SFV 1/23/01

Chevron

January 19, 2001

Ms. Sandra F. Veazey
Division of Air Resource Management
Florida Department of Environmental Protection
160 Government Center
Pensacola, Florida 32501-5794

Subject: Revised Application to Construct a Third Loading Land and Modify Air Emissions Units for the Panama City Terminal

Dear Ms. Veazey:

Enclosed are three copies of the revised application to the Panama City Terminal. Please review this application and if you have any questions please call me at 770-984-3016.

Please apply the check that was attached with the first application for this revised application. Since there is a difference in amounts we will ask for a refund at a later date.

Thank you for your help and attention on this matter.

Sincerely,

Louis C. Milkint, Jr.

Louis C. Milkint, Jr.
Terminal Environmental Health and Safety

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Application to Construct a Third Loading Lane and Modify Air Emissions Units

Chevron Products Company
Panama City Terminal
Facility ID No. 0050056

Prepared for:
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Panama City Terminal
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Panama City, Florida 32401

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1.0 Introduction

Chevron Products Company (Chevron) operates a bulk petroleum products distribution terminal in Panama City, Bay County, Florida. The facility receives a variety of refined bulk petroleum products by barge, stores those products in a variety of fixed and floating roof storage tanks, and distributes these products by tank truck (Standard Industrial Classification [SIC] Code 5171). This facility does not distribute petroleum products via marine vessel.

The Citgo terminal located in Panama City is planning to close during the end of 2000. After this closing, Chevron will be the sole provider of gasoline and diesel for the Panama City area. In order to meet the current and future demands of area businesses, Chevron proposes to add a third loading lane to its loading rack operations, increase the loading rack's maximum allowable hourly and annual throughput limits and make minor changes to the current storage tank configuration. The facility is currently operating under State of Florida Department of Environmental Protection (FDEP) Permit No. 0050056004AC, issued on 01/17/1996 and subsequently amended on 08/12/97 and 06/09/98. The current operating permit is a Federally Enforceable State Operating Permit (FESOP) to operate the facility under enforceable limitations which prevent the facility from being a major source under the Title V Operating Permit program. Emissions from the post-modified facility are estimated to be less than major source emissions thresholds; therefore, the Panama City terminal will remain a Synthetic Minor source.

Since Chevron is a Synthetic Minor facility and plans to construct emission units which emit regulated air pollutants, a permit to construct is required. This application constitutes Chevron's request for a permit to construct and modify air emissions units. This application fulfills the requirements of DEP Rules 62-4.210 F.A.C. and 62-210.300 F.A.C.

This construction permit application is intended to meet the requirements of the Florida Department of Environmental Protection (FDEP). To meet these requirements, this submittal is organized into five (5) sections with additional appendices. The five main sections and appendices are as follows:

Section 1.0 (Introduction) provides background information on the Panama City terminal and the permit application and identifies the contact personnel. Section 1.0 also contains a description of the proposed construction project and the conclusions documented in the application. A summary of the permit application organization is provided.

Section 2.0 (Facility Site Information) contains information concerning the Panama City terminal's location and physical setting as well as the attainment classification of the area for designated criteria pollutants.

Section 3.0 (Emission Estimates) contains summary information on emissions from the modified facility.

Section 4.0 (Regulatory Review) presents the results and conclusions of a detailed regulatory review for the proposed modification project.

Section 5.0 (Proposed Permit Conditions/Modifications) contains suggested permit condition revisions to the existing FESOP operating permit concerning this project.

Appendix A (Permit Application Forms) contains the required Florida DEP application forms and supplemental attachments.

Appendix B (Emissions Calculations) contains detailed air emissions calculations and supporting documentation.

1.1 Proposed Construction Project Description

To meet the petroleum product supply requirements of area businesses after the Citgo terminal closes, Chevron proposes to install a third loading lane to its loading rack operations and to modify the loading rack's current permitted throughput limits as follows:

- Change the maximum allowable hourly operating rate of the loading rack from 64,000 gallons per hour to 96,000 gallons per hour (See Appendix A, Attachment D for design specification data for the vapor combustion unit (VCU));
- Change the maximum allowable annual throughput limit for high volatile products (gasoline, aviation gasoline) from 146,240,000 gallons per year to 325,760,000 gallons per year; and
- Change the maximum allowable annual throughput limit for low volatile products (diesel, Jet A) from 28,760,000 gallons per year to 57,490,000 gallons per year.

Also, Chevron proposes to change the terminal's maximum allowable VOC emissions rate as follows.

- Change the facility-wide maximum allowable VOC emissions rate from 48.9 tons per year to 80.7 tons per year.

In addition, Chevron proposes to include the following existing tanks in its current operating permit.

- Tank 02 – Tank for storing fire protection water
- Tank 14 – 12,000 gallon fixed roof tank for storing additive
- PT #1 – Underground 12,000 gallon process tank (PT) for collecting petroleum contaminated water (PCW) from the loading rack and storage tank areas before the PCW is sent to the oil/water separator (O/S #1)
- PT #2 – Underground 126 gallon process tank for collecting PCW from the dock drain before the PCW is sent to O/S #1

Other proposed changes to the facility include altering the configuration of select storage tanks as described below.

- Tank 03 – removed
- Tank 95 – changing tank service from containing additive to empty/out-of-service
- O/S #2 – delete this unit ID since it erroneously refers to either PT #1 or PT #2

Permit No. 0050056004AC was amended on 08/12/97 to include Tank 1 as being taken out-of-service and to install an internal floating roof in Tank 66 prior to changing the service of Tank 66 from diesel to gasoline. Both of these projects have been completed. To meet the requirements of 40 CFR 60.112b(a)(1), Tank 66 has an internal floating roof with primary seals (mechanical shoe) and secondary seals (shoe mounted). Permit No. 0050056004AC was amended again on 06/09/98 to include the installation of Tanks 22 and 23. These fixed roof additive tanks have been installed at the terminal.

Table 1-1 on the following page summarizes the proposed tank configuration data for the modified Panama City terminal.

1.2 Application Contacts

The Contact Person for additional information about this permit application submittal is Louis Milkint, Terminal Environmental, Health, & Safety Specialist. Mr. Milkint can be reached by telephone at (770) 984-3016.

1.3 Conclusions

The documentation provided in this permit application supports the conclusion that the proposed modified facility would not result in an increase of facility-wide actual emissions above FESOP applicability thresholds (VOC $\leq$ 99.9 tpy; total HAP $\leq$ 24.9 tpy; and individual HAP $\leq$ 9.9 tpy). Based on the specifications for the facility and estimated emission rates, Chevron has demonstrated compliance with all applicable air regulatory requirements. A $3,250 application fee is required for this application (EU 001 - $2,000; EU 002 - $250; EU 003 - $250, EU 004 - $ 250; EU 005 - $250; and EU 006 - $250).

Table 1-1. Chevron Panama City Terminal
Modified Facility Emission Unit Summary Table

Group ID	Source ID	Tank Description	Vapor Pressure of Liquid Stored	
			≤ 1.5 psia	> 1.5 psia
VCU	001	Vapor Combustion Unit (Controls emissions from loading rack)	N/A	N/A
Tank 66	002	Internal Floating Roof Storage Tank (703,374 gal)	✓	
Tank 67	002	Internal Floating Roof Storage Tank (699,552 gal)	✓	
Tank 78	002	Internal Floating Roof Storage Tank (1,053,990 gal)	✓	
Tank 84	002	External Floating Roof (Domed) (1,103,940)	✓	
Tank 25	003	Fixed Roof Storage Tank (852,222 gal)		✓
Tank 62	003	Fixed Roof Storage Tank (211,492 gal)		✓
Tank 63	003	Fixed Roof Storage Tank (211,492 gal)		✓
Tank 14	004	Fixed Roof Storage Tank (12,000 gal)		✓
Tank 17	004	Fixed Roof Storage Tank (5,838 gal)		✓
Tank 18	004	Fixed Roof Storage Tank (4,000 gal)		✓
Tank 20	004	Fixed Roof Storage Tank (250 gal)	See Note a	See Note a
Tank 21	004	Fixed Roof Storage Tank (5,800 gal)		✓
Tank 22	004	Fixed Roof Storage Tank (8,148 gal)		✓
Tank 23	004	Fixed Roof Storage Tank (3,906 gal)		✓
Tank 96[b]	004	Fixed Roof Storage Tank (11,550 gal)	✓	
O/S #1	005	Oil/Water Separator	See Note c	See Note c
PT #1[d]	005	Underground Process Tank for PCW (12,000 gal)	See Note c	See Note c
PT #2[d]	005	Underground Process Tank for PCW (126 gal)	See Note c	See Note c
Tank 2	005	Fire Protection Water	N/A	N/A
Tank Ev.	005	Water Evaporation Tank[f]	N/A	N/A
Fl/V/Pu	006	Flanges/valves/pumps	✓	
Truck	006	Tank Truck Loading	N/A	N/A

a. This is the Flare Drop-out Tank. This tank is currently dry.
b. Tank 96 contains slop which may consist of any mixture of products stored at this facility (i.e., gasoline, diesel, water, etc.). For emissions estimation purposes, slop is simulated as gasoline, which is the most volatile product currently handled at this terminal.
c. These storage and process tanks contain petroleum contaminated water (PCW). PCW contains water and a mixture of any of the products stored at this facility. For emissions estimation purposes, the oil component of PCW is assumed to be gasoline.
d. These units are process tanks (PT). PT #1 collects PCW from the loading rack and storage tank areas before sending the PCW to O/S #1. PT #2 collects PCW from the Dock Drain before sending the PCW to O/S #1.
e. This tank stores "clean" water that is evaporated to the atmosphere.

2.0 Site Information

The Panama City terminal is located at 525 West Beach Drive, Panama City, Florida, approximately 3.5 miles south of the Panama City International Airport. The major components of the bulk petroleum products distribution terminal include fixed roof tanks, internal floating roof tanks, domed external floating roof tanks and product loading racks with associated emissions control equipment. Areas surrounding the facility are a combination of industrial, commercial, and residential sites. Attachment A of Appendix A is an area map showing the facility's location. Attachment B of Appendix A contains a facility plot plan, providing the location of emissions sources at the facility.

The attainment status for Bay County is as follows:

- Unclassifiable or attainment for all criteria pollutants.

3.0 Emission Estimates

Emission estimates for regulated air pollutants for the proposed modified facility were calculated. These estimates provide the basis for the regulatory conclusions documented in this permit application. A detailed description of the calculations and documentation supporting the emission estimates presented in this permit application are included in Appendix B.

3.1 Modified Facility Emissions

The Panama City terminal is currently operating under a Federally Enforceable State Operating Permit. The FESOP operating permit is intended to prevent the facility from being classified as a major source under the Title V Operating Permit program. Therefore, limited potential emissions of regulated pollutants from the proposed modified facility were calculated to determine compliance with the proposed FESOP emissions limitations and are presented in Table 3.1.

Table 3.1 Panama City Terminal: Modified Facility Limited Potential Emissions

Pollutant	Modified Facility Future Actual Emissions (tons/year)	Synthetic Minor Applicability Limits	Emissions Below Major Source Status Threshold (Y/N)
CO	11.1	≤99.9 tpy	Y
NOx	2.04	≤99.9 tpy	Y
PM	1.13	≤99.9 tpy	Y
VOC	80.7	≤ 99.9 tpy	Y
Individual HAP[a]	2.12	≤ 9.9 tpy	Y
Total HAPs	5.19	≤ 24.9 tpy	Y

a Emissions for individual HAP are equal to emissions from the worst-case emitting HAP (i.e., hexane).

3.2 Emissions Estimation Methods

The emission estimates detailed in Appendix B of this application were performed using the following methods:

- For tank standing and working losses: EPA TANKS (Version 4.07);
- For loading racks: 35 mg/L as required by permit for gasoline products and EPA AP-42 equations for non-gasoline products;

- For fugitive emissions: 13 mg/L per a FDEP agreement on tank truck loading fugitives and American Petroleum Institute (API) emission factors for piping components;
- For CO, PM, and NOx emissions from the flare: Source test data and EPA AP-42 emissions factors.

4.0 Regulatory Review

This section documents a detailed regulatory review conducted in support of this permit application. All potentially applicable federal and state air quality regulations were reviewed, and the necessary emission inventories were performed to assess regulatory applicability and determine compliance methodologies for the proposed modified facility. Section 4.1 provides a review of PSD applicability to the proposed facility modification. 112(g) Rule (Case-by-Case MACT) applicability to the project is summarized in Section 4.2. Section 4.3 provides a discussion of New Source Performance Standards (NSPS) and Section 4.4 summarizes other federal and state regulations potentially applicable to the proposed project.

4.1 Prevention of Significant Deterioration

The PSD regulations are codified as 62-212.400 F.A.C. This regulation defines "major" source emission thresholds and "major" or "significant" emission increase thresholds for new construction, reconstruction, or modification.

The Panama City terminal is not one of the 28 listed source categories in Table 212.400-1 of 62-212.400 F.A.C.; therefore, the major source threshold of 250 tons/yr from 62-212.400(2)(d)(2)(a) applies for any PSD regulated air pollutant. Per Panama City's operating status as a Synthetic Minor source, the terminal's facility-wide emissions of PSD regulated pollutants are all below the applicable 250 ton/yr major source thresholds. The facility is a minor source with respect to these regulations. Therefore, the PSD applicability test applies only to the modification. No "actual-to-potential" test applies.

For this source category, a major modification to a minor source, as defined in 62-212.400(2)(d)(3), is a modification that itself would constitute a new major facility (i.e., increase emissions to the 250 tons/yr threshold for any PSD regulated pollutant). As documented in Table 3.1 and Appendix B of this application, this project will not increase facility-wide emissions above PSD major source emissions thresholds (i.e., 250 tpy VOC). Therefore, the project constitutes a minor modification to a minor source with respect to PSD regulations and, as such, PSD review requirements do not apply to the project.

4.2 112(g) Case-by-Case MACT

The 112(g) rule, or case-by-case MACT (40 CFR 63.40-63.44) applies to newly constructed facilities or facilities undergoing a reconstruction of a major source of hazardous air

pollutant (HAP) emissions (>10 tpy of any single listed HAP or >25 tpy of total HAPs) where no MACT exists. The 112(g), or Case-by-Case MACT, rule does not apply to this project since one intent of the terminal's FESOP is to allow the terminal not to be subject to the requirements of the Gasoline Distribution National Emission Standard for Hazardous Air Pollutants (NESHAP) (40 CFR 63 Subpart R).

4.3 New Source Performance Standards

40 CFR 60 Subpart XX

The requirements of New Source Performance Standards are found in 40 CFR Part 60. The loading rack and associated VCU are already subject to the requirements of 40 CFR 60 Subpart A, General Provisions and Subpart XX, Standards of Performance for Bulk Gasoline Terminals. Chevron will continue to comply with these requirements after installation of the third loading lane.

40 CFR 60 Subpart Kb

Tank 14 is subject to 40 CFR 60 Subpart Kb since it has a capacity greater than 40 cubic meters and it was constructed after July 23, 1984. However, per 40 CFR 60.110b(b), Tank 14 is only subject to the requirements found in 40 CFR 60.116b(a) and (b), and Tank 14 is exempt from the General Provisions of 40 CFR 60 Subpart A. To comply with 40 CFR 60.116b(a) and (b), Chevron will keep records on-site of the capacity and dimensions of Tank 14.

Tank 66 is also subject to the requirements of Subpart Kb. Tank 66 has an internal floating roof with primary seals (mechanical shoe) and secondary seals (shoe mounted). Summarized below in Table 4-1 is a list of tanks, capacities, installation/modification dates and whether the tank is subject to any requirements of 40 CFR 60 Subpart K, Ka or Kb (Standards of Performance for Storage Vessels for Petroleum Liquids).

Table 4-1 Summary of Applicability of 40 CFR 60 Subpart K, Ka and Kb

Group ID	Source ID	Tank Description	Installation (Modification) Date	Subject to Subpart K, Ka or Kb (Y/N)
Tank 66	002	Internal Floating Roof Storage Tank (703,374 gal)	07/1951 (1997)	Yes
Tank 67	002	Internal Floating Roof Storage Tank (699,552 gal)	01/1951	No
Tank 78	002	Internal Floating Roof Storage Tank (1,053,990 gal)	07/1951	No
Tank 84	002	External Floating Roof (Domed) (1,103,940)	1958	No
Tank 25	003	Fixed Roof Storage Tank (852,222 gal)	01/1940	No
Tank 62	003	Fixed Roof Storage Tank (211,492 gal)	Before 06/11/1973	No
Tank 63	003	Fixed Roof Storage Tank (211,492 gal)	Before 06/11/1973	No
Tank 14	004	Fixed Roof Storage Tank (12,000 gal)	2000	Yes
Tank 17	004	Fixed Roof Storage Tank (5,838 gal)	08/1991	No
Tank 18	004	Fixed Roof Storage Tank (4,000 gal)	11/1993	No
Tank 20	004	Fixed Roof Storage Tank (250 gal)	1993	No
Tank 21	004	Fixed Roof Storage Tank (5,800 gal)	11/1994	No
Tank 22	004	Fixed Roof Storage Tank (8,148 gal)	1995	No
Tank 23	004	Fixed Roof Storage Tank (3,906 gal)	1998	No
Tank 96	004	Fixed Roof Storage Tank (11,550 gal)	01/1975	No
O/S #1	005	Oil/Water Separator	2000	No
PT #1	005	Underground Process Tank for PCW (12,000 gal)	2000	No
PT #2	005	Underground Process Tank for PCW (126 gal)	2000	No
Tank 2	005	Fire Protection Water	01/1936	No
Tank Ev.	005	Water Evaporation Tank	Not Available	No

4.4 Other Federal and State Regulations

An applicability and compliance review for other federal and state regulations that specifically apply to the proposed project are summarized in Table 4.1. The current and proposed modified facility are considered to be in compliance with all generally-applicable regulations (e.g., definitions, open burning, test methods); therefore, these regulations are not discussed in this section.

Table 4-2. Summary of Applicability and Compliance Review for Other Regulations

Citation	Title	Summary	Compliance Plan
State of Florida (DEP) Regulations			
62-4.210 F.A.C	Construction Permits	Specifies the requirements of construction permit applications.	This permit application is intended to satisfy the requirements of this regulation.
62-210.300 F.A.C.	Permits Required	Specifies the construction and operating permit requirements for newly constructed or modified sources.	This permit application is intended to satisfy the requirements of this regulation.
62-296.320(1) F.A.C.	General Pollutant Emission Limiting Standards – Part 1	A. Requires that facilities apply known and existing vapor emission control devices or systems deemed necessary and ordered by the Department for volatile organic compound/organic solvent emission storage and handling. B. Requires that visible emissions be controlled such that visible emissions do not exceed 20% opacity.	A. Emissions from the loading rack operations are controlled by a John Zink vapor combustion unit. Tanks 66, 67, 78 and 84 store liquids with a vapor pressure > 1.5 psia. Emissions from tanks 66, 67 and 78 are controlled by equipping these tanks with internal floating roofs. Tank 84 has a domed external floating roof. B. The vapor combustion unit and other emissions units at the facility will be operated in such a manner as to minimize opacity.

Negative Declarations:

- Rule 62-296.500 F.A.C. Reasonably Available Control Technology (RACT) – VOC and NOx Emitting Facilities, does not apply since the facility does not reside in a designated ozone nonattainment or air quality maintenance area.
- Rule 62-296.509 F.A.C. Bulk Gasoline Plants, does not apply since by definition, the facility is a bulk gasoline terminal, not a bulk gasoline plant.
- Rule 62-296.516 F.A.C. Petroleum Liquid Storage Tanks with External Floating Roofs, does not apply to Tank 84 since this tank has a welded construction, a mechanical-shoe primary seal and a shoe-mounted secondary seal per 62-296.516(1)(b)5.
- Rule 62-296.700 F.A.C. Reasonably Available Control Technology (RACT) Particulate Matter, does not apply since the facility does not reside in a designated ozone nonattainment or air quality maintenance area.

5.0 Proposed Permit Conditions / Revisions

To incorporate the requirements for the proposed facility modification, revisions to the current FESOP operating permit will be required. It is also anticipated that the construction permit for this modification will include most of the same elements as the FESOP permit. Therefore, the permit conditions/revisions suggested in this section pertain to both the construction permit and current FESOP operating permit. These suggested conditions/revisions are provided in the Section/Condition format of the FESOP permit. The conditions/revisions are annotated as follows:

- Deletions – denoted by strike out (e.g., ~~strikeout~~);
- Additions – denoted by underline (e.g., underline); and
- Comments denoted by italics (e.g., *italics*).

Note: Only those conditions where changes are proposed are addressed here.

Section - Introduction

Revise the Facility Description to clarify and/or correct the facility's current configuration and to correct the model number of the Vapor Combustion Unit:

The vapor combustion unit (VCU), a flare, is manufactured by John Zink, model ~~VC-2T0F1TC-6g-400-2~~ ZCT-3-8-45-3/6-3/6-X. The flare uses propane as an auxiliary fuel at a maximum rate of 72 SCFM. The propane is limited to a maximum sulfur content of 0.02%. VOC emissions are estimated at ~~25.56~~ 66.6 tons per year.

There are four high volatility product tanks, numbers ~~1, 67, 78 and 84~~ 66, 67, 78 and 84. These tanks are sized at ~~1,710,618 gallons, 699,522 gallons, 1,053,990 gallons and 1,103,970 gallons~~ 703,374 gallons, 699,552 gallons, 1,053,990 gallons and 1,103,970 gallons respectively for tanks ~~1, 67, 78 and 84~~ 66, 67, 78 and 84. Tanks ~~1, 67 and 78~~ 66, 67 and 78 have internal floating roofs while tank 84 has an external floating roof and a geodesic dome. Tanks ~~1, 78 and 84~~ 66, 78 and 84 are used to store unleaded gasoline while tank 67 stores store aviation gasoline. VOC emissions from these sources are estimated at ~~18.33~~ 8.92 tons per year of which ~~4.78~~ 0.36 tons per year are HAPS (Hazardous Air PollutantS). ~~Tank 1 is going to be used as temporary storage for the contents of the other tanks in the facility while the tanks are brought up to the new standards of current Above Ground Storage Tank Regulations (FAC 62-762). Tank 1 will be~~

~~taken out of service after completion of those modifications to the other tanks and the installation of a floating roof to tank 66 is completed under this amendment.~~

There are ~~four~~ three low volatility product storage tanks, numbers ~~25, 62, 63 and 66~~ 25, 62 and 63. These tanks are sized ~~at 852,222 gallons, 211,492 gallons, 211,492 gallons and 789,642 gallons~~ 852,222 gallons, 211,492 gallons and 211,492 gallons respectively for tanks ~~25, 62, 63 and 66~~ 25, 62 and 63. All these tanks have fixed roofs. ~~Tanks 25 and 66 store diesel fuel and tanks 62 and 63 store jet A fuel~~. Tank 25 stores diesel fuel and tanks 62 and 63 store jet A fuel. VOC emissions are estimated at ~~0.49~~ 0.78 tons per year.

There are eight miscellaneous tanks, numbers ~~17, 18, 20, 21, 22, 23, 95 and 96~~ 14, 17, 18, 20, 21, 22, 23, and 96. These tanks are sized at ~~5,838 gallons, 4,000 gallons, 250 gallons, 5,800 gallons, 8,000 gallons, 4,000 gallons, 27,510 gallons and 11,550 gallons~~ 12,000 gallons, 5,838 gallons, 4,000 gallons, 250 gallons, 5,800 gallons, 8,148 gallons, 3,906 gallons, and 11,550 gallons respectively for tanks ~~17, 18, 20, 21, 22, 23, 95 and 96~~ 14, 17, 18, 20, 21, 22, 23, and 96. All these tanks have fixed roofs. Tanks ~~17, 18, 21, 22, 23 and 95~~ 14, 17, 18, 21, 22 and 23 store additives, tank 20 is for flare drop-out and tank 96 is the slop tank. VOC emissions are estimated at ~~0.01~~ 2.19 tons per year.

The wastewater emissions sources are comprised of ~~oil/water separators 1 & 2~~ oil/water separator 1, process tanks 1 & 2 for collecting wastewater, ~~tank 3 to hold the wastewater~~ and an evaporation tank with an open roof. VOC emissions are estimated at ~~0.01~~ 1.21 tons per year.

There is one tank, number 2, holding water for fire protection purposes.

The facility fugitive emissions are from components such as flanges, valves and pumps and from leaking tank trucks during loading. VOC emissions from these sources are estimated at ~~3.47~~ 18.2 tons per year.

Section – Specific Condition 7.

Revise the throughput limits to include Chevron's proposed limits.

The maximum allowable operating rate of the loading rack is ~~64,000~~ 96,000 gallons per hour. This is the operating rate at which compliance with standards shall be demonstrated, using gasoline as the product. The loading rack maximum annual throughput is:

High Volatility Products	~~146.24~~ 325.76 million gallons	(gasoline, aviation gasoline)
Low Volatility Products	~~28.76~~ 57.49 million gallons	(diesel, jet A)

Section – Specific Condition 18d.

Revise the throughput limits to include Chevron's proposed limits.

The maximum loading rate for loading gasoline shall be ~~64,000~~ 96,000 gallons per hour unless the permittee requests a modification of this limit with reasonable data to justify a higher operating rate using the equation of paragraph B above.

Section – Specific Condition 21.

Revise the tank identification table and emissions limits to include Chevron's proposed tank configuration and emissions limits.

VOC emissions shall be controlled by limiting the maximum throughput of petroleum liquids through the facility as noted in specific condition 7 above. Maximum allowable VOC emissions are ~~presently 48.9~~ 80.7 tons per year. ~~Maximum allowable VOC emissions shall be 44.7 tons per year after tank 1 is taken out of service and tank 66 is retrofitted with an internal floating roof and switched to gasoline service.~~ Individual source identification numbers, service, and control equipment are as follows:

Source	I.D. Number	Service	Size (GAL)	Control Equipment
VCU	0050056001	all	-----	Flare
~~Tank 1*~~	~~0050056002*~~	~~gasoline*~~	~~1,710,618~~	~~Int. Floating Roof~~
Tank 66	0050056002	gasoline	703,374	Int. Floating Roof
Tank 67	0050056002	aviat. gas	699,552	Int. Floating Roof
Tank 78	0050056002	gasoline	1,053,990	Int. Floating Roof
Tank 84	0050056002	gasoline	1,103,940	Ext. Floating Roof (dome)
Tank 25	0050056003	diesel	852,222	Fixed Roof
Tank 62	0050056003	jet A	211,492	Fixed Roof
Tank 63	0050056003	jet A	211,492	Fixed Roof
~~Tank 66*~~	~~0050056003*~~	~~diesel*~~	~~789,642~~	~~Fixed Roof*~~
Tank 14	0050056004	additives	12,000	Fixed Roof
Tank 17	0050056004	additives	5,838	Fixed Roof
Tank 18	0050056004	additives	4,000	Fixed Roof
Tank 20	0050056004	additives	250	Fixed Roof
Tank 21	0050056004	additives	5,800	Fixed Roof
Tank 22	0050056004	additives	8,148	Fixed Roof
Tank 23	0050056004	additives	3,906	Fixed Roof
~~Tank 95~~	~~0050056004~~	~~additives~~	~~27,510~~	~~Fixed Roof~~
Tank 96	0050056004	slop tank	11,550	Fixed Roof
O/S #1	0050056005	oil/water sep.	-----	----------
~~O/S #2~~	~~0050056005~~	~~oil/water sep.~~	~~-----~~	~~----------~~
PT #1	0050056005	wastewater process tank	-----	----------
PT #2	0050056005	wastewater process tank	-----	----------
Tank 2	0050056005	fire protection water	-----	----------
~~Tank 3~~	~~0050056005~~	~~wastewater tank~~	~~-----~~	~~----------~~
Tank Evap.	0050056005	evap. tank	-----	Open Roof
Fl/V/Pu	0050056006	flanges/valves/pumps	-----	----------
Truck	0050056006	tank truck loading	-----	----------

~~* Tank 1 is to be taken out of service. Tank 66 is to be retrofitted with an internal floating roof and switched to gasoline service. At this point in time tank 66 shall be switched to source ID Number 003.~~

Section – Specific Condition 34.

Revise the tank identification numbers to match Chevron's proposed tank configuration.

34. The permanent source identification numbers for these point sources are as follows:

0050056001 Vapor Combustion Unit
0050056002 Tanks ~~1*, 67, 78 & 84~~ 66, 67, 78 & 84
0050056003 Tanks ~~25, 62, 63 & 66*~~ 25, 62 & 63
0050056004 Tanks ~~17, 18, 20, 21, 22, 23, 95 & 96~~ 14, 17, 18, 20, 21, 22, 23 & 96
0050056005 ~~Oil/Water Sep. 1 & 2, Tank 3 and Evap. Tank~~ Oil/Water Sep. 1, Process Tank 1 & 2, Tanks 2 & Evap. Tank
0050056006 Flanges/Valves/Pumps and Tank Truck Leaks

~~* Tank 1 is to be taken out of service when tank 66 is retrofitted with an internal floating roof and switched to gasoline service. At this point in time tank 66 shall be switched to source ID Number 002.~~

Department of Environmental Protection

Division of Air Resources Management

APPLICATION FOR AIR PERMIT - NON-TITLE V SOURCE

See Instructions for Form No. 62-210.900(3)

I. APPLICATION INFORMATION

Identification of Facility

1. Facility Owner/Company Name: Chevron Products Company	
2. Site Name: Panama City Terminal	
3. Facility Identification Number: 0050056 [ ] Unknown	
4. Facility Location: Street Address or Other Locator: 525 West Beach Drive City: Panama City County: Bay Zip Code: 32401	
5. Relocatable Facility? [ ] Yes [X] No	6. Existing Permitted Facility? [X] Yes [ ] No

Application Contact

1. Name and Title of Application Contact: Louis Milkint
2. Application Contact Mailing Address: Organization/Firm: Chevron Products Company Street Address: 2300 Windy Ridge Parkway, Suite 800 South City: Atlanta State: GA Zip Code: 30339-5673
3. Application Contact Telephone Numbers: Telephone: (770) 984 - 3016 Fax: (770) 984 - 3033

Application Processing Information (DEP Use)

1. Date of Receipt of Application:	
2. Permit Number:	

Purpose of Application

Air Operation Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[ ] Initial non-Title V air operation permit for one or more existing, but previously unpermitted, emissions units.

[ ] Initial non-Title V air operation permit for one or more newly constructed or modified emissions units.

Current construction permit number:_____

[ ] Non-Title V air operation permit revision to address one or more newly constructed or modified emissions units.

Current construction permit number:_____

Operation permit number to be revised:_____

[ ] Initial non-Title V air operation permit under Rule 62-210.300(2)(b), F.A.C., for an existing facility seeking classification as a synthetic non-Title V source.

Current operation/construction permit number(s):

_____

[ ] Non-Title V air operation permit revision for a synthetic non-Title V source. Give reason for revision; e.g., to address one or more newly constructed or modified emissions units.

Operation permit number to be revised:_____

Reason for revision:_____

Air Construction Permit Application

This Application for Air Permit is submitted to obtain: (Check one)

[X] Air construction permit to construct or modify one or more emissions units.

[ ] Air construction permit to make federally enforceable an assumed restriction on the potential emissions of one or more existing, permitted emissions units.

[ ] Air construction permit for one or more existing, but unpermitted, emissions units.

Owner/Authorized Representative

1. Name and Title of Owner/Authorized Representative: Paul Luper

2. Owner/Authorized Representative Mailing Address:
   Organization/Firm: Chevron Products Company
   Street Address: P.O. Box 1706
   City: Atlanta State: GA Zip Code: 30301

3. Owner/Authorized Representative Telephone Numbers:
   Telephone: (770) 984- 3036 Fax: (770) 984 - 3102

4. Owner/Authorized Representative Statement:

   I, the undersigned, am the owner or authorized representative of the facility addressed in this application. I hereby certify, based on information and belief formed after reasonable inquiry, that the statements made in this application are true, accurate and complete and that, to the best of my knowledge, any estimates of emissions reported in this application are based upon reasonable techniques for calculating emissions. The air pollutant emissions units and air pollution control equipment described in this application will be operated and maintained so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof. I understand that a permit, if granted by the Department, cannot be transferred without authorization from the Department, and I will promptly notify the Department upon sale or legal transfer of any permitted emissions unit.*

   Signature Date 1-19-01

* Attach letter of authorization if not currently on file.

Professional Engineer Certification

1. Professional Engineer Name: Michael VanBriggle
   Registration Number: 53614

2. Professional Engineer Mailing Address:
   Organization/Firm: URS Corporation
   Street Address: 235 Peachtree Street, NE, Suite 2000
   City: Atlanta State: GA Zip Code: 30303

3. Professional Engineer Telephone Numbers:
   Telephone: (404) 888- 8800 Fax: (404) 577 - 5120

4. Professional Engineer Statement:

I, the undersigned, hereby certify, except as particularly noted herein, that:*

(1) To the best of my knowledge, there is reasonable assurance that the air pollutant emissions unit(s) and the air pollution control equipment described in this Application for Air Permit, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in the Florida Statutes and rules of the Department of Environmental Protection; and

(2) To the best of my knowledge, any emission estimates reported or relied on in this application are true, accurate, and complete and are either based upon reasonable techniques available for calculating emissions or, for emission estimates of hazardous air pollutants not regulated for an emissions unit addressed in this application, based solely upon the materials, information and calculations submitted with this application.

If the purpose of this application is to obtain an air construction permit for one or more proposed new or modified emissions units (check here [ ], if so), I further certify that the engineering features of each such emissions unit described in this application have been designed or examined by me or individuals under my direct supervision and found to be in conformity with sound engineering principles applicable to the control of emissions of the air pollutants characterized in this application.

If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [ ], if so), I further certify that, with the exception of any changes detailed as part of this application, each such emissions unit has been constructed or modified in substantial accordance with the information given in the corresponding application for air construction permit and with all provisions contained in such permit.

Signature

1/18/2001
Date

(seal)

* Attach any exception to certification statement.

Scope of Application

Emissions Unit ID	Description of Emissions Unit	Permit Type	Processing Fee
001	Loading Rack (with 3 loading lanes) and associated Vapor Combustion Unit	AC1D	$2,250
002	Gasoline and Aviation Gasoline Storage Tanks	AC1F	$250
003	Diesel and Jet A Fuel Storage Tanks	AC1F	$250
004	Additive, Slop and Flare Drop-Out Storage Tanks	AC1F	$250
005	Oil/Water Separator, Water, and Evap. Tanks and Process Tanks	AC1F	$250
006	Flange/Valve/Pump and Tank Truck Leak Emissions	AC1F	$250

Application Processing Fee

Check one: [X] Attached - Amount: $ 3,500 [ ] Not Applicable

Construction/Modification Information

1. Description of Proposed Project or Alterations:

Chevron's Panama City terminal is proposing to install a third loading lane to its loading rack operations (Group ID 001). Chevron is also proposing to increase their hourly throughput limit to 96,000 gallon total product/hr and their annual throughput limits to 325,760,000 gallon/yr of high volatile products (gasoline, aviation gasoline) and 57,490,000 gallon/yr of low volatile products (diesel, Jet A). In addition, Chevron is proposing to increase their maximum allowable VOC emissions limit to 80.7 tpy. Lastly, Chevron is proposing to make modifications to the terminal's tank configuration setup (e.g., removing tanks, changing tank contents, etc.). Based on emissions estimates (see Appendix B), emissions from the modified facility will remain below major source thresholds (VOC, CO, NOx, and PM < 100 tpy, total HAP < 25 tpy, individual HAP < 10 tpy). Therefore, the Panama City terminal will retain its status as a permitted Synthetic Minor source.

2. Projected or Actual Date of Commencement of Construction: Early 2001

3. Projected Date of Completion of Construction: December 1, 2001

Application Comment

This submittal is for an application to construct and modify emissions units for a synthetic non-Title V source.

Based on the proposed throughput limits for the modified facility, Chevron expects emissions from the Panama City terminal to remain below major source thresholds of VOC, CO, NOx and PM < 100 tpy, total HAP < 25 tpy, and individual HAP < 10 tpy. See Appendix B for the emissions calculations.

Chevron is not seeking limits on total HAP or individual HAP emissions since emissions from these compounds at the loading rack's maximum throughput capacity (96,000 gal/hr) and maximum allowable emissions rate (35 mg/L) are below major source thresholds (total HAP < 25 tpy and individual HAP < 10 tpy).

II. FACILITY INFORMATION

A. GENERAL FACILITY INFORMATION

Facility Location and Type

1. Facility UTM Coordinates: Zone: East (km): North (km):			
2. Facility Latitude/Longitude: Latitude (DD/MM/SS): 30/03/00 Longitude (DD/MM/SS): 85/02/00			
3. Governmental Facility Code: 0	4. Facility Status Code: A	5. Facility Major Group SIC Code: 51	6. Facility SIC(s): 5171
7. Facility Comment (limit to 500 characters): This facility receives a variety of refined bulk petroleum products by barge, stores those products in a variety of fixed and floating roof storage tanks, and distributes these products by tank truck. This facility does not distribute petroleum products via marine terminal.			

Facility Contact

1. Name and Title of Facility Contact: Terry Franklin, Terminal Manager
2. Facility Contact Mailing Address: Organization/Firm: Chevron Products Company Street Address: 525 West Beach Drive City: Panama City State: FL Zip Code: 32401
3. Facility Contact Telephone Numbers: Telephone: (850) 785 - 7426 Fax: (850) 784 - 1566

Facility Regulatory Classifications

Check all that apply:

1. [ ] Small Business Stationary Source?	[ ] Unknown
2. [X] Synthetic Non-Title V Source?	
3. [X] Synthetic Minor Source of Pollutants Other than HAPs?	
4. [ ] Synthetic Minor Source of HAPs?	
5. [X] One or More Emissions Units Subject to NSPS?	
6. [ ] One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters): This terminal is currently a permitted synthetic minor source with limits on VOC (< 48.9 tpy). 40 CFR 63 Subpart R does not apply since the facility is not a major source for HAP.	

Rule Applicability Analysis

62-4.050 F.A.C. Procedure to Obtain Permits and Other Authorizations Application
62-4.210 F.A.C. Construction Permits
62-210 F.A.C. Stationary Sources - General Requirements
62-210.300 F.A.C. Permits Required
62-296.320 F.A.C. General Pollutant Emission Limiting Standards
62-297.310 F.A.C. General Test Requirements
62-297.330 F.A.C. Applicable Test Requirements
62-297.340 F.A.C. Frequency of Compliance Tests
62-297.570 F.A.C. Test Reports
40 CFR 60 Subpart A, General Provisions
40 CFR 60 Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Tanks 14 and 66)
40 CFR 60 Subpart XX, Standards of Performance for Bulk Gasoline Terminals

B. FACILITY POLLUTANTS

List of Pollutants Emitted

1. Pollutant Emitted	2. Pollutant Classif.	3. Requested Emissions Cap		4. Basis for Emissions Cap	5. Pollutant Comment
		lb/hour	tons/year		
VOC	SM		80.7	ESCTV	See Note 1 Below

1. Chevron proposes to increase their maximum allowable VOC emissions limit from 48.9 tpy to 80.7 tpy.

C. FACILITY SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Area Map Showing Facility Location: [X] Attached, Document ID:_Attachment A_[ ] Not Applicable [ ] Waiver Requested
2. Facility Plot Plan: [X] Attached, Document ID:_Attachment B_[ ] Not Applicable [ ] Waiver Requested
3. Process Flow Diagram(s): [X] Attached, Document ID:_Attachment C_[ ] Not Applicable [ ] Waiver Requested
4. Precautions to Prevent Emissions of Unconfined Particulate Matter: [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Supplemental Information for Construction Permit Application: [X] Attached, Document ID:_Attachment D and Appendix B___[ ] Not Applicable
6. Supplemental Requirements Comment: Vapor Combustion Unit (VCU) design data is included as Attachment D. Emissions estimates for the terminal are included as Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Vapor Combustion Unit

3. Emissions Unit Identification Number:
ID: 001

[ ] No ID
[ ] ID Unknown

4. Emissions Unit Status Code:	5. Initial Startup Date:	6. Emissions Unit Major Group SIC Code:
A	1993	51

7. Emissions Unit Comment: (Limit to 500 Characters)

001 consists of a collectively regulated group of emissions units including the tank truck loading rack (with 3 loading lanes) and an associated John Zink vapor combustion unit. The loading rack is subject to 40 CFR 60 Subpart XX.

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method): VOC emissions from this emissions unit group are controlled by a flare (vapor combustion unit - VCU).
2. Control Device or Method Code(s): 23

Emissions Unit Details

1. Package Unit: Manufacturer: John Zink	Model Number:	ZCT-3-8-45-3/6-3/6-X
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:	See Comments	mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:	96,000 gallons total product/hour	
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule:		
hours/day 24		days/week 7
weeks/year 52		hours/year 8,760
6. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron will limit annual throughput of high volatile products to 325,760,000 gal/yr and low volatile product to 57,490,000 gal/yr. Chevron will limit hourly throughput to 96,000 gal total product/hr. The maximum design inlet gas velocity to the VCU is 24.9 ft/s. The maximum design gas flow rate into the VCU is 855 scfm. The minimum Btu content of inlet gas per Chevron's current air operating permit is 300 Btu/scf. Chevron is requesting a 96,000 gallon/hour loading limit for total product loaded.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	2. Emission Point Type Code: 1

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Product loading rack (with 3 loading lanes) equipped with a vapor combustion unit.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:

001 - VCU

5. Discharge Type Code: P	6. Stack Height: 45 feet	7. Exit Diameter: 8 feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: 3800 (see comments) acfm	10. Water Vapor: 0% (see Attachment D)

11. Maximum Dry Standard Flow Rate: (See comments) dscfm	12. Nonstack Emission Point Height: feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

VOC and HAP emissions from the product loading rack are vented through the VCU.

Actual volumetric flow rate is estimated from data taken during the July 14, 2000 VCU stack test. 37,671 m^3 of exhaust gas was emitted over a 355 minute period.

The maximum outlet flow rate is not available. The maximum inlet vapor flow rate is 855 scfm.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of ___1__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Product loading to tank trucks (emissions related to thousand of gallons of throughput and VCU control efficiency/emissions limit).		
2. Source Classification Code (SCC): 40400153	3. SCC Units: Thousand Gallons Transferred or Handled	
3. Maximum Hourly Rate: 96.0 thousand gal./hr	4. Maximum Annual Rate: See Comments	6. Estimated Annual Activity Factor:
6. Maximum % Sulfur: 0.02	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment _____ of _____

1. Segment Description (Process/Fuel Type) (limit to 500 characters):		
2. Source Classification Code (SCC):	3. SCC Units:	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters):		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code: 23	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control: 99.32
6. Potential Emissions: 15.2 lb/hour 66.6 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Reference: See Comments		9. Emissions Method Code: 0, 3, 5

10. Calculation of Emissions (limit to 600 characters):

VOC and HAP emissions were calculated using the existing VOC emissions limit on the loading rack of 35 mg/L for loading of gasoline and aviation gasoline. AP-42 equations were used to estimate losses for the loading of all other products (diesel, Jet A, additive). See Appendix B for a detailed explanation ~~of emissions estimates.~~

11. Pollutant Potential Emissions Comment (limit to 200 characters):

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: RULE	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units: 35 mg VOC / L gasoline loaded	4. Equivalent Allowable Emissions: lb/hour

5. Method of Compliance (limit to 60 characters):
Periodic source tests. Manufacturer design specifications.

6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):

This allowable limit is based on requirements of 40 CFR 60.502(b). Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).

Emissions Unit Information Section ___1___ of ___6___

Pollutant Detail Information Page ___2___ of ___2___

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: CO	2. Pollutant Regulatory Code: NS	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 2.53 lb/hour 11.1 tons/year		7. Synthetically Limited? [ ]
8. Emission Factor: Reference: See Comments		9. Emissions Method Code: 1, 2
10. Calculation of Emissions (limit to 600 characters): Emissions were calculated using data from a July 14, 2000 source test performed on the VCU and a carbon mass balance. See Appendix B for a detailed explanation of emissions estimates.		
11. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions _____ of _____

1. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour tons/year
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters):	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation ___1___ of __1____

1. Visible Emissions Subtype: See Comments	2. Basis for Allowable Opacity: [X] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
5. Method of Compliance: The VCU will be operated in such a manner (good combustion and maintenance practices) as to minimize opacity.	
6. Visible Emissions Comment (limit to 200 characters): Per 40 CFR 60.18(c)(1), flares shall be designed for and operated with no visible emissions except for periods not to exceed a total of 5 minutes during any two consecutive hours. The current permitted allowable visible emissions requirement is ≤ 5% opacity.	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [X] Attached, Document ID:_Attachment D___[ ] Not Applicable
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [X] Attached, Document ID:_Summary provided in Appendix B Attachment 3____ [ ] Previously submitted, Date:_____ [ ] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

1. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Gasoline and Aviation Gasoline Storage Tanks

3. Emissions Unit Identification Number: ID: 002		[ ] No ID [ ] ID Unknown
4. Emissions Unit Status Code: A	5. Initial Startup Date: See Comments	6. Emissions Unit Major Group SIC Code: 51

7. Emissions Unit Comment: (Limit to 500 Characters)

002 includes a collectively regulated group of storage tanks (Tank Nos. 66, 67, 78 and 84). Tanks 66, 67, 78 and 84 are tanks with a storage capacity > 42,000 gallons storing products with a vapor pressure > 1.5 psia. Tanks 66, 67 and 78 have internal floating roofs. Tank 84 has an external floating roof with a geodesic dome cover.

Tank 66 is subject to the requirements of 40 CFR 60 Subpart Kb.

Startup Dates:
Tank 66 (07/51; mod. 1997), Tank 67 (01/51), Tank 78 (07/51), Tank 84 (1958).

Emissions Unit Control Equipment

1. Control Equipment/Method Description (limit to 200 characters per device or method): Tanks 62, 63, 66 and 78 have internal floating roofs. Tank 84 has a geodesic domed external floating roof. Tank 66 is a welded tank with a mechanical shoe primary seal and a shoe mounted secondary seal to comply with 40 CFR 60.112b(a)(1)(ii).
2. Control Device or Method Code(s): 99

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule: hours/day 24 weeks/year 52		 days/week 7 hours/year 8,760
6. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	2. Emission Point Type Code: 3

3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Tank Nos. 66, 67, 78 and 84.

4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
002 - Petroleum liquid storage tanks storing gasoline and aviation gasoline and having floating roofs.

5. Discharge Type Code: P	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: 29 feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Standing and working losses occur through breather vents on the tanks. The Nonstack Emission Point Height is the minimum shell height of any storage tank in this emission unit.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Standing Losses from Storage Tanks – Gasoline; Floating Roof Tanks		
2. Source Classification Code (SCC): 40400110	3. SCC Units: Thousand Gallons Stored	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment __2___ of ___2__

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Working Losses from Storage Tanks – Gasoline; Internal Floating Roofs		
2. Source Classification Code (SCC): 40400116	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC		2. Pollutant Regulatory Code: EL
3. Primary Control Device Code: 99	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 2.04 lb/hour 8.92 tpy		7. Synthetically Limited? [X]
8. Emission Factor: Reference: EPAs TANKS v4.07		9. Emissions Method Code: 3
10. Calculation of Emissions (limit to 600 characters): VOC and HAP emissions from tank standing and working losses were calculated using EPAs TANKS v4.07. See Appendix B for a detailed explanation of emissions estimates.		
11. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions ___1___ of ___1___

1. Basis for Allowable Emissions Code: See Comments Below	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: Not Applicable	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Diesel and Jet A Fuel Storage Tanks

3. Emissions Unit Identification Number: ID: 003		[ ] No ID [ ] ID Unknown
4. Emissions Unit Status Code: A	5. Initial Startup Date: See Comments	6. Emissions Unit Major Group SIC Code: 51

8. Emissions Unit Comment: (Limit to 500 Characters)

003 consists of a collectively regulated group of storage tanks (Tank Nos. 25, 62 and 63). Tank 25 is a fixed roof storage tank storing a product with a true vapor pressure < 1.5 psia. Tanks 62 and 63 are fixed roof tanks storing a product with a true vapor pressure < 1.5 psia.

Startup Dates:
Tank 25 (01/40), Tank 62 (Before June 11, 1973), Tank 63 (Before June 11, 1973).

Emissions Unit Control Equipment

6. Control Equipment/Method Description (limit to 200 characters per device or method): Tanks 25, 62 and 63 have no associated control equipment.
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		°F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule: hours/day 24 weeks/year 52		days/week 7 hours/year 8,760
7. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	7. Emission Point Type Code: 3

8. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Tank Nos. 25, 62 and 63.

9. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
003 - Petroleum liquid storage tanks storing diesel and Jet A fuel.

5. Discharge Type Code: P	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: 34 feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Standing and working losses occur through breather vents on the tanks. The Nonstack Emission Point Height is the minimum shell height of any storage tank in this emission unit.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment __1___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Standing Losses from Storage Tanks – Fixed Roof		
2. Source Classification Code (SCC): 40400121	3. SCC Units: Thousand Gallons Stored	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment ___2__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Working Losses from Storage Tanks – Fixed Roof Tanks		
2. Source Classification Code (SCC): 40400122	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Emissions Unit Information Section ___3___ of ___6___

Pollutant Detail Information Page ___1___ of __1____

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.18 lb/hour 0.78 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Reference: EPAs TANKS v4.07		9. Emissions Method Code: 3
10. Calculation of Emissions (limit to 600 characters): VOC and HAP emissions from tank standing and working losses were calculated using EPAs TANKS v4.07. See Appendix B for a detailed explanation of emissions estimates.		
12. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions ____1__ of ___1___

2. Basis for Allowable Emissions Code: See Comments	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: Not Applicable	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

3. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Additive, Slop and Flare Drop-Out Storage Tanks

3. Emissions Unit Identification Number: ID: 004		[ ] No ID [ ] ID Unknown
4. Emissions Unit Status Code: A	5. Initial Startup Date: See Comments	6. Emissions Unit Major Group SIC Code: 51

9. Emissions Unit Comment: (Limit to 500 Characters)

004 consists of a collectively regulated group of storage tanks (Tanks 14, 17, 18, 20, 21, 22, 23 and 96). Tanks 14, 17, 18, 21, 22 and 23 are fixed roof tanks storing petroleum products with a true vapor pressure < 1.5 psia. Tank 96 is a fixed roof storage tank which stores slop (slop consists of a mixture of any product stored at the terminal such as gasoline, diesel, water, etc.). Tank 20 is a fixed roof tank and is the flare drop-out tank which is currently dry. Tank 14 is subject to the requirements of 40 CFR 60 Subpart Kb.

Startup Dates:
Tank 14 (2000), Tank 17 (08/91), Tank 18 (11/93), Tank 20 (1993), Tank 21 (11/94), Tank 22 (1995), Tank 23 (1998), Tank 96 (01/75).

Emissions Unit Control Equipment

10. Control Equipment/Method Description (limit to 200 characters per device or method): These tanks have no associated control equipment.
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule: hours/day 24 weeks/year 52		 days/week 7 hours/year 8,760
8. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	11. Emission Point Type Code: 3

12. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Tank Nos. 14, 17, 18, 20, 21, 22, 23 and 96.

13. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
004 - Storage tanks storing additive, slop, or flare drop-out.

5. Discharge Type Code: P	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: 8 feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Standing and working losses occur through breather vents on the tanks. The Nonstack Emission Point Height is the minimum shell height of any storage tank in this emission unit.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Standing Losses from Storage Tanks – Fixed Roof Tanks		
2. Source Classification Code (SCC): 40400121	3. SCC Units: Thousand Gallons Stored	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment ___2__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Working Losses from Storage Tanks – Fixed Roof Tanks		
2. Source Classification Code (SCC): 40400122	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Emissions Unit Information Section ___4___ of ___6___

Pollutant Detail Information Page ___1___ of __1____

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.5 lb/hour 2.18 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Reference: EPAs TANKS v4.07		9. Emissions Method Code: 3
10. Calculation of Emissions (limit to 600 characters): VOC and HAP emissions from tank standing and working losses were calculated using EPAs TANKS v4.07. See Appendix B for a detailed explanation of emissions estimates.		
13. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions __1____ of ___1__

3. Basis for Allowable Emissions Code: See Comments	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: Not Applicable	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

4. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Oil/Water Separator, Water, and Evaporation Tanks and Process Tanks

3. Emissions Unit Identification Number: ID: 005		[ ] No ID [ ] ID Unknown
4. Emissions Unit Status Code: A	5. Initial Startup Date: See Comments	6. Emissions Unit Major Group SIC Code: 51

10. Emissions Unit Comment: (Limit to 500 Characters)

005 consists of a collectively regulated group of emissions units. Oil/Water Separator (O/S) 1 is an aboveground storage tank. Process Tanks (PT) 1 and 2 are underground collection tanks for petroleum contaminated wastewater at the facility. Tank 2 stores water for fire protection purposes. Tank 101 is the evaporation tank and contains no petroleum product.

Startup Dates:
O/S1 (2000), PT1 (2000), PT2 (2000), Tank 2 (01/36).

Emissions Unit Control Equipment

14. Control Equipment/Method Description (limit to 200 characters per device or method): These tanks have no associated control equipment.
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule: hours/day 24 weeks/year 52		 days/week 7 hours/year 8,760
9. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	15. Emission Point Type Code: 3
16. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point): Tanks O/S1, PT 1 & 2, Tank 2 and Tank Ev.	
17. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: 005 - Oil/Water Separator, Petroleum Contaminated Water (PCW) Process Tanks 1 and 2, Fire Protection Water Tank, and Evaporation Tank.	

6. Discharge Type Code: P	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: 8 feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Standing and working losses occur through breather vents on the tanks. The Nonstack Emission Point Height is the minimum shell height of any tank in this emission unit.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Standing Losses from Storage Tanks – Fixed Roof Tanks		
2. Source Classification Code (SCC): 40400121	3. SCC Units: Thousand Gallons Stored	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment __2___ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Working Losses from Storage Tanks – Fixed Roof Tanks		
2. Source Classification Code (SCC): 40400122	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Emissions Unit Information Section ___5___ of __6____

Pollutant Detail Information Page ___1___ of __3____

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.28 lb/hour 1.21 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Reference: EPAs TANKS v4.07		9. Emissions Method Code: 3
10. Calculation of Emissions (limit to 600 characters): VOC and HAP emissions from tank standing and working losses were calculated using EPAs TANKS v4.07. See Appendix B for a detailed explanation of emissions estimates.		
14. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions __1____ of __1____

4. Basis for Allowable Emissions Code: See Comments	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: Not Applicable	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

Supplemental Requirements

1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

III. EMISSIONS UNIT INFORMATION

A separate Emissions Unit Information Section (including subsections A through G as required) must be completed for each emissions unit addressed in this Application for Air Permit. If submitting the application form in hard copy, indicate, in the space provided at the top of each page, the number of this Emissions Unit Information Section and the total number of Emissions Unit Information Sections submitted as part of this application.

A. GENERAL EMISSIONS UNIT INFORMATION

Emissions Unit Description and Status

1. Type of Emissions Unit Addressed in This Section: (Check one)

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, a single process or production unit, or activity, which produces one or more air pollutants and which has at least one definable emission point (stack or vent).

[X] This Emissions Unit Information Section addresses, as a single emissions unit, a group of process or production units and activities which has at least one definable emission point (stack or vent) but may also produce fugitive emissions.

[ ] This Emissions Unit Information Section addresses, as a single emissions unit, one or more process or production units and activities which produce fugitive emissions only.

7. Description of Emissions Unit Addressed in This Section (limit to 60 characters):

Flange/Valve/Pump and Tank Truck Leak Emissions

3. Emissions Unit Identification Number: ID: 006		[ ] No ID [ ] ID Unknown
4. Emissions Unit Status Code: A	5. Initial Startup Date: 01/36	6. Emissions Unit Major Group SIC Code: 51

11. Emissions Unit Comment: (Limit to 500 Characters)

006 consists of a collectively regulated group of emissions sources. These sources include vapor emissions from tank trucks and piping components (valves, flanges, and pumps).

Emissions Unit Control Equipment

18. Control Equipment/Method Description (limit to 200 characters per device or method): This emissions unit has no associated control equipment.
2. Control Device or Method Code(s):

Emissions Unit Details

1. Package Unit: Manufacturer:	Model Number:	
2. Generator Nameplate Rating:	MW	
3. Incinerator Information: Dwell Temperature: Dwell Time: Incinerator Afterburner Temperature:		 °F seconds °F

Emissions Unit Operating Capacity and Schedule

1. Maximum Heat Input Rate:		mmBtu/hr
2. Maximum Incineration Rate:	lb/hr	tons/day
3. Maximum Process or Throughput Rate:		
4. Maximum Production Rate:		
5. Requested Maximum Operating Schedule: hours/day 24 weeks/year 52		 days/week 7 hours/year 8,760
10. Operating Capacity/Schedule Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

B. EMISSION POINT (STACK/VENT) INFORMATION

Emission Point Description and Type

1. Identification of Point on Plot Plan or Flow Diagram? See Plot Plan	19. Emission Point Type Code: 3

20. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):

Emissions Units Truck and Fl/V/Pu.

21. ID Numbers or Descriptions of Emission Units with this Emission Point in Common:
006 - Fugitive emissions from tank trucks (ID Truck) and piping components such as valves, flanges, and pumps (ID Fl/V/Pu).

5. Discharge Type Code: F	6. Stack Height: feet	7. Exit Diameter: feet
8. Exit Temperature: 76 °F	9. Actual Volumetric Flow Rate: acfm	10. Water Vapor: %

11. Maximum Dry Standard Flow Rate: dscfm	12. Nonstack Emission Point Height: 0 feet

13. Emission Point UTM Coordinates:

Zone: East (km): North (km):

14. Emission Point Comment (limit to 200 characters):

Vapor losses from this emissions unit are fugitive.

C. SEGMENT (PROCESS/FUEL) INFORMATION

Segment Description and Rate: Segment ___1__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Vapor emissions from tank trucks.		
2. Source Classification Code (SCC): 40400254	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

Segment Description and Rate: Segment ___2__ of __2___

1. Segment Description (Process/Fuel Type) (limit to 500 characters): Vapor emissions from piping components (valves, flanges, and pumps).		
2. Source Classification Code (SCC): 40400251	3. SCC Units: Thousand Gallons Transferred or Handled	
4. Maximum Hourly Rate:	5. Maximum Annual Rate:	6. Estimated Annual Activity Factor:
7. Maximum % Sulfur:	8. Maximum % Ash:	9. Million Btu per SCC Unit:
10. Segment Comment (limit to 200 characters): Chevron proposes to limit hourly throughput to 96,000 gal total product/hour and annual throughput to 325,760,000 gal/yr for high volatile products and 57,490,000 gal/yr for low volatile products.		

D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION

Potential Emissions

1. Pollutant Emitted: VOC	2. Pollutant Regulatory Code: EL	
3. Primary Control Device Code:	4. Secondary Control Device Code:	5. Total Percent Efficiency of Control:
6. Potential Emissions: 0.23 lb/hour 1.02 tons/year		7. Synthetically Limited? [X]
8. Emission Factor: Reference: See Comments		9. Emissions Method Code: 5
10. Calculation of Emissions (limit to 600 characters): VOC and HAP emissions from tank truck losses were estimated using the worst case emission factor of 13 mg/L of gasoline loaded (see Attachment 8 of calculations). VOC and HAP emissions from piping component losses were estimated using leak factors from the American Petroleum Institute (API). See Appendix B for a detailed explanation of emissions estimates.		
15. Pollutant Potential Emissions Comment (limit to 200 characters):		

Allowable Emissions Allowable Emissions ___1___ of ___1___

6. Basis for Allowable Emissions Code:	2. Future Effective Date of Allowable Emissions:
3. Requested Allowable Emissions and Units:	4. Equivalent Allowable Emissions: lb/hour
5. Method of Compliance (limit to 60 characters):	
6. Allowable Emissions Comment (Desc. of Operating Method) (limit to 200 characters): Chevron is seeking facility-wide emission limits for VOC (< 80.7 tpy).	

E. VISIBLE EMISSIONS INFORMATION
(Only Emissions Units Subject to a VE Limitation)

Visible Emissions Limitation: Visible Emissions Limitation _____ of _____

1. Visible Emissions Subtype: Not Applicable	2. Basis for Allowable Opacity: [ ] Rule [ ] Other
3. Requested Allowable Opacity: Normal Conditions: % Exceptional Conditions: % Maximum Period of Excess Opacity Allowed: min/hour	
4. Method of Compliance:	
5. Visible Emissions Comment (limit to 200 characters):	

F. CONTINUOUS MONITOR INFORMATION
(Only Emissions Units Subject to Continuous Monitoring)

Continuous Monitoring System: Continuous Monitor _____ of _____

1. Parameter Code: Not Applicable	2. Pollutant(s):
3. CMS Requirement:	[ ] Rule [ ] Other
4. Monitor Information: Manufacturer: Model Number: Serial Number:	
5. Installation Date:	6. Performance Specification Test Date:
7. Continuous Monitor Comment (limit to 200 characters):	

G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION

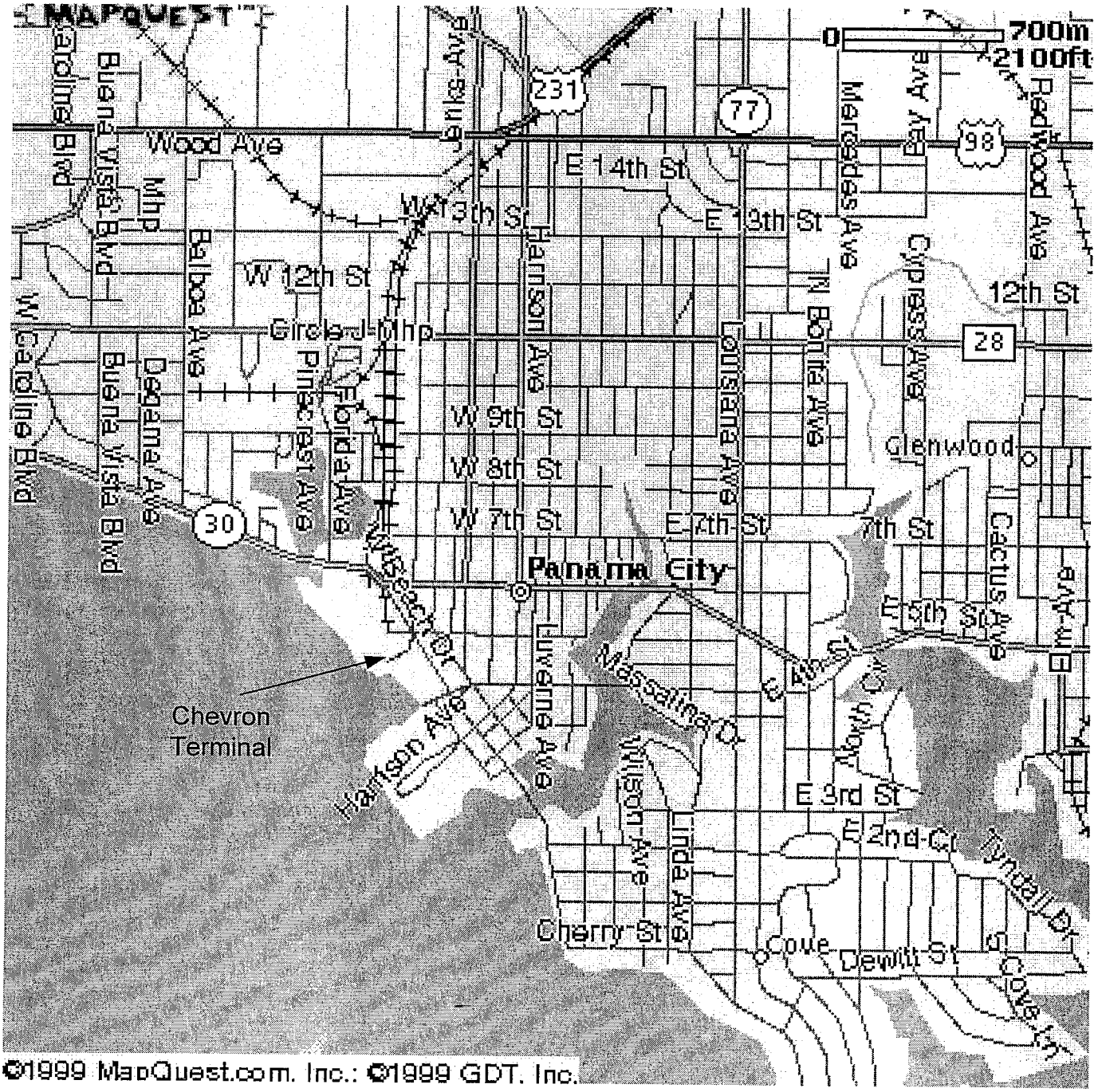
Supplemental Requirements

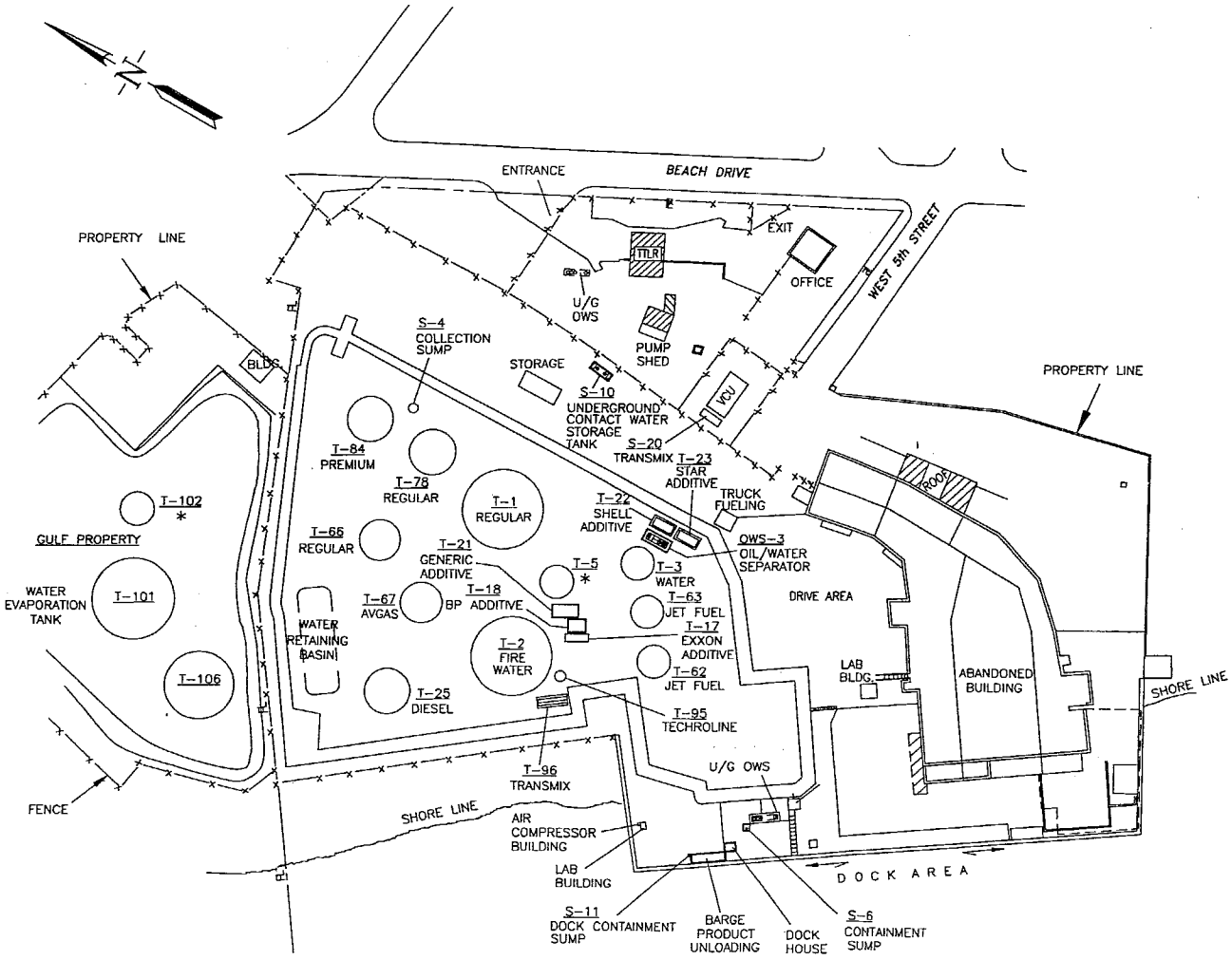
1. Process Flow Diagram [X] Attached, Document ID:_Attachment C___ [ ] Not Applicable
2. Fuel Analysis or Specification [ ] Attached, Document ID:_____ [X] Not Applicable [ ] Waiver Requested
3. Detailed Description of Control Equipment [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
4. Description of Stack Sampling Facilities [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
5. Compliance Test Report [ ] Attached, Document ID:_____ [ ] Previously submitted, Date:_____ [X] Not Applicable
6. Procedures for Startup and Shutdown [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
7. Operation and Maintenance Plan [ ] Attached, Document ID:_____ [ ] Not Applicable [X] Waiver Requested
8. Supplemental Information for Construction Permit Application [X] Attached, Document ID:__Appendix B_____ [ ] Not Applicable
9. Other Information Required by Rule or Statute [ ] Attached, Document ID:_____ [X] Not Applicable
10. Supplemental Requirements Comment: Emissions estimates provided in Appendix B.

Chevron Products Company
Panama City, Florida Terminal
525 West Beach Drive

Panama City, FL 32401

General Area Map





LEGEND

* DESIGNATES TANK NOT IN SERVICE

FIGURE 1

PREPARED FOR

Chevron

CONFIDENTIAL—ALL RIGHTS RESERVED—PROPERTY OF

RADIAN INTERNATIONAL
A DAMES & MOORE GROUP COMPANY

MILWAUKEE, WISCONSIN 53227

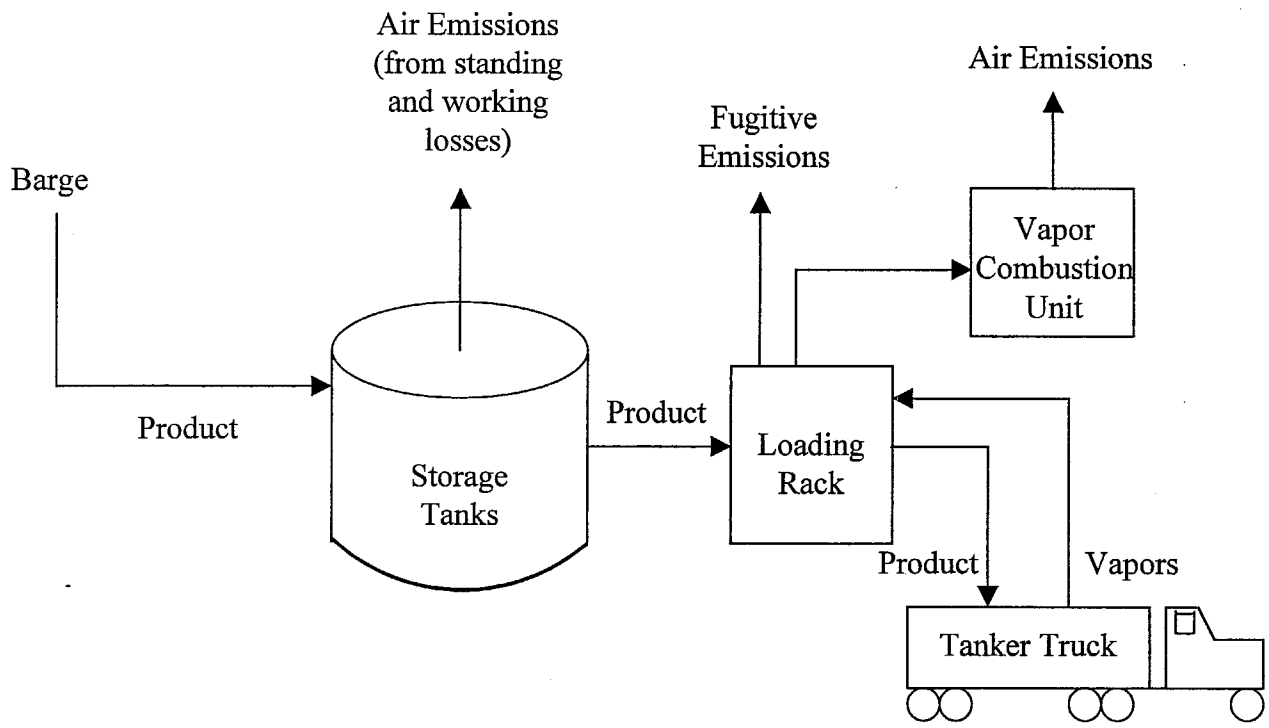
SCALE	AS NOTED	
DRAWN BY	RFW	DATE 2/24/00
CHECKED BY	KG	DATE 2/25/00
APPROVED BY	---	DATE ---

DRAWING TITLE

PANAMA CITY TERMINAL
SITE PLAN
525 WEST BEACH DRIVE
PANAMA CITY, FLORIDA

CAD DRAWING FILE: CHEVRON\B1

CONTRACT NO.	DRAWING NO.	REV.
804163.02	R-1	



Generic Process Flow Diagram for Bulk Terminal Operations

IV. DESIGN BASIS AND PERFORMANCE SUMMARY

A. Design Basis

The John Zink Vapor Combustion System is based on proprietary technology and sound engineering. Terminal loading characteristics and other design data are furnished by the customer and summarized as follows:

PRODUCTS LOADED

DESIGN PRODUCT LOADING PATTERNS
Connected to VCU

1.	Minimum loading rate:	600 GPM
2.	Maximum loading rate:	6,400 GPM
3.	Minimum vapor flow rate to combustion system:	81 SCFM
4.	Maximum vapor flow rate to combustion system:	855 SCFM
5.	Minimum hydrocarbon (measured as Propane) concentration:	6 Vol%
6.	Maximum hydrocarbon (measured as Propane) concentration:	60 Vol%

AMBIENT TEMPERATURE

1.	Summer:	100°F max
2.	Winter:	0°F min

POWER REQUIRED

1. 480 V/3 PH/60 HZ
2. 120 V/1 PH/60 HZ
3. 220 v/1 PH/60 HZ

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B. Performance Guarantee

John Zink Company guarantees the hydrocarbon emissions from the proposed vapor combustion unit not to exceed 10 milligrams per liter of product loaded based on the following:

1. Combustion unit is being operated per recommended manufacturer's instructions at conditions as specified in the "Design Basis" of the proposal.

2. Hydrocarbons are considered to be those hydrocarbons normally found in gasoline vapors displaced when transports are loaded (excluding ethane and methane). A typical analysis taken from the U.S. E.P.A. publication EPA-450/2-77-026 is as follows:

Component	Vol %
Air	58.1
Propane	0.6
Iso-butane	2.9
Butene	3.2
N-Butane	17.4
Iso-pentane	7.7
Pentene	5.1
N-Pentane	2.0
Hexane	3.0

3. Unless otherwise stated, calculation of hydrocarbon emissions from the vapor combustion system will be determined by appropriate and generally accepted sampling and analyzing techniques per requirements of the U.S. E.P.A. for bulk gasoline loading terminals (40 CRF 60, Subpart XX). Emissions are to be averaged over a six (6) hour test period.

4. John Zink Company is responsible only for those hydrocarbon emissions that pass through the combustion system and is not responsible for those emissions that may occur from the loading facility or from the vapor collection system due to improper transport or pipe sealing techniques.

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JOHN ZINK
A KOCH INDUSTRIES COMPANY

International Headquarters
P.O. Box 21220
Tulsa, Oklahoma 74121-1220
918/234-2918

Bill Matthes
Sr. Application Engineer

TELEFAX TRANSMITTAL MESSAGE

DATE:	November 13, 2000
TO:	**Jeremy Sagen**
COMPANY:	Chevron
FAX NUMBER:	404-577-5120
TOTAL PAGES:	one
REFERENCE:	Burner Velocity for Panama City
COPY:	Richard Garrett 877-395-7034

IF MISSENT, PLEASE TELEPHONE 918 234-2918. THIS MESSAGE IS BEING SENT FROM FAX 918 234-1968.

The John Zink vapor combustor installed at Panama City, Florida (VC-A00002666) is a two-stage air assisted unit.

Air assist combustors are designed and operated with an exit velocity less than Vmax. - In order to determine if the unit operates below Vmax, three (3) important factors must be known, the are as follows: 1) BTU value of the waste vapor being combusted, 2) burner area and 3) vapor flow rate. You could go to the expense cutting a spool piece to install a turbine meter, but this may never give you enough vapor to verify design vapor flow rate. Your combustor is designed to handle 6,400 gpm of instantaneous product loading. During the test you may never experience this rate loading as it requires every loading arm in each bay be connected to the truck and all loading at the same time. Therefore, measured flow will be less than the design flow rate. Your burner design has three (3) six-inch burner on the first stage and three (3) ten inch burner tips on the second stage. Each 6" burner will have a 13.74 in^2 of open area for a total open area of 82.4 square inches.

The maximum tip velocity may be calculated using the following equation:

$$Vmax = 28.75 + 0.0867\ (BTU/SCF)$$

Since 300 BTU/SCF is minimum heating valve, inserting this number into the equation yields:

$$Vmax = 28.75 + 0.0867\ (300)$$

$$Vmax = 54.76\ ft/sec$$

The combustor must operate below the Vmax velocity.

The combustor is designed for a continuous loading of 6,400 gpm (855 CFM) of product.

Velocity across the top can now be calculated.

$$\frac{855\ ft^3}{min} \times \frac{1}{82.4\ in^2} \times \frac{144\ in^2}{ft^2} \times \frac{min}{60\ sec} = 24.9\ ft/sec$$

Therefore, the operating velocity calculated is less than the Vmax allowed of 54.76 ft/sec.

If you have any questions, please feel free to call me at 918-234-2918.

URS

CALCULATION SHEET

Calc. No. 1

Prepared By: Jeremy Sagen Date: 1/14/2001 Reviewed By Michael MacDonald Date: 1/14/2001

Section I. General Information

Project: Panama City Terminal Air Pollutant Emissions Inventory Project No.: 805536.01

Subject: Post-Modified Facility Emissions Estimate for Chevron's Panama City, Florida Terminal

Section II. Source Description

A. Chevron Products Company (Chevron) operates a bulk petroleum products distribution terminal in Panama City, Florida. Chevron is planning to install a third loading lane and change the contents and/or operating status of several existing tanks. Chevron is also proposing to increase its existing permitted hourly and annual throughput limits and its VOC emissions limit. The terminal is currently a Synthetic Minor source with limits on total facility-wide throughput. Emissions from the modified facility will be estimated by this calculation to determine compliance with the terminal's status as a Synthetic Minor source. Volatile organic compound (VOC) and hazardous air pollutant (HAP) emissions are due to standing and working tank losses, product loading losses, and fugitive emissions.

B. Existing storage and process tanks proposed to be added to the air operating permit are listed below:

Table II-1 Operating/Design Parameters for Tanks to be Added to Permit

Parameter	Parameter Value			
Tank Number:	2	14	PT 1[a]	PT 2
Tank Type:	Fixed Roof	Fixed Roof	Underground	Underground
Length (feet):		31'11"	----	----
Diameter (feet):		8	----	----
Capacity (gallons):	1,809,521	12,000	12,000	126
Product Stored:	Water for Fire Protection	Additive	PCW	PCW

a PT = process tank; PCW = petroleum contaminated water. See Part E of Section III for description of process.

C. The existing tanks whose contents and/or physical design are being changed include:

Tank 01 - Regular Unleaded Gasoline to Temporarily Out of Service.
Tank 66 - Changed from a Fixed Roof Tank to an Internal Floating Roof Tank; Contents Changed from Diesel to Gasoline (Completed as per Permit Amendment 0050056-004-AC)
Tank 78 - Premium Unleaded Gasoline to Regular Unleaded Gasoline.
Tank 95 - Additive to Temporarily Out of Service.

D. Tanks 03 and 05 will be permanently removed from the Panama City terminal. ,

E. Chevron also proposes to change its existing permitted throughput as described below:

Limit	Current	Proposed	
Hourly Throughput:	64,000	96,000	gallons/hr
Annual Throughput (Gas, Avgas):	146,240,000	325,760,000	gallons/yr
Annual Throughput (Diesel, JetA):	28,760,000	57,490,000	gallons/yr

Prepared By: Jeremy Sagen Date: 1/14/2001 Reviewed By Michael MacDonald Date: 1/14/2001

Section III. Data

A. Actual Operating Hours: 24 hr/day
Actual Operating Days: 365 day/yr

B. For purposes of allocating throughput to tanks, it is assumed that future product throughput ratios (i.e., gasoline throughput to total high volatility product throughput) will remain similar to 1999 product throughput ratios.

Table III-1. Anticipated Future Product Throughputs [Ref. A]

Product	Throughput	
	1999	Future
High Volatility Products		
Gasoline	135,468,238	313,291,867
Aviation Gasoline	5,391,254	12,468,133
Sum	140,859,492	325,760,000
Low Volatility Products		
Additive	36,003	83,263
Diesel	17,834,348	38,666,514
Jet Kerosene	8,643,646	18,740,223
Sum	26,513,997	57,490,000

Additive is a low volatility product but is tied to gasoline throughput because additive and gasoline are mixed together when loaded into truck tanks. Therefore, future additive throughput is estimated as ($Additive_{1999}$ / $Gasoline_{1999}$ * $Gasoline_{2000}$) or (83,263 = 36,003 / 135,468,238 * 313,291,867). Diesel and Jet Kerosene ratios are then estimated assuming that the sum of low volatility product throughput does not include additive throughput.

Section III. Data (continued)

C. Presented below in Table III-2 is a matrix of tanks and their operating parameters (i.e., product stored, roof type, etc.).

Table III-2. Panama City Terminal Tank Data [Ref. A]

Tank ID	Product Stored	Tank Type	Capacity (gal)
PC-66	Gasoline	Internal Floating Roof	703,374
PC-78	Gasoline	Internal Floating Roof	1,053,990
PC-84	Gasoline	Domed External Floating	1,103,940
PC-67	Aviation Gasoline	Internal Floating Roof	699,552
PC-62	Jet A	Vertical Fixed Roof	211,492
PC-63	Jet A	Vertical Fixed Roof	211,492
PC-25	Diesel	Vertical Fixed Roof	852,222
PC-14	Additive	Vertical Fixed Roof	12,000
PC-17	Additive	Horizontal Fixed Roof	5,838
PC-18	Additive	Horizontal Fixed Roof	4,000
PC-21	Additive	Horizontal Fixed Roof	5,800
PC-22	Additive	Horizontal Fixed Roof	8,148
PC-23	Additive	Horizontal Fixed Roof	3,906
PC-96	Slop (Assume Gasoline)	Horizontal Fixed Roof	11,550
OWS #1[a]	PCW	Fixed Roof	800
Process Tank 1[b]	PCW	Underground	12,000
Process Tank 2[c]	PCW	Underground	126
PC-1	Out of Service	Internal Floating Roof	1,710,618
PC-2	Water (Fire Protection)	---	---
PC-20	Flare Drop-out (Dry)	---	---
PC-95	Out of Service	Vertical Fixed Roof	27,510
PC-101	Water	---	---

a 800 gallons is the capacity of the oil compartment of the oil/water separator (OWS).
b This process tank collects petroleum contaminated water (PCW) from the loading rack and storage tank areas.
c This process tank collects petroleum contaminated water from the Dock Drain.

D. The slop throughput for Tank PC-96 in 1999: 45,273 gal/yr [Ref. A]

Future slop throughput is assumed to be equal to the 1999 throughput times the ratio of total future product throughput (383,250,000 gallon/yr) to total 1999 product throughput (175,000,000). This ratio equals 2.19.

Future slop throughput for Tank PC-96: 99,148 gal/yr

E. PCW from the terminal grounds is collected in Process Tanks 1 and 2 before being sent to the Oil/Water Separator (OWS #1). Oil from OWS #1 is separated from the water and sent to the slop tank (PC-96). Water from OWS #1 is sent to the Tank 101 for evaporation. A hydrocarbon sensor on the water side of the OWS prevents water contaminanted with any product to be sent to Tank 101. Therefore, Tank 101 is assumed to contain "clean" water.

OWS #1 throughput will be assumed equal to the throughput of Tank 96. To determine the throughputs of Process Tanks 1 and 2, the OWS throughput will be apportioned to each process tank based on the ratios of their capacities to the total process tank capacity.

Section III. Data (continued)

F. To calculate loading losses from the loading of gasoline products, the permitted emission limit [Ref. B] on the loading rack of 35 mg/L will be used (plus 13 mg/L for fugitives) in lieu of any control efficiency.

VCU VOC Emissions (Permitted Value):	35.0	mg/L [Ref. B]
VCU Fugitive Emissions:	13	mg/L [Worst case emissions factor - Ref. L]

G. For slop and non-gasoline products, AP-42 emission equations will be used to estimate loading losses from the loading rack assuming a control efficiency of 0%.

Vapor Combustion Unit Control Efficiency:	0	%
Daily Average Ambient Temperature:	68.1	°F (20.1°C) [Ref. C]
Saturation Factor:	1.0	(Truck loading with dedicated vapor balance service [Ref. D])

Table III-3. Physical Data of Petroleum Products [Ref. C]

Product	Vapor Molecular Weight (lb/lb-mole)	Vapor Pressure (psia @68.1°F)
Gasoline	66	7.06
Diesel	130	0.008
Jet Kerosene	130	0.010
Aviation Gasoline	66	3.47
Additive	100	0.076

H. Below is data used to estimate CO, NOx, and PM emissions from operation of the vapor combustion unit (flare).

VOC Inlet Concentration:	193,000	ppm as propane [Ref. E]
VOC Outlet Concentration:	26.6	ppm as propane [Ref. E]
CO Outlet Concentration:	117	ppm [Ref. E]
CO_2 Outlet Concentration:	11,000	ppm [Ref. E]
Inlet Vapor Flow Rate	383,250,000	gallon/yr - See Assumption E

Table III-4. CO, NOx, and PM Emission Factors for the VCU [Ref. F]

Compound[a]	Emission Factor (lb/10^6 Btu)
CO	0.37
NOx	0.068
PM[b]	274

a SO_2 emissions are considered negligible since it is assumed that SO_2 containing compounds (e.g., mercaptans) are least likely to volatilize compared to other organic compounds (e.g., hexane).

b Value is for a heavily smoking flare. Units are in ug/L.

Section III. Data (continued)

I. The American Petroleum Institute (API) has conducted extensive studies to develop and quantify fugitive emission leak factors for a variety of piping components found at marketing terminals [Ref. G, H]. These leak factors were not developed on a seasonal or monthly basis, and they are generally applied across components without respect to prevailing climatological conditions. Also, these products are not site-specific. Summarized below in Table III-5 is data used to estimate fugitive emissions from valves, flanges, and pumps.

Table III-5. Fugitive Emission Data for Valve, Flanges, and Pumps

Component	Number[a]	Emission Factor (lb/hr/component)[b]
Valves	679	1.5E-04
Flanges	4,684	2.3E-05
Pumps	26	9.3E-04

a Reference G; averaged counts for each type of component across four surveyed terminals and assumed averages were representative of Chevron's terminals.

b Reference H

J. Summarized below in Table III-6 is the HAP speciation profile of petroleum products.

Table III-6. HAP Speciation of Petroleum Products [Ref. I, J]

	Weight Fraction (lb HAP/lb VOC)				
HAP	Gasoline	Diesel	Additive	Jet A	Aviation Gasoline
Benzene	0.0090	0.2755		0.0587	0.0021
Biphenyl		6.87E-05		4.63E-05	
Cresol		8.02E-05		0.0002	
Cumen	1.04E-04	0.0074	0.017	0.0043	1.12E-05
Ethylbenzene	0.0010	0.0181		0.0276	0.0002
Hexane	0.0160	0.5523		0.6628	0.0009
Napthalene	2.48E-06	0.0007		0.0003	6.66E-07
Phenol				0.0003	
Styrene		0.0011			
Toluene	0.0130	0.0921		0.1647	0.0089
2,2,4 Trimethylpentane	0.0039				
Xylenes	0.0050	0.0527	0.0785	0.0809	0.0008

K. Meteorological data (i.e., monthly solar insulation values and 10-meter mean wind speed data, and temperature data) for Apalachicola, Florida were used for the facility.

Section IV. Assumptions

A. Since throughput is not tracked on a per tank basis, the following data is used to calculate annual throughput for storage tanks storing the same fuel type (gasoline, diesel, jet kerosene, aviation gasoline, additive, and transmix): the capacity of each tank storing the same fuel type, the total capacity for all tanks storing the same fuel type, and the total throughput of the fuel:

$$\text{Throughput}_{A,F}\ (\text{gal/yr}) = \frac{\text{Capacity}_{A,F}\ (\text{gal})}{\sum_{i}^{n} \text{Capacity}_{A,F}\ (\text{gal})} \times \text{Throughput}_{F}\ (\text{gal/yr})$$

Where

A,F = Tank A storing fuel F

F = Fuel used

B. Loading losses for additive products are accounted for by the loading losses for gasoline, because at the time of loading, they are mixed together.

C. Fugitive emissions from the loading rack/VCU during loading of non-gasoline products are assumed to be negligible.

D. Transmix is conservatively assumed to be gasoline (RVP 13.5).

E. It is assumed that one gallon of product loaded into a truck tank results in one gallon of vapor exhausted to the VCU. Therefore, the VCU annual flow rate is the sum of the high and low volatile product maximum loading rates.

F. To estimate NOx emissions from the flare, it is assumed that the ratio of NOx emissions to CO emissions is equal to the ratio of AP-42 NOx emissions factor to CO emissions factor for flare operation.

G. For estimating PM emissions, it is assumed that the flare smokes for only 5% of its operating time. This is a very conservative estimate since the flare is required to be operated with minimal opacity.

H. SO_2 emissions from operation of the flare are assumed to be negligible since it is assumed that sulfur containing compounds (e.g., mercaptans) are least likely to volatilize compared to other organic compounds (e.g., hexane).

I. VOC and HAP emissions from piping components are from gasoline, the product with the greatest volatility stored at the terminal.

Section V. Approach

A. The Environmental Protection Agency's (EPA) TANKS v4.07 [Ref. K] was used to estimate standing and working emissions of VOC from the storage tanks presented in this calculation. Because this software is a peer-reviewed technical resource, a detailed manual calculation of the fixed-roof tank emission algorithms was not prepared. Complete documentation of the calculations performed in the TANKS v4.07 program is presented in EPA's AP-42 document [Ref. C]. Table A-1 of Attachment 1 present a summary of the VOC and HAP emissions from each tank.

B. For calculating loading loss VOC emissions for gasoline and aviation gasoline, a loading loss factor of 48 mg/L is used (35 mg/L from loading plus 13 mg/L fugitive emissions). For example, emissions from the loading of gasoline are estimated as follows:

VOC Emissions = Emission Factor (mg/L) * Volume of Product Loaded (gal/yr) * (1 lb/453,593 mg) * (28.317 L/7.4805 gal)

= 48 (mg/L) * 313,291,867 (gal/yr) * (1 lb/453,593 mg) * (28.317 L/7.4805 gal)

= 125,499 lb/yr {62.7 tpy}

Section V. Approach (continued)

C. The following method is used to calculate loading losses from slop and non-gasoline products. The American Petroleum Institute (API) has conducted much research into emissions from product loading. The current EPA-approved method for estimating loading losses is described in AP-42 Chapter 5, Section 5.2.2.1.1 [Ref. D]. This method is driven by a combination of parameters, including product vapor pressure, ambient temperature, and loading method. The general form of the emission factor equation is:

L = 12.46 * S * P * M * (100 - Control Efficiency(%)) / T / 100

where

L	=	Loading Loss (lb/Mgal)
S	=	Saturation Factor
P	=	True Vapor Pressure of Liquid Loaded (psia)
M	=	Molecular Weight of Vapors (lb/lb-mole)
T	=	Temperature (^{o}R)

For example, the loading loss factor for diesel is calculated as follows:

L = 12.46 * 1.0 * 0.008 * 130 * (100 - 0) / (68.1 + 460) / 100

= 2.48E-02 lb VOC/Mgal product loaded

For example, VOC emissions from the loading of diesel are estimated as follows:

VOC Loading Emissions = Loading Factor (lb VOC/Mgal product) * Annual Diesel Throughput (gal/yr) * (1 Mgal/1,000 gal)

= 2.48E-02 (lb VOC/Mgal Diesel) * 38,666,514 (gal Diesel/yr) * (1 Mgal/1,000 gal)

= 961 lb VOC/yr {0.481 tpy}

D. HAP emissions are calculated by multiplying total VOC emissions from product "i" by the HAP weight fraction of product "i". For example, hexane emissions from diesel loading losses are calculated as follows:

Hexane Emissions = Diesel Loading VOC Emissions (lb/yr) * Hexane Weight Fraction (lb Hexane/lb VOC)

= 962 (lb VOC/yr) * 0.5523 (lb Hexane/lb VOC)

= 531 lb Benzene/yr {0.266 tpy}

Section V. Approach (continued)

E. CO emissions from operation of the VCU are estimated using source test data and the assumption that the inlet flow rate of vapor is equal to the total amount of product loaded into tank trucks. CO emissions from the flare are estimated by first performing a carbon balance on the VCU and then using the ideal gas law (PV=nRT) on the calculated CO flow rate:

Vapor Volume Flow Rate at Outlet = Inlet Vapor Flow Rate (gal/yr) * VOC Inlet Concentration (ppm) * 3 (Carbons in Propane) / [(VOC Outlet Concentration (ppm) * 3 (Carbons in Propane)) + CO Outlet Concentration (ppm) + CO_2 Outlet Concentration (ppm)]

= 383,250,000 (gal/yr) * 193,000 (ppm) * 3 (Carbons in Propane) / [(26.6 (ppm) * 3 (Carbons in Propane)) + 117 (ppm) + 11,000 (ppm)]

= 1.98E+10 gal/yr at VCU outlet

CO Emissions from Flare = Vapor Flow Rate at Outlet (gal/yr) * CO Outlet Concentration (ppmv) * (1 ppmv / 1,000,000) * 3.785 (L/gal) * 1 (atm) / 0.08206 (atm L/mol K) / (24.2°C + 273) * 28 (g/mole) / 453.593 (g/lb)

= 1.98E+10 (gal/yr) * 117 (ppm) * (1/1,000,000) * 3.785 (L/gal) * 1 (atm) / 0.08206 (atm L/mol K) / (297.2 K) * 28 (g/mole) / 453.593 (g/lb)

= 22,214 lb CO/yr {11.1 tpy}

F. NOx emissions are estimated by multiplying the CO emissions rate by the ratio of the AP-42 NOx emissions factor to CO emissions factor:

NOx Emissions = CO Emissions (lb/yr) * NOx Emissions Factor (lb/10^6 Btu) / CO Emissions Factor (lb/10^6 Btu)

= 22,214 (lb/yr) * 0.068 (lb/10^6 Btu) / 0.37 (lb/10^6 Btu)

= 4,083 lb NOx/yr {2.04 tpy}

G. To estimate PM emissions from operation of the flare, the measured flow rate to the flare, the stack diameter, AP-42 emission factor, and the assumption of the flare smoking only during 2.5% of its operation is used.

PM Emissions from Flare = Vapor Outlet Flow Rate (gal/yr) * PM Emission Factor (ug/L) * 3.785 (L/gal) / 453,593,000 (ug/lb)

= 1.98E+10 (gal/yr) * 274 (ug/L) * 3.785 (L/gal) / 453,493,000 (ug/lb) * 0.05 (time smoking/time not smoking)

= 2,266 lb PM/yr {1.13 tpy}

Section V. Approach (continued)

H. Fugitive VOC emissions from valves, pumps, and flanges are estimated as follows:

VOC Fugitive Emissions = Emission Factor (lb/hr/component) * Number of Components * Hours of Operation per Year (hr/yr)

For example, VOC emissions from terminal valves are estimated as follows:

VOC Emissions from Valves = 1.5E-04 (lb/hr/valve) * 679 valves * 24 (hr/day) * 365 (day/yr)

= 892 lb VOC/yr {0.446 ton}

I. Terminal-wide actual emissions are estimated by summing the actual emissions from working and standing tank losses, product loading, flare operation, and fugitive emissions.

Section VI. Results

A. Throughput values for each tank are presented below in Table VI-1.

Table VI-1. Post-Construction Anticipated Actual Petroleum Product Throughputs

Tank ID	Contents	Throughput (gal/yr)
PC-66	Gasoline	77,014,310
PC-78	Gasoline	115,404,198
PC-84	Gasoline	120,873,358
PC-67	Aviation Gasoline	12,468,133
PC-62	Jet A	9,370,112
PC-63	Jet A	9,370,112
PC-25	Diesel	38,666,514
PC-14	Additive	25,173
PC-17	Additive	12,246
PC-18	Additive	8,391
PC-21	Additive	12,167
PC-22	Additive	17,092
PC-23	Additive	8,194
PC-96	Slop (Assume Gasoline)	99,148
OWS #1	PCW (Assume Gasoline)	99,148
Process Tank 1	PCW (Assume Gasoline)	98,118
Process Tank 2	PCW (Assume Gasoline)	1,030

B. See Tables A-1 of Attachment 1 for VOC and HAP emissions from tank losses. See Attachment 2 for TANKS 4.07 output files for gasoline, diesel, additive, and jet-kerosene, and aviation gasoline tanks.

Section VI. Results (continued)

C. VOC and HAP emissions from the loading rack are summarized below in Table VI-2.

Table VI-2. Post-Construction Maximum Actual VOC and HAP Emissions from the Loading Rack

Pollutant	Emissions (tpy)					
	Gasoline	Diesel	Jet Kerosene	Aviation Gasoline	Additive	Total
VOC	6.33E+01	4.80E-01	2.82E-01	2.50E+00	7.47E-03	66.6
Benzene	5.70E-01	1.32E-01	1.65E-02	5.24E-03		0.724
Biphenyl		3.30E-05	1.30E-05			4.60E-05
Cresol		3.85E-05	5.63E-05			9.49E-05
Cumen	6.58E-03	3.55E-03	1.21E-03	2.80E-05	1.27E-04	0.012
Ethylbenzene	6.33E-02	8.69E-03	7.77E-03	4.25E-04		0.080
Hexane	1.01E+00	2.65E-01	1.87E-01	2.25E-03		1.47
Napthalene	1.57E-04	3.36E-04	8.45E-05	1.66E-06		5.79E-04
Phenol			8.45E-05			8.45E-05
Styrene		5.28E-04				5.28E-04
Toluene	8.23E-01	4.42E-02	4.64E-02	2.22E-02		0.936
2,2,4 Trimethylpentane	2.47E-01					0.247
Xylenes	3.16E-01	2.53E-02	2.28E-02	2.00E-03	6.05E-04	0.367
Total HAP	3.04E+00	4.80E-01	2.82E-01	3.22E-02	7.32E-04	3.83

D. Pollutant emissions from operation of the flare are summarized below in Table VI-3.

Table VI-3. Post-Construction Maximum Actual CO, NOx, and PM Emissions from Flare Operation

Pollutant	Emissions (tpy)
CO	11.1
NOx	2.04
PM	1.13

E. VOC emissions from fugitive sources (valves, pumps, and flanges) are summarized below in Table VI-4.

Table VI-4. Post-Construction Maximum Actual Emissions from Fugitive Sources

Component	Emissions (tpy)
VOC from Valves	0.446
VOC from Pumps	0.472
VOC from Flanges	0.106
Total VOC	1.02
Benzene	0.009
Cumen	1.06E-04
Ethylbenzene	1.02E-03
Hexane	0.016
Napthalene	2.54E-06
Toluene	0.013
2,2,4 Trimethylpentane	0.004
Xylenes	0.005
Total HAP	0.049

Section VI. Results (continued)

F. Post-construction facility-wide maximum actual emissions are summarized below in Table VI-5.

Table VI-5. Post-Construction Facility-Wide Maximum Actual Emissions

Pollutant	Emissions (tpy)
VOC	80.7
CO	11.1
NOx	2.04
PM	1.13
Benzene	0.981
Biphenyl	9.31E-05
Cresol	1.93E-04
Cumen	0.019
Ethylbenzene	0.109
Hexane	2.12
Napthalene	1.01E-03
Phenol	8.93E-05
Styrene	1.06E-03
Toluene	1.19
2,2,4 Trimethylpentane	0.291
Xylenes	0.480
Total HAP	5.19

Section VII. References

A. Data per communication with Panama City's terminal manager.

B. Air Operating Permit No. 0050056002AF.

C. AP-42, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary and Area Sources, U.S. Environmental Protection Agency, Research Triangle Park, N.C., Supplemental Edition, September 1997, Section 7.1.

D. AP-42, Compilation of Air Pollutant Emission Factors, Volume 1: Stationary and Area Sources, U.S. Environmental Protection Agency, Research Triangle Park, N.C., Fifth Edition, January 1995, Section 5.2.

E. Results for Source Test performed on John Zink Vapor Destruction Unit (July 14, 2000) (See Attachment 3).

F. AP-42, Compilation of Air Pollutant Emission Factors, Volume 2: Stationary and Area Sources, U.S. Environmental Protection Agency, Research Triangle Park, N.C., Fifth Edition, January 1995, Section 13.5.

G. API Publication 4588, 1993 (See Attachment 4).

H. API Average Fugitive Equipment Leak Factors (See Attachment 5).

I. Chevron Products Company, Analytical Data, Richmond, California 1994 (See Attachment 6).

J. U.S. Environmental Protection Agency. August 16, 1993. HAP Analysis of Section 114 Data (See Attachment 7).

K. TANKS v4.07 User's Guide, U.S. Environmental Protection Agency.

Section VII. References (continued)

L. Radian Letter to Karin Ritter of API, April 27, 1995 (See Attachment 8).

ATTACHMENT 1

Table A-1. Potential Limited VOC and HAP Emissions from Tank Standing and Working Losses

	VOC Losses		Benzene	Biphenyl	Cresol	Cumene	Ethylbenzene	Hexane	Napthalene	Phenol	Styrene	Toluene	2,2,4 Trimethyl pentane	Xylene	Total
Tank ID	(lb/yr)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)	(tpy)
Gasoline Tanks															
PC-66	3,114	1.56	1.40E-02			1.62E-04	1.56E-03	2.49E-02				2.02E-02	6.07E-03	7.78E-03	7.47E-02
PC-78	8,834	4.42	3.98E-02			4.59E-04	4.42E-03	7.07E-02				5.74E-02	1.72E-02	2.21E-02	2.12E-01
PC-84	2,124	1.06	9.56E-03			1.10E-04	1.06E-03	1.70E-02				1.38E-02	4.14E-03	5.31E-03	5.10E-02
Total	14,072	7.04	6.33E-02			7.32E-04	7.04E-03	1.13E-01				9.15E-02	2.74E-02	3.52E-02	3.38E-01
Aviation Gasoline Tanks															
PC-67	3,753	1.88	3.94E-03			2.10E-05	3.19E-04	1.69E-03				1.67E-02		1.50E-03	2.42E-02
Jet Kerosene Tanks															
PC-62	298	0.149	8.74E-03	6.89E-06	2.98E-05	6.40E-04	4.11E-03	9.86E-02	4.47E-05	4.47E-05		2.45E-02		1.20E-02	1.49E-01
PC-63	298	0.149	8.74E-03	6.89E-06	2.98E-05	6.40E-04	4.11E-03	9.86E-02	4.47E-05	4.47E-05		2.45E-02		1.20E-02	1.49E-01
Total	595	0.298	1.75E-02	1.38E-05	5.95E-05	1.28E-03	8.22E-03	1.97E-01	8.93E-05	8.93E-05	0.00E+00	4.90E-02	0.00E+00	2.41E-02	2.98E-01
Diesel Tanks															
PC-25	970	0.485	1.34E-01	3.33E-05	3.89E-05	3.59E-03	8.78E-03	2.68E-01	3.40E-04		5.34E-04	4.47E-02		2.56E-02	4.85E-01
Additive Tanks															
PC-17	22.1	0.011				1.88E-04								8.69E-04	1.06E-03
PC-18	10.41	0.005				8.80E-05								4.06E-04	4.94E-04
PC-21	22.1	0.011				1.88E-04								8.68E-04	1.06E-03
PC-22	39.5	0.020				3.35E-04								1.55E-03	1.88E-03
PC-23	9.53	0.005				8.10E-05								3.74E-04	4.55E-04
PC-95	0.0	0.000				0.00E+00								0.00E+00	0.00E+00
PC-14	25.4	0.013				2.16E-04								9.97E-04	1.21E-03
Total	129	0.064				1.10E-03								5.06E-03	6.16E-03
Other Tanks (Transmix, OWS, Process Tanks)															
PC-96	4,241	2.12	1.91E-02			2.21E-04	2.12E-03	3.39E-02				2.76E-02	8.27E-03	1.06E-02	1.02E-01
OWS1	1,125	0.563	5.06E-03			5.85E-05	5.63E-04	9.00E-03				7.32E-03	2.19E-03	2.81E-03	2.70E-02
Process 1	1,286	0.643	5.79E-03			6.69E-05	6.43E-04	1.03E-02				8.36E-03	2.51E-03	3.21E-03	3.09E-02
Process 2	13.45	0.007	6.05E-05			6.99E-07	6.73E-06	1.08E-04				8.74E-05	2.62E-05	3.36E-05	3.23E-04
Total	6,666	3.33	3.00E-02			3.47E-04	3.33E-03	5.33E-02				4.33E-02	1.30E-02	1.67E-02	1.60E-01
Tank Total	26,185	13.1	2.48E-01	4.71E-05	9.84E-05	7.07E-03	2.77E-02	6.33E-01	4.29E-04	8.93E-05	5.34E-04	2.45E-01	4.04E-02	1.08E-01	1.31E+00

ATTACHMENT 2

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	OWS 1
City:	Panama City
State:	Florida
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	8.00
Volume (gallons):	800.00
Turnovers:	123.90
Net Throughput (gal/yr):	99,120.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	62.25	58.21	66.29	68.10	7.5310	6.9855	8.1099	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	63.63	59.26	67.99	68.10	7.7246	7.1246	8.3639	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Mar	66.80	62.19	71.42	68.10	8.1858	7.5221	8.8950	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Apr	70.27	65.08	75.46	68.10	8.7143	7.9336	9.5545	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	May	73.50	68.14	78.87	68.10	9.2308	8.3860	10.1412	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jun	75.89	70.77	81.00	68.10	9.6270	8.7932	10.5217	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jul	76.39	71.71	81.06	68.10	9.7116	8.9414	10.5332	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Aug	76.17	71.61	80.74	68.10	9.6754	8.9255	10.4740	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Sep	74.78	70.36	79.20	68.10	9.4416	8.7288	10.1995	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Oct	70.84	66.06	75.62	68.10	8.8042	8.0764	9.5827	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Nov	66.75	62.36	71.13	68.10	8.1777	7.5463	8.8501	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Dec	63.57	59.53	67.60	68.10	7.7160	7.1605	8.3052	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	30.3211	31.1087	40.8776	50.9238	62.2646	63.7334	61.4671	59.3215	52.1030	49.4826	37.4481	31.6638
Vapor Space Volume (cu ft):	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812
Vapor Density (lb/cu ft):	0.0887	0.0908	0.0956	0.1011	0.1065	0.1106	0.1114	0.1111	0.1087	0.1021	0.0955	0.0907
Vapor Space Expansion Factor:	0.1788	0.2016	0.2356	0.2985	0.3484	0.3650	0.3400	0.3284	0.2997	0.2800	0.2231	0.1854
Vented Vapor Saturation Factor:	0.3851	0.3791	0.3656	0.3512	0.3382	0.3288	0.3269	0.3277	0.3332	0.3489	0.3658	0.3794
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812	160.0812
Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Effective Diameter (ft):	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383	7.1383
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Tank Shell Length (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0887	0.0908	0.0956	0.1011	0.1065	0.1106	0.1114	0.1111	0.1087	0.1021	0.0955	0.0907
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.1788	0.2016	0.2356	0.2985	0.3484	0.3650	0.3400	0.3284	0.2997	0.2800	0.2231	0.1854
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	1.1244	1.2392	1.3728	1.6209	1.7552	1.7285	1.5918	1.5485	1.4707	1.5063	1.3038	1.1446
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.9855	7.1246	7.5221	7.9336	8.3860	8.7932	8.9414	8.9255	8.7288	8.0764	7.5463	7.1605
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	8.1099	8.3639	8.8950	9.5545	10.1412	10.5217	10.5332	10.4740	10.1995	9.5827	8.8501	8.3052
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.3851	0.3791	0.3656	0.3512	0.3382	0.3288	0.3269	0.3277	0.3332	0.3489	0.3658	0.3794
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Losses (lb):	39.9611	40.9882	43.4355	46.2398	48.9803	51.0825	51.5318	51.3396	50.0989	46.7166	43.3922	40.9428
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Net Throughput (gal/mo.):	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000	8,260.0000
Annual Turnovers:	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000	123.9000
Turnover Factor:	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088	0.4088

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	70.2823	72.0969	84.3131	97.1635	111.2449	114.8159	112.9989	110.6611	102.2019	96.1992	80.8403	72.6066

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	554.71	570.72	1,125.42

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-14
City:	Panama City
State:	Florida
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	31.92
Diameter (ft):	8.00
Volume (gallons):	12,000.00
Turnovers:	2.10
Net Throughput (gal/yr):	25,200.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	1.2133	1.2313	1.5453	1.8174	2.0914	2.0128	1.8998	1.8397	1.6710	1.7371	1.4104	1.2452
Vapor Space Volume (cu ft):	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9837	0.9831	0.9819	0.9805	0.9789	0.9777	0.9774	0.9775	0.9782	0.9802	0.9819	0.9832
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581	1,021.9581
Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Effective Diameter (ft):	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361	18.0361
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Tank Shell Length (ft):	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200	31.9200
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):t	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9837	0.9831	0.9819	0.9805	0.9789	0.9777	0.9774	0.9775	0.9782	0.9802	0.9819	0.9832
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000	4.0000
Working Losses (lb):	0.3911	0.4044	0.4352	0.4695	0.5091	0.5383	0.5444	0.5418	0.5247	0.4765	0.4347	0.4038
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000	2,100.0000
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	1.6044	1.6357	1.9805	2.2869	2.6004	2.5511	2.4442	2.3815	2.1958	2.2136	1.8450	1.6491

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	5.67	19.71	25.39

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-17
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	8.00
Diameter (ft):	16.00
Volume (gallons):	5,838.00
Turnovers:	2.10
Net Throughput (gal/yr):	12,259.80
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	1.1969	1.2139	1.5217	1.7871	2.0532	1.9738	1.8625	1.8038	1.6395	1.7077	1.3888	1.2277
Vapor Space Volume (cu ft):	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9679	0.9668	0.9644	0.9617	0.9586	0.9563	0.9559	0.9561	0.9574	0.9612	0.9645	0.9669
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194
Tank Diameter (ft):	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000
Effective Diameter (ft):	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694
Vapor Space Outage (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Tank Shell Length (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9679	0.9668	0.9644	0.9617	0.9586	0.9563	0.9559	0.9561	0.9574	0.9612	0.9645	0.9669
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Losses (lb):	0.1902	0.1967	0.2117	0.2284	0.2477	0.2619	0.2649	0.2636	0.2553	0.2318	0.2115	0.1965
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500	1,021.6500
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	1.3871	1.4107	1.7334	2.0155	2.3009	2.2357	2.1274	2.0674	1.8948	1.9395	1.6002	1.4242

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	2.76	19.38	22.14

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-18
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	8.00
Diameter (ft):	10.50
Volume (gallons):	4,000.00
Turnovers:	2.10
Net Throughput (gal/yr):	8,400.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.5212	0.5288	0.6634	0.7799	0.8970	0.8630	0.8145	0.7888	0.7166	0.7454	0.6055	0.5348
Vapor Space Volume (cu ft):	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9787	0.9780	0.9764	0.9745	0.9724	0.9709	0.9706	0.9707	0.9716	0.9742	0.9764	0.9780
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237	441.2237
Tank Diameter (ft):	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000
Effective Diameter (ft):	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444	10.3444
Vapor Space Outage (ft):	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500
Tank Shell Length (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9787	0.9780	0.9764	0.9745	0.9724	0.9709	0.9706	0.9707	0.9716	0.9742	0.9764	0.9780
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500	5.2500
Working Losses (lb):	0.1304	0.1348	0.1451	0.1565	0.1697	0.1794	0.1815	0.1806	0.1749	0.1588	0.1449	0.1346
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000	700.0000
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000	10.5000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.6515	0.6636	0.8085	0.9364	1.0667	1.0424	0.9959	0.9694	0.8915	0.9042	0.7504	0.6694

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	1.89	8.46	10.35

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-21
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	8.00
Diameter (ft):	16.00
Volume (gallons):	5,800.00
Turnovers:	2.10
Net Throughput (gal/yr):	12,180.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	1.1969	1.2139	1.5217	1.7871	2.0532	1.9738	1.8625	1.8038	1.6395	1.7077	1.3888	1.2277
Vapor Space Volume (cu ft):	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9679	0.9668	0.9644	0.9617	0.9586	0.9563	0.9559	0.9561	0.9574	0.9612	0.9645	0.9669
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194	1,024.5194
Tank Diameter (ft):	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000
Effective Diameter (ft):	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694	12.7694
Vapor Space Outage (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Tank Shell Length (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9679	0.9668	0.9644	0.9617	0.9586	0.9563	0.9559	0.9561	0.9574	0.9612	0.9645	0.9669
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Losses (lb):	0.1890	0.1955	0.2103	0.2269	0.2461	0.2602	0.2631	0.2619	0.2536	0.2303	0.2101	0.1952
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000	1,015.0000
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000	16.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	1.3859	1.4094	1.7320	2.0140	2.2993	2.2340	2.1256	2.0657	1.8932	1.9380	1.5988	1.4229

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	2.74	19.38	22.12

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-22
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	9.50
Diameter (ft):	20.00
Volume (gallons):	8,148.00
Turnovers:	2.10
Net Throughput (gal/yr):	17,110.80
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	2.2031	2.2339	2.7985	3.2845	3.7707	3.6228	3.4181	3.3106	3.0101	3.1380	2.5541	2.2593
Vapor Space Volume (cu ft):	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9602	0.9589	0.9559	0.9526	0.9488	0.9460	0.9454	0.9457	0.9473	0.9519	0.9560	0.9590
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637	1,900.9637
Tank Diameter (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Effective Diameter (ft):	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576	15.5576
Vapor Space Outage (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Tank Shell Length (ft):	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000	9.5000
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9602	0.9589	0.9559	0.9526	0.9488	0.9460	0.9454	0.9457	0.9473	0.9519	0.9560	0.9590
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Losses (lb):	0.2655	0.2746	0.2955	0.3188	0.3457	0.3655	0.3696	0.3679	0.3563	0.3236	0.2951	0.2742
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000	1,425.9000
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	2.4686	2.5085	3.0940	3.6033	4.1163	3.9883	3.7878	3.6785	3.3664	3.4616	2.8492	2.5335

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	3.85	35.60	39.46

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-23
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	8.00
Diameter (ft):	10.00
Volume (gallons):	3,906.00
Turnovers:	2.10
Net Throughput (gal/yr):	8,202.60
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Techroline Additives	Jan	62.25	58.21	66.29	68.10	0.0782	0.0711	0.0860	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Feb	63.63	59.26	67.99	68.10	0.0809	0.0727	0.0893	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Mar	66.80	62.19	71.42	68.10	0.0870	0.0781	0.0967	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Apr	70.27	65.08	75.46	68.10	0.0939	0.0837	0.1066	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	May	73.50	68.14	78.87	68.10	0.1018	0.0896	0.1150	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jun	75.89	70.77	81.00	68.10	0.1077	0.0951	0.1208	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Jul	76.39	71.71	81.06	68.10	0.1089	0.0974	0.1210	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Aug	76.17	71.61	80.74	68.10	0.1084	0.0972	0.1200	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Sep	74.78	70.36	79.20	68.10	0.1049	0.0941	0.1158	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Oct	70.84	66.06	75.62	68.10	0.0953	0.0856	0.1070	100.0000			100.00	Option 1: VP70 = .09324 VP80 = .11773
Techroline Additives	Nov	66.75	62.36	71.13	68.10	0.0869	0.0784	0.0960	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324
Techroline Additives	Dec	63.57	59.53	67.60	68.10	0.0808	0.0731	0.0886	100.0000			100.00	Option 1: VP60 = .07385 VP70 = .09324

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.4732	0.4802	0.6024	0.7083	0.8147	0.7838	0.7398	0.7164	0.6508	0.6769	0.5498	0.4856
Vapor Space Volume (cu ft):	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Vented Vapor Saturation Factor:	0.9797	0.9790	0.9775	0.9757	0.9737	0.9723	0.9720	0.9721	0.9729	0.9754	0.9775	0.9790
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029	400.2029
Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Effective Diameter (ft):	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951	10.0951
Vapor Space Outage (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Tank Shell Length (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0014	0.0014	0.0015	0.0017	0.0018	0.0019	0.0019	0.0019	0.0018	0.0017	0.0015	0.0014
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia)!	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0279	0.0304	0.0322	0.0366	0.0379	0.0358	0.0324	0.0315	0.0304	0.0334	0.0304	0.0278
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0149	0.0166	0.0186	0.0229	0.0253	0.0257	0.0236	0.0228	0.0216	0.0214	0.0176	0.0155
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0711	0.0727	0.0781	0.0837	0.0896	0.0951	0.0974	0.0972	0.0941	0.0856	0.0784	0.0731
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0860	0.0893	0.0967	0.1066	0.1150	0.1208	0.1210	0.1200	0.1158	0.1070	0.0960	0.0886
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9797	0.9790	0.9775	0.9757	0.9737	0.9723	0.9720	0.9721	0.9729	0.9754	0.9775	0.9790
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Vapor Space Outage (ft):	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000	5.0000
Working Losses (lb):	0.1273	0.1316	0.1417	0.1528	0.1657	0.1752	0.1772	0.1764	0.1708	0.1551	0.1415	0.1314
Vapor Molecular Weight (lb/lb-mole):	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000	100.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0782	0.0809	0.0870	0.0939	0.1018	0.1077	0.1089	0.1084	0.1049	0.0953	0.0869	0.0808
Net Throughput (gal/mo.):	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500	683.5500
Annual Turnovers:	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000	2.1000
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.6005	0.6118	0.7441	0.8611	0.9804	0.9591	0.9170	0.8928	0.8217	0.8320	0.6913	0.6170

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Techroline Additives	1.85	7.68	9.53

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-25
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	34.10
Diameter (ft):	63.50
Liquid Height (ft):	34.00
Avg. Liquid Height (ft):	34.00
Volume (gallons):	852,222.00
Turnovers:	45.44
Net Throughput (gal/yr):	38,724,967.68
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft):	1.98
Slope (ft/ft) (Cone Roof):	0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron - Diesel	Jan	62.25	58.21	66.29	68.10	0.0082	0.0073	0.0088	130.0000			130.00	Option 1: VP60 = .0079 VP70 = .0093
Chevron - Diesel	Feb	63.63	59.26	67.99	68.10	0.0084	0.0077	0.0090	130.0000			130.00	Option 1: VP60 = .0079 VP70 = .0093
Chevron - Diesel	Mar	66.80	62.19	71.42	68.10	0.0089	0.0082	0.0098	130.0000			130.00	Option 1: VP60 = .0079 VP70 = .0093
Chevron - Diesel	Apr	70.27	65.08	75.46	68.10	0.0094	0.0086	0.0110	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	May	73.50	68.14	78.87	68.10	0.0104	0.0090	0.0121	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Jun	75.89	70.77	81.00	68.10	0.0112	0.0095	0.0129	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Jul	76.39	71.71	81.06	68.10	0.0113	0.0098	0.0129	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Aug	76.17	71.61	80.74	68.10	0.0113	0.0098	0.0128	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Sep	74.78	70.36	79.20	68.10	0.0108	0.0094	0.0122	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Oct	70.84	66.06	75.62	68.10	0.0096	0.0087	0.0111	130.0000			130.00	Option 1: VP70 = .0093 VP80 = .0125
Chevron - Diesel	Nov	66.75	62.36	71.13	68.10	0.0088	0.0082	0.0097	130.0000			130.00	Option 1: VP60 = .0079 VP70 = .0093
Chevron - Diesel	Dec	63.57	59.53	67.60	68.10	0.0084	0.0078	0.0090	130.0000			130.00	Option 1: VP60 = .0079 VP70 = .0093

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.3844	0.3857	0.4733	0.5467	0.6439	0.6282	0.5944	0.5750	0.5180	0.5247	0.4321	0.3900
Vapor Space Volume (cu ft):	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0352	0.0364	0.0343	0.0310	0.0302	0.0292	0.0321	0.0294	0.0268
Vented Vapor Saturation Factor:	0.9997	0.9997	0.9996	0.9996	0.9996	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831	2,411.0831
Tank Diameter (ft):	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000
Vapor Space Outage (ft):	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613
Tank Shell Height (ft):	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000	34.1000
Average Liquid Height (ft):	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000
Roof Outage (ft):	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613	0.6613
Roof Height (ft):	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840	1.9840
Roof Slope (ft/ft):	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625
Shell Radius (ft):	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500	31.7500
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0002	0.0002	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0082	0.0084	0.0089	0.0094	0.0104	0.0112	0.0113	0.0113	0.0108	0.0096	0.0088	0.0084
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0352	0.0364	0.0343	0.0310	0.0302	0.0292	0.0321	0.0294	0.0268
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0015	0.0014	0.0015	0.0024	0.0031	0.0034	0.0031	0.0030	0.0028	0.0024	0.0014	0.0012
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0082	0.0084	0.0089	0.0094	0.0104	0.0112	0.0113	0.0113	0.0108	0.0096	0.0088	0.0084
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0073	0.0077	0.0082	0.0086	0.0090	0.0095	0.0098	0.0098	0.0094	0.0087	0.0082	0.0078
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0088	0.0090	0.0098	0.0110	0.0121	0.0129	0.0129	0.0128	0.0122	0.0111	0.0097	0.0090
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9997	0.9997	0.9996	0.9996	0.9996	0.9995	0.9995	0.9995	0.9996	0.9996	0.9996	0.9997
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0082	0.0084	0.0089	0.0094	0.0104	0.0112	0.0113	0.0113	0.0108	0.0096	0.0088	0.0084
Vapor Space Outage (ft):	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613	0.7613

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Working Losses (lb):	67.8494	69.4420	73.1130	77.5246	86.0687	92.3707	93.6910	93.1275	89.4481	79.0393	73.0495	69.3723
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0082	0.0084	0.0089	0.0094	0.0104	0.0112	0.0113	0.0113	0.0108	0.0096	0.0088	0.0084
Net Throughput (gal/mo.):	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640	3,227,080.640
	0	0	0	0	0	0	0	0	0	0	0	0
Annual Turnovers:	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400	45.4400
Turnover Factor:	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269	0.8269
Maximum Liquid Volume (gal):	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000	852,222.0000
Maximum Liquid Height (ft):	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000	34.0000
Tank Diameter (ft):	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000	63.5000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	68.2338	69.8278	73.5863	78.0714	86.7126	92.9989	94.2854	93.7025	89.9661	79.5640	73.4816	69.7623

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron - Diesel	964.10	6.10	970.19

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-62-old
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	43.00
Diameter (ft):	30.00
Liquid Height (ft):	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons): !	211,492.00
Turnovers:	44.30
Net Throughput (gal/yr):	9,369,095.60
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft):	0.94
Slope (ft/ft) (Cone Roof):	0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron - Jet Kerosene	Jan	62.25	58.21	66.29	68.10	0.0100	0.0089	0.0107	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Feb	63.63	59.26	67.99	68.10	0.0102	0.0093	0.0110	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Mar	66.80	62.19	71.42	68.10	0.0108	0.0100	0.0119	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Apr	70.27	65.08	75.46	68.10	0.0114	0.0105	0.0135	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	May	73.50	68.14	78.87	68.10	0.0127	0.0110	0.0149	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Jun	75.89	70.77	81.00	68.10	0.0137	0.0116	0.0160	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Jul	76.39	71.71	81.06	68.10	0.0139	0.0120	0.0160	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Aug	76.17	71.61	80.74	68.10	0.0138	0.0120	0.0158	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Sep	74.78	70.36	79.20	68.10	0.0133	0.0114	0.0151	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Oct	70.84	66.06	75.62	68.10	0.0116	0.0106	0.0136	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Nov	66.75	62.36	71.13	68.10	0.0107	0.0100	0.0118	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Dec	63.57	59.53	67.60	68.10	0.0102	0.0094	0.0109	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.4533	0.4548	0.5582	0.6452	0.7641	0.7481	0.7083	0.6850	0.6160	0.6199	0.5095	0.4599
Vapor Space Volume (cu ft):	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0353	0.0365	0.0344	0.0311	0.0303	0.0292	0.0322	0.0294	0.0269
Vented Vapor Saturation Factor:	0.9983	0.9982	0.9981	0.9980	0.9978	0.9976	0.9976	0.9976	0.9977	0.9980	0.9981	0.9982
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861
Tank Diameter (ft):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Vapor Space Outage (ft):	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127
Tank Shell Height (ft):	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000
Average Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Roof Outage (ft):	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127
Roof Height (ft):	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Roof Slope (ft/ft):	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625
Shell Radius (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0353	0.0365	0.0344	0.0311	0.0303	0.0292	0.0322	0.0294	0.0269
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0017	0.0016	0.0019	0.0031	0.0040	0.0044	0.0040	0.0039	0.0036	0.0030	0.0018	0.0015
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0089	0.0093	0.0100	0.0105	0.0110	0.0116	0.0120	0.0120	0.0114	0.0106	0.0100	0.0094
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0107	0.0110	0.0119	0.0135	0.0149	0.0160	0.0160	0.0158	0.0151	0.0136	0.0118	0.0109
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9983	0.9982	0.9981	0.9980	0.9978	0.9976	0.9976	0.9976	0.9977	0.9980	0.9981	0.9982
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Vapor Space Outage (ft):	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Working Losses (lb):	20.3572	20.8347	21.9353	23.2698	25.9727	27.9664	28.3841	28.2058	27.0418	23.7490	21.9163	20.8138
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Net Throughput (gal/mo.):	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667
Annual Turnovers:	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000
Turnover Factor:	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439
Maximum Liquid Volume (gal):	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000
Maximum Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Tank Diameter (ft):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	20.8105	21.2895	22.4934	23.9150	26.7368	28.7145	29.0924	28.8908	27.6578	24.3688	22.4258	21.2736

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron - Jet Kerosene	290.45	7.22	297.67

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-63-old
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Vertical Fixed Roof Tank
Description:	

Tank Dimensions

Shell Height (ft):	43.00
Diameter (ft):	30.00
Liquid Height (ft):	40.00
Avg. Liquid Height (ft):	40.00
Volume (gallons):	211,492.00
Turnovers:	44.30
Net Throughput (gal/yr):	9,369,095.60
Is Tank Heated (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Roof Characteristics

Type:	Cone
Height (ft):	0.94
Slope (ft/ft) (Cone Roof):	0.06

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron - Jet Kerosene	Jan	62.25	58.21	66.29	68.10	0.0100	0.0089	0.0107	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Feb	63.63	59.26	67.99	68.10	0.0102	0.0093	0.0110	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Mar	66.80	62.19	71.42	68.10	0.0108	0.0100	0.0119	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Apr	70.27	65.08	75.46	68.10	0.0114	0.0105	0.0135	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	May	73.50	68.14	78.87	68.10	0.0127	0.0110	0.0149	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Jun	75.89	70.77	81.00	68.10	0.0137	0.0116	0.0160	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Jul	76.39	71.71	81.06	68.10	0.0139	0.0120	0.0160	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Aug	76.17	71.61	80.74	68.10	0.0138	0.0120	0.0158	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Sep	74.78	70.36	79.20	68.10	0.0133	0.0114	0.0151	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Oct	70.84	66.06	75.62	68.10	0.0116	0.0106	0.0136	130.0000			130.00	Option 1: VP70 = .0113 VP80 = .0154
Chevron - Jet Kerosene	Nov	66.75	62.36	71.13	68.10	0.0107	0.0100	0.0118	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113
Chevron - Jet Kerosene	Dec	63.57	59.53	67.60	68.10	0.0102	0.0094	0.0109	130.0000			130.00	Option 1: VP60 = .0096 VP70 = .0113

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	0.4533	0.4548	0.5582	0.6452	0.7641	0.7481	0.7083	0.6850	0.6160	0.6199	0.5095	0.4599
Vapor Space Volume (cu ft):	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0353	0.0365	0.0344	0.0311	0.0303	0.0292	0.0322	0.0294	0.0269
Vented Vapor Saturation Factor:	0.9983	0.9982	0.9981	0.9980	0.9978	0.9976	0.9976	0.9976	0.9977	0.9980	0.9981	0.9982
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861	2,341.5861
Tank Diameter (ft):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Vapor Space Outage (ft):	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127
Tank Shell Height (ft):	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000	43.0000
Average Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Roof Outage (ft):	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127
Roof Outage (Cone Roof)												
Roof Outage (ft):	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127	0.3127
Roof Height (ft):	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380	0.9380
Roof Slope (ft/ft):	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625	0.0625
Shell Radius (ft):	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000	15.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0002	0.0002	0.0002	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0003	0.0002	0.0002
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Tank Paint Solar Absorptance (Roof):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.0270	0.0294	0.0311	0.0353	0.0365	0.0344	0.0311	0.0303	0.0292	0.0322	0.0294	0.0269
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	0.0017	0.0016	0.0019	0.0031	0.0040	0.0044	0.0040	0.0039	0.0036	0.0030	0.0018	0.0015
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	0.0089	0.0093	0.0100	0.0105	0.0110	0.0116	0.0120	0.0120	0.0114	0.0106	0.0100	0.0094
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	0.0107	0.0110	0.0119	0.0135	0.0149	0.0160	0.0160	0.0158	0.0151	0.0136	0.0118	0.0109
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.9983	0.9982	0.9981	0.9980	0.9978	0.9976	0.9976	0.9976	0.9977	0.9980	0.9981	0.9982
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Vapor Space Outage (ft):	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127	3.3127

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Working Losses (lb):	20.3572	20.8347	21.9353	23.2698	25.9727	27.9664	28.3841	28.2058	27.0418	23.7490	21.9163	20.8138
Vapor Molecular Weight (lb/lb-mole):	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000	130.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	0.0100	0.0102	0.0108	0.0114	0.0127	0.0137	0.0139	0.0138	0.0133	0.0116	0.0107	0.0102
Net Throughput (gal/mo.):	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667	780,757.9667
Annual Turnovers:	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000	44.3000
Turnover Factor:	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439	0.8439
Maximum Liquid Volume (gal):	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000	211,492.0000
Maximum Liquid Height (ft):	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000	40.0000
Tank Diameter (ft):	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000	30.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	20.8105	21.2895	22.4934	23.9150	26.7368	28.7145	29.0924	28.8908	27.6578	24.3688	22.4258	21.2736

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron - Jet Kerosene	290.45	7.22	297.67

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-66
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Internal Floating Roof Tank
Description:	

Tank Dimensions

Diameter (ft):	54.00
Volume (gallons):	703,374.00
Turnovers:	109.50
Self Supp. Roof? (y/n):	Y
No. of Columns:	0.00
Eff. Col. Diam. (ft):	0.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Mechanical Shoe
Secondary Seal:	Shoe-mounted

Deck Characteristics

Deck Fitting Category:	Typical
Deck Type:	Welded

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Roof Leg or Hanger Well/Adjustable	16
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	62.25	58.21	66.29	68.10	7.5310	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	63.63	59.26	67.99	68.10	7.7246	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 11.5)	Mar	66.80	62.19	71.42	68.10	6.8468	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Apr	70.27	65.08	75.46	68.10	7.3013	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 7.8)	May	73.50	68.14	78.87	68.10	5.0824	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jun	75.89	70.77	81.00	68.10	5.3204	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jul	76.39	71.71	81.06	68.10	5.3713	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Aug	76.17	71.61	80.74	68.10	5.3495	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 11.5)	Sep	74.78	70.36	79.20	68.10	7.9280	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Oct	70.84	66.06	75.62	68.10	7.3787	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Nov	66.75	62.36	71.13	68.10	6.8398	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 13.5)	Dec	63.57	59.53	67.60	68.10	7.7160	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	84.1416	87.2735	73.6562	80.5231	50.0778	53.0098	53.6469	53.3740	90.6499	81.7300	73.5532	87.1334
Seal Factor A (lb-mole/ft-yr):	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	6.8468	7.3013	5.0824	5.3204	5.3713	5.3495	7.9280	7.3787	6.8398	7.7160
Tank Diameter (ft):	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176	24.0176
Number of Columns:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Effective Column Diameter (ft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Net Throughput (gal/mo.):	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750	6,418,287.750
	0	0	0	0	0	0	0	0	0	0	0	0
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Tank Diameter (ft):	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000
Deck Fitting Losses (lb):	189.5135	196.5673	165.8968	181.3634	112.7911	119.3947	120.8297	120.2150	204.1720	184.0817	165.6650	196.2518
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000	194.6000
Deck Seam Losses (lb):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length (ft):	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000	458.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Deck Seam Length Factor(ft/sqft):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Tank Diameter (ft):	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000	54.0000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	KFa (lb-mole/yr)	Deck Fitting Loss Factors KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	361.2643
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	140.4917
Roof Leg or Hanger Well/Adjustable	16	7.90	0.00	0.00	1,268.4391
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	120.4214
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	62.2177

Total Losses (lb):	297.6727	307.8584	263.5706	285.9042	186.8865	196.4222	198.4943	197.6066	318.8395	289.8294	263.2359	307.4028

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	258.55	72.05	582.33	0.00	912.93
Chevron-Gasoline(RVP 11.5)	400.11	120.09	901.18	0.00	1,421.38
Chevron-Gasoline(RVP 7.8)	210.11	96.07	473.23	0.00	779.41
Total:	868.77	288.21	1,956.74	0.00	3,113.72

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-67
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Internal Floating Roof Tank
Description:	

Tank Dimensions

Diameter (ft):	54.80
Volume (gallons):	699,552.00
Turnovers:	17.80
Self Supp. Roof? (y/n):	Y
No. of Columns:	0.00
Eff. Col. Diam. (ft):	0.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Vapor-mounted
Secondary Seal:	None

Deck Characteristics

Deck Fitting Category:	Typical
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	472.00

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Roof Leg or Hanger Well/Adjustable	16
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/	25

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask. 1

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Aviation Gasoline	Jan	62.25	58.21	66.29	68.10	3.5418	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Feb	63.63	59.26	67.99	68.10	3.6431	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Mar	66.80	62.19	71.42	68.10	3.8857	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Apr	70.27	65.08	75.46	68.10	4.1656	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	May	73.50	68.14	78.87	68.10	4.4409	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Jun	75.89	70.77	81.00	68.10	4.6533	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Jul	76.39	71.71	81.06	68.10	4.6989	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Aug	76.17	71.61	80.74	68.10	4.6794	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Sep	74.78	70.36	79.20	68.10	4.5538	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Oct	70.84	66.06	75.62	68.10	4.2134	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Nov	66.75	62.36	71.13	68.10	3.8814	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6
Aviation Gasoline	Dec	63.57	59.53	67.60	68.10	3.6386	N/A	N/A	66.0000			66.00	Option 4: RVP=6.9, ASTM Slope=2.6

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	138.6052	143.1757	154.2824	167.3966	180.6276	191.0664	193.3309	192.3610	186.1503	169.6686	154.0834	142.9725
Seal Factor A (lb-mole/ft-yr):	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
Value of Vapor Pressure Function:	0.0686	0.0709	0.0764	0.0829	0.0894	0.0946	0.0957	0.0953	0.0922	0.0840	0.0763	0.0708
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	3.5418	3.6431	3.8857	4.1656	4.4409	4.6533	4.6989	4.6794	4.5538	4.2134	3.8814	3.6386
Tank Diameter (ft):	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263	3.8263
Number of Columns:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Effective Column Diameter (ft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Net Throughput (gal/mo.):	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800	1,037,668.800
	0	0	0	0	0	0	0	0	0	0	0	0
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Tank Diameter (ft):	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000
Deck Fitting Losses (lb):	84.7879	87.5838	94.3780	102.4003	110.4939	116.8796	118.2648	117.6715	113.8723	103.7901	94.2563	87.4595
Value of Vapor Pressure Function:	0.0686	0.0709	0.0764	0.0829	0.0894	0.0946	0.0957	0.0953	0.0922	0.0840	0.0763	0.0708
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000	224.6000
Deck Seam Losses (lb):	31.7618	32.8091	35.3542	38.3594	41.3913	43.7834	44.3023	44.0800	42.6569	38.8800	35.3087	32.7626
Deck Seam Length (ft):	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000	472.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400
Deck Seam Length Factor(ft/sqft):	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001	0.2001
Tank Diameter (ft):	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000	54.8000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	KFa (lb-mole/yr)	Deck Fitting Loss Factors KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	197.5948
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	76.8424
Roof Leg or Hanger Well/Adjustable	16	7.90	0.00	0.00	693.7774
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	65.8649
Stub Drain (1-in. Diameter)/	25	1.20	0.00	0.00	164.6623
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	34.0302

Total Losses (lb):	258.9812	267.3950	287.8410	311.9826	336.3391	355.5557	359.7244	357.9388	346.5059	316.1650	287.4747	267.0210

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Aviation Gasoline	2,013.72	45.92	1,231.84	461.45	3,752.92

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-78
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Internal Floating Roof Tank
Description:	

Tank Dimensions

Diameter (ft):	67.00
Volume (gallons):	1,053,990.00
Turnovers:	109.50
Self Supp. Roof? (y/n):	Y
No. of Columns:	0.00
Eff. Col. Diam. (ft):	0.00

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition:	Good
Roof Color/Shade:	White/White
Roof Condition:	Good

Rim-Seal System

Primary Seal:	Vapor-mounted
Secondary Seal:	None

Deck Characteristics

Deck Fitting Category:	Typical
Deck Type:	Bolted
Construction:	Sheet
Deck Seam:	Sheet: 5 Ft Wide
Deck Seam Len. (ft):	705.00

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Roof Leg or Hanger Well/Adjustable	20
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1
Stub Drain (1-in. Diameter)/	36

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask. 1

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	62.25	58.21	66.29	68.10	7.5310	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	63.63	59.26	67.99	68.10	7.7246	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 11.5)	Mar	66.80	62.19	71.42	68.10	6.8468	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Apr	70.27	65.08	75.46	68.10	7.3013	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 7.8)	May	73.50	68.14	78.87	68.10	5.0824	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jun	75.89	70.77	81.00	68.10	5.3204	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jul	76.39	71.71	81.06	68.10	5.3713	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Aug	76.17	71.61	80.74	68.10	5.3495	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 11.5)	Sep	74.78	70.36	79.20	68.10	7.9280	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Oct	70.84	66.06	75.62	68.10	7.3787	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Nov	66.75	62.36	71.13	68.10	6.8398	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 13.5)	Dec	63.57	59.53	67.60	68.10	7.7160	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	437.1664	453.4382	382.6880	418.3661	260.1845	275.4178	278.7280	277.3099	470.9806	424.6366	382.1532	452.7103
Seal Factor A (lb-mole/ft-yr):	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000	6.7000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	6.8468	7.3013	5.0824	5.3204	5.3713	5.3495	7.9280	7.3787	6.8398	7.7160
Tank Diameter (ft):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068	29.0068
Number of Columns:	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Effective Column Diameter (ft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Net Throughput (gal/mo.):	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750	9,617,658.750
	0	0	0	0	0	0	0	0	0	0	0	0
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Tank Diameter (ft):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Deck Fitting Losses (lb):	262.3583	272.1235	229.6640	251.0756	156.1455	165.2875	167.2741	166.4230	282.6513	254.8387	229.3430	271.6867
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000	269.4000
Deck Seam Losses (lb):	122.3841	126.9393	107.1329	117.1209	72.8382	77.1028	78.0295	77.6325	131.8503	118.8764	106.9832	126.7355
Deck Seam Length (ft):	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000	705.0000
Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr):	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400
Deck Seam Length Factor(ft/sqft):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
Tank Diameter (ft):	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000	67.0000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

Deck Fitting/Status	Quantity	Deck Fitting Loss Factors KFa (lb-mole/yr)	KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	1.20	361.2643
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	140.4917
Roof Leg or Hanger Well/Adjustable	20	7.90	0.00	0.00	1,585.5489
Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open	1	12.00	0.00	0.00	120.4214
Stub Drain (1-in. Diameter)/	36	1.20	0.00	0.00	433.5172
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	62.2177

Total Losses (lb):	850.9156	881.5078	748.4917	815.5694	518.1750	546.8148	553.0383	550.3722	914.4889	827.3585	747.4862	880.1394

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	1,343.31	87.02	806.17	376.06	2,612.56
Chevron-Gasoline(RVP 11.5)	2,078.82	145.03	1,247.57	581.96	4,053.39
Chevron-Gasoline(RVP 7.8)	1,091.64	116.03	655.13	305.60	2,168.40
Total:	4,513.78	348.08	2,708.87	1,263.63	8,834.36

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-84
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Domed External Floating Roof Tank
Description:	

Tank Dimensions

Diameter (ft):	68.50
Volume (gallons):	1,103,940.00
Turnovers:	109.50

Paint Characteristics

Internal Shell Condition:	Light Rust
Shell Color/Shade:	White/White
Shell Condition:	Good

Roof Characteristics

Type:	Double Deck
Fitting Category:	Typical

Tank Construction and Rim-Seal System

Construction:	Welded
Primary Seal:	Mechanical Shoe
Secondary Seal:	Shoe-mounted

Deck Fitting/Status	Quantity
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Unslotted Guide-Pole Well/Ungasketed Sliding Cover	1
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1
Roof Drain (3-in. Diameter)/Open	1
Roof Leg (3-in. Diameter)/Adjustable, Double-Deck Roofs	13
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	62.25	58.21	66.29	68.10	7.5310	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	63.63	59.26	67.99	68.10	7.7246	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 11.5)	Mar	66.80	62.19	71.42	68.10	6.8468	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Apr	70.27	65.08	75.46	68.10	7.3013	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 7.8)	May	73.50	68.14	78.87	68.10	5.0824	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jun	75.89	70.77	81.00	68.10	5.3204	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Jul	76.39	71.71	81.06	68.10	5.3713	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 7.8)	Aug	76.17	71.61	80.74	68.10	5.3495	N/A	N/A	66.0000			100.00	Option 4: RVP=7.8, ASTM Slope=2.7
Chevron-Gasoline(RVP 11.5)	Sep	74.78	70.36	79.20	68.10	7.9280	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Oct	70.84	66.06	75.62	68.10	7.3787	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 11.5)	Nov	66.75	62.36	71.13	68.10	6.8398	N/A	N/A	66.0000			100.00	Option 4: RVP=11.5, ASTM Slope=2.8
Chevron-Gasoline(RVP 13.5)	Dec	63.57	59.53	67.60	68.10	7.7160	N/A	N/A	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Rim Seal Losses (lb):	106.7352	110.7080	93.4342	102.1451	63.5247	67.2439	68.0521	67.7059	114.9910	103.6760	93.3036	110.5303
Seal Factor A (lb-mole/ft-yr):	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000
Seal Factor B (lb-mole/ft-yr (mph)^n):	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000	0.3000
Average Wind Speed (mph):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Seal-related Wind Speed Exponent:	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000	1.6000
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	6.8468	7.3013	5.0824	5.3204	5.3713	5.3495	7.9280	7.3787	6.8398	7.7160
Tank Diameter (ft):	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Withdrawal Losses (lb):	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162	29.7162
Net Throughput (gal/mo.):	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50	10,073,452.50
	00	00	00	00	00	00	00	00	00	00	00	00
Shell Clingage Factor (bbl/1000 sqft):	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015	0.0015
Average Organic Liquid Density (lb/gal):	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000	6.0000
Tank Diameter (ft):	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000	68.5000
Roof Fitting Losses (lb):	64.4112	66.8086	56.3845	61.6412	38.3351	40.5795	41.0672	40.8583	69.3933	62.5651	56.3057	66.7014
Value of Vapor Pressure Function:	0.1771	0.1837	0.1550	0.1695	0.1054	0.1116	0.1129	0.1123	0.1908	0.1720	0.1548	0.1834
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tot. Roof Fitting Loss Fact.(lb-mole/yr):	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400	66.1400
Average Wind Speed (mph):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

Roof Fitting/Status	Quantity	KFa (lb-mole/yr)	Roof Fitting Loss Factors KFb (lb-mole/(yr mph^n))	m	Losses (lb.)
Access Hatch (24-in. Diam.)/Bolted Cover, Gasketed	1	1.60	0.00	0.00	16.0562
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	140.4917
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	62.2177
Unslotted Guide-Pole Well/Ungasketed Sliding Cover	1	31.00	150.00	1.40	311.0887
Gauge-Hatch/Sample Well (8-in. Diam.)/Weighted Mech. Actuation, Gask.	1	0.47	0.02	0.97	4.7165
Roof Drain (3-in. Diameter)/Open	1	1.50	0.21	1.70	15.0527
Roof Leg (3-in. Diameter)/Adjustable, Double-Deck Roofs	13	0.82	0.53	0.14	106.9744
Rim Vent (6-in. Diameter)/Weighted Mech. Actuation, Gask.	1	0.71	0.10	1.00	7.1249

Total Losses (lb):	200.8626	207.2328	179.5348	193.5024	131.5759	137.5395	138.8355	138.2803	214.1005	195.9573	179.3254	206.9479

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)				
Components	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	327.97	89.15	197.92	0.00	615.04
Chevron-Gasoline(RVP 11.5)	507.55	148.58	306.29	0.00	962.42
Chevron-Gasoline(RVP 7.8)	266.53	118.86	160.84	0.00	546.23
Total:	1,102.05	356.59	665.05	0.00	2,123.69

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	PC-96
City:	Panama City
State:	FL
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	8.00
Diameter (ft):	20.00
Volume (gallons):	11,550.00
Turnovers:	8.58
Net Throughput (gal/yr):	99,099.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	N

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	-0.03
Pressure Settings (psig):	0.03

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	62.25	58.21	66.29	68.10	7.5310	6.9855	8.1099	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	63.63	59.26	67.99	68.10	7.7246	7.1246	8.3639	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Mar	66.80	62.19	71.42	68.10	8.1858	7.5221	8.8950	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Apr	70.27	65.08	75.46	68.10	8.7143	7.9336	9.5545	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	May	73.50	68.14	78.87	68.10	9.2308	8.3860	10.1412	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jun	75.89	70.77	81.00	68.10	9.6270	8.7932	10.5217	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jul	76.39	71.71	81.06	68.10	9.7116	8.9414	10.5332	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Aug	76.17	71.61	80.74	68.10	9.6754	8.9255	10.4740	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Sep	74.78	70.36	79.20	68.10	9.4416	8.7288	10.1995	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Oct	70.84	66.06	75.62	68.10	8.8042	8.0764	9.5827	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Nov	66.75	62.36	71.13	68.10	8.1777	7.5463	8.8501	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Dec	63.57	59.53	67.60	68.10	7.7160	7.1605	8.3052	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
Standing Losses (lb):	157.7323	161.0761	209.4535	258.0757	312.4610	317.5987	305.8640	295.3685	260.4798	250.3279	191.9152	163.9833
Vapor Space Volume (cu ft):	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115
Vapor Density (lb/cu ft):	0.0887	0.0908	0.0956	0.1011	0.1065	0.1106	0.1114	0.1111	0.1087	0.1021	0.0955	0.0907
Vapor Space Expansion Factor:	0.1788	0.2016	0.2356	0.2985	0.3484	0.3650	0.3400	0.3284	0.2997	0.2800	0.2231	0.1854
Vented Vapor Saturation Factor:	0.2003	0.1963	0.1873	0.1780	0.1697	0.1639	0.1627	0.1632	0.1666	0.1765	0.1875	0.1965
Tank Vapor Space Volume												
Vapor Space Volume (cu ft):	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115	1,600.8115
Tank Diameter (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Effective Diameter (ft):	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766	14.2766
Vapor Space Outage (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Tank Shell Length (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Vapor Density												
Vapor Density (lb/cu ft):	0.0887	0.0908	0.0956	0.1011	0.1065	0.1106	0.1114	0.1111	0.1087	0.1021	0.0955	0.0907
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Daily Avg. Liquid Surface Temp. (deg. R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Average Ambient Temp. (deg. F):	52.2000	54.5000	60.6500	67.3000	74.0000	79.7000	81.4000	81.3000	78.6000	70.1500	61.8500	55.3000
Ideal Gas Constant R (psia cuft / (lb-mol-deg R)):	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731	10.731
Liquid Bulk Temperature (deg. R):	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692	527.7692
Tank Paint Solar Absorptance (Shell):	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700	0.1700
Daily Total Solar Insulation Factor (Btu/sqft day):	853.0000	1,125.0000	1,474.0000	1,878.0000	2,090.0000	1,998.0000	1,813.0000	1,687.0000	1,535.0000	1,371.0000	1,040.0000	818.0000
Vapor Space Expansion Factor												
Vapor Space Expansion Factor:	0.1788	0.2016	0.2356	0.2985	0.3484	0.3650	0.3400	0.3284	0.2997	0.2800	0.2231	0.1854
Daily Vapor Temperature Range (deg. R):	16.1563	17.4510	18.4642	20.7473	21.4684	20.4545	18.7099	18.2541	17.6746	19.1260	17.5504	16.1337
Daily Vapor Pressure Range (psia):	1.1244	1.2392	1.3728	1.6209	1.7552	1.7285	1.5918	1.5485	1.4707	1.5063	1.3038	1.1446
Breather Vent Press. Setting Range(psia):	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600	0.0600
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia):	6.9855	7.1246	7.5221	7.9336	8.3860	8.7932	8.9414	8.9255	8.7288	8.0764	7.5463	7.1605
Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia):	8.1099	8.3639	8.8950	9.5545	10.1412	10.5217	10.5332	10.4740	10.1995	9.5827	8.8501	8.3052
Daily Avg. Liquid Surface Temp. (deg R):	521.9191	523.2964	526.4711	529.9397	533.1724	535.5568	536.0564	535.8432	534.4510	530.5128	526.4163	523.2361
Daily Min. Liquid Surface Temp. (deg R):	517.8800	518.9337	521.8551	524.7529	527.8053	530.4432	531.3789	531.2796	530.0324	525.7313	522.0287	519.2027
Daily Max. Liquid Surface Temp. (deg R):	525.9582	527.6592	531.0872	535.1265	538.5395	540.6705	540.7339	540.4067	538.8697	535.2943	530.8039	527.2695
Daily Ambient Temp. Range (deg. R):	16.8000	16.8000	15.9000	16.4000	16.0000	15.2000	14.0000	14.2000	14.4000	17.5000	17.5000	17.0000
Vented Vapor Saturation Factor												
Vented Vapor Saturation Factor:	0.2003	0.1963	0.1873	0.1780	0.1697	0.1639	0.1627	0.1632	0.1666	0.1765	0.1875	0.1965
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Vapor Space Outage (ft):	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000	10.0000
Working Losses (lb):	97.7322	100.2441	106.2293	113.0878	119.7902	124.9315	126.0303	125.5604	122.5260	114.2539	106.1235	100.1331
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.5310	7.7246	8.1858	8.7143	9.2308	9.6270	9.7116	9.6754	9.4416	8.8042	8.1777	7.7160
Net Throughput (gal/mo.):	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500	8,258.2500
Annual Turnovers:	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800	8.5800
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)- (Continued)

Tank Diameter (ft):	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000	20.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	255.4644	261.3202	315.6828	371.1635	432.2512	442.5302	431.8943	420.9289	383.0058	364.5818	298.0387	264.1164

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	1,356.64	2,884.34	4,240.98

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Process Tank 1
City:	Panama City
State:	Florida
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	37.00
Diameter (ft):	8.00
Volume (gallons):	12,000.00
Turnovers:	8.17
Net Throughput (gal/yr):	98,400.00
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	Y

Paint Characteristics

Shell Color/Shade:	White/White
Shell Condition:	Good

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig):	0.00

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	60.53	60.53	60.53	67.08	7.2952	7.2952	7.2952	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	61.54	61.54	61.54	67.08	7.4335	7.4335	7.4335	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Mar	64.25	64.25	64.25	67.08	7.8136	7.8136	7.8136	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Apr	67.18	67.18	67.18	67.08	8.2417	8.2417	8.2417	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	May	70.12	70.12	70.12	67.08	8.6916	8.6916	8.6916	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jun	72.63	72.63	72.63	67.08	9.0895	9.0895	9.0895	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jul	73.38	73.38	73.38	67.08	9.2109	9.2109	9.2109	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Aug	73.34	73.34	73.34	67.08	9.2037	9.2037	9.2037	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Sep	72.15	72.15	72.15	67.08	9.0116	9.0116	9.0116	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Oct	68.43	68.43	68.43	67.08	8.4308	8.4308	8.4308	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Nov	64.78	64.78	64.78	67.08	7.8895	7.8895	7.8895	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Dec	61.90	61.90	61.90	67.08	7.4821	7.4821	7.4821	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
No Standing Losses: Underground Tank												
Working Losses (lb):	94.0034	95.7858	100.6836	106.2005	111.9979	117.1243	118.6884	118.5960	116.1208	108.6368	101.6619	96.4120
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2952	7.4335	7.8136	8.2417	8.6916	9.0895	9.2109	9.2037	9.0116	8.4308	7.8895	7.4821
Net Throughput (gal/mo.):	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000	8,200.0000
Annual Turnovers:	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Diameter (ft):	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000	8.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	94.0034	95.7858	100.6836	106.2005	111.9979	117.1243	118.6884	118.5960	116.1208	108.6368	101.6619	96.4120

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	1,285.91	0.00	1,285.91

TANKS 4.0
Emissions Report - Detail Format
Tank Identification and Physical Characteristics

Identification

User Identification:	Process Tank 2
City:	Panama City
State:	Florida
Company:	Chevron Products Company
Type of Tank:	Horizontal Tank
Description:	

Tank Dimensions

Shell Length (ft):	5.00
Diameter (ft):	3.00
Volume (gallons):	126.00
Turnovers:	8.17
Net Throughput (gal/yr):	1,029.42
Is Tank Heated (y/n):	N
Is Tank Underground (y/n):	Y

Paint Characteristics

Shell Color/Shade:	
Shell Condition:	

Breather Vent Settings

Vacuum Settings (psig):	0.00
Pressure Settings (psig):	0.00

Meteorological Data used in Emissions Calculations: Apalachicola, Florida (Avg Atmospheric Pressure = 14.73 psia)

TANKS 4.0
Emissions Report - Detail Format
Liquid Contents of Storage Tank

Mixture/Component	Month	Daily Liquid Surf. Temperatures (deg F) Avg.	Min.	Max.	Liquid Bulk Temp. (deg F)	Vapor Pressures (psia) Avg.	Min.	Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
Chevron-Gasoline(RVP 13.5)	Jan	60.53	60.53	60.53	67.08	7.2952	7.2952	7.2952	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Feb	61.54	61.54	61.54	67.08	7.4335	7.4335	7.4335	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Mar	64.25	64.25	64.25	67.08	7.8136	7.8136	7.8136	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Apr	67.18	67.18	67.18	67.08	8.2417	8.2417	8.2417	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	May	70.12	70.12	70.12	67.08	8.6916	8.6916	8.6916	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jun	72.63	72.63	72.63	67.08	9.0895	9.0895	9.0895	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Jul	73.38	73.38	73.38	67.08	9.2109	9.2109	9.2109	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Aug	73.34	73.34	73.34	67.08	9.2037	9.2037	9.2037	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Sep	72.15	72.15	72.15	67.08	9.0116	9.0116	9.0116	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Oct	68.43	68.43	68.43	67.08	8.4308	8.4308	8.4308	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Nov	64.78	64.78	64.78	67.08	7.8895	7.8895	7.8895	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.5)	Dec	61.90	61.90	61.90	67.08	7.4821	7.4821	7.4821	66.0000			100.00	Option 4: RVP=13.5, ASTM Slope=2.9

TANKS 4.0
Emissions Report - Detail Format
Detail Calculations (AP-42)

Month:	January	February	March	April	May	June	July	August	September	October	November	December
No Standing Losses: Underground Tank												
Working Losses (lb):	0.9834	1.0021	1.0533	1.1110	1.1717	1.2253	1.2417	1.2407	1.2148	1.1365	1.0635	1.0086
Vapor Molecular Weight (lb/lb-mole):	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000	66.0000
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2952	7.4335	7.8136	8.2417	8.6916	9.0895	9.2109	9.2037	9.0116	8.4308	7.8895	7.4821
Net Throughput (gal/mo.):	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850	85.7850
Annual Turnovers:	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700	8.1700
Turnover Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Tank Diameter (ft):	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000	3.0000
Working Loss Product Factor:	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000
Total Losses (lb):	0.9834	1.0021	1.0533	1.1110	1.1717	1.2253	1.2417	1.2407	1.2148	1.1365	1.0635	1.0086

TANKS 4.0
Emissions Report - Detail Format
Individual Tank Emission Totals

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

	Losses(lbs)		
Components	Working Loss	Breathing Loss	Total Emissions
Chevron-Gasoline(RVP 13.5)	13.45	0.00	13.45

TANKS 4.0
Emissions Report - Detail Format
Total Emissions Summaries - All Tanks in Report

Emissions Report for: January , February , March , April , May , June , July , August , September , October , November , December

Tank Identification				Losses (lbs)
OWS 1	Chevron Products Company	Horizontal Tank	Panama City, Florida	1,125.42
PC-14	Chevron Products Company	Horizontal Tank	Panama City, Florida	25.39
PC-17	Chevron Products Company	Horizontal Tank	Panama City, FL	22.14
PC-18	Chevron Products Company	Horizontal Tank	Panama City, FL	10.35
PC-21	Chevron Products Company	Horizontal Tank	Panama City, FL	22.12
PC-22	Chevron Products Company	Horizontal Tank	Panama City, FL	39.46
PC-23	Chevron Products Company	Horizontal Tank	Panama City, FL	9.53
PC-25	Chevron Products Company	Vertical Fixed Roof Tank	Panama City, FL	970.19
PC-62-old	Chevron Products Company	Vertical Fixed Roof Tank	Panama City, FL	297.67
PC-63-old	Chevron Products Company	Vertical Fixed Roof Tank	Panama City, FL	297.67
PC-66	Chevron Products Company	Internal Floating Roof Tank	Panama City, FL	3,113.72
PC-67	Chevron Products Company	Internal Floating Roof Tank	Panama City, FL	3,752.92
PC-78	Chevron Products Company	Internal Floating Roof Tank	Panama City, FL	8,834.36
PC-84	Chevron Products Company	Domed External Floating Roof Tank	Panama City, FL	2,123.69
PC-96	Chevron Products Company	Horizontal Tank	Panama City, FL	4,240.98
Process Tank 1	Chevron Products Company	Horizontal Tank	Panama City, Florida	1,285.91
Process Tank 2	Chevron Products Company	Horizontal Tank	Panama City, Florida	13.45
Total Emissions for all Tanks:				26,184.98

ATTACHMENT 3

EXECUTIVE SUMMARY

The Chevron Products Company terminal in Panama City, Florida is a bulk transport loading facility for Gasoline and Light Fuel Oil Products.

The products are bottom loaded into transport tankers and the displaced hydrocarbon vapors are balanced to a JOHN ZINK VAPOR DESTRUCTION UNIT (VDU).

This facility was source tested for air emissions on July 14, 2000. The purpose of this test was to confirm proper operation of the VRU and verify compliance with applicable VOC (Volatile Organic Compound) air emission requirements.

The Gasoline Terminal Air Emission Source Test was conducted in accordance with procedures established, and the test methods referenced, in the Code of Federal Regulations; CFR 40, Part 60, Subpart XX. Specific procedures used include:

EPA TEST METHOD	MEASUREMENT
Method 2A	Inlet Vapor Volume
Method 2B	Exhaust Vapor Volume
Method 25A	Outlet VOC Concentration
Method 25B	Inlet VOC Concentrations
Method 21	Potential Leak Sources
Method 22	Visible Emissions
40 CFR 60 Subsection 60.503 (d)	Transport Loading Maximum Backpressure

The results of this air emission test demonstrate that this source is in compliance with all applicable Federal and Local requirements. A summary of the data is presented below:

TEST PARAMETER	MEASURED VALUE	REQUIRED VALUE
VOC Emissions	2.43 mg/liter	35 mg/liter

There was 58,500 gallons of gasoline loaded in the first hour of testing. This is 91.4% of the maximum loading capacity. The emissions rate for this period was 2.55 mg/liter.

DATA SUMMARY

TERMINAL DESCRIPTION		Chevron Products Company Panama City, Florida
VAPOR CONTROL UNIT TYPE		John Zink VDU
TEST DATE		July 14, 2000
TEST PERIOD		05:49 – 11:49
AVERAGE AMBIENT TEMPERATURE		89.5° F
AVERAGE OUTLET CONCENTRATIONS:	VOC	26.6 ppm volume
	CO	117 ppm volume
	CO_2	1.10 % by volume
AVERAGE INLET CONCENTRATION (as Propane)		19.3 % by volume
TOTAL PETROLEUM LOADED		224,700 gallons
ACCOUNTABLE PETROLEUM LOADED		207,200 gallons
AVERAGE HYDROCARBON EMISSIONS (Calculated with Total Loaded Product)		2.24 mg/liter 0.70 lb/hr
AVERAGE HYDROCARBON EMISSIONS (Calculated with Accountable Product Loaded)		2.43 mg/liter 0.70 lb/hr
MAXIMUM CAPACITY		58,500 gal/ 1st hr 2.55 mg/liter
NUMBER OF TRUCKS LOADED		29
NUMBER OF LEAKING TRUCKS		0
VOLUME OF LEAKING TRUCKS		0 gallons
MAXIMUM PRESSURE AT TRUCK VAPOR HOSE		15.0" H_20
STRIP CHART RECORDER SPEED		123 mm/hour
UNIT EFFICIENCY		99.32 %

ATTACHMENT 4

Table 2-1

Comparison of Selected Petroleum Marketing Terminal Characteristics

Terminal Description	Terminal A	Terminal B	Terminal C	Terminal D
Age of Facility (yrs.)	>40. Major modifications in late 1970s on loading racks.	>50. Major modifications in late 1970s on loading racks.	>80. Major modifications in late 1970s on loading racks.	>45. Major modifications in early 1970s on loading racks.
Average Throughput (All Products) (Gal./Day)	>900,000 (100,000 gallons of which is piped to airport).	>2,500,000	>1,300,000	>650,000
Number of Loading Racks	7 (bottom load)	8 (bottom load)	10 (7 bottom load, 3 top load)	4 (bottom load)
Number of Trucks per Day (Avg.)	90	>300	>180	12[c]
Type of Vapor Recovery System	Carbon adsorption	Refrigeration	Carbon adsorption	Carbon adsorption
Product Types	Motor gasolines; Jet A; Distillates; Solvent	Motor gasolines; Distillates	Motor gasolines; Aviation gas; Distillates	Motor gasolines; Environmental gasoline; Distillates
Approximate Ambient Temperature While Testing (°F)[a]	66	78	70	74
Approximate Wind Speed While Testing (mph)[b]	7	2	2	4
Approximate Number of Light Liquid and Gas Fugitive Components	3,600	6,800	5,800	4,300
Have Marine Terminal?	No	No	Yes	Yes
Routine I/M Program?	No	Yes	No	No
Type of Vapor Return Line Controls	Check valves (single and dual)	Posts and check valves (single)	Posts and check valves (single)	Posts and check valves (single)

[a] Temperature estimates based on the averaged measured data while bagging at three terminals, and on a rough estimate at the terminal not bagged.
[b] Wind speed estimates based on estimated and recorded data while bagging of three terminals, and on a rough estimate at the terminal not bagged.
[c] Terminal D also loads 150 barges per year.
mph = miles per hour
I/M = inspection/maintenance

Source: Development of Fugitive Emission Factors and Emission Profiles for Petroleum Marketing Terminals. API Publication No. 4588. American Petroleum Institute, Washington, D.C.

Table 5-14

Total Component Counts Per Facility

Component Type	Terminal A[a]	Terminal B[b]	Terminal C[c]	Terminal D[d]	All Sites	
					Total Components	Percent of Total (%)
Connectors	3,659	5,793	5,639	3,643	18,734	85.23
Valves	434	779	905	598	2,716	12.36
Loading Arm Valves	30	60	48	21	159	0.72
Open-Ended Lines	24	32	36	38	130	0.59
Pumps	26	20	30	27	103	0.47
"Other"[e]	3	70	23	43	139	0.63
Total Components	4,176	6,754	6,681	4,370	21,981	100.00

[a] 5 connectors and 8 valves inaccessible
[b] 96 connectors and 13 valves inaccessible
[c] 239 connectors, 49 valves, and 3 open-ended lines inaccessible
[d] 11 connectors, 10 valves, 2 open-ended lines, and 3 pump seals inaccessible
[e] "Other" includes components such as hatches, covers, manholes, thermal wells, and pressure relief valves

ATTACHMENT 5

valves, loading arm valves, open-ended lines, pump seals, and "other" (hatches, covers, manholes, thermal wells. and pressure relief valves). The service types shown are for gas and light liquids. Light liquids are defined for this section as a liquid having a vapor pressure greater than that of kerosene (>0.1 psia at 100°F or 689 Pa at 38°C).

TABLE 3-9. AVERAGE AND STRATIFIED TOTAL HYDROCARBON EMISSION FACTORS FOR PETROLEUM BULK PLANTS AND BULK TERMINAL[a]

Component Type	Service	Average Emission Factor (lbs/hr)	Stratified Emission Factor (lbs/hr)	
			0 - 999 ppmv	≥1000 ppmv
Connectors	Gas	0.000067	0.000030	0.0020
	Light Liquid	0.000023	0.000020	0.0010
Valves	Light Liquid[b]	0.00015	0.000026	0.0046
Loading Arm Valves	Gas	0.045	0.00066	0.15
	Light Liquid	0.00087	0.00047	0.015
Open-Ended Lines	Gas	0.0067	0.00022	0.037
	Light Liquid	0.0065	0.00017	0.097
Pump Seals	Light Liquid	0.00093	0.00015	0.011
"Other"[c]	Gas	0.0014	0.00062	0.0025
	Light Liquid	0.00025	0.000073	0.0021

[a] API Publication 4588, Reference [16].
[b] Recommend for valves in gas service also. Note that this differs from what is recommended in API Publication #4588, which presented gas valve emission factors based on data from a modified 1980 Refinery Study [23] emission correlation, which is now considered to be out-of-date.
[c] "Other" includes components such as hatches, covers, manholes, thermal wells, and pressure relief valves.

Sample Calculation

Emissions from a bulk terminal that does not have recorded screening values, with the number and distribution of components as shown on the following table, would be calculated as follows:

Solution: Using average emission factors:

ATTACHMENT 6
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ATTACHMENT 7

TABLE 3-3. AVERAGE GASOLINE VAPOR PROFILES
(HAP to VOC percentage by weight)

HAP	TYPE OF GASOLINE						
	Normal	Reformulated		Oxygenated		Reformulated/Oxygenated	
		with MTBE	w/o MTBE	with MTBE	w/o MTBE	with MTBE	w/o MTBE
Hexane	1.6	1.4	1.4	1.4	1.4	1.4	1.4
Benzene	0.9	0.4	0.4	0.7	0.7	0.4	0.4
Toluene	1.3	1.1	1.1	1.1	1.1	1.1	1.1
2,2,4 Trimethylpentane	0.8	0.7	0.7	0.7	0.7	0.7	0.7
Xylenes	0.5	0.4	0.4	0.4	0.4	0.4	0.4
Ethylbenzene	0.1	0.1	0.1	0.1	0.1	0.1	0.1
MTBE	—	8.7	—	11.9	—	11.9	—
TOTAL HAPS	4.8	12.9	4.2	16.3	4.4	16	4.2

Source: U.S. Environmental Protection Agency. Gasoline Distribution Industry (Stage I), Background Information for Proposed Standards. EPA - 453/R-94-002a

TABLE 3-2. LIQUID PHASE HAP FRACTIONS OF PETROLEUM PRODUCTS

Product	HAP CONCENTRATION [a]					
	Benzene	Toluene	Ethylbenzene	Xylene	Hexane	Total HAP
Gasoline [b]	1.61	7.21	1.61	7.17	7.13	38.67
Oxygenated Gasoline [b,c]	1.07	4.94	1.11	6.25	6.5	40.5
Diesel	0.33	0.38	0.23	0.77	0.41	3.27
Aviation-Gas	0.51	7.33	0.43	2.20	0.13	10.75
Jet Fuel	1.05	1.85	0.48	2.30	6.35	12.73
Jet Kerosene	0.06	0.58	0.25	1.01	0.42	3.44
Residual Fuel Oil	1.65	2.97	0.78	0.45	1.83	10.34
Recovered Slop	0.95	3.77	1.38	3.29	1.42	14.56

Source: EPA HAP Analysis of Section 114 Data, August 16, 1993 [19].

[a] Values in Average Liquid Weight Percent

[b] Cumene, naphthalene and 2,2,4-trimethylpentane were also identified in gasoline samples. Cumene and naphthalene averaged <0.5 wt% and are not considered present in significant quantities. 2,2,4-trimethylpentane concentrations were not measured in many cases (reported in fewer than <25% of gasoline profiles), but averaged 2.4 wt% in reported profiles.

[c] Based on a limited number of profiles of California winter-blend gasolines. Methyl-tert-butylether (MTBE) concentration averaged 9.53 wt%.

Most often, vapor composition must be determined to estimate emissions of HAPs. The general method for speciating HAPs from vapor phase emissions is to first determine total hydrocarbon emissions, then, determine a mass fraction of each toxic species of concern using vapor composition data of the product (measured or predicted). These mass fractions are then multiplied by the total hydrocarbon emissions to obtain the emissions of a particular toxic species. Vapor phase speciation is used to determine HAP emissions from product loading and most storage tanks losses. Table 3-3 lists average vapor phase speciation profiles for normal gasolines and for oxygenated and reformulated gasolines.

The most accurate method for determining vapor mass fractions is to use direct vapor head space measurements of total hydrocarbon concentrations and HAP concentrations in the emissions of the source of interest. The total hydrocarbon concentrations are usually reported as total non-methane hydrocarbons (TNMHC) in parts per million by volume (ppmv) as some reference species (C_1, hexane, etc.), and methane, in units of ppmv, is reported separately. To determine a vapor mass fraction of a toxic HAP species, care should be taken to assure that all pollutant concentrations are in the same units and on the same basis.

A commonly used method for determining vapor mass fractions from liquid concentration profiles involves the combination of Raoult's Law and the Ideal Gas Law.

Table 1. Data and Sample Calculation for Petroluem Product Vapor HAP Speciation

	Gasoline	Diesel	Additive	Jet A	Av Gas	
	100	130	100	130	66	Liquid Mol. Weight
	66	130	100	130	66	Vapor Mol. Weight
	6.9	0.0079	0.07385	0.0096	3.3845	Pv @ 60°F
	8.3	0.0093	0.09324	0.0113	4.1463	Pv @ 70°F
	7.2153	0.0082	0.0782	0.0100	3.5561	Pv @ T_{avg}

Compound	Antoine's Constants[a] A	B	C	T_{avg}(°F)[b] 75.9 T_{avg} (°C)	$P^*_A(T)$[c] (psia)	Compound MW (lb/lbmole)	Liquid Mass Fraction (lb A/lb product)[d] Gasoline X_A	Diesel X_A	Additive X_A	Jet A X_A	Av Gas X_A	y_A - Vapor Mass Fraction (lb A/lb product)[e, f] Gasoline	Diesel	Additive	Jet A	Av Gas
Benzene	6.90565	1211.033	220.79	24.4	1.78916	78.11	0.02	0.0033		0.0006	0.0051	0.0075	0.7187	0	0.1075	0.0026
Biphenyl	7.24541	1998.725	202.733	24.4	0.00054	154.2		0.0033		0.0019		0	2.16E-04	0	1.03E-04	0
Cresol (-o)	6.9117	1435.5	165.16	24.4	0.00422	108.14		0.0005		0.001		0	2.57E-04	0	0.0004	0
Cumene	6.93666	1460.793	207.78	24.4	0.08533	120.2	0.0075	0.002	0.02	0.001	0.0006	1.34E-04	0.0208	0.0218	0.0085	1.44E-05
Ethyl Benzene	6.95719	1424.255	213.21	24.4	0.17750	106.17	0.018	0.0023		0.003	0.0043	0.0007	0.0497	0	0.0533	2.15E-04
Hexane	6.87601	1171.17	224.41	24.4	2.85167	86.17	0.0713	0.0041		0.0042	0.0013	0.0427	1.4232	0	1.1998	0.0010
Napthalene	6.8181	1585.86	184.82	24.4	0.00334	128.17	0.005	0.005		0.002	0.001	3.51E-06	0.0020	0	0.0007	9.40E-07
Phenol	7.133	1516.79	174.95	24.4	0.00646	94.11				0.001		0	0	0	0.0006	0
Styrene	7.14016	1574.51	224.09	24.4	0.12301	104.15		0.0002				0	0.0030	0	0	0
Toluene	6.95464	1344.8	219.48	24.4	0.53283	92.13	0.0721	0.0038		0.0058	0.0733	0.0081	0.2465	0	0.3096	0.0110
Xylenes	7.009	1462.266	215.11	24.4	0.15483	106.17	0.0717	0.0077	0.05	0.0101	0.022	0.0023	0.1451	0.0990	0.1566	0.0010
2,2,4 Trimethylpentane	6.81189	1257.84	220.74	24.4	0.92669	114.23	0.024					0.0047	0	0	0	0
											Total HAP	0.0661	2.6094	0.1208	1.8372	0.0158

a Antoine's Constants from Lange's Handbook of Chemistry. 1992 McGraw-Hill, Inc. Pages 5.39 - 5.56.

b T_{avg} from EPA's AP-42 Compilation of Air Pollutant Emission Factors Volume1. Chapter 7.

c $P^*_A(T) = 10^{(A - B/(T_{avg} + C))} * (14.696 \text{ psia}/760 \text{ mmHg})$

$P^*_{Benzene}(24.4°C) = 10^{(6.90565 - 1211.033/(24.4+220.79))}*(14.696/760) = 1.78$ psia

d From Chevron Products Company, Analytical Data, Richmond, California 1994, USEPA, August 16, 1993, HAP Analysis of Section 114 Data, and MSDS for OGA 493Q Additive. OGA 493Q is assumed to be representative of all additives used by Chevron. The worst case liquid phase HAP fraction found in Table 3-2 and the Chevron data is used for this calculation.

e $y_A = x_A * (MW_{liquid\ fuel} / MW_A) * P^*_A(T_{avg}) / P_{v,fuel}(T_{avg}) * (MW_A / MW_{vapor\ fuel})$ (Raoult's Law)

$y_{Benzene}$ = 0.02 lb Benzene Liquid/lb Gas Liquid * (100/78.11) * 1.78 psia / 7.2153 psia * (78.11/66) = 0.0075 lb Benzene Vapor/lb Gas Vapor

f For hexane, benzene, toluene, xylenes, ethylbenzene, and 2,2,4 Trimethylpentane vapor fractions in gasoline, y_A will be taken from Table 3-3 since these values are greater than those calculated here.

Normalized	Vapor Mass Fraction (lb A/lb product)	
Benzene	0.2754	0.0585
Biphenyl	8.3E-05	5.58E-05
Cresol (-o)	9.83E-05	0.0002
Cumene	0.0080	0.0047
Ethyl Benzene	0.0190	0.0290
Hexane	0.5454	0.6530
Napthalene	0.0008	0.0004
Phenol		0.0004
Styrene	0.0011	
Toluene	0.0945	0.1685
Xylenes	0.0556	0.0853
2,2,4 Trimethylpentane		
Total HAP	1.0000	1.0000

Terminal	T_{avg}(°F)
Doraville	61.25
Port Everglades	75.9
Panama City	68.1
Lexington	56
Chattanooga	59.3

ATTACHMENT 8

RADIAN
CORPORATION

209-081-13-01
April 27, 1995

10389 Old Placer [illegible] Road
Sacramento [illegible]
(916)362-5[illegible]2
FAX # [illegible]

Karin Ritter
American Petroleum Institute
1220 L Street, NW 9th Floor
Washington, D.C. 20005

Subject: Tank Truck Loading Fugitive Emission Factor, 8 mg/l vs 13 mg/l.

Introduction

There has been considerable discussion to date over the 8 mg/l and 13 mg/l tank truck fugitive emission factors presented in the background information document (BID) for the Gasoline Distribution MACT. In order to better understand the basis of these emission factors, we reviewed Appendix A of this document, Cargo Tank Vapor Leakage. In Appendix A, the U.S. EPA separated the California data from the data for other portions of the U.S., whereas Radian's technical approach (May 11, 1994 letter to Bob Strieter from Ron Ricks) combined all the data for analysis. This difference in data set definition was initially believed to be responsible for the 8 mg/l vs 13 mg/l emission factors for tank truck fugitive emissions. However, closer review of Appendix A of the BID suggests that the difference may be primarily attributed to the difference in the average leak rate for tank trucks that pass leak-tightness tests.

Technical Approach

In Appendix A, Table A-1 summarizes the California data and shows an average failure rate of 3.8 percent and, therefore, an average passing rate of 96.2 percent. As shown on the top of page A-4, the average leakage from all tank trucks is then calculated as follows:

$$(0.038)(0.121) + (0.962)(0.0033) = 0.0078 = 0.8 \text{ percent.}$$

Where:

0.038	=	failure rate (CA) (%);
0.121	=	average vapor leakage from failing trucks (Table C-4) (%);
0.962	=	passage rate (CA) (%); and
0.0033	=	maximum allowable leakage from a truck passing the 1-inch pressure decay test (CA) (%).

Then, the leakage emission factor is calculated as follows:

$$(0.8 \text{ percent})\ (1{,}014) \text{ mg/liter} = 8 \text{ mg/liter.}$$

Where:

1,014	=	concentration of VOC in vapor (~8.45 lb/1000 gal)

Next, Table A-2 summarizes the data for the remainder of the U.S. and shows an average failure rate of 3.1 percent and, therefore, an average passing rate of 96.9 percent. Following the methodology previously presented for California, the average leakage from all tank trucks is then calculated as follows:

$$(0.031)(0.121) + (0.969)(0.01) = 0.013 = 1.3 \text{ percent.}$$

Where:

0.031	=	failure rate (outside of CA)(%);
0.121	=	average vapor leakage from failing trucks (Table C-4, (%);
0.969	=	passage rate (outside of CA) (%); and
0.01	=	maximum allowable leakage from a truck passing the 3-inch pressure decay test (outside of CA) (%).

Then, the leakage emission factor is calculated as follows:

$$(1.3 \text{ percent})\ (1{,}014 \text{ mg/liter}) = 13 \text{ mg/liter.}$$

A brief review of these equations shows that the main difference between the calculations for California and the rest of the U.S. is the difference in the average leak rate for tank trucks that pass leak-tightness tests (i.e., 0.0033 vs 0.01). These values represent the maximum volume of leakage allowed in order to pass a 1-inch pressure decay test or a 3-inch pressure decay test, respectively.

The U.S. EPA approach of separating California data from the remainder of the U.S., although somewhat conservative, is probably justifiable. Though some State Implementation Plans (SIPs) may include leak-tightness regulations that require a 1-inch pressure decay test, similar regulations are not currently federally enforceable throughout the U.S.

However, because the BID Appendix A uses the tank truck leakage data from Table C-4 of the 1980 U.S. EPA document "Bulk Gasoline Terminals--Background Information for Proposed Standards" to determine the leakage percent for tank trucks failing certification (i.e., 12.1 percent), we recommend that consideration be given to using these data to determine the leakage percent for tank trucks passing certification (i.e., 0.5 percent). The currently proposed approach assumes a leakage rate of 1 percent. As previously stated, this represents the maximum volume of leakage allowed in order to still pass a 3-inch decay test. In order to develop an emission factor that will be used to estimate actual emissions rather than maximum emissions, we believe it is more appropriate to use the data from Table C-4 (see attached).

Using these data, the average leakage from all tank trucks is then calculated as follows:

$$(0.031)(0.121) + (0.969)(0.005) = 0.0086 = 0.9 \text{ percent.}$$

RADIAN

Where:

0.005 = average leakage from a truck passing the 3-inch pressure decay test (Table C-4) (%).

Then, the leakage emission factor is calculated as follows:

(0.9 percent) (1,014 mg/liter) = 9 mg/liter.

Furthermore API believes that even this estimate of 9 mg/liter may be a high estimate. API has indicated that the amount of the leakage is based on test conditions with a pressure decay starting at 18" water column (WC). API further indicates that 18" WC is the maximum allowable loading pressure because the dome covers are generally set to open if pressures exceed this amount. They point out that the actual mass of vapor leaking while a truck is loading will be less than calculated because trucks typically load at pressures below 18" WC.

Conclusions and Recommendations

There has been considerable discussion to date over the 8 mg/l and 13 mg/l tank truck fugitive emission factors presented in the BID for Gasoline Distribution MACT. Closer review of Appendix A of the BID suggests that the difference may be primarily attributed to the difference in the average leak rate for tank trucks that pass leak-tightness tests (i.e., 0.0033 vs 0.01). These values represent the maximum volume of leakage allowed in order to pass a 1-inch pressure decay test or a 3-inch pressure decay test, respectively.

Because the BID Appendix A uses the tank truck leakage data from Table C-4 of the 1980 U.S. EPA document "Bulk Gasoline Terminals--Background Information for Proposed Standards" to determine the leakage percent for tank trucks failing certification (i.e., 12.1 percent), we recommend that consideration should be given to using these data to determine the leakage percent for tank trucks passing certification (i.e., 0.5 percent). The currently proposed approach assumes a leakage rate of 1 percent. As previously stated, this represents the maximum volume of leakage allowed in order to still pass a 3-inch decay test. In order to develop an emission factor that will be used to estimate actual emissions rather than maximum emissions, we believe it is more appropriate to use the data from Table C-4 (attached). Using these data, the leakage emission factor for the non-California states would be 9 mg/liter.

Sincerely,

Ronald D. Ricks

Ronald D. Ricks
Senior Engineer

c: Laura J. Markovich
G.E. Harris

RADIAN

Table C-4

Tank Truck Vapor Leakage

Percent	
Vapor Leakage >1%	Vapor Leakage≤1%
2.0	0.1
2.5	0.6
2.0	0.4
16.4	1.0
22.8	
1.9	
2.2	
13.6	
10.0	
2.4	
22.4	
16.0	
35.8	
3.6	
12.4	
26.8	
Average = 12.1	Average = 0.5

Source: U.S. EPA, 1980: *Bulk Gasoline Terminals - Background Information for Proposed Standards, Table C-4*

Department of
Environmental Protection

FILE COPY

Jeb Bush
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

David B. Struhs
Secretary

December 27, 2000

Terry Franklin, Terminal Manager
Chevron Products Company
525 W Beach Dr
Panama City FL 32401

Dear Mr. Franklin:

This is to acknowledge receipt of your application, file number 0050056-005-AC, to increase the product throughput and to construct an additional loading lane at Chevron Products Company's Panama City Terminal. This letter constitutes notice that a permit will be required for your project pursuant to Chapter 403, Florida Statutes.

The submitted application seems to be thorough, and well put together.

We believe the submitted application fee is insufficient, and we cannot further process the application until the correct fee has been provided. The fee is the sum total of fees for the affected emission units as identified in Section I, Scope of Application.

We did a preliminary review of the submitted application, and our review notes are enclosed. We suggest you address the comments in bold in our review notes prior to resubmitting the application.

Some general comments include:

The application should clearly identify both potential and allowable emissions for applicable pollutants for each emission unit. Allowable emissions must be identified where there are unit-specific requirements such as for the flare (40 CFR 60.502 - 35 mg/l gasoline loaded).

The emission unit application fees are based on the potential increase in emissions; and the total fee is the resultant sum of the emission unit fees.

The application appears to request greater allowable facility emissions than allowed or anticipated given the maximum potential throughput. If so, we see no justifiable basis for this, and we suggest the requested allowable emissions be based on the specific allowable emissions plus the potential emissions from the remaining emission units with no specific emission limits.

Construction should be specifically identified. We understand that tanks 62 and 63 will be retrofitted with internal floating roofs, but this is not stated in the application and the construction specifics (type seals, vents, etc) are not identified.

We suggest that the applicability of 40 CFR 60 (K, Ka, Kb) be identified for each tank. Information should be included identifying the date of construction or modification, size, and the stored liquid vapor pressure of each tank.

When referring to this project, please use the file number indicated above. If you have any questions, please contact Bob Kriegel at (850) 595-8364, extension 1231.

Sincerely,

Sandra F. Veazey

Sandra F. Veazey
Air Program Administrator

SFV:bkc

Enclosure
cc: Michael VanBriggle, P.E., URS Corporation

Memo to File:
From: Bob Kriegel
Date: 21-Dec-00

Re: **Construction Permit Application for increased Throughput and an Additional Loading Lane, Chevron Products Company, Panama City Terminal; Application no. 0050056-005-AC, Bay County**

Chevron applied December 19, 2000 for a construction permit to increase the throughput at their Panama City Terminal, to add an additional loading lane, to increase allowable emissions, to include various existing tanks, to make various tank configuration changes, and to retrofit various tanks with internal floating roofs (IRFs)

Chevron requests an increase in allowable emissions of some 51 TPY VOCs, and includes an application fee of $4500, appropriate for a subtype AC1C application with emissions increasing between 50 and 100 TPY.

The specific changes include:

Increasing the loading rack operating rate from 64,000 gph to 96,000 gph
Increasing the thruput of high volatile products from 146,240,000 gph to 325,760,000 gph.
Increasing the throughput of low volatile products from 28,760,000 gph to 57,490,000 gph.
Increasing allowable VOC emissions from 48.9 TPY to 99.9 TPY; limiting HAP emissions to 24.9 TPY; individual HAP emissions to 9.9 TPY
Changing the configuration of various tanks, including installation of new internal floating roofs on tanks 62 and 63.

Permit 0050056-004-AC was issued January 17, 1996 and amended August 12, 1997. This is an after-the-fact construction permit for a petroleum terminal consisting of storage tanks, a loading rack, and a vapor combustion unit (VCU). The permit identifies four high volatility products tanks (nos 1, 67, 78, 84); four low volatility products tanks (25, 62, 63, and 66), and eight miscellaneous tanks. This permit identifies emission units as:

001 - VCU
002 - Tanks 1, 67, 78, 84 (high volatility product storage, NSPS applicability not identified, or limited to EU)
003 - Tanks 25, 62, 63, 66. (low volatility product storage)
004 - Tanks 17, 18, 20, 21, 22, 23, 95, & 96 (Miscellaneous tanks - additives, etc)
005 - Oil/Water Separators 1 & 2, tank 3, and evaporator tank
006 - Flanges/Valves/Pumps and tank truck leaks (fugitive emissions)

This permit limited thruput to 146.24 mmgpy high volatility products, 28.76 mmgpy low volatility products, maximum allowable loading rate to 64,000 gph, limited VOC emissions to 44.7 TPY after tank 66 is retrofitted with an internal floating roof and tank 1 taken out of service, and required an application to amend permit 0050056-002-AF within 75 days of completion of construction.

Permit 0050056-002-AF was issued September 23, 1996 for the operation of this facility, but does not seem to reflect the current operation of tank 66 which was evidently retrofitted with an IRF in 1997.

Specific comments concerning the application include:

Section I. Application Information
Identification of Facility: Chevron Products Company, Panama city Terminal, ARMS ID no. 0050056
Application Contact: Louis Milkint, 770 984-3016
Purpose of Application, Air construction permit
Owner/Authorized Representative: Paul Luper, appropriately signed
Professional Engineer Certification: Certified by Michael VanBriggle - a Florida licensed PE
Scope of Application: EU's 001 thru 006 identified as subtype AC1C type applications - Chevron notes that they believe it is not practical to assign EU emission rates. Application fee for a Subtype AC1C application is $4500@ - resultant total should be $27000. **However, although the facility may be subject to a facility wide emission limit, the emissions are calculated at the EU level, and the fee is the resultant sum.**

Summary calculation information indicates that post construction emissions will include:

			Approx Increase (TPY)	Appli Subtype	Fee
Loading Rack	66.5	TPY VOCs	33.3	AC1D	$2,000
Flare	0	TPY VOCs		ACM1	$250
Fugitive	1.02	TPY VOCs	<1	AC1F	$250
High Vol tanks	10.56	TPY VOCs	5.3	AC1E	$1,000
Low Vol tanks	0.53	TPY VOCs	<1	AC1F	$250
Additive tanks	0.06	TPY VOCs	<1	AC1F	$250
Other tanks	3.33	TPY VOCs	1.6	AC1F	$250
Total:	82				$4,250

(Table VI-5 indicates 82.1 TPY post construction VOCs, the above EU allocation is probably close)

Construction/Modification Information: Chevron notes that the project involves construction of an additional loading lane, increased throughput, modifications to the tank configuration, with emission increased to nominally less than major source/MACT thresholds for VOCs, HAPs, and individual HAPs.

Application comment: Reiterates increased emissions.

It seems to me the requested increases are clearly expansive to just nominally less than levels that trigger additional regulatory criteria. The requested levels are greater than the potential emissions identified in the supporting calculations. I see no justification for these levels, and suggest the requested levels parallel the anticipated emission increases based on applicable regulatory criteria and emission calculations.

II. Facility Information

Facility Location and Type:

Lat N 30/03/00, Long W85/02/00

SIC 5171 - Petroleum Bulk Stations and Terminals

Facility Contact - Terry Franklin

Facility Regulatory Classifications: Identified as synthetic Non Title V for VOCs, HAPs Subject to NSPS.

Rule Applicability. Identifies 62-296.508 and 62-296.510 as applicable - these should apply only in nonattainment areas - see rule 62-296.500

Does not identify Rule 62-204.800

Identifies 40CFR60 Subparts Kb, XX

Facility Pollutants

VOC, HAPs, Ind HAP identified as SM @ 99.9, 24.9, 9.9 TPY. Seems excessive.

CO, NOX, PM identified as a regulated pollutant. Why, what applicable limits?

EU 001 - Vapor Combustion Unit

A. General Emission Unit Information. Comments that the VCU consists of a John Zink VCU (model ZCT-3-8-45-3/6-3/6-X) and associated loading rack (three lanes).
Notes maximum process rate as 96,000 gal product transferred per hour, no limits on hours of operation. Notes annual thruput of high volatile products as 325,760,000 gpy and low volatile product as 57,490,000 gal/year. Identifies max inlet gas velocity to VCU as 24.9 ft/s; minimum Btu content as 300 Btu/scf.

B. Emission Point Information provided.

C. Segment information
SCC 40400135 identified - What is the description of this SCC. Seems to me that 4-04-001-53 (VCU losses) is more appropriate.
Notes 96,000 gph transferred; 0.02%S

D. Emission Unit Pollutant Detail Information
Identifies VOC, 99.9 TPY; HAPs, 24.9 TPY; Individual HAP, 9.9 TPY.
Pollutants should be identified at the EU level. Necessary for subsequent pollutant tracking, fee identification,
Allowable emissions - should be identified for VCU - 35 mg VOC/l loaded.
Potential emissions should be identified for all applicable pollutants including HAPs, HAP, etc. Notes can explain that facility is requesting facility wide limits on VOCs, HAPs, HAP emissions.
Note that individual pollutants need not be identified if they are not emission limited or exceed minimum thresholds - 5 TPY for NOX/PM.

E. Visible Emissions Information.
Identifies 5% opacity. Basis for limit not identified. Suspect applicable limit should be 40 CFR 60.18 (Subpart A), no visible emissions except for up to 5 minutes/two hours.

EU 002 - Gasoline and Aviation Gasoline Storage Tanks.

A. Emission Unit Description. Identified as a group of storage tanks (nos. 62, 63, 66, 78,and 84) with a storage capacity >42,000 gallons and a vapor pressure >1.5 psia. Tanks 62, 63, 66, and 78 have internal floating roofs; tank 84 has an external floating roof with a geodesic dome cover. (1.5 psia = 10.35 kPa

Although the facility information identifies Subpart Kb, the application does not specify applicability of 40 CFR 60 Kb to individual tanks, and this should be included in the EU description.

The introductory notes state that tanks 62 and 63 will have new internal floating roof installed and product changes, and tank 66 has had an IRF installed. The scope of involved work should clearly be identified, ie. the type closure device, covers, vents etc as required by Subpart Kb. The application should review the post construction compliance status of tank 66.

B. Emission Point Information. Included.

C. Segment Information. Two segments identified, standing and working losses.
SCCs identified as 4-04-001-10 (Gasoline standing loss) and
4-04-001-16 (Gasoline withdrawal loss).

D. Emissions Unit Pollutant Detail Information

VOCs, HAPs, HAP identified as EU pollutants; but potential emissions not identified. Should be for EU, as previously noted. Applicant requests facility wide limitation, and this should be included in the facility section of the application - which it is - with appropriate comment in the EU allowable emission section.

E. Visible Emissions Information. NA

EU 003 - Diesel and Jet A Fuel Storage Tanks.

A. Emission Unit Description. Identified as a group of storage tanks (nos.25 and 67) with a true vapor pressure <1.5 psia. Tanks 25 is a fixed roof, and tank 67 has an internal floating roof.

Although the facility information identifies Subpart Kb, the application does not specify applicability of 40 CFR 60 Kb to individual tanks, and this should be included in the EU description.

B. Emission Point Information. Included.

C. Segment Information. Four segments identified, includes standing and working losses.
SCCs identified as 4-04-001-21 (diesel standing loss)
4-04-001-22 (diesel withdrawal loss).
4-04-001-60 (specific liquid IFR standing loss)
4-04-001-79(specific liquid IFR working loss)

D. Emissions Unit Pollutant Detail Information

VOCs, HAPs, HAP identified as EU pollutants; but potential emissions not identified. Should be for EU, as previously noted. Applicant requests facility wide limitation, and this should be included in the facility section of the application - which it is - with appropriate comment in the EU allowable emission section.

E. Visible Emissions Information. NA

EU 004 - Additive, Slop, and Flare Drop-out Storage Tanks

A. Emission Unit Description. Identified as a group of storage tanks (nos.14, 17, 18, 20, 21, 22 23, 96)with a true vapor pressure <1.5 psia. All are fixed roof. Tanks 14, 17, 18, 21, 22, and 23 store petroleum products with a true vapor pressure< 1.5 psia; tank 96 stores slop, and tank 20 is the flare drop out tank and is currently dry.

Although the facility information identifies Subpart Kb, the application does not specify applicability of 40 CFR 60 Kb to individual tanks, and this should be included in the EU description.

B. Emission Point Information. Included.

C. Segment Information. two segments identified, includes standing and working losses.
SCCs identified as 4-04-001-21 (diesel standing loss)
4-04-001-22 (diesel withdrawal loss).

D. Emissions Unit Pollutant Detail Information
VOCs, HAPs, HAP identified as EU pollutants; but potential emissions not identified. Should be for EU, as previously noted. Applicant requests facility wide limitation, and this should be included in the facility section of the application - which it is - with appropriate comment in the EU allowable emission section.

E. Visible Emissions Information. NA

EU 005 - Additive, Slop, and Flare Drop-out Storage Tanks

A. Emission Unit Description. Identified as a group of storage tanks (Oil Water Separator, OS1; Process Tanks, PT 1 & 2; evaporation tank 101; Tank 2). Tanks PT1 & 2 are underground collection tanks for petroleum contaminated wastewater. Tank 101 is an evaporation tank and contains no petroleum product. Tank 2 contains fire protection water.
Although the facility information identifies Subpart Kb, the application does not specify applicability of 40 CFR 60 Kb to individual tanks, and this should be included in the EU description.

B. Emission Point Information. Included.

C. Segment Information. two segments identified, includes standing and working losses.
SCCs identified as 4-04-001-21 (diesel standing loss)
4-04-001-22 (diesel withdrawal loss).

D. Emissions Unit Pollutant Detail Information
VOCs, HAPs, HAP identified as EU pollutants; but potential emissions not identified. Should be for EU, as previously noted. Applicant requests facility wide limitation, and this should be included in the facility section of the application - which it is - with appropriate comment in the EU allowable emission section.

E. Visible Emissions Information. NA

EU 006 - Fugitive emissions from tank trucks and piping components (valves, flanges, and pumps)

A. Emission Unit Description. Fugitive emissions from tank trucks and piping components, includes valves, flanges, and pumps.

B. Emission Point Information. Included.

C. Segment Information. two segments identified, includes vapor emissions from trucks and piping components.
SCCs identified as 4-04-002-54 (tank truck vapor losses)
4-04-002-51 (Valves, flanges, pumps).

D. Emissions Unit Pollutant Detail Information
EU emissions estimated using a factor 13 mg/l gasoline loaded; and API leak emission factors. **I'd like more information on the basis for the 13 mg/l, and the volumes included in the actual calculations.**
VOCs, HAPs, HAP identified as EU pollutants; but potential emissions not identified. Should be for EU, as previously noted. Applicant requests facility wide limitation, and this should be included in the facility section of the application - which it is - with appropriate comment in the EU allowable emission section.

E. Visible Emissions Information. NA

Department of
Environmental Protection

Lawton Chiles
Governor

Northwest District
160 Governmental Center
Pensacola, Florida 32501-5794

Virginia B. Wetherell
Secretary

PERMIT DATA FORM Date: 12-19-02

PROJECT SOURCE NAME Panama City Terminal

TYPE CODE ~~AA~~ AC SUBCODE 1C

CORRECT FEE 4500

AMOUNT RECEIVED 4500

AMOUNT REFUND

PROCESSOR KRIEGEL_R

COMMENTS

PERMIT APPLICATION SITE NUMBER AN

WAFER SITE NUMBER

ARMS SITE NUMBER 0050056-005-AC

CASH RECEIVING RECEIPT NUMBER 335246

Check Remitted BY: Chevron

Check# 0022073830

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+------------------------------- ARMS Facility -------------------------------+
|     POINT AIRS ID 0050056  STATUS  A     OFFICE NWDP  NW_Br:_PANAMA_CITY_____|
| SITE NAME CHEVRON_PRODUCTS_COMPANY__________  COUNTY  BAY___________________|
|OWNER/COMP CHEVRON_PRODUCTS_COMPANY___________________________________________|
+---------------------------------- Project ----------------------------------+
|AIR Permit #: _______-___-___      Project #: 005  CRA Reference #: 82155_____|
|Permit Office: NWD_(DISTRICT)_____________________   Agency Action: Pending___|
|Project Name: CHEVRON_PRODUCTS_CO___________ Desc: Chevron_modification______|
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|    Received: 19-DEC-2000_ Issued: _____________ Expires: _____________ OGC: _|
|Fee: ___4500.00 Fee Recd: ___4500.00 Dele: _________ Override: NONE___________|
+------------------------------- Related Party -------------------------------+
|Role: APPLICANT_______    Begin: 20-DEC-2000   End: ____________            |
|Name: LUPER,_PAUL_____________________ Company: CHEVRON_USA_PRODUCTS_CO_______|
|Addr: CHEVRON_USA_PRODUCTS_CO.,_P.O._BOX_1706_____________________________   |
|City: ATLANTA_____________________ State: GA Zip: 30301-____ Country: U.S.A._|
|Phone: 770-984-3036   Fax: 770-984-3102                                      |
+---------------------------------- Processors -------------------------------+
|Processor: KRIEGEL_R_____________ Y Active: 20-DEC-2000 Inactive: ___________|
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| SYS$RCPT: 335246__ PNR: ________ Check #: 22073830__  Amount: ______4,500.00 |
| SSN/FEI#: _________                Name: CHEVRON_PRODUCTS_CO_____________   |
|    First: ______________________ Middle: _____  Title:________ Suf: _____   |
| Address1: P_O_BOX_9034_____________________________  Short Comments:        |
| Address2: ___________________________________________ 0050056005_-_MBC_____ |
|     City: CONCORD_____________ ST: CA  Zip: 94524-____ Country: __________ |
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Count: *0                                                              <Replace>
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Chevron

December 12, 2000

Mr. Andy Allen
Division of Air Resource Management
Florida Department of Environmental Protection
160 Government Center
Pensacola, Florida 32501-5794

Subject: Application to Construct a Third Loading Lane and Modify Air Emissions Units for Chevron's Panama City Terminal (Facility ID 0050056)

Dear Mr. Allen:

Enclosed please find three (3) copies of the Application to Construct a Third Loading Lane and Modify Air Emissions Units for Chevron Products Company's (Chevron) Panama City Terminal and the application processing fee of $4,500.

A bulleted list of proposed changes to the terminal for which this construction permit application is being made can be found in Section 1.1 of the application text. These changes will not result in an increase of facility-wide emissions above new proposed Synthetic Minor applicability thresholds (VOC $\leq$ 99.9 tpy; total HAP $\leq$ 24.9 tpy; and individual HAP $\leq$ 9.9 tpy). Detailed emissions calculations are also provided in the permit application.

We appreciate your assistance and guidance in the development of the enclosed permit application and look forward to working closely with you throughout the permit drafting process. If you have any questions regarding the enclosed application, please contact me at (770) 984-3016.

Sincerely,

Louis Milkint

Louis Milkint
Terminal Environmental, Health, & Safety Specialist

cc: Terry Franklin, Chevron Products Company

Enclosures

RECEIVED
DEC 19 2000
NORTHWEST FLORIDA
DEP