

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.  
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)  
 2.  Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. W. E. Herchline Union Oil Company of California P. O. Box 4147 Atlanta, Georgia 30302	4. Article Number P 274 010 423 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery <b>APR 10 1989</b>	

PS Form 3811, Mar. 1988 \* U.S.G.P.O. 1988-212-865 . DOMESTIC RETURN RECEIPT

P 274 010 423

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

PS Form 3800, June 1985 \* U.S.G.P.O. 1985-480-794

Sent to	Mr. W. E. Harchline, Unocal
Street and No.	P.O. Box 4147
P.O., State and ZIP Code	Atlanta, GA 30302
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date	Mailed: 4-7-89 Permit: AC 29-159295



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
NOTICE OF PERMIT

Mr. W. E. Herchline  
Division of Distribution Manager  
Union Oil Company of California  
Unocal Corporation  
Post Office Box 4147  
Atlanta, Georgia 30302

April 7, 1989

Enclosed is construction permit No. AC 29-159295 for Union Oil Company of California to construct (modify) their petroleum product storage tank No. 5 at the Unocal Terminal in Tampa, Hillsborough County, Florida. This permit is issued pursuant to Section 403, Florida Statutes.

Any party to this permit has the right to seek judicial review of the permit pursuant to Section 120.68, Florida Statutes, by the filing of a Notice of Appeal pursuant to Rule 9.110, Florida Rules of Appellate Procedure, with the Clerk of the Department in the Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400; and by filing a copy of the Notice of Appeal accompanied by the applicable filing fees with the appropriate District Court of Appeal. The Notice of Appeal must be filed within 30 days from the date this permit is filed with the Clerk of the Department.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality Management

Copy furnished to:

B. Thomas, SW District  
J. Campbell, EPCHC  
E. Mael, P.E.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF PERMIT and all copies were mailed before the close of business on April 7, 1989.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(9), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

*Ruby C. Carter*  
Clerk

4-7-89  
Date

Final Determination

Union Oil Company of California  
Unocal Corporation  
Tampa, Florida  
Hillsborough County

Tank No. 5 Modification  
Permit Number: AC 29-159295

Florida Department of Environmental Regulation  
Division of Air Resources Management  
Bureau of Air Quality Management  
Central Air Permitting

April 5, 1989

## Final Determination

The Technical Evaluation and Preliminary Determination for the construction permit to modify the existing petroleum product storage tank No. 5 at the Unocal Terminal in Tampa, Hillsborough County, Florida was distributed on February 15, 1989. The Notice of Proposed Agency Action was published in The Tampa Tribune on March 9, 1989.

No comments were submitted on the Department's proposed action. The final action of the Department will be to issue construction permit No. AC 29-159295 as proposed in the Technical Evaluation and Preliminary Determination.

RECEIVED THE TAMPA TRIBUNE

Published Daily  
Tampa, Hillsborough County, Florida

MAR 11 1989  
State of Florida  
County of Hillsborough  
DER-BAQM

Before the undersigned authority personally appeared G. F. Gleson, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

in the matter of NOTICE OF INTENT TO ISSUE

was published in said newspaper in the issues of

March 9, 1989

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

*G. F. Gleson*

Notary Public, State of Florida

Sworn to and subscribed before me, this 9th day of Commission Expires Sept. 8, 1992  
of March A.D. 19 89

(SEAL)

State of Florida  
Department of Environmental  
Regulation Notice of  
Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a construction permit to Union Oil Company of California, P.O. Box 4147, Atlanta, Georgia, 30302, which will allow the modification of the existing petroleum storage tank No. 5 to handle gasoline at their terminal at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The modification will increase VOC emissions from the terminal by 4.03 T.P.Y. A determination of Best Available Control Technology (BACT) was not required. The Department is using this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel of the above address of the Department. Failure to petition within the above time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-3.207, P.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of  
Environmental Regulation  
Bureau of Air Quality  
Management  
2600 Blair Stone Road  
Tallahassee, Florida  
32399-2400  
Dept. of Environmental  
Regulation  
Southwest District Office  
4520 Live Oak Park Blvd.  
Tampa, Florida 33610-7347  
Environmental Protection  
Commission of Hillsborough  
County  
1410 N. 21st Street  
Tampa, Florida 33603

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.  
1/7/89



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtman, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**  
Union Oil Company of Calif.  
Unocal Corporation  
P. O. Box 4147  
Atlanta, GA 30302

Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989  
County: Hillsborough  
Latitude/Longitude: 27°55'15"N  
82°26'35"W

Project: Tank No. 5  
Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Install a Petrex internal floating roof system with a vapor seal system which complies with 40 CFR 60, Subpart Kb, Standards of Performance for Volatile Organic Liquid Storage Vessels, and begin using tank No. 5 to store gasoline.

Tank No. 5 is located in Unocal Corporation's bulk petroleum storage terminal (SIC 5171) that is at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The UTM coordinates of this facility are Zone 17, 358.0 Km E and 3089.1 Km N.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachment:

1. Application
2. Public Notice

PERM. TEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefore caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.



PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

PERMITTEE :  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989

GENERAL CONDITIONS:

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989

**GENERAL CONDITIONS:**

b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.

c. Records of monitoring information shall include:

- the date, exact place, and time of sampling or measurements;
- the person responsible for performing the sampling or measurements;
- the date(s) analyses were performed;
- the person responsible for performing the analyses;
- the analytical techniques or methods used; and
- the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. Tank No. 5 is restricted to gasoline service only. The permittee shall notify the Environmental Protection Commission of Hillsborough County prior to handling more than 40 million gallons of gasoline per year in this tank.

2. The modified tank No. 5 shall comply with all the applicable 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.

PERMITTEE:  
Union Oil Company of Calif.

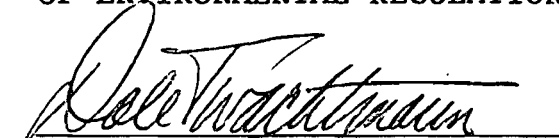
Permit Number: AC 29-159295  
Expiration Date: Sept. 29, 1989

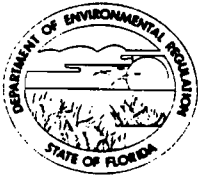
SPECIFIC CONDITIONS:

3. The storage tank may be in service continuously, 8,760 hrs/yr.
4. The permittee shall calculate the actual VOC emissions from tank No. 5 annually by the procedures described in AP-42, Compilation of Air Pollutant Emission Factors, Section 4.3-Storage of Organic Liquids, using actual production, construction, and meteorological data, and shall submit this information to the Environmental Protection Commission of Hillsborough County with the annual operation report.
5. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).
6. An application for an operation permit must be submitted to the Environmental Protection Commission of Hillsborough County office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

Issued this 6 day  
of April, 1989

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

  
Dale Twachtmann, Secretary



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

# Interoffice Memorandum

TO: Dale Twachtmann

FROM: Steve Smallwood *at*

DATE: April 5, 1989

SUBJ: Approval of Construction Permit No. AC 29-159295  
Union Oil Company of California

RECEIVED

APR 5 1989

Office of the Secretary

Attached for your approval and signature is a permit prepared by Central Air Permitting for the above mentioned company to construct (modify) their existing petroleum product storage tank No. 5 at the Unocal Terminal in Tampa, Florida.

Comments were not received during the public notice period.

Day 90, after which this permit will be issued by default, is May 1, 1989.

I recommend your approval and signature.

SS/WH/s

attachments

*Please call  
Patty Adams  
when signed*

*8-1344*

Check Sheet

Company Name: Union Oil Company of California  
Permit Number: AC 29-159295  
PSD Number: \_\_\_\_\_  
Permit Engineer: \_\_\_\_\_

**Application:**

- |  |                          |
|--|--------------------------|
| <input checked="" type="checkbox"/> Initial Application    | Cross References:        |
| <input checked="" type="checkbox"/> Incompleteness Letters | <input type="checkbox"/> |
| <input checked="" type="checkbox"/> Responses              | <input type="checkbox"/> |
| <input type="checkbox"/> Waiver of Department Action       | <input type="checkbox"/> |
| <input type="checkbox"/> Department Response               |                          |
| <input type="checkbox"/> Other                             |                          |

**Intent:**

- Intent to Issue
  - Notice of Intent to Issue
  - Technical Evaluation
  - BACT or LAER Determination
  - Unsigned Permit
- Correspondence with:
- EPA
  - Park Services
  - Other
- Proof of Publication
    - Petitions - (Related to extensions, hearings, etc.)
    - Waiver of Department Action
    - Other

**Final**

**Determination:**

- Final Determination
- Signed Permit
- BACT or LAER Determination
- Other

**Post Permit Correspondence:**

- Extensions/Amendments/Modifications
- Other

AC29-159295

Unocal Refining & Marketing Division  
Unocal Corporation  
13 Corporate Square Northeast, P.O. Box 4147  
Atlanta, Georgia 30302  
Telephone (404) 321-7600



RECEIVED  
MAY 10 1990  
DER-BAQMM

May 7, 1990

Florida Department of Environmental Regulation  
4520 Oak Fair Boulevard  
Tampa, Florida 336710-7347

Attn: Mr. Jim McDonald

**PROJECTED EMISSIONS ESTIMATE**

Unocal Tampa Terminal  
1523 Port Avenue  
Tampa, Florida

Dear Mr. McDonald:

In response to your request I am sending you the attached calculation of projected emissions from Unocal's Tampa, Florida, petroleum distribution terminal. The projected emissions are based upon a 50% increase in terminal throughput over actual 1989 values. Also note that the loading emissions are estimated based upon 75% of loading activity being controlled with the Vapor Combustion Unit and the remaining loading emissions being controlled by the Vapor Recovery Unit.

If additional information is needed, please do not hesitate to call me. My telephone number is (404) 320-2272.

Very truly yours,

David R. Keasey  
Manager  
Marketing Environmental

DRK/bmc

attachment

cc: (w/attachment)  
N. L. Melvin  
S. K. Baruch (EPCHC)  
W. Hanks (DER--Tallahassee)

Unecol Tampa Terminal

Emissions Summary (Tons/year)		
Rack:		65.13
TankNo.	1	1.78
	2	1.45
	3	11.91
	4	15.24
	5	11.87
	6	9.95
	7	15.29
Total:		132.62



Tampa, Projected Gasoline Loading Emissions

Controlled Gasoline Loading Emissions  
(Through VRU)

Volume: 81299338.5 Gal (25% of Gasoline Throughput)  
 Emitted Concentration 87 mg/l (VRU Limit)  
 factor 2.20459E-06 lb/mg  
 factor 3.785 l/gal

Emitted	59020	Pounds/Year
	29.51	Tons/Year
	161.70	Pounds/Day
	6.74	Pounds/Hour

Controlled Gasoline Loading Emissions  
(Through Flare)

Volume: 243898015.5 Gal (75% of Gasoline Throughput)  
 Emitted Concentration 35 mg/l (VRU Limit)  
 factor 2.20459E-06 lb/mg  
 factor 3.785 l/gal

Emitted	71231	Pounds/Year
	35.62	Tons/Year
	195.15	Pounds/Day
	8.13	Pounds/Hour

Total Gasoline Loading Emissions (Flare + VRU):

Emitted	130251	Pounds/Year
	65.13	Tons/Year
	356.85	Pounds/Day
	14.87	Pounds/Hour

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 1 (Projected)
Product:	No. 2 Fuel
Product Throughput:	62704196 Gal
Product True Vapor Pressure:	0.0105 PSI
Product Density:	7.10 Lb Per Gal
Product Vapor Molecular Weight:	130.00
Tank Type:	0 Cone Roof
Tank Height:	40 Ft
Tank Diameter:	120 Ft
Tank Capacity:	3276000 Gal
Primary Seal:	0 none
Secondary Seal:	0 None
Deck Type:	0 None
Number of Roof Columns:	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed:	0.1 MPH

=====

AP-42 Emission Estimate  
(Fixed Roof Tank)

Tank Number: Tampa Tank No. 1 (Projected)  
Product: No. 2 Fuel

$$\text{Loss(Total)} = \text{Loss(Breathing)} + \text{Loss(Working)}$$

$$\text{Loss(Breathing)} = 0.0226 \cdot MV \cdot (P / (PA - P)) \cdot 0.68 \cdot D \cdot 1.73 \cdot H \cdot 0.51 \cdot \Delta T \cdot 0.5 \cdot FP \cdot C \cdot KC$$

MV= 130.00 Vapor Molecular Weight  
P= 0.0105 Product Vapor Pressure (PSI)  
PA= 14.7 Atmospheric Pressure (PSI)  
D= 120 Tank Diameter (Ft)  
H= 20 Vapor Space Height (FT)  
DelT= 15 Diurnal Temperature Change (Deg F)  
FP= 1.00 Paint Factor  
C= 1.00 Small Tank Factor  
KC= 1.00 Product Factor

$$\text{Loss(Breathing)} = 1504.701 \text{ (Pounds Per Year)}$$

$$\text{Loss(Working)} = 2.4E-5 \cdot MV \cdot P \cdot V \cdot N \cdot KN \cdot KC$$

MV= 130 Vapor Molecular Weight  
P= 0.0105 Product Vapor Pressure (PSI)  
V= 3276000 Tank Volume (Gal)  
N= 19.14047 Number of Turnovers  
KN= 1.00 Turnover Factor  
KC= 1.00 Product Factor

$$\text{Loss(Working)} = 2054 \text{ (Pounds Per Year)}$$

$$\text{Loss(Total)} = \text{Loss(Breathing)} + \text{Loss(Working)}$$

= 1504.701 + 2054.189445  
= 3559 (Pounds Per Year)  
= 1.78 (Tons Per Year)  
= 9.75 (Pounds Per Day)  
= 0.41 (Pounds Per Hour)

=====

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 2 (Projected)
Product:	No. 2 Fuel
Product Throughput:	47832680 Gal
Product True Vapor Pressure:	0.0105 PSI
Product Density:	7.10 Lb Per Gal
Product Vapor Molecular Weight:	130.00
Tank Type:	0 Cone Roof
Tank Height:	32 Ft
Tank Diameter:	120 Ft
Tank Capacity:	2604000 Gal
Primary Seal:	0 none
Secondary Seal	0 None
Deck Type:	0 None
Number of Roof Columns	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed	N/A MPH

=====

AP-42 Emission Estimate  
(Fixed Roof Tank)

Tank Number: Tampa Tank No. 2 (Projected)  
Product: No. 2 Fuel

$$\text{Loss(Total)} = \text{Loss(Breathing)} + \text{Loss(Working)}$$

$$\text{Loss(Breathing)} = 0.0226 \cdot MV \cdot (P / (PA - P))^{-0.68} \cdot D^{-1.73} \cdot H^{-0.51} \cdot \Delta T^{-0.5} \cdot FP \cdot C \cdot KC$$

MV= 130.00 Vapor Molecular Weight  
P= 0.0105 Product Vapor Pressure (PSI)  
PA= 14.7 Atmospheric Pressure (PSI)  
D= 120 Tank Diameter (Ft)  
H= 16 Vapor Space Height (FT)  
 $\Delta T$ = 15 Diurnal Temperature Change (Deg F)  
FP= 1.00 Paint Factor  
C= 1.00 Small Tank Factor  
KC= 1.00 Product Factor

$$\text{Loss(Breathing)} = 1342.846 \text{ (Pounds Per Year)}$$

$$\text{Loss(Working)} = 2.4E-5 \cdot MV \cdot P \cdot V \cdot N \cdot KN \cdot KC$$

MV= 130 Vapor Molecular Weight  
P= 0.0105 Product Vapor Pressure (PSI)  
V= 2604000 Tank Volume (Gal)  
N= 18.36892 Number of Turnovers  
KN= 1.00 Turnover Factor  
KC= 1.00 Product Factor

$$\text{Loss(Working)} = 1567 \text{ (Pounds Per Year)}$$

$$\text{Loss(Total)} = \text{Loss(Breathing)} + \text{Loss(Working)}$$

$$\begin{aligned} &= 1342.846 + 1566.99858 \\ &= 2910 \text{ (Pounds Per Year)} \end{aligned}$$

= 1.45 (Tons Per Year)  
= 7.97 (Pounds Per Day)  
= 0.33 (Pounds Per Hour)

=====

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 3 (Projected)
Product:	Gasoline
Product Throughput:	71918796 Gal
Product True Vapor Pressure:	7.2516 PSI
Product Density:	5.60 Lb Per Gal
Product Vapor Molecular Weight:	65.00
Tank Type:	2 Welded Internal Floater
Tank Height:	32 Ft
Tank Diameter:	120 Ft
Tank Capacity:	2436000 Gal
Primary Seal:	1 Liquid-Mounted
Secondary Seal:	2 Rim Mounted
Deck Type:	1 Bolted
Number of Roof Columns:	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed:	0.0 MPH

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AP-42 Emission Estimate  
(Floating Roof Tank)

Tank No. Tampa Tank No. 3 (Projected)  
Tank Type: Welded Internal Floater  
Product: Gasoline

$$\text{Loss(Total)} = \text{Loss(Rim)} + \text{Loss(Withdraw)} + \text{Loss(Fitting)} + \text{Loss(Seam)}$$

$$\text{Loss(Rim)} = \text{KS} \cdot \text{VW} \cdot \text{NW} \cdot \text{PF} \cdot \text{D} \cdot \text{MV} \cdot \text{KC}$$

KS= 1.6 Seal Factor  
VW= 0.001 Average Wind Speed (MPH)  
NW= 0 Wind Speed Exponent  
PF= 0.168344 Vapor Pressure Function  
D= 120 Tank Diameter (Ft)  
MV= 65 Vapor Molecular Weight  
KC= 1.00 Product Factor

$$\text{Loss(Rim)} = 2100.935 \text{ (Pounds Per Year)}$$

$$\text{Loss(Withdraw)} = 0.943 \cdot \text{Q} \cdot \text{C} \cdot \text{WL} / \text{D} \cdot (1 + \text{NC} \cdot \text{FC} / \text{D})$$

Q= 1712352 Throughput (Bbls)  
C= 0.0015 Cling Factor  
WL= 5.6 Product Liquid Density (Lb Per Gal)  
D= 120 Tank Diameter (Ft)  
NC= 15 Number of Roof Columns  
FC= 1.00 Column Section Factor

$$\text{Loss(Withdraw)} = 128.1034 \text{ (Pounds Per Year)}$$

$$\text{Loss(Fitting)} = \text{FF} \cdot \text{PF} \cdot \text{MV} \cdot \text{KC}$$



FF= 993.88 Fitting Factor  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Fitting)= 10875.4 (Pounds Per Year)

Loss(Seam)= $KD \cdot SD \cdot D \cdot D \cdot PF \cdot MV \cdot KC$

KD= 0.34 Deck Seam Factor  
 SD= 0.20 Seam Length Factor  
 D= 120 Tank Diameter (Ft)  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Seam)= 10714.77 (Pounds Per Year)

Loss Total=	Loss(Rim)	2100.935412
	+ Loss(Withdraw)	128.1033576
	+ Loss(Fitting)	10875.40462
	+ Loss(Seam)	10714.7706

= 23819 (Pounds Per Year)  
 = 11.91 (Tons Per Year)  
 = 65.26 (Pounds Per Day)  
 = 2.72 (Pounds Per Hour)

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. # (Projected)
Product:	Gasoline
Product Throughput:	51503606 Gal
Product True Vapor Pressure:	7.2516 PSI
Product Density:	5.60 Lb Per Gal
Product Vapor Molecular Weight:	65.00
Tank Type:	2 Welded Internal Floater
Tank Height:	40 Ft
Tank Diameter:	120 Ft
Tank Capacity:	2982000 Gal
Primary Seal:	2 Vapor-Mounted
Secondary Seal:	0 None
Deck Type:	1 Bolted
Number of Roof Columns:	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Almospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed:	0.0 MPH

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AP-42 Emission Estimate  
(Floating Roof Tank)

Tank No. Tampa Tank No. 4 (Projected)  
Tank Type: Welded Internal Floater  
Product: Gasoline

$$\text{Loss(Total)} = \text{Loss(Rim)} + \text{Loss(Withdraw)} + \text{Loss(Fitting)} + \text{Loss(Seam)}$$

$$\text{Loss(Rim)} = \text{KS} * \text{VW} * \text{NW} * \text{PF} * \text{D} * \text{MV} * \text{KC}$$

KS= 6.7 Seal Factor  
VW= 0.001 Average Wind Speed (MPH)  
NW= 0 Wind Speed Exponent  
PF= 0.168344 Vapor Pressure Function  
D= 120 Tank Diameter (Ft)  
MV= 65 Vapor Molecular Weight  
KC= 1.00 Product Factor

$$\text{Loss(Rim)} = 3797.667 \text{ (Pounds Per Year)}$$

$$\text{Loss(Withdraw)} = 0.943 * \text{Q} * \text{C} * \text{WL} / \text{D} * (1 + \text{NC} * \text{FC} / \text{D})$$

Q= 1226276 Throughput (Bbls)  
C= 0.0015 Cling Factor  
WL= 5.6 Product Liquid Density (Lb Per Gal)  
D= 120 Tank Diameter (Ft)  
NC= 16 Number of Roof Columns  
FC= 1.00 Column Section Factor

$$\text{Loss(Withdraw)} = 91.73937 \text{ (Pounds Per Year)}$$

$$\text{Loss(Fitting)} = \text{FF} * \text{PF} * \text{MV} * \text{KC}$$

FF= 993.88 Fitting Factor  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Fitting)= 10875.4 (Pounds Per Year)

Loss(Seam)= $KD \cdot SD \cdot D \cdot D \cdot PF \cdot MV \cdot KC$

KD= 0.34 Deck Seam Factor  
 SD= 0.20 Seam Length Factor  
 D= 120 Tank Diameter (Ft)  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Seam)= 10714.77 (Pounds Per Year)

Loss Total=	Loss(Rim)	8797.667037
	+ Loss(Withdraw)	91.73936664
	+ Loss(Fitting)	10875.40462
	+ Loss(Seam)	10714.7706

= 30480 (Pounds Per Year)  
 = 15.24 (Tons Per Year)  
 = 83.51 (Pounds Per Day)  
 = 3.48 (Pounds Per Hour)

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 5 (Projected)
Product:	Gasoline
Product Throughput:	26797848 Gal
Product True Vapor Pressure:	7.2516 PSI
Product Density:	5.60 Lb Per Gal
Product Vapor Molecular Weight:	65.00
Tank Type:	2 Welded Internal Floater
Tank Height:	40 Ft
Tank Diameter:	120 Ft
Tank Capacity:	3024000 Gal
Primary Seal:	1 Liquid-Mounted
Secondary Seal:	2 Rim Mounted
Deck Type:	1 Bolted
Number of Roof Columns:	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed:	0.0 MPH

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AP-42 Emission Estimate  
(Floating Roof Tank)

Tank No. Tampa Tank No. 5 (Projected)  
Tank Type: Welded Internal Floater  
Product: Gasoline

$$\text{Loss(Total)} = \text{Loss(Rim)} + \text{Loss(Withdraw)} + \text{Loss(Fitting)} + \text{Loss(Seam)}$$

$$\text{Loss(Rim)} = \text{KS} * \text{VW} * \text{NW} * \text{PF} * \text{D} * \text{MV} * \text{KC}$$

KS= 1.6 Seal Factor  
VW= 0.001 Average Wind Speed (MPH)  
NW= 0 Wind Speed Exponent  
PF= 0.168344 Vapor Pressure Function  
D= 120 Tank Diameter (Ft)  
MV= 65 Vapor Molecular Weight  
KC= 1.00 Product Factor

$$\text{Loss(Rim)} = 2100.935 \text{ (Pounds Per Year)}$$

$$\text{Loss(Withdraw)} = 0.943 * \text{Q} * \text{C} * \text{WL} / \text{D} * (1 + \text{NC} * \text{FC} / \text{D})$$

Q= 638044 Throughput (Bbls)  
C= 0.0015 Cling Factor  
WL= 5.6 Product Liquid Density (Lb Per Gal)  
D= 120 Tank Diameter (Ft)  
NC= 16 Number of Roof Columns  
FC= 1.00 Column Section Factor

$$\text{Loss(Withdraw)} = 47.73292 \text{ (Pounds Per Year)}$$

$$\text{Loss(Fitting)} = \text{FF} * \text{PF} * \text{MV} * \text{KC}$$

FF= 993.88 Fitting Factor  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Fitting)= 10875.4 (Pounds Per Year)

Loss(Seam)= $KD \cdot SD \cdot D \cdot PF \cdot MV \cdot KC$

KD= 0.34 Deck Seam Factor  
 SD= 0.20 Seam Length Factor  
 D= 120 Tank Diameter (Ft)  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Seam)= 10714.77 (Pounds Per Year)

Loss Total=	Loss(Rim)	2100.935412
	+ Loss(Withdraw)	47.73292237
	+ Loss(Fitting)	10875.40462
	+ Loss(Seam)	10714.7706

= 23739 (Pounds Per Year)  
 = 11.87 (Tons Per Year)  
 = 65.04 (Pounds Per Day)  
 = 2.71 (Pounds Per Hour)

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 6 (Projected)
Product:	Gasoline
Product Throughput:	68881718 Gal
Product True Vapor Pressure:	7.2516 PSI
Product Density:	5.60 Lb Per Gal
Product Vapor Molecular Weight:	65.00
Tank Type:	2 Welded Internal Floater
Tank Height:	40 Ft
Tank Diameter:	90 Ft
Tank Capacity:	1764000 Gal
Primary Seal:	2 Vapor-Mounted
Secondary Seal	0 None
Deck Type:	1 Bolted
Number of Roof Columns	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed	0.0 MPH

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AP-42 Emission Estimate  
(Floating Roof Tank)

Tank No. Tampa Tank No. 6 (Projected)  
Tank Type: Welded Internal Floater  
Product: Gasoline

$$\text{Loss(Total)} = \text{Loss(Rim)} + \text{Loss(Withdraw)} + \text{Loss(Fitting)} + \text{Loss(Seam)}$$

$$\text{Loss(Rim)} = \text{KS} * \text{VW} * \text{NW} * \text{PF} * \text{D} * \text{MV} * \text{KC}$$

KS= 6.7 Seal Factor  
VW= 0.001 Average Wind Speed (MPH)  
NW= 0 Wind Speed Exponent  
PF= 0.168344 Vapor Pressure Function  
D= 90 Tank Diameter (Ft)  
MV= 65 Vapor Molecular Weight  
KC= 1.00 Product Factor

$$\text{Loss(Rim)} = 6598.25 \text{ (Pounds Per Year)}$$

$$\text{Loss(Withdraw)} = 0.943 * \text{Q} * \text{C} * \text{WL} / \text{D} * (1 + \text{NC} * \text{FC} / \text{D})$$

Q= 1640041 Throughput (Bbls)  
C= 0.0015 Cling Factor  
WL= 5.6 Product Liquid Density (Lb Per Gal)  
D= 90 Tank Diameter (Ft)  
NC= 16 Number of Roof Columns  
FC= 1.00 Column Section Factor

$$\text{Loss(Withdraw)} = 170.0069 \text{ (Pounds Per Year)}$$

$$\text{Loss(Fitting)} = \text{FF} * \text{PF} * \text{MV} * \text{KC}$$

FF= 649.09 Fitting Factor  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Fitting)= 7102.584 (Pounds Per Year)

Loss(Seam)= $KD \cdot SD \cdot D \cdot D \cdot PF \cdot MV \cdot KC$

KD= 0.34 Deck Seam Factor  
 SD= 0.20 Seam Length Factor  
 D= 90 Tank Diameter (Ft)  
 PF= 0.168344 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Seam)= 6027.058 (Pounds Per Year)

Loss Total=	Loss(Rim)	6598.250278
	+ Loss(Withdraw)	170.0068819
	+ Loss(Fitting)	7102.5842
	+ Loss(Seam)	6027.058463

= 19898 (Pounds Per Year)  
 = 9.95 (Tons Per Year)  
 = 54.51 (Pounds Per Day)  
 = 2.27 (Pounds Per Hour)

AP-42 CALCULATION

Input Sheet

Tank No.	Tampa Tank No. 7 (Projected)
Product:	Gasoline
Product Throughput:	106095387 Gal
Product True Vapor Pressure:	7.2516 PSI
Product Density:	5.60 Lb Per Gal
Product Vapor Molecular Weight:	65.00
Tank Type:	2 Welded Internal Floater
Tank Height:	40 Ft
Tank Diameter:	120 Ft
Tank Capacity:	3024000 Gal
Primary Seal:	2 Vapor-Mounted
Secondary Seal:	0 None
Deck Type:	1 Bolted
Number of Roof Columns:	16
Tank Paint Factor:	1.00 (Assumes White Paint)
Small Tank Factor:	1.00 (Assumes no small tanks)
Atmospheric Pressure:	14.7 (Assumes Standard Conditions)
Diurnal Delta Temp:	15 Deg F
Average Wind Speed:	0.0 MPH

=====  
AP-42 Emission Estimate  
(Floating Roof Tank)

Tank No. Tampa Tank No. 7 (Projected)  
Tank Type: Welded Internal Floater  
Product: Gasoline

$$\text{Loss(Total)} = \text{Loss(Rim)} + \text{Loss(Withdraw)} + \text{Loss(Fitting)} + \text{Loss(Seam)}$$

$$\text{Loss(Rim)} = \text{KS} * \text{VW} * \text{NW} * \text{PF} * \text{D} * \text{MV} * \text{KC}$$

KS= 6.7 Seal Factor  
VW= 0.001 Average Wind Speed (MPH)  
NW= 0 Wind Speed Exponent  
PF= 0.168344184 Vapor Pressure Function  
D= 120 Tank Diameter (Ft)  
MV= 65 Vapor Molecular Weight  
KC= 1.00 Product Factor

$$\text{Loss(Rim)} = 8797.667037 \text{ (Pounds Per Year)}$$

$$\text{Loss(Withdraw)} = 0.943 * \text{Q} * \text{C} * \text{WL} / \text{D} * (1 + \text{NC} * \text{FC} / \text{D})$$

Q= 2526080.643 Throughput (Bbls)  
C= 0.0015 Cling Factor  
WL= 5.6 Product Liquid Density (Lb Per Gal)  
D= 120 Tank Diameter (Ft)  
NC= 16 Number of Roof Columns  
FC= 1.00 Column Section Factor

$$\text{Loss(Withdraw)} = 188.979461 \text{ (Pounds Per Year)}$$

$$\text{Loss(Fitting)} = \text{FF} * \text{PF} * \text{MV} * \text{KC}$$

FF= 993.88 Fitting Factor  
 PF= 0.168344184 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Fitting)= 10875.40462 (Pounds Per Year)

Loss(Seam)= $KD \cdot SD \cdot D \cdot D \cdot PF \cdot MV \cdot KC$

KD= 0.34 Deck Seam Factor  
 SD= 0.20 Seam Length Factor  
 D= 120 Tank Diameter (Ft)  
 PF= 0.168344184 Vapor Pressure Function  
 MV= 65 Vapor Molecular Weight  
 KC= 1.0 Product Factor

Loss(Seam)= 10714.7706 (Pounds Per Year)

Loss Total=	Loss(Rim)	8797.667037
	+ Loss(Withdraw)	188.979461
	+ Loss(Fitting)	10875.40462
	+ Loss(Seam)	10714.7706

= 30577 (Pounds Per Year)  
 = 15.29 (Tons Per Year)  
 = 83.77 (Pounds Per Day)  
 = 3.49 (Pounds Per Hour)

**SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4.  
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)      2.  Restricted Delivery (Extra charge)

3. Article Addressed to: WE Merchline Union Oil Co. Unocal Corp. P.O. Box 4147 Atlanta GA 30302	4. Article Number P 938 762 879
	Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise
	Always obtain signature of addressee or agent and <u>DATE DELIVERED</u> .
5. Signature — Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature — Agent X	
7. Date of Delivery FEB 12 1990	

PS Form 381T, Mar. 1988      \* U.S.G.P.O. 1988-212-865      DOMESTIC RETURN RECEIPT

P 938 762 879

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

Sent to WE Merchline	
Street and No. Union Oil - Unocal Corp	
P.O., State and ZIP Code P.O. Box 4147 - Atlanta GA 30302	
Postage	S
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	S
Postmark or Date 2-7-90	

PS Form 3800, June 1985



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

February 2, 1990

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

Mr. W. E. Herchline  
Division Distribution Manager  
Union Oil Company of California  
Unocal Corporation  
Post Office Box 4147  
Atlanta, Georgia 30302

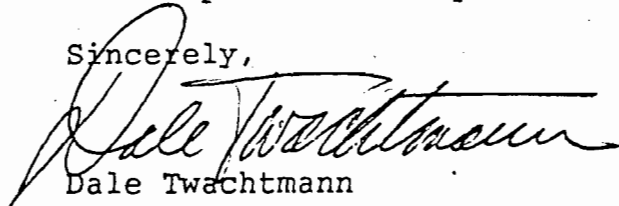
Dear Mr. Herchline:

Re: Amendment of Construction Permit No. AC 29-159295

The Department has evaluated Mr. David Keasey's request to estimate the VOC emissions from the No. 5 gasoline storage tank at the Unocal Tampa Terminal in Hillsborough County, Florida, by using the deck seam loss factor for a riveted storage tank listed in AP-42, Emission Factors. This request is acceptable and the referenced construction permit is amended to allow the use of this factor to estimate the VOC emissions.

A copy of this letter must be filed with the referenced construction permit and shall become a part of that permit.

Sincerely,



Dale Twachtmann  
Secretary

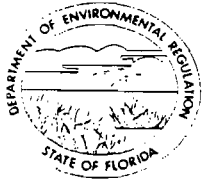
DT/plm

Attachment:

Unocal October 12, 1989, letter

Copy:

Bill Thomas, SW District  
Jerry Campbell, EPCHC



State of Florida  
DEPARTMENT OF ENVIRONMENTAL REGULATION

For Routing To Other Than The Addressee	
To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

# Interoffice Memorandum

TO: Dale Twachtmann  
FROM: ~~for~~ Steve Smallwood *James K. Pennington*  
DATE: February 2, 1990  
SUBJ: Amendment of Construction Permit No. AC 29-159295  
Unocal Corporation

Attached for your approval and signature is a letter that will amend a permit to construct a gasoline storage tank at the Unocal Tampa Terminal. The amendment authorizes the use of a different factor in a formula used to estimate the emissions from petroleum storage tanks.

The request is not controversial.

I recommend your approval and signature.

SS/plm

Attachment

*Please call  
Patty Adams  
when signed  
8-1344*

RECEIVED  
FEB 2 1990

Office of the Secretary



● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address. (Extra charge)      2.  Restricted Delivery (Extra charge)

<b>3. Article Addressed to:</b> Mr. W. E. Harchline Union Oil Company of Calif. Unocal Corporation P. O. Box 4147 Atlanta, Georgia 30302	<b>4. Article Number</b> P 938 762 750 <b>Type of Service:</b> <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and <b>DATE DELIVERED.</b>
<b>5. Signature -- Address</b> X	<b>8. Addressee's Address (ONLY if requested and fee paid)</b>
<b>6. Signature -- Agent</b> X	
<b>7. Date of Delivery</b> JUN 16 1989	

PS Form 3811, Mar. 1988 U.S.G.P.O. 1988-212-865 DOMESTIC RETURN RECEIPT

F 938 762 750

**RECEIPT FOR CERTIFIED MAIL**

NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

Sent to Mr. W. E. Herchline, Unocal	
Street and No. P. O. Box 4147	
P.O., State and ZIP Code Atlanta, GA 30302	
Postage	\$
Certified Fee	
Special Delivery Fee	
Restricted Delivery Fee	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Postmark or Date Mailed: 11-16-89 Permit: AC 29-159295	

PS Form 3800, June 1985



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

November 15, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. W. E. Herchline  
Division Distribution Manager  
Union Oil Company of California  
Unocal Corporation  
Post Office Box 4147  
Atlanta, Georgia 30302

Dear Mr. Herchline:

Attached is one copy of the Amended Technical Evaluation and Preliminary Determination for petroleum product storage tank No. 5 at the Unocal Tampa Terminal.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Regulation.

Sincerely,

C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

CHF/WH/t

Attachments

cc: B. Thomas, SW District  
J. Campbell, EPCHC  
E. Mael, P.E.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Union Oil Company of California  
Unocal Corporation  
P. O. Box 4147  
Atlanta, GA 30302

DER File No. AC 29-159295

---

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to amend the Technical Evaluation and Preliminary Determination for the permit (copy attached) for the project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Amended Technical Evaluation and Preliminary Determination.

The applicant, Union Oil Company of California, applied on December 20, 1988, to the Department of Environmental Regulation for a permit to construct (modify) the existing petroleum product storage tank No. 5 at the Unocal Tampa Terminal. This terminal is located at 1523 Port Avenue, Tampa, Hillsborough County, Florida. In a letter dated October 12, 1989, the permittee notified the Department that the estimated VOC emissions would be higher than originally proposed.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application(s) have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such

person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida.

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION



---

C. H. Fancy, P.E.  
Chief  
Bureau of Air Regulation

Copies furnished to:

E. Manuel, P.E.  
B. Thomas, SW District  
J. Campbell, EPCHC

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on 11-16-89.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(9), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

Kenneth J. Ober  
Clerk

11-16-89  
Date

State of Florida  
Department of Environmental Regulation  
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to amend the Technical Evaluation for the construction permit that was issued to Union Oil Company of California, P. O. Box 4147, Atlanta, Georgia, 30302, which allowed the modification of the existing petroleum storage tank No. 5 to handle gasoline at their terminal at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The modification increased the estimated VOC emissions from the terminal by 12.2 TPY. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Amended Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
- (b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
- (c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
- (d) A statement of the material facts disputed by Petitioner, if any;
- (e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
- (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the

Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation  
Bureau of Air Regulation  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Department of Environmental Regulation  
Southwest District Office  
4520 Live Oak Fair Blvd.  
Tampa, Florida 33610-7347

Environmental Protection Commission of  
Hillsborough County  
1410 North 21st Street  
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.



Amended Technical Evaluation  
and  
Preliminary Determination

Union Oil Company California  
Unocal Corporation  
Tampa, Florida  
Hillsborough County

Tank No. 5 Modification  
Permit Number: AC 29-159295

Florida Department of Environmental Regulation  
Division of Air Resources Management  
Bureau of Air Regulation

November 15, 1989

## Amended Technical Evaluation and Preliminary Determination

Unocal Corporation submitted an application for permit to modify their No. 5 petroleum product storage tank at the Unocal Tampa Terminal on December 20, 1988. The estimated emissions of 4.03 TPY VOC were based on the use of a welded floating roof. Because of the column arrangement in Tank No. 5, the floating roof was bolted together. The estimated emissions for a floating roof that is bolted together are higher than for a floating roof that is welded. The estimated emissions for tank No. 5 are increased from 4.03 to 12.2 TPY VOC. The emission rate of 12.2 TPY VOC is only an estimate and test methods are not available to show if the increase in emissions due to the difference in roof construction actually occurred. However, for future rule applicability determinations, the emissions from tank No. 5 shall be considered 12.2 TPY VOC.

These emissions are in compliance with all federal, state, and county regulations. The construction permit issued for the modification to tank No. 5 on February 15, 1989, which requires compliance with the new source performance standards for volatile organic liquid storage vessels, does not require any revisions as a result of the changes requested by the permittee.

*John Thomas*  
*12/14/89*



# Interoffice Memorandum

For Routing To Other Than The Addressee

To: _____	Location: _____
To: _____	Location: _____
To: _____	Location: _____
From: _____	Date: _____

*Entered on PATS  
5-10-89*

To: Air Quality

From: David M. Beebe, Assistant Chief *DMB*  
Bureau of Finance and Accounting

Date: May 1, 1989

Subject: Refund of Fees

Your application for refund for Unocal 76

File# AC29-1592959, is complete.

State of Florida Warrant 4 21585 61, dated 04-17-89 and  
in the amount of \$ 200.00, was mailed 04-19-89.

DMB/lis

Refund processed on Agency Voucher C 05874

Fiscal Year 88-89

RECEIVED THE TAMPA TRIBUNE

Published Daily

Tampa, Hillsborough County, Florida

MAR 17 1989

State of Florida

County of Hillsborough

DER - BAQM

Before the undersigned authority personally appeared G. T. Gleason, who on oath says that he is Controller of The Tampa Tribune, a daily newspaper published at Tampa in Hillsborough County, Florida; that the attached copy of advertisement being a

LEGAL NOTICE

NOTICE OF INTENT TO ISSUE

in the matter of

was published in said newspaper in the issues of

March 9, 1989

Affiant further says that the said The Tampa Tribune is a newspaper published at Tampa, in said Hillsborough County, Florida, and that the said newspaper has heretofore been continuously published in said Hillsborough County, Florida, each day and has been entered as second class mail matter at the post office in Tampa, in said Hillsborough County, Florida, for a period of one year next preceding the first publication of the attached copy of advertisement; and affiant further says that he has neither paid nor promised any person, firm, or corporation any discount, rebate, commission or refund for the purpose of securing this advertisement for publication in the said newspaper.

G. T. Gleason

Notary Public, State of Florida

Sworn to and subscribed before me, this 9th day of

March

A.D. 19 89

Bonded Thru Troy Foin - Insurance Inc.

Sanya Poole

State of Florida Department of Environmental Regulation Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a construction permit to Union Oil Company of California, P.O. Box 4147, Atlanta, Georgia, 30302, which will allow the modification of the existing petroleum storage tank No. 5 to handle gasoline at their terminal at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The modification will increase VOC emissions from the terminal by 4.03 TPY. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this intent to issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section, 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information:

- (a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

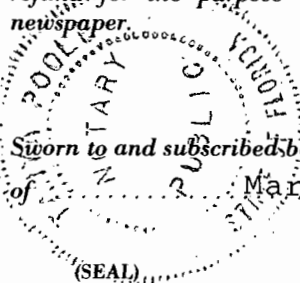
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(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at: Department of Environmental Regulation Bureau of Air Quality Management 2600 Blair Stone Road Tallahassee, Florida 32399-2400 Dept. of Environmental Regulation Southwest District Office 4520 Live Oak Fair Blvd. Tampa, Florida 33610-7347 Environmental Protection Commission of Hillsborough County 1410 N. 21st Street Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination. 1773 3/9/89



Postmark or Date	
Mailed: 2-15-89	
Permit: AC 29-159295	
Return Receipt showing to whom and Date Delivered	
Return Receipt showing to whom, Date, and Address of Delivery	
TOTAL Postage and Fees	\$
Restricted Delivery Fee	
Special Delivery Fee	
Certified Fee	
Postage	\$
P.O. State and ZIP Code	Atlanta, GA 30302
Street and No.	P.O. Box 4147
Sent to	Mr. W. E. Herchline, Unocal

**RECEIPT FOR CERTIFIED MAIL**  
 NO INSURANCE COVERAGE PROVIDED  
 NOT FOR INTERNATIONAL MAIL  
 (See Reverse)

P 274 007 580

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address.      2.  Restricted Delivery (Extra charge)

3. Article Addressed to: Mr. W. E. Herchline Union Oil Company Unocal Corporation P. O. Box 4147 Atlanta, GA 30302	4. Article Number P 274 007 580 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail <input type="checkbox"/> Return Receipt for Merchandise Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Address X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery FEB 17 1989	

● **SENDER:** Complete items 1 and 2 when additional services are desired, and complete items 3 and 4. Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1.  Show to whom delivered, date, and addressee's address.      2.  Restricted Delivery (Extra charge)

3. Article Addressed to: MR. W. E. HERCHLINE UNION OIL CO. OF CA, UNOCAL Corp P.O. Box 4147 30302	4. Article Number P-274 007 580 Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail Always obtain signature of addressee or agent and DATE DELIVERED.
5. Signature - Addressee X	8. Addressee's Address (ONLY if requested and fee paid)
6. Signature - Agent X	
7. Date of Delivery FEB 22 1989	



# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

February 14, 1989

CERTIFIED MAIL-RETURN RECEIPT REQUESTED

Mr. W. E. Herchline  
Division Distribution Manager  
Union Oil Company of California  
Unocal Corporation  
Post Office Box 4147  
Atlanta, GA 30302

Dear Mr. Herchline:

Attached is one copy of the Technical Evaluation and Preliminary Determination and proposed permit for the modification to petroleum product storage tank No. 5 at the Unocal Tampa Terminal.

Please submit any written comments you wish to have considered concerning the Department's proposed action to Mr. Bill Thomas of the Bureau of Air Quality Management.

Sincerely,

C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

CHF/ks

Attachments

cc: B. Thomas, SW District  
J. Campbell, EPCHC  
E. Mauel, P.E.

BEFORE THE STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

In the Matter of  
Application for Permit by:

Union Oil Company of California  
Unocal Corporation  
P. O. Box 4147  
Atlanta, GA 30302

DER File No. AC 29-159295

---

INTENT TO ISSUE

The Department of Environmental Regulation hereby gives notice of its intent to issue a permit (copy attached) for the proposed project as detailed in the application specified above. The Department is issuing this Intent to Issue for the reasons stated in the attached Technical Evaluation and Preliminary Determination.

The applicant, Union Oil Company of California, applied on December 20, 1988, to the Department of Environmental Regulation for a permit to construct (modify) the existing petroleum product storage tank No. 5 at the Unocal Tampa Terminal. This terminal is located at 1523 Port Avenue, Tampa, Hillsborough County, Florida.

The Department has permitting jurisdiction under Chapter 403, Florida Statutes, and Florida Administrative Code Rules 17-2 and 17-4. The project is not exempt from permitting procedures. The Department has determined that an air construction permit is required for the proposed work.

Pursuant to Section 403.815, F.S. and DER Rule 17-103.150, F.A.C., you (the applicant) are required to publish at your own expense the enclosed Notice of Intent to Issue Permit. The notice shall be published one time only within 30 days, in the legal ad section of a newspaper of general circulation in the area affected. For the purpose of this rule, "publication in a newspaper of general circulation in the area affected" means publication in a newspaper meeting the requirements of Sections 50.011 and 50.031, F.S., in the county where the activity is to take place. The applicant shall provide proof of publication to the Department, at the address specified within seven days of publication. Failure to publish the notice and provide proof of publication within the allotted time may result in the denial of the permit.

The Department will issue the permit with the attached conditions unless a petition for an administrative proceeding (hearing) is filed pursuant to the provisions of Section 120.57, F.S.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400. Petitions filed by the permit applicant and the parties listed below must be filed within 14 days of receipt of this intent. Petitions filed by other persons must be filed within 14 days of publication of the public notice or within 14 days of receipt of this intent, whichever first occurs. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The Petition shall contain the following information;

(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the county in which the project is proposed;

(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;

(d) A statement of the material facts disputed by Petitioner, if any;

(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;

(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and

(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the applicant have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office in General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such



person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C.

Executed in Tallahassee, Florida

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION



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C. H. Fancy, P.E.  
Deputy Chief  
Bureau of Air Quality  
Management

Copies furnished to:

E. Mauel, P.E.  
B. Thomas, SW District  
J. Campbell, EPCHC

State of Florida  
Department of Environmental Regulation  
Notice of Intent to Issue

The Department of Environmental Regulation hereby gives notice of its intent to issue a construction permit to Union Oil Company of California, P. O. Box 4147, Atlanta, Georgia, 30302, which will allow the modification of the existing petroleum storage tank No. 5 to handle gasoline at their terminal at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The modification will increase VOC emissions from the terminal by 4.03 TPY. A determination of Best Available Control Technology (BACT) was not required. The Department is issuing this Intent to Issue for the reasons stated in the Technical Evaluation and Preliminary Determination.

A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within this time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

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- (d) A statement of the material facts disputed by Petitioner, if any;
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- (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
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The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:

Department of Environmental Regulation  
Bureau of Air Quality Management  
2600 Blair Stone Road  
Tallahassee, Florida 32399-2400

Dept. of Environmental Regulation  
Southwest District Office  
4520 Live Oak Fair Blvd.  
Tampa, Florida 33610-7347

Environmental Protection Commission of  
Hillsborough County  
1410 N. 21st Street  
Tampa, Florida 33605

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.

CERTIFICATE OF SERVICE

The undersigned duly designated deputy clerk hereby certifies that this NOTICE OF INTENT TO ISSUE and all copies were mailed before the close of business on February 15, 1989.

FILING AND ACKNOWLEDGEMENT  
FILED, on this date, pursuant to  
§120.52(9), Florida Statutes, with  
the designated Department Clerk,  
receipt of which is hereby  
acknowledged.

Martha J. Wai February 15, 1989  
Clerk Date

Technical Evaluation  
and  
Preliminary Determination

Union Oil Company California  
Unocal Corporation  
Tampa, Florida  
Hillsborough County

Tank No. 5 Modification  
Permit Number: AC 29-159295

Florida Department of Environmental Regulation  
Bureau of Air Quality Management  
Central Air Permitting

February 14, 1989

I. General Information

A. Applicant

Union Oil Company of California  
Unocal Corporation  
P. O. Box 4147  
Atlanta, Georgia 30302

B. Project

Mr. David R. Keasey, Manager of Marketing Environmental for Union Oil Company of California, submitted an application for permit to construct (modify) the petroleum product storage tank No. 5 at the Unocal Tampa Terminal (SIC 5171) on December 20, 1988. The request to amend the permits for storage tanks Nos. 1 and 2, which was included in this application, is being processed by the Department's Southwest District office. This terminal is located at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The UTM coordinates of this site are Zone 17-358.0 Km E and 3089.1 Km N.

The modification will be to use existing tank No. 5 to handle gasoline, a VOC, instead of diesel oil. A Petrex internal floating roof system with a vapor seal system will be installed on the tank to control VOC emissions.

The application was considered complete on receipt by the Department on December 20, 1988.

C. Emissions

Tank No. 5 will be a source of VOC emissions. The applicant has not completed the final design for the internal floating roof and vapor seal system. However, his engineer was able to estimate the VOC emissions from the modified tank using the formulas in AP-42, Compilation of Air Pollutant Emission Factors, Section 4.3 - Storage of Organic Liquids (September, 1985). Assuming tank No. 5 will handle 40 million gallons of gasoline per year, its emissions were estimated to be 8,063 lbs VOC/yr (4.03 TPY) or 0.92 lbs/hr for continuous operations. These emissions may vary slightly depending on actual gasoline throughput and weather.

II. Rule Applicability

The proposed project, modification of an existing petroleum product storage tank, is subject to preconstruction review under the provisions of Chapter 403, Florida Statutes, and Chapter 17-2, F.A.C.

The source is in an area designated nonattainment for ozone and particulate matter (17-2.410), unclassifiable for sulfur dioxide (17-2.430), and attainment for the other criteria pollutants (17-2.420).

The terminal is a major facility because the allowable VOC emissions exceed 100 TPY. The project will not cause a significant emissions rate increase as defined in Table 500-2. Therefore, the project is not subject to new source review for nonattainment areas (17-2.510).

As the project results in an increase in VOC emissions, the source will be subject to Standards of Performance for New Stationary Sources (17-2.660). The applicable standards are specified in 40 CFR 60, Subpart Kb, Standard of Performance for Volatile Organic Liquid Storage Vessels (including Petroleum Liquid Storage Vessels) for which Construction, Reconstruction, or modification commenced after July 23, 1984.

### III. Technical Evaluation

The new source performance standards that regulate this source specify equipment design standards. The applicant proposes to use a Petrex internal floating roof system and a vapor seal system that complies with these standards. Using the tank parameters and assuming the throughput for the modified tank will be 40 million gallons of gasoline per year, the annual emissions were estimated to be 4.03 TPY VOC. Prior to receiving a permit to operate the modified tank, the applicant will have to comply with the reporting and recordkeeping requirements described in 40 CFR 60.115b to confirm the tank meets the new source performance standards. The Department will also require the applicant to estimate the emissions from the tank by the procedures in AP-42 using actual gasoline throughput.

### IV. Air Quality Analysis

It is the judgement of the Department that the estimated emissions from the modified tank (0.92 lbs/hr VOC) will not interfere with reasonable future progress toward attainment of ambient air quality standards.

### V. Conclusion

Based on the information provided by Union Oil of California, the Department has reasonable assurance that the

The source is in an area designated nonattainment for ozone and particulate matter (17-2.410), unclassifiable for sulfur dioxide (17-2.430), and attainment for the other criteria pollutants (17-2.420).

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### IV. Air Quality Analysis

It is the judgement of the Department that the estimated emissions from the modified tank (0.92 lbs/hr VOC) will not interfere with reasonable future progress toward attainment of ambient air quality standards.

### V. Conclusion

Based on the information provided by Union Oil of California, the Department has reasonable assurance that the



proposed modification of tank No. 5 as described in this evaluation and subject to the conditions proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment, or violate any other technical provision of Chapter 17-2 of the Florida Administrative Code.

*John Thomas*  
*2/14/89*

proposed modification of tank No. 5 as described in this evaluation and subject to the conditions proposed herein, will not cause or contribute to a violation of any ambient air quality standard or PSD increment, or violate any other technical provision of Chapter 17-2 of the Florida Administrative Code.





# Florida Department of Environmental Regulation

Twin Towers Office Bldg. • 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

Bob Martinez, Governor

Dale Twachtmann, Secretary

John Shearer, Assistant Secretary

**PERMITTEE:**

Union Oil Company of Calif.  
Unocal Corporation  
P. O. Box 4147  
Atlanta, GA 30302

Permit Number: AC 29-159295  
Expiration Date: 09/29/89  
County: Hillsborough  
Latitude/Longitude: 27°55'15"N  
82°26'35"W

Project: Tank No. 5  
Modification

This permit is issued under the provisions of Chapter 403, Florida Statutes, and Florida Administrative Code Rule(s) 17-2 and 17-4. The above named permittee is hereby authorized to perform the work or operate the facility shown on the application and approved drawing(s), plans, and other documents attached hereto or on file with the Department and made a part hereof and specifically described as follows:

Install a Petrex internal floating roof system with a vapor seal system which complies with 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, and began using tank No. 5 to store gasoline.

Tank No. 5 is located in Unocal Corporation's bulk petroleum storage terminal (SIC 5171) that is at 1523 Port Avenue, Tampa, Hillsborough County, Florida. The UTM coordinates of this facility are Zone 17, 358.0 Km E and 3089.1 Km N.

The source shall be constructed in accordance with the permit application, plans, documents, amendments and drawings, except as otherwise noted in the General and Specific Conditions.

Attachment:

1. Application

PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: 09/29/89

**GENERAL CONDITIONS:**

1. The terms, conditions, requirements, limitations, and restrictions set forth herein are "Permit Conditions" and as such are binding upon the permittee and enforceable pursuant to the authority of Sections 403.161, 403.727, or 403.859 through 403.861, Florida Statutes. The permittee is hereby placed on notice that the Department will review this permit periodically and may initiate enforcement action for any violation of the "Permit Conditions" by the permittee, its agents, employees, servants or representatives.

2. This permit is valid only for the specific processes and operations applied for and indicated in the approved drawings or exhibits. Any unauthorized deviation from the approved drawings, exhibits, specifications, or conditions of this permit may constitute grounds for revocation and enforcement action by the Department.

3. As provided in Subsections 403.087(6) and 403.722(5), Florida Statutes, the issuance of this permit does not convey any vested rights or any exclusive privileges. Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations. This permit does not constitute a waiver of or approval of any other Department permit that may be required for other aspects of the total project which are not addressed in the permit.

4. This permit conveys no title to land or water, does not constitute state recognition or acknowledgement of title, and does not constitute authority for the use of submerged lands unless herein provided and the necessary title or leasehold interests have been obtained from the state. Only the Trustees of the Internal Improvement Trust Fund may express state opinion as to title.

5. This permit does not relieve the permittee from liability for harm or injury to human health or welfare, animal, plant or aquatic life or property and penalties therefor caused by the construction or operation of this permitted source, nor does it allow the permittee to cause pollution in contravention of Florida Statutes and Department rules, unless specifically authorized by an order from the Department.

PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: 09/29/89

**GENERAL CONDITIONS:**

6. The permittee shall at all times properly operate and maintain the facility and systems of treatment and control (and related appurtenances) that are installed or used by the permittee to achieve compliance with the conditions of this permit, as required by Department rules. This provision includes the operation of backup or auxiliary facilities or similar systems when necessary to achieve compliance with the conditions of the permit and when required by Department rules.

7. The permittee, by accepting this permit, specifically agrees to allow authorized Department personnel, upon presentation of credentials or other documents as may be required by law, access to the premises, at reasonable times, where the permitted activity is located or conducted for the purpose of:

- a. Having access to and copying any records that must be kept under the conditions of the permit;
- b. Inspecting the facility, equipment, practices, or operations regulated or required under this permit; and
- c. Sampling or monitoring any substances or parameters at any location reasonably necessary to assure compliance with this permit or Department rules.

Reasonable time may depend on the nature of the concern being investigated.

8. If, for any reason, the permittee does not comply with or will be unable to comply with any condition or limitation specified in this permit, the permittee shall immediately notify and provide the Department with the following information:

- a. a description of and cause of non-compliance; and
- b. the period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps being taken to reduce, eliminate, and prevent recurrence of the non-compliance.

PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: 09/29/89

**GENERAL CONDITIONS:**

The permittee shall be responsible for any and all damages which may result and may be subject to enforcement action by the Department for penalties or revocation of this permit.

9. In accepting this permit, the permittee understands and agrees that all records, notes, monitoring data and other information relating to the construction or operation of this permitted source, which are submitted to the Department, may be used by the Department as evidence in any enforcement case arising under the Florida Statutes or Department rules, except where such use is proscribed by Sections 403.73 and 403.111, Florida Statutes.

10. The permittee agrees to comply with changes in Department rules and Florida Statutes after a reasonable time for compliance, provided however, the permittee does not waive any other rights granted by Florida Statutes or Department rules.

11. This permit is transferable only upon Department approval in accordance with Florida Administrative Code Rules 17-4.12 and 17-30.30, as applicable. The permittee shall be liable for any non-compliance of the permitted activity until the transfer is approved by the Department.

12. This permit is required to be kept at the work site of the permitted activity during the entire period of construction or operation.

13. This permit also constitutes:

- ( ) Determination of Best Available Control Technology (BACT)
- ( ) Determination of Prevention of Significant Deterioration (PSD)
- (x) Compliance with New Source Performance Standards

14. The permittee shall comply with the following monitoring and record keeping requirements:

- a. Upon request, the permittee shall furnish all records and plans required under Department rules. The retention period for all records will be extended automatically, unless otherwise stipulated by the Department, during the course of any unresolved enforcement action.

**PERMITTEE:**  
Union Oil Company of Calif.

**Permit Number:** AC 29-159295  
**Expiration Date:** 09/29/89

**GENERAL CONDITIONS:**

- b. The permittee shall retain at the facility or other location designated by this permit records of all monitoring information (including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation), copies of all reports required by this permit, and records of all data used to complete the application for this permit. The time period of retention shall be at least three years from the date of the sample, measurement, report or application unless otherwise specified by Department rule.
- c. Records of monitoring information shall include:
- the date, exact place, and time of sampling or measurements;
  - the person responsible for performing the sampling or measurements;
  - the date(s) analyses were performed;
  - the person responsible for performing the analyses;
  - the analytical techniques or methods used; and
  - the results of such analyses.

15. When requested by the Department, the permittee shall within a reasonable time furnish any information required by law which is needed to determine compliance with the permit. If the permittee becomes aware that relevant facts were not submitted or were incorrect in the permit application or in any report to the Department, such facts or information shall be submitted or corrected promptly.

**SPECIFIC CONDITIONS:**

1. Tank No. 5 is restricted to gasoline service only. The permittee shall notify the Environmental Protection Commission of Hillsborough County prior to handling more than 40 million gallons per year gasoline in this tank.

2. The modified tank No. 5 shall comply with all the applicable 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.

PERMITTEE:  
Union Oil Company of Calif.

Permit Number: AC 29-159295  
Expiration Date: 09/29/89

**SPECIFIC CONDITIONS:**

3. The storage tank may be in service continuously, 8,760 hrs/yr.
4. The permittee shall calculate the actual VOC emissions from tank No. 5 annually by the procedures described in AP-42, Compilation of Air Pollutant Emission Factors, Section 4.3-Storage of Organic Liquids, using actual production, construction and meteorological data and submit this information to the Environmental Protection Commission of Hillsborough County with the annual operation report.
5. The permittee, for good cause, may request that this construction permit be extended. Such a request shall be submitted to the BAQM prior to 60 days before the expiration of the permit (F.A.C. 17-4.090).
6. An application for an operation permit must be submitted to the Environmental Protection Commission of Hillsborough County office at least 90 days prior to the expiration date of this construction permit or within 45 days after completion of compliance testing, whichever occurs first. To properly apply for an operation permit, the applicant shall submit the appropriate application form, fee, certification that construction was completed noting any deviations from the conditions in the construction permit, and compliance test reports as required by this permit (F.A.C. 17-4.220).

Issued this \_\_\_\_\_ day  
of \_\_\_\_\_, 1989

STATE OF FLORIDA DEPARTMENT  
OF ENVIRONMENTAL REGULATION

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Dale Twachtman, Secretary



ATTACHMENT 1  
AVAILABLE UPON REQUEST





OPTIONS SELECTED FOR THE FACILITY EMISSION REPORT -- AIRF10 - 01/13/89

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*****  
**  
**          DISTRICT: 40          **  
**          OFFICE: HIL          **  
**          COUNTY: 29          **  
**          FACILITY NUMBER: 0081 **  
**          CDS CODE(S):          **  
**          VOC CODE(S):          **  
**          SIC:                  **  
**          AOR YEAR: 86          **  
**          SORT ORDER: N        **  
**  
*****
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DEPARTMENT OF ENVIRONMENTAL REGULATION  
AIR POLLUTANT INFORMATION SYSTEM  
FACILITY EMISSION REPORT

FACILITY ID: 40HIL290081  
OWNER: UNION OIL COMPANY OF CALIFORNIA  
# SRC: 03 # SRC REPORTED: 03 MAJOR FAC: Y CITY: TAMPA  
NAME/LOC: 1523 PORT AVE  
FAC STATUS: ACTIVE  
CDS: A1A VOC: A1A

POLLUTANT	POTENTIAL (TPY)	ESTIMATED (TPY)	ALLOWABLE (TPY)	# SRC	ACTUAL 86 (TPY)	# SRC	ACTUAL 85 (TPY)	# SRC	MAJOR
VOC	115.8400	57.0510	24821.0000	3	17.2900	3	0.0000	0	*

Subpart  
K

§ 60.111 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in Subpart K of this part.

(a) "Storage vessel" means any tank, reservoir, or container used for the storage of petroleum liquids, but does not include:

(1) Pressure vessels which are designed to operate in excess of 15 pounds per square inch gauge without emissions to the atmosphere except under emergency conditions,

(2) Subsurface caverns or porous rock reservoirs, or

(3) Underground tanks if the total volume of petroleum liquids added to and taken from a tank annually does not exceed twice the volume of the tank.

(b) "Petroleum liquids" means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery but does not mean Nos. 2 through 6 fuel oils as specified in ASTM D396-78, gas turbine fuel oils Nos. 2-GT through 4-GT as specified in ASTM D2880-78, or diesel fuel oils Nos. 2-D and 4-D as specified in ASTM D975-78. (These three methods are incorporated by reference—see § 60.17.)

(c) "Petroleum refinery" means each facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking, extracting, or reforming of unfinished petroleum derivatives.

(d) "Petroleum" means the crude oil removed from the earth and the oils removed from tar sands, shale, and coal.

(e) "Hydrocarbon" means any organic compound consisting predominantly of carbon and hydrogen.

(f) "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature and/or pressure and remains liquid at standard conditions.

(g) "Custody transfer" means the transfer of produced petroleum and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

(h) "Drilling and production facility" means all drilling and servicing equipment, wells, flow lines, separators, equipment, gathering lines, and auxiliary nontransportation-related equipment used in the production of petroleum but does not include natural gasoline plants.

(i) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss from External Floating-Roof Tanks, Second Edition, February 1980 (incorporated by reference—see § 60.17).

(j) "Floating roof" means a storage vessel cover consisting of a double deck, pontoon single deck, internal floating cover or covered floating roof, which rests upon and is supported by the petroleum liquid being contained, and is equipped with a closure seal or seals to close the space between the roof edge and tank wall.

(k) "Vapor recovery system" means a vapor gathering system capable of collecting all hydrocarbon vapors and gases discharged from the storage vessel and a vapor disposal system capable of processing such hydrocarbon vapors and gases so as to prevent their emission to the atmosphere.

(l) "Reid vapor pressure" is the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids, except liquified petroleum gases, as determined by ASTM D323-82 (incorporated by reference—see § 60.17).

[39 FR 9317, Mar. 8, 1974; 39 FR 13776, Apr. 17, 1974, as amended at 39 FR 20794, June 14, 1974; 45 FR 23379, Apr. 4, 1980; 48 FR 3737, Jan. 27, 1983; 52 FR 11429, Apr. 8, 1987]

§ 60.112 Standard for volatile organic compounds (VOC).

(a) The owner or operator of any storage vessel to which this subpart applies shall store petroleum liquids as follows:

(1) If the true vapor pressure of the petroleum liquid, as stored, is equal to or greater than 78 mm Hg (1.5 psia) but not greater than 570 mm Hg (11.1 psia), the storage vessel shall be

equipped with a floating roof, a vapor recovery system, or their equivalents.

(2) If the true vapor pressure of the petroleum liquid as stored is greater than 570 mm Hg (11.1 psia), the storage vessel shall be equipped with a vapor recovery system or its equivalent.

[39 FR 9317, Mar. 8, 1974; 39 FR 13776, Apr. 17, 1974, as amended at 45 FR 23379, Apr. 4, 1980]

§ 60.113 Monitoring of operations.

(a) Except as provided in paragraph (d) of this section, the owner or operator subject to this subpart shall maintain a record of the petroleum liquid stored, the period of storage, and the maximum true vapor pressure of that liquid during the respective storage period.

(b) Available data on the typical Reid vapor pressure and the maximum expected storage temperature of the stored product may be used to determine the maximum true vapor pressure from nomographs contained in API Bulletin 2517, unless the Administrator specifically requests that the liquid be sampled, the actual storage temperature determined, and the Reid vapor pressure determined from the sample(s).

(c) The true vapor pressure of each type of crude oil with a Reid vapor pressure less than 13.8 kPa (2.0 psia) or whose physical properties preclude determination by the recommended method is to be determined from available data and recorded if the estimated true vapor pressure is greater than 6.9 kPa (1.0 psia).

(d) The following are exempt from the requirements of this section:

(1) Each owner or operator of each affected facility which stores petroleum liquids with a Reid vapor pressure of less than 6.9 kPa (1.0 psia) provided the maximum true vapor pressure does not exceed 6.9 kPa (1.0 psia).

(2) Each owner or operator of each affected facility equipped with a vapor recovery and return or disposal system in accordance with the requirements of § 60.112.

[45 FR 23379, Apr. 4, 1980]

Subpart Ka—Standards of Performance for Storage Vessels for Petroleum Liquids for Which Construction, Reconstruction, or Modification Commenced After May 18, 1978, and Prior to July 23, 1984

SOURCE: 45 FR 23379, Apr. 4, 1980, unless otherwise noted.

§ 60.110a Applicability and designation of affected facility.

(a) Except as provided in paragraph (b) of this section, the affected facility to which this subpart applies is each storage vessel for petroleum liquids which has a storage capacity greater than 151,416 liters (40,000 gallons) and for which construction is commenced after May 18, 1978.

(b) Each petroleum liquid storage vessel with a capacity of less than 1,589,873 liters (420,000 gallons) used for petroleum or condensate stored, processed, or treated prior to custody transfer is not an affected facility and, therefore, is exempt from the requirements of this subpart.

§ 60.111a Definitions.

In addition to the terms and their definitions listed in the Act and Subpart A of this part the following definitions apply in this subpart:

(a) "Storage vessel" means each tank, reservoir, or container used for the storage of petroleum liquids, but does not include:

(1) Pressure vessels which are designed to operate in excess of 204.9 kPa (15 psig) without emissions to the atmosphere except under emergency conditions.

(2) Subsurface caverns or porous rock reservoirs, or

(3) Underground tanks if the total volume of petroleum liquids added to and taken from a tank annually does not exceed twice the volume of the tank.

(b) "Petroleum liquids" means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery but does not mean Nos. 2 through 6 fuel oils as specified in ASTM D396-78, gas turbine fuel oils Nos. 2-GT through 4-GT as specified in ASTM D2880-78, gas

turbine fuel oils Nos. 2-GT through 4-GT as specified in ASTM D2880-78, or diesel fuel oils Nos. 2-D and 4-D as specified in ASTM D975-78. (These methods are incorporated by reference—see § 60.17.)

(c) "Petroleum refinery" means each facility engaged in producing gasoline, kerosene, distillate fuel oils, residual fuel oils, lubricants, or other products through distillation of petroleum or through redistillation, cracking, extracting, or reforming of unfinished petroleum derivatives.

(d) "Petroleum" means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

(e) "Condensate" means hydrocarbon liquid separated from natural gas which condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

(f) "True vapor pressure" means the equilibrium partial pressure exerted by a petroleum liquid such as determined in accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss from External Floating-Roof Tanks, Second Edition, February 1980 (incorporated by reference—see § 60.17).

(g) "Reid vapor pressure" is the absolute vapor pressure of volatile crude oil and nonviscous petroleum liquids, except liquified petroleum gases, as determined by ASTM D323-82 (incorporated by reference—see § 60.17).

(h) "Liquid-mounted seal" means a foam or liquid-filled primary seal mounted in contact with the liquid between the tank wall and the floating roof continuously around the circumference of the tank.

(i) "Metallic shoe seal" includes but is not limited to a metal sheet held vertically against the tank wall by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

(j) "Vapor-mounted seal" means a foam-filled primary seal mounted continuously around the circumference of the tank so there is an annular vapor space underneath the seal. The annular vapor space is bounded by the bottom of the primary seal, the tank

wall, the liquid surface, and the floating roof.

(k) "Custody transfer" means the transfer of produced petroleum and/or condensate, after processing and/or treating in the producing operations, from storage tanks or automatic transfer facilities to pipelines or any other forms of transportation.

[45 FR 23379, Apr. 4, 1980, as amended at 48 FR 3737, Jan. 27, 1983; 52 FR 11429, Apr. 8, 1987]

§ 60.112a Standard for volatile organic compounds (VOC).

(a) The owner or operator of each storage vessel to which this subpart applies which contains a petroleum liquid which, as stored, has a true vapor pressure equal to or greater than 10.3 kPa (1.5 psia) but not greater than 76.6 kPa (11.1 psia) shall equip the storage vessel with one of the following:

(1) An external floating roof, consisting of a pontoon-type or double-deck-type cover that rests on the surface of the liquid contents and is equipped with a closure device between the tank wall and the roof edge. Except as provided in paragraph (a)(1)(ii)(D) of this section, the closure device is to consist of two seals, one above the other. The lower seal is referred to as the primary seal and the upper seal is referred to as the secondary seal. The roof is to be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(i) The primary seal is to be either a metallic shoe seal, a liquid-mounted seal, or a vapor-mounted seal. Each seal is to meet the following requirements:

(A) The accumulated area of gaps between the tank wall and the metallic shoe seal or the liquid-mounted seal shall not exceed 212 cm<sup>2</sup> per meter of tank diameter (10.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 3.81 cm (1½ in).

(B) The accumulated area of gaps between the tank wall and the vapor-mounted seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (½ in).

(C) One end of the metallic shoe is to extend into the stored liquid and the other end is to extend a minimum vertical distance of 61 cm (24 in) above the stored liquid surface.

(D) There are to be no holes, tears, or other openings in the shoe, seal fabric, or seal envelope.

(ii) The secondary seal is to meet the following requirements:

(A) The secondary seal is to be installed above the primary seal so that it completely covers the space between the roof edge and the tank wall except as provided in paragraph (a)(1)(ii)(B) of this section.

(B) The accumulated area of gaps between the tank wall and the secondary seal used in combination with a metallic shoe or liquid-mounted primary seal shall not exceed 21.2 cm<sup>2</sup> per meter of tank diameter (1.0 in<sup>2</sup> per ft. of tank diameter) and the width of any portion of any gap shall not exceed 1.27 cm (½ in.). There shall be no gaps between the tank wall and the secondary seal used in combination with a vapor-mounted primary seal.

(C) There are to be no holes, tears or other openings in the seal or seal fabric.

(D) The owner or operator is exempted from the requirements for secondary seals and the secondary seal gap criteria when performing gap measurements or inspections of the primary seal.

(iii) Each opening in the roof except for automatic bleeder vents and rim space vents is to provide a projection below the liquid surface. Each opening in the roof except for automatic bleeder vents, rim space vents and leg sleeves is to be equipped with a cover, seal or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use or as described in paragraph (a)(1)(iv) of this section. Automatic bleeder vents 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. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting.

(iv) Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(2) A fixed roof with an internal floating type cover equipped with a continuous closure device between the tank wall and the cover edge. The cover is to be floating at all times (i.e., off the leg supports) except during initial fill and when the tank is completely emptied and subsequently refilled. The process of emptying and refilling when the cover is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible. Each opening in the cover except for automatic bleeder vents and the rim space vents is to provide a projection below the liquid surface. Each opening in the cover except for automatic bleeder vents, rim space vents, stub drains and leg sleeves is to be equipped with a cover, seal, or lid which is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents are to be closed at all times when the cover is floating, except when the cover is being floated off or is being landed on the leg supports. Rim vents are to be set to open only when the cover is being floated off the leg supports or at the manufacturer's recommended setting.

(3) A vapor recovery system which collects all VOC vapors and gases discharged from the storage vessel, and a vapor return or disposal system which is designed to process such VOC vapors and gases so as to reduce their emission to the atmosphere by at least 95 percent by weight.

(4) A system equivalent to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114a.

(b) The owner or operator of each storage vessel to which this subpart applies which contains a petroleum liquid which, as stored, has a true vapor pressure greater than 76.6 kPa (11.1 psia), shall equip the storage vessel with a vapor recovery system

recovery and return or disposal system in accordance with the requirements of § 60.112a (a)(3) and (b).

**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**

SOURCE: 52 FR 11429, Apr. 8, 1987, unless otherwise noted.

**§ 60.110b Applicability and designation of affected facility.**

(a) Except as provided in paragraphs (b), (c), and (d) of this section, the affected facility to which this subpart applies is each storage vessel with a capacity greater than or equal to 40 cubic meters (m<sup>3</sup>) that is used to store volatile organic liquids (VOL's) for which construction, reconstruction, or modification is commenced after July 23, 1984.

(b) Except as specified in paragraphs (a) and (b) of § 60.116b, storage vessels with design capacity less than 75 m<sup>3</sup> are exempt from the General Provisions (Part 60, Subpart A) and from the provisions of this subpart.

(c) Except as specified in paragraphs (b) and (c) of § 60.116b, vessels either with a capacity greater than or equal to 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 3.5 kPa or with a capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> storing a liquid with a maximum true vapor pressure less than 15.0 kPa are exempt from the General Provisions (Part 60, Subpart A) and from the provisions of this subpart.

(d) This subpart does not apply to the following:

- (1) Vessels at coke oven by-product plants.
- (2) Pressure vessels designed to operate in excess of 204.9 kPa and without emissions to the atmosphere.
- (3) Vessels permanently attached to mobile vehicles such as trucks, railcars, barges, or ships.
- (4) Vessels with a design capacity less than or equal to 1,589.874 m<sup>3</sup> used for petroleum or condensate stored,

processed, or treated prior to custody transfer.

(5) Vessels located at bulk gasoline plants.

(6) Storage vessels located at gasoline service stations.

(7) Vessels used to store beverage alcohol.

**§ 60.111b Definitions.**

Terms used in this subpart are defined in the Act, in Subpart A of this part, or in this subpart as follows:

(a) "Bulk gasoline plant" means any gasoline distribution facility that has a gasoline throughput less than or equal to 75,700 liters per day. Gasoline throughput shall be the maximum calculated design throughput as may be limited by compliance with an enforceable condition under Federal requirement or Federal, State or local law, and discoverable by the Administrator and any other person.

(b) "Condensate" means hydrocarbon liquid separated from natural gas that condenses due to changes in the temperature or pressure, or both, and remains liquid at standard conditions.

(c) "Custody transfer" means the transfer of produced petroleum and/or condensate, after processing and/or treatment in the producing operations, from storage vessels or automatic transfer facilities to pipelines or any other forms of transportation.

(d) "Fill" means the introduction of VOL into a storage vessel but not necessarily to complete capacity.

(e) "Gasoline service station" means any site where gasoline is dispensed to motor vehicle fuel tanks from stationary storage tanks.

(f) "Maximum true vapor pressure" means the equilibrium partial pressure exerted by the stored liquid at the temperature equal to the highest calendar-month average of the liquid storage temperature for liquids stored above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored at the ambient temperature, as determined:

- (1) In accordance with methods described in American Petroleum Institute Bulletin 2517, Evaporation Loss

From External Floating Roof Tanks, (incorporated by reference—see § 60.17); or

(2) As obtained from standard reference texts; or

(3) As determined by ASTM Method D2879-83 (incorporated by reference—see § 60.17);

(4) Any other method approved by the Administrator.

(g) "Reid vapor pressure" means the absolute vapor pressure of volatile crude oil and volatile nonviscous petroleum liquids except liquified petroleum gases, as determined by ASTM D323-82 (incorporated by reference—see § 60.17).

(h) "Petroleum" means the crude oil removed from the earth and the oils derived from tar sands, shale, and coal.

(i) "Petroleum liquids" means petroleum, condensate, and any finished or intermediate products manufactured in a petroleum refinery.

(j) "Storage vessel" means each tank, reservoir, or container used for the storage of volatile organic liquids but does not include:

- (1) Frames, housing, auxiliary supports, or other components that are not directly involved in the containment of liquids or vapors; or
- (2) Subsurface caverns or porous rock reservoirs.

(k) "Volatile organic liquid" (VOL) means any organic liquid which can emit volatile organic compounds into the atmosphere except those VOL's that emit only those compounds which the Administrator has determined do not contribute appreciably to the formation of ozone. These compounds are identified in EPA statements on ozone abatement policy for SIP revisions (42 FR 35314, 44 FR 32042, 45 FR 32424, and 45 FR 48941).

(l) "Waste" means any liquid resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, or biologically treated prior to being discarded or recycled.

**§ 60.112b Standard for volatile organic compounds (VOC).**

(a) The owner or operator of each storage vessel either with a design ca-

capacity greater than or equal to 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 5.2 kPa but less than 76.6 kPa or with a design capacity greater than or equal to 75 m<sup>3</sup> but less than 151 m<sup>3</sup> containing a VOL that, as stored, has a maximum true vapor pressure equal to or greater than 27.6 kPa but less than 76.6 kPa, shall equip each storage vessel with one of the following:

(1) A fixed roof in combination with an internal floating roof meeting the following specifications:

(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. The internal floating roof shall be floating on the liquid surface at all times, except during initial fill and during those intervals when the storage vessel is completely emptied or subsequently emptied and refilled. When the roof is resting on the leg supports, the process of filling, emptying, or refilling shall be continuous and shall be accomplished as rapidly as possible.

(ii) Each internal floating roof shall be equipped with one of the following closure devices between the wall of the storage vessel and the edge of the internal floating roof:

(A) A foam-or liquid-filled seal mounted in contact with the liquid (liquid-mounted seal). A liquid-mounted seal means a foam-or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel and the floating roof continuously around the circumference of the tank.

(B) Two seals mounted one above the other so that each forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the internal floating roof. The lower seal may be vapor-mounted, but both must be continuous.

(C) A mechanical shoe seal. A mechanical shoe seal is a metal sheet held vertically against the wall of the storage vessel by springs or weighted levers and is connected by braces to the floating roof. A flexible coated fabric (envelope) spans the annular



space between the metal sheet and the floating roof.

(iii) Each opening in a noncontact external floating roof except for automatic bleeder vents (vacuum breaker vents) and the rim space vents is to provide a projection below the liquid surface.

(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 at all times (i.e., no visible gap) except when the device is in actual use. The cover or lid shall be equipped with a gasket. Covers on each access hatch and automatic gauge float well shall be bolted except when they are in use.

(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.

(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.

(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 percent of the opening.

(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 a gasketed sliding cover.

(ix) Each penetration of the internal floating roof that allows for passage of a ladder shall have a gasketed sliding cover.

(2) **An external floating roof.** An external floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a vessel with no fixed roof. Each external floating roof must meet the following specifications:

(i) Each external floating roof shall be equipped with a closure device between the wall of the storage vessel and the roof edge. The closure device is to consist of two seals, one above the

other. The lower seal is referred to as the primary seal, and the upper seal is referred to as the secondary seal.

(A) The primary seal shall be either a mechanical shoe seal or a liquid-mounted seal. Except as provided in § 60.113b(b)(4), the seal shall completely cover the annular space between the edge of the floating roof and tank wall.

(B) The secondary seal shall completely cover the annular space between the external floating roof and the wall of the storage vessel in a continuous fashion except as allowed in § 60.113b(b)(4).

(ii) Except for automatic bleeder vents and rim space vents, each opening in a noncontact external floating roof shall provide a projection below the liquid surface. Except for automatic bleeder vents, rim space vents, roof drains, and leg sleeves, each opening in the roof is to be equipped with a gasketed cover, seal, or lid that is to be maintained in a closed position at all times (i.e., no visible gap) except when the device is in actual use. Automatic bleeder vents 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. Rim vents are to be set to open when the roof is being floated off the roof legs supports or at the manufacturer's recommended setting. Automatic bleeder vents and rim space vents are to be gasketed. Each emergency roof drain is to be provided with a slotted membrane fabric cover that covers at least 90 percent of the area of the opening.

(iii) The roof shall be floating on the liquid at all times (i.e., off the roof leg supports) except during initial fill until the roof is lifted off leg supports and when the tank is completely emptied and subsequently refilled. The process of filling, emptying, or refilling when the roof is resting on the leg supports shall be continuous and shall be accomplished as rapidly as possible.

(3) **A closed vent system and control device** meeting the following specifications:

(i) The closed vent system shall be designed to collect all VOC vapors and gases discharged from the storage vessel and operated with no detectable

emissions as indicated by an instrument reading of less than 500 ppm above background and visual inspections, as determined in Part 60, Subpart VV, § 60.485(b).

(ii) The control device shall be designed and operated to reduce inlet VOC emissions by 95 percent or greater. If a flare is used as the control device, it shall meet the specifications described in the general control device requirements (§ 60.18) of the General Provisions.

(4) **A system equivalent** to those described in paragraphs (a)(1), (a)(2), or (a)(3) of this section as provided in § 60.114b of this subpart.

(b) The owner or operator of each storage vessel with a design capacity greater than or equal to 75 m<sup>3</sup> which contains a VOL that, as stored, has a maximum true vapor pressure greater than or equal to 76.6 kPa shall equip each storage vessel with one of the following:

(1) A closed vent system and control device as specified in § 60.112b(a)(3).

(2) A system equivalent to that described in paragraph (b)(1) as provided in § 60.114b of this subpart.

#### § 60.113b Testing and procedures.

The owner or operator of each storage vessel as specified in § 60.112b(a) shall meet the requirements of paragraph (a), (b), or (c) of this section. The applicable paragraph for a particular storage vessel depends on the control equipment installed to meet the requirements of § 60.112b.

(a) After installing the control equipment required to meet § 60.112b(a)(1) (permanently affixed roof and internal floating roof), each owner or operator shall:

(1) Visually inspect the internal floating roof, the primary seal, and the secondary seal (if one is in service), prior to filling the storage vessel with VOL. If there are holes, tears, or other openings in the primary seal, the secondary seal, or the seal fabric or defects in the internal floating roof, or both, the owner or operator shall repair the items before filling the storage vessel.

(2) For vessels equipped with a liquid-mounted or mechanical shoe primary seal, visually inspect the in-

ternal floating roof and the primary seal or the secondary seal (if one is in service) through manholes and roof hatches on the fixed roof at least one every 12 months after initial fill. If the internal floating roof is not resting on the surface of the VOL inside the storage vessel, or there is liquid accumulated on the roof, or the seal is detached, or there are holes or tears in the seal fabric, the owner or operator shall repair the items or empty and remove the storage vessel from service within 45 days. If a failure that is detected during inspections required in this paragraph cannot be repaired within 45 days and if the vessel cannot be emptied within 45 days, a 30-day extension may be requested from the Administrator in the inspection report required in § 60.115(a)(b)(3). Such a request for an extension must document that alternate storage capacity is unavailable and specify a schedule of actions the company will take that will assure that the control equipment will be repaired or the vessel will be emptied as soon as possible.

(3) For vessels equipped with a double-seal system as specified in § 60.112b(a)(1)(ii)(B):

(i) Visually inspect the vessel as specified in paragraph (a)(4) of this section at least every 5 years; or

(ii) Visually inspect the vessel as specified in paragraph (a)(2) of this section.

(4) Visually inspect the internal floating roof, the primary seal, the secondary seal (if one is in service), gaskets, slotted membranes (if any), and sleeve seals (if any) each time the storage vessel is emptied and degassed. If the internal floating roof has defects, the primary seal has holes, tears, or other openings in the seal or the seal fabric, or the secondary seal has holes, tears, or other openings in the seal or the seal fabric, or the gaskets no longer close off the liquid surfaces from the atmosphere, or the slotted membrane has more than 10 percent open area, the owner or operator shall repair the items as necessary so that none of the conditions specified in this paragraph exist before refilling the storage vessel with VOL. In no event shall inspections conducted in accordance with this provision

Unocal Refining & Marketing Division  
Unocal Corporation  
13 Corporate Square, N.E.  
P.O. Box 4147  
Atlanta, Georgia 30302  
Telephone (404) 321-7600

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DER - MAIL ROOM

1988 DEC 20 AM 10:33

**UNOCAL** 

December 16, 1988

**W.E. Herchline**  
Division Distribution Manager, Atlanta  
Eastern Marketing

FEDERAL EXPRESS

Mr. Bill Thomas  
State of Florida  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

1032

RE: Application for Permit to Modify Air  
Pollution Source  
Unocal Tampa Terminal  
Permit No. A029-131987

Dear Mr. Thomas:

Enclosed are two copies of our application for a permit to modify the operating permit for Unocal's Tampa Terminal.

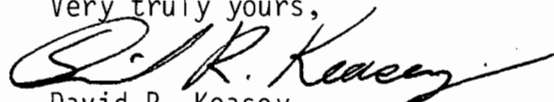
The proposed project is to convert existing Tanks No. 1 and 2 from No. 6 fuel oil to diesel oil service, and to convert existing Tank No. 5 from diesel oil to gasoline service. There is a small increase in emission associated with the change of Tanks No. 1 and 2. These tanks, however, are exempt from NSPS requirements due to the low vapor pressure of the material to be stored.

The modification to Tank No. 5 will result in a somewhat larger increase in emission. The emission from Tank No. 5 will be controlled as required by Federal New Source Performance Standards. This will be accomplished by installation of a Petrex internal floating roof system with a vapor seal system which complies with NSPS.

Also enclosed with this application package is our check in the amount of \$200 to cover the application fee.

If you have any questions, please call me at 404/320-2272.

Very truly yours,



David R. Keasey  
Manager, Marketing Environmental

DRK/cjf

Enclosures

cc: W. Gerdon

J. Halligan

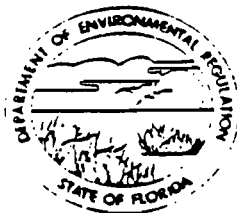
Victor San Agustin - Hillsborough  
County w/application

BEST AVAILABLE COPY

		<b>AIRBILL</b> <small>USE THIS AIRBILL FOR DOMESTIC SHIPMENTS WITHIN THE CONTINENTAL U.S.A. ALASKA AND HAWAII.          USE THE INTERNATIONAL AIR WAYBILL FOR SHIPMENTS TO PUERTO RICO.          QUESTIONS? CALL 800-238-5355 TOLL FREE.</small>		<b>PACKAGE TRACKING NUMBER</b> 1945318185 <i>Vituvia S.A.</i>																					
92711   1945318185		Date: 12/19/88		<b>RECIPIENT'S COPY</b>																					
From (Your Name) Please Print <b>U. R. Keasey</b>		Your Phone Number (Very Important) ( 404 ) 321-7600		To (Recipient's Name) Please Print <b>Mr. Bill Thomas</b>																					
Company <b>OCAL</b>		Department/Floor No.		Recipient's Phone Number (Very Important) ( 904 ) 488-1344																					
Street Address <b>CORP SQUARE EAST STE 200</b>		Company <b>State of Florida - DER 031</b>		Department/Floor No.																					
City <b>LANTA GA</b>		State <b>GA</b>		Exact Street Address (We Cannot Deliver to P.O. Boxes or P.D.® Zip Codes.) <b>2600 Blair Stone Road</b>																					
City <b>LANTA</b>		State <b>GA</b>		City <b>Tallahassee FL</b>																					
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DEPARTMENT OF ENVIRONMENTAL REGULATION

AC 29-159295



BOB GRAHAM GOVERNOR

VICTORIA J. TSCHINKEL SECRETARY

RICHARD D. GARRITY, PH.D. DISTRICT MANAGER

SOUTHWEST DISTRICT

7601 HIGHWAY 301 NORTH TAMPA, FLORIDA 33610-9544

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Bulk Petroleum Storage Terminal [ ] New<sup>1</sup> [X] Existing<sup>1</sup>

APPLICATION TYPE: [ ] Construction [X] Operation [X] Modification

COMPANY NAME: Union Oil Company of California (dba Unocal) COUNTY: Hillsborough

Identify the specific emission point source(s) addressed in this application (i.e. Lime Siln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) Storage Tanks #1, 2, 5

SOURCE LOCATION: Street 1523 Port Avenue City Tampa

UTM: East 17-358.0 East North 3089.1 North

Latitude \_\_\_ ° \_\_\_ ' \_\_\_ "N Longitude \_\_\_ ° \_\_\_ ' \_\_\_ "W

APPLICANT NAME AND TITLE: W. E. Herchline, Manager, Distribution

APPLICANT ADDRESS: P. O. Box 4147, Atlanta, GA 30302

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of Unocal Tampa Terminal construction and

I certify that the statements made in this application for a operating permit are true, correct and complete to the best of my knowledge and belief. Further I agree to maintain and operate the pollution control source and pollution control facilities in such a manner as to comply with the provision of Chapter 403, Florida Statutes, and all the rules and regulations of the department and revisions thereof. I also understand that a permit, if granted by the department, will be non-transferable and I will promptly notify the department upon sale or legal transfer of the permitted establishment.

\*Attach letter of authorization

Signed: W E Herchline

W. E. Herchline, Div. Distribution Manager Name and Title (Please Type)

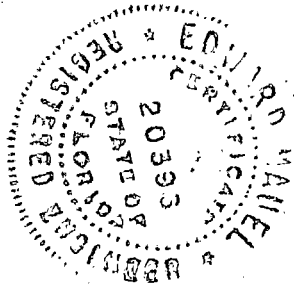
Date: 12/14/88 Telephone No. 404/320-2260

B. PROFESSIONAL ENGINEER REGISTERED IN FLORIDA (where required by Chapter 471, F.S.)

This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance, in my professional judgment, that

<sup>1</sup> See Florida Administrative Code Rule 17-2.100(57) and (104)

the pollution control facilities, when properly maintained and operated, will discharge an effluent that complies with all applicable statutes of the State of Florida and the rules and regulations of the department. It is also agreed that the undersigned will furnish, if authorized by the owner, the applicant a set of instructions for the proper maintenance and operation of the pollution control facilities and, if applicable, pollution sources.



Signed Edward Mael

Edward Mael

Name (Please Type)

Edward Mael, Consulting Engineer

Company Name (Please Type)

2301 Westwood Lane, Palatine, Illinois 60067

Mailing Address (Please Type)

Florida Registration No. 20396 Date: 12-15-88 Telephone No. (312) 397-1224

**SECTION II: GENERAL PROJECT INFORMATION**

A. Describe the nature and extent of the project. Refer to pollution control equipment, and expected improvements in source performance as a result of installation. State whether the project will result in full compliance. Attach additional sheet if necessary.

Project is to convert Tanks No. 1 and 2 from No. 6 fuel oil to Diesel Oil service and to convert Tank No. 5 from Diesel Oil service to Gasoline service. Upon completion, the project will be in compliance with all applicable control requirements.

B. Schedule of project covered in this application (Construction Permit Application Only)  
 upon issuance of 60 days after  
 Start of Construction authority to construct Completion of Construction construction starts

C. Costs of pollution control system(s): (Note: Show breakdown of estimated costs only for individual components/units of the project serving pollution control purposes. Information on actual costs shall be furnished with the application for operation permit.)

Petrex internal floating roof system with vapor seal.

D. Indicate any previous DER permits, orders and notices associated with the emission point, including permit issuance and expiration dates.

Permit No. A029-131987; Issued June 2, 1987; Expires June 1, 1992  
NEDS No. 0081, Point ID No. 02

SECTION III: AIR POLLUTION SOURCES & CONTROL DEVICES (Other than Incinerators)

A. Raw Materials and Chemicals Used in your Process, if applicable:

Description	Contaminants		Utilization Rate - <del>lbs/hr</del> gal/yr.	Relate to Flow Diagram
	Type	% Wt		
Tank 1: Diesel	VOC	100%	35,000,000 est.	Figure 1
Tank 2: Diesel	VOC	100%	35,000,000 est.	Figure 1
Tank 5: Gasoline	VOC	100%	40,000,000 est.	Figure 1

B. Process Rate, if applicable: (See Section V, Item 1)

- Total Process Input Rate (lbs/hr): N/A
- Product Weight (lbs/hr): N/A

C. Airborne Contaminants Emitted: (Information in this table must be submitted for each emission point, use additional sheets as necessary)

Name of Contaminant	Emission <sup>1</sup>		Allowed-Emission Rate per Rule 17-2	Allowable <sup>3</sup> Emission lbs/hr	Potential <sup>4</sup> Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/hr.	T/yr	
VOC (Tank #1)	0.28*	1.23*	No specific limits	No specific limits	0.28***	1.23***	Figure 1
VOC (Tank #2)	0.26*	1.15*	No specific limits	No specific limits	0.26***	1.15***	Figure 1
VOC (Tank #5)	0.92*	4.03*	40 CFR kb	.92	92**	403**	Figure 1

<sup>1</sup>See Section V, Item 2.

<sup>2</sup>Reference applicable emission standards and units (e.g. Rule 17-2.600(5)(b)2. Table II, E. (1) - 0.1 pounds per million BTU heat input)

<sup>3</sup>Calculated from operating rate and applicable standard.

<sup>4</sup>Emission, if source operated without control (See Section V, Item 3).

\*See attached calculations

\*\*Assume 99% control

\*\*\*No controls required

D. Control Devices: (See Section V, Item 4)

Name and Type (Model & Serial No.)	Contaminant	Efficiency	Range of Particles Size Collected (in microns) (If applicable)	Basis for Efficiency (Section V Item 5)
Tank 1 N/A				
Tank 2 N/A				
Tank 5 Petrex	VOC	99+%	N/A	Estimate bas
Internal Floating Roof with vapor seal				on AP-42

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
N/A			

\*Units: Natural Gas--MMCF/hr; Fuel Oils--gallons/hr; Coal, wood, refuse, other--lbs/hr.

Fuel Analysis:

Percent Sulfur: \_\_\_\_\_ Percent Ash: \_\_\_\_\_

Density: \_\_\_\_\_ lbs/gal Typical Percent Nitrogen: \_\_\_\_\_

Heat Capacity: \_\_\_\_\_ BTU/lb \_\_\_\_\_ BTU/gal

Other Fuel Contaminants (which may cause air pollution): \_\_\_\_\_

F. If applicable, indicate the percent of fuel used for space heating.

Annual Average N/A Maximum \_\_\_\_\_

G. Indicate liquid or solid wastes generated and method of disposal.

Contaminated water is collected and managed pursuant to a temporary operating permit. Solid wastes are disposed offsite at an appropriate solid waste or hazardous waste disposal facility.





Brief description of operating characteristics of control devices: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Ultimate disposal of any effluent other than that emitted from the stack (scrubber water, ash, etc.):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

NOTE: Items 2, 3, 4, 6, 7, 8, and 10 in Section V must be included where applicable.

**SECTION V: SUPPLEMENTAL REQUIREMENTS**

Please provide the following supplements where required for this application.

1. Total process input rate and product weight -- show derivation [Rule 17-2.100(127)]
2. To a construction application, attach basis of emission estimate (e.g., design calculations, design drawings, pertinent manufacturer's test data, etc.) and attach proposed methods (e.g., FR Part 60 Methods 1, 2, 3, 4, 5) to show proof of compliance with applicable standards. To an operation application, attach test results or methods used to show proof of compliance. Information provided when applying for an operation permit from a construction permit shall be indicative of the time at which the test was made.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test).
4. With construction permit application, include design details for all air pollution control systems (e.g., for baghouse include cloth to air ratio; for scrubber include cross-section sketch, design pressure drop, etc.)
5. With construction permit application, attach derivation of control device(s) efficiency. Include test or design data. Items 2, 3 and 5 should be consistent: actual emissions = potential (1-efficiency).
6. An 8 1/2" x 11" flow diagram which will, without revealing trade secrets, identify the individual operations and/or processes. Indicate where raw materials enter, where solid and liquid waste exit, where gaseous emissions and/or airborne particles are evolved and where finished products are obtained.
7. An 8 1/2" x 11" plot plan showing the location of the establishment, and points of airborne emissions, in relation to the surrounding area, residences and other permanent structures and roadways (Example: Copy of relevant portion of USGS topographic map).
8. An 8 1/2" x 11" plot plan of facility showing the location of manufacturing processes and outlets for airborne emissions. Relate all flows to the flow diagram.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation.
10. With an application for operation permit, attach a Certificate of Completion of Construction indicating that the source was constructed as shown in the construction permit.

**SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY**

A. Are standards of performance for new stationary sources pursuant to 40 C.F.R. Part 60 applicable to the source?

Yes  No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

B. Has EPA declared the best available control technology for this class of sources (if yes, attach copy).

Yes  No

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

C. What emission levels do you propose as best available control technology?

Contaminant	Rate or Concentration
_____	_____
_____	_____
_____	_____

D. Describe the existing control and treatment technology (if any).

1. Control Device/System:

2. Operating Principles:

3. Efficiency:\*

4. Capital Costs:

\*Explain method of determining

5. Useful Life:

6. Operating Costs:

7. Energy:

8. Maintenance Cost:

9. Emissions:

Contaminant

Rate or Concentration

Contaminant	Rate or Concentration

10. Stack Parameters

- a. Height: ft.      b. Diameter: ft.
- c. Flow Rate: ACFM      d. Temperature: °F.
- e. Velocity: FPS

E. Describe the control and treatment technology available (As many types as applicable, use additional pages if necessary).

1.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:
- j. Applicability to manufacturing processes:
- k. Ability to construct with control device, install in available space, and operate within proposed levels:

2.

- a. Control Device: b. Operating Principles:
- c. Efficiency:<sup>1</sup> d. Capital Cost:
- e. Useful Life: f. Operating Cost:
- g. Energy:<sup>2</sup> h. Maintenance Cost:
- i. Availability of construction materials and process chemicals:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

3.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

4.

a. Control Device:

b. Operating Principles:

c. Efficiency:<sup>1</sup>

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:<sup>2</sup>

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

j. Applicability to manufacturing processes:

k. Ability to construct with control device, install in available space, and operate within proposed levels:

F. Describe the control technology selected:

1. Control Device:

2. Efficiency:<sup>1</sup>

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:<sup>2</sup>

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

<sup>1</sup>Explain method of determining efficiency.

<sup>2</sup>Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager: \_\_\_\_\_

(6) Telephone No.: \_\_\_\_\_

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration

_____	_____
_____	_____
_____	_____

(8) Process Rate:<sup>1</sup>

b. (1) Company: \_\_\_\_\_

(2) Mailing Address: \_\_\_\_\_

(3) City: \_\_\_\_\_

(4) State: \_\_\_\_\_

(5) Environmental Manager: \_\_\_\_\_

(6) Telephone No.: \_\_\_\_\_

(7) Emissions:<sup>1</sup>

Contaminant

Rate or Concentration

_____	_____
_____	_____
_____	_____

(8) Process Rate:<sup>1</sup>

10. Reason for selection and description of systems:

<sup>1</sup>Applicant must provide this information when available. Should this information not be available, applicant must state the reason(s) why.

### SECTION VII - PREVENTION OF SIGNIFICANT DETERIORATION

#### A. Company Monitored Data

1. \_\_\_\_\_ no. sites \_\_\_\_\_ TSP \_\_\_\_\_ ( ) SO<sub>2</sub> \_\_\_\_\_ Wind spd/dir

Period of Monitoring \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year

Other data recorded \_\_\_\_\_

Attach all data or statistical summaries to this application.

\*Specify bubbler (B) or continuous (C).

2. Instrumentation, Field and Laboratory

- a. Was instrumentation EPA referenced or its equivalent? [ ] Yes [ ] No
- b. Was instrumentation calibrated in accordance with Department procedures?  
[ ] Yes [ ] No [ ] Unknown

3. Meteorological Data Used for Air Quality Modeling

- 1. \_\_\_\_\_ Year(s) of data from \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_ to \_\_\_\_\_ / \_\_\_\_\_ / \_\_\_\_\_  
month day year month day year
- 2. Surface data obtained from (location) \_\_\_\_\_
- 3. Upper air (mixing height) data obtained from (location) \_\_\_\_\_
- 4. Stability wind rose (STAR) data obtained from (location) \_\_\_\_\_

C. Computer Models Used

- 1. \_\_\_\_\_ Modified? If yes, attach description.
- 2. \_\_\_\_\_ Modified? If yes, attach description.
- 3. \_\_\_\_\_ Modified? If yes, attach description.
- 4. \_\_\_\_\_ Modified? If yes, attach description.

Attach copies of all final model runs showing input data, receptor locations, and principle output tables.

D. Applicants Maximum Allowable Emission Data

Pollutant	Emission Rate
TSP	_____ grams/sec
SO <sub>2</sub>	_____ grams/sec

E. Emission Data Used in Modeling

Attach list of emission sources. Emission data required is source name, description of point source (on NEDS point number), UTM coordinates, stack data, allowable emissions, and normal operating time.

F. Attach all other information supportive to the PSD review.

G. Discuss the social and economic impact of the selected technology versus other applicable technologies (i.e., jobs, payroll, production, taxes, energy, etc.). Include assessment of the environmental impact of the sources.

H. Attach scientific, engineering, and technical material, reports, publications, journals, and other competent relevant information describing the theory and application of the requested best available control technology.

SECTION V  
(Supplemental Information)

1. Not applicable.
2. Basis of emissions estimates: See attached AP-42 calculations.

Internal Floating Roof with Vapor Seals will be installed in Tank #5. Construction drawings will be submitted prior to operation of the tank to show compliance with New Source Performance Standards. Vapor seals will be either liquid-mounted single seal or a secondary seal with vapor-mounted primary seal.

For operation of Tanks 1 and 2, the tanks are to be used for storage of diesel oil which has a true vapor pressure of approximately 0.009 psia. Storage of this low vapor pressure material is in compliance with all New Source Performance Standards promulgated by USEPA.

3. Basis of potential discharge: See attached AP-42 calculations.
4. An internal floating roof with a vapor seal system will be installed in Tank No. 5 in compliance with 40 CFRKb. Construction drawings showing details of roof and seal system will be submitted prior to operation.
5. Control device efficiency is an estimate based upon information from AP-42.
6. Typical Flow Diagram attached.
7. Map attached.
8. Facility Drawing attached.
9. Check for \$340 attached.
10. N/A. No construction required for Tanks No. 1 and 2. Tanks comply with applicable NSPS for storage of diesel.

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DATE

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DRK

11/28/88

1 OF

SUBJECT

AP-42 Emissions Calculations

W O / A F E. NO

Tank #1

$$L_B + L_w = L_T$$

$$L_B = 2.26 \times 10^{-2} M_v \left( \frac{P}{P_A - P} \right)^{0.68} D^{1.73} H^{0.51} \Delta T^{0.50} F_p C K_c$$

where

$$M_v = 130$$

$$\Delta T = 18^\circ F$$

$$P = 9.0 \times 10^{-3} \text{ psia}$$

$$F_p = 1.0$$

$$P_A = 14.696 \text{ psia}$$

$$C = 1.0$$

$$D = 120 \text{ ft}$$

$$K_c = 1.0$$

$$H = 20 \text{ ft}$$

$$L_B = 2.26 \times 10^{-2} \cdot 130 \cdot \left( \frac{9 \times 10^{-3}}{14.696 - 9 \times 10^{-3}} \right)^{0.68} \cdot 120^{1.73} \cdot 20^{0.51} \cdot 18^{0.50} \cdot 1.0 \cdot 1.0 \cdot 1.0$$

$$= \boxed{1484 \text{ lb/yr}} \text{ for Tank No. 1, Breathing Losses}$$

$$L_w = 2.40 \times 10^{-5} M_v P V N K_n K_c$$

$$M_v = 130$$

$$P = 9.0 \times 10^{-3} \text{ psia}$$

$$V \cdot N = 35 \times 10^6 \text{ gallons per year}$$

$$K_n = 1.00$$

$$K_c = 1.00$$

$$L_w = 2.40 \times 10^{-5} \cdot 130 \cdot 9 \times 10^{-3} \cdot 35 \times 10^6 \cdot 1.0 \cdot 1.0$$

$$= \boxed{983 \text{ lb/yr}} \text{ for Tank No. 1, Working Losses}$$

$$L_T = L_B + L_w = 1484 + 983$$

$$= \boxed{2467 \text{ lb/yr}} \leftarrow \text{Estimated Annual Emissions, Tank No. 1}$$

$$= 123 \text{ Ton/yr}$$

$$= 0.28 \text{ lb/hr}$$



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SUBJECT

AP-42 Emission Calculation

W O / A F E. NO

Tank #2

$$L_T = L_B + L_w$$

$$L_B = 2.26 \times 10^{-2} M_v \left( \frac{P}{P_A - P} \right)^{0.68} D^{1.73} H^{0.51} \Delta T^{0.50} F_p C K_c$$

$$M_v = 130$$

$$\Delta T = 18^\circ F$$

$$P = 9.0 \times 10^{-3} \text{ psia}$$

$$F_p = 1.0$$

$$P_A = 14.696 \text{ psia}$$

$$C = 1.0$$

$$D = 120 \text{ ft}$$

$$K_c = 1.0$$

$$H = 16 \text{ ft}$$

$$L_B = 2.26 \times 10^{-2} \cdot 130 \cdot \left( \frac{9 \times 10^{-3}}{14.696 - 9 \times 10^{-3}} \right)^{0.68} \cdot 120^{1.73} \cdot 16^{0.51} \cdot 18^{0.50} \cdot 1.0 \cdot 1.0 \cdot 1.0$$

$$= \boxed{1325 \text{ lb/yr}} \text{ — Tank No 2 Breathing Losses}$$

$$L_w = 2.40 \times 10^{-5} M_v P V N K_n K_c$$

$$M_v = 130$$

$$P = 9.0 \times 10^{-3} \text{ psia}$$

$$V \cdot N = 35 \times 10^6 \text{ gallons per year}$$

$$K_n = 1.00$$

$$K_c = 1.00$$

$$L_w = 2.40 \times 10^{-5} \cdot 130 \cdot 9.0 \times 10^{-3} \cdot 35 \times 10^6 \cdot 1.0 \cdot 1.0$$

$$= \boxed{983 \text{ lb/yr}} \text{ Tank No 2 Working Losses}$$

$$L_T = L_B + L_w$$

$$= 1325 + 983$$

$$= \boxed{2308 \text{ lb/yr}}$$

← Estimated Annual Emissions, Tank No. 2

$$= 1.15 \text{ Ton/yr}$$

$$= 0.26 \text{ lb/hr}$$

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SUBJECT

AP-42 Emission Calculation

W O / A F E. NO

Tank No. 5

$$L_T = L_R + L_W + L_F + L_D$$

$$L_R = K_S V^n P^* D M_V K_C$$

$$K_S = 3.0$$

$V = N/A$  for internal floating roof

$n = 0$  " " " "

$$P^* = \frac{P/P_A}{\left(1 + \left(1 - \frac{P}{P_A}\right)^{0.5}\right)^2}$$

$$P = 7.2 \text{ psia}$$

$$P_A = 14.7 \text{ psia}$$

$$P^* = \frac{7.2/14.7}{\left[1 + \left(1 - \frac{7.2}{14.7}\right)^{0.5}\right]^2} = 0.167$$

$$D = 120 \text{ ft}$$

$$M_V = 64$$

$$K_C = 1.00$$

$$L_R = 3.0 \cdot (V)^0 \cdot 0.167 \cdot 120 \cdot 64 \cdot 1.00$$

$$= \boxed{3840 \text{ lb/yr}} \quad \text{Tank 5 Rim Losses}$$

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SUBJECT

AP-42 Emission Calculation

W O / A F E. NO

Tank 5 (cont'd)

$$L_w = \frac{0.943 \cdot Q \cdot C \cdot W_L}{D} \left[ 1 + \frac{N_c F_c}{D} \right]$$

$$Q = 952,000 \text{ Bbl/yr} \quad (40 \times 10^6 \text{ gallons/yr})$$

$$C = 0.0015 \quad (\text{assume light rust})$$

$$W_L = 5.6 \text{ lb/gal}$$

$$D = 120 \text{ ft}$$

$$N_c = 0 \quad (\text{Cone Roof})$$

$$F_c = \text{N/A}$$

$$L_w = \frac{0.943 \cdot 952000 \cdot 0.0015 \cdot 5.6}{120} \cdot [1 + 0]$$

$$= \boxed{63 \text{ lb/yr}} \quad \text{With drawal Losses}$$

$$L_F = F_F \cdot P^* \cdot M_v \cdot K_c$$

$$F_F \approx 0.032 D^2 + 0.79 D + 105.2$$

$$D = 120 \text{ ft}$$

$$\text{so } F_F \approx 390.0$$

$$P^* = 0.167 \quad (\text{See Rim Loss Calculation})$$

$$M_v = 64$$

$$K_c = 1.0$$

$$L_F = 390 \cdot 0.167 \cdot 64 \cdot 1.0$$

$$= \boxed{4160 \text{ lb/yr}} \quad \text{Fitting Loss}$$

$$L_D = 0 \quad (\text{Internal floating roof with welded seams})$$

$$L_T = L_R + L_w + L_F + L_D$$

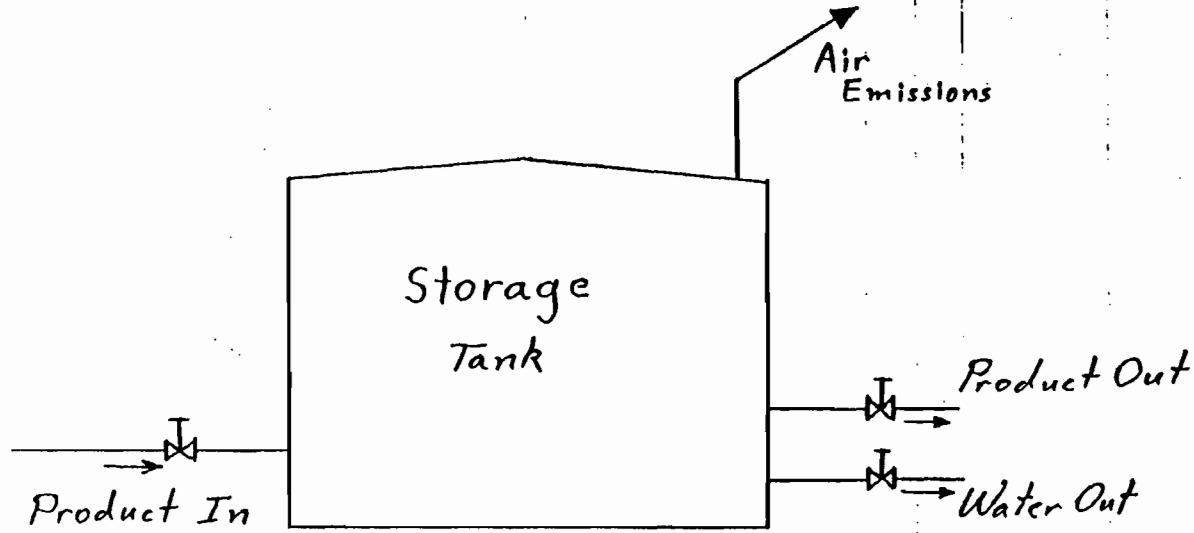
$$= 3840 + 63 + 4160$$

$$= \boxed{8063 \text{ lb/yr}} \quad \leftarrow \text{Estimated Annual Emissions, Tank No. 5}$$

$$= 4.03 \text{ Ton/yr}$$

$$= 0.92 \text{ lb/hr}$$

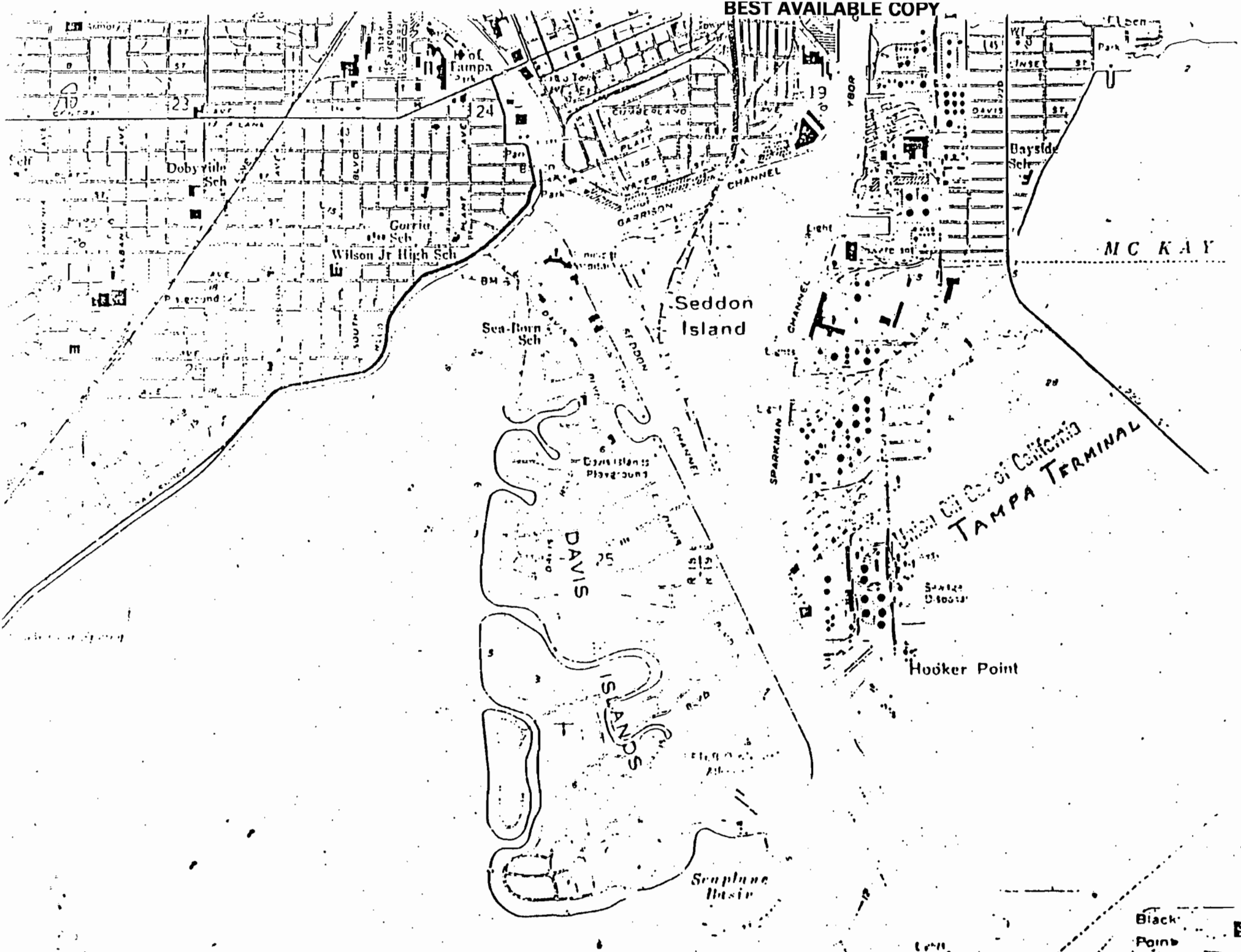
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SUBJECT		W O / A F E. NO.	
Flow Diagram for Typical Storage Tank			



Flow Diagram  
Typical Storage Tank

FIGURE 1

DRK  
11/28/88



Dobyville Sch

Wilson Jr High Sch

Sea-Born Sch

Seddon Island

DAVIS

ISLANDS

Sculpture Basin

Hooker Point

U.S. Coast of California  
TAMPA TERMINAL

MCKAY

Black Point



**UNOCAL** 76

Unocal Chemicals Division  
Union Oil Company of California  
1345 North Meacham Road  
Schaumburg, Illinois 60196

0188

MELLON BANK N.A.  
MELLON SQUARE OFFICE

240280

60-160  
433

PAY EXACTLY:  
TWO HUNDRED AND NO/100 DOLLARS.

DATE  
11/29 1988

AMOUNT  
\$\*\*\*\*\*200.00

PAY  
TO THE  
ORDER  
OF

FLORIDA DEPARTMENT OF  
ENVIRONMENTAL REGULATION  
4520 OAK FAIR BLVD  
TAMPA FL 33610

*G. H. Haines*  
24  
TREASURER

**CERTIFIED**

VENDOR NUMBER      CHECK NUMBER      CHECK DATE  
006989                      240280                      11/29 1988

DETACH AND RETAIN THIS STATEMENT  
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.  
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

**UNOCAL** 76

INVOICE DATE	INVOICE	CO NUMBER	AMOUNT
11/21 1988	112188	0020054230	200.00

*Ext 2569*

*(3/2) 330-0076 Chem D.V.*

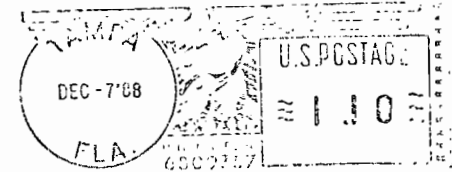
*Air Permit Fee Hillsborough*

*(3/2) 619-2613 Dancely*

TOTAL                      200.00

RECEIVED  
ENVIRONMENTAL  
REGULATION  
NOV 30 1988  
PM 3:40

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION  
SOUTHWEST DISTRICT  
4520 OAK FAIR BOULEVARD  
TAMPA, FLORIDA 33610-7347



Florida Department of Environmental Reg.  
2600 Blair Stone Road  
Tallahassee, FL 32399

Attention: ~~Janette Eilsinger~~  
Underground Storage Tank  
Registration Fee

*Went*



BEST AVAILABLE COPY

0188

70-2369  
719

Union Oil Company of California  
1650 East Golf Road  
Schaumburg, Illinois 60196

No 0906

UNOCAL

December 14, 1988 No. \_\_\_\_\_

ENDORSEMENT THIS CHECK IS ACCEPTED IN  
PAYMENT OF THE FOLLOWING ACCOUNT

DATE	AMOUNT
2/14/88	200.00
Permit application	
Modify air	
Pollution Tampa	
TOTAL OF INVOICES	
S	% DISCOUNT
S	
TOTAL DEDUCTIONS	
AMOUNT OF CHECK	

Pay to the order of Florida Dept Environmental Regulations \$ 200.00

EXACTLY \$200 AND 00 CTS

Dollars

Continental Bank  
of Oakbrook Terrace  
Oakbrook Terrace, IL 60181  
or if desired  
Continental Bank  
Chicago, IL 60693  
Field Disbursement Account

[REDACTED]

*Need to  
refund \$200*

Mr. Bill Thomas  
State of Florida  
Department of Environmental  
Regulation  
2600 Blair Stone Road  
Tallahassee, FL 32301

1032

RE: Application for Permit to Modify Air  
Pollution Source  
Unocal Tampa Terminal  
Permit No. A029-131987

Dear Mr. Thomas:

Enclosed are two copies of our application for a permit to modify the operating permit for Unocal's Tampa Terminal.

The proposed project is to convert existing Tanks No. 1 and 2 from No. 6 fuel oil to diesel oil service, and to convert existing Tank No. 5 from diesel oil to gasoline service. There is a small increase in emission associated with the change of Tanks No. 1 and 2. These tanks, however, are exempt from NSPS requirements due to the low vapor pressure of the material to be stored.

The modification to Tank No. 5 will result in a somewhat larger increase in emission. The emission from Tank No. 5 will be controlled as required by Federal New Source Performance Standards. This will be accomplished by installation of a Petrex internal floating roof system with a vapor seal system which complies with NSPS.

Also enclosed with this application package is our check in the amount of \$200 to cover the application fee.

If you have any questions, please call me at 404/320-2272.

Very truly yours,  
  
David R. Keasey  
Manager, Marketing Environmental

DRK/cjf  
Enclosures  
cc: W. Gerdon  
J. Halligan  
Victor San Agustin - Hillsborough  
County w/application