

THRIFTY OIL CO.

93 JUN 17 11 01 AM '93

June 15, 1993

Alameda Environmental Health Department
Hazardous Materials Division
470 27th St. #322
Oakland, CA 94612

Re: THRIFTY OIL CO. #063
6125 Telegraph Ave.
Oakland, CA 94609

Dear Sir/Madam;

Enclosed please find our test results for the following;

- Tank Integrity
- Hydrostatic Line Test
- Leak Detector (Mechanical)
- Electronic Monitoring
- Meter Calibration

If you have any further questions or concerns, please contact me at Ext. 377. Thank you.

Yours truly,



Lori Freshour
Environmental Specialist





Champion
Precision Tank Testing
License No 73549

P O Box 13059
Sacramento, CA 95813-3059
CA 800-660-9443
NEV 800-949-9443
(916) 927-1557
Fax: (916) 927-7345

Alameda County Health Agency
% Britt Johnson
Hazardous Materials Specialist
80 Swan Way Room 350
Oakland, Calif. 94621

11-23-92

Re: Storage Tank Test Results For: Thrifty Oil Company
Location: 6125 Telegraph Ave./Oakland, Calif.
Test Date: 11-21-92
Job#: 92CC2083

Dear Sir:

Enclosed with this letter are the completed tank test results for the above Company and location. The results are for your review and information.

If you should foresee any questions pertaining to this letter, tank test results and or any other questions then please feel free to call the office for assistance.

Thank you for your attention and cooperation in this matter!

Sincerely,

Chet Champion

Chet Champion

CC:pg

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST

PLEASE PRINT

1. OWNER Property Tank(s)

Name _____ Address _____ Zip _____ Representative _____ Telephone _____

Name _____ Address _____ Zip _____ Representative _____ Telephone _____

2. OPERATOR
 THIRTY OIL & GAS 6125 TELEGRAPH AVE. OAKLAND, CALIF.
 Name _____ Address _____ Zip _____ Telephone _____

3. REASON FOR TEST
 (Explain Fully)
 REGULATION GOVERNING UNDERGROUND STORAGE OF HAZARDOUS SUBSTANCES
 SUBCHAPTER 16 CHAPTER 3 TITLE 23 OF CALIFORNIA ADMINISTRATIVE
 CODE:

4. WHO REQUESTED TEST AND WHEN

Name _____ Title _____ Company or Affiliation _____ Date _____

Address _____ Zip _____ Telephone _____

5. TANK INVOLVED
 Use additional lines for manifolded tanks

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel Fiberglass
EAST WEST	15,000	BENETO	UNLEADED		STEEL
EAST WEST	12,000	TANK	MID GRADE		STEEL
EAST WEST	12,000	LINES	PREMIUM		STEEL

6. INSTALLATION DATA

Location	Cover	Fill	Vents	Siphons	Pumps
FRONT OF STORE	CONCRETE	4" WITH OVERFILL PROTECTION	2"		RED JACKET TURBINE

7. UNDERGROUND WATER
 Depth to the water table from grade: BELOW TANKS/MONITORING WELL Yes No
 Is the water over the tank? Yes No

8. FILL-UP ARRANGEMENTS
 Tanks to be filled: 0900 11/21/92 Date Arranged by _____ Name _____ Telephone _____
 Extra product to top off & dilute with water. How and why to provide? Consider NO Lead
TESTING CO.
 Terminal or other contact for notice or inquiry: BENETO TANK LINES SACRAMENTO, CALIF.
 Company Name Telephone

9. CONTRACTOR, MECHANICS, any other contractor involved

10. OTHER INFORMATION OR REMARKS
 SELF LEVELING STANDPIPE AND DTS. 2,000
 Additional information on any items above. Office or others to be advised when testing in progress or completed. Visitors or observers present during test, etc.

11. TEST METHOD
 PETRO TITE # 2 PETRO COMP QUICK CHECK 2000

11a. TEST RESULTS
 Tests were made on the above tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows:

Tank Identification	Tight	Net Volume Change Per Hour	Date Tested
UNLEADED	Pass	-.0125	11/21/92
MID GRADE	Pass	-.0265	11/21/92
PREMIUM	Pass	-.040	11/21/92

12. SENSOR CERTIFICATION
 1/23/92 Date
 418
 Serial No. of Thermal Sensor

Technician: W. CAMPBELL
 Certification # 92-1324

CHAMPION'S PRECISION TANK TESTING *W. Campbell*
 P.O. BOX 13059 SACRAMENTO CALIF.
 916-927-1557 1-800-660-9443 CALIF.
 SACRAMENTO 1-800-949-9443 NEV.

DATA CHART FOR TANK SYSTEM TIGHTNESS TEST

PLEASE PRINT



1. OWNER	Property <input type="checkbox"/> Tank(s) <input type="checkbox"/>																				
	Name	Address	Zip	Representative	Telephone																
2. OPERATOR	Name: THRIFTY OIL Address: 6125 TELEGRAPH AVE. Zip: OAKLAND, CALIF.																				
3. REASON FOR TEST (Explain Fully)	REGULATION GOVERNING UNDERGROUND STORAGE OF HAZARDOUS SUBSTANCES SUBCHAPTER 16 CHAPTER 3 TITLE 23 OF CALIFORNIA ADMINISTRATIVE CODE:																				
4. WHO REQUESTED TEST AND WHEN	Name _____ Title _____ Company or Affiliation _____ Date _____ Address _____ Zip _____ Telephone _____																				
5. TANK INVOLVED	Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/FiberGlass															
Use additional lines for manifolded tanks	EAST WEST	15,000	BENETO	UNLEADED		STEEL															
	EAST WEST	12,000	TANK	MID GRADE		STEEL															
	EAST WEST	12,000	LINES	PREMIUM		STEEL															
6. INSTALLATION DATA	Location	Cover	Fills	Vents	Siphones	Pumps															
	FRONT OF STORE	CONCRETE	4" WITH OVERFILL PROTECTION	2"		RED JACKET TURBINE															
7. UNDERGROUND WATER	Depth to the water table from grade: BELOW TANKS/MONITORING WELL Is the water over the tank? <input type="checkbox"/> Yes <input type="checkbox"/> No																				
8. FILL-UP ARRANGEMENTS	Tanks to be filled: 0900 hr. 11/21/92 Date Arranged by _____ Name _____ Telephone _____ Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead TESTING CO. Terminal or other contact for notice or inquiry: BENETO TANK LINES SACRAMENTO, CALIF. Company Name Telephone																				
9. CONTRACTOR, MECHANICS, any other contractor involved	_____ _____ _____																				
10. OTHER INFORMATION OR REMARKS	SELF LEVELING STANDPIPE AND DTS. 2,000 _____ Additional information on any items above. Officials or others to be advised when testing is in progress or completed. Visitors or observers present during test, etc.																				
11. TEST METHOD	<input checked="" type="checkbox"/> PETRO TITE # 2 <input type="checkbox"/> PETRO COMP <input type="checkbox"/> QUICK CHECK 2000																				
11a. TEST RESULTS	Tests were made on the above tank systems in accordance with test procedures prescribed for as detailed on attached test charts with results as follows: <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:30%;">Tank Identification</th> <th style="width:10%;">Tight</th> <th style="width:30%;">Net Volume Change Per Hour</th> <th style="width:30%;">Date Tested</th> </tr> </thead> <tbody> <tr> <td>UNLEADED</td> <td></td> <td></td> <td>11/21/92</td> </tr> <tr> <td>MID GRADE</td> <td></td> <td></td> <td>11/21/92</td> </tr> <tr> <td>PREMIUM</td> <td></td> <td></td> <td>11/21/92</td> </tr> </tbody> </table>					Tank Identification	Tight	Net Volume Change Per Hour	Date Tested	UNLEADED			11/21/92	MID GRADE			11/21/92	PREMIUM			11/21/92
Tank Identification	Tight	Net Volume Change Per Hour	Date Tested																		
UNLEADED			11/21/92																		
MID GRADE			11/21/92																		
PREMIUM			11/21/92																		
12. SENSOR CERTIFICATION	Date: 1/23/92 Serial No of Thermal Sensor: 418 Technicians: 1. W. CAMPBELL CHAMPION'S PRECISION TANK TESTING Certification # 92-1324 P.O. BOX 13059 SACRAMENTO CALIF. 916-927-1557 1-800-660-9443 CALIF. 2. _____ SACRAMENTO 1-800-949-9443 NEV. Certification # _____																				

UNLEADED:		PRESSURE		VOLUME		
15 MIN. READING	BEFORE	AFTER	BEFORE	AFTER	CHANGE	
TURBINE RED JACKET		50				
SUCTION	46	50	.046	.044	- .002	
PRODUCT LINE X	46	50	.044	.043	- .002	
VENT LINE	47	50	.042	.041	- .001	
VAPOR LINE	48	50	.041	.040	- .001	
BLEEDBACK	50		.040	.070	+ .030	
LINE TEST		PASS		FAIL	RESULTS - .006	
BLEEDBACK TEST		PASS		FAIL	RESULTS + .030	

MID GRADE:		PRESSURE		VOLUME		NET
15 MIN. READING	BEFORE	AFTER	BEFORE	AFTER	CHANGE	
TURBINE RED JACKET		50				
SUCTION	46	50	.052	.040	- .003	
PRODUCT LINE X	47	50	.049	.047	- .002	
VENT LINE	47	50	.047	.045	- .002	
VAPOR LINE	47	50	.045	.043	- .002	
BLEEDBACK	50		.043	.055	+ .012	
LINE TEST		PASS		FAIL	RESULTS - .009	
BLEEDBACK TEST		PASS		FAIL	RESULTS + .012	

PREMIUM:		PRESSURE		VOLUME		NET
15 MIN. READING	BEFORE	AFTER	BEFORE	AFTER	CHANGE	
TURBINE RED JACKET		50				
SUCTION	42	50	.041	.037	- .004	
PRODUCT LINE X	44	50	.037	.035	- .002	
VENT LINE	46	50	.035	.033	- .002	
VAPOR LINE	48	50	.033	.032	- .001	
BLEEDBACK	50		.032	.072	+ .040	
LINE TEST		PASS		FAIL	RESULTS - .009	
BLEEDBACK TEST		PASS		FAIL	RESULTS + .040	

DIESEL:		PRESSURE		VOLUME		NET
15 MIN. READING	BEFORE	AFTER	BEFORE	AFTER	CHANGE	
TURBINE						
SUCTION						
PRODUCT LINE						
VENT LINE						
VAPOR LINE						
BLEEDBACK						
LINE TEST		PASS		FAIL	RESULTS	
BLEEDBACK TEST		PASS		FAIL	RESULTS	

		PRESSURE		VOLUME		NET
15 MIN. READING	BEFORE	AFTER	BEFORE	AFTER	CHANGE	
TURBINE						
SUCTION						
PRODUCT LINE						
VENT LINE						
VAPOR LINE						
BLEEDBACK						
LINE TEST		PASS		FAIL	RESULTS	
BLEEDBACK TEST		PASS		FAIL	RESULTS	

Name of Supplier, Owner or Dealer

Address No. and Street(s)

City

State

Date of Test

15. TANK TO TEST

EAST WEST
Identity by position

UNLEADED
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 15,000
Gallons

By most accurate capacity chart available 15,000
Gallons

From

- Station Chart
- Tank Manufacturer's Chart
- Company Engineering Data
- Charts supplied with Tank Tester
- Other _____

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up ∅ to 1/4" in. ∅ Gallons 113 Tank Diameter in.

	Total Gallons as Reading
Inventory in Tank	<u>15,000</u>
Water Bottom	<u>∅</u>
Top off equipment	<u>+ 10</u>
Total Quantity	<u>15,010</u>

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

- Water in tank
- Line(s) being tested with LVLLT
- High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).

Use maximum allowable test pressure for all tests. Four pound rule does not apply to doublewalled tanks.

Complete section below:

1. Is four pound rule required? Yes No
2. Height to 12" mark from grade 14 in.
3. Pressure at bottom of tank 4.78 P.S.I.
4. Pressure at top of tank 1.85 P.S.I.

Depth of burial 170 in.
Tank dia. 57 in.
Water table to tank bottom BELOW TANK in.

NOTES:

MONITORING WELL ON SITE

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 170 in.
Add 30" for "T" probeassy. 30 in.
Total tubing to assemble - approximate _____ in.

20. EXTENSION HOSE SETTING

Tank top to grade* 57 in.
Extend hose on suction tube 6" or more _____ in.
below tank top _____ in.

*If fill pipe extends above grade, use top of fill. 2" by 4" RISER

USE WITH THERMAL SENSOR PN5039 (Blue Box)

22. Thermal-Sensor reading after circulation _____ digits
Between _____ °F
23. Digits per °F in range of expected change _____ digits

24a. IF USING THERMAL SENSOR DTS-2000 OR QC-2000 WHICH READ 1000 DIGITS PER °F TRANSFER 1000 TO LINE 26, DIGITS PER °F IN TEST RANGE.

58.835

21. VAPOR RECOVERY SYSTEM Stage I Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

UNLEADED

Type of Product _____
Hydrometer Employed 6 H
Temperature in Tank After Circulation 58 °F
Temperature of Sample 60 °F
Difference (+/-) +2 °F
Observed A.P.I. Gravity 57.2
Reciprocal 1499 Page # 61
15,010 + 1499 = 10.01334
Total quantity in full tank (17) Reciprocal Volume change in this tank per °F Transfer to Line 25a.

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C from Thermal Sensor _____ °F
Coefficient of Water Table D _____
Added Surfactant? Yes No Transfer COE to Line 25b

25. (a) _____ × (b) _____ = (c) _____ gallons
Total quantity in full tank (17) Coefficient of expansion for involved product Volume change in this tank per °F

26. (a) 10,013342 + 1,000 = .0100133 This is test factor (a) .0100
Volume change per °F (25 or 24b) Digits per °F in test Range (23 or 24a) Volume change per digit Compute to 4 decimal places

UNLEADED LOG OF TEST PROCEDURES			30 HYDROSTATIC PRESSURE CONTROL		31 VOLUME MEASUREMENTS (V) RECORD TO 001 GAL			34 TEMPERATURE COMPENSATION USE FACTOR (A)			38 NET VOLUME CHANGING EACH READING	39 ACCUMULATED CHANGE
8. DATE TIME (24 hr)	Record details of setting up and running test (Use full length of line if needed)	29 Reading No	Standpipe Level in Inches		32 Product in Graduate		33 Product Replaced (V)	35 Thermal Sensor Reading	36 Change Higher - Lower - (C)	37 Computation (C) + (A) + Expansion - Contraction -	Temperature Adjustment Volume minus Expansion + Contraction (V) + (A) - (B) (C)	At Low Level computer Change per hour (INFA (1000))
			Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (V)					
1300	START CIRCULATION							58				
1430	FIRST SENSOR READING & A.F.I. SAMPLE					.050		735		FACTOR "A"		.0100
45	START HIGH LEVEL	1	SLS	42.0	.050	250	+200	852	+17	+1.170	+0.030	
1500		2	"	"	.250	440	+200	871	+19	+1.190	+0.020	
15		3	"	"	.450	660	+210	893	+22	+1.220	-0.010	
35		4	"	"	.660	880	+200	910	+17	+1.170	+0.030	
45		5	"	"	.000	180	+1.180	925	+15	+1.150	+0.030	
1600		6	"	"	.180	360	+1.190	943	+18	+1.180	+0.000	
15		7	"	"	.360	530	+1.170	959	+16	+1.160	+0.010	
20	Completed High Level	8	"	"	.530	700	+1.170	977	+18	+1.180	-0.010	
		9	"	"								
		10	"	"								
		11	"	"								
		12	"	"								
	DROP STANDPIPE TO LOW LEVEL											
45	REBOUND # 1	1	SLS	12.0	.000	200	+200	992	+15			
1700	REBOUND # 2	2	"	"	.200	390	+1.190	991	+19			
65	START LOW LEVEL TEST DATA	1	SLS	12.0	.390	450	+0.060	016	+5	+1.050	+0.010	+0.010
16		2	"	"	.450	510	+0.060	023	+7	+1.070	-0.020	-0.010
15		3	"	"	.510	580	+0.070	030	+7	+1.070	+0.000	-0.010
15		4	"	"	.580	640	+0.060	036	+6	+1.060	+0.000	-0.010
15		5	"	"	.640	700	+0.060	043	+6	+1.060	+0.000	-0.010
20		6	"	"	.000	040	+0.040	049	+7	+1.070	-0.010	-0.020
25		7	"	"	.060	120	+0.060	054	+5	+1.050	+0.000	-0.010
30		8	"	"	.120	180	+0.060	060	+6	+1.060	+0.000	-0.010
45		9	"	"	.180	240	+0.060	067	+7	+1.070	-0.010	-0.020
50		10	"	"	.240	300	+0.060	072	+5	+1.050	+0.010	-0.010
55		11	"	"	.300	360	+0.060	079	+7	+1.070	-0.010	-0.020
1500		12	"	"	.360	420	+0.060	086	+6	+1.060	+0.000	-0.020
15		13	"	"	.420	480	+0.060	091	+5	+1.050	+0.020	-0.010
10		14	"	"	.480	540	+0.060	098	+7	+1.070	+0.010	-0.020
15		15	"	"	.540	600	+0.060	104	+6	+1.060	+0.000	-0.020
20	PROTOCOL "C"	16	"	"	.010	065	+0.055	111	+7	+1.070	-0.015	-0.035
25	by 4 = per hr.	17	"	"	.065	120	+0.055	117	+6	+1.060	-0.005	-0.040
30	PROTOCOL "B"	18	"	"	.120	175	+0.055	122	+5	+1.050	+0.005	-0.035
35	by 3 = per hr.	19	"	"	.175	230	+0.055	126	+4	+1.040	+0.015	-0.020
40		20	"	"	.230	285	+0.055	132	+6	+1.060	-0.005	-0.025
45		21	"	"	.285	340	+0.055	137	+5	+1.050	+0.005	-0.020
50		22	"	"	.340	395	+0.055	143	+6	+1.060	-0.015	-0.025
55		23	"	"	.395	450	+0.055	148	+5	+1.050	+0.005	-0.020
1500	PROTOCOL "A"	24	"	"	.450	505	+0.055	154	+6	+1.060	-0.005	-0.020
	by 2 = per hr. -0.0125											

P-T Tank Test Data Chart
Additional Info

Net Volume Change at Conclusion of Precision Test _____ gph

Signature of Tester: Will Campbell

Date: 11/21/92

2. Statement.

Tank and product handling system has been tested tight according to the Precision Test Criteria as established by regulatory agency. This is not intended to indicate permission of a leak.

OR

Tank and product handling system has failed the tank tightness test according to the Precision Test Criteria as established by regulatory agency.

OR

Test invalid due to environmental or mechanical factors beyond control of the testing equipment.

It is the responsibility of the owner and/or operator of this system to immediately advise state and local authorities of any implied hazard and the possibility of any reportable pollution to the environment as a result of the indicated failure of this system. The manufacturer of this test method does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator _____

Date _____

15. TANK TO TEST <u>EAST WEST</u> <small>Identity by position</small> <hr/> <u>MID GRADE</u> <small>Brand and Grade</small>	15a. BRIEF DIAGRAM OF TANK FIELD 	16. CAPACITY Nominal Capacity <u>12,000</u> Gallons <hr/> By most accurate capacity chart available <u>12,000</u> Gallons	From <input type="checkbox"/> Station Chart <input type="checkbox"/> Tank Manufacturer's Chart <input checked="" type="checkbox"/> Company Engineering Data <input type="checkbox"/> Charts supplied with Tank Tester <input type="checkbox"/> Other _____
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17. FILL-UP FOR TEST Stick Water Bottom before Fill-up _____ to W" _____ in. _____ Gallons _____ Tank Diameter _____ in.	Total Gallons ea. Reading Inventory in Tank <u>12,000</u> Water Bottom <u>0</u> Top off equipment <u>+ 10</u> Total Quantity <u>12,010</u>
--	--

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK Water in tank Line(s) being tested with LVLLT
 High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27).
 Use maximum allowable test pressure for all tests
 Four pound rule does not apply to doublewalled tanks.
 Complete section below:

1. Is four pound rule required? Yes No
2. Height to 12" mark from grade 14 in.
3. Pressure at bottom of tank 4.39 P.S.I.
4. Pressure at top of tank 1.92 P.S.I.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 155 in.
 Add 30" for "T" probe esy. 30 in.
 Total tubing to assemble - approximate _____ in.

20. EXTENSION HOSE SETTING

Tank top to grade* 60 in.
 Extend hose on suction tube 6" or more below tank top _____ in.

*If fill pipe extends above grade, use top of fill. **2"by4" RISER**

USE WITH THERMAL SENSOR PN5039 (Blue Box)

22. Thermal-Sensor reading after circulation _____ digits
 Between _____ °F

23. Digits per °F in range of expected change _____ digits

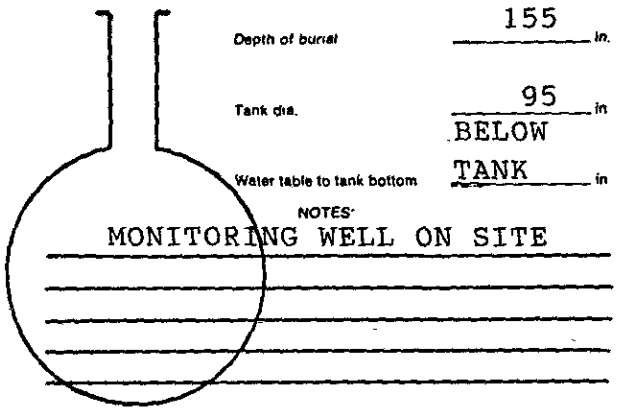
21. VAPOR RECOVERY SYSTEM Stage I Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product MID GRADE

Hydrometer Employed 6 H
 Temperature in Tank After Circulation 59 °F
 Temperature of Sample 60 °F
 Difference (+/-) +1 °F
 Observed A.P.I. Gravity 59.1

Reciprocal 1475 Page # 63
12,010 : 1475 = 8.142372
 Total quantity in full tank (17) Reciprocal Volume change in this tank per °F
 Transfer to Line 26a



NOTES-
MONITORING WELL ON SITE

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

24a. IF USING THERMAL SENSOR DTS-2000 OR QC-2000 WHICH READ 1000 DIGITS PER °F TRANSFER 1000 TO LINE 26, DIGITS PER °F IN TEST RANGE.

59.985

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C from Thermal Sensor _____ °F

Coefficient of Water Table D _____

Added Surfactant? Yes No Transfer COE to Line 25b

25. (a) _____ × (b) _____ = (c) _____ gallons
Total quantity in full tank (17) Coefficient of expansion for involved product Volume change in this tank per °F

26. (a) 8.1423728 × (b) 1,000 = .0081423
Volume change per °F (25 or 24b) Digits per °F in test Range (23 or 24a) Volume change per digit Compute to 4 decimal places This is test factor (a) .0081

LOG OF TEST PROCEDURES		STANDPIPE LEVEL IN INCHES		PRODUCT IN GRADUATE		PRODUCT REPLACED (-)		TEMPERATURE COMPENSATION USE FACTOR (A)		CHANGING EACH READING		VOLUME CHANGED	
DATE	Record details of setting up and running test (Use full length of line if needed)	29 Reading No	Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (+)	Thermal Sensor Reading	36 Change Higher - Lower - (C)	37 Computation (C) - Lat + Expansion - Contraction -	Temperature Adjustment	Volume Minus Expansion + or Contraction + or - (33)(C) - (37)(A)	Net Volume Change
1300	START CIRCULATION							59					
1430	FIRST SENSOR READING & A.F.I.							085		FACTOR "A"			.0081
45	START HIGH LEVEL	1	SLS	42.0	080	140	+060	013	+24	+227	+167		
1500		2	"	"	140	215	+075	043	+30	+243	+168		
15		3	"	"	215	335	+120	074	+31	+251	+131		
30		4	"	"	335	475	+140	103	+29	+235	+005		
45		5	"	"	475	620	+145	129	+26	+211	-066		
1600		6	"	"	110	260	+150	153	+24	+194	+044		
15		7	"	"	260	410	+150	174	+21	+170	+020		
30	COMPLETE HIGH LEVEL	8	"	"	410	565	+155	196	+23	+186	+031		
		9	"	"									
		10	"	"									
		11	"	"									
		12	"	"									
	DROP STANDPIPE TO LOW LEVEL												
45	REBOUND # 1	1	SLS	12.0	010	225	+215	221	+25				
700	REBOUND # 2	2	"	"	225	410	+185	240	+19				
1705	START LOW LEVEL TEST DATA	1	SLS	12.0	040	100	+060	252	+12	+047	+037	+037	
16		2	"	"	100	165	+065	260	+8	+065	+000	+037	
15		3	"	"	165	230	+065	266	+6	+049	+016	+021	
70		4	"	"	230	295	+065	276	+10	+081	+016	+037	
25		5	"	"	295	345	+050	283	+7	+057	+013	+024	
30		6	"	"	345	425	+080	290	+7	+057	+003	+021	
35		7	"	"	425	485	+060	299	+9	+073	+013	+034	
40		8	"	"	485	545	+060	306	+7	+057	+003	+031	
45		9	"	"	100	170	+070	315	+9	+073	+003	+034	
50		10	"	"	170	230	+060	321	+6	+049	+011	+023	
55		11	"	"	230	240	+060	328	+7	+057	+003	+020	
700		12	"	"	240	350	+060	338	+10	+081	+021	+041	
05		13	"	"	350	410	+060	345	+7	+057	+003	+038	
10		14	"	"	410	470	+060	353	+8	+065	+005	+048	
15		15	"	"	040	100	+060	359	+6	+049	+011	+032	
20	PROTOCOL "C"	16	"	"	100	160	+060	367	+8	+065	+005	+037	
25	by 4 = per hr.	17	"	"	160	220	+060	375	+8	+065	+006	+042	
30	PROTOCOL "B"	18	"	"	220	280	+060	382	+7	+057	+003	+034	
35	by 3 = per hr.	19	"	"	280	340	+060	391	+9	+073	+013	+052	
40		20	"	"	340	400	+060	398	+7	+057	+003	+049	
45		21	"	"	400	460	+060	406	+8	+065	+005	+054	
50		22	"	"	460	520	+060	414	+8	+065	+005	+059	
55		23	"	"	520	580	+060	421	+7	+057	+003	+056	
1000	PROTOCOL "A"	24	"	"	580	640	+060	428	+7	+057	+003	+053	
	by 2 = per hr. 0265												

P-T Tank Test Data Chart
Additional info

Net Volume Change at Conclusion of Precision Test 027 gph
Signature of Tester Will Campbell
Date 11/21/92

Statement
Tank and product handling system has been tested tight according to the Precision Test Criteria as established by regulatory agency. This is not intended to indicate permission of a leak.

OR

Tank and product handling system has failed the tank tightness test according to the Precision Test Criteria as established by regulatory agency.

OR

Test invalid due to environmental or mechanical factors beyond control of the testing equipment.

It is the responsibility of the owner and/or operator of the system to immediately advise state and local authorities of any implied hazard and the possibility of any reportable pollution to the environment as a result of the indicated failure of this system. The manufacturer of this test method does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator _____

Date _____

Name of Supplier, Owner or Dealer

Address No. and Street(s)

City

State

Date of Test

15. TANK TO TEST

EAST WEST

Identify by position

PREMIUM

Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 12,000 Gallons

By most accurate capacity chart available 12,000 Gallons

From

- Station Chart
- Tank Manufacturer's Chart
- Company Engineering Data
- Charts supplied with Tank Tester
- Other _____

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up Ø in. Ø Gallons 95 in. Tank Diameter

Total Gallons as Reading

Inventory in Tank 12,000

Water Bottom - Ø

Top off equipment + 10

Total Quantity 12,010

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK

- Water in tank
- Line(s) being tested with LVLLT
- High water table in tank excavation

See manual sections applicable. Check below and record procedure in log (27)

Use maximum allowable test pressure for all tests. Four pound rule does not apply to doublewalled tanks.

Complete section below:

- 1. Is four pound rule required? Yes No
- 2. Height to 12" mark from grade 14 in.
- 3. Pressure at bottom of tank 4.39 P.S.I.
- 4. Pressure at top of tank 1.92 P.S.I.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 155 in.
Add 30" for "T" probe easy. 30 in.
Total tubing to assemble - approximate _____ in.

20. EXTENSION HOSE SETTING

Tank top to grade* 60 in.
Extend hose on suction tube 8" or more _____ in.
below tank top _____ in.

*If fill pipe extends above grade, use top of fill. 2" by 4" RISER

USE WITH THERMAL SENSOR PN5039 (Blue Box)

22. Thermal-Sensor reading after circulation _____ digits

23. Digits per °F in range of expected change _____ digits

21. VAPOR RECOVERY SYSTEM Stage 1 Stage 2

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product PREMIUM

Hydrometer Employed 6

Temperature in Tank After Circulation 62

Temperature of Sample 60

Difference (+/-) -2

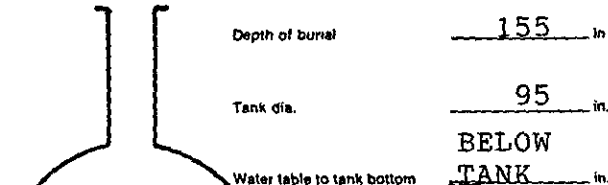
Observed A.P.I. Gravity 55.5

Reciprocal 1514 Page # 59

12,010 : 1514 = 7.93268

Total quantity in full tank (17) Reciprocal Volume change in this tank per °F

Transfer to Line 25a



NOTES:

MONITORING WELL ON SITE

The above calculations are to be used for dry soil conditions to establish a positive pressure advantage, or when using the four pound rule to compensate for the presence of subsurface water in the tank area.

Refer to N.F.P.A. 30, Sections 2-3.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

24a. IF USING THERMAL SENSOR DTS-2000 OR QC-2000 WHICH READ 1000 DIGITS PER °F TRANSFER 1000 TO LINE 26, DIGITS PER °F IN TEST RANGE.

62.148

24c. FOR TESTING WITH WATER see Table C & D

Water Temperature after Circulation Table C from Thermal Sensor. _____

Coefficient of Water Table D _____

Added Surfactant? Yes No Transfer COE to Line 25b.

25. (a) _____ × (b) _____ = (c) _____ gallons

Total quantity in full tank (17) Coefficient of expansion for involved product Volume change in this tank per °F

26. (a) 7.9326287 + 1,000 = .0079326

Volume change per °F (25 or 24b) Digits per °F in test Range (23 or 24a) Volumes change per digit Compute to 4 decimal places. This is test factor (a) .00

PREMIUM		LOG OF TEST PROCEDURES		STANDPIPE LEVEL IN INCHES		PRODUCT IN GRADUATE		PRODUCT REPLACED (-)		TEMPERATURE COMPENSATION USE FACTOR (1)		EACH READING		CHANGE	
Date	Record details of setting up and running test (Use full length of line if needed)	29 Reason No.	Standpipe Level	Level as Restored	Before Reading	After Reading	Product Recovered (-)	Thermal Sensor Reading	Change Higher - Lower - (1)	37 Computation (1) = (1) * Expansion - Contraction -	Temperature Adjustment	Volume Must Expansion (+) or Contraction (-) (1) = (1) * (1) * (1)	At Low Level Comp. Change per hour (1) PA (1) (1) (1)		
1300	START CIRCULATION														
1430	FIRST SENSOR READING & A.F.I. SAMPLE														.0079
145	START HIGH LEVEL	1	SLS	42.0	085	170	+085	168	+20	+158	-073				
1500		2	"	"	170	250	+080	191	+23	+182	-102				
15		3	"	"	250	340	+090	219	+28	+221	-131				
30		4	"	"	340	430	+090	240	+21	+166	-076				
45		5	"	"	430	540	+110	262	+22	+174	-064				
600		6	"	"	540	650	+110	282	+20	+158	-048				
15		7	"	"	650	760	+110	305	+23	+182	-072				
30	COMPLETE LIGHT LEVEL	8	"	"	760	860	+100	324	+19	+150	-050				
		9	"	"											
		10	"	"											
		11	"	"											
		12	"	"											
	DROP STANDPIPE TO LOW LEVEL														
45	REBOUND # 1	1	SLS	12.0	020	170	+150	339	+15						
700	REBOUND # 2	2	"	"	170	310	+140	359	+20						
1705	START LOW LEVEL TEST DATA	1	SLS	12.0	310	360	+050	364	+5	+040	-010	+010	+010		
10		2	"	"	360	410	+050	373	+9	+071	-021	+011	+011		
15		3	"	"	410	450	+040	319	+6	+047	-007	+018	+018		
20		4	"	"	450	500	+050	385	+6	+047	+003	+015	+015		
25		5	"	"	500	550	+050	393	+8	+063	-013	+028	+028		
30		6	"	"	550	600	+050	403	+10	+079	-029	+057	+057		
35		7	"	"	600	640	+040	409	+6	+047	-007	+044	+044		
40		8	"	"	640	690	+050	416	+7	+055	-005	+064	+064		
45		9	"	"	690	740	+050	422	+6	+047	-003	+066	+066		
50		10	"	"	740	790	+050	431	+9	+071	-021	+087	+087		
55		11	"	"	790	835	+045	436	+5	+040	-005	+082	+082		
600		12	"	"	835	880	+045	441	+5	+040	-005	+077	+077		
65		13	"	"	880	930	+050	448	+7	+055	-005	+082	+082		
10		14	"	"	930	980	+050	454	+6	+047	-003	+079	+079		
15		15	"	"	980	1025	+045	459	+5	+040	-005	+074	+074		
20	PROTOCOL "C"	16	"	"	1025	1065	+040	464	+5	+040	-005	+074	+074		
25	by 4 = per hr.	17	"	"	1065	1105	+040	470	+6	+047	-007	+084	+084		
30	PROTOCOL "B"	18	"	"	1100	1140	+040	475	+5	+040	-000	+084	+084		
35	by 3 = per hr.	19	"	"	1140	1185	+045	480	+5	+040	-005	+079	+079		
40		20	"	"	1185	1230	+045	486	+6	+047	-002	+081	+081		
45		21	"	"	1230	1270	+040	491	+5	+040	-000	+081	+081		
50		22	"	"	1270	1310	+040	496	+5	+040	-000	+081	+081		
55		23	"	"	1310	1350	+040	502	+6	+047	-007	+088	+088		
1400	PROTOCOL "A"	24	"	"	1350	1390	+040	506	+4	+032	-008	+085	+085		
	by 2 = per hr. 1040														

P-T Tank Test Data Chart
Additional Info

Net Volume Change at Conclusion of Precision Test 040 gph
Signature of Tester William Campbell
Date 11/21/92

Statement

Tank and product handling system has been tested tight according to the Precision Test Criteria as established by regulatory agency. This is not intended to indicate permission of a leak.

OR

Tank and product handling system has failed the tank tightness test according to the Precision Test Criteria as established by regulatory agency.

OR

Test invalid due to environmental or mechanical factors beyond control of the testing equipment.

It is the responsibility of the owner and/or operator of the system to immediately advise state and local authorities of any implied hazard and the possibility of any reported pollution to the environment as a result of the indicated failure of the system. The manufacturer of this test method does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator _____

Date _____