

POINT		AIRS ID	0050056	STATUS	A	OFFICE	NWDP	HW Br:	PANAMA CITY
SITE NAME		CHEVRON PRODUCTS COMPANY			COUNTY		BAY		
OWNER/COMPANY		CHEVRON PRODUCTS COMPANY							
<b>Project</b>									
AIR Permit #		Project #	009	CRA Reference #	175411				
Permit Office	HWD (DISTRICT)			Agency Action	Pending				
Project Name	CHEVRON PRODUCTS COMPANY		Desc	Chevron Panama City Terminal					
Type/Sub/Des	AC	M1	Minor Modification			Logged	03/09/2004		
Received	03/08/2004		Issued		Expires		OCC	<input type="checkbox"/>	
Fee	250.00		Fee Recd	250.00		Dele		Override	NONE
<b>Related Party</b>									
Role	APPLICANT			Begin	03/09/2004		End		
Name	FRANKLIN, TERRY			Company	CHEVRON PRODUCTS COMPANY				
Address	525 WEST BEACH DRIVE								
City	PANAMA CITY			State	FL	Zip	32401	Country	
Phone	850-785-7426		Fax						
<b>Processors</b>									
Processor	JACKSON_A		Y	Active	03/09/2004		Inactive		Events

Collection Point Log Remittance

AREA **MWD** Total **\$28,225.00**  
 Remittance **557705** Type  Received Date **03/08/2004** Status **RECEIVED**  
 SYS\$ROPT **450384** PNR  Check# **0022617235** Amount **250.00**  
 SSNIFE#  Name **CHEVRONTEXACO**  
 First  Middle  Title  Sur   
 Address1 **P O BOX 9034** Short Comments  
 Address2  **0050056009 - MBC**  
 City **CONCORD** ST **CA** Zip **94624** Country

PAYMENT(S)

Payment#	Dist	CL	Object	Payment	Reference#	Applic	Fund	status
	Area		Code/Description	Amount				
606409	MWD		002222 AIR CONSTRUCT	\$250.00	0050056009	ARM	PFTF	COMPLETE

COMMIT FREQUENTLY **\$250.00** Payment total



March 5, 2004

Ms. Sandra F. Veazey  
Air Program Administrator  
Florida Department of Environmental Protection  
160 Governmental Center  
Pensacola, Florida 32502

**Subject: Modification of Non-Title V Air Construction Permit (No. 0050056-008-AC) for Chevron's Panama City Terminal**

Dear Ms. Veazey:

Chevron Products Company's (Chevron) is requesting a modification of the Non-Title V Air Construction Permit No. 0050056-008-AC for the Panama City Terminal. The modification is needed to revise the size of the aboveground storage tank (AST) previously permitted in the Air Construction Permit No. 0050056-008-AC issued September 5, 2003. The new AST will store gasoline (Tank No. 10) and replace an old gasoline AST (Tank No. 01). Tank 10 will be subject to the requirements of 40 CFR 60 Subpart Kb since its design capacity is greater than 40 m<sup>3</sup> and since the tank was modified after July 23, 1984. To meet the requirements of Subpart Kb, Tank 10 will have an internal floating roof with a stainless steel mechanical primary shoe seal. In addition, Chevron has entered into the voluntary agreement with the U.S Environmental Protection Agency (EPA) to provide control for slotted guidepoles. Tank T-01 will be removed from service upon operation of Tank T-10

Attached you will by 4 copies of the Air Construction Permit Application and a check for the \$250 air construction permit fee.

We appreciate your assistance in the Panama City terminal construction permit application process. If you have any questions please contact me at (850) 785-7426.

Sincerely,

A handwritten signature in cursive script that reads "Terry Franklin".

Terry Franklin  
Terminal Manager

cc: Louis Milkint, Chevron Products Company

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NORTHWEST FLORIDA  
DEP

**APPLICATION FOR AN AIR  
CONSTRUCTION PERMIT FOR A  
SYNTHETIC NON-TITLE V SOURCE**

**CHEVRON PRODUCTS COMPANY  
PANAMA CITY TERMINAL  
Facility ID No. 0050056**

URS Corporation  
1000 Abernathy Road, NE  
Suite 900  
Atlanta, Georgia 30328

March 2004

**RECEIVED**

**MAR - 8 2004**

**NORTHWEST FLORIDA  
DEP**

**Application for an Air Construction Permit  
for a Synthetic Non-Title V Source**

**Chevron Products Company  
Panama City Terminal  
Facility ID No. 0050056**



Prepared for:  
Chevron Products Company  
Panama City Terminal  
525 West Beach Drive  
Panama City, Florida 32401

Prepared by:  
URS Corporation  
1000 Abernathy Road, NE  
Suite 900  
Atlanta, Georgia 30328

March 2004

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Attachment B	Facility Plot Plan
Attachment C	Process Flow Diagram
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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.

This application constitutes Chevron Products Company's (Chevron) request to obtain an air construction permit for the construction of Tank 10 and removal from service of Tank 01. Tank 01 is a riveted tank built in 1934 and needs to be removed from service. Chevron does not plan to increase the throughputs or permitted VOC emissions through this construction.

The Chevron facility is currently operating under State of Florida Department of Environmental Protection (FDEP) Permit No. 0050056-002-AF, issued on August 15, 2001 and expires on August 15, 2006. 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-construction facility are estimated to be less than major source emissions thresholds since Chevron does not plan to increase permitted emissions with this construction; therefore, the Panama City terminal will remain a Synthetic Minor source.

The air construction permit submitted June 2003, 0050056-008-AC, became effective September 5, 2003 and expires September 5, 2006. Chevron is requesting a modification to this air construction permit due to the redesign of the proposed tank.

Since Chevron is a Synthetic Minor facility and plans to construct a tank to be included in an existing emission unit, 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.

## **Tank 10**

Tank 10 will have a maximum safe fill capacity of 3,186,960-gallon internal floating roof tank with a geodesic dome that will store gasoline. Tank 10 will be subject to the requirements of 40 CFR 60 Subpart Kb since its design capacity is greater than 40 m<sup>3</sup> and since the tank was modified after July 23, 1984. To meet the requirements of Subpart Kb, Tank 10 will have an internal floating roof with stainless steel mechanical primary shoe seal. In addition, Chevron has entered into the voluntary agreement with the U.S Environmental Protection Agency (EPA) to provide control for slotted guidepoles. As part of this agreement, Chevron will install required controls for Tank 10 and other select tanks by April 12, 2010. Based on the construction specifications of Tank 10, it should be grouped with existing emission unit 007. Chevron desires to begin construction of Tank 10 in June 2004. A review of the compliance status of Tank 10 with applicable provisions of 40 CFR 60 Subpart Kb and any other state regulations is provided in Section 2.0. Summarized below in Table 1-2 is a list of emissions units at the Panama City terminal.

## **Tank 01**

Tank 01 is a 1,932,000-gallon internal floating roof tank that stores gasoline. Tank 01 is going to be removed from service by Chevron. Tank 01 is currently part of emission unit 002. Although Tank 10 is larger than Tank 01, Chevron does not plan to increase the permitted throughputs or permitted maximum allowable VOC emissions through this construction.

## **Emission Estimates**

Emission estimates for regulated air pollutants for proposed Tank 10 were calculated and compared to the emissions from Tank 01. These estimates provide the basis for the regulatory conclusions documented in this permit application. The emission estimates presented in this permit application and calculated by EPA TANKS v4.09b are included in Attachment D.

For calendar year 2003 Tank 01 emitted approximately 15,142 pounds (7.57 tpy) of VOC. Based on the same throughputs, the estimated emissions produced from Tank 10 would be 15,990 pounds (8.0 tpy) of VOC. Therefore, the new tank will increase the amount of emissions produced. Based on calendar year 2003 throughputs the emissions would increase approximately 848 pounds (0.42 tpy).

Based on 2003 throughputs, 39.4 tpy of VOC were emitted at the Panama City Terminal. Recalculating the emissions with Tank 10, 39.8 tpy of VOC would be emitted. Therefore, these emission estimates support the conclusion that the proposed construction will not result in an increase of facility-wide actual emissions above the current permit's thresholds (88.3 tpy VOC).

**Table 1-1. Emission Estimates**

	Tank 01	Tank 10
VOC Emissions Calculated with 2002 Throughputs	15,142 lbs. (7.57 tpy)	15,990 lbs. (8.0 tpy)
VOC Emission Increase with the Installation of Tank 10 and removal of Tank 1	848 lbs. (0.42 tpy)	
Annual VOC Emissions Based on 2002 Throughputs	39.4 tpy	39.8 tpy
Permitted VOC Emission Limit	88.3 tpy	

**Table 1-2. Chevron Panama City Terminal  
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 01	002	Internal Floating Roof Storage Tank (1,932,000 gal) – Tank to be removed	✓	
Tank 67	002	Internal Floating Roof Storage Tank (758,644 gal)	✓	
Tank 78	002	Internal Floating Roof Storage Tank (1,037,802 gal)	✓	
Tank 84	002	External Floating Roof (Domed) (1,114,000)	✓	
Tank 25	003	Fixed Roof Storage Tank (856,457 gal)		✓
Tank 62	003	Fixed Roof Storage Tank (179,780 gal)		✓
Tank 63	003	Fixed Roof Storage Tank (182,513 gal)		✓
Tank 17	004	Fixed Roof Storage Tank (5,858 gal)		✓
Tank 18	004	Fixed Roof Storage Tank (3,684 gal)		✓
Tank 20	004	Fixed Roof Storage Tank (250 gal)	See Note a	See Note a
Tank 21	004	Fixed Roof Storage Tank (5,493 gal)		✓
Tank 22	004	Fixed Roof Storage Tank (7,948 gal)		✓
Tank 23	004	Fixed Roof Storage Tank (3,799 gal) -(Currently out of Service)	N/A	N/A
Tank 96 <sup>b</sup>	004	Fixed Roof Storage Tank (11,929 gal)	✓	
OWS #1	005	Oil/Water Separator	See Note c	See Note c
PT #1 <sup>d</sup>	005	Underground Process Tank for PCW (12,000 gal)	See Note c	See Note c
Tank 2	005	Fire Protection Water	N/A	N/A
Tank Ev.	005	Water Evaporation Tank <sup>e</sup>	N/A	N/A
Fl/V/Pu	006	Flanges/valves/pumps	✓	
Truck	006	Tank Truck Loading	N/A	N/A
Tank 66	007	Internal Floating Roof Storage Tank (703,399 gal)	✓	
Tank 10	007	Internal Floating Roof Storage Tank (3,186,960 gal) – New Tank to be constructed by March 2005	✓	
Tank 14	008	Fixed Roof Storage Tank (11,134 gal)		✓

a. This is the Flare Drop-out Tank. This tank is currently dry.

b. Tank 96 contains transmix which may consist of any mixture of products stored at this facility (i.e., gasoline, diesel, water, etc.).

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.

d. These units are process tanks (PT). PT #1 collects PCW from the loading rack and storage tank areas before sending the PCW to OWS #1.

e. This tank stores water that is evaporated to the atmosphere.

\* All tank capacities listed are safe fill capacity.

## 2.0 Regulatory Review

This section documents a regulatory review conducted in support of this permit application.

### New Source Performance Standards – 40 CFR 60 Subpart Kb

Tank 10 is subject to the requirements of 40 CFR 60 Subpart Kb – Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced After July 23, 1984. Tank 10 has a capacity greater than 40 cubic meters (10,557 gallons) and stores a VOL with a vapor pressure of approximately 8.6 psia (59.8 kPa) at 70°F. Summarized below in Table 2-1 is a list of Subpart Kb requirements potentially applicable to Tank 10.

**Table 2-1. Applicability of Panama City Terminal Tank 10 with Requirements of Rule 40 CFR 60 Subpart Kb**

Rule Citation – 40 CFR 60	Requirement	Applicable? (Yes, No, Not Applicable)
112b(a)(1)(i)	The internal floating roof shall rest or float on the liquid surface (but not necessarily in complete contact with it) inside a storage vessel that has a fixed roof.	Yes
	The internal floating roof shall float on the liquid surface at all times, except during initial fill and during those intervals with the tank is completely emptied of subsequently emptied and filled.	Yes
112b(a)(1)(ii)(C)	The internal floating roof shall be equipped with a mechanical shoe seal.	Yes
112b(a)(1)(iii)	Each opening in a noncontact internal floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.	N/A – Roof is in Contact
112b(a)(1)(iv)	Each opening in the internal floating roof except for leg sleeves, automatic bleeder vents, rim space vents, column wells, ladder wells, sample wells, and stub drains is to be equipped with a cover or lid which is to be maintained in a closed position (i.e., no visible gap) at all times except when in use.	Yes
	The cover or lid shall be equipped with a gasket.	Yes
	Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.	Yes
112b(a)(1)(v)	Automatic bleeder vents shall be equipped with a gasket and are to be closed at all times when the roof is floating except when the roof is being floated off or is being landed on the roof leg supports.	Yes

**Table 2-1. Applicability of Panama City Terminal Tank 10 with Requirements of Rule 40 CFR 60 Subpart Kb (continued)**

Rule Citation – 40 CFR 60	Requirement	Applicable? (Yes, No, Not Applicable)
112b(a)(1)(vi)	Rim space vents shall be equipped with a gasket and are to be set to open only when the internal floating roof is not floating or at the manufacturer’s recommended setting.	Yes
112b(a)(1)(vii)	Each penetration of the internal floating roof for the purpose of sampling shall be a sample well. The sample well shall have a slit fabric cover that covers at least 90% of the opening.	Yes
112b(a)(1)(viii)	Each penetration of the internal floating roof that allows for passage of a column supporting the fixed roof shall have a flexible fabric sleeve seal or gasketed sliding cover.	Yes
112b(a)(1)(ix)	Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.	Yes
113b(a)(1)	After installation of the internal floating roof, was the internal floating roof and seals inspected prior to filling of the vessel?	Yes
	If holes, tears, or openings were found during the inspection, were these openings repaired before filling of the vessel?	Yes

## **Appendix A**

### **Permit Application Forms and Supplemental Attachments**



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

##### Application Contact

1. Name and Title of Application Contact: <b>Louis Milkint</b>	
2. Application Contact Mailing Address: Organization/Firm: <b>Chevron Products Company</b> Street Address: <b>4442 Grove Drive</b> City: <b>Acworth</b> State: <b>Georgia</b> Zip Code: <b>30101</b>	
3. Application Contact Telephone Numbers: Telephone: <b>(770) 529 - 4776</b> Fax: <b>(770) 529 - 4229</b>	

##### Application Processing Information (DEP Use)

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

**RECEIVED**

MAR - 8 2004

**NORTHWEST FLORIDA  
DEP**

**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: 0050056-008-AC

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: \_\_\_\_\_

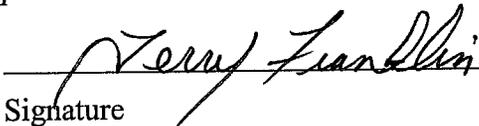
Reason for revision: \_\_\_\_\_

**Air Construction Permit Application**

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

- 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: <b>Terry Franklin</b>
2. Owner/Authorized Representative Mailing Address: Organization/Firm: <b>Chevron Products Company</b> Street Address: <b>525 West Beach Drive</b> City: <b>Panama City</b> State: <b>Florida</b> Zip Code: <b>32401</b>
3. Owner/Authorized Representative Telephone Numbers: Telephone: <b>(850) 785-7426</b> Fax: <b>(850) 784 - 1566</b>
4. Owner/Authorized Representative Statement: <i>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.</i>   Signature _____ Date <u>3/5/04</u>

\* Attach letter of authorization if not currently on file.

**Professional Engineer Certification**

1. Professional Engineer Name: <b>Samir M. Najim</b> Registration Number: <b>57206</b>
2. Professional Engineer Mailing Address: Organization/Firm: <b>URS Corporation</b> Street Address: <b>1000 Abernathy Road, NE, Suite 900</b> City: <b>Atlanta</b> State: <b>GA</b> Zip Code: <b>30328</b>
3. Professional Engineer Telephone Numbers: Telephone: <b>(678) 808 - 8800</b> Fax: <b>(678) 808 - 8400</b>

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 [ X ], 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.*

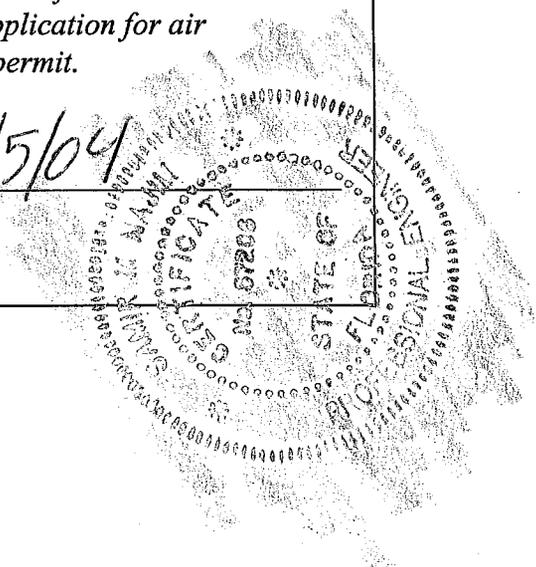
*If the purpose of this application is to obtain an initial air operation permit or operation permit revision for one or more newly constructed or modified emissions units (check here [    ], if so), I further certify that, with the exception of any changes detailed as part of this application, each 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.*

*Samir M. Najim*  
\_\_\_\_\_  
Signature

*3/5/04*  
\_\_\_\_\_  
Date

(seal)

\* Attach any exception to certification statement.





**Construction/Modification Information**

1. Description of Proposed Project or Alterations:

**This submittal is for an air construction permit to modify an emission unit for a synthetic non-Title V source. Chevron is planning on removing from service Tank 01 (emission unit 002) and replacing it with Tank 10 (emission unit 007). Tank 10 will be an internal floating roof tank with a stainless steel mechanical primary shoe seal. Tank 10 will have a capacity of 3,186,960 gallons and will contain gasoline. Chevron does not plan to change their permitted throughput limits or maximum allowable VOC emissions with this modification. Tank 10 will be subject to the requirements of 40 CFR 60 Subpart Kb. Based on emission estimates, 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: **June 2004**

3. Projected Date of Completion of Construction: **March 2005**

**Application Comment**



**Facility Regulatory Classifications**

Check all that apply:

1. <input type="checkbox"/> Small Business Stationary Source?	<input type="checkbox"/> Unknown
2. <input checked="" type="checkbox"/> Synthetic Non-Title V Source?	
3. <input checked="" type="checkbox"/> Synthetic Minor Source of Pollutants Other than HAPs?	
4. <input checked="" type="checkbox"/> Synthetic Minor Source of HAPs?	
5. <input checked="" type="checkbox"/> One or More Emissions Units Subject to NSPS?	
6. <input type="checkbox"/> One or More Emission Units Subject to NESHAP Recordkeeping or Reporting?	
7. Facility Regulatory Classifications Comment (limit to 200 characters):	
<p><b>This terminal is currently a permitted synthetic minor source with limits on VOC (&lt; 88.3 tpy). 40 CFR 63 Subpart R does not apply since the facility is not a major source of HAP.</b></p> <p><b>The terminal is not requesting an increase from the permitted VOC emission limit of 88.3 tpy or the VOL throughput limit of 325,760,000 gallons/year.</b></p>	

**Rule Applicability Analysis**

<p><b>62-4.050 F.A.C. Procedure to Obtain Permits and Other Authorizations Application</b></p> <p><b>62-210 F.A.C. Stationary Sources - General Requirements</b></p> <p><b>62-210.300 F.A.C. Permits Required</b></p> <p><b>62-296.320 F.A.C. General Pollutant Emission Limiting Standards</b></p> <p><b>62-297.310 F.A.C. General Test Requirements</b></p> <p><b>62-297.330 F.A.C. Applicable Test Requirements</b></p> <p><b>62-297.340 F.A.C. Frequency of Compliance Tests</b></p> <p><b>62-297.570 F.A.C. Test Reports</b></p> <p><b>40 CFR 60 Subpart A, General Provisions (Tank 10)</b></p> <p><b>40 CFR 60 Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels (Tank 10)</b></p>
--





**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**

<p>1. Type of Emissions Unit Addressed in This Section: (Check one)</p> <p><input type="checkbox"/> 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).</p> <p><input checked="" type="checkbox"/> 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.</p> <p><input type="checkbox"/> 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.</p>		
<p>2. Description of Emissions Unit Addressed in This Section (limit to 60 characters):</p> <p><b>High Volatility VOL Storage Tanks Subject to NSPS – includes New Tank 10 &amp; Existing Tank 66</b></p>		
<p>3. Emissions Unit Identification Number:</p> <p>ID: 007</p>		<p><input type="checkbox"/> No ID</p> <p><input type="checkbox"/> ID Unknown</p>
<p>4. Emissions Unit Status Code:</p> <p>A</p>	<p>5. Initial Startup Date:</p> <p>March 2005</p>	<p>6. Emissions Unit Major Group SIC Code:</p> <p>51</p>
<p>7. Emissions Unit Comment: (Limit to 500 Characters)</p> <p><b>Emission Unit ID: 007 consists of a collectively regulated group of emission units. Tank 10 is a storage tank with a storage capacity &gt; 10,557 gallons storing product with a vapor pressure &gt; 1.5 psia. Tank 10 has an internal floating roof. Tank 10 is subject to the requirements of 40 CFR 60 Subpart Kb.</b></p> <p><b>Emission Unit 007 currently consists of Tank 66.</b></p>		

**Emissions Unit Control Equipment**

<p>1. Control Equipment/Method Description (limit to 200 characters per device or method):</p> <p><b>Tank 10 will be a carbon steel tank with an internal floating roof and aluminum geodesic dome roof. Tank 10 will have a stainless steel mechanical primary shoe seal to comply with 40 CFR 60.112b(a)(1)(ii).</b></p>
<p>2. Control Device or Method Code(s): <b>099</b></p>

**Emissions Unit Details**

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

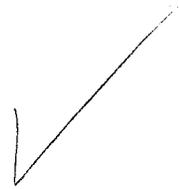
**Emissions Unit Operating Capacity and Schedule**

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 <b>24</b>	days/week <b>7</b>
	weeks/year <b>52</b>	hours/year <b>8,760</b>
6. Operating Capacity/Schedule Comment (limit to 200 characters):		
<p><b>Chevron will limit hourly throughput to 96,000 gallon total product/hour and annual throughput to 325,760,000 gallon/year for high volatile products and <u>47,490,000</u> gallon/year for low volatile products.</b></p>		

**B. EMISSION POINT (STACK/VENT) INFORMATION**

**Emission Point Description and Type**

1. Identification of Point on Plot Plan or Flow Diagram? <b>See Plot Plan</b>		2. Emission Point Type Code: <b>3</b>	
3. Descriptions of Emission Points Comprising this Emissions Unit for VE Tracking (limit to 100 characters per point):  <b>New Tank 10 &amp; Existing Tank 66</b>			
4. ID Numbers or Descriptions of Emission Units with this Emission Point in Common: <b>007 – Petroleum liquid storage tank storing gasoline, having an internal floating roof, and subject to NSPS requirements.</b>			
5. Discharge Type Code: <b>P</b>	6. Stack Height:  feet	7. Exit Diameter:  feet	
8. Exit Temperature: <b>77</b> °F	9. Actual Volumetric Flow Rate:  acfm	10. Water Vapor:  %	
11. Maximum Dry Standard Flow Rate:  dscfm		12. Nonstack Emission Point Height:  <b>42.5</b> feet	
13. Emission Point UTM Coordinates:  Zone: <b>16</b> East (km): <b>628.3</b> North (km): <b>3336.8</b>			
14. Emission Point Comment (limit to 200 characters):  <b>Standing and working losses occur through breather vents on the tanks. The Nonstack Emission Point Height is the minimum shell height of the storage tanks in this emission unit.</b>			



**C. SEGMENT (PROCESS/FUEL) INFORMATION**

**Segment Description and Rate:** Segment  1  of  2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>Standing Losses from Storage Tanks – Gasoline; Floating Roof Tanks</b>		
2. Source Classification Code (SCC): <b>40400110</b>		3. SCC Units: <b>Thousand Gallons Stored</b>
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):  <b>Chevron will limit hourly throughput to 96,000 gallon total product/hour and annual throughput to 325,760,000 gallon/year for high volatile products and 47,490,000 gallon/year for low volatile products.</b>		

**Segment Description and Rate:** Segment  2  of  2

1. Segment Description (Process/Fuel Type) (limit to 500 characters):  <b>Working Losses from Storage Tanks – Gasoline; Floating Roof Tanks</b>		
2. Source Classification Code (SCC): <b>40400116</b>		3. SCC Units: <b>Thousand Gallons Transferred or Handled</b>
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):  <b>Chevron will limit hourly throughput to 96,000 gallon total product/hour and annual throughput to 325,760,000 gallon/year for high volatile products and 47,490,000 gallon/year for low volatile products.</b>		

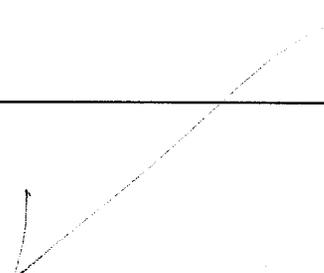
**D. EMISSIONS UNIT POLLUTANT DETAIL INFORMATION**

**Potential Emissions**

1. Pollutant Emitted: <b>VOC</b>		2. Pollutant Regulatory Code: <b>EL</b>	
3. Primary Control Device Code: <b>99</b>	4. Secondary Control Device Code:		5. Total Percent Efficiency of Control:
6. Potential Emissions: <b>2.28</b> lb/hour <b>10.0</b> tons/year			7. Synthetically Limited? [ <b>X</b> ]
8. Emission Factor: <b>Reference: EPA's TANKS v4.09b</b>		9. Emissions Method Code: <b>3</b>	
10. Calculation of Emissions (limit to 600 characters):  <b>VOC emissions from tank standing and working losses were calculated using EPA's TANKS v4.09b. These calculations are attached as Attachment D.</b>			
11. Pollutant Potential Emissions Comment (limit to 200 characters):			

**Allowable Emissions** Allowable Emissions  1  of  1

1. Basis for Allowable Emissions Code: <b>See Comments Below</b>		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):  <b>The facility-wide emissions limit for VOC is 88.3 tpy.</b>			





**G. EMISSIONS UNIT SUPPLEMENTAL INFORMATION**

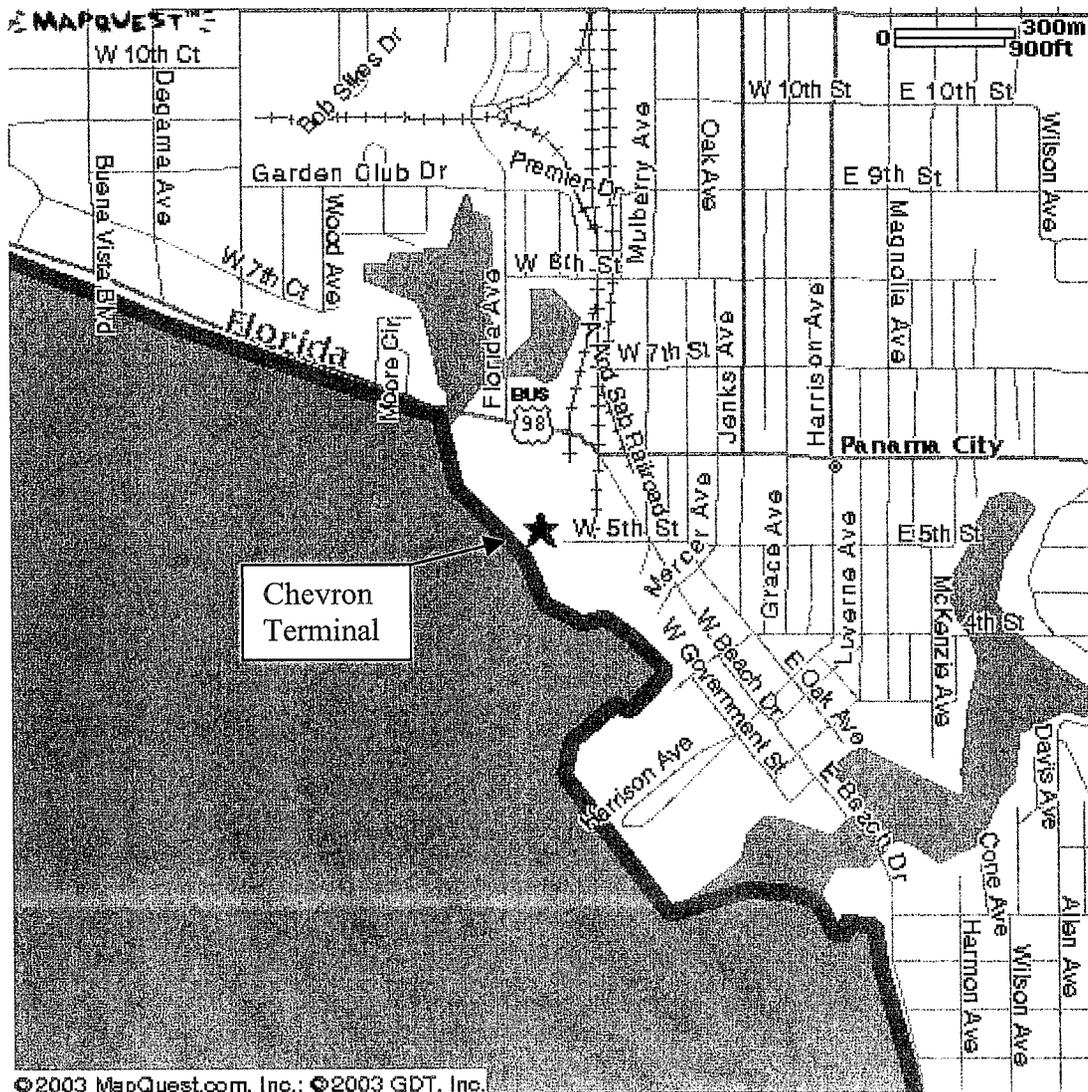
**Supplemental Requirements**

1. Process Flow Diagram <input checked="" type="checkbox"/> Attached, Document ID: <b>Attachment C</b> <input type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
2. Fuel Analysis or Specification <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
3. Detailed Description of Control Equipment <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
4. Description of Stack Sampling Facilities <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable <input type="checkbox"/> Waiver Requested
5. Compliance Test Report <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Previously submitted, Date: _____ <input checked="" type="checkbox"/> Not Applicable
6. Procedures for Startup and Shutdown <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
7. Operation and Maintenance Plan <input type="checkbox"/> Attached, Document ID: _____ <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Waiver Requested
8. Supplemental Information for Construction Permit Application <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
9. Other Information Required by Rule or Statute <input type="checkbox"/> Attached, Document ID: _____ <input checked="" type="checkbox"/> Not Applicable
10. Supplemental Requirements Comment:

**Attachment A**

**Area Map Showing Facility Location**

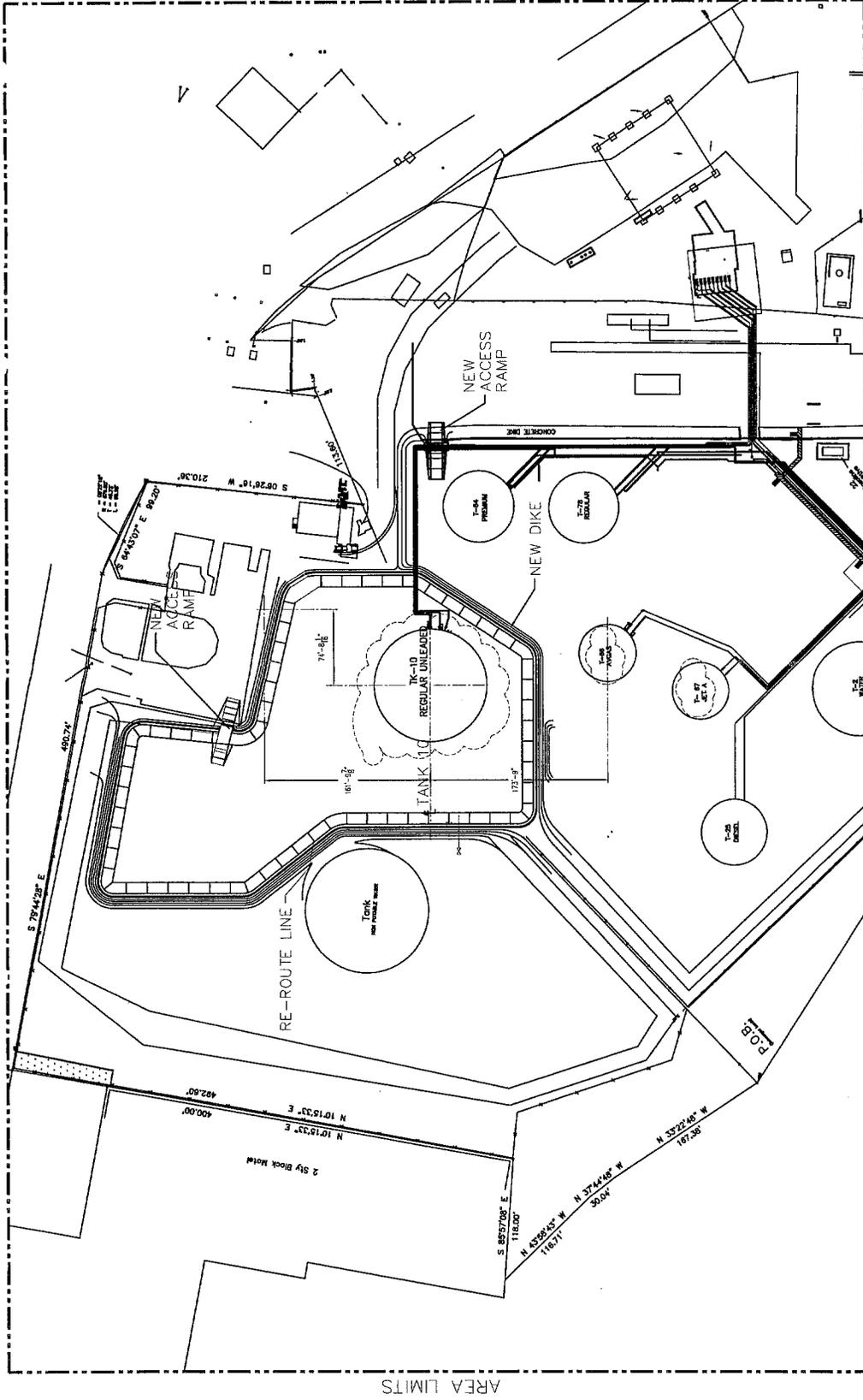
Chevron Products Company  
Panama City, Florida Terminal  
525 West Beach Drive  
Panama City, Florida 32401  
General Area Map



**Attachment B**

**Facility Plot Plan**

AREA LIMITS



AREA LIMITS

AREA LIMITS

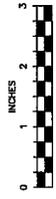
LEGEND



**Chevron** **Chevron Products Co.**  
**PANAMA CITY TERMINAL**  
 TANK 10 INSTALLATION  
 TANK 10 LOCATION PLAN  
 TANK TRUCK LOADING FACILITIES  
 SCALE: 1" = 50'-0"  
 DRAWING NO. PC-G-P-021  
 SHEET NO. 1 OF 8

ENGINEER	STS	CST	DATE
DRYING CHECK	CS	CS	
DRAFTING CHECK	CS	CS	
DATE CHECKED			
REVISION			
DATE			
CHECKED			
REVISION			

M-E-I CONSULTANTS, INC.  
 1101 ST. MARY'S LANE, STE. 500  
 HOUSTON, TEXAS 77057  
 (813) 311-7788



**SCOPE OF WORK**

THE SCOPE OF THIS PROJECT IS TO REMOVE EXISTING TANK T-1 AND TANK T-102, INSTALL NEW TANK T-10 JUST EAST OF EXISTING TANK T-1. CONTRACTOR SHALL FURNISH ALL LABOR, SUPERVISION, TOOLS, EQUIPMENT, MATERIALS AND SUPPLIES NECESSARY TO PERFORM THE WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE CHEVRON COMPANY. CONTRACTOR SHALL ADHERE TO THE APPROPRIATE ANS/ASSE CODES AND ALL STANDARDS IN THE CHEVRON SAFETY AND DESIGN MANUAL. CONTRACTOR SHALL OBTAIN ALL CONSTRUCTION PERMITS ALONG WITH OTHER PERMITS REQUIRED TO PERFORM THIS PROJECT. ALL STRUCTURAL STEEL SHALL BE PAINTED PER CHEVRON PAINTING SPECIFICATIONS AND STANDARDS.

**MECHANICAL/CIVIL**

1. CONTRACTOR SHALL VERIFY EXISTING TOPOGRAPHIC DATA, LOCATIONS OF EXISTING UNDERGROUND LINES BOTH ELECTRICAL OR MECHANICAL PRIOR TO BEGINNING CONSTRUCTION IN THE AREA OF WORK.
2. CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS FROM CHEVRON PRIOR TO COMMENCING ANY CUTTING OR HOT WORK.
3. DRAIN, PURGE AND CUT EXISTING LINES FOR NEW INSTALLATION.
4. CONSTRUCT NEW TANK FOUNDATION (BY MATING).
5. CONSTRUCT NEW DIRT FILL, COMPLETE WITH ROAD CROSSING AND DRAINAGE SYSTEM.
6. CONSTRUCT NEW CONCRETE PIPE TRENCH UNDER EXISTING ROAD CROSSING.
7. CONSTRUCT NEW CONCRETE FOUNDATION FOR NEW WATER DRAW PUMP.
8. CONSTRUCT NEW CONCRETE FOUNDATION FOR NEW WATER DRAW PUMP.
9. INSTALL NEW WATER DRAW PUMP (AIR OPERATED) AT TANK T-10 AND TIE-IN TO EXISTING WATER DRAW SYSTEM AT TANK T-84.
10. INSTALLATION OF NEW TANK T-10 (BY MATING).
11. INSTALL NEW PIPE SUPPORTS.
12. INSTALL NEW TANK EQUIPMENT (DNRAF) VALVES, AND RELIEF PIPING.
13. INSTALL NEW PIPING HEADERS AT THE PUMP MANFOLD.
14. INSTALL NEW AIR AND WATER DRAW LINE.
15. INSTALL HIGH POINT VENTS, LOW POINT DRAWS AS SHOWN ON DRAWINGS.
16. CONSTRUCT ACCESS PLATFORMS AND CROSSOVERS AS REQUIRED.
17. HYDRO TEST ALL WELD PIPING. PERFORM 100% X-RAY ON ALL NEW PIPING INSTALLATIONS.
18. VERIFY AND PUT DIRECTION ARROWS ON ALL NEW PIPING AS REQUIRED.
19. CONTRACTOR IS RESPONSIBLE FOR PUTTING PRODUCT SYSTEMS, WATER DRAW AND AIR SYSTEMS IN SERVICE.

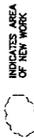
**ELECTRICAL**

1. INSTALL NEW HIGH AND HIGH LEVEL ALARM SYSTEM.
2. INSTALL GROUND AND WIRING FOR TANK SAFETY VALVES.

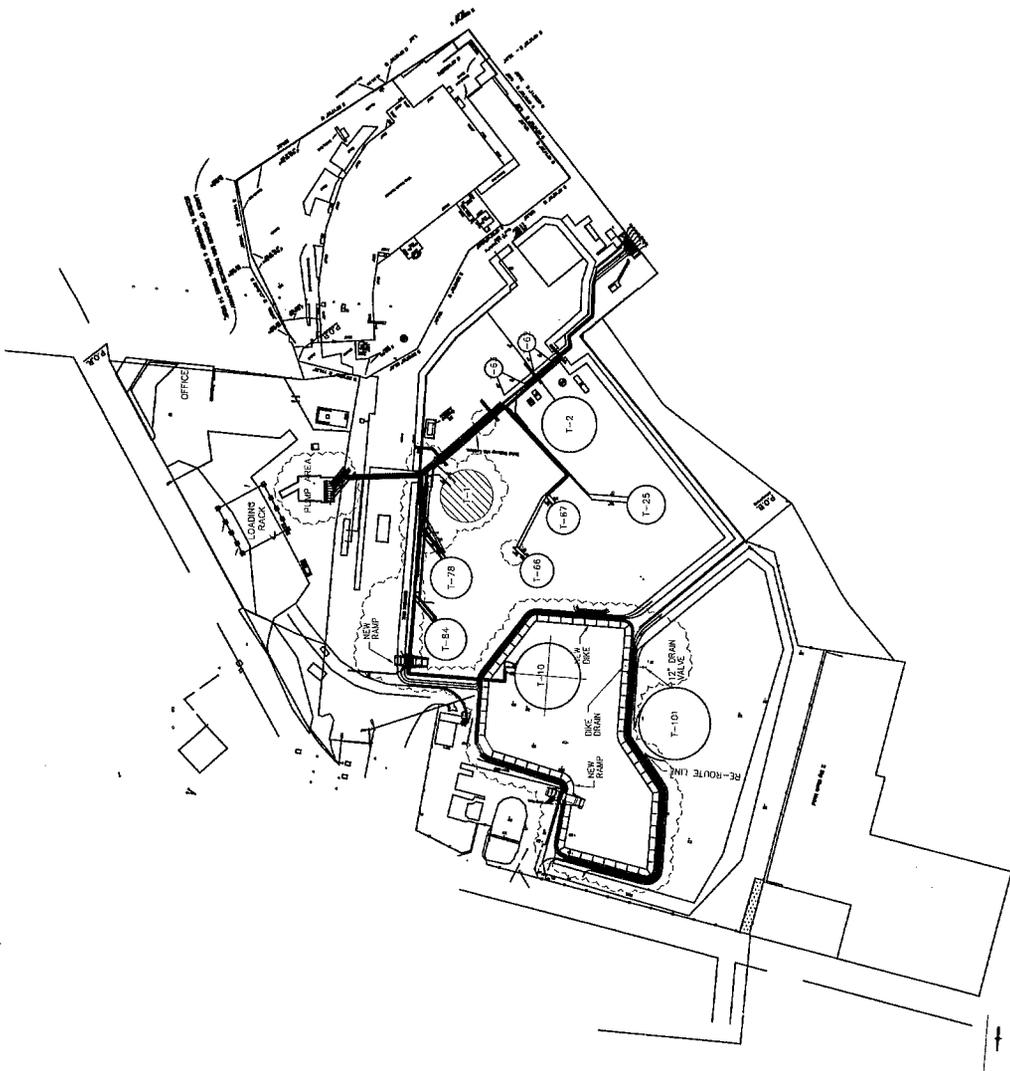
**DEMOLITION**

1. REMOVE TANK T-1 ALONG WITH THE ASSOCIATED PIPING, DRAWINGS.
2. REMOVE TANK T-102 ALONG WITH ANY ASSOCIATED PIPING, DRAWINGS, FOUNDATION AND PIPE SUPPORTS AS SHOWN ON DRAWINGS.
3. REMOVE EXISTING 2.5 FT. HIGH CONCRETE WALL ADJACENT TO TANK T-102 AS REQUIRED.
4. TANK T-102 SHALL BE DEMOLISHED AS SHOWN ON DRAWINGS. T-102 AND T-84 AS REQUIRED AND SHOWN ON DRAWINGS.
5. REMOVE/ADJUST EXISTING PIPING AT PUMP MANFOLD AREA AS SHOWN ON DRAWINGS.

**LEGEND**



INDICATES AREA OF NEW WORK

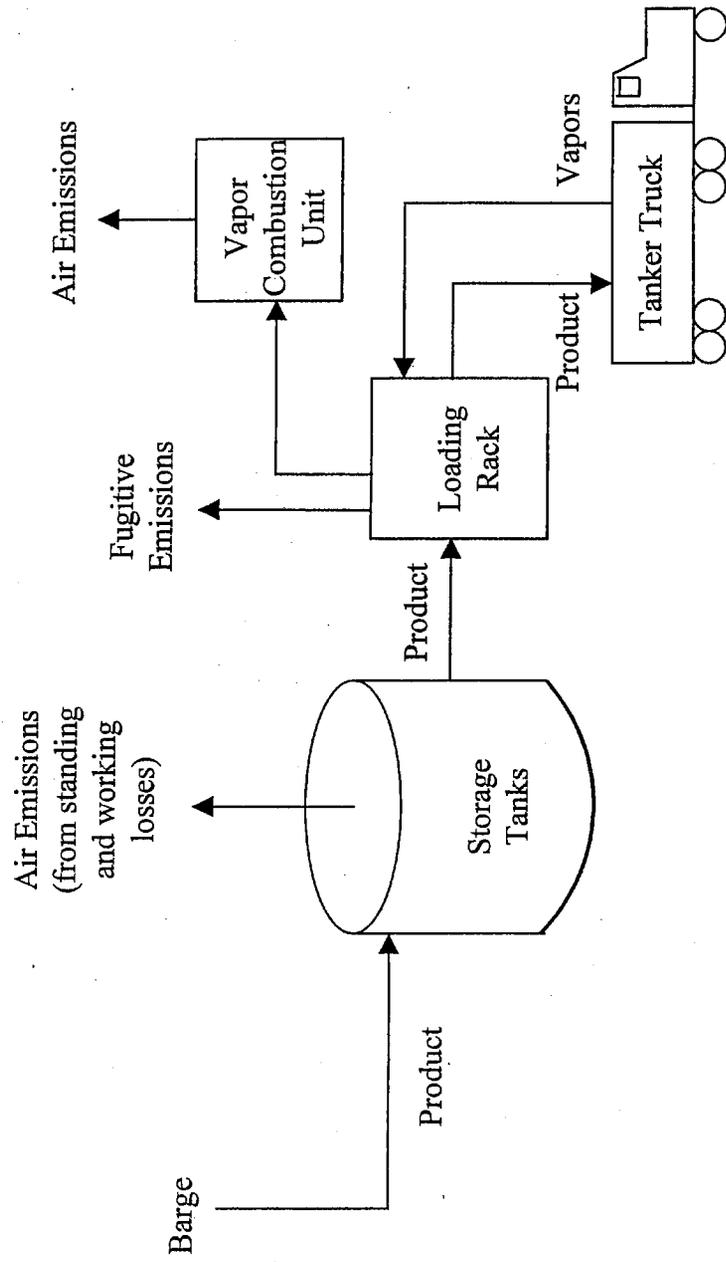


**Chevron** **Chevron Products Co.**  
**PANAMA CITY TERMINAL**  
**TANK 10 INSTALLATION**  
**SITE PLOT PLAN**  
**TANK TRUCK LOADING FACILITIES**  
 SCALE: 1"=100'  
 DRAWING NO. P-C-G-P-020  
 SHEET NO. 1 OF 1

ENGINEER	STS	CUSTOMER DRAWING NUMBER
DRYAN	CJ	
DESIGNED BY	STS	CUSTOMER APPROVAL DATE
CHECKED BY	RAS	
DATE		
M-E-I CONSULTANTS, INC. 14700 BAYVIEW BLVD, STE 500 PANAMA CITY, FL 32413 (904) 331-1182		
ISSUED FOR PERMITTING	3/04	MB
ISSUED FOR INITIAL REVIEW	12/03	STS
DATE	CHECKED	REVISION

## **Attachment C**

### **Process Flow Diagram**



**Generic Process Flow Diagram for Bulk Terminal Operations**

## **Attachment D**

### **Emission Calculations – EPA TANKS v4.09b Results**

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

- Existing Tank, to be replaced

**Identification**  
 User Identification: PC-01  
 City: Panama City  
 State: FL  
 Company: Chevron Products Company  
 Type of Tank: Internal Floating Roof Tank  
 Description:

**Tank Dimensions**  
 Diameter (ft): 96.00  
 Volume (gallons): 1,932,000.00  
 Turnovers: 30.77  
 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: Detail  
 Deck Type: Bolted  
 Construction: Sheet  
 Deck Seam: Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 1,447.64

**Deck Fitting/Status**  
 Access Hatch (24-in. Diam.): Unbolted Cover, Ungasketed  
 Automatic Gauge Float Well/Unbolted Cover, Ungasketed  
 Roof Leg or Hanger Well/Adjustable  
 Stub Drain (1-in. Diameter)  
 Vacuum Breaker (10-in. Diam.): Weighted Mech. Actuation, Gask.  
 Unslotted Guide-Pole Well/Ungasketed Sliding Cover

**Quantity**  
 1  
 1  
 30  
 74  
 1  
 1

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

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)			Liquid Bulk Temp. (deg F)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Chevron-Gasoline(RVP 13.0)	Jan	62.25	58.21	66.29	68.10	7.2224	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Feb	63.63	59.26	67.99	68.10	7.4090	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Mar	66.80	62.19	71.42	68.10	7.8539	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Apr	70.27	65.08	75.46	68.10	8.3639	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 9.0)	May	73.50	68.14	78.87	68.10	5.9312	N/A	N/A	66.0000		100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Jun	75.89	70.77	81.00	68.10	6.2034	N/A	N/A	66.0000		100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Jul	76.39	71.71	81.06	68.10	6.2616	N/A	N/A	66.0000		100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Aug	76.17	71.61	80.74	68.10	6.2367	N/A	N/A	66.0000		100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 13.0)	Sep	74.78	70.36	79.20	68.10	9.0660	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Oct	70.84	66.06	75.62	68.10	8.4507	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Nov	66.75	62.36	71.13	68.10	7.8461	N/A	N/A	66.0000		100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Dec	63.57	59.53	67.60	68.10	7.4008	N/A	N/A	66.0000		100.00	Option 4: RVP=13, 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):	590.3656	611.9861	655.6099	731.0875	453.1243	480.4220	486.3714	483.8219	829.3683	742.6888	664.6351	611.0197																																										
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 <sup>3</sup> /m):	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:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727																																										
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2224	7.4090	7.8539	8.3639	5.9312	6.2034	6.2616	6.2367	9.0660	8.4507	7.8461	7.4008																																										
Tank Diameter (ft):	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000																																										
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):	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176	10.2176																																										
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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000																																										
Net Throughput (gal/mo.):	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250																																										
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):	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000																																										
Deck Filling Losses (lb):	379.0751	392.9575	427.3894	469.4328	290.9520	308.4799	312.3001	310.6630	532.5391	476.8820	426.7635	392.3370																																										
Value of Vapor Pressure Function:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727																																										
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 Filling Loss Fact. (lb-mole/yr):	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000																																										
Deck Seam Losses (lb):	236.8512	245.5252	267.0387	295.3080	181.7908	192.7424	195.1293	194.1065	332.7376	297.9623	266.6476	245.1375																																										
Deck Seam Length (ft):	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447	1,447.6447																																										
Deck Seam Loss per Unit Length	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400	0.1400																																										
Factor (lb-mole/ft-yr):	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000																																										
Deck Seam Length Factor (ft/sqft):	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000	96.0000																																										
Tank Diameter (ft):	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 Molecular Weight (lb/lb-mole):	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000																																										
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 Loss Factors	<table border="1"> <thead> <tr> <th>Deck Fitting/Status</th> <th>Quantity</th> <th>KFa (lb-mole/yr)</th> <th>KFb (lb-mole/yr)</th> <th>m</th> <th>Losses (lb.)</th> </tr> </thead> <tbody> <tr> <td>Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed)</td> <td>1</td> <td>36.00</td> <td>36.00</td> <td>1.20</td> <td>410.9418</td> </tr> <tr> <td>Automatic Gauge Float Well/Unbolted Cover, Ungasketed</td> <td>1</td> <td>14.00</td> <td>14.00</td> <td>1.10</td> <td>159.8107</td> </tr> <tr> <td>Roof Leg or Hanger Well/Adjustable</td> <td>30</td> <td>7.90</td> <td>7.90</td> <td>0.00</td> <td>2,705.3671</td> </tr> <tr> <td>Stub Drain (1-in. Diameter)</td> <td>74</td> <td>1.20</td> <td>1.20</td> <td>0.00</td> <td>1,013.6955</td> </tr> <tr> <td>Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.</td> <td>1</td> <td>6.20</td> <td>6.20</td> <td>0.94</td> <td>70.7733</td> </tr> <tr> <td>Unslotted Guide-Pole Well/Unslotted Sliding Cover</td> <td>1</td> <td>31.00</td> <td>31.00</td> <td>1.40</td> <td>353.8666</td> </tr> </tbody> </table>												Deck Fitting/Status	Quantity	KFa (lb-mole/yr)	KFb (lb-mole/yr)	m	Losses (lb.)	Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed)	1	36.00	36.00	1.20	410.9418	Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	14.00	1.10	159.8107	Roof Leg or Hanger Well/Adjustable	30	7.90	7.90	0.00	2,705.3671	Stub Drain (1-in. Diameter)	74	1.20	1.20	0.00	1,013.6955	Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.	1	6.20	6.20	0.94	70.7733	Unslotted Guide-Pole Well/Unslotted Sliding Cover	1	31.00	31.00	1.40	353.8666
Deck Fitting/Status	Quantity	KFa (lb-mole/yr)	KFb (lb-mole/yr)	m	Losses (lb.)																																																	
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Unslotted Guide-Pole Well/Unslotted Sliding Cover	1	31.00	31.00	1.40	353.8666																																																	
Total Losses (lb):	1,216.5097	1,260.6863	1,370.2557	1,504.0459	936.0846	991.8619	1,004.0184	998.8090	1,704.8626	1,527.7507	1,368.2638	1,258.7117																																										

**TANKS 4.0**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Annual Emissions Report**

Components	Losses(lbs)					Total Emissions
	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss		
Chevron-Gasoline(RVP 13.0)	5,446.76	81.74	3,497.38	2,185.21		11,211.09
Chevron-Gasoline(RVP 9.0)	1,903.74	40.87	1,222.39	763.77		3,930.77
<b>Total:</b>	<b>7,350.50</b>	<b>122.61</b>	<b>4,719.77</b>	<b>2,948.98</b>		<b>15,141.86</b>

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

**Identification**  
 User Identification: PC-010  
 City: Panama City  
 State: FL  
 Company: Chevron Products Company  
 Type of Tank: Internal Floating Roof Tank  
 Description: Internal Floating Roof Tank

- New Tank

**Tank Dimensions**  
 Diameter (ft): 110.00  
 Volume (gallons): 3,186,960.00  
 Turnovers: 19.03  
 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: None

**Deck Characteristics**  
 Deck Fitting Category: Detail  
 Deck Type: Bolted  
 Construction: Sheet  
 Deck Seam: Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 1,900.66

**Deck Fitting/Status**  
 Access Hatch (24-in. Diam.): Unbolted Cover, Ungasketed  
 Automatic Gauge Float Well/Unbolted Cover, Ungasketed  
 Roof Leg or Hanger Well/Adjustable  
 Stub Drain (1-in. Diameter)  
 Vacuum Breaker (10-in. Diam.): Weighted Mech. Actuation, Gask.  
 Unslotted Guide-Pole Well/Ungasketed Sliding Cover

**Quantity**  
 1  
 1  
 30  
 74  
 1  
 1

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

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)		Liquid Bulk Temp. (deg F)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.		Max.	Avg.	Min.					
Chevron-Gasoline(RVP 13.0)	Jan	62.25	59.21	68.10	7.2224	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Feb	63.63	59.26	68.10	7.4090	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Mar	66.80	62.19	68.10	7.8539	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Apr	70.27	65.08	68.10	8.3639	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 9.0)	May	73.50	68.14	68.10	5.9312	N/A	N/A	66.0000			100.00	Option 4: RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Jun	75.99	70.77	68.10	6.2034	N/A	N/A	66.0000			100.00	Option 4: RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Jul	76.39	71.71	68.10	6.2616	N/A	N/A	66.0000			100.00	Option 4: RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Aug	76.17	71.61	68.10	6.2367	N/A	N/A	66.0000			100.00	Option 4: RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 13.0)	Sep	74.78	70.36	68.10	9.0660	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Oct	70.84	66.06	68.10	8.4507	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Nov	66.75	62.36	68.10	7.8461	N/A	N/A	66.0000			100.00	Option 4: RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Dec	63.57	59.53	68.10	7.4008	N/A	N/A	66.0000			100.00	Option 4: RVP=13, 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):	585.9530	607.0384	660.2287	725.1770	449.4610	476.5379	482.4393	479.9104	822.6633	736.6845	659.2618	606.0789
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr (mph) <sup>2</sup> /m):	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:	0.1669	0.1730	0.1862	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2224	7.4090	7.8539	8.3639	5.9312	6.2034	6.2616	6.2367	9.0660	8.4507	7.8461	7.4008
Tank Diameter (ft):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
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):	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172	8.9172
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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Net Throughput (gal/mo.):	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250	4,854,168.250
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):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
Deck Fitting Losses (lb):	379.0751	392.9575	427.3894	469.4328	290.9520	308.4799	312.3001	310.6630	532.5391	476.8820	426.7635	392.3370
Value of Vapor Pressure Function:	0.1669	0.1730	0.1862	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
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):	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000
Deck Seam Losses (lb):	310.9701	322.3583	350.6042	385.0940	238.6793	253.0581	256.1919	254.8490	436.8626	391.2049	350.0907	321.8493
Deck Seam Length (ft):	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620
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):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
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 Loss Factors												
Deck Fitting Losses (lb.)												
Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed)												
Automatic Gauge Float Well/Unbolted Cover, Ungasketed												
Roof Leg or Hanger Well/Adjustable												
Slub Drain (1-in. Diameter)												
Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.												
Unslotted Guide-Pole Well/Ungasketed Sliding Cover												
Total Losses (lb):	1,284.5553	1,331.2714	1,447.1396	1,568.6209	988.0094	1,046.9931	1,059.8485	1,054.3396	1,800.9820	1,613.6885	1,445.0332	1,329.1833

Deck Fitting/Status	Quantity	KEa (lb-mole/yr)	KEb (lb-mole/yr mph <sup>2</sup> /m)	m	Losses (lb.)
Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed)	1	36.00	5.90	1.20	410.9418
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	1.10	159.8107
Roof Leg or Hanger Well/Adjustable	30	7.90	0.00	0.00	2,705.3671
Slub Drain (1-in. Diameter)	74	1.20	0.00	0.00	1,013.6565
Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.	1	6.20	1.20	0.94	70.7733
Unslotted Guide-Pole Well/Ungasketed Sliding Cover	1	31.00	150.00	1.40	353.8666

**TANKS 4.0**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Annual Emissions Report**

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	
Chevron-Gasoline(RVP 13.0)	5,402.73	71.34	3,497.38	2,869.03	11,840.47
Chevron-Gasoline(RVP 9.0)	1,888.35	35.67	1,222.39	1,002.78	4,149.19
Total:	7,291.08	107.01	4,719.77	3,871.81	15,989.66

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

Maximum Throughput

PTE - EU007

<b>Identification</b>	PC-010	
User Identification:	Panama City	
City:	FL	
State:	Chevron Products Company	
Company:	Internal Floating Roof Tank	
Type of Tank:		
Description:		
<b>Tank Dimensions</b>		
Diameter (ft):	110.00	
Volume (gallons):	3,186,960.00	
Turnovers:	47.90	
Self Supp. Roof? (y/n):	Y	
No. of Columns:	0.00	
Eff. Col. Diam. (ft):	0.00	
<b>Paint Characteristics</b>		
Internal Shell Condition:	Light Rust	
Shell Color/Shade:	White/White	
Shell Condition:	Good	
Roof Color/Shade:	White/White	
Roof Condition:	Good	
<b>Rim-Seal System</b>		
Primary Seal:	Mechanical Shoe	
Secondary Seal:	None	
<b>Deck Characteristics</b>		
Deck Fitting Category:	Detail	
Deck Type:	Bolted	
Construction:	Sheet	
Deck Seam:	Sheet: 5 Ft Wide	
Deck Seam Len. (ft):	1,900.66	
<b>Deck Fitting/Status</b>		<b>Quantity</b>
Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed		1
Automatic Gauge Float Well/Unbolted Cover, Ungasketed		1
Roof Leg or Hanger Well/Adjustable		30
Stub Drain (1-in. Diameter)		74
Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.		1
Unslotted Guide-Pole Well/Ungasketed Sliding Cover		1

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

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)			Liquid Bulk Temp. (deg F)	Vapor Pressures (psia)			Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.	Max.		Avg.	Min.	Max.					
Chevron-Gasoline(RVP 13.0)	Jan	62.25	58.21	66.29	68.10	7.2224	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Feb	63.63	59.26	67.99	68.10	7.4090	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Mar	66.80	62.19	71.42	68.10	7.8539	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Apr	70.27	65.08	75.46	68.10	8.3639	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 9.0)	May	73.50	68.14	78.87	68.10	5.9312	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Jun	75.89	70.77	81.00	68.10	6.2034	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Jul	76.39	71.71	81.06	68.10	6.2616	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 9.0)	Aug	76.17	71.61	80.74	68.10	6.2367	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=9, ASTM Slope=2.7	
Chevron-Gasoline(RVP 13.0)	Sep	74.78	70.36	79.20	68.10	9.0660	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Oct	70.84	66.06	75.62	68.10	8.4507	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Nov	66.75	62.36	71.13	68.10	7.8461	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, ASTM Slope=2.9	
Chevron-Gasoline(RVP 13.0)	Dec	63.57	59.53	67.60	68.10	7.4008	N/A	N/A	66.0000	N/A	100.00	Option 4: RVP=13, 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):	585.5930	607.0384	660.2287	725.1770	449.4610	476.5379	482.4393	479.9104	822.6633	736.6845	659.2618	606.0799
Seal Factor A (lb-mole/ft-yr):	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000	5.8000
Seal Factor B (lb-mole/ft-yr) (mp/h):	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:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7.2224	7.4090	7.8539	8.9639	5.9312	6.2034	6.2616	6.2367	9.0660	8.4507	7.8461	7.4008
Tank Diameter (ft):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
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):	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694	23.3694
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):	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Net Throughput (gal/mo.):	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41	12,721,426.41
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):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
Deck Fitting Losses (lb):	379.0751	382.9575	427.3894	469.4328	290.9520	308.4799	312.3001	310.6630	532.5391	476.8620	426.7635	392.3370
Value of Vapor Pressure Function:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
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):	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000	413.0000
Deck Seam Losses (lb):	310.9701	322.3583	350.6042	385.0940	238.6793	253.0581	256.1919	254.8490	436.8626	391.2049	350.0907	321.8493
Deck Seam Length (ft):	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620	1,900.6620
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):	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000	110.0000
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)	KFb (lb-mole/yr mph <sup>1/2</sup> )	Losses (lb.)
Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed	1	36.00	5.90	410.9418
Automatic Gauge Float Well/Unbolted Cover, Ungasketed	1	14.00	5.40	159.8107
Roof Leg or Hanger Well/Adjustable	30	7.90	0.00	2,705.3671
Stub Drain (1-in. Diameter)	74	1.20	0.00	1,013.6565
Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.	1	6.20	0.94	70.7733
Unslotted Guide-Pole Well/Ungasketed Sliding Cover	1	31.00	150.00	353.8666
<b>Total Losses (lb):</b>	<b>1,299.0075</b>	<b>1,345.7236</b>	<b>1,461.5918</b>	<b>1,459.4854</b>
	<b>1,002.4617</b>	<b>1,061.4453</b>	<b>1,074.3007</b>	<b>1,628.1408</b>
	<b>1,603.0732</b>	<b>1,068.7919</b>	<b>1,815.4343</b>	<b>1,343.6356</b>

**TANKS 4.0**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Annual Emissions Report**

Components	Losses(lbs)				Total Emissions
	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	
Chevron-Gasoline(RVP 13.0)	5,402.73	186.96	3,497.38	2,869.03	11,956.09
Chevron-Gasoline(RVP 9.0)	1,888.35	93.48	1,222.39	1,002.78	4,207.00
<b>Total:</b>	<b>7,291.08</b>	<b>280.43</b>	<b>4,719.77</b>	<b>3,871.81</b>	<b>16,163.09</b>

**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: Internal Floating Roof Tank

Maximum Throughput  
PTE - EU007

**Tank Dimensions**  
 Diameter (ft): 54.00  
 Volume (gallons): 703,374.00  
 Turnovers: 47.69  
 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: Detail  
 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
Slotted Guide-Pole/Sample Well/Ungask. Sliding Cover, w/o Float	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)		Liquid Bulk Temp. (deg F)	Vapor Pressures (psia)		Max.	Vapor Mol. Weight	Liquid Mass Fract.	Vapor Mass Fract.	Mol. Weight	Basis for Vapor Pressure Calculations
		Avg.	Min.		Avg.	Min.						
Chevron-Gasoline(RVP 13.0)	Jan	62.25	58.21	68.10	7.2224	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Feb	63.63	59.26	68.10	7.4090	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Mar	66.80	62.19	68.10	7.8539	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Apr	70.27	65.08	68.10	8.3639	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 9.0)	May	73.50	68.14	68.10	5.9312	N/A	N/A	66.0000			100.00	Option 4; RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Jun	75.89	70.77	68.10	6.2034	N/A	N/A	66.0000			100.00	Option 4; RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Jul	76.39	71.71	68.10	6.2616	N/A	N/A	66.0000			100.00	Option 4; RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 9.0)	Aug	76.17	71.61	68.10	6.2367	N/A	N/A	66.0000			100.00	Option 4; RVP=9, ASTM Slope=2.7
Chevron-Gasoline(RVP 13.0)	Sep	74.78	70.36	68.10	9.0660	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Oct	70.84	66.06	68.10	8.4507	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Nov	66.75	62.36	68.10	7.8461	N/A	N/A	66.0000			100.00	Option 4; RVP=13, ASTM Slope=2.9
Chevron-Gasoline(RVP 13.0)	Dec	63.57	59.53	68.10	7.4008	N/A	N/A	66.0000			100.00	Option 4; RVP=13, 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):	79,3029	82,2071	89,4103	98,2058	60,8674	64,5343	65,3335	64,5910	111,4077	95,7642	89,2793	82,0773
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) <sup>1/2</sup> ):	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:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
Vapor Pressure at Daily Average Liquid Surface Temperature (psia):	7,2224	7,4090	7,8539	8,3639	5,9312	6,2034	6,2616	6,2367	9,0660	8,4507	7,8461	7,4008
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):	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599	10,4599
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):	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000	0,0000
Net Throughput (gall/mo.):	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333	2,795,235.333
Shelf Clingage Factor (lb/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):	218,0829	226,0695	245,8783	270,0659	187,3855	177,4693	179,6671	178,7263	306,3711	274,3515	245,5182	225,7125
Value of Vapor Pressure Function:	0.1669	0.1730	0.1882	0.2067	0.1281	0.1358	0.1375	0.1368	0.2344	0.2099	0.1879	0.1727
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):	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000	237,6000
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
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 Losses (lb):	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 Fitting Loss Factors												
Access Hatch (24-in. Diam./Unbolted Cover, Ungasketed)												
Automatic Gauge Float Well/Unbolted Cover, Ungasketed												
Root Leg or Hanger Well/Adjustable												
Sample Pipe or Well (24-in. Diam./Slit Fabric Seal 10% Open												
Vacuum Breaker (10-in. Diam./Weighted Mech. Actuation, Gask.												
Slotted Guide-Pole/Sample Well/Ungask. Sliding Cover, w/o Float												
Quantity	1	1	1	16	1	1	1	1	1	1	1	1
KFa (lb-mole/yr)	36.00	14.00	7.90	12.00	6.20	43.00	270.00	254.1762	428.2388	384.5756	345.2575	318.2497
KFb (lb-mole/yr mph <sup>1/2</sup> )	5.90	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
Losses (lb.)	410,9418	159,8107	1,442,8624	136,9606	70,7733	490,8472	345,2575	384,5756	428,2388	384,5756	345,2575	318,2497
Total Losses (lb):	307,8457	318,7365	345,7485	378,7317	238,7129	252,4635	255,4605	254,1762	428,2388	384,5756	345,2575	318,2497

**TANKS 4.0**  
**Emissions Report - Detail Format**  
**Individual Tank Emission Totals**

**Annual Emissions Report**

Components	Losses (lbs)				Total Emissions
	Rim Seal Loss	Withdrawal Loss	Deck Fitting Loss	Deck Seam Loss	
Chevron-Gasoline(RVP 13.0)	731.65	83.68	2,012.05	0.00	2,827.38
Chevron-Gasoline(RVP 9.0)	255.73	41.84	703.25	0.00	1,000.81
<b>Total:</b>	<b>987.38</b>	<b>125.52</b>	<b>2,715.30</b>	<b>0.00</b>	<b>3,828.20</b>