SCOTT CO.
MECHANICAL CONTRACTORS
1919 Market Street
P.O. Box 12954
Oakland, California 94604
(415) 834-2333

Contractors License No. 184480

March 21, 1990

Walton Engineering
837 Riske Lane
West Sacramento, California 95691

Attention: Mark

Reference: 3 tanks @ 4035 Park Boulevard, Oakland
Line Test @ Exxon, 1040 El Camino, Prunedale

Gentlemen:

On March 1, 1990, we precision tested three (3) underground storage tanks using the "Petro-Tite" system.

The results for the tank tests were as follows:

PRODUCT	CAPACITY	RESULTS
Unleaded	10,000	-.003 gph
Regular	8,000	+.048 gph
Supreme	8,000	-.006 gph

All the above leak rates are within the NFPA criteria of ±.050 gallons per hour; therefore, these tanks and attached piping can be considered liquid tight at this time.

The test results are attached.

If you have any additional questions or if we can be of further assistance to you, please call us at (415) 834-2333, extension 3379.

Very truly yours,

SCOTT CO. OF CALIFORNIA

Jay Groh
Environmental Estimator

JG:jj

Enclosures as stated

Data Chart for Tank System Tightness Test

DATE 2-28-90

PLEASE PRINT — STATION # —

1. OWNER (Property / Tanks)	Beacon 4035 Park Blvd. Oakland Ca
2. OPERATOR	Mostafa Karimabadi / Jason Goloph
3. REASON FOR TEST (Explain Fully)	Had full system test done @ station on Fairfield. Tanks mounted to tank top & contamination found. Scott Co. is doing water test for Desert Industries. This test is being done for Regular tank only
4. WHO REQUESTED TEST AND WHEN	
5. TANK INVOLVED (Use additional lines for manifolded tanks)	#1 of 1 — Capacity: 8,000 — Manufacturer: Reuben — Material: Steel — Internal: Fiberglass liner
6. INSTALLATION DATA	Location: Right side of station — Cover: Asphalt — Fill: 4" — Vent: 1½" — Piping: Remote Red-Jacket — Water found: None
7. UNDERGROUND WATER	Depth to water table: Below Tank Bottom — Tested by: Bill — Date: 2-28-90 — Amount: 8" — Date Installed: 1-84
8. FILL-UP ARRANGEMENTS	Tank filled with H2O, provided on site by Scott Co. Jay Gray (415) 834-2333 ext. 3336
9. CONTRACTOR, MECHANICS, any other observer involved	SCOTT-BROADWAY SERVICE
10. OTHER INFORMATION OR REMARKS	Desert industries, during back excavation, crossed vapor recovery and product line for test. Tank tested only with vent line installed. Buried over at end of tank. Product line, vapor recovery fill.
11. TEST RESULTS	Tank was tested as per the above test procedures prescribed by an attached test chart or this manufacturer. Test: #1 of 1 Regular — Type: Xcs — Leakage Rate: +.04 8 gph — Date Tested: 2-28-90
12. SENSOR CERTIFICATION	I/We hereby certify that the tank system was tested on the date(s) shown. Those indicated as "Pass" met the criteria established by the National Fire Protection Association Pamphlet 329. Name: Paul Ferreira — Company: Scott-Broadway Co. — Title: Mgr. Mechanic Sr. Operations — Date: 2-28-90

14. Beacon — 4035 Park Blvd. — Oakland — Ca — 2-28-90
(Name of Supplier, Owner or Owner — Address (No. and Street) — City — State — Date of Test)

STATION #

15. TANK TO TEST: #1 of 1 (Identify by position) — Regular Tested w/ H2O (Grade and Grade)

15a. BRIEF DIAGRAM OF TANK FIELD: Store (Front) — Cap — NOT BEING TESTED TODAY

16. CAPACITY — Nominal Capacity: 8,000 Gallons — By most accurate capacity chart available: 8,139 Gallons
From: ☑ Below Chart ☐ Tank Manufacturer's Chart ☐ Company Engineering Data ☐ Charts supplied with ☐ Other

17. FILL-UP FOR TEST — Stick Water Bottom before Pick-up: 0 in. (to ½") — 0 Gallons — 95 Tank Diameter in.

Inventory	Gallons	Total Gallons on Hand
TANK		8,139
H2O		Tank filled up to
Top-OFF		10
TOTAL	→	8,149

Transfer total to line 35a

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK ☐ Water in tank ☐ Leaking manifold with LVLLT ☐ High water table or tank excavation — N/A

See manufacturer's applicable. Check below and record procedure in log (27).

Use one-hour allowable test pressure for all tests. Four pound rule does not apply to double-walled tanks.

Complete section below:

1. Is four pound rule required? Yes ☐ No ☐
2. Height to 12" mark from bottom of tank: ____ ft
3. Pressure at bottom of tank: ____ P.S.I.
4. Pressure at top of tank: ____ P.S.I.

Depth of burial: ____ ft
Tank dia.: ____ in.
Water table: ____ in.

NOTES: Below Tank bottom

The above calculations are to be used for dry soil conditions to establish a gasoline 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 3-5.3.4 and 3-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to grade* ____ in.
Add 30" for "I" probe only ____ 30 in.
Total tubing to assemble -- approximate ____ in.

20. EXTENSION HOSE SETTING
Tank top to grade* ____ in.
Extend hose on suction tube 9" or more
Below tank top ____ in.
*If Fill pipe extends above grade, use top of fill.

22. Thermal-sensor reading after circulation: 99307 (5 digits) 52-53 °F
23. Digits per °F in range of expected change: 307 (3 digits)

COEFFICIENT OF EXPANSION (Complete after circulation)
24a. Corrected A.P.I. Gravity
Observed A.P.I. Gravity
Hydrometer employed ____ H
Observed Sample Temperature ____ °F
Corrected A.P.I. Gravity @ 60°F, From Table A: N/A
Coefficient of Expansion for Tested Product From Table B
Transfer COE to Line 26b

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD
Type of Product
Hydrometer Employed
Temperature in Tank After Circulation
Temperature of Sample
Difference (+/-) N/A
Observed A.P.I. Gravity
Reciprocal ____ Page # ____
Total quantity in full tank (1b or 1f) * Reciprocal = Volume change in this tank per °F
Transfer to Line 26c

24c. FOR TESTING WITH WATER (see Table C & D)
Water Temperature after Circulation Table C: 52.0 °F
Coefficient of Water Table D: .0000570
Added Surfactant? ☐ Yes ☐ No Transfer COE to Line 26b

25. (a) 8,149 (Total quantity in full tank (1b or 1f)) × (b) .00005703 (Coefficient of expansion for tested product) × (c) 46.4493 (Volume change in this tank per °F) = ____ gallons

26. (a) .464493 (Volume change per °F (25c or 34b)) ÷ 307 (Digits per °F in test Range (23)) = .001513 (Volume change per digit Complete to 4 decimal places.) This is test factor (J) (.0015)

27. S/N (2171) Sensor Calibration Yes 49

LOG OF TEST PROCEDURES

28. DATE / TIME (24 hr.)	Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	30. HYDROSTATIC PRESSURE CONTROL: Standpipe Level in Inches — Beginning of Reading	30. Level to which Restored	31. VOLUME MEASUREMENTS (to RECORD TO .001 GAL): 32. Product in Graduate — Before Reading	32. After Reading	33. Product Replaced (+)	34. TEMPERATURE COMPENSATION USE FACTOR (A): 35. Thermal Sensor Reading	36. Change Higher + Lower − (Δ)	37. Compensation (C) = (Δ) × Expansion + Contraction −	38. NET VOLUME CHANGING EACH READING: Temperature Adjustment — Volume Minus Expansion (+) or Contraction (−) (COL 31) − (COL 37)	39. ACCUMULATED CHANGE: At Low Level compute Change per Hour (NFPA criteria)
	PRODUCT: Water											
8 [illegible]	ARRIVED AT SITE, REMOVED DROP-TUBE, VAPOR RECOVERY LINES, DISPENSER COVERS, BLEED PLUGS IN REMOTE PUMPS OR SUCTION SYSTEM, ETC.											
9 [illegible]	SET-UP EQUIPMENT											
9 [illegible]	START CIRCULATION							FACTOR	A =	(.0015)		
9 [illegible]	1ST THERMO READING							09907				
10 [illegible]	START 42" HIGH-LEVEL TEST			42		.490		910	+3			
10 15	1ST HIGH-LEVEL READING	1	41.6		.490	.470	+.020	917	+7	+.011	−.031	
10 [illegible]	CONT'D HIGH-LEVEL READINGS	2	41.6		.470	.450	−.020	922	+5	+.008	−.028	
10 55	"	3	41.7		.450	.435	−.015	927	+5	+.008	−.023	
11 [illegible]	"	4	41.8		.435	.420	−.015	933	+6	+.009	−.024	
11 [illegible]	"	5	41.8		.420	.410	−.010	938	+5	+.008	−.018	
11 [illegible]	"	6	41.8		.410	.400	−.010	943	+5	+.008	−.018	
11 [illegible]	"	7	41.9		.400	.390	−.010	948	+5	+.008	−.018	
12 [illegible]	"	8	41.9		.390	.385	−.005	952	+4	+.006	−.011	
12 [illegible]	DROP TO LOW-LEVEL, WAIT ½ HOUR											
12 [illegible]	START 12" LOW LEVEL TEST					.485		966				
12 [illegible]	1ST LOW-LEVEL READING	1	12.3	12	.485	.500	+.015	968	+2	+.003	+.012	
12 45	CONT'D LOW-LEVEL READINGS	2	12.2		.500	.510	+.010	970	+2	+.003	+.007	+.019
12 [illegible]	"	3	12.2		.510	.520	+.010	972	+2	+.003	+.007	+.026
12 [illegible]	"	4	12.2		.520	.530	+.010	975	+1	+.002	+.800	+.034
1 [illegible]	"	5	12.2		.530	.540	+.010	977	+4	+.006	+.004	+.038
1 [illegible]	"	6	12.2		.540	.550	+.010	978	+1	+.002	+.008	+.046
1 [illegible]	"	7	12.2		.550	.560	+.010	980	+2	+.003	+.007	+.053
1 [illegible]	"	8	12.2		.560	.570	+.010	982	+2	+.003	+.007	+.060
1 [illegible]	"	9	12.1		.570	.575	+.005	982	+0	+.000	+.005	+.065
1 [illegible]	"	10	12.2		.575	.585	+.010	985	+3	+.005	+.005	+.070
1 [illegible]	"	11	12.1		.585	.590	+.005	987	+2	+.003	+.002	+.072
1 [illegible]	"	12	12.1		.590	.595	+.005	989	+2	+.003	+.002	+.074
1 [illegible]	CONT'D LOW LEVEL READINGS	13	12.1	12	.595	.600	+.005	990	+1	+.002	+.003	+.077
1 45	"	14	12.1		.600	.605	+.005	992	+2	+.003	+.002	+.079
1 [illegible]	"	15	12.1		.605	.610	+.005	992	+0	+.000	+.005	+.084
1 [illegible]	"	16	12.1		.610	.615	+.005	996	+4	+.006	−.001	+.083
2 [illegible]	"	17	12.0		.615	.615	+.000	997	+1	+.002	−.002	+.081
2 45	"Removed H2O fr. Graduate	18	12.0		.180	.180	+.000	997	+0	+.000	+.000	+.081
2 [illegible]	"to facilitate low level	19	12.2		.180	.190	+.010	10.000	+3	+.005	+.005	+.086
2 [illegible]	"readings."	20	12.2		.190	.200	+.010	003	+3	+.005	+.005	+.091
2 [illegible]	"	21	12.0		.200	.200	+.000	005	+2	+.003	−.003	+.088
2 35	"	22	12.1		.200	.205	+.005	006	+1	+.002	+.003	+.091
2 [illegible]	"	23	12.0		.205	.205	+.000	007	+1	+.002	−.002	+.089
2 [illegible]	"	24	12.2		.205	.215	+.010	008	+1	+.002	+.008	+.097
	STOP TEST											
										(+.097)	÷2 =	(+.048 GPH)

P-T Tank Test Data Chart
Additional Info

1. Net Volume Change at Conclusion of Precision Test (+.048 GPH) gph

Signature of Tester: [signature]

Date: 2-[illegible]-90

Statement:

☒ Tank and product handling system has been tested right according to the Precision Test Criteria as established by N.F.P.A. publication 329. 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 N.F.P.A. publication 329.

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. Health Consultants Incorporated does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator Beacon

Data Chart for Tank System Tightness Test

DATE 3-1-90

STATION # Beacon 4035 Park Blvd Oakland Ca 3-1-90

1. OWNER — Name: Beacon; Address: 4035 Park Blvd; Representative: Oakland Ca; Telephone: 3-1-90
2. OPERATOR — Name: Scott-Broadway Service; Address: 4th Market St. Oakland Ca.
3. REASON FOR TEST: Tanks failed initial tank tightness test, Tks have been uncovered and are being re-tested
4. WHO REQUESTED TEST AND WHEN
5. TANK INVOLVED — #1 of 1 Supreme
6. INSTALLATION DATA
7. UNDERGROUND WATER
8. FILL-UP ARRANGEMENTS
9. CONTRACTOR, MECHANICS, and other companies involved
10. OTHER INFORMATION OR REMARKS
11. TEST RESULTS — Tank Number: #1; Type: Yes; Capacity Tested: - .006 gph; Date Tested: 3-1-90
12. SENSOR CERTIFICATION
13. Title to be certified that these tank systems were tested as the attached shows. These tests were conducted by the National Fire Protection Association Pamphlet 329. — Scott-Broadway Co. 4th Market St. Oakland Ca.

14. Beacon — 4035 Park Blvd. — Oakland — Ca — 3-1-90
(Name of Supplier, Owner or Dealer) — (Address No. and Street) — (City) — (State) — (Date of Test)

15. TANK TO TEST: #1 of 1 (Identify by position); Supreme Test w/ H_2O (Brand and Grade)

15a. BRIEF DIAGRAM OF TANK FIELD: #1 #2 #3 — STORE — TESTED 3-2-89

16. CAPACITY: Nominal Capacity 8,000 Gallons; By most accurate capacity chart available 8,139 Gallons
From: ☒ Station Chart ☐ Tank Manufacturer's Chart ☐ Company Engineering Data ☐ Charts supplied with ☐ Other

STATION #

17. FILL-UP FOR TEST
Stick reading (inches) below fill-up: ____ in. to 0" — Gallons: ____ — Tank Diameter: 93 in.

Inventory	Gallons	Total Gallons on Reading
TANK		8,139
H_2O	TESTED W/ H_2O	
Top-OFF		10
TOTAL	→	8,149

Transfer total to line 25a.

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK: ☐ Water in tank ☐ Liquid below suction inlet ☒ High water table in tank excavation — N/A

See manual sections applicable. Check below and record procedure in log (21).

Use maximum allowable test pressure for all tanks. Four pound rule does not apply to double-walled tanks.

Complete section below:

1. Is four pound rule required? Yes ☐ No ☑
2. Height to 12" mark from bottom of tank: ____ in.
3. Pressure at bottom of tank: ____ P.S.I.
4. Pressure at top of tank: ____ P.S.I.

Depth of product: ____ in.
Tank dia.: ____ in.
Water table: ____ in.
NOTES: Below Tank

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 2-2.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to grade* ____ in.
Add 30" for "T" plate only ____ 30 in.
Total tubing to assemble — approximate ____ in.

20. EXTENSION HOSE SETTING
Tank top to grade* ____ in.
Extend hose on manifold tube 6" or more
below tank top ____ in.
*If fill pipe extends above grade, use top of fill.

22. Thermal-Sensor reading after circulation: 10400 digits
53.54 °F
23. Digits per °F in range of expected change: 308 digits

COEFFICIENT OF EXPANSION (Complete after circulation)
24a. Corrected A.P.I. Gravity
Observed A.P.I. Gravity ____
Hydrometer employed ____ °F
Observed Sample Temperature ____ °F
Corrected A.P.I. Gravity @ 60°F, from Table A ____
Coefficient of Expansion for Involved Product, From Table B ____
Transfer COE to Line 26b.

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II — NOT EQUIPPED WITH VAPOR

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD
Type of Product ____
Hydrometer Employed ____ °F
Temperature in Tank After Circulation ____ °F
Temperature of Sample ____ °F
Difference (+/-) ____ °F
Observed A.P.I. Gravity ____
Reciprocal ____ Page # ____
Total Quantity in Tank (18 or 17) * Reciprocal = Volume change in this tank per °F. Transfer to Line 26c.

24c. FOR TESTING WITH WATER see Table C & D
Water Temperature after Circulation, Table C: 53.54 °F
Coefficient of Water, Table D: .00006338
Added Quantity? ☐ Yes ☐ No Transfer COE to Line 26b.

25. (a) 8149 Total quantity in tank (18 or 17) × (b) .00006338 Coefficient of expansion for involved product = (c) .5164466 Volume change in this tank per °F — gallons

26. (a) .8166966 Volume change per °F (25 or 24c) × 308 Digits per °F in test Range (23) = .0016774 Volume change per digit. Compute to 4 decimal places. This is test factor (F) (.0017)

Below tank top ____"
*If Fill pipe extends above bottom end/top of fill.

25. ____ volume change per "I" (24) ____ Digit plus or minus Range (23) = ____ Volume change per digit. Compute to 4 decimal places. This is test factor (A)

22. Date (Mo. Day)	23. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	30. HYDROSTATIC PRESSURE CONTROL: Standpipe Level in Inches — Beginning of Reading	Level to which Restored	31. VOLUME MEASUREMENT TO RECORD TO .001 GAL.: Product in Gradate — Before Reading	After Reading	Product Replaced (−) Product Recovered (+)	34. TEMPERATURE COMPENSATION USE FACTOR (A): 35. Thermal Sensor Reading	36. Change Higher + Lower − (±)	37. Compensation (±) + (±) = Expansion + Contraction −	38. NET VOLUME CHANGES - GAIN OR LOSS: Temperature Adjustment — Volume Minus Expansion (+) or Compensation (−) (#33(V) −/+ #37(T))	39. ACCUMULATED CHANGE: At High Level record Total Net Extraction	At Low Level compute Change per Hour (39/# of hrs.)
8-1-94	Water Test											
8:00	Arrived @ Sit. Tank excavated, product line removed from submersible pump, vent line & drop tube. Only lines hooked up are the V.R line and vent line.											
8:15	Set Up Equipment											
8:30	Start Circulation							A Factor (.0017)				
9:30	1st Thermo Reading							10432				
9:35	Start 42" High-level test			42		.950		10436				
10:00		1	34.2		.950	.540	-.410	441	+5	+.009	-.401	
10:15		2	34.0		.540	.140	-.400	447	+6	+.010	-.390	
10:30	Filled Graduate	3	33.2		.810	.385	-.425	452	+5	+.009	-.416	
10:45		4	33.4		.385			456	+4			
		5	At this point removed vapor recovery line since tank was loosing a substantial amount. I tried V.R. line prior to this and could not remove an air pocket, visible thru fiberglass line. Left vent line hooked up @ this point because it was buried. Tank test only w/ vent line intact.									
11:00	Started Circulation											
11:30	1st Thermo Reading							10403		(.0017)		
11:35	Start 42" High level test			42		1.000		10410	+7			
11:45	1st high level Reading	1	34.3		1.000	.580	-.420	419	+9	+.015	-.0435	
11:57		2	33.7		.580	.115	-.465	425	+6	+.010	-.0475	
12:12	Filled Graduate	3	32.4		.980	.445	-.535	430	+5	+.009	-.544	
12:25	Filled Graduate	4	34.4		.445	.030	-.415	436	+6	+.010	-.415	
12:40		5	35.4		.990	.695	-.345	441	+5	+.009	-.354	
12:56		6	35.6		.695	.295	-.350	443	+2	+.003	-.353	
1:10	Filled Graduate	7	35.7		1.000	.660	-.340	451	+8	+.014	-.354	
1:25		8	35.8		.660	.325	-.335	455	+4	+.007	-.342	
1:40		9	35.9		.325	.000	-.325	464	+9	+.015	-.340	
1:55	Filled Graduate	10	36.0		.970	.665	-.305	469	+5	+.009	-.314	
2:10		11	36.2		.665	.370	-.295	476	+7	+.012	-.307	
2:25		12	36.4		.370	.080	-.290	480	+4	+.007	-.297	
2:30	Drop to low level Wait ½ hour											
2:45	Start 12" low level test			12		.650		482				
	1st low level Reading	1	11.5		.650	.625	-.025	483	+1	+.002	-.027	
	During the ½ hr. wait the tank did not bounce back. For the amount of water added and the extended high level readings, the tanks should have gained, and we observed nothing but losses. At this point we removed the vent line and plugged it. The test was restarted at high level were it held solid at 42" and eventually gained. Because the tank was well circulated and gained above 42", at low level w/ permission from Desert Industries.											
3:15	Drop to low level Wait ½ hour.											
3:30	Start 12" low level test			12		.300		455				
3:45	1st low level Reading	1	12.0		.300	.300	+.000	56	+1	+.002	-.002	
4:00	Continued low level Readings	2	12.0		.300	.300	+.000	56	+0	+.000	+.000	-.002
4:15		3	12.0		.300	.300	+.000	58	+2	+.003	-.003	-.005
4:30		4	12.1		.300	.305	+.005	58	+0	+.000	+.005	+.000
4:45		5	12.0		.305	.305	+.000	60	+2	+.003	-.003	-.003
5:00		6	12.1		.305	.310	+.005	60	+0	+.000	+.005	+.002
5:15		7	12.0		.310	.310	+.000	63	+3	+.005	-.005	-.003
5:30		8	12.0		.310	.310	+.000	63	+0	+.000	+.000	-.003
5:45		9	12.1		.310	.315	+.005	67	+4	+.007	-.002	-.005
6:00		10	12.0		.315	.315	+.000	69	+2	+.003	-.003	-.008
6:15		11	12.0		.315	.315	+.000	69	+0	+.000	+.000	-.008
6:30		12	12.0		.315	.315	+.000	70	+1	+.002	-.002	-.008

Bottom tank gap ..... 35. Volume change per 'F (34) ..... Volume change per digit. Compute to 4 decimal places. This is test factor (e)

*If the gross amounts above exceed 1/2 gal, use the 64 mm.

26. LOG OF TEST PROCEDURES			30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME DISPLACEMENTS (+) RELEASED TO UNIT CHK.			34. TEMPERATURE COMPENSATION SEE FACTOR (d)			36. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
27. Date / Time	28. Record details of setting up and running test. (Use full length of line if needed.)	29. Reading No.	Standpipe Level to Nozzle		32. Product in Ullage		Product Replaced (-)	35. Thermal Sensor Reading	36. Change Higher + Lower - (t)	37. Compensation (c) = (t) x (Expansion + Contraction -)	Temperature Adjustment	In High Level record Total End Reflection
			Beginning of Reading	Level to which Restored	Before Reading	After Reading	Product Recovered (+)				Volume Change Expansion (+) or Contraction (-) = #33(f) - #37(c)	At Low Level compute Change per Hour (GPH) entered
	Continued low level Reading	14	12.0	12	.320	.320	+.000	75	+4	+.007	-.007	-.014
		15	12.0		.320	.320	+.000	77	+2	+.003	-.003	-.017
		16	12.1		.320	.325	+.005	77	+0	+.000	+.005	-.012
		17	12.0		.325	.325	+.000	77	+0	+.000	+.000	-.012
		18	12.0		.325	.325	+.000	78	+1	+.002	-.002	-.014
		19	12.0		.325	.325	+.000	78	+0	+.000	+.000	-.014
		20	12.1		.325	.330	+.005	79	+1	+.002	+.003	-.011
		21	12.0		.330	.330	+.000	79	+0	+.000	+.000	-.011
		22	12.0		.330	.330	+.000	79	+0	+.000	+.000	-.011
		23	12.0		.330	.330	+.000	83	+4	+.007	-.007	-.018
		24	12.1	▼	.330	.335	+.005	83	+0	+.000	+.005	-.013
	STOP TEST											
							(-.018 ÷ 2)			= [-.006 gph]		

Data Chart for Tank System Tightness Test

DATE 3-1-90

PLEASE PRINT STATION #

1. OWNER Private ☐ Station ☐	Beacon	Same As Above	Contamination found in excavation. Tank to Pull.	If problem is fuel tanks, 2-27-90	Regular tank passed H2O test, 2-28-90 Systems passed H2O test.	Beacon	#1 of 1 Unleaded	10,000	Asphalt	4"	2"	H2O	Fiberglass				
2. OPERATOR																	
3. REASON FOR TEST (Routine, Policy)																	
4. WHO REQUESTED TEST AND WHEN																	
5. TANK INVOLVED (Use additional lines for manifolded tanks)	#1 of 1 unleaded											H2O test					
6. INSTALLATION DATA	10,000										4"						
7. UNDERGROUND PIPING (Suction, Gravity, Pressure, etc.)	10 Degree																
8. FILL-UP ARRANGEMENTS	Asphalt										2"	H2O					
9. CONTRACTOR, MECHANICS (any other technician involved)	Below tank batch										None						
10. OTHER INFORMATION OR REMARKS	Beacon										Red / Jacket						
11. TEST RESULTS	Test Date w/ Tex Graph H2O																
12. SENSOR CERTIFICATION	Scott-Service																
	1756																
	16630																

Remove vent line, product line & Stage I V.R. Stage II V.R. was left in place.

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	Type	Leakage Indicated	Date Tested
#1 of 1 Unleaded	Y-E	-.003 gph	3-1-90

13. This is to certify that these tank systems were tested as the date(s) shown. Those [illegible] by "Tight" passed the criteria established by the National Fire Protection Association Pamphlet 329.

Technician: Paul Ferreir

Certificate # 1152-92

Scott-Co. [illegible]

1919 Market St Oakland, Ca.

14. Beacon — Name of Supplier, Owner or Dealer | Park Blvd. — Address No. and Street | Oakland — City | Ca — State | 3-1-90 — Date of Test

15. TANK TO TEST: #1 of 1 (Identify by position); Test Date w/ H_2O (Brand and Grade)

15a. BRIEF DIAGRAM OF TANK FIELD: Tested 2-28

16. CAPACITY: Nominal Capacity 10000 Gallons; By most accurate capacity chart available 10,157 Gallons

Price: ☐ Beacon Chart ☐ Tank Manufacturer's Chart ☐ Company Engineering Data ☐ Charts supplied with ☐ Other

17. FILL-UP FOR TEST

Stick Water Reading before Fill-up: 0 in. to 0"; 0 Gallons; 95 Tank Diameter in.

Inventory	Gallons	Total Gallons as Reading
TANK		10,157
H_2O		0
Top-Off		10
TOTAL	→	10,167

Transfer total to Line 25a

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK ☐ Water in tank ☐ Unable to determine stick LEVEL ☐ 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 double-walled tanks.

Complete section below:

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

Depth of bucket ____ in.
Tank dia. ____ in.
Water table ____ in.

NOTES: Below Tanks

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 2-2.2.4 and 2-7.2 and the tank manufacturer regarding allowable system test pressures.

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade*	141 in.
Add 30" for "I" probe only	30 in.
Total tubing to assemble — approximate	171 in.

20. EXTENSION HOSE SETTING

Tank top to grade*	1 46 in.
Extend hose on suction tube 6" or more below tank top	# 8 in.

*If FM pipe extends above grade, use top of fill.

22. Thermal-Sensor reading after circulation: Digits 1041 R; Remainder 54-55 °F

23. Digits per °F to range of expected change: 311 Digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity ____

Observed A.P.I. Gravity ____

Hydrometer employed ____ °F

Observed Sample Temperature N/A °F

Corrected A.P.I. Gravity @ 60°F. From Table A ____

Coefficient of Expansion for Indicated Product From Table B ____

Transfer COE to Line 25b.

21. VAPOR RECOVERY SYSTEM N/A ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product ____

Hydrometer Employed ____ °F

Temperature in Tank After Circulation ____ °F

Temperature of Sample ____ °F

Difference (+/-) N/A °F

Observed A.P.I. Gravity ____

Reciprocal ____ Page # ____

Total quantity in full tank (16 or 17) * Reciprocal * Volume change in this tank per °F = Transfer to Line 25c.

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

Water Temperature after Circulation N/A °F

Table C ____

Coefficient of Water Table D ____

Added Surcharge? ☐ Yes ☐ No Transfer COE to Line 25c.

25. (a) 10,167 Total quantity in full tank (16 or 17) × (b) .00006728 Coefficient of expansion for product content • (c) .6842391 Volume change in this tank ____ gallons

HPK 65 790 665-39 WHELEN ENGINEERING

27. Sensor Calibration	LOG OF TEST PROCEDURES	28. HYDROSTATIC PRESSURE CONTROL	VOLUME MEASUREMENTS (To) RECORD TO .001 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGING EACH READING	39. ACCUMULATED CHANGE

29. DATE / TIME OF N.I.	Record details of setting up and running test. (Use full length of line if needed.) PRODUCT	30. Reading No.	Standpipe Level to Inches: Beginning of Reading	Standpipe Level to Inches: Level to which Restored	32. Product in Gallons: Before Reading	32. Product in Gallons: After Reading	33. Product Replaced (+) Product Recovered (-)	35. Thermal Sensor Reading	36. Change Higher + Lower - (d)	37. Computation (a) + (d) = Expansion + Contraction -	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (-) (35)(V) — (37)(T)	39. As Low Level complete Change per Hour (NFPA criteria)
7 02	ARRIVED AT SITE. REMOVED DROP-TUBE, VAPOR RECOVERY LINES, DISPENSER COVERS. BLEED PLUS IN REMOTE PUMPS OR SUCTION SYSTEM, ER											
9 10	SET-UP EQUIPMENT											
9 15	START CIRCULATION							FACTOR	A =	(.0022)		
10 02	1ST THERMO READING							10718				
10 15	START 42" HIGH-LEVEL TEST			42		.370		729	+11			
10 45	1ST HIGH-LEVEL READING	1	39.5		.370	.295	-.075	794	+15	+.033	-.108	
11 30	CONT'D HIGH-LEVEL READINGS	2	39.5		.295	.220	-.075	45	+1	+.002	-.077	
11 15	"	3	40.0		.220	.155	-.065	49	+4	+.009	-.074	
11 30	"	4	40.2		.155	.110	-.045	52	+3	+.007	-.052	
11 45	"	5	40.5		.110	.075	-.035	56	+4	+.009	-.044	
12 02	"	6	41.0		.075	.050	-.025	58	+2	+.004	-.029	
12 15	"	7	41.5		.050	.030	-.020	62	+4	+.009	-.029	
12 30	"	8	42.0	—	.030	.015	-.015	64	+2	+.004	-.019	
12 35	DROP TO LOW-LEVEL, WAIT ½ HOUR											
1 05	START 12" LOW LEVEL TEST					.410		75	+19			
1 18	1ST LOW-LEVEL READING	1	12.0	12	.410	.410	+000	75	+0	+.000	+.000	
1 15	CONT'D LOW-LEVEL READINGS	2	12.0		.410	.410	+000	75	+0	+.000	+.000	+.000
1 30	"	3	12.0		.410	.410	+000	78	+3	+.007	-.007	-.007
1 35	"	4	12.1		.410	.415	+.005	80	+2	+.004	+.001	-.006
1 50	"	5	12.0		.415	.415	+.000	80	+0	+.000	+.000	-.006
1 35	"	6	12.0		.415	.415	+000	81	+1	+.002	-.002	-.008
1 40	"	7	12.0		.415	.415	+.000	81	+0	+.000	+.000	-.008
1 45	"	8	12.1		.415	.420	+.005	81	+0	+.000	+.005	-.003
1 50	"	9	12.0		.420	.420	+.000	85	+4	+.009	-.009	-.012
1 55	"	10	12.0		.420	.420	+.000	85	+0	+.000	+.000	-.012
2 02	"	11	12.0		.420	.420	+.000	85	+0	+.000	+.000	-.012
2 07	"	12	12.1	▼	.420	.425	+.005	86	+1	+.002	+.003	-.009
2 12	CONT'D LOW LEVEL READINGS	13	12.0	12	.425	.425	+.000	86	+0	+.000	+.000	-.009
2 25	"	14	12.0		.425	.425	+.000	86	+0	+.000	+.000	-.009
2 30	"	15	12.1		.425	.430	+.005	86	+0	+.000	+.005	-.004
2 35	"	16	12.0		.430	.430	+.000	86	+0	+.000	+.000	-.004
2 50	"	17	12.0		.430	.430	+.000	89	+3	+.007	-.007	-.011
2 55	"	18	12.1		.435	.435	+.005	91	+2	+.004	+.001	-.010
2 40	"	19	12.0		.435	.435	+.000	91	+0	+.000	+.000	-.010
2 45	"	20	12.0		.435	.435	+.000	91	+0	+.000	+.000	-.010
2 50	"	21	12.0		.435	.435	+.000	91	+0	+.000	+.000	-.010
2 55	"	22	12.1		.435	.440	+.005	92	+1	+.002	+.003	-.007
3 00	"	23	12.0		.440	.440	+.000	93	+1	+.002	-.002	-.009
3 05	"	24	12.1	—	.440	.445	+.005	94	+1	+.002	+.003	-.006
	STOP TEST											
										(-.006)	÷2 =	-.003 (GPH)

P-T Tank Test Data Chart
Additional Info

1. Net Volume Change at Conclusion of Precision Test -.003 (GPH) gph

Signature of Tester: [signature]

Date: _____

2. Statement:

☑ Tank and product handling system has been tested tight according to the Precision Test Criteria as established by N.F.P.A. publication 329. 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 N.F.P.A. publication 329.

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. Heath Consultants Incorporated does not assume any responsibility or liability for any loss of product to the environment.

Tank Owner/Operator _____

Date _____