

Check Sheet

Company Name: Louis Druffus Energy  
Permit Number: \_\_\_\_\_  
PSD Number: General  
Permit Engineer: \_\_\_\_\_

**Application:**

- Initial Application
- Incompleteness Letters
- Responses
- Waiver of Department Action
- Department Response
- Other

**Cross References:**

- 
- 
- 

*No Activity*

**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

STATE OF FLORIDA  
DEPARTMENT OF ENVIRONMENTAL REGULATION

RECEIVED

NORTHWEST DISTRICT  
160 GOVERNMENTAL CENTER  
PENSACOLA FLORIDA 32501-5794



NOV 1 1994

E.P.C. OF H.C.  
AIR PROGRAM

SOURCE TYPE: BULK PETROLUUM STORAGE TERMINAL [ ] New<sup>1</sup> [X] Existing<sup>1</sup>  
APPLICATION TYPE: [X] Construction [ ] Operation [ ] Modification  
COMPANY NAME: LOUIS DREYFUS ENERGY COUNTY: HILLSBOROUGH

Identify the specific emission point source(s) addressed in this application (i.e. Lime Kiln No. 4 with Venturi Scrubber; Peaking Unit No. 2, Gas Fired) TERMINAL

SOURCE LOCATION: Street 1523 PORT AVENUE City TAMPA  
UTM: East 17-358.0 EAST North 3089-1 NORTH  
Latitude 27 ° 55 ' 15 "N Longitude 82 ° 26 ' 35 "W

APPLICANT NAME AND TITLE: W. E. HERCHLINE, GENERAL MANAGER TERMINAL OPERATIONS

APPLICANT ADDRESS: 8800 ROSWELL ROAD, SUITE 200 ATLANTA, GA 30350-1843

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative\* of LOUIS DREYFUS ENERGY TAMPA TERMINAL  
I certify that the statements made in this application for a Permit to Construct 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

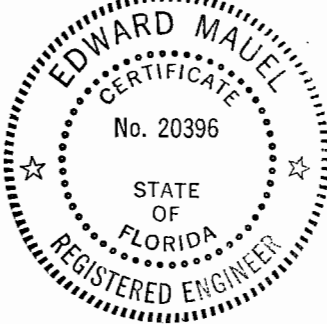
Signed: W. E. Herchline  
W. E. HERCHLINE, GENERAL MANAGER, TERMINAL  
Name and Title (Please Type) OPERATIONS  
Date: 10/27/94 Telephone No. 404/518-3664

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 Mauel

EDWARD MAUEL  
Name (Please Type)

\_\_\_\_\_  
Company Name (Please Type)

2301 WESTWOOD LANE, PALATINE, IL 60067  
Mailing Address (Please Type)

Florida Registration No. 20396 Date: 10/28/94 Telephone No. 708/397-1224

**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.

REQUEST CONSOLIDATION OF ALL OPERATING PERMITS SHOWN ON EXHIBIT A INTO 1 PERMIT  
AND TO INCREASE THROUGHPUT LIMITATION AS SHOWN ON EXHIBIT B. ALSO TO INCREASE  
EMISSION CAP ON PERMITS.

B. Schedule of project covered in this application (Construction Permit Application Only)

Start of Construction \_\_\_\_\_ Completion of Construction \_\_\_\_\_

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.)

NA

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

|                    |                          |                    |                           |
|--------------------|--------------------------|--------------------|---------------------------|
| <u>A029-210986</u> | <u>5/28/92 - 6/1/97</u>  | <u>A029-235049</u> | <u>10/12/93 - 9/30/98</u> |
| <u>A029-210985</u> | <u>6/10/92 - 6/15/97</u> | <u>A029-191074</u> | <u>3/22/91 - 3/21/96</u>  |
| <u>A029-210984</u> | <u>6/10/92 - 6/15/97</u> | <u>A029-169660</u> | <u>8/6/90 - 7/4/95</u>    |

E. Requested permitted equipment operating time: hrs/day 24; days/wk 7; wks/yr 52 ;  
if power plant, hrs/yr \_\_\_\_\_; if seasonal, describe: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

F. If this is a new source or major modification, answer the following questions.  
(Yes or No)

1. Is this source in a non-attainment area for a particular pollutant? NO
    - a. If yes, has "offset" been applied? \_\_\_\_\_
    - b. If yes, has "Lowest Achievable Emission Rate" been applied? \_\_\_\_\_
    - c. If yes, list non-attainment pollutants. \_\_\_\_\_
  2. Does best available control technology (BACT) apply to this source?  
If yes, see Section VI. NO
  3. Does the State "Prevention of Significant Deterioration" (PSD)  
requirement apply to this source? If yes, see Sections VI and VII. NO
  4. Do "Standards of Performance for New Stationary Sources" (NSPS)  
apply to this source? NO
  5. Do "National Emission Standards for Hazardous Air Pollutants"  
(NESHAP) apply to this source? NO
- H. Do "Reasonably Available Control Technology" (RACT) requirements apply  
to this source? YES
- a. If yes, for what pollutants? VOLATILE ORGANIC COMPOUNDS

b. If yes, in addition to the information required in this form,  
any information requested in Rule 17-2.650 must be submitted.

Attach all supportive information related to any answer of "Yes". Attach any justifi-  
cation for any answer of "No" that might be considered questionable.

**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 - lbs/hr | Relate to Flow Diagram |
|---------------|--------------|------|---------------------------|------------------------|
|               | Type         | % Wt |                           |                        |
| SEE EXHIBIT B |              |      |                           |                        |
|               |              |      |                           |                        |
|               |              |      |                           |                        |
|               |              |      |                           |                        |
|               |              |      |                           |                        |

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

1. Total Process Input Rate (lbs/hr): \_\_\_\_\_

2. Product Weight (lbs/hr): \_\_\_\_\_

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 <sup>2</sup> 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/yr                          | T/yr |                        |
| VOC                 | SEE ATTACHED          |             | CALCULATIONS                                     |  |                                 |      |                        |
|                     |                       |             |  |  |                                 |      |                        |
|                     |                       |             |  |  |                                 |      |                        |
|                     |                       |             |  |  |                                 |      |                        |
|                     |                       |             |  |  |                                 |      |                        |

<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).

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

| Name and Type<br>(Model & Serial No.) | Contaminant | Efficiency | Range of Particles<br>Size Collected<br>(in microns)<br>(If applicable) | Basis for<br>Efficiency<br>(Section V<br>Item 5) |
|---------------------------------------|-------------|------------|---|--|
| NA                                    |             |            |   |  |
|                                       |             |            |   |  |
|                                       |             |            |   |  |
|                                       |             |            |   |  |
|                                       |             |            |   |  |
|                                       |             |            |   |  |

E. Fuels

| Type (Be Specific) | Consumption* |         | Maximum Heat Input<br>(MMBTU/hr) |
|--------------------|--------------|---------|----------------------------------|
|                    | avg/hr       | max./hr |                                  |
| NA                 |              |         |                                  |
|                    |              |         |                                  |
|                    |              |         |                                  |
|                    |              |         |                                  |

\*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 NA Maximum \_\_\_\_\_

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

CONTAMINATED WATER IS COLLECTED AND DISPOSED OFFSITE. SOLID WASTES ARE DISPOSED  
OFFSITE AT AN APPROPRIATE SOLID WASTE OR HAZARDOUS WASTE DISPOSAL FACILITY.

H. Emission Stack Geometry and Flow Characteristics (Provide data for each stack):

Stack Height: NA ft. Stack Diameter: \_\_\_\_\_ ft.  
 Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM Gas Exit Temperature: \_\_\_\_\_ °F.  
 Water Vapor Content: \_\_\_\_\_ % Velocity: \_\_\_\_\_ FPS

SECTION IV: INCINERATOR INFORMATION

NA

| Type of Waste            | Type 0 (Plastics) | Type I (Rubbish) | Type II (Refuse) | Type III (Garbage) | Type IV (Pathological) | Type V (Liq. & Gas By-prod.) | Type VI (Solid By-prod.) |
|--------------------------|-------------------|------------------|------------------|--------------------|------------------------|------------------------------|--------------------------|
| Actual lb/hr Incinerated |                   |                  |                  |                    |                        |                              |                          |
| Uncontrolled (lbs/hr)    |                   |                  |                  |                    |                        |                              |                          |

Description of Waste \_\_\_\_\_

Total Weight Incinerated (lbs/hr) \_\_\_\_\_ Design Capacity (lbs/hr) \_\_\_\_\_

Approximate Number of Hours of Operation per day \_\_\_\_\_ day/wk \_\_\_\_\_ wks/yr. \_\_\_\_\_

Manufacturer \_\_\_\_\_

Date Constructed \_\_\_\_\_ Model No. \_\_\_\_\_

|                   | Volume (ft) <sup>3</sup> | Heat Release (BTU/hr) | Fuel |        | Temperature (°F) |
|-------------------|--------------------------|-----------------------|------|--------|------------------|
|                   |                          |                       | Type | BTU/hr |                  |
| Primary Chamber   |                          |                       |      |        |                  |
| Secondary Chamber |                          |                       |      |        |                  |

Stack Height: \_\_\_\_\_ ft. Stack Diameter: \_\_\_\_\_ Stack Temp. \_\_\_\_\_

Gas Flow Rate: \_\_\_\_\_ ACFM \_\_\_\_\_ DSCFM\* Velocity: \_\_\_\_\_ FPS

\*If 50 or more tons per day design capacity, submit the emissions rate in grains per standard cubic foot dry gas corrected to 50% excess air.

Type of pollution control device:  Cyclone  Wet Scrubber  Afterburner  
 Other (specify) \_\_\_\_\_

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

| 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

| 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

B. 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 <sup>2</sup> | _____ 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.

**EXHIBIT A**

***EXISTING PERMITS***

| <b>PERMIT NUMBER</b> | <b>EXPIRES</b> | <b>SOURCE</b>  | <b>PRODUCT</b>    | <b>TANK TYPE</b>        | <b>THRUPUT LIMIT</b> | <b>EMISSION LIMIT</b>  |
|----------------------|----------------|----------------|-------------------|-------------------------|----------------------|------------------------|
| <b>A029-210986</b>   | <b>6/01/97</b> | <b>8 RACKS</b> | <b>All</b>        | <b>-</b>                | <b>529,580,000</b>   | <b>80 mg/l</b>         |
| <b>A029-210985</b>   | <b>6/15/97</b> | <b>Tank 3</b>  | <b>Premium</b>    | <b>Internal Floater</b> | <b>71,918,796</b>    | <b>11.91 tons/year</b> |
|                      |                | <b>Tank 4</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>51,503,606</b>    | <b>15.24 tons/year</b> |
|                      |                | <b>Tank 6</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>68,881,718</b>    | <b>9.95 tons/year</b>  |
| <b>A029-210984</b>   | <b>6/15/97</b> | <b>Tank 1</b>  | <b>LS Diesel</b>  | <b>Fixed Roof</b>       | <b>62,704,200</b>    | <b>1.88 tons/year</b>  |
|                      |                | <b>Tank 2</b>  | <b>HS Diesel</b>  | <b>Fixed Roof</b>       | <b>47,832,700</b>    | <b>1.54 tons/year</b>  |
| <b>A029-235049</b>   | <b>9/30/98</b> | <b>Tank 20</b> | <b>Additive</b>   | <b>Fixed Roof</b>       | <b>108,000</b>       | <b>.08 tons/year</b>   |
| <b>A029-191074</b>   | <b>3/21/96</b> | <b>Tank 7</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>106,100,000</b>   | <b>15.3 tons/year</b>  |
| <b>A029-169660</b>   | <b>7/04/95</b> | <b>Tank 5</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>40,000,000</b>    | <b>12.16 tons/year</b> |

**EXHIBIT B**

***PROPOSED PERMIT THRUPUTS***

| <b>SOURCE</b>  | <b>PRODUCT</b>    | <b>TANK TYPE</b>        | <b>PROPOSED THRUPUT</b> |
|----------------|-------------------|-------------------------|-------------------------|
| <b>8 RACKS</b> | <b>All</b>        | <b>-</b>                | <b>903,098,040</b>      |
| <b>Tank 3</b>  | <b>Premium</b>    | <b>Internal Floater</b> | <b>143,837,592</b>      |
| <b>Tank 4</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>103,007,212</b>      |
| <b>Tank 6</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>137,763,436</b>      |
| <b>Tank 1</b>  | <b>LS Diesel</b>  | <b>Fixed Roof</b>       | <b>125,408,400</b>      |
| <b>Tank 2</b>  | <b>HS Diesel</b>  | <b>Fixed Roof</b>       | <b>95,665,400</b>       |
| <b>Tank 20</b> | <b>Additive</b>   | <b>Fixed Roof</b>       | <b>216,000</b>          |
| <b>Tank 7</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>212,200,000</b>      |
| <b>Tank 5</b>  | <b>UL Regular</b> | <b>Internal Floater</b> | <b>80,000,000</b>       |

## RACK EMISSION CALCULATION - POTENTIAL

VOC from control equipment shall not exceed 80 milligrams per liter of gasoline loaded (4.7 grains per gallon).

Gasoline loaded: 288,658,910 gallons (based upon 2 1/2 times 1993 volume)

$$\text{VOC} = 288,658,910 \text{ gallons} \times \frac{4.7 \text{ grains}}{\text{gallon}} \times \frac{1.428 \times 10^{-4} \text{ lb.}}{\text{grain}} \times \frac{1 \text{ ton}}{2000 \text{ lb.}}$$

$$\text{VOC} = 96.87 \text{ tons}$$



**TANKS PROGRAM 2.0**  
**EMISSIONS REPORT - DETAIL FORMAT**  
**TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

**10/27/94**  
**PAGE 1**

**Identification**

Identification No.: TANK #1  
City: Tampa  
State: FL  
Company: LDEC  
Type of Tank: Vertical Fixed Roof

**Tank Dimensions**

Shell Height (ft): 40  
Diameter (ft): 120  
Liquid Height (ft): 40  
Avg. Liquid Height (ft): 35  
Volume (gallons): 3276000  
Turnovers: 38  
Net Throughput (gal/yr): 125143200

**Paint Characteristics**

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

**Roof Characteristics**

Type: Cone  
Height (ft): 20.00  
Radius (ft) (Dome Roof): 0.00  
Slope (ft/ft) (Cone Roof): 0.3333

**Breather Vent Settings**

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

Meteorological Data Used in Emission Calculations: Tampa, Florida

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 LIQUID CONTENTS OF STORAGE TANK

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| Mixture/Component         | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk Vapor Pressures (psia) |        |        | Vapor Mol. Weight | Liquid Mass Fract. | Vapor Mass Fract. | Mol. Weight Calculations | Basis for Vapor Pressure             |
|---------------------------|-------|---|-------|-------|------------------------------------|--------|--------|-------------------|--------------------|-------------------|--------------------------|--------------------------------------|
|                           |       | Avg.                                    | Min.  | Max.  | Temp. (deg F)                      | Avg.   | Min.   |                   |                    |                   |                          |                                      |
| Distillate fuel oil no. 2 | All   | 74.01                                   | 68.83 | 79.19 | 72.02                              | 0.0102 | 0.0086 | 0.0119            | 130.000            |                   |                          | 130.00 Option 4: A=12.1010, B=8907.0 |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

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**Annual Emission Calculations**

|                                 |          |
|---------------------------------|----------|
| Standing Losses (lb):           | 385.9338 |
| Vapor Space Volume (cu ft):     | 131946.1 |
| Vapor Density (lb/cu ft):       | 0.0002   |
| Vapor Space Expansion Factor:   | 0.034946 |
| Vented Vapor Saturation Factor: | 0.993754 |

**Tank Vapor Space Volume**

|                             |          |
|-----------------------------|----------|
| Vapor Space Volume (cu ft): | 131946.1 |
| Tank Diameter (ft):         | 120      |
| Vapor Space Outage (ft):    | 11.67    |
| Tank Shell Height (ft):     | 40       |
| Average Liquid Height (ft): | 35       |
| Roof Outage (ft):           | 6.67     |

**Roof Outage (Cone Roof)**

|                     |         |
|---------------------|---------|
| Roof Outage (ft):   | 6.67    |
| Roof Height (ft):   | 20.000  |
| Roof Slope (ft/ft): | 0.33333 |
| Shell Radius (ft):  | 60      |

**Vapor Density**

|  |            |
|--|------------|
| Vapor Density (lb/cu ft):  | 0.0002     |
| Vapor Molecular Weight (lb/lb-mole):                               | 130.000000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.010165   |
| Daily Avg. Liquid Surface Temp. (deg. R):                          | 533.68     |
| Daily Average Ambient Temp. (deg. R):                              | 531.67     |
| Ideal Gas Constant R (psia cuft / (lb-mole-deg R)):                | 10.731     |
| Liquid Bulk Temperature (deg. R):                                  | 531.69     |
| Tank Paint Solar Absorptance (Shell):                              | 0.17       |
| Tank Paint Solar Absorptance (Roof):                               | 0.17       |
| Daily Total Solar Insolation Factor (Btu/sqftday):                 | 1492.00    |

**Vapor Space Expansion Factor**

|  |          |
|--|----------|
| Vapor Space Expansion Factor:                                      | 0.034946 |
| Daily Vapor Temperature Range (deg.R):                             | 20.71    |
| Daily Vapor Pressure Range (psia):                                 | 0.003303 |
| Breather Vent Press. Setting Range (psia):                         | 0.06     |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.010165 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.008631 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.011934 |
| Daily Avg. Liquid Surface Temp. (deg R):                           | 533.68   |
| Daily Min. Liquid Surface Temp. (deg R):                           | 528.50   |
| Daily Max. Liquid Surface Temp. (deg R):                           | 538.86   |
| Daily Ambient Temp. Range (deg.R):                                 | 18.90    |

TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)

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Annual Emission Calculations

Vented Vapor Saturation Factor  
Vented Vapor Saturation Factor: 0.993754  
Vapor Pressure at Daily Average Liquid  
Surface Temperature (psia): 0.010165  
Vapor Space Outage (ft): 11.67

Withdrawal Losses (lb): 3850.9072  
Vapor Molecular Weight (lb/lb-mole): 130.000000  
Vapor Pressure at Daily Average Liquid  
Surface Temperature (psia): 0.010165  
Annual Net Throughput (gal/yr): 125143200  
Turnover Factor: 0.9780  
Maximum Liquid Volume (cuft): 452389  
Maximum Liquid Height (ft): 40  
Tank Diameter (ft): 120  
Working Loss Product Factor: 1.00

Total Losses (lb): 4236.84

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EMISSIONS REPORT - DETAIL FORMAT  
INDIVIDUAL TANK EMISSION TOTALS

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Annual Emissions Report

| Liquid Contents           | Losses (lbs.): |            | Total   |
|---------------------------|----------------|------------|---------|
|                           | Standing       | Withdrawal |         |
| -----                     | -----          | -----      | -----   |
| Distillate fuel oil no. 2 | 385.93         | 3850.91    | 4236.84 |
| Total:                    | 385.93         | 3850.91    | 4236.84 |

**TANKS PROGRAM 2.0**  
**EMISSIONS REPORT - DETAIL FORMAT**  
**TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

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**PAGE 1**

**Identification**

Identification No.: TANK #2  
City: Tampa  
State: FL  
Company: LDEC  
Type of Tank: Vertical Fixed Roof

**Tank Dimensions**

Shell Height (ft): 40  
Diameter (ft): 120  
Liquid Height (ft): 40  
Avg. Liquid Height (ft): 35  
Volume (gallons): 2604000  
Turnovers: 37  
Net Throughput (gal/yr): 95665400

**Paint Characteristics**

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

**Roof Characteristics**

Type: Cone  
Height (ft): 20.00  
Radius (ft) (Dome Roof): 0.00  
Slope (ft/ft) (Cone Roof): 0.3333

**Breather Vent Settings**

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

Meteorological Data Used in Emission Calculations: Tampa, Florida

**TANKS PROGRAM 2.0**  
**EMISSIONS REPORT - DETAIL FORMAT**  
**LIQUID CONTENTS OF STORAGE TANK**

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| Mixture/Component         | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |        |        | Vapor   | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|---------------------------|-------|---|-------|-------|---------------|------------------------|--------|--------|---------|-------------|-------------|-------------|---------------------------------------|
|                           |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min.   | Max.   | Weight  | Mass Fract. | Mass Fract. |             |                                       |
| Distillate fuel oil no. 2 | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 0.0102                 | 0.0086 | 0.0119 | 130.000 |             |             | 130.00      | Option 4: A=12.1010, B=8907.0         |

TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)

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Annual Emission Calculations

|                                 |          |
|---------------------------------|----------|
| Standing Losses (lb):           | 385.9338 |
| Vapor Space Volume (cu ft):     | 131946.1 |
| Vapor Density (lb/cu ft):       | 0.0002   |
| Vapor Space Expansion Factor:   | 0.034946 |
| Vented Vapor Saturation Factor: | 0.993754 |

Tank Vapor Space Volume

|                             |          |
|-----------------------------|----------|
| Vapor Space Volume (cu ft): | 131946.1 |
| Tank Diameter (ft):         | 120      |
| Vapor Space Outage (ft):    | 11.67    |
| Tank Shell Height (ft):     | 40       |
| Average Liquid Height (ft): | 35       |
| Roof Outage (ft):           | 6.67     |

Roof Outage (Cone Roof)

|                     |         |
|---------------------|---------|
| Roof Outage (ft):   | 6.67    |
| Roof Height (ft):   | 20.000  |
| Roof Slope (ft/ft): | 0.33333 |
| Shell Radius (ft):  | 60      |

Vapor Density

|  |            |
|--|------------|
| Vapor Density (lb/cu ft):  | 0.0002     |
| Vapor Molecular Weight (lb/lb-mole):                               | 130.000000 |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.010165   |
| Daily Avg. Liquid Surface Temp. (deg. R):                          | 533.68     |
| Daily Average Ambient Temp. (deg. R):                              | 531.67     |
| Ideal Gas Constant R (psia cuft / (lb-mole-deg R)):                | 10.731     |
| Liquid Bulk Temperature (deg. R):                                  | 531.69     |
| Tank Paint Solar Absorptance (Shell):                              | 0.17       |
| Tank Paint Solar Absorptance (Roof):                               | 0.17       |
| Daily Total Solar Insolation Factor (Btu/sqftday):                 | 1492.00    |

Vapor Space Expansion Factor

|  |          |
|--|----------|
| Vapor Space Expansion Factor:                                      | 0.034946 |
| Daily Vapor Temperature Range (deg.R):                             | 20.71    |
| Daily Vapor Pressure Range (psia):                                 | 0.003303 |
| Breather Vent Press. Setting Range (psia):                         | 0.06     |
| Vapor Pressure at Daily Average Liquid Surface Temperature (psia): | 0.010165 |
| Vapor Pressure at Daily Minimum Liquid Surface Temperature (psia): | 0.008631 |
| Vapor Pressure at Daily Maximum Liquid Surface Temperature (psia): | 0.011934 |
| Daily Avg. Liquid Surface Temp. (deg R):                           | 533.68   |
| Daily Min. Liquid Surface Temp. (deg R):                           | 528.50   |
| Daily Max. Liquid Surface Temp. (deg R):                           | 538.86   |
| Daily Ambient Temp. Range (deg.R):                                 | 18.90    |



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EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)

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Annual Emission Calculations

Vented Vapor Saturation Factor  
Vented Vapor Saturation Factor: 0.993754  
Vapor Pressure at Daily Average Liquid  
Surface Temperature (psia): 0.010165  
Vapor Space Outage (ft): 11.67

Withdrawal Losses (lb): 3010.0144  
Vapor Molecular Weight (lb/lb-mole): 130.000000  
Vapor Pressure at Daily Average Liquid  
Surface Temperature (psia): 0.010165  
Annual Net Throughput (gal/yr): 95665400  
Turnover Factor: 1.0000  
Maximum Liquid Volume (cuft): 452389  
Maximum Liquid Height (ft): 40  
Tank Diameter (ft): 120  
Working Loss Product Factor: 1.00

Total Losses (lb): 3395.95

TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
INDIVIDUAL TANK EMISSION TOTALS

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Annual Emissions Report

| Liquid Contents           | Losses (lbs.): |            | Total   |
|---------------------------|----------------|------------|---------|
|                           | Standing       | Withdrawal |         |
| -----                     | -----          | -----      | -----   |
| Distillate fuel oil no. 2 | 385.93         | 3010.01    | 3395.95 |
| Total:                    | 385.93         | 3010.01    | 3395.95 |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

**10/27/94  
PAGE 1**

**Identification**

Identification No.: TANK #3  
 City: TAMPA  
 State: FL  
 Company: LDEC  
 Type of Tank: Internal Floating Roof

**Tank Dimensions**

Diameter (ft): 120  
 Volume(gallons): 2436000  
 Turnovers: 59

**Paint Characteristics**

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

**Rim-Seal System**

Primary Seal: Liquid-mounted  
 Secondary Seal: Y  
 Deck Type: Bolted

**Deck Characteristics**

Deck Fitting Category: Typical  
 Construction: Cont. Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 2262

| Deck Fitting/Status   | Quantity |
|---|----------|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        |
| Stub Drain (1-in. Diameter)/                                    | 116      |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        |
| Roof Leg or Hanger Well/Adjustable                              | 41       |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        |

Meteorological Data Used in Emission Calculations: Tampa, Florida

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 LIQUID CONTENTS OF STORAGE TANK

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 PAGE 2

| Mixture/Component | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |      |      | Vapor  | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---|-------|-------|---------------|------------------------|------|------|--------|-------------|-------------|-------------|---------------------------------------|
|                   |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min. | Max. | Weight | Mass Fract. | Mass Fract. |             |                                       |
| Gasoline (RVP 10) | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 6.6755                 | N/A  | N/A  | 66.000 |             |             | 66.00       | Option 4: RVP=10.00, ASTM Slope=2.5   |

**TANKS PROGRAM 2.0**  
**EMISSIONS REPORT - DETAIL FORMAT**  
**DETAIL CALCULATIONS (AP-42)**

**10/27/94**  
**PAGE 3**

Annual Emission Calculations

Rim Seal Losses (lb): 1903.2483  
 Seal Factor (lb-mole/ft yr): 1.6000  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Pressure at Daily Average Liquid  
 Surface Temperature (psia): 6.675534  
 Atmospheric Pressure (psia): 14.7  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

Withdrawal Losses (lb): 217.7178  
 Number of Columns: 7.0000  
 Effective Column Diameter (ft): 1.0000  
 Annual Net Throughput (gal/yr): 143724000  
 Shell Clingage Factor: 0.0015  
 Average Organic Liquid Density (lb/gal): 5.1000  
 Tank Diameter (ft): 120

Deck Fitting Losses (lb): 9256.5276  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000  
 Tot. Deck Fitting Loss Fact. (lb-mole/yr): 933.8000

Deck Seam Losses (lb): 9706.7952  
 Deck Seam Length (ft): 2262  
 Deck Seam Loss per Unit Length  
 Factor (lb-mole/ft-yr): 0.3400  
 Deck Seam Length Factor (ft/sqft): 0.2000  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

| Deck Fitting/Status   | Quantity | Deck Fitting<br>Loss Factor<br>KF (lb-mole/yr) |
|---|----------|--|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        | 0.70   |
| Stub Drain (1-in. Diameter)/                                    | 116      | 1.20   |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        | 12.00  |
| Roof Leg or Hanger Well/Adjustable                              | 41       | 7.90   |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        | 76.00  |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        | 47.00  |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        | 28.00  |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        | 25.00  |

Total Losses (lb): 21084.29

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 EMISSIONS REPORT - DETAIL FORMAT  
 INDIVIDUAL TANK EMISSION TOTALS

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Annual Emissions Report

| Liquid Contents   | Losses (lbs.):   |                |                |                | Total Standing  | Total           |
|-------------------|------------------|----------------|----------------|----------------|-----------------|-----------------|
|                   | Total Withdrawal | Rim-Seal       | Deck-Fitting   | Deck Seam      |                 |                 |
| Gasoline (RVP 10) | 217.72           | 1903.25        | 9256.53        | 9706.80        | 20866.57        | 21084.29        |
| <b>Total:</b>     | <b>217.72</b>    | <b>1903.25</b> | <b>9256.53</b> | <b>9706.80</b> | <b>20866.57</b> | <b>21084.29</b> |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

**10/27/94  
PAGE 1**

**Identification**

Identification No.: TANK #4  
 City: TAMPA  
 State: FL  
 Company: LDEC  
 Type of Tank: Internal Floating Roof

**Tank Dimensions**

Diameter (ft): 120  
 Volume(gallons): 2982000  
 Turnovers: 35

**Paint Characteristics**

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

**Rim-Seal System**

Primary Seal: Vapor-mounted  
 Secondary Seal: N  
 Deck Type: Bolted

**Deck Characteristics**

Deck Fitting Category: Typical  
 Construction: Cont. Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 2262

**Deck Fitting/Status**

**Quantity**

| Deck Fitting/Status   | Quantity |
|---|----------|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        |
| Stub Drain (1-in. Diameter)/                                    | 116      |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        |
| Roof Leg or Hanger Well/Adjustable                              | 41       |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        |

Meteorological Data Used in Emission Calculations: Tampa, Florida

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 LIQUID CONTENTS OF STORAGE TANK

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 PAGE 2

| Mixture/Component | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |      |      | Vapor       | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---|-------|-------|---------------|------------------------|------|------|-------------|-------------|-------------|-------------|---------------------------------------|
|                   |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min. | Max. | Mol. Weight | Mass Fract. | Mass Fract. |             |                                       |
| Gasoline (RVP 10) | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 6.6755                 | N/A  | N/A  | 66.000      |             |             | 66.00       | Option 4: RVP=10.00, ASTM Slope=2.5   |



**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

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PAGE 3**

Annual Emission Calculations

Rim Seal Losses (lb): 7969.8524  
 Seal Factor (lb-mole/ft yr): 6.7000  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Pressure at Daily Average Liquid Surface Temperature (psia): 6.675534  
 Atmospheric Pressure (psia): 14.7  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

Withdrawal Losses (lb): 156.2962  
 Number of Columns: 7.0000  
 Effective Column Diameter (ft): 1.0000  
 Annual Net Throughput (gal/yr): 103177200  
 Shell Clingage Factor: 0.0015  
 Average Organic Liquid Density (lb/gal): 5.1000  
 Tank Diameter (ft): 120

Deck Fitting Losses (lb): 9256.5276  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000  
 Tot. Deck Fitting Loss Fact. (lb-mole/yr): 933.8000

Deck Seam Losses (lb): 9706.7952  
 Deck Seam Length (ft): 2262  
 Deck Seam Loss per Unit Length Factor (lb-mole/ft-yr): 0.3400  
 Deck Seam Length Factor (ft/sqft): 0.2000  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

| Deck Fitting/Status   | Quantity | Deck Fitting Loss Factor KF (lb-mole/yr) |
|---|----------|--|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        | 0.70                                     |
| Stub Drain (1-in. Diameter)/                                    | 116      | 1.20                                     |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        | 12.00                                    |
| Roof Leg or Hanger Well/Adjustable                              | 41       | 7.90                                     |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        | 76.00                                    |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        | 47.00                                    |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        | 28.00                                    |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        | 25.00                                    |

Total Losses (lb): 27089.47

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 EMISSIONS REPORT - DETAIL FORMAT  
 INDIVIDUAL TANK EMISSION TOTALS

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 PAGE 4

Annual Emissions Report

| Liquid Contents   | Losses (lbs.):      |                |                |                | Total<br>Standing | Total           |
|-------------------|---------------------|----------------|----------------|----------------|-------------------|-----------------|
|                   | Total<br>Withdrawal | Rim-Seal       | Deck-Fitting   | Deck Seam      |                   |                 |
| Gasoline (RVP 10) | 156.30              | 7969.85        | 9256.53        | 9706.80        | 26933.18          | 27089.47        |
| <b>Total:</b>     | <b>156.30</b>       | <b>7969.85</b> | <b>9256.53</b> | <b>9706.80</b> | <b>26933.18</b>   | <b>27089.47</b> |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

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PAGE 1**

**Identification**

Identification No.: TANK #5  
 City: TAMPA  
 State: FL  
 Company: LDEC  
 Type of Tank: Internal Floating Roof

**Tank Dimensions**

Diameter (ft): 120  
 Volume(gallons): 3024000  
 Turnovers: 33

**Paint Characteristics**

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

**Rim-Seal System**

Primary Seal: Vapor-mounted  
 Secondary Seal: N  
 Deck Type: Bolted

**Deck Characteristics**

Deck Fitting Category: Typical  
 Construction: Cont. Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 2262

**Deck Fitting/Status**

**Quantity**

| Deck Fitting/Status   | Quantity |
|---|----------|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        |
| Stub Drain (1-in. Diameter)/                                    | 116      |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        |
| Roof Leg or Hanger Well/Adjustable                              | 41       |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        |

Meteorological Data Used in Emission Calculations: Tampa, Florida

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
LIQUID CONTENTS OF STORAGE TANK**

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PAGE 2**

| Mixture/Component | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |      |      | Vapor  | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---|-------|-------|---------------|------------------------|------|------|--------|-------------|-------------|-------------|---------------------------------------|
|                   |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min. | Max. | Weight | Mass Fract. | Mass Fract. |             |                                       |
| Gasoline (RVP 10) | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 6.6755                 | N/A  | N/A  | 66.000 |             |             | 66.00       | Option 4: RVP=10.00, ASTM Slope=2.5   |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

**10/27/94  
PAGE 3**

Annual Emission Calculations

Rim Seal Losses (lb): 7969.8524  
 Seal Factor (lb-mole/ft yr): 6.7000  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Pressure at Daily Average Liquid  
 Surface Temperature (psia): 6.675534  
 Atmospheric Pressure (psia): 14.7  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

Withdrawal Losses (lb): 151.6263  
 Number of Columns: 7.0000  
 Effective Column Diameter (ft): 1.0000  
 Annual Net Throughput (gal/yr): 100094400  
 Shell Clingage Factor: 0.0015  
 Average Organic Liquid Density (lb/gal): 5.1000  
 Tank Diameter (ft): 120

Deck Fitting Losses (lb): 9256.5276  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000  
 Tot. Deck Fitting Loss Fact. (lb-mole/yr): 933.8000

Deck Seam Losses (lb): 9706.7952  
 Deck Seam Length (ft): 2262  
 Deck Seam Loss per Unit Length  
 Factor (lb-mole/ft-yr): 0.3400  
 Deck Seam Length Factor (ft/sqft): 0.2000  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

| Deck Fitting/Status   | Quantity | Deck Fitting<br>Loss Factor<br>KF (lb-mole/yr) |
|---|----------|--|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        | 0.70   |
| Stub Drain (1-in. Diameter)/                                    | 116      | 1.20   |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        | 12.00  |
| Roof Leg or Hanger Well/Adjustable                              | 41       | 7.90   |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        | 76.00  |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        | 47.00  |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        | 28.00  |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        | 25.00  |

Total Losses (lb): 27084.80

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 INDIVIDUAL TANK EMISSION TOTALS

10/27/94  
 PAGE 4

Annual Emissions Report

| Liquid Contents   | Losses (lbs.):      |                |                |                | Total<br>Standing | Total           |
|-------------------|---------------------|----------------|----------------|----------------|-------------------|-----------------|
|                   | Total<br>Withdrawal | Rim-Seal       | Deck-Fitting   | Deck Seam      |                   |                 |
| Gasoline (RVP 10) | 151.63              | 7969.85        | 9256.53        | 9706.80        | 26933.18          | 27084.80        |
| <b>Total:</b>     | <b>151.63</b>       | <b>7969.85</b> | <b>9256.53</b> | <b>9706.80</b> | <b>26933.18</b>   | <b>27084.80</b> |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

**10/27/94  
PAGE 1**

**Identification**

Identification No.: TANK #6  
 City: TAMPA  
 State: FL  
 Company: LDEC  
 Type of Tank: Internal Floating Roof

**Tank Dimensions**

Diameter (ft): 120  
 Volume(gallons): 1765000  
 Turnovers: 78

**Paint Characteristics**

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

**Rim-Seal System**

Primary Seal: Vapor-mounted  
 Secondary Seal: Y  
 Deck Type: Bolted

**Deck Characteristics**

Deck Fitting Category: Typical  
 Construction: Cont. Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 2262

**Deck Fitting/Status**

**Quantity**

| Deck Fitting/Status   | Quantity |
|---|----------|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        |
| Stub Drain (1-in. Diameter)/                                    | 116      |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        |
| Roof Leg or Hanger Well/Adjustable                              | 41       |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        |

Meteorological Data Used in Emission Calculations: Tampa, Florida

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 LIQUID CONTENTS OF STORAGE TANK

10/27/94  
 PAGE 2

| Mixture/Component | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |      |      | Vapor  | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---|-------|-------|---------------|------------------------|------|------|--------|-------------|-------------|-------------|---------------------------------------|
|                   |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min. | Max. | Weight | Mass Fract. | Mass Fract. |             |                                       |
| Gasoline (RVP 10) | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 6.6755                 | N/A  | N/A  | 66.000 |             |             | 66.00       | Option 4: RVP=10.00, ASTM Slope=2.5   |



**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

**10/27/94  
PAGE 3**

Annual Emission Calculations

|  |               |
|--|---------------|
| Rim Seal Losses (lb):                      | 2973.8255     |
| Seal Factor (lb-mole/ft yr):               | 2.5000        |
| Value of Vapor Pressure Function:          | 0.1502        |
| Vapor Pressure at Daily Average Liquid     |               |
| Surface Temperature (psia):                | 6.675534      |
| Atmospheric Pressure (psia):               | 14.7          |
| Tank Diameter (ft):                        | 120           |
| Vapor Molecular Weight (lb/lb-mole):       | 66.000000     |
| Product Factor:                            | 1.0000        |
| <br>Withdrawal Losses (lb):                | <br>208.5470  |
| Number of Columns:                         | 7.0000        |
| Effective Column Diameter (ft):            | 1.0000        |
| Annual Net Throughput (gal/yr):            | 137670000     |
| Shell Clingage Factor:                     | 0.0015        |
| Average Organic Liquid Density (lb/gal):   | 5.1000        |
| Tank Diameter (ft):                        | 120           |
| <br>Deck Fitting Losses (lb):              | <br>9256.5276 |
| Value of Vapor Pressure Function:          | 0.1502        |
| Vapor Molecular Weight (lb/lb-mole):       | 66.000000     |
| Product Factor:                            | 1.0000        |
| Tot. Deck Fitting Loss Fact. (lb-mole/yr): | 933.8000      |
| <br>Deck Seam Losses (lb):                 | <br>9706.7952 |
| Deck Seam Length (ft):                     | 2262          |
| Deck Seam Loss per Unit Length             |               |
| Factor (lb-mole/ft-yr):                    | 0.3400        |
| Deck Seam Length Factor (ft/sqft):         | 0.2000        |
| Tank Diameter (ft):                        | 120           |
| Vapor Molecular Weight (lb/lb-mole):       | 66.000000     |
| Product Factor:                            | 1.0000        |

| Deck Fitting/Status   | Quantity | Deck Fitting<br>Loss Factor<br>KF (lb-mole/yr) |
|---|----------|--|
| -----   |          |  |
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        | 0.70   |
| Stub Drain (1-in. Diameter)/                                    | 116      | 1.20   |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        | 12.00  |
| Roof Leg or Hanger Well/Adjustable                              | 41       | 7.90   |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        | 76.00  |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        | 47.00  |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        | 28.00  |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        | 25.00  |

|                    |          |
|--------------------|----------|
| Total Losses (lb): | 22145.70 |
|--------------------|----------|

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
INDIVIDUAL TANK EMISSION TOTALS**

**10/27/94  
PAGE 4**

Annual Emissions Report

| Liquid Contents   | Losses (lbs.):      |                |                |                | Total<br>Standing | Total           |
|-------------------|---------------------|----------------|----------------|----------------|-------------------|-----------------|
|                   | Total<br>Withdrawal | Rim-Seal       | Deck-Fitting   | Deck Seam      |                   |                 |
| Gasoline (RVP 10) | 208.55              | 2973.83        | 9256.53        | 9706.80        | 21937.15          | 22145.70        |
| <b>Total:</b>     | <b>208.55</b>       | <b>2973.83</b> | <b>9256.53</b> | <b>9706.80</b> | <b>21937.15</b>   | <b>22145.70</b> |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS**

**10/27/94  
PAGE 1**

**Identification**

Identification No.: TANK #7  
 City: TAMPA  
 State: FL  
 Company: LDEC  
 Type of Tank: Internal Floating Roof

**Tank Dimensions**

Diameter (ft): 120  
 Volume(gallons): 3024000  
 Turnovers: 70

**Paint Characteristics**

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

**Rim-Seal System**

Primary Seal: Liquid-mounted  
 Secondary Seal: Y  
 Deck Type: Bolted

**Deck Characteristics**

Deck Fitting Category: Typical  
 Construction: Cont. Sheet: 5 Ft Wide  
 Deck Seam Len. (ft): 2262

**Deck Fitting/Status**

**Quantity**

| Deck Fitting/Status   | Quantity |
|---|----------|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        |
| Stub Drain (1-in. Diameter)/                                    | 116      |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        |
| Roof Leg or Hanger Well/Adjustable                              | 41       |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        |

Meteorological Data Used in Emission Calculations: Tampa, Florida

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
LIQUID CONTENTS OF STORAGE TANK**

**10/27/94  
PAGE 2**

| Mixture/Component | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |      |      | Vapor  | Liquid      | Vapor       | Mol. Weight | Basis for Vapor Pressure Calculations |
|-------------------|-------|---|-------|-------|---------------|------------------------|------|------|--------|-------------|-------------|-------------|---------------------------------------|
|                   |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min. | Max. | Weight | Mass Fract. | Mass Fract. |             |                                       |
| Gasoline (RVP 10) | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 6.6755                 | N/A  | N/A  | 66.000 |             |             | 66.00       | Option 4: RVP=10.00, ASTM Slope=2.5   |

**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

**10/27/94  
PAGE 3**

Annual Emission Calculations

Rim Seal Losses (lb): 1903.2483  
 Seal Factor (lb-mole/ft yr): 1.6000  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Pressure at Daily Average Liquid  
 Surface Temperature (psia): 6.675534  
 Atmospheric Pressure (psia): 14.7  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

Withdrawal Losses (lb): 321.5759  
 Number of Columns: 7.0000  
 Effective Column Diameter (ft): 1.0000  
 Annual Net Throughput (gal/yr): 212284800  
 Shell Clingage Factor: 0.0015  
 Average Organic Liquid Density (lb/gal): 5.1000  
 Tank Diameter (ft): 120

Deck Fitting Losses (lb): 9256.5276  
 Value of Vapor Pressure Function: 0.1502  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000  
 Tot. Deck Fitting Loss Fact. (lb-mole/yr): 933.8000

Deck Seam Losses (lb): 9706.7952  
 Deck Seam Length (ft): 2262  
 Deck Seam Loss per Unit Length  
 Factor (lb-mole/ft-yr): 0.3400  
 Deck Seam Length Factor (ft/sqft): 0.2000  
 Tank Diameter (ft): 120  
 Vapor Molecular Weight (lb/lb-mole): 66.000000  
 Product Factor: 1.0000

| Deck Fitting/Status   | Quantity | Deck Fitting<br>Loss Factor<br>KF (lb-mole/yr) |
|---|----------|--|
| Vacuum Breaker (10-in. Diam.)/Weighted Mech. Actuation, Gask.   | 1        | 0.70   |
| Stub Drain (1-in. Diameter)/                                    | 116      | 1.20   |
| Sample Pipe or Well (24-in. Diam.)/Slit Fabric Seal 10% Open    | 1        | 12.00  |
| Roof Leg or Hanger Well/Adjustable                              | 41       | 7.90   |
| Ladder Well (36-in Diam.)/Sliding Cover, Ungasketed             | 1        | 76.00  |
| Column Well (24-in. Diam.)/Built-Up Col.-Sliding Cover, Ungask. | 7        | 47.00  |
| Automatic Gauge Float Well/Unbolted Cover, Ungasketed           | 1        | 28.00  |
| Access Hatch (24-in. Diam.)/Unbolted Cover, Ungasketed          | 1        | 25.00  |

Total Losses (lb): 21188.15

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 INDIVIDUAL TANK EMISSION TOTALS

10/27/94  
 PAGE 4

Annual Emissions Report

| Liquid Contents   | Losses (lbs.):      |                |                |                | Total<br>Standing | Total           |
|-------------------|---------------------|----------------|----------------|----------------|-------------------|-----------------|
|                   | Total<br>Withdrawal | Rim-Seal       | Deck-Fitting   | Deck Seam      |                   |                 |
| Gasoline (RVP 10) | 321.58              | 1903.25        | 9256.53        | 9706.80        | 20866.57          | 21188.15        |
| <b>Total:</b>     | <b>321.58</b>       | <b>1903.25</b> | <b>9256.53</b> | <b>9706.80</b> | <b>20866.57</b>   | <b>21188.15</b> |

TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
TANK IDENTIFICATION AND PHYSICAL CHARACTERISTICS

10/27/94  
PAGE 1

Identification

Identification No.: TANK 20  
City: Tampa  
State: FL  
Company: LDEC  
Type of Tank: Horizontal Fixed Roof

Tank Dimensions

Shell Length (ft): 27  
Diameter (ft): 8  
Volume(gallons): 10000  
Is tank underground? (Y/N): N  
Turnovers: 22  
Net Throughput (gal/yr): 216000

Paint Characteristics

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

Breather Vent Settings

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

Meteorological Data Used in Emission Calculations: Tampa, Florida

TANKS PROGRAM 2.0  
 EMISSIONS REPORT - DETAIL FORMAT  
 LIQUID CONTENTS OF STORAGE TANK

10/27/94  
 PAGE 2

| Mixture/Component         | Month | Daily Liquid Surf. Temperatures (deg F) |       |       | Liquid Bulk   | Vapor Pressures (psia) |        |        | Vapor   | Liquid      | Vapor       | Mol. Basis for Vapor Pressure Calculations |
|---------------------------|-------|---|-------|-------|---------------|------------------------|--------|--------|---------|-------------|-------------|--|
|                           |       | Avg.                                    | Min.  | Max.  | Temp. (deg F) | Avg.                   | Min.   | Max.   | Weight  | Mass Fract. | Mass Fract. |  |
| Distillate fuel oil no. 2 | All   | 74.01                                   | 68.83 | 79.19 | 72.02         | 0.0102                 | 0.0086 | 0.0119 | 130.000 |             |             | 130.00 Option 4: A=12.1010, B=8907.0       |



**TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
DETAIL CALCULATIONS (AP-42)**

**10/27/94  
PAGE 3**

**Annual Emission Calculations**

Standing Losses (lb): 2.5324  
 Vapor Space Volume (cu ft): 862.24  
 Vapor Density (lb/cu ft): 0.0002  
 Vapor Space Expansion Factor: 0.034946  
 Vented Vapor Saturation Factor: 0.997850

Tank Vapor Space Volume  
 Vapor Space Volume (cu ft): 862.24  
 Tank Diameter (ft): 8  
 Effective Diameter (ft): 17  
 Vapor Space Outage (ft): 4.00  
 Tank Shell Height (ft): 27

Vapor Density  
 Vapor Density (lb/cu ft): 0.0002  
 Vapor Molecular Weight (lb/lb-mole): 130.000000  
 Vapor Pressure at Daily Average Liquid  
 Surface Temperature (psia): 0.010165  
 Daily Avg. Liquid Surface Temp. (deg R): 533.68  
 Daily Average Ambient Temp. (deg. R): 531.67  
 Ideal Gas Constant R  
 (psia cuft / (lb-mole-deg R)): 10.731  
 Liquid Bulk Temperature (deg R): 531.69  
 Tank Paint Solar Absorptance: 0.17  
 Daily Total Solar Insolation  
 Factor (Btu/sqftday): 1492.00

Vapor Space Expansion Factor  
 Vapor Space Expansion Factor: 0.034946  
 Daily Vapor Temperature Range (deg R): 20.71  
 Daily Vapor Pressure Range (psia): 0.003303  
 Breather Vent Press. Setting Range(psia): 0.06  
 Vapor Pressure at Daily Average Liquid  
 Surface Temperature (psia): 0.010165  
 Vapor Pressure at Daily Minimum Liquid  
 Surface Temperature (psia): 0.008631  
 Vapor Pressure at Daily Maximum Liquid  
 Surface Temperature (psia): 0.011934  
 Daily Avg. Liquid Surface Temp. (deg R): 533.68  
 Daily Min. Liquid Surface Temp. (deg R): 528.50  
 Daily Max. Liquid Surface Temp. (deg R): 538.86  
 Daily Ambient Temp. Range (deg.R): 18.90

TANKS PROGRAM 2.0  
EMISSIONS REPORT  
DETAIL FORMAT

10/27/94  
PAGE 4

DETAIL CALCULATIONS (AP-42), CONT.

Annual Emission Calculations

|  |            |
|--|------------|
| Vented Vapor Saturation Factor         |            |
| Vented Vapor Saturation Factor:        | 0.997850   |
| Vapor Pressure at Daily Average Liquid |            |
| Surface Temperature (psia):            | 0.010165   |
| Vapor Space Outage (ft):               | 4.00       |
| Withdrawal Losses (lb):                | 6.7962     |
| Vapor Molecular Weight (lb/lb-mole):   | 130.000000 |
| Vapor Pressure at Daily Average Liquid |            |
| Surface Temperature (psia):            | 0.010165   |
| Annual Net Throughput (gal/yr):        | 216000     |
| Turnover Factor:                       | 1.0000     |
| Tank Diameter (ft):                    | 8          |
| Working Loss Product Factor:           | 1.00       |
| Total Losses (lb):                     | 9.33       |

TANKS PROGRAM 2.0  
EMISSIONS REPORT - DETAIL FORMAT  
INDIVIDUAL TANK EMISSION TOTALS

10/27/94  
PAGE 5

Annual Emissions Report

| Liquid Contents           | Losses (lbs.): |            | Total |
|---------------------------|----------------|------------|-------|
|                           | Standing       | Withdrawal |       |
| Distillate fuel oil no. 2 | 2.53           | 6.80       | 9.33  |
| Total:                    | 2.53           | 6.80       | 9.33  |

Louis Dreyfus Energy  
North America

Telephone 404 518-3500  
Fax 404 518-3567

8800 Roswell Road  
Suite 200  
Atlanta, Georgia  
30350-1843

*B. Scott*  
*3/day copy to:* Gerald Kessel, SW District  
Stephanie Brooks, SE District

Certified Mail Return Receipt Requested  
P 881 874 449

RECEIVED



March 1, 1994

MAR 9 1994

Florida Department of Environmental Regulation  
Air Permitting and Standards Section  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

Bureau of  
Air Regulation

**LOUIS DREYFUS ENERGY TERMINAL  
FACILITY ID 40HIL290081  
TAMPA, FL**

**LOUIS DREYFUS ENERGY TERMINAL  
FACILITY ID 50BRO060053  
PORT EVERGLADES, FL**

**LOUIS DREYFUS ENERGY TERMINAL  
FACILITY ID 10PEN17013901-10  
PENSACOLA, FL**

**SIGNATORY REQUIREMENTS**

Dear Madam or Sir:

I hereby authorize the individual occupying the position of General Manager, Terminal Operations as a duly authorized representative of Louis Dreyfus Energy Corp.

The named position has the responsibility for the overall operation of these regulated facilities. All reports required by permits shall be signed by the General Manager, Terminal Operations.

Sincerely yours,

John L. Goss  
President

copy: Hillsborough County Environmental Protection Commission  
1410 N. 21st Street  
Tampa, FL 33605

Broward County Department of Natural Resources  
218 S. W. 1st Avenue  
Fort Lauderdale, FL 33301

Florida DEP  
160 Governmental Center  
Pensacola, FL 32501-5794

COMMISSION

PHYLLIS BUSANSKY  
JOE CHILLURA  
LYDIA MILLER  
JIM NORMAN  
JAN KAMINIS PLATT  
ED TURANCHIK  
SANDRA WILSON



FAX (813) 272-5157

ROGER P. STEWART  
EXECUTIVE DIRECTOR  
ADMINISTRATIVE OFFICES  
AND  
WATER MANAGEMENT DIVISION  
1900 - 9TH AVENUE  
TAMPA, FLORIDA 33605  
TELEPHONE (813) 272-5960  
AIR MANAGEMENT DIVISION  
TELEPHONE (813) 272-5530  
WASTE MANAGEMENT DIVISION  
TELEPHONE (813) 272-5788  
ECOSYSTEMS MANAGEMENT DIVISION  
TELEPHONE (813) 272-7104

November 10, 1994

RECEIVED  
NOV 14 1994

Bureau of  
Air Regulation

Ms. Barbara Castleberry  
Environmental Coordinator  
Louis Dreyfus Energy  
8800 Roswell Road, Suite 200  
Atlanta, GA 30350-1843

Re: Construction Permit Application Louis Dreyfus Energy Terminal,  
1523 Port Avenue, Tampa, FL 33605

Dear Ms. Castleberry:

This is to acknowledge receipt of your application and to advise that:

1. Your check in the amount of \$5,000.00 is being returned, the fee associated with this is \$7,500.00. In addition, the check must be made out to the Florida Department of Environmental Protection (FDEP).
2. This permit application, as submitted, will trigger Nonattainment New Source Review (NNSR). Based on this the permit will be processed by FDEP in Tallahassee and three additional sealed copies of the application must be sent to:

Bruce Mitchell  
Division of Air Resources Management  
Florida Department of Environmental Protection  
Twin Towers Office Building  
2600 Blair Stone Road  
Tallahassee, FL 32399-2400

If after reviewing this letter you determine not to proceed with this modification, as is, and wish to discuss the different options with our office, please contact Jerry Campbell at (813) 272-5530.

Ms. Barbara Castleberry


Ms. Barbara Castleberry  
November 10, 1994  
Page 2

3. Since this application initiates NNSR, the Environmental Protection Commission (EPC) of Hillsborough County no-longer is afforded delegation and thus an additional \$400 permit fee is assessed. Please submit a check for \$400 made out to EPC of Hillsborough County and forward to 1410 N. 21st Street, Tampa, FL 33605.

Please be advised that new permit application forms will be required after November 23, 1994. Therefore, in order to use the old forms you currently submitted the application on, the entire fee and additional sealed applications (four were submitted, an additional three must be submitted = seven total) must be received at FDEP prior to that date.

If you have any questions concerning this letter, please call me at (813) 272-5530.

Sincerely,

  
Bruce M. King  
Air Permitting Specialist

Enclosure

cag

cc: Bruce Mitchell, FDEP w/copy of application  
Jerry Kissel, SWDFDEP w/copy of application