ARCO Products Company
2000 Alameda de las Pulgas
Mailing Address: Box 5811
San Mateo, California 94402
Telephone 415 571 2400

January 4, 1989 90

12,000 gal

Hazardous Material Division
80 Swan Way Room 200
Oakland, Ca. 94621

Attn: Ed Howell

Re: Tank Test Results
ARCO # 2152
22141 Center St.
Castro Valley, Ca.

Dear Sirs:

This letter is to notify you that the tanks and piping at the above facility passed the latest tank test, as noted in the attached test results.

ARCO is committed to the compliance of all environmental laws that govern the safe operation of underground storage tanks. Feel free to call me at 415-571-2424.

Sincerely,

ARCO Products Company
a division of Atlantic Richfield Company

Courtland A. Holman

C. A. Holman
Env. Compl. Engineer

REM:cc
Enclosure
Form #1

Data Chart for Tank System Tightness Test

PLEASE PRINT

1. OWNER Property ☐ Tank(s) ☐

Name: ARCO SS #2152 — Address: 22141 CENTRAL S/[illegible] — Representative: [illegible] — Telephone: 5?? -[illegible]

Name: — Address: — Representative: — Telephone:

2. OPERATOR

Name: — Address: — Telephone:

3. REASON FOR TEST (Explain Fully)

NEW TANKS

4. WHO REQUESTED TEST AND WHEN

Name: COURTLAND HOLMAN — Title: — Company or Affiliation: ARCO — Date: 10/4/89

Address: — Telephone:

5. TANK INVOLVED

Use additional lines for manifolded tanks

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
CENTER TANK	12,000	ARCO	REGULAR	-	DOUBLE WALL FIBERGLASS

6. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
NORTHEAST OF BUILDING	FULL SLAB	4"	2"	NO	[illegible]
North inside driveway, Rear of station, etc	Concrete, Black Top, Earth, etc.	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

7. UNDERGROUND WATER

Depth to the Water table ______"

Is the water over the tank? ☐ Yes ☐ No

8. FILL-UP ARRANGEMENTS

Tanks to be filled 630 hr. 10/17/89 Date — Arranged by COURTLAND HOLMAN — Name — Telephone

Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead.

Terminal or other contact for notice or inquiry — Company — Name — Telephone

9. CONTRACTOR, MECHANICS, any other contractor involved

GETTLER-RYAN INC

JIM REGO

SCOTT MOORE

10. OTHER INFORMATION OR REMARKS

1) TESTED WITH COMMON VENT & VAPOR [illegible]

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 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	Leakage Indicated	Date Tested
12000 GALLON REGULAR	YES		10/17/89

12. SENSOR CERTIFICATION

10/17/89
Date

Serial No. of Thermal Sensor

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

Technicians

1. Jim Rego

Certification # 4145130??

2. Scott Moore

Certification #

Gettler-Ryan Inc — [signature]
Testing Contractor or Company By Signature

1992 [illegible] Hayward
Address

OK

PN 827

14. ARCO SS#2152 2214 [illegible] [illegible] | [illegible] | CA | [illegible] -39

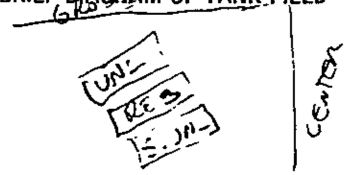
Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

15. TANK TO TEST

Middle Tank
Identity by position

ARCO - Regular
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD



16. CAPACITY

Nominal Capacity 12,000 Gallons

By most accurate capacity chart available 11630 Gallons

From
- ☐ Station Chart
- ☒ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with
- ☐ Other ______

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 in. to ⅛" ______ Gallons 92" in. Tank Diameter

		Gallons	Total Gallons ea. Reading
Inventory		11630	
	TOP OFF	25	
		11655	

Transfer total to line 25a

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.

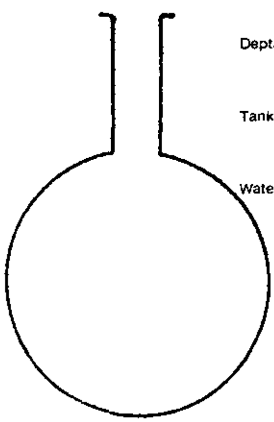
Complete section below

1 Is four pound rule required? Yes ☐ No ☒

2 Height to 12" mark from bottom of tank ______ in.

3 Pressure at bottom of tank ______ P.S.I.

4 Pressure at top of tank ______ P.S.I.



Depth of burial ______ in.

Tank dia ______ in

Water table ______ in

NOTES

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* 173" in

Add 30" for "T" probe assy 30 in.

Total tubing to assemble — approximate 203 in

20. EXTENSION HOSE SETTING

Tank top to grade* 81" in.

Extend hose on suction tube 6" or more below tank top 91"+ in.

*If Fill pipe extends above grade use top of fill

22. Thermal-Sensor reading after circulation 3220 digits

62/63 °F Between

23. Digits per °F in range of expected change [illegible] digits

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product ______

Hydrometer Employed ______ H

Temperature in Tank After Circulation ______ °F

Temperature of Sample ______ °F

Difference (+/-) ______ °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 26a

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity

Observed A.P.I. Gravity 56.0

Hydrometer employed 6 H

Observed Sample Temperature 63 °F

Corrected A.P.I. Gravity @ 60°F, From Table A 55.6

Coefficient of Expansion for involved Product From Table B .0005336

Transfer COE to Line 25b

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

Water Temperature after Circulation Table C ______ °F

Coefficient of Water Table D ______

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

25. (a) 11655 × (b) .0005336 = (c) 6.2191[illegible] gallons
Total quantity in full tank (16 or 17) | Coefficient of expansion for involved product | Volume change in this tank per °F

26. (a) 6.2[illegible] ÷ [illegible] = .0200 This is test factor (a)
Volume change per °F (25 or 24b) | Digits per °F in test Range (23) | Volume change per digit Compute to 4 decimal places

27. Sensor Calibration ____ / ____ 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
28. 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: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (-): Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) × (a) = Expansion + Contraction -	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (-) #33(V) — #37(T)	At Low Level compute Change per Hour (NFPA criteria)
920	TANKER TOPPED OFF											
930	SET UP TESTS											
9[illegible]	[illegible] TESTS [illegible]	[illegible]										
a -	[illegible]									.0209		
1045	[illegible] AT 12"	1		-2		.690		13220				(2)
1100		2	41.9	-2	.690	.670	-.020	13228	+8	+.167	-.187	
1115		3	42.1	-2	.670	.690	+.020	13233	+5	+.105	-.085	
1130		4	42.4	-2	.690	.740	+.050	13240	+7	+.146	-.096	
1145		5	42.8	-2	.740	.820	+.080	13246	+6	+.126	-.046	
1200		6	42.9	-2	.820	.920	+.100	13254	+8	+.167	-.067	
1215		7	42.9	-2	.190	.280	+.090	13260	+6	+126	-.036	
1230		8	43.1	-2	.280	.400	+.120	13266	+6	+126	-.006	
1232	LOWERED TO 12"											
1245	READING AT 12"	9	13.3		.400	.560	+.160	13272	+6	+.126	+.034	
1300		10	13.2		.560	.690	+.130	13279	+7	+.146	-.016	
1315			13.1		.690	.760	+.070	13282	+3	+.063	+.007	
1[illegible]		[illegible]	12.3		.760	.810	+.050	13284	-2	+.042	+.008	
1[illegible]		[illegible]	12.4		.140	.200	+.060	13289	+4	+.084	-.024	
1320			12.5		.200	.250	+.050	13289	+1	+.021	+.029	
1325		[illegible]	12.3		.250	.280	+.030	13291	+2	+.042	-.012	
1330		[illegible]	12.3		.290	.320	+.040	13292	[illegible]	[illegible]	+.019	
1335		[illegible]	12.3		.320	.370	+.050	13296	+3	+.063	-.013	
1340			12.3		370	.420	+.050	13[illegible]	[illegible]	[illegible]	[illegible]	
1[illegible]			12.3		[illegible]	470	+.050	13290	-2	+.042	+.008	
1[illegible]			12.3		[illegible]	510	+.040	13302	+3	+.063	-.023	
[illegible]			12.3		510	550	[illegible]	13[illegible]	[illegible]	[illegible]	[illegible]	
[illegible]			[illegible]		550	.600	[illegible]	13[illegible]	+2	-.042	[illegible]	
1[illegible]		[illegible]	12.3		[illegible]	.640	+.040	13302	+1	+.021	+.019	

			2.3		.640	.690	+.050	13310	-2	-.042	-.052	
					.220	.260	+.040	13312	-2	-.042	-.052	
					.260	.300	+.040	13314	-2	-.042	-.052	
					.300	.330	+.030	13316	-2	-.042	-.052	
					.330	.380	+.050	13318	-2	-.042	-.052	
					.380	.420	+.040	13320	+2	-.042	-.052	
					.420	.430	+.010	13323	+3	-.063	-.073	
					.430	.530	+.100	13326	+3	+.063	-.013	
					.530	.580	+.050	13328	+2	+.042	-.009	
					.580	.630	+.050	13330	+2	-.042	+.008	
					.630	.670	+.040	13333	+3	+.063	-.023	-.0100
					.670	.710	-.040	13335	+2	-.042	-.002	-.0145
					* TANK TIGHT *							
					LAST HOUR READING -.0145							

P-T Tank Test Data Chart
Additional Info

1. Net Volume Change at Conclusion of Precision Test -.0145 gph

Signature of Tester James P. Read

Date 10/17/89

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 _____

Data Chart for Tank System Tightness Test

PLEASE PRINT

Job # 1546

1. OWNER Property ☐ Tank(s) ☐

ARCO | Center St. / Grove Way, Castro Valley

Name | Address | Representative | Telephone

Name | Address | Representative | Telephone

2. OPERATOR

Name | Address | Telephone

3. REASON FOR TEST (Explain Fully)

New Installation Tanks, lines, etc.

4. WHO REQUESTED TEST AND WHEN

Name | Title | Company or Affiliation | Date

Address | Telephone

5. TANK INVOLVED — Use additional lines for manifolded tanks

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
Tank Closest to Parrell to Grove Way	12,000	ARCO	Unleaded Clear	New	Double wall Fiberglass

6. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
Northend of lot -	Concrete Asphalt	4"	2"	None	Remote - Pod Jackets
North Inside driveway, Rear of station, etc	Concrete, Black Top, Earth, etc	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

7. UNDERGROUND WATER

Depth to the Water table N/A ft. | Is the water over the tank? ☐ Yes ☒ No

8. FILL-UP ARRANGEMENTS

Tanks to be filled 6:30 AM hr 10-17-89 Date | Arranged by Paridesio Name Telephone

Extra product to "top off" and run tank tester How and who to provide? Consider NO Lead

Terminal or other contact for notice or inquiry Company Name Telephone

9. CONTRACTOR, MECHANICS, any other contractor involved

Beeler Ryan Inc.
S. Moore
J. Reed

10. OTHER INFORMATION OR REMARKS

Full Systems Test - excluding product line.

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 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	Leakage Indicated	Date Tested
#1 Unleaded Clear	.0216		10-17-89

12. SENSOR CERTIFICATION

10-17-89 Date

Serial No of Thermal Sensor

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

Technicians

1 S. Moore Certification # 114812279

2 Certification #

Beeler Ryan Inc. — Testing Contractor or Company — By: Signature

1172 National Ave. Hayward, CA. — Address

PN6827 OK

14. Arco | Center st / Grove Wy. | Castro Valley | CA. | 10-17-89

Name of Supplier, Owner or Dealer | Address No and Street(s) | City | State | Date of Test

15. TANK TO TEST

Closest to Grove Way

Identify by position

Arco - Unleaded Clear

Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD

16. CAPACITY

Nominal Capacity 12,000 Gallons

By most accurate capacity chart available _____ Gallons

From
- ☐ Station Chart
- ☒ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with
- ☐ Other _____

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to ⅛" in. | 0 Gallons | 92" Tank Diameter in.

	Inventory	Gallons	Total Gallons as Reading
	92"	11,627	11,627
	Top off	23	+ 23
			11,650

Transfer total to line 25a

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

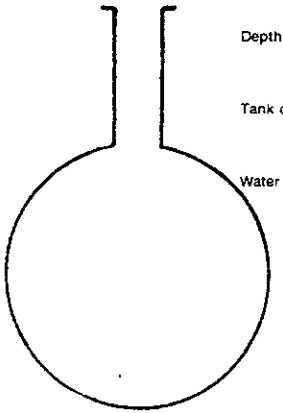
Complete section below

1 Is four pound rule required? Yes ☐ No ☒

2 Height to 12" mark from bottom of tank _____ in.

3 Pressure at bottom of tank _____ P.S.I

4 Pressure at top of tank _____ P.S.I.



Depth of burial _____ in.

Tank dia _____ in

Water table _____ in

NOTES.

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* 168 in

Add 30" for "T" probe assy. 30 in.

Total tubing to assemble — approximate _____ in

20. EXTENSION HOSE SETTING

Tank top to grade* 78" in

Extend hose on suction tube 6" or more below tank top 82"+ in.

*If Fill pipe extends above grade, use top of fill

22. Thermal-Sensor reading after circulation 12882 digits

61-62 °F Between

23. Digits per °F in range of expected change 322 digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A P I Gravity

Observed A P I Gravity 55.7

Hydrometer employed 6 H

Observed Sample Temperature 66 °F

Corrected A P.I Gravity @ 60°F, From Table A 56.3+.7=57.0

Coefficient of Expansion for Involved Product From Table B .00059230

Transfer COE to Line 25b

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product N/A

Hydrometer Employed N/A H

Temperature in Tank After Circulation N/A °F

Temperature of Sample N/A °F

Difference (+/-) N/A °F

Observed A P I. Gravity N/A

Reciprocal _____ Page # _____

_____ - _____ = _____

Total quantity in full tank (16 or 17) | Reciprocal | Volume change in this tank per °F

Transfer to Line 26a

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

Water Temperature after Circulation Table C _____ °F

Coefficient of Water Table D _____

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

25. (a) 11,650 Total quantity in full tank (16 or 17) × (b) .00059230 Coefficient of expansion for involved product = (c) 6.900295 Volume change in this tank per °F gallons

26. (a) 6.900295 Volume change per °F (25 or 24b) ÷ 322 Digits per °F in test Range (23) = 0.021429487 Volume change per digit Compute to 4 decimal places. This is test factor (a) (.0214)

27. Sensor Calibration 16600 / 16600 — 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
28. 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: Beginning of Reading	Standpipe Level in inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (–) / Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower – (c)	37. Computation (c) × (a) = Expansion + Contraction –	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (–) #33(V) – #37(T)	At Low Level compute Change per Hour (NFPA criteria)
0925	Pump Primed + Running	All	LINES Bleed off - etc.							Factor A		
0930	Begin Circulation -									.0214		
1025	Took API Sample											
1030	1st Sensor Reading	1	42	—	.895	1st Sensor -		12882				
1045	High level	2	40.6	42	.895	.790	−.105	12891	+9	+.1926	−.2976	
1100		3	40.8	42	.790	.690	−.100	898	+7	+.1498	−.2498	
1115		4	41.1	42	.690	.620	−.070	905	+7	+.1498	−.2198	
1130		5	41.3	42	.620	.570	−.050	911	+6	+.1284	−.1784	
1145		6	41.3	42	.570	.530	−.040	920	+9	+.1926	−.2326	
1200		7	41.4	42	.530	.490	−.040	930	+10	+.2140	−.2540	
1215		8	41.8	42	.490	.480	−.010	938	+8	+.1712	−.1812	
1230	Drop in 3rd level	9	42	42	.480	1st Sensor		939	—		—	
1230		10	13.5	12	.480	.590	+.110	943	+4	+.0856	+.0244	
1245		11	13.3	12	.590	.680	+.090	953	+10	+.2140	−.1240	
1250	Begin Low level Test	12	12.5	12	.680	.720	+.040	955	+2	+.0428	−.0028	
1255		13	12.4	12	.720	.755	+.035	959	+4	+.0856	−.0506	
1300		14	12.4	12	.755	.790	+.035	963	+4	+.0856	−.0506	
1305		15	12.4	12	.790	.820	+.030	967	+4	+.0856	−.0556	
1310		16	12.5	12	.820	.855	+.035	972	+5	+.1070	−.0720	
1315		17	12.5	12	.000	.035	+.035	975	+3	+.0642	−.0292	
1320		18	12.5	12	.035	.065	+.030	976	+1	+.0214	+.0086	
1325		19	12.5	12	.065	.100	+.035	978	+2	+.0428	−.0078	
1330		20	12.5	12	.100	.130	+.030	981	+3	+.0642	−.0342	
1335		21	12.6	12	.130	.170	+.040	983	+2	+.0428	−.0028	
1340		22	12.5	12	.170	.205	+.035	987	+4	+.0856	−.0506	

1315		23	12.7	12	.205	.255	+.050	991	+4	+.0856	-.0356	
1320		24	13.0	12	.255	.325	+.070	993	+2	+.0428	+.0272	
1325		25	12.8	12	.325	.370	+.045	997	+4	+.0856	-.0406	
1330		26	12.5	12	.370	.405	+.035	13000	+3	+.0642	-.0292	
1335		27	12.8	12	.405	.455	+.050	003	+3	+.0642	-.0142	
1340		28	12.9	12	.455	.510	+.055	007	+4	+.0856	-.0306	
1345		29	12.7	12	.510	.555	+.045	010	+3	+.0642	-.0192	
1350		30	12.9	12	.555	.610	+.055	014	+4	+.0856	-.0306	
1425		31	12.8	12	.610	.660	+.050	016	+2	+.0428	+.0072	
1420		32	12.9	12	.660	.720	+.060	018	+2	+.0428	+.0172	
1435		33	12.9	12	.720	.780	+.060	021	+3	+.0642	-.0042	
1440		34	12.7	12	.780	.820	+.040	023	+2	+.0428	-.0028	
1445		35	12.8	12	.820	.870	+.050	027	+4	+.0856	-.0356	-.2693
1450		36	12.9	12	.870	.930	+.060	030	+3	+.0642	-.0042	-.2700
1455		37	12.9	12	.930	.995	+.065	033	+3	+.0642	+.0008	-.2443
1500		38	12.8	12	.160	.225	+.065	034	+1	+.0214	+.0236	-.1972
1505		39	12.5	12	.225	.260	+.035	036	+2	+.0428	-.0078	-.1733
1510		40	13.0	12	.260	.330	+.070	040	+4	+.0856	-.0156	-.1451
1515		41	12.8	12	.330	.380	+.050	041	+1	+.0214	+.0286	-.1162
1520		42	12.9	12	.380	.425	+.045	042	+1	+.0214	+.0236	-.1087
1525		43	12.9	12	.425	.490	+.065	044	+2	+.0428	+.0222	-.0937
1530		44	13.2	12	.490	.570	+.080	046	+2	+.0428	+.0372	-.0580
1535		45	12.6	12	.570	.600	+.030	050	+4	+.0856	-.0556	-.0844
1340		46	12.8	12	.600	.660	+.060	052	+2	+.0428	+.0172	-.0505
1345		47	13.0	12	.660	.725	+.065	054	+2	+.0428	+.0222	-.0216 *
1350	Remove Test -											

P-T Tank Test Data Chart
Additional Info

1 Net Volume Change at Conclusion of Precision Test (-.0216) gph

Signature of Tester A. Mode

Date 10-17-89

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 _____

Data Chart for Tank System Tightness Test

-JCR
1542

PLEASE PRINT

1. OWNER Property ☐ Tank(s) ☐

ARCO SS #2152 2214 CENTER ST / GROVE CITY 871-126..
Name / Address / Representative / Telephone

Name / Address / Representative / Telephone

2. OPERATOR

Name / Address / Telephone

3. REASON FOR TEST (Explain Fully)

NEW TANKS

4. WHO REQUESTED TEST AND WHEN

COURTLAND HOLMAN ARCO 10/9/89
Name / Title / Company or Affiliation / Date

Address / Telephone

5. TANK INVOLVED

Use additional lines for manifolded tanks

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx Age	Steel/Fiberglass
CLOSEST TO CENTER ST	12,000	ARCO	SUPREME UNLEADED	NEW	DOUBLE WALL FIBERGLASS

6. INSTALLATION DATA

Location	Cover	Fills	Vents	Siphones	Pumps
NORTHEAST OF BUILDING	FULL SLAB	4"	2"	NO	REMOTE
North inside driveway, Rear of station, etc.	Concrete, Black Top, Earth, etc.	Size, Titefill make, Drop tubes, Remote Fills	Size, Manifolded	Which tanks?	Suction, Remote, Make if known

7. UNDERGROUND WATER

Depth to the Water table ? "

Is the water over the tank? ☐ Yes ☒ No

8. FILL-UP ARRANGEMENTS

Tanks to be filled 630 hr. 10/17/89 Date Arranged by COURTLAND HOLMAN
Name / Telephone

Extra product to "top off" and run tank tester. How and who to provide? Consider NO Lead

Terminal or other contact for notice or inquiry
Company / Name / Telephone

9. CONTRACTOR, MECHANICS, any other contractor involved

GETTLER RYAN INC
JIM REED

10. OTHER INFORMATION OR REMARKS

1) TESTED WITH ALL LINES PLUGGED AT TANK
2) VENT & VAPOR LINES TESTED WITH REGULAR TANK
3) TESTED WITH TWO CIRCULATING PUMPS

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 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	Leakage Indicated	Date Tested
12,000 GALLON SUPERUNLEADED	YES		10/18/89

12. SENSOR CERTIFICATION

10/18/89
Date

Serial No. of Thermal Sensor

13. **This is to certify that these tank systems were tested on the date(s) shown. Those indicated as "Tight" meet the criteria established by the National Fire Protection Association Pamphlet 329.**

Technicians

1. JIM REED

Certification # 414813017

2.

Certification #

GETTLER RYAN INC [signature]
Testing Contractor or Company / By: Signature

1992 NATIONAL AVE / HAYWARD
Address

PM6827 OK

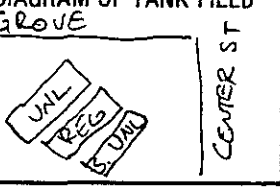
Name of Supplier, Owner or Dealer	Address No. and Street(s)	City	State	Date of Test
ARCO 35+2152	22141 CENTER ST / GROVE WAY	CASTRO VALLEY	CA	10/18/89

15. TANK TO TEST

CLOSEST TO CENTER ST
Identity by position

ARCO SUPER UNLEADED
Brand and Grade

15a. BRIEF DIAGRAM OF TANK FIELD



16. CAPACITY

Nominal Capacity 12,000 Gallons

By most accurate capacity chart available 11630 Gallons

From
- ☐ Station Chart
- ☒ Tank Manufacturer's Chart
- ☐ Company Engineering Data
- ☐ Charts supplied with
- ☐ Other

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 0 to ⅛" in. ____ Gallons 92" Tank Diameter in

	Gallons	Total Gallons ea. Reading
Inventory	11630	
TOP OFF	25	
	11655	

Transfer total to line 25a

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.

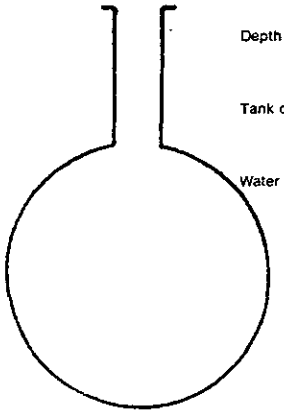
Complete section below

1 Is four pound rule required? Yes ☐ No ☒

2. Height to 12" mark from bottom of tank ____ in.

3 Pressure at bottom of tank ____ P.S.I.

4 Pressure at top of tank ____ P.S.I



Depth of burial ____ in.

Tank dia ____ in

Water table ____ in

NOTES:

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 NFPA 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* 180 in.
Add 30" for "T" probe assy 30 in
Total tubing to assemble — approximate 210 in.

20. EXTENSION HOSE SETTING

Tank top to grade* 88 in.
Extend hose on suction tube 6" or more below tank top 98 in.

*If Fill pipe extends above grade use top of fill

22. Thermal-Sensor reading after circulation 13260 digits
62/63/64 °F Between

23. Digits per °F in range of expected change 324 digits

COEFFICIENT OF EXPANSION (Complete after circulation)

24a. Corrected A.P.I. Gravity

Observed A.P.I. Gravity 56.0

Hydrometer employed ____ H

Observed Sample Temperature ____ °F

Corrected A.P.I. Gravity @ 60°F, From Table A 55.3

Coefficient of Expansion for Involved Product From Table B ____

Transfer COE to Line 25b

21. VAPOR RECOVERY SYSTEM ☐ Stage I ☐ Stage II

24b. COEFFICIENT OF EXPANSION RECIPROCAL METHOD

Type of Product ____

Hydrometer Employed ____ H

Temperature in Tank After Circulation ____ °F

Temperature of Sample ____ °F

Difference (+/-) ____ °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 26a.

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

Water Temperature after Circulation Table C ____ °F

Coefficient of Water Table D ____

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

25. (a) 11655 Total quantity in full tank (16 or 17) × (b) .00059023 Coefficient of expansion for involved product = (c) 6.7625302 Volume change in this tank per °F gallons

26. (a) ____ Volume change per °F (25 or 24b) ÷ 324 Digits per °F in test Range (23) = .0209 Volume change per digit Compute to 4 decimal places. This is test factor (a)

27. Sensor Calibration ____/____

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

28. 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: Beginning of Reading	Standpipe Level in Inches: Level to which Restored	32. Product in Graduate: Before Reading	32. Product in Graduate: After Reading	33. Product Replaced (-): Product Recovered (+)	35. Thermal Sensor Reading	36. Change Higher + Lower - (c)	37. Computation (c) × (a) = Expansion + Contraction -	Temperature Adjustment: Volume Minus Expansion (+) or Contraction (-) #33(V) — #37(T)	At Low Level compute Change per Hour (NFPA criteria)
900	SET UP TESTERS											
945	FILLED TESTERS & BLED OFF AIR									.0209		
1000	RAISED TO 42"											
1100	READING @ 42"	1		42		.100		13260				
1115	" "	2	44.3	42	.100	.220	+.120	13268	+8	+.167	-.047	
1130	" "	3	44.8	42	.220	.370	+.150	13276	+8	+.167	-.017	
1145		4	44.8	42	.370	.510	+.140	13286	+10	+.209	-.069	
1200		5	45.0	42	.510	.660	+.150	13295	+9	+.189	-.038	
1215		6	45.1	42	.660	.810	+.150	13306	+11	+.230	-.080	
1230		7	45.4	42	.810	1.000	+.190	13317	+11	+.230	-.040	
1245		8	45.4	42	.200	.390	+.190	13327	+12	+.251	-.061	
1247	LOWERED TO 12"		42	12								
1300	REFOING TO 2"	9	16.0	12	360	.620	+.260	13336	+10	+.209	+.051	
1315		10	15.7	12	.620	.850	.230	13350	+11	+.230	+.000	
1330		11	13.3	12	.060	.140	+.080	13354	+4	+.084	-.004	
1345		12	13.3	12	.140	220	+.080	13359	+5	+.105	-.025	
1400		13	13.0	12	.220	.280	+.060	13362	-3	+.063	-.003	
1415		14	13.0	12	.280	.340	+.060	13364	+2	+.042	+.018	
1430		15	13.0	12	.340	.400	+.060	13366	+2	+.042	+.018	
1445		16	13.2	12	.400	.470	+.070	13368	+2	+.042	+.028	
1500		17	13.4	12	.470	.560	+.090	13372	+3	+.063	+.027	
1515		18	13.2	12	.560	.630	+.070	13376	+4	+.084	-.014	
1530		19	13.3	12	.630	.710	+.080	13382	+4	+.084	-.004	
1545		20	13.3	12	.710	.790	+.080	13388	+3	+.063	+.017	
1600		21	13.2	12	.790	.900	+.110	13393	+5	+.105	+.005	
1615		22	13.3	12	.900	1.010	+.110	13398	+4	+.084	+.026	
1630		23	13.3	12	.010	.060	+.050	13396	+4	+.084	-.034	
1645		24	13.2	12	.060	.190	+.130	13399	-3	+.063	+.067	

[illegible]	[illegible] "2"	25	133	2	.230	.310	[illegible]	13402	+3	+.063	+.017	
[illegible]		26	133	2	.310	.420	[illegible]	1340[illegible]	-4	+.08[illegible]	-.004	
[illegible]		27	133	2	.420	.500	+.080	13[illegible]	-5	+.105	-.025	
[illegible]		28	[illegible]	2	.500	.580	+.080	134[illegible]	+4	+.084	-.004	
[illegible]		29	13[illegible]	2	[illegible]	[illegible]	+.070	134[illegible]	+3	+.063	+.007	
[illegible]		30	133	2	.650	.730	+.080	[illegible]	-4	-.084	-.004	
[illegible]		[illegible]	133	2	.730	.810	+.080	13425	+3	-.063	+.017	
1305		[illegible]	133	2	.030	[illegible]	+.080	13428	+3	+.063	+.017	
1310		[illegible]	132	2	[illegible]	.230	+.070	13432	+4	+.084	-.014	
1315		[illegible]	133	2	.230	.310	+.080	[illegible]	+4	+.084	-.004	+.002
1320		3[illegible]	133	2	.310	.390	+.080	13440	+4	-.084	-.004	+.002

TANK [illegible]

[illegible] +.002

P-T Tank Test Data Chart
Additional Info

1 Net Volume Change at Conclusion of Precision Test +.002 gph

Signature of Tester James P Reed

Date 10/18/89

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 ____________________

DATA CHART
For Use With

1 LOCATION: 22141 Center St / Grove   Castro Valley   CA

2 OWNER: Arco

3 [redacted]

4 [redacted] New Lines

5 TE[redacted]ED BY: Courtland Holman

6 SPECIAL INSTRUCTIONS:

7 CONTRACTOR OR COMPANY MAKING TEST MECHANIC(S) NAME: Gettler Ryan Inc.

8 IS A TANK TEST TO BE MADE WITH THIS LINE TEST? ☐ YES ☒ NO

9 MAKE AND TYPE OF PUMP OR DISPENSERS:

10 WEATHER: ____ TEMPERATURE IN TANKS ____ °F ____ °C   COVER OVER LINES: ____   APPROXIMATE BURIAL DEPTH: ____

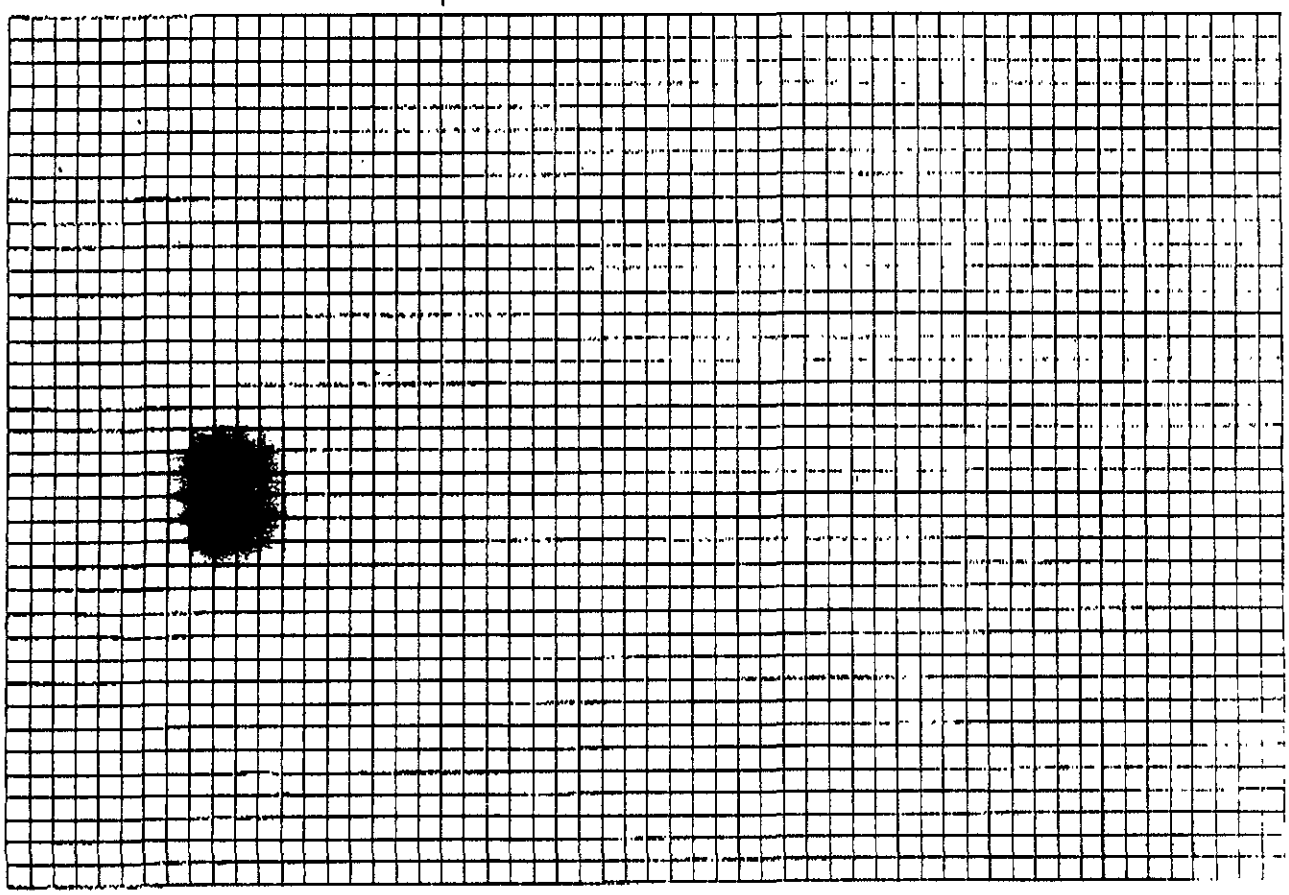
11 IDENTIFY EACH LINE AS TESTED	12 TIME (MILITARY)	13 LOG OF TEST PROCEDURES, AMBIENT TEMPERATURE, WEATHER, ETC.	14 PRESSURE psi OR kPa BEFORE	14 PRESSURE psi OR kPa AFTER	15 VOLUME READING BEFORE	15 VOLUME READING AFTER	NET CHANGE	16 TEST RESULTS: CONCLUSIONS, REPAIRS AND COMMENTS
Unleaded	700	Set up tester						
	715	[illegible]						
	745	Pumped up to 50 psi						
	800	Restored to 50psi		50		.073		
	815		48	50	.073	.071	-.002	
	830		4[illegible]	50	.071	.068	-.003	
	845		48	50	.068	.066	-.002	
	900		48	50	.066	.064	-.002	
	915		49	50	.064	.063	-.001	LINE TIGHT LAST HOUR READING -.00[illegible]
Super Unleaded	920	Set up tester						
	930	Filled tester & bled off air						
	940	Pumped up to 50psi						
	1000	Restored to 50psi		50		.049		
	1015		49	50	.049	.047	-.002	
	1030		48	50	.047	.044	-.003	
	1045		48	50	.044	.043	-.001	
	1100		49	50	.043	.042	-.001	
	1115		50	50	.042	.042	±.000	LINE TIGHT LAST HOUR READING -.005

[redacted]

11 IDENTIFY EACH LINE AS TESTED	12 TIME (MILITARY)	13 USE OF [redacted] (DISPENSER, SUCTION, GRAVITY, ETC.)	14 PRESSURE (IF OR VAC) BEFORE	14 PRESSURE (IF OR VAC) AFTER	15 VOLUME BURETTE READING BEFORE	15 VOLUME BURETTE READING AFTER	CHANGE	16 TEST RESULTS CONCLUSIONS, REPAIRS AND COMMENTS
REGULAR	710	SUPERSYSTEM						
	720	FILLER TESTER & BLEED OFF LINE						
	745	PUMPED UP TO 50#						
	800	[redacted] TO 50#		50		.051		
	815		47	50	.051	.048	-003	
	830		48	50	.048	.046	-002	
	845		49	50	.045	.044	-001	
	900		48	50	.044	.042	-002	
	915		49	50	.042	.041	-001	LINE TIGHT LAST HOUR READING .007

SCALE: ☐ 1 PAGE = 8 FT. PER SQUARE—THIS SHEET = 168' x 114'
☐ 2 PAGES = 6 FT. PER SQUARE—THIS SHEET = 336' x 228'

17 SKETCH OF LOCATION — SHOW: NORTH, STREETS, STATION BUILDING, TANKS, ISLANDS, PIPING (IF KNOWN, OR BEST INFO), PUMPS OR DISPENSERS (USE NUMBERS ONLY IF PERMANENTLY MARKED).



petro tite
LINE TESTER

HEATH CONSULTANTS
100 TOSCA DRIVE
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