Data Chart for Tank System Tightness Test

petro tite
TANK TESTER

#3 Test

PLEASE PRINT

1. OWNER Property [X] Tank(s) [X]

CHEVRON U.S.A. INC.
Name

SS 6414 1395 7th St. @ Cypress OAKLAND, CALIF.
Name — Address — Representative — Telephone

2. OPERATOR

Name — Address — Telephone

3. REASON FOR TEST (Explain Fully)

4. WHO REQUESTED TEST AND WHEN

John Randall — Name
ENG. — Title
CHEVRON U.S.A. INC. — Company of Affiliation
10-16-85 — Date
Address — Telephone

5. WHO IS PAYING FOR THIS TEST?

CHEVRON U.S.A. INC. — Company, Agency or Individual
John Randall — Person Authorizing
ENG. — Title
838-5339 — Telephone
2 ANNABEL LANE, Suite 200 — Billing Address
SAN RAMON, CALIF. — City, State
Zip
Attention of: — Order No. — Other Instructions

6. TANK(S) INVOLVED

Identify by Direction	Capacity	Brand/Supplier	Grade	Approx. Age	Steel/Fiberglass
#1	9,000	CHEVRON	Reg.		
#2	8,000	CHEVRON	Reg.		
#3	4,000	CHEVRON	Reg.		

7. INSTALLATION DATA

Location (North inside driveway, Rear of station, etc)	Cover (Concrete, Black Top, Earth, etc.)	Fills (Size, Titefill make, Drop tubes, Remote Fills)	Vents (Size, Manifolded)	Siphones (Which tanks?)	Pumps (Suction, Remote, Make if known)
~~Concrete~~ South side of BLDG.	Concrete	4"	2"	NO	Remote

8. UNDERGROUND WATER

Depth to the Water table _____"

Is the water over the tank? [ ] Yes [ ] No

9. FILL-UP ARRANGEMENTS

Tanks to be filled _____ hr. _____ Date Arranged by _____
Name — Telephone

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

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

10. CONTRACTOR, MECHANICS, any other contractor involved

R.L. STEVENS CO.

11. OTHER INFORMATION OR REMARKS

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.

12. TEST RESULTS

Tests were made on the above tank systems in accordance with test procedures prescribed for petro tite TANK TESTER as detailed on attached test charts with results as follows:

Tank Identification	Tight	Leakage Indicated	Date Tested
#1	YES	+.021	10-18-85
#2	YES	-.001	10-17-85
#3	YES	+.010	10-18-85

13. CERTIFICATION

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.

10-18-85
Date

DAVE STEVENS
PAT STEVENS
Technicians

R.L. STEVENS CO. — Robert L Stevens
Testing Contractor or Company. By: Signature

22240 MEEKLAND AVE. HAYWARD, CALIF. 94541
Address

LIC. # [illegible]807

730 · 732
Serial No of Thermal Sensor

14. Chevron SS-6414 — 7th + Cypress — Oakland, CA — 10-18-85
Name of Supplier Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

Petro Tite TANK TESTER

15. TANK TO TEST
#1
Identity by position
Chevron Regular
Brand and Grade

16. CAPACITY
Nominal Capacity 9,000 Gallons
By most accurate capacity chart available 9,006 Gallons
Is there doubt as to True Capacity? ☐
See Section "DETERMINING TANK CAPACITY"
From
☒ Station Chart
☐ Tank Manufacturer's Chart
☐ Company Engineering Data
☐ Charts supplied with Petro Tite TANK TESTER
☐ Other

17. FILL-UP FOR TEST
OBS API Grav. 64.0
OBS Temp. 66
Correct 63.2 Inventory
Stick Water Bottom before Fill-up 0 " to 1/8 in. 0 Gallons
Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY
Tank Diameter 95"
Product in full tank (up to fill pipe)

	Stick Readings to 1/8 in.	Gallons	Total Gallons ea. Reading
		6,550	
Trans.		2570 +30	
			9,150

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
See manual sections applicable. Check below and record procedure in log (26)
☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
☒ Stage I
☒ Stage II

HEATH CONSULTANTS
100 TOSCA DRIVE
P.O. BOX CS-200
STOUGHTON, MA. 02072-1591

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to Grade* ..... 139 "
Add 30" for 4" L ..... "
Add 24" for 3" L or air seal ..... "
Total tubing to assemble Approximate ..... "

20. EXTENSION HOSE SETTING
Tank top to grade* ..... 44 "
Extend hose on suction tube 6" or more below tank top ..... "
*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK
Is Today Warmer? Colder? ___° F Product in Tank ___° F Fill-up Product on Truck ___° F Expected Change (+ or)

22. Thermal-Sensor reading after circulation 15796 digits 70/71 Nearest °F

23. Digits per °F in range of expected change 325 digits

24. 9,150 total quantity in full tank (16 or 17) × 0.0006332 coefficient of expansion for involved product = 5.822328 volume change in this tank per °F gallons

25. 5.822328 volume change per °F (24) ÷ 325 Digits per °F in test Range (23) = 0.0179148 Volume change per digit. Compute to 4 decimal places. This is test factor (a) (.0179)

26. 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 CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE / TIME (24 hr.)	28. 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	Product in Graduate: After Reading	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 High Level record Total End Deflection / At Low Level compute Change per Hour (NFPA criteria)

(.079)

1430	pump primed + running												
1535	First Sensor Reading							15796					
1535	Remove API Sample												
1540	Start Hi level test			42				802					
1555	Cont. Hi level test	1	43	42	.540	.585	±.045	810	+8	±.143	−.098		
1610	" " " "	2	43	42	.585	.630	±.045	819	+9	±.161	−.116		
1625	" " " "	3	43.6	42	.630	.690	±.060	830	+11	±.197	−.137		
1640	" " " "	4	43.8	42	.690	.760	±.070	835	+5	±.090	−.020		
1655	" " " "	5	44.1	42	.760	.855	±.095	841	+6	±.107	−.012		
1710	" " " "	6	44	42	.010	.100	±.090	847	+6	±.107	−.017		
1725	" " " "	7	44.1	42	.100	.195	±.095	850	+5	±.090	±.005		
1740	" " " "	8	44.3	42	.195	.300	±.105	858	+6	±.107	−.002		
1845	Drop to low level test			12				860					
1900	Cont. low level test	9	15	12	.080	.230	±.150	869	+9	±.161	−.011		
1915	" " " "	10	15	12	.230	.380	±.150	877	+8	±.143	±.007	}	
1930	" " " "	11	14.9	12	.380	.525	±.145	885	+8	±.143	±.002	}	
1945	" " " "	12	15	12	.525	.675	±.150	893	+8	±.143	±.007	}	±.021
2000	" " " "	13	14.6	12	.675	.805	±.130	900	+7	±.125	±.005	}	
					system tight at this time ±.021								

14. Chevron SS-6414 | 7th + Cypress | Oakland, CA | 10-17-85
Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

petro Tite TANK TESTER

15. TANK TO TEST
#2
Identity by position
Chevron Regular
Brand and Grade

16. CAPACITY
Nominal Capacity 8,000 Gallons
By most accurate capacity chart available ____ Gallons
Is there doubt as to True Capacity? ☐
See Section "DETERMINING TANK CAPACITY"
From
☐ Station Chart
☐ Tank Manufacturer's Chart
☐ Company Engineering Data
☐ Charts supplied with petro Tite TANK TESTER
☐ Other ____

17. FILL-UP FOR TEST
OBS API Grav. 64.5
OBS Temp. 69
Correct 63.3
Stick Water Bottom before Fill-up 0 " to ⅛ in. 0 Gallons

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Inventory			
			8,215

Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 97 ii
Product in full tank (up to fill pipe)

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
See manual sections applicable. Check below and record procedure in log (26).
☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
☒ Stage I
☒ Stage II

HEATH CONSULTANTS
100 TOSCA DRIVE
P.O. BOX CS-200
STOUGHTON, MA. 02072-1591

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to Grade* ..... 128 "
Add 30" for 4" L ..... "
Add 24" for 3" L or air seal ..... "
Total tubing to assemble Approximate ..... "

20. EXTENSION HOSE SETTING
Tank top to grade* ..... 35 "
Extend hose on suction tube 6" or more below tank top ..... "
*If Fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK
Is Today Warmer? ( ) Colder? ( ) ____° F Product in Tank ____° F Fill-up Product on Truck ____° F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation 15329 digits 68.69 Nearest °F

23. Digits per °F in range of expected change 326 digits

24. 8215 total quantity in full tank (16 or 17) × 0.0006703 coefficient of expansion for involved product = 5.23320145 gallons volume change in this tank per °F

25. 5.23320145 volume change per °F (24) ÷ 326 Digits per °F in test Range (23) = 0.01605276 Volume change per digit. Compute to 4 decimal places. This is test factor (a) (.0161)

26. 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 CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE / TIME (24 hr.)	28. 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	Product in Graduate: After Reading	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 High Level record Total End Deflection / At Low Level compute Change per Hour (NFPA criteria)

Transfer product from 4,000 gallon tank to top off. (.01C)

200	Pump primed + Running											
300	First Sensor Reading							15329				
305	Remove API Sample											
315	Start Hi level test			42				340				
330	Con't. Hi level test	1	44	42	.100	.250	+.150	359	+19	+.302	-.156	
345	" " " "	2	44.3	42	.250	.420	+.170	374	+15	+.242	-.072	
400	" " " "	3	44.8	42	.420	.610	+.190	390	+16	+.258	-.068	
415	" " " "	4	44.2	42	.610	.770	+.160	404	+14	+.225	-.065	
430	" " " "	5	44.6	42	.770	.960	+.190	420	+16	+.258	-.068	
445	" " " "	6	44.5	42	.100	.260	+.160	430	+10	+.161	-.001	
500	" " " "	7	44.6	42	.260	.450	+.190	442	+12	+.193	-.003	
515	" " " "	8	44.8	42	.450	.650	+.200	455	+13	+.209	-.009	
520	Drop to low level	9		12				466				
535	start low level test	10	16	12	.150	.420	+.270	480	+14	+.225	+.045	
550	" " " "	11	15.5	12	.420	.630	+.210	493	+13	+.209	+.001	}
605	" " " "	12	15.6	12	.630	.850	+.220	507	+14	+.225	-.005	}
620	" " " "	13	15.8	12	.150	.390	+.240	522	+15	+.242	-.002	} -.001
635	" " " "	14	15.7	12	.390	.620	+.230	536	+14	+.225	+.005	}
					System tight at this time -.001							

14. Chevron SS-6414 7th Cypress, Oakland, CA 10-18-85
Name of Supplier, Owner or Dealer | Address No. and Street(s) | City | State | Date of Test

Petro Tite TANK TESTER

15. TANK TO TEST
#3
Identity by position
Chevron Regular
Brand and Grade

16. CAPACITY
Nominal Capacity 4,000 Gallons
By most accurate capacity chart available 3993 Gallons
Is there doubt as to True Capacity? ☐
See Section "DETERMINING TANK CAPACITY"

From
☒ Station Chart
☐ Tank Manufacturer's Chart
☐ Company Engineering Data
☐ Charts supplied with Petro Tite TANK TESTER
☐ Other

OBS API Grav. 63.1
OBS Temp. 60
Correct 63.1

17. FILL-UP FOR TEST
Stick Water Bottom before Fill-up 0 " to ⅛ in. 0 Gallons

	Stick Readings to ⅛ in.	Gallons	Total Gallons ea. Reading
Inventory			
			4,020

Fill up. STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METERED DELIVERY QUANTITY

Tank Diameter 64"

Product in full tank (up to fill pipe)

HEATH CONSULTANTS
100 TOSCA DRIVE
P.O. BOX CS-200
STOUGHTON, MA. 02072-1591

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
See manual sections applicable. Check below and record procedure in log (26).
☐ Water in tank ☐ High water table in tank excavation ☐ Line(s) being tested with LVLLT

VAPOR RECOVERY SYSTEM
☒ Stage I
☒ Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
Bottom of tank to Grade* ..... 109 ½ "
Add 30" for 4" L ..... "
Add 24" for 3" L or air seal ..... "
Total tubing to assemble Approximate ..... "

20. EXTENSION HOSE SETTING
Tank top to grade* ..... 55½ "
Extend hose on suction tube 6" or more below tank top ..... "

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

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK
Is Today Warmer? ☐ Colder? ☐ ____° F Product in Tank ____° F Fill-up Product on Truck ____° F Expected Change (+ or −)

22. Thermal-Sensor reading after circulation 15721 digits 70/71 °F Nearest

23. Digits per °F in range of expected change 325 digits

24. 4020 total quantity in full tank (16 or 17) × 0.000321 coefficient of expansion for involved product = 2555756 volume change in this tank per °F gallons

25. 2.555756 volume change per °F (24) ÷ 325 Digits per °F in test Range (23) = 0.0078694 Volume change per digit. Compute to 4 decimal places. This is (.0079 test factor (a)

26. 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 CHANGES EACH READING	39. ACCUMULATED CHANGE
27. DATE / TIME (24 hr)	28. 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	Product in Graduate: After Reading	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 High Level record Total End Deflection / At Low Level compute Change per Hour (NFPA criteria)

(.0079)

940 pump primed + running

1005	First sensor reading						15721					
1005	Remove API sample											
1010	Start Hi level test			42			720					
1025	Con't Hi level test	1	43	42	.740	.790	±.050	751	+31	±.245	-.195	
1040	" " " "	2	43.1	42	.140	.195	±.055	762	+11	±.087	-.032	
1055	" " " "	3	43.2	42	.195	.255	±.060	775	+13	±.103	-.043	
1110	" " " "	4	43.5	42	.255	.325	±.070	798	+23	±.182	-.112	
1125	" " " "	5	43.4	42	.325	.390	±.065	810	+12	±.095	-.030	
1140	" " " "	6	43.7	42	.390	.470	±.080	822	+12	±.095	-.015	
											N/A	
1145	Drop to low level test			12			823					
1200	Con't. low level test	7	14	12	.000	.080	±.080	832	+9	±.071	±.009	
1215	" " " "	8	14.1	12	.080	.165	±.085	842	+10	±.079	±.006	
1230	" " " "	9	14.2	12	.165	.255	±.090	853	+11	±.087	±.003	
1245	" " " "	10	14.3	12	.255	.350	±.095	865	+12	±.095	±.000	±.010
1300	" " " "	11	14	12	.350	.430	±.080	875	+10	±.079	±.001	

System tight at this time ±.010