$1000 pd
10-17-90
Rec't #15195

Florida Department of Environmental Regulation

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

DER Form #
Form Title
Effective Date
DER Application No. (Filled in by DER)

AC 48-184406

TN 6 & C 4 Loading Racks.

APPLICATION TO OPERATE/CONSTRUCT AIR POLLUTION SOURCES

SOURCE TYPE: Bulk Petroleum Terminal [ ] New[1] [XX] Existing[1]

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

COMPANY NAME: Central Florida Pipeline Corporation **COUNTY:** Orange

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) Flare

SOURCE LOCATION: Street 9919 Palm Avenue City Taft

UTM: East 17-463.8 North 3143.8

Latitude 28 ° 25 ' 19 "N **Longitude** 81 ° 22 ' 01 "W

APPLICANT NAME AND TITLE: Tom Rigg, Manager of Florida Operations

APPLICANT ADDRESS: 100 GATX Drive; Tampa, FL 33605

SECTION I: STATEMENTS BY APPLICANT AND ENGINEER

A. APPLICANT

I am the undersigned owner or authorized representative* of Central Florida Pipeline Corporatio

I certify that the statements made in this application for a modification 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: Tom Rigg

Tom Rigg, Manager of Florida Operations
Name and Title (Please Type)

Date: 10/15/90 Telephone No. (813) 248-2148

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

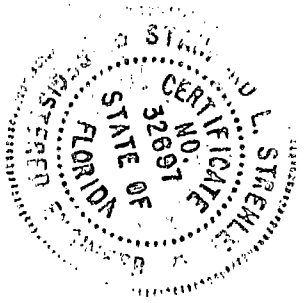
This is to certify that the engineering features of this pollution control project have been designed/examined by me and found to be in conformity with modern engineering principles applicable to the treatment and disposal of pollutants characterized in the permit application. There is reasonable assurance,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

[1] See Florida Administrative Code Rule 17-2.100(57) and (104)

Dennis Nester
407-836-7400

Northwest District 160 Governmental Center Pensacola, Florida 32501-5794 904-436-8300
Northeast District 3426 Bills Rd. Jacksonville, Florida 32207 904-798-4200
Central District 3319 Maguire Blvd., Suite 232 Orlando, Florida 32803-3767 407-894-7555
Southwest District 4520 Oak Fair Blvd. Tampa, Florida 33610-7347 813-623-5561
South District 2269 Bay St. Fort Myers, Florida 33901-2896 813-332-2667
Southeast District 1900 S. Congress Ave., Suite A West Palm Beach, Florida 33406 407-964-9668

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 Stan Strehler

Stanford L. Strehler
Name (Please Type)

GATX Terminals Corporation
Company Name (Please Type)

100 GATX Drive; Tampa, FL 33605
Mailing Address (Please Type)

Florida Registration No. 0032697 Date: 10/15/90 Telephone No. (813) 248-2148

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.

See attached project description.

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

Start of Construction Upon Receipt Of Permit Completion of Construction Within One (1) Year Of Issuance

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.)

Flare Cost: $60,000.

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

Existing operating permit A048-126131, issued 4/8/87, expires 8/24/92 covering loading racks: T1, T2, TX3, C4, TN6 and the existing VRU.

E. Requested permitted equipment operating time: hrs/day 24 ; days/wk 7 ; wks/yr 52 ;

if power plant, hrs/yr N/A ; 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? No

   b. If yes, has "Lowest Achievable Emission Rate" been applied? No

   c. If yes, list *non-attainment* pollutants. N/A

2. Does best available control technology (BACT) apply to this source? If yes, see Section VI. No

3. Does the State "Prevention of Significant Deterioriation" (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? Yes

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? No*

   a. If yes, for what pollutants? _____

   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 justification for any answer of "No" that might be considered questionable.

*

Orange County has been designated an air quality maintenance area for ozone pursuant to Section 17-2.460(1)(b), Florida Administrative Code.

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

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

Description	Contaminants		Utilization Rate - lbs/hr	Relate to Flow Diagram
	Type	% Wt		

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

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[1]		Allowed[2] Emission Rate per Rule 17-2	Allowable[3] Emission lbs/hr	Potential[4] Emission		Relate to Flow Diagram
	Maximum lbs/hr	Actual T/yr			lbs/yr	T/yr	
VOC	31.92	62.58	17-2.660	35 mg/l	31.92	62.58	

[1]See Section V, Item 2.

[2]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)

[3]Calculated from operating rate and applicable standard.

[4]Emission after control (See Section V, Item 2).

Potential emission calculated pursuant to Chapter 17-2, FAC.

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)
John Zink Model	VOC	97.3%	N/A	Based On Manufacturer's
GV-LH-8400-2-				Guarantee of 35 mg/l

E. Fuels

Type (Be Specific)	Consumption*		Maximum Heat Input (MMBTU/hr)
	avg/hr	max./hr	
Propane (pilot)	3.4 lbs/hr.	5.1 lbs/hr.	.11

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

Fuel Analysis:

Percent Sulfur: negligible Percent Ash: negligible

Density: 4.24 lbs/gal Typical Percent Nitrogen: N/A

Heat Capacity: 21,560 BTU/lb 90,500 BTU/gal

Other Fuel Contaminants (which may cause air pollution): N/A

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

Annual Average _____ Maximum _____

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

N/A

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

Stack Height: 25 ft. Stack Diameter: 2.0 ft.

Gas Flow Rate: * Inlet 1203 ACFM Outlet 18,469 ~~DSCFM~~ ACFM Gas Exit Temperature: 1600 °F.

Water Vapor Content: 14.42 % Velocity: 77 FPS

*Inlet and outlet ACFM

SECTION IV: INCINERATOR INFORMATION

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 $(ft)^3$	Heat Release (BTU/hr)	Fuel		Temperature (°F)
			Type	BTU/hr	
Primary Chamber					
Secondary Chamber					

Stack Height: _____ ft. Stack Diamter: _____ 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)] See calculations.
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. See calculation, manufacturer's guarantee.
3. Attach basis of potential discharge (e.g., emission factor, that is, AP42 test). See calculations.
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.) See attachment.
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). See calculations.
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. See attachment.
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). See attached.
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. See attached.

9. The appropriate application fee in accordance with Rule 17-4.05. The check should be made payable to the Department of Environmental Regulation. Attached.

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. N/A

SECTION VI: BEST AVAILABLE CONTROL TECHNOLOGY N/A

A. Are standarda 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

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:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy [2]

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:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

h. Maintenance Cost:

i. Availability of construction materials and process chemicals:

[1]Explain method of determining efficiency.
[2]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:[1]

d. Capital Cost:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

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:[1]

d. Capital Costs:

e. Useful Life:

f. Operating Cost:

g. Energy:[2]

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:[1]

3. Capital Cost:

4. Useful Life:

5. Operating Cost:

6. Energy:[2]

7. Maintenance Cost:

8. Manufacturer:

9. Other locations where employed on similar processes:

a. (1) Company:

(2) Mailing Address:

(3) City:

(4) State:

[1] Explain method of determining efficiency.
[2] Energy to be reported in units of electrical power - KWH design rate.

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

b. (1) Company:

(2) Mailing Address:

(3) City: (4) State:

(5) Environmental Manager:

(6) Telephone No.:

(7) Emissions:[1]

Contaminant	Rate or Concentration

(8) Process Rate:[1]

10. Reason for selection and description of systems:

[1]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 N/A

A. Company Monitored Data

1. _____no. sites _____ TSP _____( ) SO^2* _____ 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^2	_____	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.

Professional Engineer in Florida (as required by Subsection 17-4.05(3), F. A. C.)

This is to certify that the engineering features of this air pollution control project have been 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 judgement, that 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 Stan Strehler

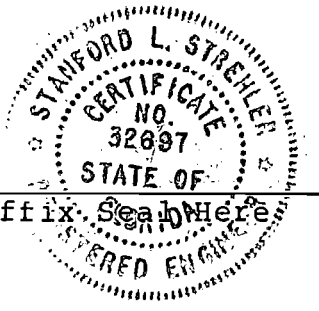
Date 10/15/90 Telephone No. (813) 248-2148

STANFORD L. STREHLER
Name

GATX TERMINALS CORPORATION
Company Name

100 GATX DRIVE, TAMPA, FL 33605
Mailing Address

Florida Registration No. 0032697



Affix Seal Here

CENTRAL FLORIDA PIPELINE CORPORATION

PROJECT DESCRIPTION

To route the vapors from the existing loading rack TN6 (with six (6) gasoline and two (2) diesel fill connections) and existing loading rack CO4 (with eight (8) gasoline and two (3) diesel fill connections) to a new flare. Vapor originally went to an existing vapor recovery unti permitted under AO48-126131. The flare will meet the NSPS standard of 35 mg/l.

CENTRAL FLORIDA PIPELINE CORPORATION

Proposed Throughputs:

Assumes: 85% product is gasoline.

15% product is diesel.

Maximum Instataneous:

9,000 gpm total as guaranteed by the manufacturer to meet the NSPS standard of 35 mg/l.

Note: The maximum instantaneous throughput can not be used in determining hourly emission rates and/or hourly throughputs.

Maximum Hourly:

$$4 \text{ bays} \times \frac{4 \text{ trucks}}{\text{hr. bay}} \times \frac{8{,}000 \text{ gal.}}{\text{truck}} = 128{,}000 \text{ gal/hr. total}$$

or 108,800 gal/hr. gasoline and 19,200 gal/hr. diesel

Maximum Annual:

Predicted to be 12,000,000 BBL/yr total or 10,200,000 BBL/yr gasoline and 1,800,000 BBL/yr diesel.

Existing Gasoline Loading Racks (TN6 and C4):

Vapors from these racks are to be routed to a new flare instead of the existing vapor recovery system.

CENTRAL FLORIDA PIPELINE CORPORATION

Maximum and Allowable Emission Rates:

Manufacturer's guarantee rate is the same as the NSPS allowable rate:

= 35 mg/l gasoline loaded

$$= \frac{35 \text{ mg}}{1} \times \frac{1 \text{ lb}}{453{,}514 \text{ mg}} \times \frac{3.785 \text{ l}}{\text{gal}}$$

$= 2.92 \times 10^{-4}$ lbs/gal gasoline

Actual Emissions (From Gasoline):

L_L (hourly) = $2.92 \times 10^{-4} \times 108{,}800$ gallons/hr = 31.77 lbs/hr.

L_L (annual) = 2.92×10^{-4} lbs/gal. x 10.2×10^{6} BBL/yr

x 42 gal/1 BBL x 1 ton/2,000 lbs.

= 62.55 tons per year

Air Emission Calculations based on AP-42, Section 4.4 dated September 1985.

Equation:

$$L_L = 12.46 \frac{S\,P\,M}{T} \times \left(1 - \frac{\text{eff.}}{100}\right) \times Q$$

Where:

L_L = Loading Loss (lb/1,000 gal)

M = Molecular Weight (lb/lb-mole)

P = True Vapor Pressure (psia)

T = Temperature (°R)

S = Saturation Factor (Table 4.4-1)

Eff. = Eff. Of Control Device (%)

Q = Throughput

CENTRAL FLORIDA PIPELINE CORPORATION

Uncontrolled Emissions (From Gasoline):

$$L_L \text{ (uncontrolled)} = \frac{12.46\ (1.0)(7.9)(64)(10.2 \times 10^6\ \text{BBL/yr})(42)}{532(1000)(2000)}$$

$$= 2536.49 \text{ TPY}$$

$$\text{Eff.} = \frac{(L_L \text{ (uncontrolled)}) - L_L \text{ (controlled)})}{L_L \text{ (uncontrolled)}} \times 100$$

$$= \frac{2536.49 - 62.55}{2536.49} (100) = 97.53\%$$

Diesel emisssions based on previously determined efficiency of 97.53%:

$$L_L \text{ (hourly)} = \frac{12.46(1.0)(130)(0.0105)(19{,}200)}{532(1000)} (1-.9753)$$

$$= 0.0152 \text{ lbs/hr}$$

$$L_L \text{ (annual)} = \frac{12.46(1.0)(130)(.0105)(1.8 \times 10^6\ \text{BBL/yr})((42)(1-.9753)}{532(1000)(2000)}$$

$$(1-9753) = 0.0298 \text{ TPY}$$

CENTRAL FLORIDA PIPELINE CORPORATION

Total Emissions Projected:

Product	lbs/hr	tons/yr
Gasoline	31.77	62.55
Diesel	0.15	0.0298
Total	31.92	62.58

Gas Flow Rate - Maximum:

$$\text{Inlet: } \frac{9{,}000 \text{ gal.}}{\text{min.}} \times \frac{\text{ft.}^3}{7.48 \text{ gal.}} = 1{,}203 \text{ ACFM}$$

$$\text{Outlet: } \frac{9{,}000 \text{ gal.}}{\text{min.}} \times \frac{\text{ft.}^3}{7.48 \text{ gal.}} \times 15.35^{*} = 18{,}469 \text{ ACFM}$$

*Combustion air requirements per manufacturer.

PINE CASTLE, FLA.

N2822.5—W8115/7.5

1953

PHOTOREVISED 1970

AMS 4740 IV NE—SERIES V847

SCALE 1 : 24 000

1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

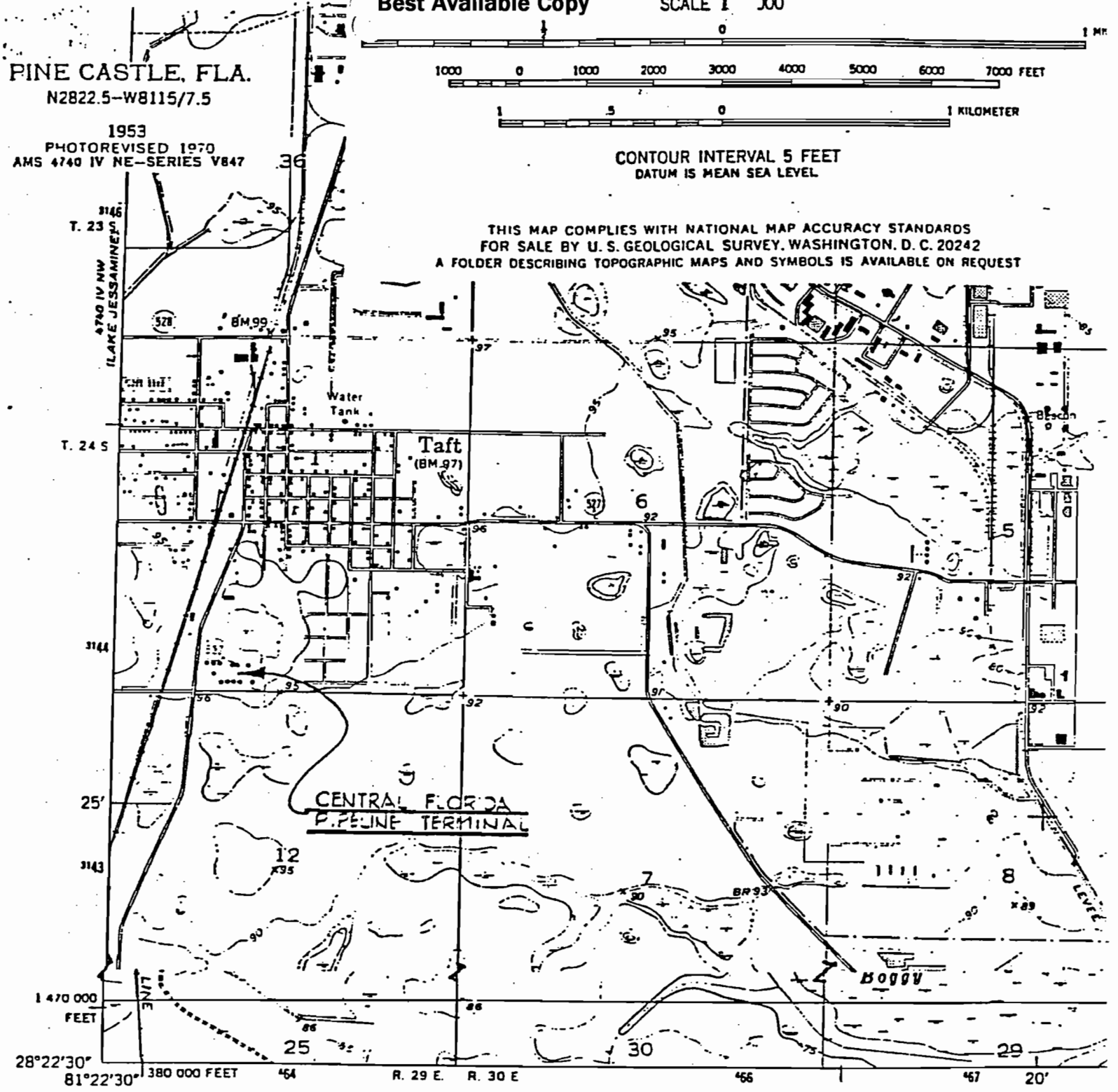
CONTOUR INTERVAL 5 FEET

DATUM IS MEAN SEA LEVEL

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, WASHINGTON, D. C. 20242

A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



Mapped, edited, and published by the Geological Survey

Control by USGS, USC&GS, and USCE

Culture and drainage in part compiled by U. S. Corps of Engineers from aerial photographs taken 1950. Topography by plane-table surveys 1953

Polyconic projection. 1927 North American datum

10,000-foot grid based on Florida coordinate system, east zone

1000-meter Universal Transverse Mercator grid ticks, zone 17, shown in blue

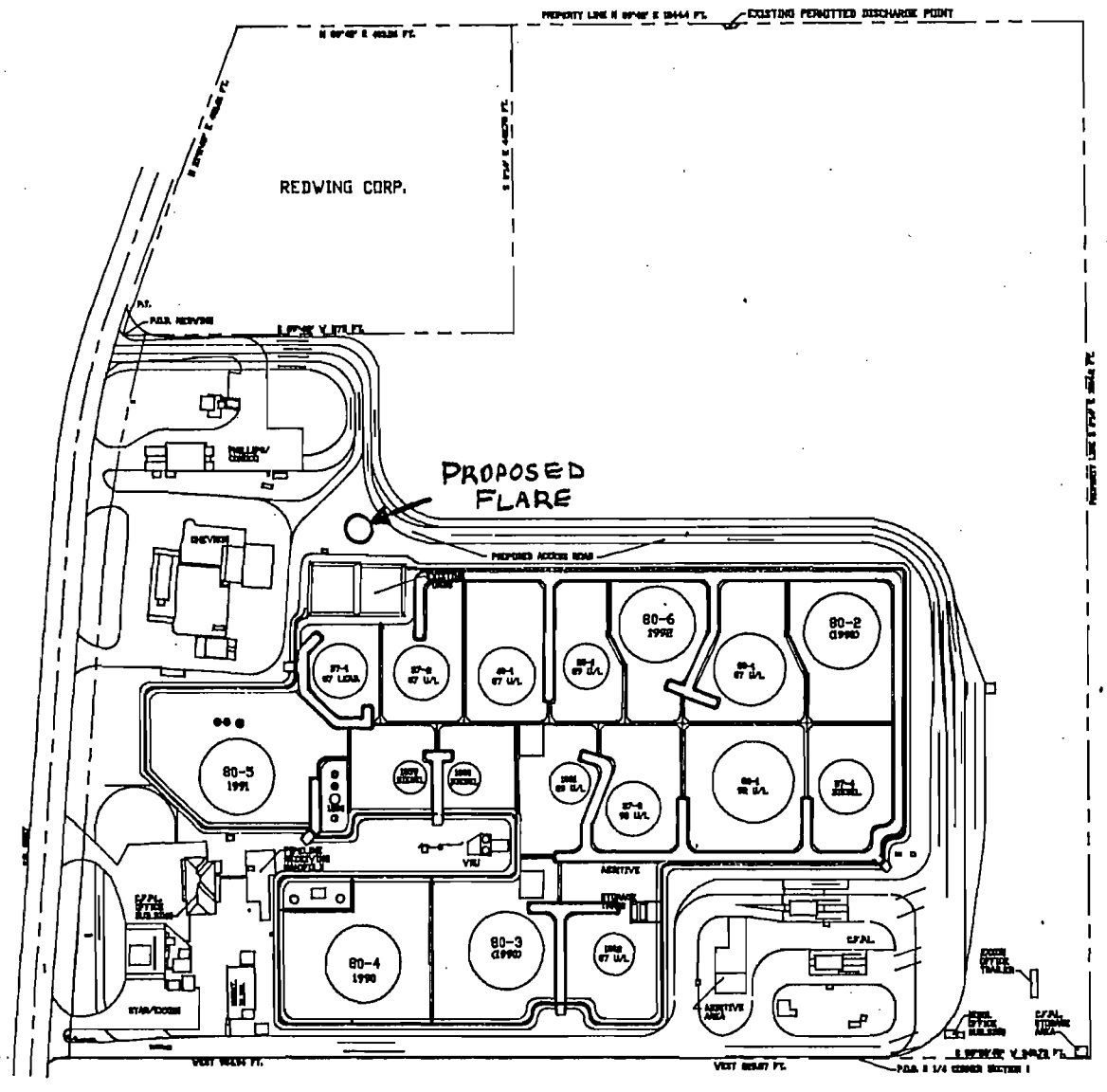
(KISSIMMEE) 4740 IV SW

MN GN

½° 9 MILS 0°09' 3 MILS

UTM GRID AND 1970 MAGNETIC NORTH DECLINATION AT CENTER OF SHEET

Best Available Copy



TANKS

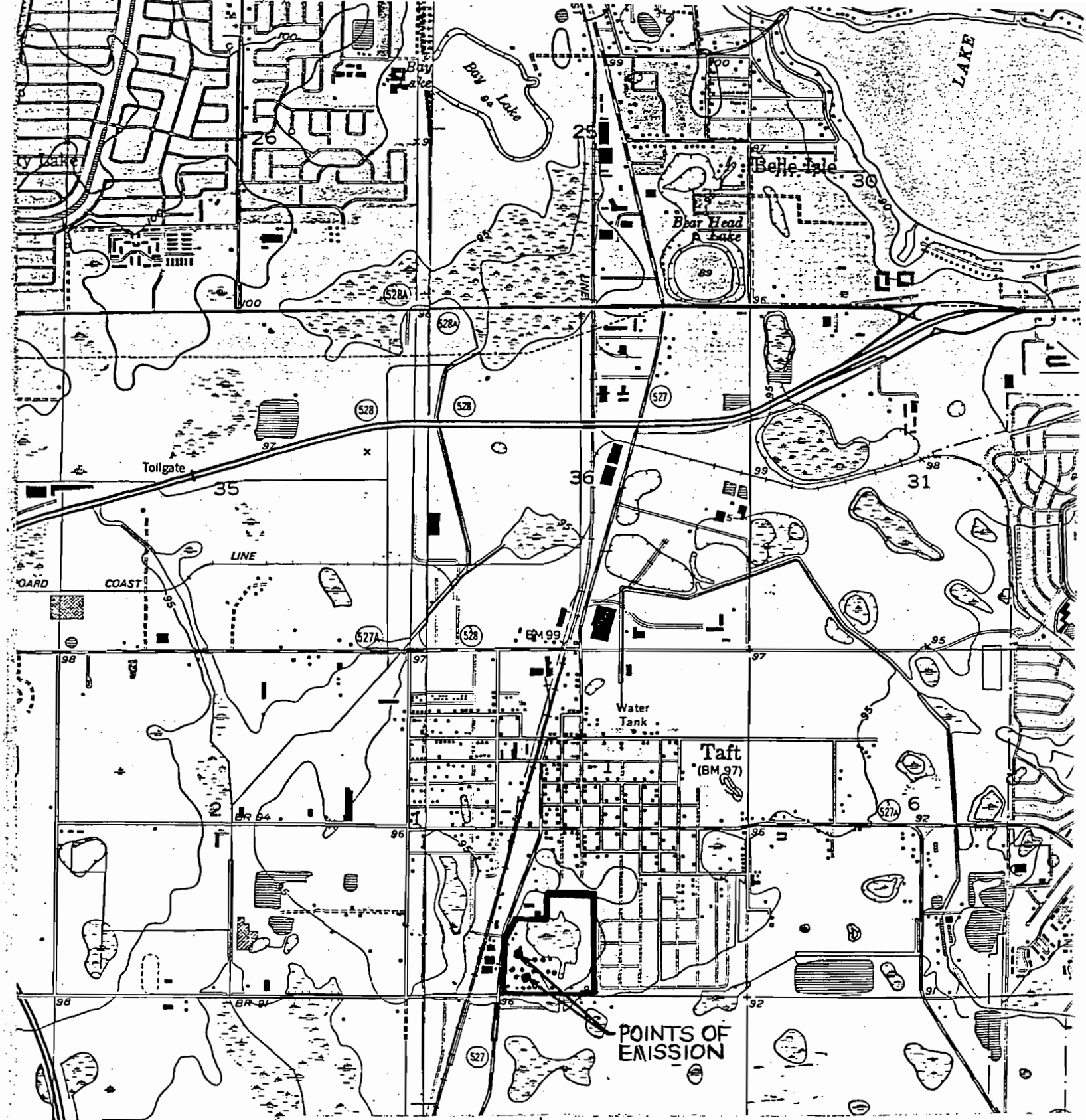
NO.	SIZE	CAPACITY	PRODUCT
2	10'ØX35' C.R.	700 Bbl.	INTERFACE
3	10'ØX35' C.R.	700 Bbl.	INTERFACE
4	12'ØX40' C.R.	700 Bbl.	OUT OF SVC.
5	10'ØX31'-6" C.R.	500 Bbl.	OUT OF SVC.
6	10'ØX31'-6" C.R.	500 Bbl.	OUT OF SVC.
7	10'ØX31'-2" C.R.	500 Bbl.	INTERFACE
8	12'ØX17'-10" C.R.	350 Bbl.	ADDITIVE (XCL-IP)
9	12'ØX18' C.R.	350 Bbl.	ADDITIVE (C-TECHROLINE)
10	HORIZ.	195 Bbl.	ADDITIVE
11	HORIZ.	195 Bbl.	ADDITIVE
25-1	67'ØX42' I.F.R.	25,000 Bbl.	89 UNLEADED
37-1	80'ØX42' I.F.R.	37,500 Bbl.	89 LEADED
37-2	80'ØX42' I.F.R.	37,500 Bbl.	89 UNLEADED
37-3	80'ØX42' I.F.R.	37,500 Bbl.	93 UNLEADED
37-4	80'ØX42' I.F.R.	37,500 Bbl.	DIESEL
40-1	85'ØX40' I.F.R.	40,000 Bbl.	89 UNLEADED
60-1	106'ØX40' I.F.R.	60,000 Bbl.	89 UNLEADED
80-1	120'ØX40' I.F.R.	80,000 Bbl.	92 UNLEADED
80-2	112'Øx48' I.F.R.	80,000 Bbl.	93 UNLEADED
80-3	112'Øx48' I.F.R.	80,000 Bbl.	87 UNLEADED
80-4	112'Øx48' I.F.R.	80,000 Bbl.	
80-5	112'Øx48' I.F.R.	80,000 Bbl.	
80-6	112'Øx48' I.F.R.	80,000 Bbl.	
1053	52'ØX40' E.F.R.	15,000 Bbl.	INTERFACE
1054	67'ØX40' E.F.R.	25,000 Bbl.	87 UNLEADED
1055	42'ØX40' E.F.R.	10,000 Bbl.	87 UNLEADED
1058	15'ØX32' C.R.	1,000 Bbl.	INTERFACE
1059	48'ØX48' C.R.	15,000 Bbl.	DIESEL
1060	48'ØX48' C.R.	15,000 Bbl.	DIESEL
1061	60'ØX40' I.F.R.	20,000 Bbl.	89 UNLEADED
1062	60'ØX40' I.F.R.	20,000 Bbl.	87 UNLEADED

FILE PATH	CFPL\DOC
FILE NAME	TFT8X11A
PLOT SCALE	1=1
CAD NO.	N/A
DRAWN BY	RTN
DATE DRAWN	8/17/90
DRAWING SCALE	N.T.S.

GATX CENTRAL FLORIDA PIPELINE CORP.
TAFT TERMINAL
a subsidiary of
GATX TERMINALS CORPORATION

GENERAL ARRANGEMENT - PLOT PLAN

DRAWING NO. REVISION NO.



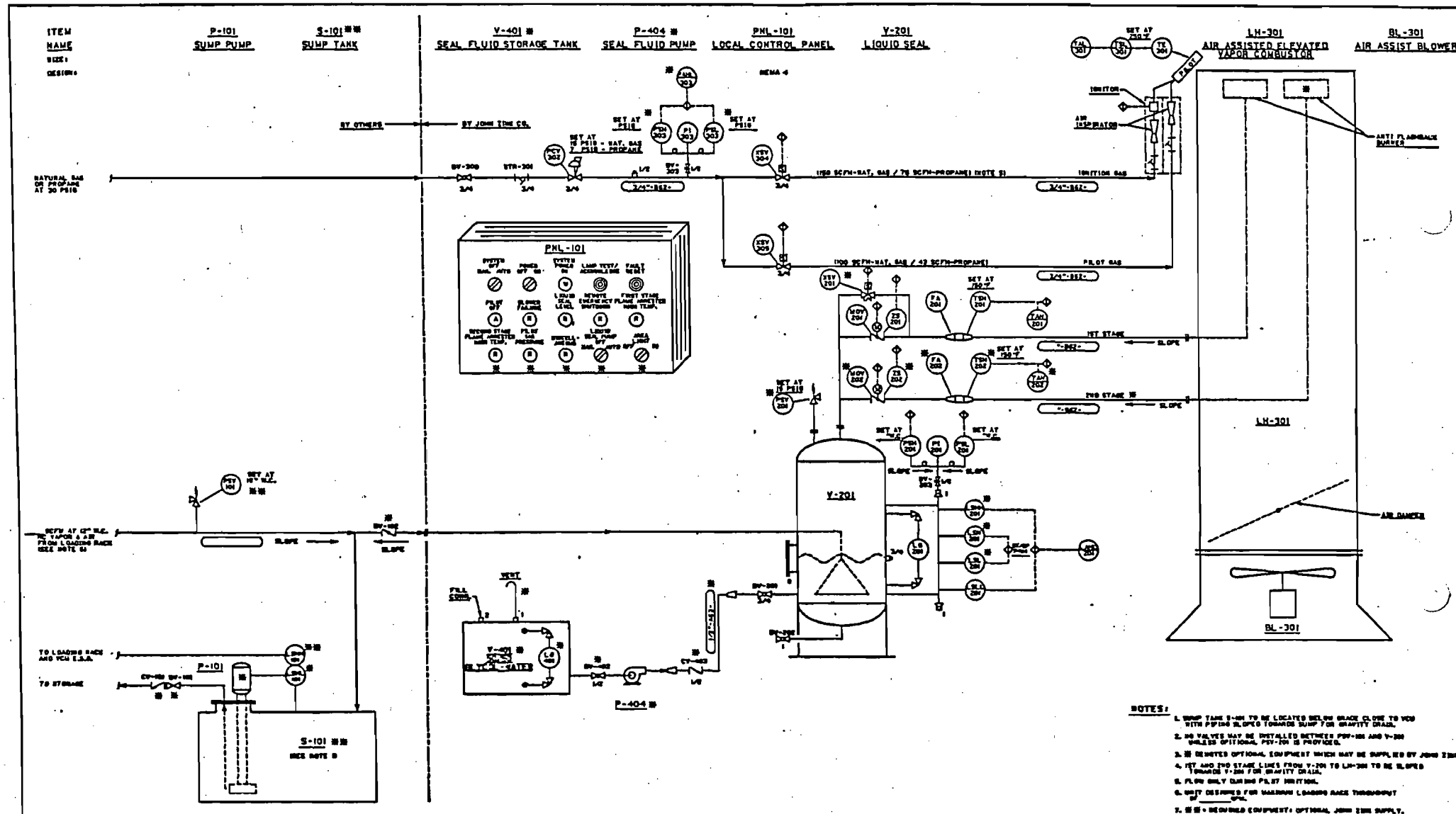
1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 5 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

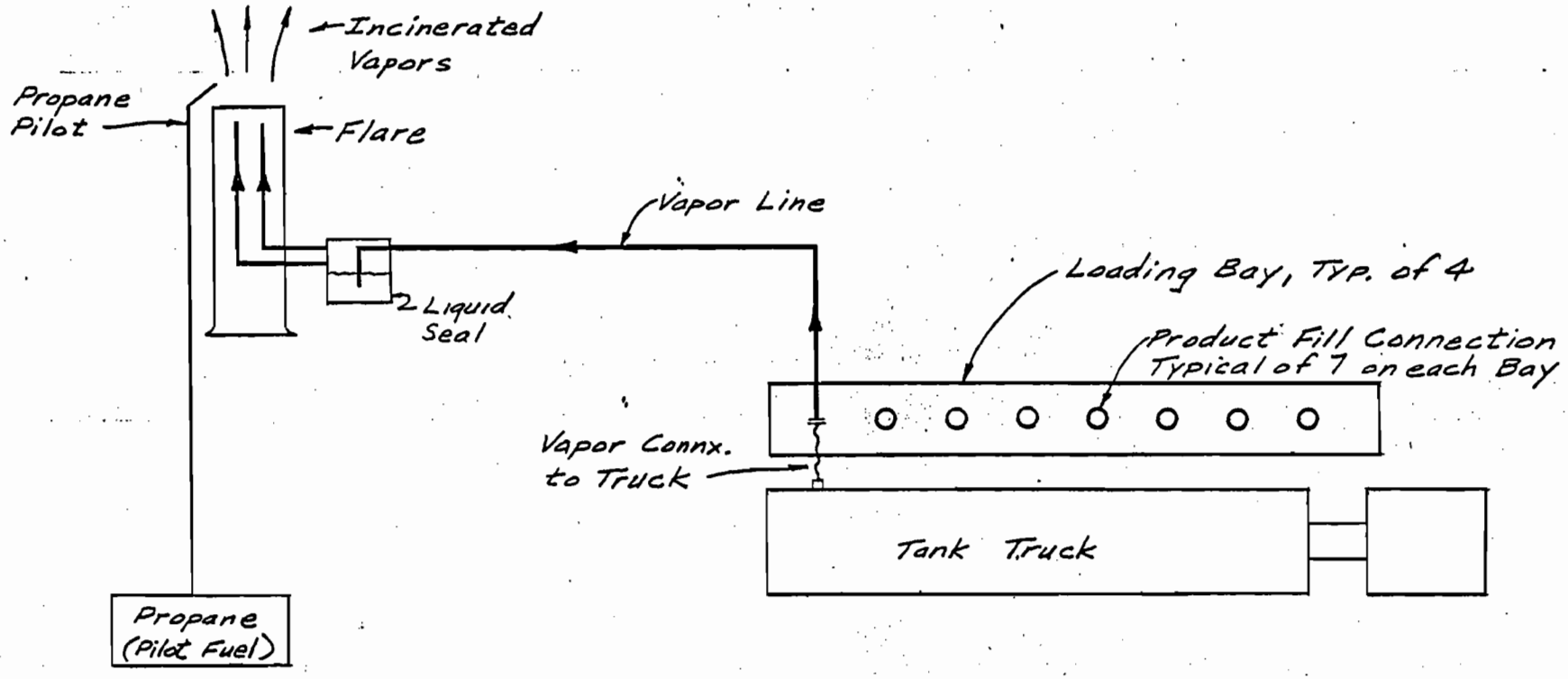
THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS
FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 220
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST



NOTES:

1. VAPOR TANK S-101 TO BE LOCATED BELOW GRADE CLOSE TO VCU WITH PIPING SLOPED TOWARDS SUMP FOR GRAVITY DRAIN.
2. NO VALVES MAY BE INSTALLED BETWEEN PSV-101 AND V-201 UNLESS OPTIONAL PSV-201 IS PROVIDED.
3. ⊞ DENOTES OPTIONAL EQUIPMENT WHICH MAY BE SUPPLIED BY JOHN ZINK
4. 1ST AND 2ND STAGE LINES FROM V-201 TO LH-301 TO BE SLOPED TOWARDS V-201 FOR GRAVITY DRAIN.
5. FLOW ONLY DURING PILOT IGNITION.
6. UNIT DESIGNED FOR MAXIMUM LOADING RACK THROUGHPUT OF [illegible] GPM.
7. ⊞ ⊞ - REQUIRED EQUIPMENT: OPTIONAL JOHN ZINK SUPPLY.

REVISIONS							REFERENCE DRAWINGS				DRAWING STATUS																	
NO.	DESCRIPTION	DATE	BY	CHECK	APPR.	DRAWING NUMBER	DESCRIPTION				CONSTRUCTION	CHKR.	2-7-97	THIS DRAWING AND THE INFORMATION REVEALED BY IT IS SUBMITTED WITH THE UNDERSTANDING THAT IT IS THE PROPRIETARY PROPERTY OF JOHN ZINK COMPANY AND IS NOT TO BE DISCLOSED TO OTHERS WITHOUT WRITTEN PERMISSION. UNAUTHORIZED USE IS EXPRESSLY FORBIDDEN. ALL DRAWINGS MUST BE RETURNED UPON REQUEST.	CUSTOMER	JOHN ZINK COMPANY TULSA OKLAHOMA													
											CUSTOMER APPROVAL	CHKR.			WORK	TITLE: PIPING AND INSTRUMENT DIAGRAM FOR JOHN ZINK CO. TYPE GVLH GASOLINE VAPOR COMBUSTION UNIT													
											BASIS	CHKR.			ADDED TO													
											INFORMATION	CHKR.			SHOP ORDER	PURCHASE ORDER												
											ISSUED FOR:	SIGNATURE	DATE	REV.	SCALE:	DRAWN: S.W.	CHECKED: L.P.	DATE: 12-87	DRAWING NUMBER: B-ST-2646 - SHT. 4 OF 4								
											DRAWING STATUS																	



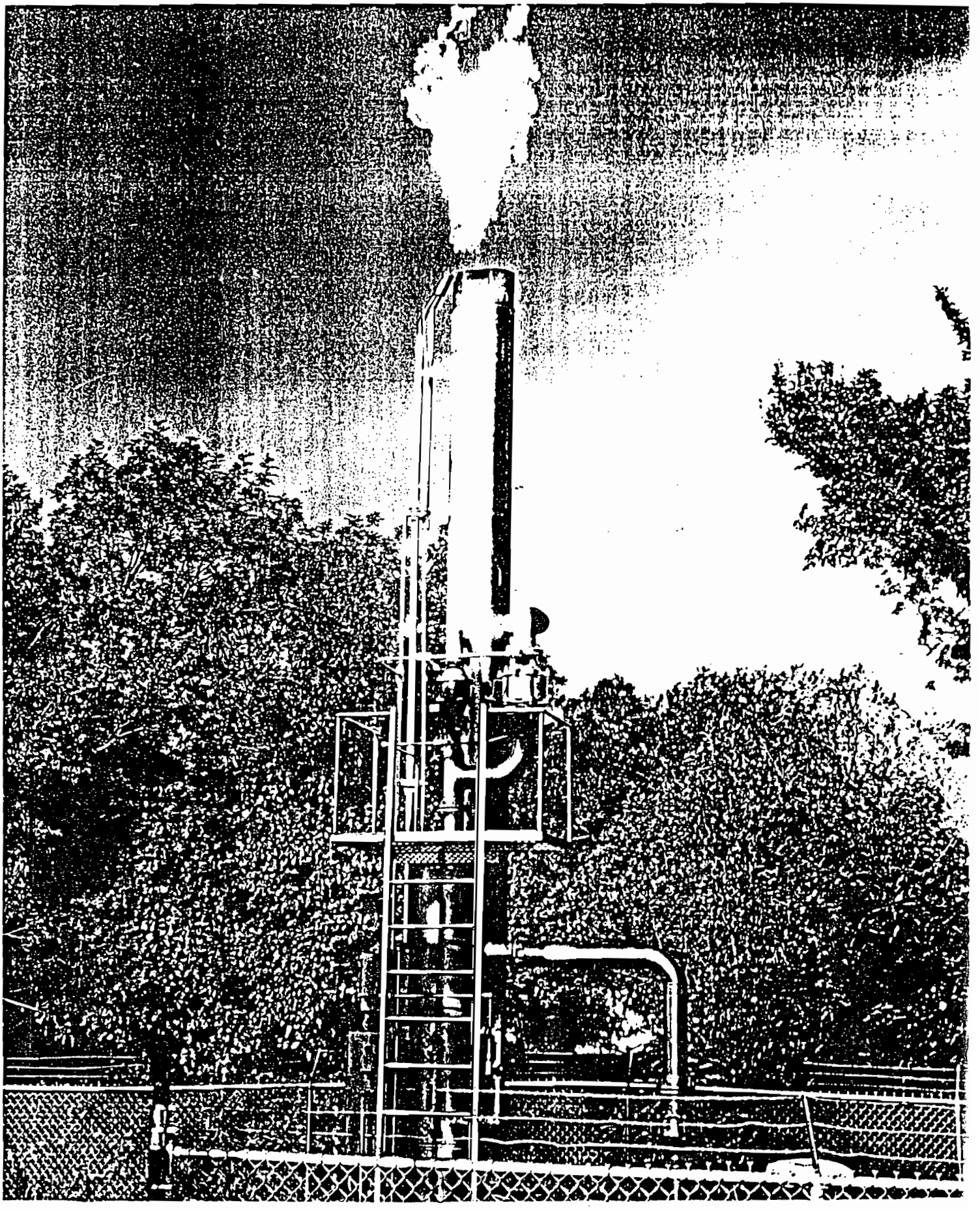
FLOW DIAGRAM

TRUCK LOADING RACK

WITH FLARE

TAFT — TERMINAL

5/25/88
DOT



JOHN ZINK COMPANY

International Headquarters
P.O. Box 702220
Tulsa, Oklahoma 74170
(918) 747-1371

GATX APR 16 1990

April 9, 1990

GATX Terminals
100 GATX Drive
Tampa, FL 33605

Attention: Mr. Rick Rykosky

Reference: John Zink File G9002-072NE-1

Dear Mr. Rykosky:

Per our conversation on Tuesday, April 3, 1990, I am forwarding a proposal for a John Zink Model GV-LH-12,600-2 Gasoline Vapor Combustion System. Utilizing the GV-LH design, you can expect smokeless combustion of your gasoline/air vapor up to an instantaneous loading rate of 12,600 gpm.

In our March 6, 1990 proposal, John Zink proposed a Model GV-LH-8400-2 Gasoline Vapor Combustion Unit. Please be advised that this model can handle up to 9,000 gpm of product loading. John Zink will guarantee the performance of our model GV-LH-8400-2 for a maximum truck loading rate of 9,000 gpm. John Zink guarantees the VOC emissions from the proposed Vapor Combustion Unit not to exceed 35 milligrams per liter of product loaded. The model GV-LH-8400-2 Vapor Combustion Unit will meet the requirements of the Federal Regulation of 40 CFR 60.18 as they pertain to flares.

The enclosed proposal on our model GV-LH-12,600 is self explanatory. After you have had an opportunity to review the attached information, I would appreciate an opportunity to meet with you to answer any questions and review the proposal in more detail. For the interim, if you have any questions, please feel free to contact me at 918-592-4732.

Yours truly,

JOHN ZINK COMPANY

Bill Matthes (Rkd)

Bill Matthes
Sr. Application Engineer

Enclosure
cc: H. Dinsmore
N. Tuttle
J. Holman
John Zink/N.E.

L:GATX49

PROPOSAL

FOR

VAPOR COMBUSTION UNIT

MODEL NO. GV-LH-8400-2

OPEN FLAME UNIT

Prepared For

GATX TERMINALS

Taft, Florida

JOHN ZINK FILE NO. G9002-072 NE

by

JOHN ZINK COMPANY

Tulsa, Oklahoma

Vapor Control Group

March 6, 1990

I. TECHNICAL SUMMARY

A. Process Description

The John Zink Company has reviewed your operation criteria and is pleased to propose, for your consideration, an automated John Zink GV-LH air assisted, open flame, elevated Vapor Combustion Unit.

John Zink combustors have been extensively tested by the United States Environmental Protection Agency and were chosen by the USEPA on which to base their emissions and operating standards. We do not believe any other manufacturer's combustors have passed USEPA tests.

This system is designed on the following conditions:

Ambient Temperature:	0° F to 100° F
Maximum Hydrocarbon Emissions:	35 mg/l
Minimum Loading Rate:	600 GPM
Maximum Loading Rate:	8400 GPM
Minimum Vapor Flow Rate to Combustor:	80 SCFM
Maximum Vapor Flow Rate to Combustor:	1123 SCFM
Minimum Vapor (Propane Equivalent) Hydrocarbon Concentration:	6 Vol%
Maximum Vapor (Propane Equivalent) Hydrocarbon Concentration:	60 Vol%
Pressure Drop Through Unit:	12" W.C.

The John Zink Series GV-LH Smokeless, Air assisted Combustor is a custom designed integrated waste vapor combustor. The combustor is specially designed for the conditions given. Any modification to these design criteria should be related to John Zink Company to insure the performance of the combustor. The combustor is designed for the conditions listed above and operated within these conditions the unit will meet the Federal EPA hydrocarbon vapor emission standards of 35 mg/liter. In most cases the hydrocarbon emissions will be less.

The GV-LH Smokeless Air Assisted Combustor is a vertical self supporting structure 25 feet in elevation. Internal risers deliver the waste vapor to the burner. The air for smoke suppression is supplied by an air assist blower to a plenum, which surrounds the burners. One continuous pilot provides an ignition source to safely combust the waste vapor.

The safety design of a vapor combustion unit in this application is of utmost importance since it receives and air/hydrocarbon vapor mixture which can often times be in the explosive range. The John Zink Vapor Combustion Unit features several unique safety controls. The first feature is the proprietary anti-flashback burner used. The design of this burner minimizes flashback potential. Supplementing this is careful sizing and burner staging to maintain

velocity through the burner. By keeping the gas velocity above the flame propagation speed of the gases being burned, flashback in unlikely to occur.

If the above measures fail, a crimped ribbon type flame arrestor is provided with a temperature switch mounted near the surface of the element to detect heat increase. The temperature switch reacts to the rising temperature input causing a valve upstream of the flame arrestor to close, eliminating the fuel source and extinguishing the fire.

The final safety device is the liquid seal drum with special internals for use with gases in the stoichiometric range. The John Zink Liquid Seal, properly maintained and operated, has been proven 100% effective in stopping a flame front, providing assurance that no flame can reach the terminal from the combustor burners.

The unit is designed to be fully automatic, responding to a signal from the loading rack to start the air assist blower and light the pilot. When the unit recognizes all systems go, a "ready" signal is returned to the rack so loading may proceed. After loading at the truck rack is completed, the combustor is automatically shutdown in the standby mode. During standby period the pilot does not burn which minimizes pilot gas consumption.

The combustion system is a complete package requiring only minor assembly.

B. Equipment Description

The following items comprise the Terminal Combustion System.

Item No. 1 - Combustion Stack

One (1) 24" O.D. X 25' O.A.H. self supported LH Riser Stack with internal gas riser.

Proprietary John Zink Antiflashback Burner, which stable over the 600 to 8400 GPM operating range.

One (1) Self inspiration energy efficient EEP pilot complete with ignitor assembly. The pilot is designed to utilize propane or natural gas for fuel.

Structural design and fabrication is in accordance with AISC.

Welding is per AWS-D1.1 No testing or x-ray is included.

Material: A-283 Grade C or equivalent. The upper 12" of the riser stack is Type 304 stainless steel.

Refractory: None

Item No. 2 - Combustion Air Blower

One (1) Tube-Axial Air Blower Complete with 3 HP, 480 volt, TEAO motor. Motor starter is provided and is prewired to motor.

Item No. 3 - Controls

One (1) John Zink GV-LH Combustion Control Package, installed in a NEMA 4 Weather proof control panel. Explosion proof enclosures can be quoted upon request but are usually not required since combustion unit must be installed in non hazardous area anyway.

The control system includes the following:

1. Self-Inspirating Automatic Pilot ignition system complete with:

   a. Fuel gas pressure regulator
   b. Air inspirator
   c. Pilot gas block valve
   d. Pilot gas solenoid valve
   e. Pressure gauge for pilot line
   f. Ignition gas solenoid valve

g. 3 pilot and ignition gas strainers
h. Automatic ignitor assembly

2. Two (2) burner staging control pressure switches and one (1) pressure gauge. The high pressure switch signals the burner control valve when there is sufficient pressure in the line to keep the gas velocity above the flame propagation speed of the gas being burned making flashback unlikely to occur. The low pressure switch close the waste burner valve when the line pressure, indicated product loading has stop.

3. Control panel indicating lights and shutdowns.

   a. Low liquid seal level (red light-shutdown)
   b. Pilot off (amber light)
   c. Power on (white light)
   d. Blower failure (red light-shutdown)
   e. Remote emergency shutdown/high sump tank level (red light-shutdown)
   f. High flame arrestor temp. (red light-shutdown)
   g. Power failure (red light)

4. One (1) liquid level gauge glass mounted on liquid seal vessel.

5. One (1) liquid level switch to detect low liquid level in liquid seal vessel.

6. Two (2) electrically operated butterfly burner block valves. These valves stay closed until, vapor combustor unit is operational, pilot is proven, ground signal is reached at VCU and vapor flow rate to unit is sufficient to create minimum pressure in vapor header.

7. One (1) General Electric Programmable Control System.

8. Space heater inside control panel and actuator cover.

9. One (1) pilot monitoring thermocouple and low temperature switch.

10. Block valves on liquid seal fill and drain lines.

11. Block valves on all pressure gauges.

12. One (1) high temperature switch (flame arrestor hot face)

13. The following terminal blocks are provided in the control panel for customer connection:

    a. Customer remote Emergency Shutdown
    b. Sump tank high level alarm shutdown
    c. Customer permissive to run signal
    d. Customer remote alarm
    e. Remote start signal

Item No. 4, Liquid Seal Drum

One (1) John Zink patented 3' diameter X approximately 6' TT, vertical Liquid Seal Drum.

The Liquid Seal is utilized to provide positive pressure on the gas relief header and to be a positive flame arrestor in the event a flashback occurs. The drum has specially designed internals to insure a steady flow of gases to the burner tip thus increasing the maximum smokeless capacity of the combustor with the minimum amount of supplemental energy. The liquid seal's proprietary internals also decrease the noise caused by uneven combustion at the combustor.

The following connections are included:

One (1) 10" ANSI class 150 lb. RF gas inlet
One (1) 10" ANSI class 150 lb. RF gas outlet
One (1) 1" NPT drain connections
Two (2) 2" NPT level connection
Two (2) 3/4" NPT level gauge
One (1) 1" NPT Liquid Fill
One (1) 8" ANSI class 150 lb. RF inspection opening
One (1) 3/4" NPT hydrocarbon skimmer connection
One (1) 1" NPT relief valve

Design pressure is 50 PSIG.

The Liquid Seal Drum is designed and fabricated per ASME. Welding is per ASME. No code stamp is provided.

Item No. 5 - Flame Arrestor

One spiral wound crimped ribbon type flame arrestor is installed, between the staging control valve and the burner tips. The flame arrestor is provided with a temperature switch mounted near the surface of the flame bank to detect heat increase. The temperature switch reacts to the temperature input causing a valve upstream of the flame arrestor to close, eliminating the fuel source and extinguishing the fire. The advantage to the operator of this equipment, is that it lets the operator know quickly that there is a problem with one of the burners. Control panel will be provided with red indication light to indicate shutdown.

Item No. 6 - Unit Testing

The combustor to be fully assembled and tested in manufacturer's shop. The following minimum check out shall be performed on the unit.

a. Natural gas is connected to pilot fuel train to check pilot operation.

b. Liquid Seal to be filled with water to check low level switch.

c. Pressure/temperature switches to be preset.

d. All safety shutdowns to be checked.

e Power connected to blower to check start/stop cycle.

f. Start signal to be given to unit to simulate field operation.

Unit Weight: 6,500 pounds.

Paint:

A. No paint required on stainless steel surface.
B. Paint to be applied to exterior carbon steel surface only unless otherwise noted.
C. Exterior carbon steel surface preparation per SSPC-SP6-63 and prime coat with self cure inorganic zinc (2 1/2 Mil D.F.T.)

C. Utility Requirements

1. EEP Pilot.....29 SCFH Propane @ 7 psig or
   71 SCFH Natural Gas @ 15 PSIG

2. Electrical
   a. Control Panel...110 V/1 Ph/60 Hertz
   b. Air Blower.....3 Hp/440/220/3 PH/60 Hertz

3. Instrument Air.....None

4. Assist Gas.....None