

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT STATIONARY SOURCE COMPLIANCE DIVISION PERMIT APPLICATION PROCESSING AND CALCULATIONS	PAGES 4	PAGE 1
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EVALUATION REPORT FOR TITLE V PERMIT REVISION

APPLICANT'S NAME:
ARCO TERMINAL SERVICES CORP.

ID NO. 800286

MAILING ADDRESS
1300 PIER B STREET
LONG BEACH, CA 90813

EQUIPMENT ADDRESS
2350 OBISPO AVE.
SIGNAL HILL, CA 90755

EQUIPMENT DESCRIPTION:

AN510633

HATHAWAY TERMINAL METER CALIBRATION FACILITY CONSISTING OF:

1. TANK, UNDERGROUND GASOLINE SUMP, FIXED ROOF, 31 BBL, 5' DIA. X 9'H.
2. PUMP, GASOLINE RETURN, WITH A 5 HP MOTOR
3. FUGITIVE EMISSIONS, MISCELLANEOUS
4. CARBON ADSORBER(S), 55 GALLON DRUM(S), CONNECTED IN SERIES (IF MORE THAN ONE), EACH FILLED WITH AT LEAST 150 LB OF GRANULAR ACTIVATED CARBON, PASSIVELY VENTING THE UNDERGROUND GASOLINE SUMP (ITEM 1).

AN510635

WASTE WATER HANDLING SYSTEM CONSISTING OF:

1. TANK WATER DRAWS, 10 TOTAL, EACH 2'-6"L X 2'-6"W X 1'-6"D, COVERED AND GASKETED
2. SUMP PROXIMATE TO TANK NO. 30026, TANK WATER DRAW, FIXED, COVERED, WITH A 3 HP SUBMERSIBLE PUMP, 480 GALLONS; 4'L X 4'W X 4'D.
3. SUMP PROXIMATE TO TANK 103, TRUCK LOADING RACK DRAIN, CLOSED TOP, WITH 3 HP AND 30 HP SUBMERSIBLE PUMPS, 3384 GALLONS; 8'DIA. X 9'H.
4. CARBON ADSORBER(S), 55 GALLON DRUM(S), CONNECTED IN SERIES (IF MORE THAN ONE), EACH FILLED WITH AT LEAST 150 LB OF GRANULAR ACTIVATED CARBON, PASSIVELY VENTING THE SUMP PROXIMATE TO TANK NO. 30026 (ITEM 1).

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HISTORY

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The waste water handling system at the Hathaway Terminal was previously permitted (D65595, AN246913) and the equipment description included "one 55 gallon canister of activated carbon containing at least 150 pounds of activated carbon" that passively vented the water draw sump "proximate to Tank No. 26". In 1997 the applicant determined that the Hathaway Facility was not subject to Rule 1176 and requested that the carbon vessel be removed from the equipment description (F9917, AN325057). Similarly, the collection sump (underground gasoline storage tank) at calibration (proving meter) area was passively vented to a carbon adsorption canister that was in the equipment description on Permit to Operate D14075 (AN187874) and subsequently removed when that permit was modified (F9918, AN32055). When the Initial TV Facility Permit was issued, the carbon vessels were not included as devices in the equipment listing. Arco Terminal Services Corporation (ATSC) has continued to operate the carbon adsorption vessels and has filed the subject applications to add them back on their respective equipment lists on the TV Permit. Since the Facility is not subject to Rule 1176 there are no required operating conditions associated with the operation or maintenance of these tanks.

There is no emission increase as a result of the requested changes so these actions will be considered minor TV permit revisions. The revised permit is subject to EPA 45 day review.

PROCESS DESCRIPTION

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The water draw sump is used to collect waste water that accumulates under the petroleum products stored in one or more storage tanks at the facility. The waste water drawn from the tanks inevitably contains some storage product. Over time, the petroleum product mixed with the waste water can evaporate and produce VOC in the head space of the enclosed sump. If the vapor pressure of the product in the waste water is high enough it can expand and enter the atmosphere at the sump vent. The operator has elected to install one or more carbon vessels in series to on the sump vent line. If expansion of the vapors in the sump headspace causes vapors to move through the vent line the VOC is captured in the granulated activate carbon and prevented from entering the atmosphere. The exhaust pipe from the carbon vessel(s) is monitored periodically for breakthrough whereupon the saturated vessel is replaced with a new carbon vessel.

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CALCULATIONS/EMISSIONS

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Passive emissions from the sumps are estimated using a default AER emission factor for Clean Out Sumps.

Emission Factor: = 1.8 lb/sf/year

Carbon adsorber efficiency ≈ 95%

Sump surface area:

AN510633 Area of Sump = 4'L x 4'W = 16sf
R1 = 1.8 lb/sf/yr x 16sf = 28.8 lb/yr
R2 = 28.8 lb/yr x ((100%-95%)/100) = 1.44 lb/yr = 0.004 lb/day

AN510635 Area of Sump = 5' DIA ≈ 20sf
R1 = 1.8 lb/sf/yr x 20sf = 36 lb/yr
R2 = 36 lb/yr x ((100%-95%)/100) = 1.8 lb/yr = 0.005 lb/day

NSR Emissions:

Daily emissions from the controlled source are de minimus

RULES EVALUATION:

Rule 212 There is no net increase in PTE resulting from the addition of these vessels to the permit description. Public notice is not required.

Rule 401 Rule 401(b)(1) limits visible emissions to a shade as dark as No. 1 on the Ringelmann Chart for a period of three minutes in any hour. No visible emissions are expected as a result of these modifications.

Rule 402 Operation of the equipment is not expected to result in a public nuisance. Compliance is expected.

Reg IX New Source Performance Standards

This regulation is not applicable to the sumps in this application.

Reg X National Emission Standards for Hazardous Air Pollutants

This regulation is not applicable to the sumps in this application.

Rule 1176 This rule regulates VOC emissions from waste water treatment systems and associated control equipment at petroleum refineries, on-shore oil production fields, off-shore oil production platforms, chemical plants, and industrial facilities. The SIC group number code for the East Hynes Terminal is not 492 or 461, therefore it is not subject to this rule.

Rule 1303 There is no PTE increased as a result of venting these sumps to passive carbon adsorption. Rule 1303 is not applicable.

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Rule 1401 There is no increase in PTE. Therefore no Rule 1401 (d) specifies limits for Maximum Individual Cancer Risk (MICR), cancer burden, non-cancer acute and chronic Hazard Index (HI) from new, relocated and modified sources of Toxic Air Contaminants (TAC). The modification results in a reduction in VOC and a corresponding reduction in TAC emissions. Per 1401(g)(B), a modification which results in no increase in Risk is exempt from the requirements of this rule.

Reg XVII No net increase in PTE, further evaluation is not required.

Reg XXX This facility is subject to Reg. XXX and the Initial Title V Permit has been issued. These permits are considered a minor revision and will be submitted to EPA for 45 day review upon completion under Revision AN510632. As minor revisions of the Title V Permit, Public Notice will not be required.

DISCUSSION

As noted in the History section, previous permits to operate the wastewater collection and treatment system included the passive carbon vessels as part of the VOC control on sumps as part of the system equipment description. The operator requested that they be deleted from the descriptions when they determined that they were not subject to Rule 1176. The operator has since determined that they want to continue operating with these sumps vented to the passive carbon vessels and has requested they again be listed on as part of the equipment description to avoid possible confusion during routine inspections.

RECOMMENDATION

Issue a revised TV permit (Section D, Revision 1) that includes the carbon vessels as part of the equipment description and require monthly monitoring with a 500 ppmv threshold for carbon changeout using Rule 204 as justification.

CONDITIONS:

The facility is not subject to Rule 1176 and no conditions other than the standard requirements to operate the equipment in accordance with the data and specifications in the application and to keep it in good repair and operating condition.(Rule 204)