

 <p>SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT</p> <p><i>ENGINEERING & COMPLIANCE DIVISION</i></p> <p>APPLICATION PROCESSING AND CALCULATIONS</p>	PAGES 25	PAGE 1
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COMPANY NAME: Calnev Pipe Line, LLC
ID No. 800022

MAILING ADDRESS: 1100 Town and Country Rd.
Orange, CA 92868

EQUIPMENT LOCATION: 2051 E. Slover Ave.
Bloomington, CA 92324

CONTACT PERSON: Ronald E. Zinner
(714) 560-4752

TV REVISION (A/N 451883) DE MINIMUS SIGNIFICANT

Section D – Revision No. 5

SUBGROUP #1: (page 4) Equipment without prior permits

A/N 451878

STATION SUMP, 1000 GALLON, UNDERGROUND, 5'-10" DIA. BY 6'-0" H., VENTED TO APC SYSTEM

A/N 451879

SATURATOR SUMP, 370 GALLONS, UNDERGROUND, 3'-0" DIA. BY 7'-0" H.

A/N 451881

EVAPORATION POND, OPEN TOP, 60'-0" DIA., FOR RECEIVING WATER FROM PERMITTED OIL/WATER SEPARATORS

SUBGROUP #2: (page 11) Throughput increase

A/N 461445

STORAGE TANK, CN-139, INTERNAL FLOATING ROOF, WELDED SHELL, 80,000 BARREL CAPACITY, 120'-6" DIA. X 47'-9" H., WITH A DOUBLE DECK-TYPE FLOATING ROOF, CATEGORY A MECHANICAL SHOE PRIMARY SEAL, CATEGORY A COMPRESSION PLATE SECONDARY SEAL.

A/N 461446

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STORAGE TANK, CN-140, INTERNAL FLOATING ROOF, WELDED SHELL, 80,000 BARREL CAPACITY, 120'-6" DIA. X 47'-9" H., WITH A DOUBLE DECK-TYPE FLOATING ROOF, CATEGORY A MECHANICAL SHOE PRIMARY SEAL, CATEGORY A COMPRESSION PLATE SECONDARY SEAL.

A/N 461447

VAPOR RECOVERY AND DISPOSAL SYSTEM CONSISTING OF:

1. THERMAL OXIDIZER, SMITH ENGINEERING, 5'-0" DIA. BY 5'-6" H. COMBUSTION CHAMBER, 5 MMBTU/HR, 30 HP MAIN BLOWER, 10 HP BURNER BLOWER, PILOT AND CONTROL SYSTEM
2. VAPOR SATURATOR TANK, ABOVE GROUND, 7500 GALLONS, HORIZONTAL
3. VAPOR HOLDER TANK NO. 1, 30,000 CUBIC FEET
4. VAPOR HOLDER TANK NO. 2, 30,000 CUBIC FEET
5. STACK, 5 FT DIA. BY 27 FT. HIGH

SUBGROUP #3 (page 18) Upgrade seals, tank converted to drain-dry, increase RVP from 11 to 13.5 psia (no thruput increase)

A/N 492117

STORAGE TANK, CN-137, INTERNAL FLOATING ROOF, WELDED SHELL, 55,000 BARREL CAPACITY, 101'-6" DIA. X 40'-0" H., WITH A PAN-TYPE FLOATING ROOF, CATEGORY A METALLIC SHOE TYPE PRIMARY SEAL, CATEGORY A RIM MOUNTED WIPER TYPE SECONDARY SEAL, UNSLOTTED GUIDEPOLE WITH GASKETTED SLIDING COVER AND WIPER, AND SLOTTED GUIDEPOLE WITH GASKETTED COVER, FLOAT AND WIPER

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FACILITY BACKGROUND

Calnev Pipe Line, LLC operates a tank farm and a pipeline terminal in Bloomington, CA. The facility is called a pipeline breakout station that receives petroleum products, such as gasoline, diesel, and jet / turbine fuel, via pipelines from Carson, CA, then transfers the products to pipelines serving the Southern California Mojave Desert region and Southern Nevada.

The facility is a Title V Facility but not a RECLAIM facility.

FACILITY COMPLIANCE RECORD REVIEW

A search of the AQMD Compliance Database shows that there is one Notice to comply (NC C76449) issued 3/3/09 to repair components within required timeframe. A follow up on 3/4/09 shows that the facility is in compliance.

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ENGINEERING EVALUATIONS

SUBGROUP #1

A/N 451878 (Station Sump)

A/N 451879 (Saturator Sump)

A/N 451881 (Evaporation Pond)

The applicant submitted this application package on 12/30/05 to obtain Permits to Operate for two existing sumps and one existing evaporation pond.

These three units were originally listed in the initial Title V application under Rule 219 Equipment Exempt, Form 500-B. However, during a recent review of facility operations and further discussions with District permitting staff, it was discovered that the rule does not provide the specific exemptions for the two sumps and the evaporation pond. Thus, the applicant has determined that it would be appropriate to submit permit applications.

PROCESS DESCRIPTION

Two Underground Sumps:

For locations, see maps and aerial photos in file A/N 415878.

Station Sump:

The station sump, 1000 gallon capacity, collects fluids drained from product sampling activities, pump repairs, drains from meter proving works, and fluids pumped in from the saturator sump. All fluids collected in the station sump are pumped to Tank 100 (D17), a storage tank used for storage of Transmix. Displaced vapors in the sump are directed via a closed vent system to the facility's vapor collection and disposal system operating under (D21) and (C20), which is a thermal oxidizer.

Total fluid throughput for the station sump ranges from 800 to 1500 bbls/month and is a mixture of gasoline, diesel, and jet / turbine fuel.

Saturator Sump:

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The small saturator sump, 370 gallon in capacity, collects spent gasoline which must be drained periodically from the Saturator Tank (D61). This tank is used to enrich the vapors collected in the facility's vapor collection system to a level above the upper explosive limit to ensure a safe operation in the vapor holder. The spent gasoline collected in the sump is then pumped to the station sump, which also serves as an indirect vapor control for the saturator sump. In addition, the spent gasoline, with most of its volatile components stripped out in the saturator, has very little vapor left and the sump is vented to atmosphere.

The total spent gasoline drained to the saturator sump is a maximum of 20 bbls once every two months. However, it takes only an hour to drain 20 bbls of fluid or a maximum throughput of 840 gallons per day.

Evaporation Pond:

The open evaporation pond, 60 ft. in diameter, is utilized to collect and evaporate waste water received from the two permitted oil / water separators operating under D18 and D19, respectively. The waste water received by the two separators results from the draining of water that accumulates in the bottoms of the facility's storage tanks, mostly external floaters. This accumulation of water occurs mostly during the rainy season, and thus, the evaporation pond is dry most of the year. Calnev Pipe Line has recently completed the installation of six dome covers on external floating roof tanks and that will reduce a significant amount of rain water collected in tank bottoms.

According to the study conducted by the company with laboratory analysis reports, the applicant has determined that the total volume of process water discharged to the pond over the past 12 months is not more than 37,520 gallons or a daily average of 670 gals/day. Also, the VOC content in the water is 0.694 lbs/MMgals based on the worst analytical data. For details, refer to 8/21/06 document submitted by applicant in A/N 451881.

EMISSIONS CALCULATION

VOC emissions for the two small underground sumps, based on worst conditions, are estimated using the following equation (AP-42, 5.2, 1995).

$$L = 12.46SPM/T (1 - \text{eff}/100)$$

Where:

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L = VOC loss, lbs/1000gal
S = saturator factor, Table 5.2-1, AP-42, using 0.2 for constant temp at 60 deg F
P = true v.p, Table 7.1-2, 5.2 psia for station sump; 0.009 for saturator
M = molecular wt., 66 for station sump liquid; 130 for saturator, Table 7.1-2
T = temp, 520 deg R
Eff = control efficiency, 95% for station sump and zero for saturator

Station Sump: 95% control

$$L = [(12.46)(0.2)(5.2)(66)/520] * (1-0.95)$$

$$= 0.08 \text{ lb/1000 gal}$$

$$\text{Max flow} = 1500 \text{ bbl/mo} * 42 \text{ gal/bbl} * \text{mo}/30 \text{ days} = 2100 \text{ gal/day}$$

$$\text{Therefore, VOC emissions} = 0.08 \text{ lb/1000 gal} * 2100 \text{ gal/day}$$

$$= 0.17 \text{ lb/day, R2}$$

$$*1/24 = 0.01 \text{ lb/hr}$$

$$R1 = 3.44 \text{ lb/day}$$

$$= 0.14 \text{ lb/hr}$$

Saturator Sump: No Control

$$L = [(12.46)(0.2)(0.009)(130)/520]$$

$$= 0.006 \text{ lb/1000 gal}$$

$$\text{Max flow} = 840 \text{ gal/day}$$

$$\text{Therefore, VOC emissions} = 0.006 \text{ lb/1000 gal} * 840 \text{ gal/day}$$

$$= 0.005 \text{ lb/day, R1 = R2}$$

Evaporation Pond:

$$\text{Max VOC emitted} = 670 \text{ gals/day} * 0.694 \text{ lbs/ MMgals} = 0.000465 \text{ lbs/day}$$

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Toxic Air Contaminants (TACs)

There are minute amounts of TAC emissions associated with the incremental VOC emissions discussed above. To quantify these TACs, weight fractions of TACs in gasoline emissions (worst assumption) are used to multiply the calculated mass VOC emission of the permit unit. These TAC emissions are then used in Tier 1 Screening Level Health Risk Analysis. The resulting TAC emissions and the Health Risk Analysis for the highest VOC emission level of the Station Sump are summarized in the following tables:

Calculated TAC Emissions

Compound	CAS#	TAC wt%	Max, lbs/yr	Max, lbs/hr
VOC	-	-	62	
Benzene	71-43-2	0.9	0.558	0.0000637
Ethylbenzene	100-41-4	0.1	0.062	0.000007
N-Hexane	108-88-3	1.6	0.992	0.000113
Napthalene	91-20-3	0.05	0.031	-
Toluene	71-43-2	1.3	0.806	0.000092
Xylene	110-54-3	0.5	0.31	0.000035

Tier 1 Screening Level Analysis

TAC	R-1401 Screening Level, 100 meters		TAC Emissions		Pollutant Screening Index	
	Chronic lbs/yr	Acute lbs/hr	lbs/y	lbs/hr	Chronic	Acute
Benzene	8.92	3.96	0.558	0.000064	0.062556	0.000016
Ethylbenzene	517,000	N/A	0.062	0.000007	-	-
N-hexane	1,810,000	N/A	0.992	0.000113	-	-
Napthalene	7.44	N/A	0.031	-	0.004167	-
Toluene	77,500	99.1	0.806	0.000092	0.000010	-
Xylene	181,000	58.9	0.310	0.000035	-	-
Application Screening Index					0.066733	0.000016

Note: The nearest receptor is a commercial receptor to the west of the facility, 217

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meters from the sump.

As shown in the above calculations, the Application Screening Index for both chronic and acute are much less than one, and the MICR is also less than one in one million. In addition, the VOC emission levels at the Saturator Sump and the Evaporation Pond are very minute, and thus, the associated TACs are negligible.

RULES EVALUATION

Rule 212 Standards for Approving and Issuing Public Notice

Tier 1 Screening Level Health Risk Analysis was performed according to the procedures prescribed in AQMD's Guidance Document for Health Risk Assessments for Rules 1401 and 212. The calculated MICR for the project is less than one in one million. Furthermore, the increase of total VOC emissions is well below 1 lbs/day and there is no school within 1000 feet of the equipment. Thus, public notice is not required per Rule 212.

Rule 401 Visible Emissions

Operation of the equipment is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

Rule 402 Nuisance

Operations of the sumps and the evaporation pond are not expected to result in a public nuisance. There is no report of any nuisance problem in the current Compliance Tracking System, and therefore, compliance with this rule is expected.

Rule 463 Organic Liquid Storage

Not applicable because the permit units are not above-ground storage tanks.

Reg IX Standard of Performance for New Stationary Sources

There are no NSPS requirements applicable to the sumps or the evaporation pond.

Reg X National Emission Standards for Hazardous Air Pollutants

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40 CFR 63 Subpart R

The facility is not subject to Subpart R (Major Source) and is only subject to recordkeeping requirements.

Reg XI Source Specific Standards

Rule 1149, Storage Tank Cleaning and Degassing

The 1000 gal sump is subject to the requirements of R-1149(c)(2). Since it is connected to a vapor control unit with a 95% efficiency, it complies with the rule.

Rule 1176, VOC Emissions from Wastewater Systems

This rule is not applicable to facilities with an SIC code of 4226.

Rule 1178, Further Reductions of VOCs from Storage Tanks

This rule applies only to above-ground storage tanks.

Reg XIII New Source Review (NSR)

Rule 1303: Requirements (Amended Dec. 6, 2002)

1303(a) Best Available Control Technology (BACT)
 Since the saturator sump and the evaporation pond each results in a net emission increase of less than 1 lb/day of any nonattainment air contaminant, BACT does not apply. However, the station sump has an uncontrolled emissions of 3 lb/day and is vented to a thermal oxidizer which is considered BACT.

1303(b)(1) Modeling - modeling for VOC is not required.

1303(b)(2) Emission Offsets
 Since the increase in emissions is less than 0.5 lbs/day from each equipment, offsets are not required.

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Reg XIV Toxics and Other Non-Criteria Pollutants

Rule 1401, New Source Review for Air Toxics

Based on the results of the TACs calculations and the health risk analysis, the MICR is less than one in one million, and the chronic and acute indices are also less than 1.0.

Reg XXX Title V Permits

In addition to the three permit unit applications, Calnev also submitted an application A/N 451883 for its Title V revision.

CONCLUSION AND RECOMMENDATION

The operations of the two existing underground sumps and the existing evaporation pond are expected to comply with all applicable District Rules and Regulations. Therefore, Permits to Operate are recommended subject to the attached conditions:

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SUBGROUP #2

A/N 461445 (Tank CN-139)

A/N 461446 (Tank CN-140)

A/N 461447 (Vapor Recovery System – Thermal Oxidizer)

On 10/24/06, the applicant submitted this application package consisting of the following units for Permits to Construct/Operate:

- A/N 461445 Increase throughput condition of Tank CN-139 from 9,422,800 bbls/yr to 29,053,742 bbls/yr with multi-products service.
- A/N 461446 Increase throughput condition of Tank CN-140 from 9,422,800 bbls/yr to 29,053,742 bbls/yr with multi-products service.
- A/N 461447 Increase overall throughput conditions on the existing Thermal Oxidizer From 32,640,000 bbls/yr to 66,262,000 bbls/yr.

PROCESS DESCRIPTION

On 6/14/2007, due to high costs of ERCs for emission offsets, the applicant requested to revise the throughput increase of each tank to 15,000,000 bbls/year instead of 29,053,742 bbls/year, and to increase the overall throughput condition on the Thermal Oxidizer permit condition to 38,154,400 bbls/yr instead of 66,262,000 bbls/yr. The revised throughput increases represent very significant reductions from the original request.

The existing permit units are listed below:

- Storage Tank CN-139, operating under P/C 341956 issued 11/05/98.
- Storage Tank CN-140, operating under P/C 341958 issued 11/05/98.
- APC System – Thermal Oxidizer, operating under P/C 341954 issued 11/05/98.

The three existing permit units, P/Cs issued since 1998, are currently listed in Section H of Facility Permit ID 800022; Tank CN-139 or Tank No.139 as D66 and Tank CN-140 as D70; and the Air Pollution Control System or Thermal Oxidizer as C20. These will be superseded by these three newer applications (A/N 461445, 46, and 47).

The two existing storage tanks, built in 1998 in accordance with the P/Cs, are identical; each one is an internal floating roof tank, 80,000 bbl capacity, and equipped with an approved seal system.

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The correct dimensions of each tank, confirmed with the applicant, are 120.5' D x 47.75' H. The existing throughput condition of each tank is 9,422, 800 bbl/year of gasoline and petroleum products. Each tank is also equipped a vapor vent line connecting the tank's bottom space, the volume between the floating pan and the landing legs, to the APC system. Therefore, these two tanks are capable to serve as drain-dry tanks for product switching operation (see schematic flow diagram in file). However, under normal operating conditions, the tanks are not vented to the APC system except during drain-dry or degassing.

After a number of years of operation, the applicant has now request to increase the throughput condition of each tank to 15,000,000 bbls/yr from 9,422,800 bbls/yr in order to meet market demands. This higher volume condition is also needed just in case of a major repair and maintenance in the tank farm system especially when one or more large tanks are out of service for an extended period of time.

As shown in the flow diagram, the existing APC system consists mainly of a saturator tank, two 30,000 cu. ft. vapor holders, and a thermal oxidizer together with the necessary connecting ductwork, blowers, control, and safety equipment. The APC system serves a total of 11 floating roof tanks in the terminal. For details, refer to the list of tanks (attached in file) with various capacities and vapor volume below the floating roof. During a drain-dry and refilling operation or a degassing process of a tank, the displaced vapor below the floating roof is vented first to the saturator where the inlet air/vapor is saturated with a gasoline spray to ensure a safe mixture before entering into one of the vapor holders. When the accumulated vapor mixture in the vapor holder reaches to a pre-set level, it is then sent to the thermal oxidizer for final control or combustion of the VOC emissions. Therefore, the thermal oxidizer operates intermittently and depends on the level of the vapor holders and not on the throughput volume of the storage tanks. This control system is currently operating under a P/C, A/N 341954 issued in 1998, listed as C20 in Section H, ID 800022. The thermal oxidizer is a relatively small unit with a rating of 5 mm Btu/hr and about 100 scfm of inlet vapor. The revised throughput increases of the two tanks are also very small and should have little impact on the operation of the thermal oxidizer.

The existing P/C condition, E71.2, on the thermal oxidizer control system limits the facility throughput to 27,000,000 bbls/yr of gasoline and 5,640,000 bbls/yr of No.2 distillate oil, or other combinations that would result in an equivalent amount of VOC emissions. Now the applicant has requested to modify this condition to 38,154,400 bbls/yr of gasoline as the surrogate product or other combination that would result in an equivalent amount of VOC emissions. To ensure that there are no emission increases in the thermal oxidizer, the existing emission limit conditions of benzene and VOC not to exceed 0.81 lbs/day and 70 lbs/day, respectively, will remain. The thermal oxidizer will continue to operate the same as before.

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This project does not involve any physical equipment changes, but it involves a net VOC emission increase and the associated toxic emissions due to the proposed throughput increases in storage tanks CN-139 and CN140.

EMISSIONS CALCULATION

Under normal operating conditions, VOC emissions are the only criteria pollutants generated from Tanks CN-139 and CN-140. For each tank, based on worst case data (RVP = 13.5 psia) and 24hrs/day, 365 days/yr. operation, the VOC emission increase from the proposed throughput increase could be estimated using EPA TANK 4.0.9d. Also, use R-1306(d) to determine the required emission offsets.

Tank CN-139:

New throughput with gasoline service (PTE) VOC emissions = 6,504 lbs/yr

Existing operations (PTE) VOC emissions = 4,783 lbs/yr

Net increase = $(6,504 - 4,783)/360 = 5$ lbs/day, 30-day ave.

Tank CN-140:

New throughput with gasoline service (PTE) VOC emissions = 6,504 lbs/yr

Existing operations (PTE) VOC emissions = 4,783 lbs/yr

Net increase = $(6,504 - 4,783)/360 = 5$ lbs/day, 30-day ave.

VOC or ROG emission offsets required for each tank = $5 \times 1.2 = 6.0$ bs/day

For each tank; 30 day ave. $R1 = R2 = 18.0$ lbs/day or 0.75 lbs/hr. of ROG

Toxic Air Contaminants (TACs):

VOC emissions emitting from petroleum liquid storage tanks normally include certain amount of TACs depending on the products stored. Based on submitted data, the table below shows the toxic species in the gasoline vapor emitting from Tank CN-139 or Tank CN-140. The amount of each

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TAC is an increment based on the proposed throughput increase of each tank, and assuming all gasoline storage represents a worst case scenario for Rules 1401 and 212 health risk analysis.

TAC Emission Increases for Tank CN-139 or CN-140 Serving Gasoline

TAC	Wt.% in Vapor*	Emissions, lbs/yr	Emissions, lbs/hr
Benzene	0.90	15.49	0.0018
Ethyl Benzene	0.10	1.72	0.0002
n-Hexane	1.60	27.54	0.0031
Toluene	1.30	22.37	0.0026
Xylenes	0.50	8.61	0.0001
Napthalene	0.05	1.48	-

*Provided by applicant, Gasoline Marketing, ERG Inc., January 2001.

The amount of each TAC is the result of multiplying the wt. % by the calculated increase of VOC emission of 1,721 lbs/yr. For emission estimate purposes, operations of the two petroleum product storage tanks are considered 24 hours per day and 365 days per year.

In accordance with the procedures prescribed in the District's Risk Assessment Procedures for Rules 1401 and 212, Version 7.0, July 2005, a Tier 2 screening analysis was performed. The results, as shown in the detailed computer printouts, indicate that the MICR is less than one in one million for both the nearest residential and commercial receptors. In addition, each chronic and acute index is also well below the threshold limit of 1.0. Therefore, the proposed throughput increases for the two tanks are in compliance with Rule 1401.

A/N 461447: Thermal Oxidizer

The thermal oxidizer is used to process the VOC vapor accumulated in the two vapor holders with a total capacity of 60,000 cu. ft. The thermal oxidizer is rated at 6,000 scf/hr of inlet vapor and it would take about 10 hours for one complete turnover. Based on information and data submitted, the inlet vapor stream is saturated with a gasoline vapor providing a constant and high heating value gaseous fuel. It can support a clean combustion without any auxiliary fuel.

On 12/13/04 a series of source tests was conducted on the thermal oxidizer in accordance with the permit conditions. The test was performed by VOC Testing, Inc., a testing laboratory certified by the District, and the results indicated an efficiency of 99% plus for VOCs destruction. The mass emission rate reported for VOC was 0.13 lbs/hr and for NOx was 0.32 lbs/hr. In addition, the reported toxic air contaminants were also extremely low: for benzene, 0.00015 lbs/hr; toluene,

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0.00064 lbs/hr; xylene, 0.00065 lbs/hr; and ethyl benzene, 0.00019 lbs/hr. A copy of the test report is in A/N 461447. The results are well within the P/C emission conditions of 0.81 lbs/day of benzene and 70 lbs/day of VOCs.

If the control system is maintained in good operating conditions as stipulated in the permit conditions, the thermal oxidizer will continue to operate at a high level of destruction efficiency. Since the inlet vapor from the vapor holder is pre-conditioned with little fluctuation in variables and at a constant temperature of 1400 degrees F, it will provide a steady and clean combustion process of the gaseous fume.

Therefore, it can be concluded that the thermal oxidizer unit will continue to operate the same way as before with little or no significant impact on the overall risk assessment of the project. Previously calculated criteria pollutants for NSR data entries are still valid for this application (see attached in A/N 461447).

RULES EVALUATION

Reg II Permits
CEQA is not triggered according to the information submitted in Form 400-CEQA.

Rule 212 Standards for Approving and Issuing Public Notice

A Tier 2 health risk analysis confirms that the calculated MICR for the project is less than one in one million and each chronic and acute index is also less than 1.0. The total net increase of VOC emissions from Tanks CN-139 and CN-140 is below the rule limit and no school is within 1000 feet of the equipment. Thus, a public notice is not required per Rule 212.

Since the thermal oxidizer will continue to operate essentially the same as before, no significant increases in criteria pollutants are expected.

Rule 401 Visible Emissions
Operation of the storage tanks and the thermal oxidizer is not expected to result in visible emissions. Therefore, compliance with this rule is expected.

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Rule 402 Nuisance

Operation of the equipment under normal conditions is not expected to result in a public nuisance. There is no report of any nuisance problem in the current Compliance Tracking System, and therefore, compliance with this rule is expected.

Rule 463 Organic Liquid Storage

The two storage tanks are internal floating roof tanks equipped with approved primary and secondary seals; compliance with the rule requirements is expected.

Rule 1149 Tank Degassing

Tanks CN-139 and CN-140, each is equipped with a vent pipe below the floating pan and is used to vent the displaced vapor to the thermal oxidizer during drain-dry and refilling or degassing operation. This meets the specific requirements of the rule. For tank cleaning, a permitted portable equipment will be used.

Rule 1178 Further Reductions of VOCs.

Each tank is an internal floating roof and is equipped with approved primary and secondary seals. All openings and fittings are enclosed and gasketed to meet all the requirements of the rule.

Reg XIII New Source Review (NSR)

The proposed throughput increase of each tank results in a net increase of 5.0 lbs/day of VOC which would trigger BACT. However, the tank is already equipped with the current BACT that is a Category A primary and secondary seal system and compliance with Rule 463.

Modeling of VOC emissions is not required.

Rule 1303(b)(2); Offsets are required for the emissions increase thru ERCs. The facility holds sufficient ERC's to offset.

Source test results of the thermal oxidizer show 99% plus control efficiency which meets all BACT requirements.

Rule 1303(b)(5)(B): The facility has demonstrated Statewide Compliance.

Rule 1303(b)(5)(A&D) Compliance Thru CEQA – This is exempt per the responses on the 400CEQA form.

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Rule 1401 NSR of Toxic Air Contaminants
The results of a Tier 2 assessment indicate that the MICR is less than one in one million; and each chronic and acute index is also less than 1.0.

Reg XXX Title V Permits

The initial Title V Permit for the facility, under Facility ID 800022, was issued on April 6, 2001 with the revision issued August 30, 2007. These equipment will be covered under A/N 451883 for this TV revision.

40 CFR 60 Subpart Kb: NSPS for Storage Vessels for Petroleum Liquids for Which Construction Commenced after 7/23/84
These two tanks constructed in 1998 under P/Cs granted by the District are subject to this subpart and are expected to be in compliance with all the requirements.

40 CFR 63 Subpart R: NESHAPS for Bulk Gasoline and Pipeline Terminal
The facility has been determined as a minor source of air toxics (refer to submitted document, Yorke Engineering letter dated May 19, 2006 in file). Since this is a minor source of air toxics, it is not subject to the rule requirements, but it still needs recordkeeping and reporting as stated in Section J of the Title V Permit.

CONCLUSION AND RECOMMENDATION

The proposed changes in permit conditions are expected to operate in compliance with all applicable District Rules and Regulations. Since there are no physical modifications involved with the project, Permits to Operate are recommended subject to the conditions listed in the attached pages with new throughput corrections.

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SUBGROUP #3

A/N 492117 (Tank CN-137)

Calnev Pipeline, LLC (ID 800022) submitted the subject AN 492117 on 11/07/08 for a proposed tank modification to coincide with the roof maintenance and repair of their internal floating roof Tank No. 137 currently covered by P/O No. R-E05139 granted on 09/17/97 under A/N 02223E (see **Appendix A** for copy of permit). The proposal is mostly for regulatory compliance and would include the following changes:

1. The length of the tank legs would be reduced to meet the drain-dry breakout tank definition under SCAQMD Rule 1149. A drain-dry breakout tank is defined under this rule as “an above ground storage tank designed such that the floating roof rests on support legs no higher than one foot along the tank shell with a bottom sloped to a sump or sumps such that no product or sludge remains on the tank bottom and walls after emptying except clingage and is primarily used to receive product from pipelines and to distribute product back into pipelines”. The applicant facility is a pipeline breakout storage terminal (SIC Code 4613) used for the receipt and shipment of refined petroleum products.
2. With the tank leg modification, some associated appurtenances would be made.
3. The existing Category “C” primary tank seal would be replaced and upgraded to a Category “A” mechanical shoe seal. Also, a Category “A” rim mounted, wiper type secondary tank seal would be added for additional emission control.
4. Some deck fittings would be added, removed or modified. A listing of these changes including that referred to in Items 2 & 3 above is shown in **Appendix B**.

According to Calnev, the proposed modification would not change the tank throughput of commodities they are currently allowed to store (gasoline and diesel as given in the current equipment description, see Appendix A) with true vapor pressure up to less than 11 psia as allowed under Rule 463(d)(4) [Note: There is currently no vapor pressure limit on the tank permit]. A review of the historical files show that a TVP = 7.2 (RVP = 11 psia) was listed. To provide operational flexibility, Calnev requested that they be allowed to handle additional commodities such as aviation gasoline, ethanol, jet fuel and transmix, in the subject tank after modification with an increase in RVP to 13.5 psia (per email dated 2/25/20). A comparison of the vapor pressure and toxic compound composition of all the commodities expected to be handled in the subject tank is shown in **Appendix C**.

The proposed modification would not affect the current venting of the subject tank to a thermal oxidizer during degassing or refilling operations as required under the current

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permit Cond. E336.1 (see Appendix A). This condition, however, would be revised for the purpose of clarity.

PERMIT HISTORY:

A permit history for this tank no. 137 is summarized in the following table:

Permit History for Tank 137 (D11)

Permit to Construct		Permit to Operate		Description of Application
A/N	Issue Date	No.	Issue Date	
---	---	10973B	1971	New tank construction. Records have been destroyed but according to Calnev, the tank was constructed in 1971.
02223E	02/05/81	E05139	12/17/81	Identical replacement of the equipment's Category "C" tank seal. No emission increase reported. Reg XIII did not apply.
02223E	---	R-E05139	09/17/97	Permit re-issuance. Reg XIII did not apply.
492117	(This subject application)			Equipment modification with proposed changes as described.

COMPLIANCE RECORD REVIEW:

There is no record of any outstanding compliance problem related to the operation of the subject storage tank during the last 5 yrs.

EQUIPMENT DESCRIPTION:

The current description of Tank No. 137 (D11) is given in Appendix A. The permit of the tank describes only the commodities that can be stored and the vapor space % of LEL limit, and none on vapor pressure and throughput limits.

An existing thermal oxidizer (A/N 461447)(Dev. C20) would continue to be used after modification. This control device is used to combust vapors or gases that are displaced and vented to it from the vapor space beneath the floating roof of the tank during filling operation (before the tank internal roof floats on the product liquid). Current Cond. E336.1 requires control of such vapors during tank filling operation, and also degassing operation. Any vapors displaced above the floating roof during tank filling operation (would be

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considered insignificant due to proposed use of double seals and deck fittings gaskets and covers) would continue to be vented out to atmosphere after the proposed modification [Note: For clarity, Cond. E336.1 would be replaced with Cond. E336.2 to specify the source of the vent gases from Tank No. 137 that are controlled by a thermal oxidizer].

CALCULATIONS

The current NSR emission baseline of the tank as shown in **Appendix D** is zero based on no emission increase reported from the previous modification (AN 02223E). To estimate the change in emissions with the tank improvements proposed to comply with District requirements, the most updated Tank 4.0 emission calculation program was used based on the following parameters:

Operating Parameter	Before Requested Change	After Requested Change
Type of roof (same)	Pan	Pan
Max. Tank throughput (no change)	843,150,000 gals/yr	843,150,000 gals/yr
Max. True vapor pressure (increase)	RVP 11; <10.99 psia TVP = 7.2 psia per prev. eval.	RVP 13.5 psia (change from original info submitted)
Roof fittings list	See Appendix B	See Appendix B
Commodity	Gasoline (worst case)	Gasoline (worst case)

Note: Gasoline was used in the analysis among the commodities to be stored including aviation gasoline, ethanol, jet fuel, diesel and transmix because it represents a worst case scenario in terms of emissions and toxic compound composition, see Appendix C.

The printouts for the tank emission calculations using the above parameters are shown in the **Appendices E** (before change) and **F** (after change), and are summarized below:

Before Modification: R2 = 8,144.99 lbs VOC/yr; 22.62 lbs VOC/day (annual/360)

After Modification: R2 = 9286.36 lbs VOC/yr; 25.80 lbs VOC/day (annual/360)

The above calculated VOC emissions from the tank before and after modification do not take into consideration the control of vented VOCs, about 99%, by the use of a thermal oxidizer during tank refilling operation [Note: Current permit condition requires venting of the tank to the control device during refilling operation.]. For practical purposes, the 30-

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day average VOC emission from such operation with control is negligible compared to the results of the calculation above. Therefore, the

Net emission change: $(25.80 - 22.62)$ lbs ROG/day = + 3.18 lbs ROG/day

ERCs will be needed to offset the increase.

Toxic Air Contaminants (TACs):

VOC emissions emitting from petroleum liquid storage tanks normally include certain amount of TACs depending on the products stored. Based on submitted data, the table below shows the toxic species in the gasoline vapor emitting from Tank CN-137. The amount of each TAC is an increment based on the proposed throughput increase of each tank, and assuming all gasoline storage represents a worst case scenario for Rules 1401 and 212 health risk analysis.

TAC Emission Increases for Tank CN-137 Serving Gasoline

Annual increase = $9286.36 - 8144.99 = 1141.37$ lb/yr

TAC emissions lb/yr = wt.% * (1141.37 lb/yr)

TAC	Wt.% in Vapor*	Emissions, lbs/yr	Emissions, lbs/hr
Benzene	0.90	10.27	0.0012
Ethyl Benzene	0.10	1.14	0.00013
n-Hexane	1.60	18.26	0.0021
Toluene	1.30	14.84	0.0017
Xylenes	0.50	5.71	0.00065
Napthalene	0.05	0.57	0.000065

*Provided by applicant, Gasoline Marketing, ERG Inc., January 2001.

The amount of each TAC is the result of multiplying the wt. % by the calculated increase of VOC emission of 1,141.37 lbs/yr. For emission estimate purposes, operation of the storage tank is based on 24 hours per day and 365 days per year.

In accordance with the procedures prescribed in the District's Risk Assessment Procedures for Rules 1401 and 212, a Tier 2 screening analysis was performed. The results, as shown in the detailed computer printouts, indicate that the MICR is less than one in one million for both the nearest residential (0.697 in a million) and commercial receptors (0.274 in a million). In addition,

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each chronic and acute index is also well below the threshold limit of 1.0. Therefore, the proposed vapor pressure increase for the tank is in compliance with Rule 1401.

EVALUATION AND RULE COMPLIANCE REVIEW:-

The current NSR baseline emission of this tank is 0 lb VOC/day (see Appendix D) and would be revised to show the following emission entries:

PreVOC = 8,144.99 lbs VOC/yr; 22.62 lbs VOC/day; 0.93 lb VOC/hr

and the emission entries for the tank after the modifications would be as follows:

PostVOC = 9286.36 lbs VOC/yr; 25.8 lbs VOC/day; 1.08 lb VOC/hr

The other changes shown in the equipment description on page 1 are merely administrative in nature not requiring further evaluation since they would not affect tank emissions.

The operation of the subject IFRT is expected to continue to comply with the following District Rules and Regulations:

- Rule 212:** Public notice is not required since the emission increase is below threshold and the MICR is less than one in a million.
- Rule 401:** No visible emission to violate this rule is expected.
- Rule 402:** No nuisance problem is expected.
- Rule 463:** This tank is subject to the requirements of this rule since it has a storage volume of greater than 19,815 gallons and stores organic liquids, which is any liquid containing VOCs. Continued compliance with the applicable requirements of this rule is expected.

- Reg. IX:** Standards of Performance for New Stationary Sources:
40CFR60, Subpart K (*Construction, Reconstruction or Modification after 6-1-73 and prior to 5-19-78*)
40CFR60, Subpart Ka (*Construction, Reconstruction or Modification after 5-18-78 and prior to 7-23-84*)
40CFR60, Subpart Kb (*Construction, Reconstruction or Modification after 7-23-84*)

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The subject tank was installed in 1971. Although there is a 3 lb/d increase in emissions from this modification, there is no capital cost associated with it. Therefore, the said equipment is not subject to any of these subparts.

40CFR63 Subpart R The facility is not subject to this regulation but perform recording keeping as a “minor source”

Rule 1149 Compliance with tank cleaning and degassing requirements of this rule is expected. The proposed modification should bring the tank into compliance with the drain-dry breakout tank definition under this rule.

Rule 1173 There are no new fugitive components associated with the change of condition. The applicant has maintenance and inspection program required by this rule.

Rule 1178 The subject internal floating roof tank is expected to comply with all the applicable requirements of this rule by the use of new Category “A” primary seal, Category “A” secondary seal, and use of gasketed fittings and covers. With these improvements being maintained to minimize VOCs in the vapor space above the internal floating roof of the tank, the LEL concentration limit should be reduced from 50% to 30% of LEL which is characteristic of tank improvements..

Reg. XIII: New Source Review
Emission Increase: An increase of 3 lb/day of ROG is expected from this modification, so Reg 13 is triggered.

BACT: The tank is already equipped with the current BACT which is a Category A primary and secondary seal

Modeling: There is no VOC dispersion modeling required under R1303(b)(1), Appendix A.

Offsets in the form of ERCs will be required.

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Rule 1401: There is an incremental increase in health risk from the modification. According to Appendix C, gasoline (the material currently allowed to be stored in the subject tank) contains most of the highest toxic compound concentration compared to the other commodities proposed to be handled in the said tank. The incremental increase in risk is less than one in a million, so compliance is expected.

CEQA: According to the District's CEQA Guidelines, the net emission increase threshold for significant effect for the pollutant expected from the project is:

ROG: 55 lbs/day

The proposed modification is not a significant project or part of a significant project requiring a CEQA document.

Reg. XXX: The facility is covered by an existing Title V Permit. The proposed equipment modification is a de minimus significant revision. The existing Title V permit would be revised to reflect the proposed modification and would be processed simultaneously with the Permit to Construct and Operate for the subject equipment. The AQMD engineering analysis along with the draft permit would be forwarded to the EPA for their review and comment on the application within a 45-day period as required under this regulation.

RECOMMENDATION:

Based on the foregoing evaluation and considering that compliance with all the applicable District Rules and Regulations is expected with the proposed modification, it is recommended that a Permit to Construct and Operate (P/C-P/O) be issued for storage tank no. 137 subject to attached conditions. It is further recommended that the current P/O R-E05139 issued under the previous AN02223E be inactivated upon approval of the new P/O for the subject equipment.

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PROJECT EMISSIONS SUMMARY (ROG)

Equipment	A/N	PostMod lb/hr	PreMod lb/day	PostMod lb/day	Increase lb/day
Station Sump	451878	0.007	---	0.17	0.17
Saturator Sump	451879	0.0002	---	0.005	0.005
Evaporation Pond	451881	0.000019	---	0.000465	0.000465
Tank CN-139	461445	0.75	13.29	18.07	4.78
Tank CN-140	461446	0.75	13.29	18.07	4.78
VRS	461447	2.92	70	70	0
Tank CN-137	492117	1.08	22.62	25.8	3.18
Total					12.9

ERC's needed = 4.78 + 4.78 + 3.18 = 12.74

*1.2 = **15 pounds**

(Note that individual equipment that emit less than one pound per day do not trigger Reg 13 so offsets are not required)

ERC's available under this COID:

AQ 008770 40 # INTERNAL -0 to 0