PO

COMPANY NAME AND ADDRESS

Pacific Terminals, LLC
5900 Cherry Avenue
Long Beach, CA 90805

ID 121727

mailing and equipment address

EQUIPMENT DESCRIPTION

APPLICATION NO. 499359

TITLE V REVISION

APPLICATION NO. 499360

WASTE WATER TREATMENT SYSTEM CONSISTING OF:

1. COVERED OIL WATER SEPARATOR, 3'-0"W. X 5'-0"L. X 5'-0"H., WITH AN INLET WATER TRANSFER PUMP AND AN OUTLET WATER TRANSFER PUMP.

2. FLOW CONTROL TANK, 6'-0"DIA. X 5'-0"H., 1,000 GALLONS CAPACITY.

3. FOUR LIQUID PHASE FILTERS, ROSEDALE MODEL LCO-8, EACH 1'-0"DIA. X 3'-0"H., AND EACH WITH A PARTICULATE FILTER BAG

4. TWO LIQUID PHASE ADSORBER VESSELS, EACH 4'-0"DIA. X 6'-0"H., EACH CONTAINING 2,000 LBS ORGANO CLAY.

5. TWO LIQUID PHASE ADSORBER VESSELS, EACH 4'-0"DIA. X 6'-0"H., EACH CONTAINING 2,000 LBS ACTIVATED CARBON.

6. THREE 55-GALLON GAS PHASE ACTIVATED CARBON ADSORPTION DRUMS, CONNECTED IN SERIES, PASSIVELY VENTING THE OIL WATER SEPARATOR.

HISTORY

Application Nos. 499359-60 were received on 6/30/2009. A/N 499360 was submitted for the permit required to operate an oil/water separator used to treat rain water runoff. This equipment was installed in 2002 and operated under the 5 mg/L VOC exemption in Rule 1176 for a period of time ending around 2005. The equipment has not been in operation since that time and requires maintenance before it can be operated again.

The exemption in Rule 1176 only applies to the VOC content of the water treated. However, there is no exemption in Rule 219 from written permit requirement for this equipment. Therefore, Rule 301 requires the 50% penalty fee in this case for operating without a Permit to Construct or Operate.

PROCESS DESCRIPTION

This facility receives, stores, and transfers petroleum products using storage tanks and pipelines. The oil/water separator is not connected to any storage tanks in the tank farm. It will only be used to treat primarily rain water runoff.

The applicant has indicated that operation of this equipment cannot comply with the 5 mg/L VOC exemption listed in Rule 1176 regarding monitoring requirements. Therefore, monitoring requirements will be required to comply with Rule 1176 requirements.

The subject equipment will be used to filter VOC's from the rain water with clay adsorbent followed by activated carbon adsorbent, and will be filtered for particulates, prior to discharging to the city sewer lines.

The oil/water separator unit will also be passively vented to three activated carbon canisters (55 gallon drums) in series to remove VOC vapors in the gas phase.

This system will process a maximum of 50 gallons/minute of water, 24 hours/day and 365 days/year. This is equivalent to a maximum of more than 10,000 gallons/day water treated. Therefore, fee schedule C applies to this equipment (BCAT 431803).

The applicant plans on monitoring the outlet of the carbon drums for breakthrough using a portable organic vapor analyzer (OVA).

This equipment will operate 24 hours/day, 7 days/week, and 52 weeks/year.

CALCULATIONS

APPLICANTS DATA

maximum throughput	72,000 gallons/day.
operating schedule	24 hrs/day 7 days/week 52 weeks/year

ASSUMPTIONS

1. APC system efficiency (due to passive venting) — 50%
2. Materials processed — oil film on ground mixed with rain water
3. Diesel fuel oil no. 2 will be used to model the emissions from the oil water separator using Tanks 4.09d program. Refer to Appendix A for calculations not shown.
4. The worst case X/Q dispersion factors from the tables in the Rule 1401 Risk Assessment Guidelines will be used to estimate health risk.
5. Emissions summary

	ROG	BENZENE
R1, lb/hr	0.0139	5.708E-06
R1, lb/day	0.3346	1.370E-04
R2, lb/hr	0.0070	2.854E-06
R2, lb/day	0.1673	6.849E-05
R2, lb/day (30 day average)	0.1673	6.849E-05
R2, lb/year	61.065	2.500E-02
R2, ton/yr	0.0305	0.0000

Note: Benzene is the main contributor to cancer risk, based on the compound list in Tanks 4.09d for diesel fuel oil no. 2. For other TAC's with minor health effects, refer to the appendix.

6. HRA summary

MICR SUMMARY	HRA
MICR, commercial (per million population)	0.019
MICR, residential (per million population)	0.099

ACUTE HAZARD INDEX
TARGET ORGANS AFFECTED

AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CHRONIC HAZARD INDEX--COMMERCIAL
TARGET ORGANS AFFECTED

AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN	CEQA
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

CHRONIC HAZARD INDEX--RESIDENTIAL
TARGET ORGANS AFFECTED

AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN	CEQA
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

EVALUATION

CEQA

The CEQA form submitted did not indicate applicability, and emissions increases resulting from the installation and operation of this equipment are not expected to cause emission levels which will trigger the requirement for a CEQA EIR evaluation and associated notifications.

RULE 212

This equipment is not located within 1,000 feet of the outer boundary of a school, the increases of air contaminants are less than the significant levels indicated in this rule, the increase in cancer risk is less than one in a million, and all hazard indices are less than 1. Therefore, public notice pursuant to this rule is not required.

RULE 401

Based on the nature of this equipment, visible emissions are not expected. Therefore, compliance with this rule is expected.

RULE 402

Since this equipment will be vented to carbon canisters, odors at nuisance levels are not expected. Therefore, compliance with this rules is expected.

RULE 1176

Periodic monitoring, as described in permit conditions, will ensure compliance with this rule.

REGULATION XIII

The emissions from this equipment are only 0.17 lbs/day (30 day average). Since this is less than 1 lb/day, emission offsets are not required and a BACT evaluation is not required.

RULE 1401

The oil water separator is in compliance with Rule 1401 and it will have a negligible increase in health risk, in the worst case, which will be less than the amounts indicated below:

RECEPTOR	MICR
MICR, commercial (per million population)	0.019
MICR, residential (per million population)	0.099

The MICR is due mainly to benzene. The acute and chronic hazard indices are all less than 0.001, as indicated in the CALCULATIONS part of this report.

DISCUSSION

Calculations indicate that compliance is expected with all applicable rules and regulations. The oil water separator will be passively vented to a carbon adsorber. The applicant has proposed a 500 PPMv limit on the carbon adsorber outlet to verify that breakthrough has occurred. There is no applicable rule requirement for this suggested condition. The oil water separator is requires Rule 1176 monitoring. The 500 PPMv fugitive vapor concentration limit required by this rule will ensure that this equipment is vapor tight.

The main purpose for the carbon adsorber is to minimize the potential for odor nuisance. However, since the oil water separator is passively vented (no exhaust blower), the efficiency of

the proposed carbon drums is questionable. It has been assumed that the overall control efficiency will be 50% (in contrast to the assumption of 99% made by the applicant.)

The applicant has chosen to use an EPA emission factor for a covered oil water separator and has estimated a maximum emission rate of 0.14 lbs/day. This is in agreement with the current estimate of 0.17 lbs/day using Tanks 4.09d and maximum operating conditions.

Permit conditions are required to ensure that emission levels do not trigger odor nuisance, due to excess vapor leaks, and to ensure compliance with Rule 1176. Rule 1176 is applicable because there is a possibility that small amounts of process water may become mixed with rain water runoff which is treated by the subject equipment. To ensure compliance, vapor monitoring, using an OVA, will be incorporated into recommended permit conditions.

Since this equipment is already constructed and has previously been operated, a Permit to Operate will be issued in this case.

RECOMMENDATION

APPLICATION NO. 499359

APPROVE RECLAIM PERMIT REVISION

APPLICATION NO. 499360

Issue Permit to Operate in Section D of the Facility Permit subject to the following conditions:

1. OPERATION OF THIS EQUIPMENT SHALL BE CONDUCTED IN ACCORDANCE WITH ALL DATA AND SPECIFICATIONS SUBMITTED WITH THE APPLICATION UNDER WHICH THIS PERMIT IS ISSUED UNLESS OTHERWISE NOTED BELOW.

   [RULE 204]

2. THIS EQUIPMENT SHALL BE PROPERLY MAINTAINED AND KEPT IN GOOD OPERATING CONDITION AT ALL TIMES.

   [RULE 204]

3. THIS EQUIPMENT SHALL ONLY BE USED TO PROCESS WASTE WATER CONSISTING PRIMARILY OF RAIN WATER RUNOFF.

   [RULE 204]

4. THIS EQUIPMENT SHALL COMPLY WITH THE APPLICABLE REQUIREMENTS OF RULE 1176.

   [RULE 1176]

5. THE OPERATOR SHALL MONITOR THE HYDROCARBON CONCENTRATION AT THE OUTLET OF THE CARBON ADSORBER AT LEAST ONCE PER MONTH. THE OPERATOR SHALL USE A DISTRICT APPROVED ORGANIC VAPOR ANALYZER (OVA) TO MONITOR THE HYDROCARBON CONCENTRATION. THE OVA SHALL MEET THE REQUIREMENTS OF EPA METHOD 21. THE OPERATOR SHALL CALIBRATE THE OVA USED TO MONITOR THE HYDROCARBON CONCENTRATION IN PPMv METHANE.

   [RULE 204, RULE 1176]

6. THE OPERATOR SHALL REPLACE THE SPENT CARBON WITH FRESH ACTIVATED CARBON IN THE ADSORBER WHENEVER BREAKTHROUGH OCCURS. FOR THE PURPOSE OF THIS CONDITION, BREAKTHROUGH OCCURS WHEN THE OVA READING INDICATES A CONCENTRATION OF 500 PPMv OR HIGHER, AS METHANE, AT THE OUTLET OF THE FINAL CARBON ADSORBER.

   [RULE 204, RULE 1176]

7. THE OPERATOR SHALL KEEP ALL SPENT CARBON IN A TIGHTLY COVERED CONTAINER WHICH SHALL REMAIN CLOSED EXCEPT WHEN IT IS BEING TRANSFERRED INTO OR OUT OF THE CONTAINER.

   [RULE 204]

8. THE OPERATOR SHALL KEEP RECORDS, IN A MANNER APPROVED BY THE DISTRICT, FOR THE FOLLOWING PARAMETER(S) OR ITEM(S):

   A. DATE, TIME, AND OVA READING EACH TIME THE CONCENTRATION IS MEASURED AT THE OUTLET OF THE CARBON ADSORBER.

   B. DATE AND TIME THE SPENT CARBON IS REPLACED.

   [RULE 3004(a)(4)-PERIODIC MONITORING, RULE 402]

APPENDIX A: Calculations

COMPUTATIONS

Oil Water Separator Overall Dimensions:

W = 3.00 feet
L = 5.00 feet
H = 5.00 feet

$A = 3\ ft \times 5\ ft = 15\ ft^2$

Calculation of equivalent diameter

$Deq = (4A/\pi)^{1/2} = (4*15/\pi)^{1/2} = 4.37\ ft$

Volume (applicant's data) = 336.64 gal + 67.22 gal = 404 gal = 54 ft^3

Water flow rate = 50 gal/min x 60 x 24 x 365 = 26,280,000 gal/year
= 26,280,000/404 = 65,050 turnovers/year
(equivalent for Tank 4.09d calculations)

Equivalent liquid volume dimensions: H = 3.6 ft
DIA = 4.37 ft

TANKS 4.0.9d

Emissions Report - Detail Format

Tank Identification and Physical Characteristics

Identification	
User Identification:	AN499360
City:	Long Beach
State:	California
Company:	PACIFIC PIPELINE SYSTEM LLC
Type of Tank:	Vertical Fixed Roof Tank
Description:	OIL WATER SEPARATOR
Tank Dimensions	
Shell Height (ft):	5.00
Diameter (ft):	4.37
Liquid Height (ft) :	3.60
Avg. Liquid Height (ft):	3.60
Volume (gallons):	404.00
Turnovers:	65,049.50
Net Throughput(gal/yr):	26,280,200.00
Is Tank Heated (y/n):	N
Paint Characteristics	
Shell Color/Shade:	Aluminum/Specular
Shell Condition	Good
Roof Color/Shade:	Aluminum/Specular
Roof Condition:	Good
Roof Characteristics	
Type:	Dome
Height (ft)	0.00
Radius (ft) (Dome Roof)	4.37
Breather Vent Settings	
Vacuum Settings (psig):	-0.03
Pressure Settings (psig)	0.03

Meteorological Data used in Emissions Calculations: Long Beach, California (Avg Atmospheric Pressure = 14.7 psia)

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

AN499360 - Vertical Fixed Roof Tank
Long Beach, California

Mixture/Component	Month	Daily Liquid Surf. Temperature (deg F) Avg.	Min.	Max.	Liquid Bulk Temp (deg F)	Vapor Pressure (psia) Avg	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Distillate fuel oil no. 2	All	69.90	62.04	77.76	65.65	0.0090	0.0070	0.0113	130.0000			188.00	Option 1: VP60 = .0065 VP70 = .009
1,2,4-Trimethylbenzene						0.0301	0.0222	0.0404	120.1900	0.0100	0.0485	120.19	Option 2: A=7.04383, B=1573.267, C=208.56
Benzene						1.5273	1.2356	1.8738	78.1100	0.0000	0.0020	78.11	Option 2: A=6.905, B=1211.033, C=220.79
Ethylbenzene						0.1520	0.1165	0.1963	106.1700	0.0001	0.0032	106.17	Option 2: A=6.975, B=1424.255, C=213.21
Hexane (-n)						2.4614	2.0174	2.9823	86.1700	0.0000	0.0004	86.17	Option 2: A=6.876, B=1171.17, C=224.41
Toluene						0.4462	0.3517	0.5613	92.1300	0.0003	0.0230	92.13	Option 2: A=6.954, B=1344.8, C=219.48
Unidentified Components						0.0077	0.0068	0.0072	134.5098	0.9866	0.8636	189.60	
Xylene (-m)						0.1270	0.0971	0.1645	106.1700	0.0029	0.0593	106.17	Option 2: A=7.009, B=1462.266, C=215.11

AN499360 - Vertical Fixed Roof Tank
Long Beach, California

Annual Emission Calculations	
Standing Losses (lb):	0.1061
Vapor Space Volume (cu ft):	25.4938
Vapor Density (lb/cu ft):	0.0002
Vapor Space Expansion Factor	0.0556
Vented Vapor Saturation Factor	0.9992
Tank Vapor Space Volume:	
Vapor Space Volume (cu ft):	25.4938
Tank Diameter (ft):	4.3700
Vapor Space Outage (ft):	1.6997
Tank Shell Height (ft):	5.0000
Average Liquid Height (ft):	3.6000
Roof Outage (ft):	0.2997
Roof Outage (Dome Roof)	
Roof Outage (ft):	0.2997
Dome Radius (ft):	4.3700
Shell Radius (ft):	2.1850
Vapor Density	
Vapor Density (lb/cu ft):	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0090
Daily Avg. Liquid Surface Temp. (deg. R):	529.5710
Daily Average Ambient Temp. (deg. F):	64.3083
Ideal Gas Constant R	
(psia cuft / (lb-mol-deg R)):	10.731
Liquid Bulk Temperature (deg. R)	525.3183
Tank Paint Solar Absorptance (Shell):	0.3900
Tank Paint Solar Absorptance (Roof):	0.3900
Daily Total Solar Insulation	

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

ENGINEERING AND COMPLIANCE

APPLICATION PROCESSING AND CALCULATIONS

Factor (Btu/sqft day):	1,571.6498
Vapor Space Expansion Factor	
Vapor Space Expansion Factor:	0.0556
Daily Vapor Temperature Range (deg. R):	31.4304
Daily Vapor Pressure Range (psia):	0.0043
Breather Vent Press. Setting Range(psia):	0.0600
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0090
Vapor Pressure at Daily Minimum Liquid	
Surface Temperature (psia):	0.0070
Vapor Pressure at Daily Maximum Liquid	
Surface Temperature (psia):	0.0113
Daily Avg. Liquid Surface Temp. (deg R):	529.5710
Daily Min. Liquid Surface Temp. (deg R):	521.7134
Daily Max. Liquid Surface Temp. (deg R):	537.4286
Daily Ambient Temp. Range (deg. R):	19.8167
Vented Vapor Saturation Factor	
Vented Vapor Saturation Factor:	0.9992
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0090
Vapor Space Outage (ft):	1.6997
Working Losses (lb):	122.0153
Vapor Molecular Weight (lb/lb-mole):	130.0000
Vapor Pressure at Daily Average Liquid	
Surface Temperature (psia):	0.0090
Annual Net Throughput (gal/yr.):	26,280,200.000 0
Annual Turnovers:	65,049.5000
Turnover Factor:	0.1671
Maximum Liquid Volume (gal):	404.0000
Maximum Liquid Height (ft):	3.6008
Tank Diameter (ft):	4.3700
Working Loss Product Factor:	1.0000
Total Losses (lb):	122.1224

TANKS 4.0.9d
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Emissions Report for: Annual

AN499360 - Vertical Fixed Roof Tank
Long Beach, California

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Distillate fuel oil no. 2	122.02	0.11	122.12
Hexane (-n)	0.05	0.00	0.05
Benzene	0.24	0.00	0.24
Toluene	2.81	0.00	2.81
Ethylbenzene	0.39	0.00	0.39
Xylene (-m)	7.24	0.01	7.25
1,2,4-Trimethylbenzene	5.92	0.01	5.92
Unidentified Components	105.38	0.09	105.47

RULE 1401 SCREENING RISK ASSESSMENT

EMISSIONS SUMMARY

A/N 499360

HOURS/DAY:	24.00
DAYS/WEEK:	7.00
OPERATING SCHED: WEEKS/YEAR:	52.00
(DAILY AND ANNUAL) DAYS/YEAR:	365.00

DEFINITIONS:	
AF work =	1.00
AF res =	1.00
EVF work =	0.38
EVF res =	0.96
DBR work =	149.00
DBR res =	302.00

	ROG	C1	C2	C3	C4	C5	C6						
R1, lb/hr	0.0139	5.708E-06	2.740E-05	3.208E-04	4.452E-05	8.276E-04	6.758E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R1, lb/day	0.3346	1.370E-04	6.575E-04	7.699E-03	1.068E-03	1.986E-02	1.622E-02	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R2, lb/hr	0.0070	2.854E-06	1.370E-05	1.604E-04	2.226E-05	4.138E-04	3.379E-04	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R2, lb/day	0.1673	6.849E-05	3.288E-04	3.849E-03	5.342E-04	9.932E-03	8.110E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R2, lb/day (30 day average)	0.1673	6.849E-05	3.288E-04	3.849E-03	5.342E-04	9.932E-03	8.110E-03	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R2, lb/year	61.0850	2.500E-02	1.200E-01	1.405E+00	1.950E-01	3.625E+00	2.960E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
R2, ton/yr	0.0305	0.0000	0.0001	0.0007	0.0001	0.0018	0.0015	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

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24 **RULE 1401 HEALTH RISK SCREENING**

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26 **ABBREVIATIONS:**

	Toxic air contam.		MICR CP	MICR MPr	MICR MPw	CHRONIC REL	CHRONIC MPr	CHRONIC MPw	ACUTE REL	ACUTE AVE HRS	ACUTE AVE FACTOR (AF)
29	Hexane (-n)	C1	NA	NA	NA	7.00E+03	1.00	1.00	NA	NA	1.00
30	Benzene	C2	1.00E-01	1.00	1.00	6.00E+01	1.00	1.00	1.30E+03	6.00	0.78
31	Toluene	C3	NA	NA	NA	3.00E+02	1.00	1.00	3.70E+04	1.00	1.00
32	Ethylbenzene	C4	8.70E-03	1.00	1.00	2.00E+03	1.00	1.00	NA	NA	1.00
33	Xylene (-m)	C5	NA	NA	NA	7.00E+02	1.00	1.00	2.20E+04	1.00	1.00
34	1,2,4-Trimethylbenzene	C6	NA	NA	NA	NA	NA	NA	NA	NA	1.00
35			NA	NA	NA	NA	NA	NA	NA	NA	1.00
36			NA	NA	NA	NA	NA	NA	NA	NA	1.00
37			NA	NA	NA	NA	NA	NA	NA	NA	1.00
38			NA	NA	NA	NA	NA	NA	NA	NA	1.00
39			NA	NA	NA	NA	NA	NA	NA	NA	1.00
40			NA	NA	NA	NA	NA	NA	NA	NA	1.00

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	Receptor Type	Source Type	Dispersion Factor ug/m^3/ tn/yr, av.	Dispersion Factor ug/m^3/ lb/hr, max.	Receptor Distance (Meters)	
42						
43						
44						
45						
46	commercial	Point	49.6800	2719.9800	25	(Based on Tier II worst case point source factor for 25 meters)
47	residential	Point	49.6800	2719.9800	25	(Based on Tier II worst case point source factor for 25 meters)

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CALCULATION OF CANCER RISK

RULE 1401 SCREENING RISK ASSESSMENT (TIER 2 OR 3), COMMERCIAL RECEPTORS (FOR TIER 3: SET MET = 1)

STACK	COMPOUND	(Q) Max Emissions Tons/Yr	(X/Q) DISPERSION FACTOR (ug/M3)/(ton/yr)	(CP) Cancer Potency 1/(mg/Kg*day)	(MP) Multi-Pathway FACTOR	(DBR) Daily Breath Rate L/(Kg*day)	(AF) Annual Concentration FACTOR	(EVF) Exposure Value FACTOR	(MET) METEORO-LOGICAL FACTOR	UNIT CORRECT FACTOR (mg*m3)/(ug*L)	(MICR) HEALTH RISK	(MICR) PER MILLION POPULATION
Point	C1	1.250E-05	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point	C2	6.000E-05	49.6800	1.00E-01	1.00	149	1.00	0.38	1	1.00E-06	1.69E-08	0.017
Point	C3	7.025E-04	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point	C4	9.750E-05	49.6800	6.70E-03	1.00	149	1.00	0.38	1	1.00E-06	2.39E-09	0.002
Point	C5	1.813E-03	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point	C6	1.480E-03	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	149	1.00	0.38	1	1.00E-06	0.00E+00	0.000
									TOTAL =		**1.93E-08**	**0.019**

RULE 1401 SCREENING RISK ASSESSMENT (TIER 2 OR 3), RESIDENTIAL RECEPTORS: (FOR TIER 3: SET MET = 1)

STACK	COMPOUND	(Q) Max Emissions Tons/Yr	(X/Q) DISPERSION FACTOR (ug/M3)/(ton/yr)	(CP) Cancer Potency 1/(mg/Kg*day)	(MP) Multi-Pathway FACTOR	(DBR) Daily Breath Rate L/(Kg*day)	(AF) Annual Concentration FACTOR	(EVF) Exposure Value FACTOR	(MET) METEORO-LOGICAL FACTOR	UNIT CORRECT FACTOR (mg*m3)/(ug*L)	(MICR) HEALTH RISK	(MICR) PER MILLION POPULATION
Point	C1	1.250E-05	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point	C2	6.000E-05	49.6800	1.000E-01	1.00	302	1	0.96	1	1.00E-06	8.64E-08	0.086
Point	C3	7.025E-04	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point	C4	9.750E-05	49.6800	8.700E-03	1.00	302	1	0.96	1	1.00E-06	1.22E-08	0.012
Point	C5	1.813E-03	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point	C6	1.480E-03	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
Point		0.000E+00	49.6800	NA	NA	302	1	0.96	1	1.00E-06	0.00E+00	0.000
									TOTAL =		**9.86E-08**	**0.099**

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ACUTE HAZARD INDEX CALCULATION

TARGET ORGANS AFFECTED

TAC	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
C1										
C2			x		x	x		x		
C3			x	x			x	x	x	
C4										
C5				x					x	
C6										

ACUTE HAZARD INDEX

TAC	Q, LBS/HR	X	X/Q, HRLY	/	REL	X	AF	=	HIA
C1	2.854E-06		2719.98		NA		1.00		0.00000
C2	1.370E-05		2719.98		1300.00		0.78		0.00002
C3	1.604E-04		2719.98		37000.00		1.00		0.00001
C4	2.226E-05		2719.98		NA		1.00		0.00000
C5	4.138E-04		2719.98		22000.00		1.00		0.00005
C6	3.379E-04		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
	0.000E+00		2719.98		NA		1.00		0.00000
								TOTAL =	0.00009

130 ACUTE HAZARD INDEX
131 TARGET ORGANS AFFECTED

132 TAC	AL	CV	DEV	EYE	HEM	IMM	NS	REP	RESP	SKIN
133 C1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
134 C2	NA	NA	0.000	NA	0.000	0.000	NA	0.000	NA	NA
135 C3	NA	NA	0.000	0.000	NA	NA	0.000	0.000	0.000	NA
136 C4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
137 C5	NA	NA	NA	0.000	NA	NA	NA	NA	0.000	NA
138 C6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
139	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
140	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
141	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
142	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
143	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
144	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
145 TOTALS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

146

147 CHRONIC HAZARD INDEX CALCULATION
148 TARGET ORGANS AFFECTED

149 TAC ID	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN	CEQA
150 C1										x				x
151 C2				x			x			x				x
152 C3				x						x		x		x
153 C4	x			x	x				x					x
154 C5										x		x		x
155 C6														
156														
157														
158														
159														
160														
161														

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163 CALCULATION OF CHRONIC HAZARD INDEX FOR CEQA SCREENING

164 CHRONIC HAZARD INDEX -- COMMERCIAL

	TAC	Q,TONS/YR	X	X/Q, YRLY	X	MP	X	MET	/	REL	=	HIC
165												
166	C1	1.250E-05		49.68		1.00		1		7000.00		0.00000
167	C2	6.000E-05		49.68		1.00		1		60.00		0.00005
168	C3	7.025E-04		49.68		1.00		1		300.00		0.00012
169	C4	9.750E-05		49.68		1.00		1		2000.00		0.00000
170	C5	1.813E-03		49.68		1.00		1		700.00		0.00013
171	C6	1.480E-03		49.68		NA		1		NA		0.00000
172		0.000E+00		49.68		NA		1		NA		0.00000
173		0.000E+00		49.68		NA		1		NA		0.00000
174		0.000E+00		49.68		NA		1		NA		0.00000
175		0.000E+00		49.68		NA		1		NA		0.00000
176		0.000E+00		49.68		NA		1		NA		0.00000
177		0.000E+00		49.68		NA		1		NA		0.00000
178												
179											TOTAL =	0.00030

180

181 CHRONIC HAZARD INDEX--COMMERCIAL

182 TARGET ORGANS AFFECTED

	TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN	CEQA
183															
184	C1	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	NA	NA	NA	0.000
185	C2	NA	NA	NA	0.000	NA	NA	0.000	NA	NA	0.000	NA	NA	NA	0.000
186	C3	NA	NA	NA	0.000	NA	NA	NA	NA	NA	0.000	NA	0.000	NA	0.000
187	C4	0.000	NA	NA	0.000	0.000	NA	NA	NA	0.000	NA	NA	NA	NA	0.000
188	C5	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	NA	0.000	NA	0.000
189	C6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
190		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
191		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
192		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
193		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
194		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
195		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
196	TOTALS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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198 CALCULATION OF CHRONIC HAZARD INDEX FOR CEQA SCREENING

199 CHRONIC HAZARD INDEX -- RESIDENTIAL

	TAC	Q,TONS/YR	X	X/Q, YRLY	X	MP	X	MET	/	REL	=	HIC
200												
201	C1	1.250E-05		49.68		1.00		1		7000.00		0.00000
202	C2	6.000E-05		49.68		1.00		1		60.00		0.00005
203	C3	7.025E-04		49.68		1.00		1		300.00		0.00012
204	C4	9.750E-05		49.68		1.00		1		2000.00		0.00000
205	C5	1.813E-03		49.68		1.00		1		700.00		0.00013
206	C6	1.480E-03		49.68		NA		1		NA		0.00000
207		0.000E+00		49.68		NA		1		NA		0.00000
208		0.000E+00		49.68		NA		1		NA		0.00000
209		0.000E+00		49.68		NA		1		NA		0.00000
210		0.000E+00		49.68		NA		1		NA		0.00000
211		0.000E+00		49.68		NA		1		NA		0.00000
212		0.000E+00		49.68		NA		1		NA		0.00000
213												
214											TOTAL =	0.00030

215

216 CHRONIC HAZARD INDEX--RESIDENTIAL

217 TARGET ORGANS AFFECTED

	TAC	AL	BN	CV	DEV	END	EYE	HEM	IMM	KID	NS	REP	RESP	SKIN	CEQA
218															
219	C1	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	NA	NA	NA	0.000
220	C2	NA	NA	NA	0.000	NA	NA	0.000	NA	NA	0.000	NA	NA	NA	0.000
221	C3	NA	NA	NA	0.000	NA	NA	NA	NA	NA	0.000	NA	0.000	NA	0.000
222	C4	0.000	NA	NA	0.000	0.000	NA	NA	NA	0.000	NA	NA	NA	NA	0.000
223	C5	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.000	NA	0.000	NA	0.000
224	C6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
225		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
226		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
227		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
228		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
229		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
230		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
231	TOTALS	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

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