

CASTRO VALLEY UNIFIED SCHOOL DISTRICT

P.O. BOX 2146 • CASTRO VALLEY, CALIFORNIA 94546 • (415) 537-3000

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**CASTRO VALLEY HIGH
(9-12)**
19400 Santa Maria Ave.
537-5910

CANYON MIDDLE (6-8)
19600 Cull Canyon Rd.
538-8833

**REDWOOD
COMMUNITY PARK**
4400 Alma Ave.

ELEMENTARY (K-5)

CASTRO VALLEY
20185 San Miguel Ave.
537-1919

CHABOT
19104 Lake Chabot Rd.
537-2342

MARSHALL
20111 Marshall St.
537-2431

PALOMARES
6395 Palo Verde Rd.
582-4207

PROCTOR
17520 Redwood Rd.
537-0630

VANNOY
5100 Vannoy Ave.
537-1832

**ADULT AND COMMUNITY
EDUCATION**
19722 Center St.
886-1000

*Yg
for UG TANKS*

RECEIVED
JUN 08 1987
ENVIRONMENTAL HEALTH
ADMINISTRATION

June 3, 1987

Mr. Ted Gerow
Alameda County Department of Environmental Health
470 27th Street, 3rd. Floor
Oakland, CA 94612

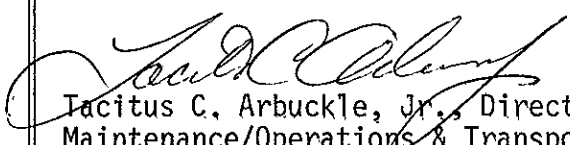
Re: Tests resolutes on underground tanks at C.V.U.S.D.

Dear Ted:

Thank you for all the help we received from your organization to help complete the testing of our underground tanks.

Enclosed are the tests and their results that show we are within the prescribed requirements for your files. If you have any questions or other information needs, please feel free to call me at anytime (538-3422).

Sincerely,


Tacitus C. Arbuckle, Jr., Director
Maintenance/Operations & Transportation

TCA: db

cc: Robert Hagler, Superintendent



1255 POWELL STREET EMERYVILLE, CA 94608 • (415) 428-2300

LOG NO: E87-05-073

Received: 05 MAY 87
Reported: 15 MAY 87


Mr. T.C. Arbuckle
Castro Valley Unified School Dist.
21000 Wilbeam
Castro Valley, California 94546

Purchase Order: 87-42566

REPORT OF ANALYTICAL RESULTS

Page 1

LOG NO	SAMPLE DESCRIPTION, SOIL SAMPLES	DATE SAMPLED	
05-073-1	#1 East End	05 MAY 87	
05-073-2	#2 South Central	05 MAY 87	
PARAMETER		05-073-1	05-073-2
Total Fuel Hydrocarbons, mg/kg		<10	<10


D. A. McLean, Laboratory Director



April 22, 1987

Mr. T.C. Arbuckle
Castro Valley Unified
School District
P.O. Box 2146
Castro Valley, Calif. 94546

Dear Mr. Arbuckle:

As you are aware we performed precision tests on your 2000 gallon, (nominal Capacity), diesel and gasoline tanks on December 10, 1986.

The diesel tank failed so we uncovered the tank and lines to see if there was a problem in the slope of the tank or the integrity of the lines. We applied an air pressure test on the lines isolated from the tank, and on the tank only. The lines and the tank showed no loss of air pressure during a period of one hour.

Our visual inspection showed the tank and lines to be in good condition, but the tank is of unusual construction. The ends are concave instead of flat, and the wall thickness appears to be greater than a normal 2000 gallon steel tank. Also there are very heavy duty lifting lugs, and what appear to be tie down bolts on the top. The outer surface has what seems to be a rubberized coating in very good condition.

When we perform a second precision test on the diesel tank it again failed to meet the passing criteria. We suspect that there is a baffle which interferes with proper circulation during the test procedure, and possibly leads to erroneous test results.

Based on the calculations of the test we cannot certify a tight system. But based on our other observations we cannot justify recommending the expenditure necessary to replace this tank.

We, of course, are not the lawful authority empowered to make such decisions. It is our recommendation, however, that you present this information to the Alameda County Environmental Health Department. They are the local agency administering the Underground Tank Regulations, and can probably advise you on what your next step should be.

Until a final determination is made, we have thought it best not to restore a concrete surface over your diesel tank. If you wish us to do that please call me, and we will dispatch a crew right away.

Very truly yours,
Richard Fahey
Richard Fahey

Attachments: TEST RESULTS

3930 Pacheco Boulevard • Martinez, California 94553

(415) 228-2222
Martinez

(415) 634-3013
Brentwood

(707) 553-9127
Vallejo

(415) 449-4363
Livermore

(415) 490-7704
Fremont



MONITORING UNDERGROUND STORAGE TANKS

CONTAINING MOTOR VEHICLE FUEL

The Heath Petro Tite Tank Tester is a precision test, meeting NFPA criteria of accuracy for a tight tank of five on hundredths of a gallon (.05) per hour.

This is not a permissible leak, but is rather a minimum allowance for variations in tank capacity, coefficients of expansion, and instrument precision.

It is important to remember that test results are effective at the time of the test. It is equally important to continue an efficient inventory control system so that any changes in the system can be recognize in a timely fashion.

Maintenance of leak detectors, if a pressure systems is used; or daily observation for indications of possible leaks, if a suction system is used, are also important responsibilities of underground tank owners and operators.

TANK OWNERS MUST SEND TEST RESULTS TO HEALTH DEPARTMENT OR
FIRE DEPARTMENT WITHIN 30 DAYS OF TEST.

3930 Pacheco Boulevard • Martinez, California 94553
(415) 228-2222 (415) 634-3013 (707) 553-9127 (415) 449-4363 (415) 490-7704
Martinez Brentwood Vallejo Livermore Fremont

14. Castro Valley Union School District 21000 Hillman Castro Valley California 12-10
 Name of Supplier, Owner or Tester Address No. and Street(s) City State Date of Test

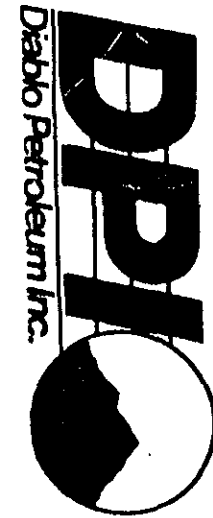
15. TANK TO TEST
 16. CAPACITY
 Nominal Capacity 2021 Gallons
 By most accurate capacity chart available 2016 Gallons
 Is there doubt as to True Capacity? See Section "DETERMINING TANK CAPACITY"
 From:
 Station Chart
 Tank Manufacturer's Chart
 Company Engineering Data
 Charts supplied with **Petro-Tite**
 Other 9/29/86 P.T.C.I.

17. FILL-UP FOR TEST
 Stick Water Bottom before Fill-up 0 to 1/8 in. Gallons Inventory 2016
 Product in full tank (up to fill pipe) 2021
 FM up STICK BEFORE AND AFTER EACH COMPARTMENT DROP OR EACH METELED DELIVERY QUANTITY
 Tank Diameter 76"

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
 See manual sections applicable. Check below and record procedure in log (26).
 Water in tank NO
 High water table in tank excavation NO
 Line(s) being tested with LVLTLT NO
 VAPOR RECOVERY SYSTEM
 Stage # NO
 Stage # 10

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY
 Bottom of tank to grade* 152 1/2"
 Add 30" for 4" L 30"
 Add 24" for 3" L or air seal 24"
 Total tubing to ensemble Approximate 187 1/2"
 20. EXTENSION HOSE SETTING
 Tank top to grade* 82 1/2"
 Extend hose on suction tube 6" or more below tank top N/A
 * If fill pipe extends above grade, use top of fill.
 21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK S/N # 1249
 Is Today Warmer? () Colder? () F Product in Tank F FM-up Product on Truck F Expected Change (+ or -)
 22. Thermal-Sensor reading after circulation 140.45 65/66 F
 23. Digits per °F in range of expected change 326
 24. 2021 x 0.0000221 = 1.22717141
 total quantity in full tank (18 or 17) coefficient of expansion for involved product volume change in this tank per °F
 25. 1.22717141 + 326 = 0.003764329
 volume change per °F (24) Digits per °F in test Range (23) Volume change per digit Compute to 4 decimal places. This is test factor (a)

26. LOG OF TEST PROCEDURES		28. Recording		30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO 0.01 GAL.		34. TEMPERATURE COMPENSATION USE FACTOR (a)			35. Thermal Sensor Reading	36. Change Higher + Lower - (b)	37. Compensation (+) = Expansion + Contraction - (c) = (a) - (b) - (c)	38. NET VOLUME CHANGE EACH READING	39. ACCUMULATED CHANGE
DATE	TIME (14 hr)	27. Record details of setting up and running test (Use full length of line if needed.)	28. Reading No.	30. Secondary Level in Tachas	31. Product in Gradostat	31. Product Replaced (-) Product Recovered (+)	34. Thermal Sensor Reading	36. Change Higher + Lower - (b)	37. Compensation (+) = Expansion + Contraction - (c) = (a) - (b) - (c)	35. Thermal Sensor Reading	36. Change Higher + Lower - (b)	37. Compensation (+) = Expansion + Contraction - (c) = (a) - (b) - (c)	38. NET VOLUME CHANGE EACH READING	39. ACCUMULATED CHANGE	
0935		ARRIVE SITE - FIND CUC OUTLET - require keys to tank lock. File - take tank dimensions - 56x26x18 1/2 - assemble equipment - 1035 Begin Primary System - 1040 Begin Circulation (10 min) 1050 Begin API sample test READ API SAMPLE													
1030		First sensor reading	1	42											
1105		Begin High Level Test	2	41.4	42	.755 .720	-.035	064	+19	+072			-107		
1120		Continue High Level Test	3	42.7	42	.720 .735	+.015	088	+24	+091			-076		
1135		"	4	42.4	42	.735 .760	+.025	101	+13	+049			-024		
1150		"	5	42.2	42	.760 .775	+.015	117	+16	+061			-046		
1205		"	6	42.4	42	.775 .800	+.025	129	+12	+046			-021		
1220		"	7	42.4	42	.800 .825	+.025	144	+15	+057			-032		
1222		REPLACE LIQUID TO 12" MARK						145							
1235		Begin Low Level Test	8		12										
1250		Continue Low Level Test	9	13.2	12	.315 .365	+.050	169	+14	+053			-003	-003	
1305		"	10	13.2	12	.365 .425	+.060	183	+14	+053			+007	+004	
1320		"	11	13.2	12	.425 .480	+.055	196	+13	+049			+006	+010	
1335		"	12	13.1	12	.480 .535	+.055	209	+13	+049			+006	+016	
1405		Cleaned up													



OK

1.016 GPH
 5400 BTU / HR
 1/19/11

14. Cassia Valley Charter School District 21000 Hubbards Cassia Valley Idaho 12-10-86
 Name of Supplier, Owner, or Dealer Address, No. and Street(s) City State Date of Test

15. TANK TO TEST
 Identify by position _____
DIESEL
 Size and Grade _____

16. CAPACITY
 Nominal Capacity 2000 Gallons
 By most accurate capacity chart available 2016 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**
 Other gauge stick

17. FILL-UP FOR TEST
 Stick Water Bottom before Fill-Up 0 to W. In. 0 Gallons
 Inventory _____ Gallons 2016
 Fill up stick before and after each compartment drop or each metered delivery quantity
120 Gallons 2-0-5
1000 Gallons 5
 Tank Diameter 69 Product in full tank (up to fill pipe) 2021

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
N/D N/D N/D
 Stage I N/D
 Stage II N/D
 VAPOR RECOVERY SYSTEM

18. TANK MEASUREMENTS FOR TSTT ASSEMBLY
 Bottom of tank to Grade 151"
 Add 30" for 4" L 30"
 Add 24" for 3" L or air seal _____"
 Total tubing to assemble Approximate 181"
 20. EXTENSION HOSE SETTING
 Tank top to grade 82 1/2"
 Extend hose on suction tube 6" or more _____"
 Below tank top N/A"
 *If fill pipe extends above grade, use top of fill.

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK S/N #1207
 Is Today Warmer? () Colder? () F Product in Tank _____ F Fill up Product on Truck _____ F Expected Change (+ or -) _____
 22. Thermal-Sensor reading after circulation 134.81 63.64 F
 23. Digits per F in range of expected change 324 digits
 24. 2021 x .0004725 = .90889225 gallons
 total quantity in full tank (16 or 17) coefficient of expansion for involved product volume change in this tank per F
 25. .90889225 + 324 = .00278979 FACTOR
 volume change per F (24) Digits per F in test Range (23) Volume change per digit. Compute to 4 decimal places. This is test factor (a)



26. LOG OF TEST PROCEDURES		28. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) SECOND TO .001 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGES EACH READING		39. ACCUMULATED CHANGE
27. DATE	28. Record details of setting up and running test. (Use full length of line if needed)	28. Reading No.	Standpipe Level in Inches	32. Product in Products		35. Thermal Sensor Reading	36. Change Higher + Lower - (F)	37. Compensation (1) = (+) = Expansion - Contraction (-)	Temperature Adjustment	Volume Above Expansion (+) or Contraction (-) @ 33°F - #37(1)	At High Level record Total End Difference	At Low Level compute Change per Hour (10% error)
12-10-86	ARRIVE SITE - Take Tank measurements (clean) 1200 Draw API Sample		Assemble 87 in pipe - 125 Read API Sample	Before Reading	After Reading	Product Recovered (+)						
1200	FIRST SENSOR READING	1	42						481			
1215	BEGIN HIGH LEVEL TEST	2	41.8	42	.940	.925	-.015		504	+23	+0.064	-.079
1230	CONTINUE HIGH LEVEL TEST	3	42.0	42	.925	.925	-.000		526	+22	+0.062	-.062
1245	"	4	41.9	42	.925	.920	-.005		549	+23	+0.064	-.069
1300	"	5	41.8	42	.920	.905	-.015		569	+20	+0.056	-.071
1315	"	6	41.9	42	.905	.900	-.005		585	+16	+0.045	-.050
1330	"	7	42	42	.900	.895	-.005		602	+17	+0.048	-.052
1352	LOWER LEVEL TO 12											
1345	BEGIN LOW LEVEL TEST	8	12	12					623			
1400	CONT " " "	9	12.4	12	.925	.935	+0.010		642	+19	+0.053	-.043
1415	" " "	10	12.2	12	.935	.940	+0.005		657	+15	+0.042	-.037
1430	" " "	11	12.0	12	.940	.940	+0.000		673	+16	+0.045	-.045
1445	" " "	12	12.2	12	.940	.945	+0.005		691	+18	+0.050	-.045
1515	CLEANED UP & LEFT SITE											

170 GPH

NG

4 HRS 15 MIN



14. Castro Valley Unified School District 21000 Hillman Castro Valley Calif. 4.2.87
 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 EAST OF HALLMUSE
 Identity by position
 DIESEL
 Brand and Grade

16. CAPACITY
 Nominal Capacity 2000 Gallons
 By most accurate capacity chart available 2016 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
 Other 94895, 5226

17. FILL-UP FOR TEST

Stick Water Bottom before Fill-up 1000 to W. In. Gallons
 Inventory 2016
 Total Gallons ea. Reading 2016

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

Tank Diameter 68" Product in full tank (up to fill pipe) 2021

18. SPECIAL CONDITIONS AND PROCEDURES TO TEST THIS TANK
 See manual sections applicable. Check below and record procedure in log (26).

Water in tank Trace High water table in tank excavation 48 1/2" Line(s) being tested with LVLLT A-2

VAPOR RECOVERY SYSTEM
 Stage I
 Stage II

19. TANK MEASUREMENTS FOR TSTT ASSEMBLY

Bottom of tank to grade* 153"
 Add 30" for 4" L 30"
 Add 24" for 3" L or air seal 24"
 Total tubing to assemble Approximate 183"

20. EXTENSION HOSE SETTING

Tank top to grade* 85"
 Extend hose on suction tube 8" or more below tank top N/A"

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

21. TEMPERATURE/VOLUME FACTOR (a) TO TEST THIS TANK S/N # 1249
 Is Today Warmer? | Colder? | | °F Product in Tank °F Fill up Product on Truck °F Expected Change (+ or -)

22. Thermal-Sensor reading after circulation 182.85 °F
 Digits 02/63

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

24. 2021 total quantity in full tank (16 or 17) X .0004950 coefficient of expansion for involved product = 9084395 volume change in this tank per °F

25. 9084395 volume change per °F (24) + 324 Digits per °F in test Range (23) = -002803825 FACTOR (a) This is test factor (a)



27. DATE (M/D/Y)	28. Record details of setting up and running test (Use full length of line if needed.)	29. Reading No.	30. HYDROSTATIC PRESSURE CONTROL		31. VOLUME MEASUREMENTS (V) RECORD TO .01 GAL.			34. TEMPERATURE COMPENSATION USE FACTOR (a)			38. NET VOLUME CHANGES EACH READING	39. ACCUMULATED CHANGE
			Beginning of Reading	Level to which Restored	Product in Grade (°)	Product Restored (-)	Product Recovered (+)	Thermal Sensor Reading	Change Higher + Lower - (c)	Computation (a) * (c) = Expansion (+) or Contraction (-) #33(V) - #37(I)		
4/2/87	ARRIVE SITE - SINK SITE WORK - ASSEMBLE EQUIPMENT											
4/2/87	Begin Pumping System - 1125	1	41.2	42								
4/2/87	Continue High Level Test	2	40.8	42	.695	.665	-.030	290	+5	+0.14	-.044	
4/2/87	Continue High Level Test	3	40.8	42	.775	.680	-.045	305	+15	+0.42	-.087	
4/2/87		4	40.1	42	.80	.615	-.065	324	+19	+0.53	-.118	
4/2/87		5	40.8	42	.620	.570	-.050	344	+20	+0.56	-.106	
4/2/87		6	40.6	42	.570	.555	-.055	348	+4	+0.11	-.066	
4/2/87		7	40.6	42	.515	.460	-.055	361	+13	+0.36	-.091	
4/2/87	Change High Level to 2' mark											
4/2/87	Begin Low Level Test	8		12				368				
4/2/87	Continue Low Level Test	9	11.7	12	.485	.475	-.010	378	+10	+0.28	-.038	-.028
4/2/87		10	11.4	12	.475	.455	-.010	390	+12	+0.34	-.054	-.072
4/2/87		11	11.3	12	.455	.430	-.025	405	+15	+0.42	-.067	-.159
4/2/87		12	11.3	12	.430	.410	-.020	424	+19	+0.53	-.073	-.232
<p>When you see suction to 12' 10" check tank & volume of back of 7' 4"</p> <p>* 25000/DIPIT/CHANGES TO 15378 TO 63/64 320 = 5.0 MG</p> <p>252 GPH 54 SPHM 145 PPM 110" 719 PPM</p> <p>N.G.</p>												

1 SHAS