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TOTAL VOLATILE ORGANIC COMPOUND
EMISSIONS AND EFFICIENCY TESTING ON THE
JOHN ZINK VAPOR RECOVERY UNIT

PERIMETER OIL COMPANY

2970 PARROT AVENUE NW
ATLANTA, GEORGIA 30318
(404) 592-2572 Plant Telephone Number
(404) 794-1376 Facsimile Number
Georgia Department of Natural Resources
Air Permit No. 5171-121-0415-S-01-3
Test Date: June 7, 2007
ATC Project No. P-7067

ATC
ANALYTICAL TESTING
Providing Quality Air Testing and Consulting Services Since 1981

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INTRODUCTION

Perimeter Oil Company requested that ANALYTICAL TESTING CONSULTANTS, INC. perform a Volatile Organic Compound emissions test in accordance with US EPA Method 25B on the John Zink carbon adsorption unit exhaust located at the Atlanta, Georgia bulk storage facility. Testing was performed in accordance with the following US EPA methodology (40 CFR 60 Subpart XX and Appendix A).

TABLE I

Method #	Description	Sampling Location
2a	Direct measurement of gas volume through pipes and small ducts	Exhaust VRU
21	Determination of volatile organic compound leaks	Loading rack, VRU, Associated piping, tanker trucks
25b	Determination of total gaseous organic concentrations using a non-dispersive infrared analyzer	Inlet/Exhaust of VRU
205	Verification of Gas Dilution Systems for Field Instrument Calibrations	All Analyzers

ATC personnel Stewart Meadows (Project Manager) and Kent Childers (Technician) conducted testing on Thursday, June 7, 2007.

CERTIFICATION OF RESULTS BY TEST FIRM

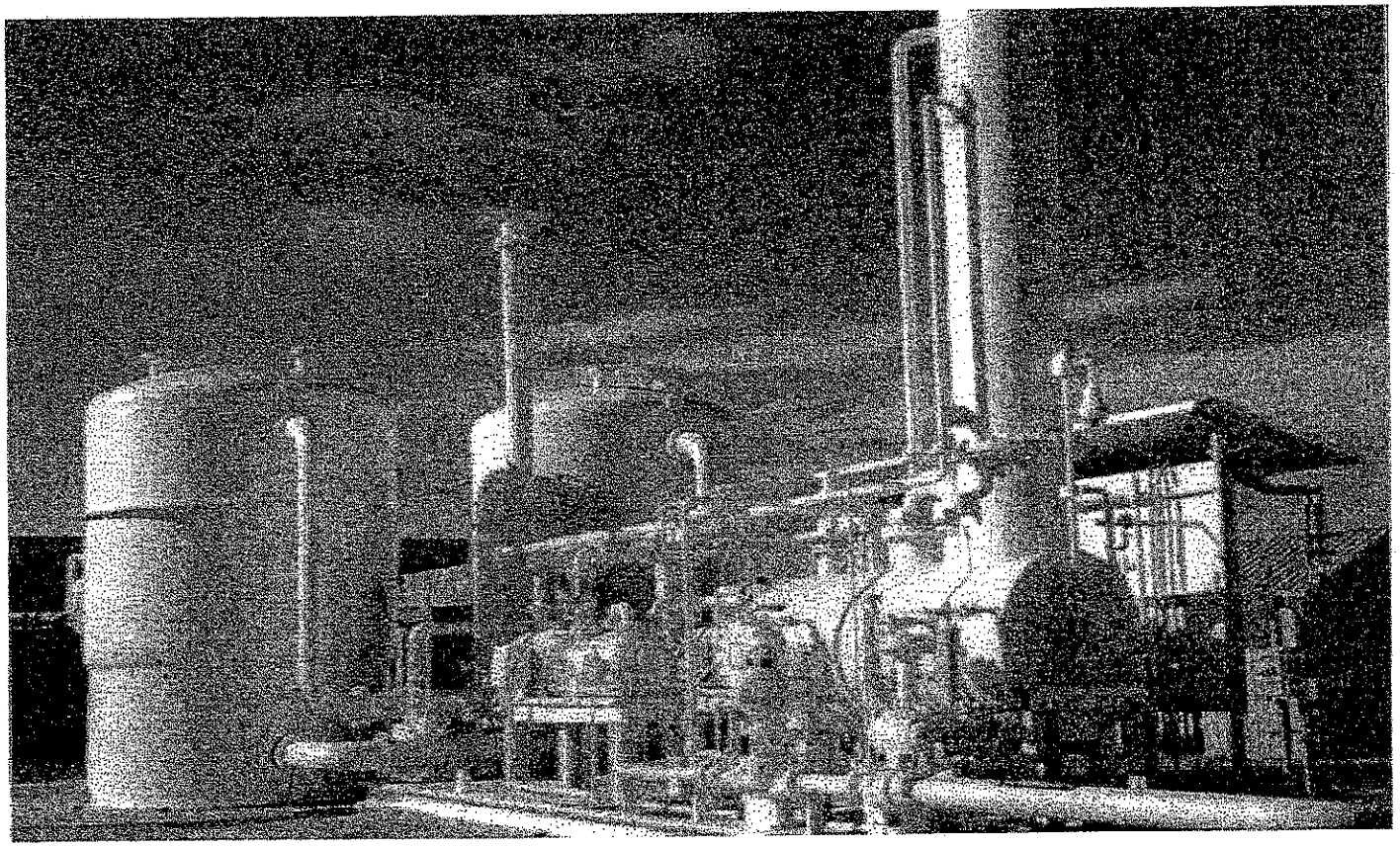
"I certify under penalty of law that I believe the information provided in this document is true, accurate and complete. I am aware that there are significant civil and criminal penalties, including the possibility of fine or imprisonment or both, for submitting false, inaccurate or incomplete information."

Signature/Date
Report Author

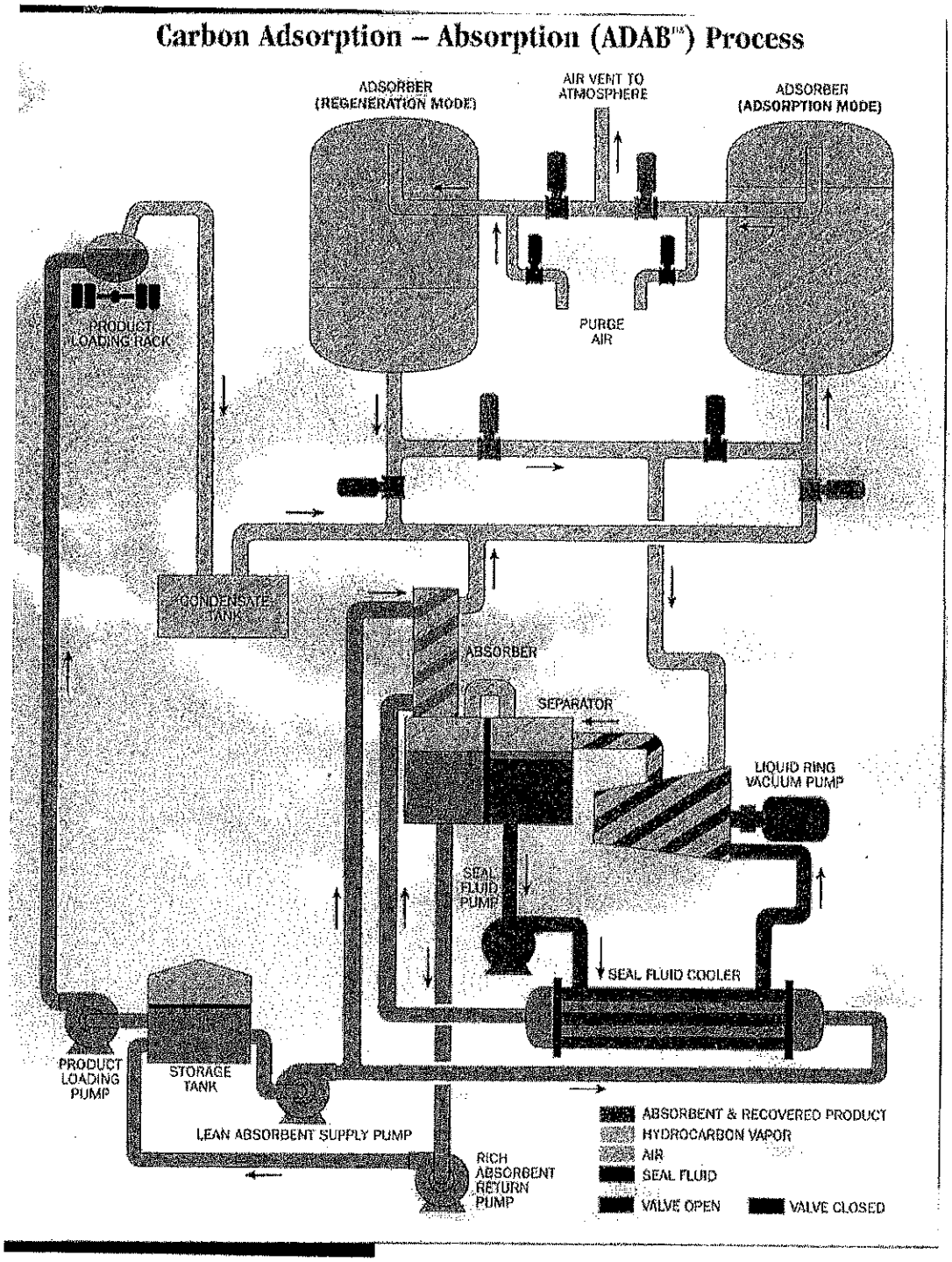
W. Stewart Meadows
Sr. Project Manager
Printed Name/Title

Signature/Date
Report Review

W. Keith Poole
Technical Director
Printed Name/Title



Typical Zink VRU Unit



Typical Process Flow Diagram

Executive Summary

Bulk Gasoline Loading Terminal Emission Test

Test Date	06/07/07	
Terminal Owner (company)	Perimeter Oil	
Terminal Name	Same	
Physical Address	2970 Parrot Avenue NW	
Location (City, State)	Atlanta, GA 30318	
Type of Vapor Control Unit	Carbon Adsorption	
Vapor Control Make & Model	John Zink VRU S3-AAD-3-80-80-8	
Number of Loading Bays	3	
Applicable Permit Number	Georgia Air Permit No. 5171-121-0415-S-01-3	
Emissions Test Methods		
Inlet Vapor Flow Rate	EPA Method 2A	
VOC Inlet Concentration	EPA Method 25B	
Exhaust Flow Rate	EPA Method 2A	
VOC Exhaust Concentration	EPA Method 25B	
Vapor Leak Test	EPA Method 21	
Other Measurements	N/A	
Product Loading Data	**Observations**	**Criteria**
Start Test (time)	6:05	
End Test (time)	12:05	
Total Test Duration (time)	6:00	≥ 6 hours
Total Fuels Loaded (gross gallons)	275,572	
Total Fuels Loaded (gross liters)	1,043,040	
Total Gasolines Loaded (gross gallons)	263,377	> 80,000 gallons
Total Gasolines Loaded (gross liters)	996,882	> 300,000 liters
% Distillate Loaded	4.43%	
VOC Emission Test Results	**Observations**	**Limits**
Vapor Control Leak Check	Good, no leaks	< 10,000 ppm as CH_4
Maximum Loading Pressure ("H_2O)	4.6	< 18 "H_2O
Local Station Pressure ("Hg)	29.00	
Average Inlet Concentration (% as C_3)	40.64%	
Inlet Vapor VOC (lbs)	1633.38	
Average Exhaust VOC Concentration (% as C_3)	0.095	
Total VOC Emissions (mg)	1486055.91	
Total VOC Emissions (lbs)	3.27	
VOC Emission Rate (lbs/hr)	0.54	
VOC Emission Rate (mg/liter of all fuels loaded)	1.42	
VOC Emission Rate (mg/liter of gasoline loaded)	1.49	<10 mg/liter
Calculated Recovery Efficiency (VRU)	99.80%	

CONCLUSIONS

Results of the testing are shown in the RESULTS SUMMARY. Additional data and information may be reviewed in the CALCULATIONS section and APPENDIX of this report.

Total VOC emissions averaged **1.49 milligrams/liter** (mg/l), well in compliance with the allowable of **10 mg/l**. This was based upon a throughput of **263,377** gallons of gasoline products loaded on non-leaking tankers.

The removal/destruction efficiency was **99.80%**.

Project Sampling Issues and Method Discussion

VOC sampling and testing of the vapor recovery unit was performed according to the test methods outlined in the test plan and contained no abnormalities or deviations from established methodologies in either sampling or analysis.

Quality Assurance Procedures

The following steps were conducted to ensure the accuracy and precision of the test project.

1) All equipment was visually inspected prior to arrival on site. Consumables were inventoried and replenished as needed.

2) Method 205 is performed on the Environics 2020 gas dilution system before each test to ensure the accuracy of calibration gases generated.

3) The Environics 2020 (serial no. 2032 for terminal trailer) gas dilution system is calibrated by the manufacturer annually and is currently certified through December 21, 2007. A certification sticker reflecting this date is affixed to the unit.

4) Turbine meter, pressure transducers, and thermocouples have primary calibrations performed on an annual schedule.

5) Turbine meter, pressure transducers, and thermocouples have post-test calibrations performed after each test series.

6) All data entered into an Excel spreadsheet in the field or on pre-printed ATC forms are double-checked in technical review prior to issuing the report.

7) Either the Technical Director or the QA/QC manager reviews and signs all report.

RECOMMENDATIONS

ANALYTICAL TESTING CONSULTANTS, INC. recommends Perimeter Oil Company submit this report to the Georgia Department of Natural Resources, Environmental Protection Division, Air Protection Branch as evidentiary proof of compliance with the 10 mg/liter emissions limitation of the John Zink vapor recovery unit.

DESCRIPTION OF TEST

Perimeter Oil Company operates a bulk fuel loading/storage terminal at 2970 Parrot Avenue NW, Atlanta, GA. Tanker trucks may load gasoline and distillate products at one of three loading lanes. Normal loading volume for the facility is currently about 25 MM gallons monthly. Vapor-tight cargo tankers are loaded by bottom-fill, submerged pipe. As liquid product enters each compartment, VOC-laden vapors are displaced into the terminal's vapor collection system and piped to the vapor control device, a John Zink vapor recovery unit (model no. S3-AAD-3-80-80-8).

Stewart Meadows and Kent Childers were the representatives on site for Analytical Testing Consultants. They immediately finalized the equipment setup at the exhaust of the vapor recovery system upon arrival at the terminal at 5:15 AM, local time. Preliminary measurements and calibration of instrumentation was accomplished, followed by a complete leak test of the vapor recovery collection system while trucks were loading; no leaks were found. Continuous monitoring of the exhaust and inlet gases was conducted from 0605 until 1205. This corresponded with Subpart XX requirements of a minimum of six hours of continuous sampling; minimum throughput volumes had been achieved earlier in the test (actual = 263,377).

The methods utilized for testing were as outlined by US EPA Method 25B. Method 2A was utilized for air volume measurements; Method 25B for the volatile organic compound determination. Copies of all calculation formula appear in the CALCULATIONS section of this report. A Rockwell Turbine Gas Meter, Model T-60, equipped with a pulse sensor for flow and sensors for temperature and pressure, was utilized for the Method 2A volume determination. Inlet vapors were monitored by a Horiba VIA-510. A California Analytical Instruments Model 300 was utilized for monitoring of the exhaust air stream. These instruments were connected to a Pace Scientific XR5 data acquisition system for data logging and an Omega Instruments 10" strip chart recorder for backup documentation.

Instrument calibrations began with verifying the accuracy of the Environics 2020 Gas dilution system. The first step was to calibrate any analyzer (CAI ZRH CO_2 analyzer chosen) according to the established US EPA methodology associated with that analytical principle. Therefore, the ZRH was calibrated according to US EPA method 10 (promulgated 8/15/2006) using three gases: 19.97%, 10.23% (both Protocol mixtures of CO_2 in nitrogen) and UHP nitrogen for a zero gas. Once this was successfully completed, the gas in the 19.97% CO_2 cylinder was diluted with nitrogen to levels of 10.0% and 5.0%. These were introduced to the CAI in triplicate and the response compared to the predicted deflection. The calculated precisions were 0.25% and 0.00%, respectively. Accuracy of the 10.0% dilution was 0.12%; and the 5.0% dilution was 0.12%. The third step was to introduce a mid-level audit gas (10.23%) to the analyzer in triplicate (precision 0.16%, accuracy 0.54%). Method 205 requires precision and accuracy to be ±2%.[1]

[1] There may be slight variations between the percent errors reflected in the raw data and the field form ATC-18. This is due to rounding.

DESCRIPTION OF TEST
(continued)

Monitoring of Loading Rack

Immediately prior to emissions testing, a MicroFID portable FID was calibrated using hydrocarbon-free air and an EPA protocol mixture of 9,080 ppm methane in air (18% LEL). Loading rack connections, flanges, seals and flame arrestors were checked from the truck rack to the control device as much as feasible (excluding underground or elevated piping).

During emissions testing, all loading tanker trucks were monitored by sight, sound and smell. Any tanker with questionable vapor-tightness was checked with the LEL meter. Additionally, any tanker without current vapor-tightness certification was not allowed to load. No tankers were disallowed during this emissions test.

Calculation of VRU Emission Rate

A Pace Scientific XR5-SE 50mv data logger was utilized for collection of pertinent data. The XR5 data logger is a microprocessor based data acquisition system designed specifically to acquire, process, store, and telemeter environmental data.

Data Logger Specifications

ANALOG INPUTS	
Resolution:	12 bits (1 part in 4095, 0.024% F.S.)
Temperature Accuracy:	1 +/- 0.15°C from 10 to 40°C
	+/- 0.3°C from -25 to 85°C
Temperature Resolution:	1 0.02°C at 25°C (12 bits)
	0.06°C or better from -25 to 75°C
Temperature Range:	1 -40 to 150°C
0-5v and 0-2.5v ranges	
Accuracy (0-2.5v range):	+/- 0.15% F.S. (10-40°C)
	+/- 0.20% F.S. (0-60°C)
Accuracy (0-5v range):	+/- 0.35% F.S. (10-40°C)
	+/- 0.40% F.S. (0-60°C)
Repeatability:	+/- 0.05% F.S. for <10°C ambient temperature change.
Input impedance:	>10Mohm (for all logging modes and when inactive or not logging).
Optional Millivolt ranges	
Accuracy (low range):	+/- 0.45% F.S. (10-40°C)
	+/- 0.50% F.S. (0-60°C)
Accuracy (high range):	+/- 0.65% F.S. (10-40°C)
	+/- 0.70% F.S. (0-60°C)

DESCRIPTION OF TEST
(concluded)

Data Logger Specifications, continued

Input impedance:	>10Mohm (for all logging modes and when inactive or not logging).
Input offset:	5uV max. at 25°C, 10uV max. from -40 to 60°C.
Offset voltage drift:	0.02uV/°C max.

Sensors associated with the data acquisition system continuously collected data for the following parameters: pressure, temperature, flow, VOC inlet/outlet concentration in percent. This data was averaged in one minute intervals and stored in a .TXT file. At the end of testing, the text file was edited for calibration periods and linked to an EXCEL spreadsheet. The spreadsheet was used to average the one minute intervals into five minute intervals; data was then linked to the VRU Calculations shown on pages 14-15. Outlet concentrations were translated directly from output voltage to percent. Equation #2 on page 16 was utilized in calculating mass at each test interval. After all test intervals were calculated, propane mass for the entire six hour (or appropriate length) time period was calculated by a summation of all of the test intervals. This value was divided by the total terminal throughput at the rack (as expressed in liters) of all non-leaking tankers, thus yielding mg/l (Equation #3, page 16).

During calibration periods when monitoring of the exhaust is suspended, the concentration during the previous five-minute interval prior to the calibration is substituted into Equation #2 to estimate VOC emissions while in calibration mode.

Presentation of Raw Data

Raw data may be found beginning on page one of the APPENDIX. Page one begins with the initial calibration data starting at 0537. Hourly zero drift checks and mid-range calibration errors are highlighted in yellow; percent errors are shown to the right of each calibration period. Immediately following the test data is the method 205 procedures. The same yellow markings will hold true for all calibration periods for the CALIBRATION DRIFT data found in the APPENDIX.

REFERENCES

1. CODE OF FEDERAL REGULATIONS, Title 40, Part 60, Appendix A, July 1, 2005.

2. CODE OF FEDERAL REGULATIONS, Title 40, Part 51, Appendix M, July 1, 2005.

CALCULATIONS

VOC Mass Determinations
Calculation Formulae

VOC MASS DETERMINATIONS

AND VOLUMETRIC FLOW

CLIENT:	*Perimeter Oil*
ADDRESS:	*2970 Parrot Avenue NW*
CITY, STATE:	Atlanta, GA 30318
TYPE OF UNIT:	Carbon Adsorption
DATE:	06/07/07
BAROMETRIC PRESSURE:	29.00

Time	Actual Vol. Cubic Ft.	Pressure Inches H_2O	Meter Temp. ° F	Exhaust Concentration, ppm	Inlet Concentration, %	Interval Total Flow, scm	Interval Total mass, mg
6:05	0	0.08	71.3	1983	17.78	0.000	0
6:10	435	-0.45	71.1	401	49.00	11.862	8696
6:15	420	0.21	71.1	567	47.67	11.472	11899
6:20	110	0.13	70.8	391	46.81	3.005	2149
6:25	634	-0.28	71.0	420	47.06	17.297	13295
6:30	340	0.19	71.0	391	47.57	9.288	6642
6:35	571	0.28	70.9	283	43.88	15.605	8087
6:40	839	-0.17	71.6	303	32.10	22.873	12683
6:45	393	0.21	71.6	410	30.67	10.722	8049
6:50	405	0.22	71.6	459	29.39	11.052	9284
6:55	648	-0.28	71.7	401	45.60	17.655	12943
7:00	614	0.28	72.0	1768	47.47	16.745	54183
7:05	273	0.10	71.8	calibrating	calibrating	7.444	24088
7:10	700	-0.21	72.2	623	calibrating	19.058	21719
7:15	583	0.27	72.5	1846	40.35	15.884	53666
7:20	441	-0.01	72.7	664	43.52	12.001	14587
7:25	498	-0.09	72.8	420	42.27	13.547	10412
7:30	252	0.18	72.9	1153	41.73	6.859	14468
7:35	615	-0.13	73.2	1651	32.82	16.716	50499
7:40	1034	0.44	74.1	889	30.21	28.096	45709
7:45	130	0.11	74.1	1016	30.98	3.530	6563
7:50	68	-0.42	73.7	703	30.15	1.845	2374
7:55	417	0.15	74.6	118	36.68	11.313	2435
8:00	2	0.08	74.4	224	37.58	0.054	22
8:05	384	-0.38	75.1	calibrating	calibrating	10.395	4269
8:10	596	0.31	76.1	317	calibrating	16.129	9364
8:15	1	0.10	75.7	264	38.57	0.027	13
8:20	46	-0.58	75.9	371	39.80	1.243	844
8:25	711	0.33	78.0	840	40.26	19.174	29481
8:30	310	0.19	79.5	2764	43.46	8.335	42165
8:35	275	-0.52	80.8	947	43.92	7.363	12765
8:40	392	0.21	82.4	274	44.87	10.483	5249
8:45	518	0.28	84.2	879	44.09	13.809	22218
8:50	743	-0.24	85.4	1094	41.25	19.737	39521
8:55	676	0.31	87.0	1270	40.65	17.931	41672
9:00	10	0.08	89.3	1397	36.56	0.264	675
9:05	278	-0.36	90.2	calibrating	calibrating	7.318	18708
9:10	609	0.29	92.2	427	calibrating	16.001	12510
9:15	372	0.21	94.3	2090	40.62	9.734	37233

Time	Actual Vol. Cubic Ft.	Pressure in. H_2O	Meter Temp. ° F	Exhaust Concentration, ppm	Inlet Concentration, %	Interval Total Flow, scm	Interval Total mass, mg
9:20	527	-0.36	94.6	1592	39.76	13.763	40106
9:25	652	0.31	96.9	1416	40.34	17.017	44101
9:30	412	0.22	96.7	1885	36.58	10.735	37037
9:35	440	-0.30	97.1	1006	36.00	11.441	21062
9:40	678	0.31	96.2	977	40.56	17.684	31605
9:45	466	0.23	97.6	1621	36.85	12.123	35965
9:50	712	-0.16	99.0	752	40.34	18.458	25408
9:55	553	0.26	99.3	938	44.02	14.343	24615
10:00	260	0.18	101.9	713	39.72	6.711	8756
10:05	342	-0.45	101.2	calibrating	calibrating	8.823	11513
10:10	346	0.20	102.3	547	calibrating	8.924	8933
10:15	602	0.28	104.4	860	43.75	15.474	24341
10:20	776	-0.20	103.0	508	45.59	19.972	18567
10:25	275	0.17	101.9	791	46.48	7.098	10280
10:30	225	0.16	102.2	889	46.96	5.804	9441
10:35	843	-0.10	97.9	1055	41.69	21.900	42273
10:40	695	0.31	98.8	1905	42.09	18.045	62902
10:45	218	0.15	103.6	1993	42.23	5.609	20455
10:50	440	-0.47	103.6	528	42.60	11.303	10913
10:55	403	0.20	107.2	1280	43.99	10.305	24130
11:00	309	0.18	108.7	1729	46.09	7.880	24932
11:05	597	-0.36	104.7	calibrating	calibrating	15.311	48445
11:10	1102	0.48	104.6	147	calibrating	28.330	7608
11:15	410	0.21	104.7	449	37.16	10.530	8656
11:20	408	-0.48	102.6	244	43.68	10.501	4689
11:25	186	0.16	105.9	596	44.74	4.767	5197
11:30	884	0.38	110.1	1914	45.02	22.500	78824
11:35	915	-0.09	106.9	801	47.46	23.392	34280
11:40	449	0.22	103.8	2217	46.61	11.550	46869
11:45	59	-0.01	105.4	2403	46.61	1.513	6651
11:50	889	-0.13	105.2	479	42.08	22.793	19972
11:55	546	0.25	103.2	342	35.10	14.064	8802
12:00	202	0.00	105.5	801	30.51	5.178	7590
12:05			**End Test**	**946.20**	**40.64**	**875.70**	**1486055.9**

CALCULATION FORMULAE FOR BULK STORAGE TERMINALS

1.

$$V_{E_S} = \frac{\frac{293.16^{o}K}{760mmHg} xGx \frac{m^3}{35.315\,ft^3} xV_m x\left(P_g + P_b\right)}{T_m}$$

Where:

V_{es}	=	Standard volume of air-vapor mixture, m^3 (cubic meters)
G	=	Gas meter coefficient, unit less
V_m	=	Net gas meter volume, ft^3 (cubic feet)
P_g	=	Static pressure, mm Hg (millimeters mercury)
P_b	=	Atmospheric pressure, mm Hg (millimeters mercury)
T_m	=	Absolute temperature at meter, °K (degrees Kelvin)

2.

$$M_{e_i} = \frac{KxV_{es_i} xC_{e_i}}{1{,}000{,}000}$$

Where:

Me_i	=	mass of emissions for interval i, milligrams
K	=	1,830,000 mg/scm (density of propane)
Ves_i	=	standard metered volume for interval i (from equation 1), m^3 (Cubic meters)
Ce_i	=	exhaust concentration for interval i, in ppmv of propane
1,000,000	=	ppm per unity

3.

$$E = \frac{\sum_{1}^{n} M_{ei}}{L}$$

Where:

E	=	emission rate, mg VOC/L
L	=	liters of countable gasoline loaded during test period
n	=	number of test intervals, unit less

CALCULATION FORMULAE FOR BULK STORAGE TERMINALS (continued)

4.

$$V_{e_s} = V_{i_s}\left[\frac{(KxHC_i)}{(KxHC_e)+CO_{2_e}+CO_e-300}\right]$$

Where:

CO_{2e} = mean exhaust concentration of carbon dioxide for i_{th} interval.

CO_{2a} = measured ambient concentration of CO_2 (or may be assumed to be 300 ppm)

CO_e = mean exhaust concentration of carbon monoxide for i_{th} interval.

HC_e = mean exhaust organic concentration as defined by calibration gas, E.g. propane.

HC_i = mean inlet organic concentration as defined by calibration gas, e.g. propane.

V_{is} = measured inlet gas volume, m^3 (cubic meters).

V_{es} = calculated exhaust gas volume, m^3 (cubic meters).

$K_{e\ or\ I}$ = Hydrocarbon calibration gas factor, propane=3.

5.

$$\overline{d} = \frac{1}{n}\sum_{i=1}^{n} d_i$$

Where:

d = Arithmetic mean of the difference of a data set

n = number of data points

$\sum_{i=1}^{n} d_i$ = Algebraic summation of the individual differences, d_i

6.

$$S_d = \sqrt{\frac{\sum_{i=1}^{n} d_i^2 - \left[\frac{\left(\sum_{i=1}^{n} d_i\right)^2}{n}\right]}{n-1}}$$

Where:

S_d = standard deviation

CALCULATION FORMULAE FOR BULK STORAGE TERMINALS (continued)

7.

$$cc = t_{0.975}\frac{S_d}{\sqrt{n}}$$

Where:

$t_{0.975}$ = t-value from Table 2-1 of PS-2.

8.

$$RA = \frac{\left|\bar{d}\right| + \left|cc\right|}{\overline{RM}} x100$$

Where:

$\bar{d}$ = absolute value of the mean differences from equation 5

cc = absolute value of the confidence coefficient from equation 7.

RM = average reference method value. In cases where the average emissions for the test are less than 50% of the applicable standard, substitute the emission standard value in the denominator of Equation 8. In all other cases, use RM.

RA = absolute mean difference between the gas concentration or emission rate determined by the reference method (RM), plus the 2.5% error confidence coefficient of a series of tests, divided by the mean of the RM tests or the applicable emission limit.

9.

$$H_T = K\sum_{i=1}^{n} C_i H_i$$

H_t = Net heating value of the sample. MJ/scm; where the net enthalpy per mole of offgas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K = Constant, 1.740×10^{-7} (1/ppm)(g mole/scm) (MJ/kcal), where the standard temperature for (g mole/scm) is 20 °C.

C_i = Concentration of sample component i in ppm on a wet basis, as measured for organics by Reference Method 18 and measured for hydrogen and carbon monoxide by ASTM D1946-77 or 90 (Reapproved 1994).

CALCULATION FORMULAE FOR BULK STORAGE TERMINALS (concluded)

H_i = Net heat of combustion of sample component i, kcal/g mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382-76 or 88 or D4809-95 if published values are not available or can not be calculated.

10.

$$V_F = \frac{\left(\frac{VFR_{scm}}{3600}\right)}{A_{Fn}}$$

Where:

V_f = velocity of the flare, meters per second

VFR_{scm} = Volumetric flow rate, standard cubic meters per hour

3600 = Conversion from hours to seconds

Afn = Unobstructed cross-sectional area of the flare tip, m^2.

11.

$$V_{\max} = 8.706 + 0.7084\left(H_T\right)$$

Where:

V_{max} = maximum permitted velocity, m/sec

8.706 = Constant

0.7084 = Constant

H_T = The net heating value as determined in equation 10.

APPENDIX

Raw Test Data
Loading Rack Information Data Sheet
Terminal Verification of Loading Volume
System Calibration Error for Protocol Gases
Method 205 Dilution System Verification
System Calibration Errors for Step-down Calibrations
Method 21 Calibration Form
Method 21 Leak Check Results
Strip Chart
EPA Method 21 Memo
Calibration Data

Commissioners request hearing on gas center

12:38 AM CDT on Wednesday, June 15, 2011

By Bj Lewis / Denton Record-Chronicle

Denton County commissioners want a hearing with the Texas Commission on Environmental Quality about a proposed gasoline distribution center near Sanger.

Commissioners passed a resolution Tuesday listing their concerns about the site and requesting a hearing on the matter.

County Judge Mary Horn advocated the hearing in order to air concerns the county has as well as to make the public aware of the project.

"I wanted unanimous support to request a TCEQ hearing on the subject, and that is exactly what I got," Horn said. "I'm already receiving phone calls and e-mails from citizens."

On the other side is Denton Terminal LLC, a company formed by MidPoint Partners and Cogent Energy Solutions for the purpose of completing the Denton-area project, which Steven Senter called "a big gas station."

Senter, of Houston-based MidPoint Partners, attended Tuesday's meeting to correct misinformation in the resolution and to formally address the full court. He had previously met with Horn and Commissioner Hugh Coleman.

"I was amazed today Steven Senter showed up and said it was twice as many trucks as he originally told us about," Horn said.

She said that Senter originally said that, at peak volume, the terminal could load approximately 150 trucks a day, but he said Tuesday it could be as many as 300 trucks.

The trucks would travel FM2164 nearly five miles between the site and Loop 288 in Denton.

During his remarks to the court, Senter revisited the topic of paying the county money for road work.

Commissioner Bobby Mitchell asked if there was any way to legally hold Denton Terminal to its financial agreement. John Feldt with the district attorney's office said there was not if it was done as a gift, but a contractual arrangement could be made.

Senter, who has been working with the county for a couple of years on the project, said later that the meeting with commissioners went well. He said he was pleased that their rhetoric changed from opposing the project to focusing on hearings.

Commissioner Andy Eads said the meetings would be the next logical step.

"There are many unresolved issues regarding the installation of that site," he said. "It's only prudent we make sure TCEQ does a hearing so residents can be heard, the county can be heard, and we fully understand all the complexities so TCEQ makes an informed decision on whether or not that is the right location."

Eads said the commissioners don't oppose the business itself, but the main concerns are the location of "that particular road with the topography, the road conditions and the safety of the traveling public."

From: Bonnie Barrera
To: pevans@wcmgroup.com; ssenter@midpointpartners.com
CC: Banda, Monico
Date: 6/13/2011 9:41 AM
Subject: PBR request, Denton Terminal, permit #96348

Hello Mr. Evans,

My name is Bonnie Barrera and I am reviewing the PBR application for Denton Terminal. To continue technical review of the application the following needs to be addressed:

1. Loading calculations
During loading operations, emissions occur at the truck and control device. Per AP-42, Chapter 5.2, pg 6, if the trucks are not annually leak tested, then one can only assume 70% loading emissions reach the control device. So, overall control efficiency without truck leak testing would be (.70)(0.995) = 0.70.
Are the trucks used in loading operations annually leak tested?

2. Appropriate PBR for gasoline
§106.473 Organic Liquid Loading and Unloading is the correct PBR to cover gasoline loading. Per §106.261 (b)(1), 106.261 cannot be used to authorize "construction of a facility authorized in another section of this chapter." Please evaluate §106.473 for units T-001, T-002, T-005, and T-006. loading for docks using 473 rather than 261
Also, §106.472 is the correct PBR to cover diesel loading. Please evaluate unit §106.472 for unit T-004. for loading for T-004

3. Carbon adsorption vapor recovery unit
How is breakthrough in the carbon tower monitored?
Does the unit include an alarm system to monitor breakthrough?
What is the velocity of the streams that route to the unit?
What is the VOC concentration of the streams that route to the unit?
Please include the design of the carbon system that shows it can accommodate the stream being sent to it at the stream velocity and concentration.

4. Chapter 115 Texas Commission on Environmental Quality - Control of Air Pollution from Volatile Organic Compounds
Denton county is part of the DFW nonattainment area and storage tanks and loading have Chapter 115 requirements. How will the facility meet these requirements?

5. NSPS Subpart Kb/40 CFR Part 60 - Subpart Kb - Standards of Performance for Volatile Organic Liquid Storage Vessels (Including Petroleum Liquid Storage Vessels) for Which Construction, Reconstruction, or Modification Commenced after July 23, 1984
NSPS Kb has requirements for storage tanks with volumes greater than 40,000 gallons. How will the facility meet these requirements?

6. Tanks
a) How are lbs/hour calculated for each of the tanks?
b) Roof landings are considered MSS for tanks and must be addressed for newly constructed tanks during PBR review. How will the facility address tank landings during change of tank service?

Please provide a response no later than June 20. Feel free to contact me with any question.

Thank you,
Bonnie

Bonnie Barrera
Rule Registrations Section
Air Permits Division
Texas Commission on Environmental Quality
512-239-5652
512-239-7130 (fax)

From: Anne Inman
To: Barrera, Bonnie
CC: Banda, Monico; Partee, Michael; Swor, Cindy; Wentworth, Molly
Date: 6/6/2011 7:34 AM
Subject: Re: Fwd: Re Midpoint
Attachments: Re: Fwd: Re Midpoint

fyi - this relates to your Denton Terminal project - keep me and Molly in the loop on the status and any issues with the review please.

Anne M. Inman, P.E., Manager
Rule Registrations (R&R) Section
Air Permits Division
Anne.Inman@tceq.texas.gov
(512) 239-1264

>>> Steve Hagle 6/1/2011 1:54 PM >>>
Emily,

Call me if you have any questions.

Steve

From: Anne Inman
To: Hagle, Steve; Hendrickson, Erik
Date: 6/1/2011 1:22 PM
Subject: Re: Fwd: Re Midpoint

agree. We have had some smaller terminals claim 106.473-478 with a flare under 106.492 which do not require registration if sweet and small tanks, but if of any substantial throughput or larger tanks, they cannot stay below 25 tpy VOC.

A recent example is an older terminal run (now) by Magellan. Originally a permit, then changed (incorrectly) to Special Exemption in 1985. Even with a flare, they have 65 tpy VOC in their MAERT. They will be coming in for an NSR permit, and subsequently a 106.478 to handle ethanol (almost 25 tpy).

I will be happy to watch for Midpoint, but if there are other company names, please let me know....Thanks!

>>> Steve Hagle 6/1/2011 1:16 PM >>>
This is likely a fuels terminal, not an upstream oil and gas operation. I'm not sure they could get everything under a PBR unless it is a very small facility. Anne????

>>> Erik Hendrickson 6/1/2011 11:07 AM >>>
I checked our database and we have not received any projects from Midpoint. We also do not have any new oil and gas construction projects in Denton County. Below is a link to our database accessible to the general public through our website that the Judge could periodically check. She might want to check by pending projects in the County, in the event that Midpoint seeks authorization under a different company name (common for tax, accounting, and ownership interests purposes).

Erik, x1095

Link to Database

http://www5.tceq.state.tx.us/airperm/index.cfm?fuseaction=airpermits.start

>>> Emily Lindley 6/1/2011 9:36 AM >>>
Judge Horn just emailed me to see if they've come in for a PBR yet. Any word?

Emily Lindley
TCEQ, Legislative Liaison
512-239-4086

>>> Emily Lindley 5/27/2011 11:22 AM >>>
Fyi

Emily Lindley
TCEQ, Legislative Liaison
512-239-4086

>>> Mary Horn <Mary.Horn@dentoncounty.com> 5/27/2011 11:18 AM >>>
Don't believe they have applied yet but learned that it will be a Permit by Rule application

Mary Horn
Denton County Judge
110 W. Hickory St
Denton, TX 76201
940-349-2820
972-434-8805 Metro
940-349-2821 FAX

From: Emily Lindley
To: Erik Hendrickson
CC: Michael Partee; Steve Hagle
Date: 6/3/2011 4:25 PM
Subject: Re: Denton Terminal PBR Registration Information Attached

Thanks for the info. I've shared it with Brad Patterson in OPA, more than likely he will end up speaking with her about this if she has further questions.

Emily Lindley
TCEQ, Legislative Liaison
512-239-4086

>>> Erik Hendrickson 6/3/2011 3:48 PM >>>
The Denton Terminal project PBR registration is attached below. I scanned the information in two parts, so it can be sent in two e-mails, since some networks block large files. The project has not been assigned to a reviewer as of late Friday afternoon. Michael Partee (x3312), who is copied on this e-mail, will assign the project early next week. Michael will be able to provide a point of contact who is reviewing the PBR registration. If you need any additional assistance, you can also call me.

Erik, x1095

Review PBR applicability & calculations very carefully.
Let me know

ethanol
butane

pg 48

more conservative

Uncontrolled SOCMI Fugitive Emission Factors

Equipment/Service	SOCMI Average [1]	SOCMI Without C_2 [2] ethane	SOCMI With C_2 [2]	SOCMI Non-Leaker [3]
Valves				
Gas/Vapor	0.0132	0.0089	0.0258	0.00029
Light Liquid	0.0089	0.0035	0.0459	0.00036
Heavy Liquid	0.0005	0.0007	0.0005	0.0005
Pumps				
Light Liquid	0.0439	0.0386	0.144	0.0041
Heavy Liquid	0.019	0.0161	0.0046	0.0046
Flanges/Connectors				
Gas/Vapor	0.0039	0.0029	0.0053	0.00018
Light Liquid	0.0005	0.0005	0.0052	0.00018
Heavy Liquid	0.00007	0.00007	0.00007	0.00018
Compressors	0.5027	0.5027	0.5027	0.1971
Relief Valve (Gas/Vapor)	0.2293	0.2293	0.2293	0.0986
Open-ended Lines [4]	0.0038	0.004	0.0075	0.0033
Sampling Connections [5]	0.033	0.033	0.033	0.033

Notes: All factors are in units of (lb/hr)/component.
1. Factors are taken from EPA Document, EPA-453/R-95-017, November 1995, Page 2-12.
2. Factors are TCEQ derived.
3. Control credit is included in the factor; no additional control credit can be applied to these factors. AVO walk-through inspection required.
4. The 28 Series quarterly LDAR programs require open-ended lines to equipped with a cap, blind flange, plug, or a second valve. If so equipped, open-ended lines may be given a 100% control credit.
5. Use the SOCMI Sampling Connection factor for Non-Leaker. Emission factor is in terms of Pounds per Hour per Sample Taken.

document Source?

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Facility/Compound Specific Fugitive Emission Factors

Equipment/ Service	Ethylene Oxide[1]	Phosgene[2]	Butadiene[3]	Petroleum Marketing Terminal[4]	Oil and Gas Production Operations[5]				Refinery[6]
					Gas	Heavy Oil <20° API	Light Oil	Water/Light Oil	
Valves					0.00992	0.0000185	0.0055	0.000216	
Gas/Vapor	0.000444	0.00000216	0.001105	0.0000287					0.059
Light Liquid	0.00055	0.00000199	0.00314	0.0000948					0.024
Heavy Liquid				0.0000948					0.00051
Pumps	0.042651	0.0000201	0.05634		0.00529	0.00113[10]	0.02866	0.000052	
Light Liquid				0.00119					0.251
Heavy Liquid				0.00119					0.046
Flanges/Connectors	0.000555	0.00000011	0.000307		0.00086	0.00000086	0.000243	0.000006	0.00055
Gas/Vapor				0.000092604					
Light Liquid				0.00001762					
Heavy Liquid				0.0000176					
Compressors	0.000767		0.000004		0.0194	0.0000683	0.0165	0.0309	1.399
Relief Valve	0.000165	0.0000162	0.02996		0.0194	0.0000683	0.0165	0.0309	0.35
Open-ended Lines[7]	0.001078	0.00000007	0.00012		0.00441	0.000309	0.00309	0.00055	0.0051
Sampling	0.000088		0.00012						0.033
Connectors					0.00044	0.0000165	0.000463	0.000243	
Other[9]					0.0194	0.0000683	0.0165	0.0309	
Gas/Vapor				0.000265					
Light/Heavy Liquid				0.000287					
Process Drains					0.0194	0.0000683	0.0165	0.0309	0.07