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ARCO TERMINAL SERVICES CORP. TERMINAL 2	Processed by TL03	Checked by CO1

EVALUATION FOR CHANGE OF CONDITIONS FOR
PERMIT TO OPERATE (PO) FOR A
THERMAL OXIDIZER

COMPANY NAME AND LOCATION ADDRESS

ARCO Terminal Services Corp., Terminal 2
1350 Pier "B" Street
Long Beach, CA 90813

Facility ID# 800052

EQUIPMENT DESCRIPTION

A/N 543960

Marine Terminal Vapor Control System (Thermal Oxidizer) →

See draft permit for detailed equipment description.

BACKGROUND

Arco Terminal Services Corporation's (ATSC) Terminal 2 is a large marine terminal located in the Port of Long Beach. Terminal 2 is a Title V facility which operates over 30 petroleum storage tanks, 3 marine berths (ship loading/unloading), a waste water treatment system and two IC engines. Two thermal oxidizers are also employed to control VOC emissions. One oxidizer controls VOC emissions from storage tank degassing operations and the other controls vapors from the loading of marine vessels at the berths.

ATSC has submitted this application (A/N 543960) for a change of conditions to their existing permit (A/N 277458; P/O G13790) for the thermal oxidizer that controls emissions from the ship loading operations at marine Berths 76, 77 & 78. The change of condition involves the source testing requirements. ATSC is seeking a change in the required source test frequency as well as clarification of the criteria under which source testing is performed.

This change of conditions will be treated as a minor revision (Title V revision A/N 543962) under Regulation XXX.



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NOV/NC HISTORY

There have been two Notices of Violation (NOV) issue to ATSC's Terminal 2 in the last two years. Both NOV's have been resolved and are closed. In addition, Terminal 2 was last inspected on August 9th, 2012 and found to be in full compliance.

EVALUATION

The changes ATSC is seeking are to the source test frequency and commodity requirements during testing (see Condition No. 6 on current P/O G13790; copy included in this file). Condition No. 6 requires that source test be conducted annually "for the most volatile liquid loaded at this terminal". The source test frequency and commodity requirements are discussed and evaluated separately below.

Annual Source Testing

The initial Permit to Construct (A/N 265399; copy included in this file) for the thermal oxidizer was issued in 1992 and contained requirements for initial source testing (see Condition No. 3) and source testing to be continued on an annual basis thereafter (see Condition No. 11). Though not specifically required by Rule 1142 or by BACT guidelines for marine tank vessel loading operations, annual source testing is sometimes imposed on control equipment permits to ensure that the performance/emission standards of RACT (in this case Rule 1142) and/or BACT (though in this case, BACT is not applicable) are being met on a consistent basis. As such, annual testing eventually establishes the "performance reliability" of the control equipment. The initial source testing requirement for ATSC's marine berth oxidizer was fulfilled in 1994 with source testing performed annually thereafter. All of ATSC's annual source tests show compliance with the Rule 1142 standards of 2 lbs VOC/1000 barrels of product loaded and the 95% destruction efficiency (except for year 2003 where the efficiency standard was not met, but Rule 1142 only requires that one of the two standards be met). The table below summarizes the results of the most recent 5 years and 2 earlier years of source testing of ATSC's marine berth oxidizer.



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TABLE 1
Performance of ATSC's Marine Berth Thermal Oxidizer

Year	Commodity Loaded & Vapor Pressure (psi)	Test Results	Rule 1142 Requirement	Compliance?
2003	Fuel Oil (RVP .01)	0.47 lbs/1000 bbls loaded; 86.7%	2 lbs/1000 bbls loaded or 95% ↓ ↓ ↓	Yes
2004	Light Cycle Oil (RVP .03)	0.13 lbs/1000 bbls loaded; 99.1%	↓ ↓ ↓	Yes
2007	HUX Naphtha (RVP 2-7)	0.77 lbs/1000 bbls loaded; 97.5%	↓ ↓ ↓	Yes
2008	Gasoline (RVP 5-15)	0.11 lbs/1000 bbls loaded; 99.9%	↓ ↓ ↓	Yes
2009	Naphtha/Pentane (RVP 1/8)	1.79 lbs/1000 bbls loaded; 98.2%	↓ ↓ ↓	Yes
2010	BRC* (RVP 11.2)	0.08 lbs/1000 bbls loaded; 99.8%	↓ ↓ ↓	Yes
2011	Carbob (RVP 5-15)	0.03 lbs/1000 bbls loaded; 99.9%	↓ ↓ ↓	Yes

*Bantang Return Condensate

As can be seen, ATSC's marine berth oxidizer demonstrates compliance with both the lbs/bbl loaded and destruction efficiency standards of Rule 1142 (except for Year 2003 as noted earlier). The source test compliance record of the oxidizer has established the performance of the equipment as consistent and reliable.

The past source test performance may be sufficient alone to change the source test frequency, however, as an added "assurance policy", ATSC will be required to improve its monitoring practices. Condition No. 11 of the current permit requires that the temperature of the combustion chamber of the oxidizer not be less than 1400°F. Condition No. 10 requires such temperature to be monitored and measured and requires that the measuring device have a certain accuracy and



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calibration schedule. These conditions will be updated using current Continuous Parameter Monitoring System (CPMS) and Compliance Assurance Monitoring (CAM) requirements as a guideline (a full CAM application & evaluation will be required for ATSC's Title V renewal for which filing is due in 2013). The proven performance reliability of the thermal oxidizer together with requiring more current monitoring practices substantiates changing the source test frequency to once every 5 years and is consistent with current Title V Periodic Monitoring guidelines and practices.

Commodity Requirements

The thermal oxidizer is currently required to be tested annually "for the most volatile liquid loaded at this facility". However, the products loaded in Table 1 have products ranging from very low vapor pressures (RVP of .03 psi) to very high vapor pressures (RVP of 15 psi). Whether a low vapor pressure or high vapor pressure product was loaded, the thermal oxidizer performance achieved compliance with Rule 1142. It is recommended therefore that the high vapor pressure product requirement be removed from the permit.

EMISSIONS CALCULATIONS

The changes in source testing and monitoring conditions have no effect on emissions. This application will use the previous permit's emission values for NSR and AEIS purposes.

RULES EVALUATION

Rule 212

There is no increase in emissions or MICR, and there is no school within 1000 feet; no public notice is required.

Rule 401

Visible emissions are not expected under proper operation of this equipment.

Rule 402

No nuisance complaints are expected with proper operation of the equipment.



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Rule 1147

Facility has existing conditions (Conditions 7, 8, & 9 on current permit) that were based on Rule 1147 requirements; however, the thermal oxidizer is exempt from these requirements per Rule 1147(g)(3)(B) and will be removed administratively when the permit is issued after EPA review.

Rule 1173

As a marine terminal, ASTC Terminal 2 is required to comply with this rule and is conditioned to do so in a facility-wide condition in Section D and as listed in Section K of the facility's Title V permit. Continued compliance is expected.

Reg. XIII

There are no emission increases for any criteria pollutants as a result of this proposed change of condition, no BACT, Offsets, or Modeling is required.

The facility is currently in compliance with all applicable rules and regulations of the District and thus meets the requirements of 1303(b)(4).

Rule 1401

There are no increases in toxic emissions as a result of this change of condition, thus no increase in MICR or HI.

Regulation XXX

The Title V permit has been issued for this facility. The change of conditions for the thermal oxidizer constitutes a minor permit revision (TV Revision A/N 543962) and will be proposed to EPA for 45-day review prior to being incorporated into Section D of the Title V Permit.

CEQA

The CEQA Applicability Form (400-CEQA) indicates that the project does not have any impacts which trigger the preparation of a CEQA document.



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40CFR 63 Subpart R (Gasoline Distribution MACT)

This facility is not a major source of HAPs and is thus only subject to the minor source requirements (recordkeeping) of this Subpart as stated in the facility-wide condition in Section D with supporting conditions in Section J of Title V permit. Continued compliance is expected.

40CFR 63 Subpart BBBBBB (Gasoline Distribution GACT)

As a minor source under Subpart R, this facility is required to comply with this Subpart as required by a facility-wide condition in Section D with supporting conditions in Section J of Title V permit. Continued compliance is expected.

40CFR 63 Subpart Y (Marine Tank Vessel Loading Operations MACT)

This facility is not a major source of HAPs and is thus required to comply with the minor source requirements of this Subpart as required by a facility-wide condition in Section D with supporting conditions in Section J of the Title V permit. Continued compliance is expected.

RECOMMENDATIONS

Propose the draft thermal oxidizer permit (with change of conditions) to EPA for 45-day review as a minor revision (see sample permit).