

WESTERN AMERICA TANK TESTING, INC.  
3131 Fairhaven Drive  
Bakersfield, CA 93308  
(805) 322-9827

April 6, 1989

*H.S. File*

Mr. Tony Yap  
UNOCAL Corp.  
2175 N. California Blvd., Suite 650  
Walnut Creek, CA 94596

RE: Tank Testing Reports

Dear Mr. Yap:

Enclosed herewith please find the original plus one copy of the Certificate of Underground Storage Tank Integrity, Short Report Form, and General Report Form for the tanks which were tested at the following stations:

4/3/89	Station #4186	Livermore, CA
4/3/89	Station #5901	Dublin, CA
4/4/89	Station #0429	El Cerrito, CA

We have mailed for you copies of the reports to the appropriate regulatory agencies.

We again appreciate the opportunity to work with you. If you have any questions, please feel free to contact me.

Sincerely,

*Frank H. Miller*

Frank H. Miller  
General Manager

FHM:caf  
Enclosures

WESTERN AMERICA TANK TESTING, INC.

\*\*\*\* CERTIFICATE OF UNDERGROUND STORAGE TANK INTEGRITY \*\*\*\*

PRECISION VOLUMETRIC QUANTITATIVE VOLUMETRIC LEAK TEST  
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HS-FILE  
/

WESTERN AMERICA TANK TESTING, INC. has tested the following underground storage tank systems, and certifies them tight at the product height equal to the grade level.

List of Tank Systems Tested:

<u>TANK CONTENTS</u>	<u>TANK CAPACITY</u>	<u>TANK NUMBER</u>	<u>STATION NUMBER</u>
Sup. Unleaded	10,000 gal.	Sup. Unleaded	4186
Unleaded	10,000 gal.	Unleaded	4186

TANK LOCATION: UNOCAL CORP.  
1771 First St.  
Livermore, CA 94550

WESTERN AMERICA TANK TESTING, INC. is authorized to test and certify these tanks using the VPLT Tank Testing System by the manufacturer, NDE Technology, Inc.

This certification meets or exceeds certification standards set by the State of California, Federal and the Local jurisdictional agency: the County of Alameda.

WESTERN AMERICA TANK TESTING, INC. CERTIFICATION meets the  
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requirements of California Administrative Code Title 23 Water  
-----  
Resources Control Board, Subchapter 16 Underground Storage  
-----  
Regulations, Part 2643. The leak test certifies the leak  
-----  
resolution of instrumentation or allowable change is no more than  
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0.05 gallons per hour as cited in Part 2643(b) on Page 4.14.  
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Date : 04/03/1989  
Certification No. : 890339  
Certified Tester : Stephen Frasch  
Recertification Date recommended: 04/03/1990

NDE'S VPLT COMPUTERIZED TANK TESTING SYSTEM Patent Pending  
PRECISION UNDERGROUND TANK TESTING RESULTS AND CERTIFICATION  
PAGE 1, SHORT REPORT FORM - Copyright 1985  
NDE TECHNOLOGY, INC. PROPRIETARY

TEST DATE: 04/3/1989

1. Owner of storage tanks UNOCAL CORP.  
Company Representative Tony Yap  
Title
2. Mailing address of owner 2175 N. California Blvd., Suite 650  
Walnut Creek, CA 94596
3. Phone of owner (415) 945-7676
4. STATION NUMBER 4186  
Location and address of 1771 First St.  
the tanks Livermore, CA 94550  
Phone number (415) 455-0121  
Regulatory Agency County of Alameda
5. TANK DESIGNATION OR ID # Sup. Unleaded
6. Date each tank was tested 04/3/1989
7. The name of the test method VPLT COMPUTERIZED TANK TESTING SYSTEM
8. Business name of tank testing company WESTERN AMERICA TANK TESTING, INC.
9. Mailing address of tank testing company 3131 FAIRHAVEN DRIVE  
BAKERSFIELD, CA 93308
10. Person conducting test and completing report Stephen Frasch (TECHNICIAN)
  
11. Station Operator or manager N/A
12. Phone number (415) 455-0121
13. Owner name and title UNOCAL CORP.
14. Capacity of the tank 10,000 gallons
15. Present or past contents Sup. Unleaded
16. Tank construction material Steel
17. Testing fluid Sup. Unleaded
18. (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT HEIGHT EQUAL TO THE GRADE LEVEL. Yes.  
(b) Allowable leak resolution of instrumentation or allowable change per California Administrative Code Title 23 Waters, Chapter 3 Water Resources Control Board Subchapter 16 Underground Storage Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour.  
\*\*\* (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR NUMERICAL LEAK RATE IS: -0.036 Gal/Hr.

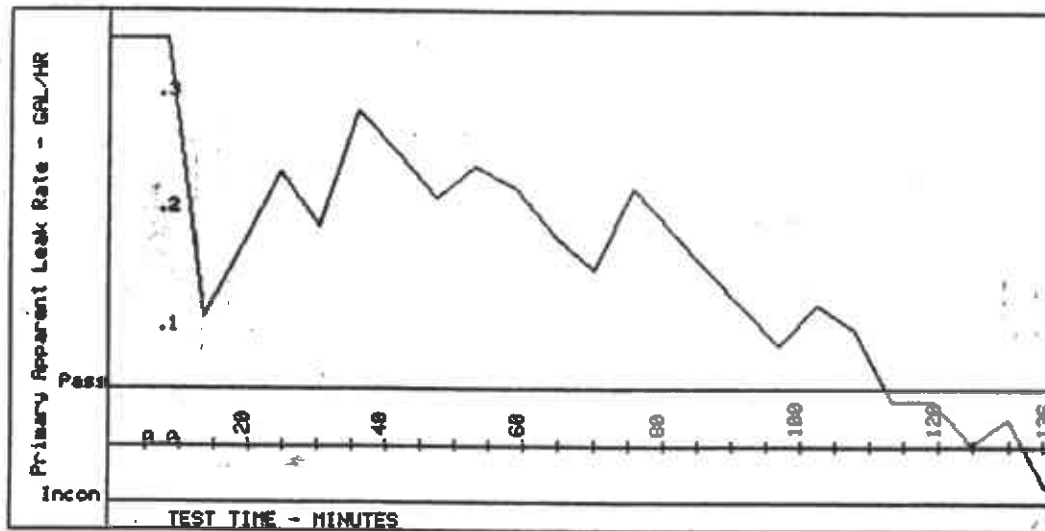
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This measurement is within the legal limits as defined in (b).

COMPUTERIZED PRINTOUT OF DIGITAL LEAKAGE RATE DATA

Tank Owner .....	= UNOCAL
Tank Number .....	= S/UNL.
Measurement # .....	32
Date of Test .....	04/03/1989
Time of measurement .....	= 13:05:53
Tank Temperature .....	62.5474 degrees F.
Tank Pressure .....	.4208 psi.
Basic Tank Volume .....	10000.643 Gallons.
Temperature Correction .....	14.428 Gallons.
Pressure Correction .....	.022 Gallons.
Corrected Volume .....	10015.093 Gallons.
Stratified Corrected Volume .....	10015.018 Gallons.
Total Fluid Level .....	137.53016 inches.
Fluid Pressure on Tank Bottom .....	3.8008 psi
Total Temperature Change .....	.11475 degrees F.
Total Level Change .....	2.53016 inches.
Leak Rate Calculation Time .....	= 01:05:20
Geometry Band .....	.0051 Gallons/Hour.
Rate of Temperature Change .....	.04531 degrees F./Hour.
Volume Change .....	.282 Gallons.
Expected Level Change .....	1.46231 inches.
Measured Level Change .....	1.66442 inches.
Primary Apparent Leak .....	-.0390 Gallons.
Primary Apparent Leak Rate .....	-.036 Gallons/Hour.
Strat Volume Change .....	.3296 Gallons.
Strat Expected Level Change .....	1.70902 inches.
Strat Apparent Leak .....	.0086 Gallons.
Strat Apparent Leak Rate .....	.008 Gallons/Hour.
Avg Measured Level Change .....	1.35670 inches.
Avg Volume Change .....	.2805 Gallons.
Avg Expected Level Change .....	1.45453 inches.
Avg Apparent Leak .....	.0189 Gallons.
Avg Apparent Leak Rate .....	.017 Gallons/Hour.
Avg Strat Volume Change .....	.3093 Gallons.
Avg Strat Expected Level Change .....	1.60376 inches.
Avg Strat Apparent Leak .....	.0476 Gallons.
Avg Strat Apparent Leak Rate .....	.043 Gallons/Hour.

Total Elapsed Test Time ..... = 02:15:29

COMPUTERIZED PLOTS OF LEAKAGE RATE DATA



NDE'S VPLT COMPUTERIZED TANK TESTING SYSTEM Patent Pending  
 PRECISION UNDERGROUND TANK TESTING RESULTS AND CERTIFICATION  
 PAGE 1, GENERAL REPORT FORM - Copyright 1985  
 NDE TECHNOLOGY, INC. PROPRIETARY

TEST DATE: 04/3/1989

- |     |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                      |              |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| 1.  | Owner of storage tanks<br>Company Representative<br>Title                                                                                                                                                                                                                                                                                                                                | UNOCAL CORP.<br>Tony Yap                                                             |              |
| 2.  | Mailing address of owner                                                                                                                                                                                                                                                                                                                                                                 | 2175 N. California Blvd., Suite 650<br>Walnut Creek, CA 94596                        |              |
| 3.  | Phone of owner                                                                                                                                                                                                                                                                                                                                                                           | (415) 945-7676                                                                       |              |
| 4.  | STATION NUMBER<br>Location and address of<br>the tanks<br>Phone number<br>Regulatory Agency                                                                                                                                                                                                                                                                                              | 4186<br>1771 First St.<br>Livermore, CA 94550<br>(415) 455-0121<br>County of Alameda |              |
| 5.  | TANK DESIGNATION OR ID #                                                                                                                                                                                                                                                                                                                                                                 | Sup. Unleaded                                                                        |              |
| 6.  | Date each tank was tested                                                                                                                                                                                                                                                                                                                                                                | 04/3/1989                                                                            |              |
| 7.  | The name of the test method                                                                                                                                                                                                                                                                                                                                                              | VPLT COMPUTERIZED TANK TESTING SYSTEM                                                |              |
| 8.  | Business name of tank<br>testing company                                                                                                                                                                                                                                                                                                                                                 | WESTERN AMERICA TANK TESTING, INC.                                                   |              |
| 9.  | Mailing address of tank<br>testing company                                                                                                                                                                                                                                                                                                                                               | 3131 FAIRHAVEN DRIVE<br>BAKERSFIELD, CA 93308                                        |              |
| 10. | Person conducting test<br>and completing report                                                                                                                                                                                                                                                                                                                                          | Stephen Frasch                                                                       | (TECHNICIAN) |
| 11. | Station Operator or<br>manager                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                  |              |
| 12. | Phone number                                                                                                                                                                                                                                                                                                                                                                             | (415) 455-0121                                                                       |              |
| 13. | Owner name and<br>title                                                                                                                                                                                                                                                                                                                                                                  | UNOCAL CORP.                                                                         |              |
| 14. | Capacity of the tank                                                                                                                                                                                                                                                                                                                                                                     | 10,000                                                                               | gallons      |
| 15. | Present or past contents                                                                                                                                                                                                                                                                                                                                                                 | Sup. Unleaded                                                                        |              |
| 16. | Tank construction material                                                                                                                                                                                                                                                                                                                                                               | Steel                                                                                |              |
| 17. | Testing fluid                                                                                                                                                                                                                                                                                                                                                                            | Sup. Unleaded                                                                        |              |
| 18. | (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT<br>HEIGHT EQUAL TO THE GRADE LEVEL. Yes.<br>(b) Allowable leak resolution of instrumentation or allowable change<br>per California Administrative Code Title 23 Waters, Chapter 3<br>Water Resources Control Board Subchapter 16 Underground Storage<br>Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour. |                                                                                      |              |
| *** | (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR<br>NUMERICAL LEAK RATE IS: -0.036 Gal/Hr.                                                                                                                                                                                                                                                                                    |                                                                                      |              |

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 This measurement is within the legal limits as defined in (b).

1. Capacity of the tank 10,000 Gallons
2. Present or past contents Sup. Unleaded
3. Tank construction material Steel
4. Tank end deflection 0"
5. Internal diameter of tank 95"
6. Fill pipe internal diameter 4"
7. Fill pipe length 30"
8. Air vents 1
9. Type of fill pipe cap Cam
10. Type of pumps associated with the appurtenant piping Turbine
11. Coefficient of thermal expansion .0005663 volumetric coefficient of expansion/deg
12. Specific gravity .781
13. Bulk modulus 188,000
14. Type of phase II vapor recovery system OPW
15. Depth of groundwater from grade level BELOW BOTTOM OF TANK
16. Date and Time storage tank system was filled for testing 04/03/89  
Time Unknown
17. Testing fluid Sup. Unleaded
18. NOTES: Used 1 bottom shield protector.

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Individual steps taken as part of the test but not limited to:

1. Topping of the tanks 04/04/89  
Time Unknown
2. Tank inclination 0  
0, 90, 180, 270 degrees  
Temperature calibration (see reduced data plots & raw data part III)  
Pressure calibration (see reduced data plots & raw data part III)  
Level readings (see reduced data plots & raw data part III)
3. Log entries: None
4. Other measurement or readings not included in the computer printout:  
None
5. Any special procedures other than NDE Computerized VPLT Tank Testing Procedures:  
None
6. Description of any repairs made to the storage tank prior to or during the test:  
None
7. Were tanks subject to sludge deposits during normal use properly cleaned prior to testing:  
Yes, to the best of our knowledge.

1. (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT HEIGHT EQUAL TO THE GRADE LEVEL. Yes.  
(b) Allowable leak resolution of instrumentation or allowable change per California Administrative Code Title 23 Waters, Chapter 3 Water Resources Control Board Subchapter 16 Underground Storage Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour.  
\*\*\* (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR NUMERICAL LEAK RATE IS: -0.036 Gal/Hr.

-----  
This measurement is within the legal limits as defined in (b).  
(See also computer plots or reduced data of leakage rate, Part III)

Product level of the storage system at the time of testing:	
2. Total product level	135"
3. Fill pipe height from bottom of tank	125"
4. Test pipe height from bottom of tank	155"
5. Grade level from bottom of tank	125"
6. Tank top height from bottom of tank excluding piping, or tank diameter	95"
7. Test conduction - total time	
Time leak rate calculated	2:15 Hours
8. Start	10:50
9. End	13:05

(See also computer plots or reduced data of leakage rate, Part III)

(Calculated leak rate shall be based on data generated during the second hour of testing)

Distance from grade level and/or location at which the test was conducted (tank top level, distance below grade level, distance above grade, etc.)

10. Distance from grade level to location test conducted: +10"  
11. Fluid level where the test was conducted. Test Stand  
12. Does the tank show the presence of vapor pockets?  
No

If yes, was the owner informed of steps that must be taken to release all vapor pockets in order to complete testing?

Owners of storage tanks are under a legal obligation to report any leaking tanks to the agency having jurisdiction of the tank test.



1. Piping Pressure Test - N/A
2. Pneumatic Pressure Data  
Amount of pressure applied  
to system: N/A
3. Amount of pressure drop if any: N/A
4. Amount of time elapsed during the test N/A
5. Piping Pressure Test Leak Rate is N/A

If computer is used see computer printout of leakage rate and all test parameters on Test Results, Part IV, Page 11, 12  
Test results of storage systems that utilize pressurized piping systems will not be recognized unless the turbine pump is activated after the completion of a successful system test

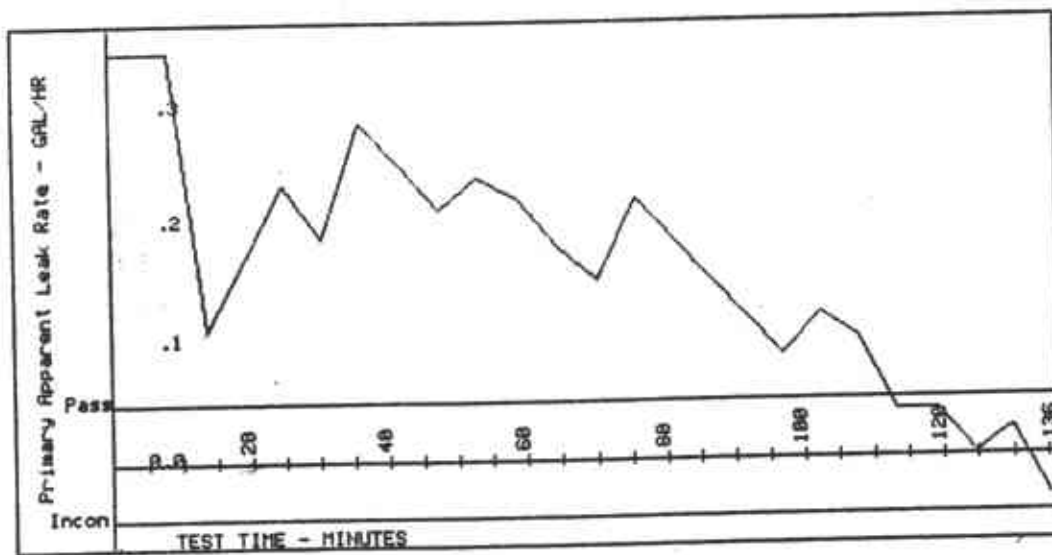
6. Was turbine pump activated? N/A
7. Pressure piping systems shall be tested under actual operating pressures, and statement describing results must be included.  

See #1 Above
8. If applicable, has the isolation procedure in addition to the product line been completed? N/A

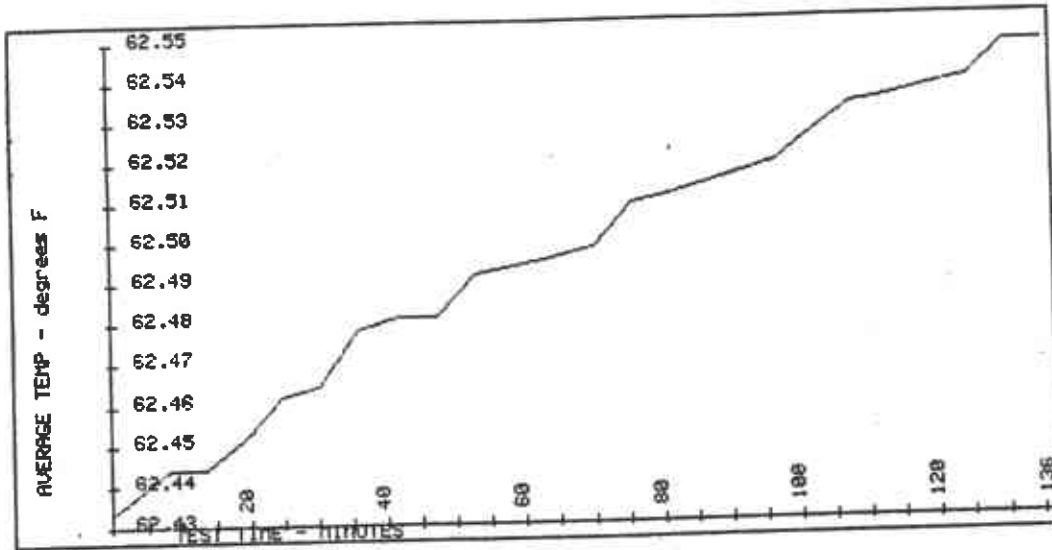
NDE TECHNOLOGY, INC. PROPRIETARY  
 COMPUTERIZED PRINTOUT OF DIGITAL LEAKAGE RATE DATA

Tank Owner .....	= UNOCAL
Tank Number .....	= S/UNL.
Measurement # .....	22
Date of Test .....	04/03/1989
Time of measurement .....	13:05:53
Tank Temperature .....	62.5474 degrees F.
Tank Pressure .....	.4208 psi.
Basic Tank Volume .....	10000.643 Gallons.
Temperature Correction .....	14.428 Gallons.
Pressure Correction .....	.022 Gallons.
Corrected Volume .....	10015.093 Gallons.
Stratified Corrected Volume .....	10015.016 Gallons.
Total Fluid Level .....	137.53016 inches.
Fluid Pressure on Tank Bottom .....	3.8808 psi
Total Temperature Change .....	.11475 degrees F.
Total Level Change .....	2.53016 inches.
Leak Rate Calculation Time.....	01:05:20
Geometry Band .....	.0051 Gallons/Hour.
Rate of Temperature Change .....	.04531 degrees F/Hour.
Volume Change .....	.282 Gallons.
Expected Level Change .....	1.46231 inches.
Measured Level Change .....	1.66442 inches.
Primary Apparent Leak .....	-.0398 Gallons.
Primary Apparent Leak Rate .....	-.036 Gallons/Hour.
Strat Volume Change .....	.3296 Gallons.
Strat Expected Level Change .....	1.70902 inches.
Strat Apparent Leak .....	.0086 Gallons.
Strat Apparent Leak Rate .....	.008 Gallons/Hour.
Avg Measured Level Change .....	1.35670 inches.
Avg Volume Change .....	.2805 Gallons.
Avg Expected Level Change .....	1.45453 inches.
Avg Apparent Leak .....	.0189 Gallons.
Avg Apparent Leak Rate .....	.017 Gallons/Hour.
Avg Strat Volume Change .....	.3093 Gallons.
Avg Strat Expected Level Change .....	1.50376 inches.
Avg Strat Apparent Leak .....	.0476 Gallons.
Avg Strat Apparent Leak Rate .....	.043 Gallons/Hour.
Total Elapsed Test Time .....	02:15:29

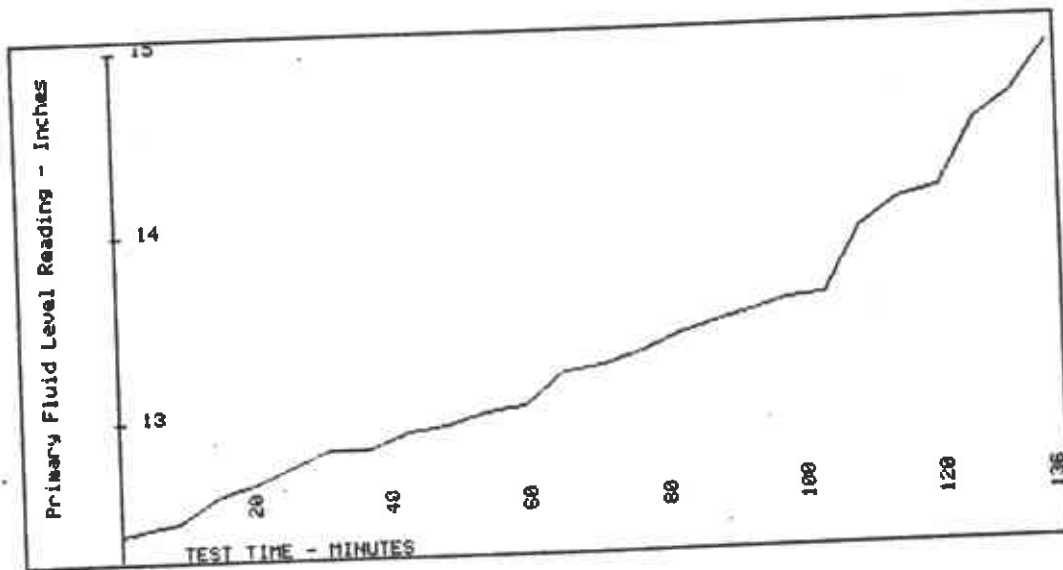
COMPUTERIZED PLOTS OF LEAKAGE RATE DATA



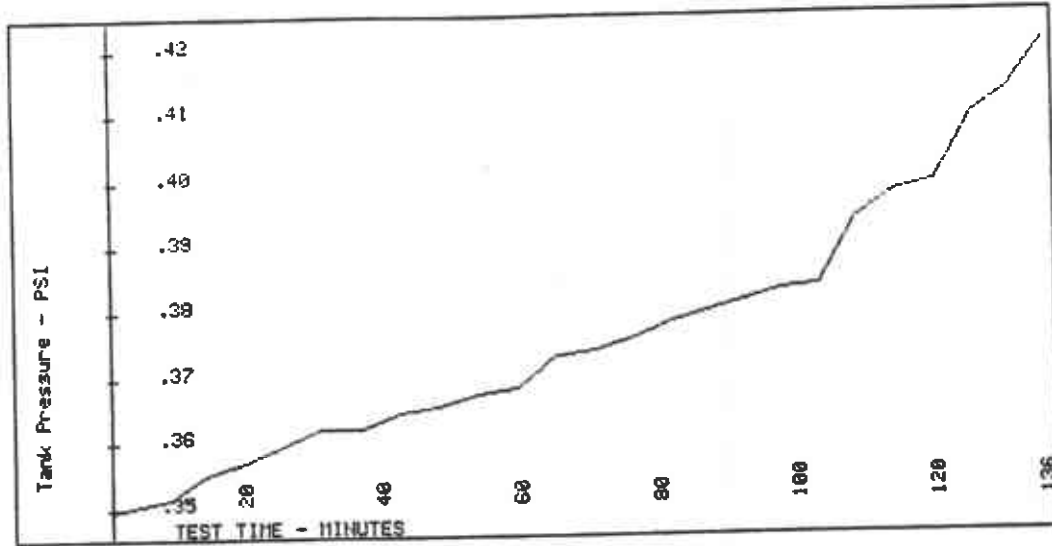
NDE TECHNOLOGY, INC. PROPRIETARY  
 COMPUTERIZED PRINTOUT OF AVERAGE TEMPERATURE



LEVEL DATA



PRESSURE DATA



NDE'S VPLT COMPUTERIZED TANK TESTING SYSTEM Patent Pending  
 PRECISION UNDERGROUND TANK TESTING RESULTS AND CERTIFICATION  
 PAGE 1, SHORT REPORT FORM - Copyright 1985  
 NDE TECHNOLOGY, INC. PROPRIETARY

TEST DATE: 04/3/1989

- |     |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                      |              |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| 1.  | Owner of storage tanks<br>Company Representative<br>Title                                                                                                                                                                                                                                                                                                                                | UNOCAL CORP.<br>Tony Yap                                                             |              |
| 2.  | Mailing address of owner                                                                                                                                                                                                                                                                                                                                                                 | 2175 N. California Blvd., Suite 650<br>Walnut Creek, CA 94596                        |              |
| 3.  | Phone of owner                                                                                                                                                                                                                                                                                                                                                                           | (415) 945-7676                                                                       |              |
| 4.  | STATION NUMBER<br>Location and address of<br>the tanks<br>Phone number<br>Regulatory Agency                                                                                                                                                                                                                                                                                              | 4186<br>1771 First St.<br>Livermore, CA 94550<br>(415) 455-0121<br>County of Alameda |              |
| 5.  | TANK DESIGNATION OR ID #                                                                                                                                                                                                                                                                                                                                                                 | Unleaded                                                                             |              |
| 6.  | Date each tank was tested                                                                                                                                                                                                                                                                                                                                                                | 04/3/1989                                                                            |              |
| 7.  | The name of the test method                                                                                                                                                                                                                                                                                                                                                              | VPLT COMPUTERIZED TANK TESTING SYSTEM                                                |              |
| 8.  | Business name of tank<br>testing company                                                                                                                                                                                                                                                                                                                                                 | WESTERN AMERICA TANK TESTING, INC.                                                   |              |
| 9.  | Mailing address of tank<br>testing company                                                                                                                                                                                                                                                                                                                                               | 3131 FAIRHAVEN DRIVE<br>BAKERSFIELD, CA 93308                                        |              |
| 10. | Person conducting test<br>and completing report                                                                                                                                                                                                                                                                                                                                          | Stephen Frasch                                                                       | (TECHNICIAN) |
| 11. | Station Operator or<br>manager                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                  |              |
| 12. | Phone number                                                                                                                                                                                                                                                                                                                                                                             | (415) 455-0121                                                                       |              |
| 13. | Owner name and<br>title                                                                                                                                                                                                                                                                                                                                                                  | UNOCAL CORP.                                                                         |              |
| 14. | Capacity of the tank                                                                                                                                                                                                                                                                                                                                                                     | 10,000                                                                               | gallons      |
| 15. | Present or past contents                                                                                                                                                                                                                                                                                                                                                                 | Unleaded                                                                             |              |
| 16. | Tank construction material                                                                                                                                                                                                                                                                                                                                                               | Steel                                                                                |              |
| 17. | Testing fluid                                                                                                                                                                                                                                                                                                                                                                            | Unleaded                                                                             |              |
| 18. | (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT<br>HEIGHT EQUAL TO THE GRADE LEVEL. Yes.<br>(b) Allowable leak resolution of instrumentation or allowable change<br>per California Administrative Code Title 23 Waters, Chapter 3<br>Water Resources Control Board Subchapter 16 Underground Storage<br>Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour. |                                                                                      |              |
| *** | (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR<br>NUMERICAL LEAK RATE IS: -0.023 Gal/Hr.                                                                                                                                                                                                                                                                                    |                                                                                      |              |

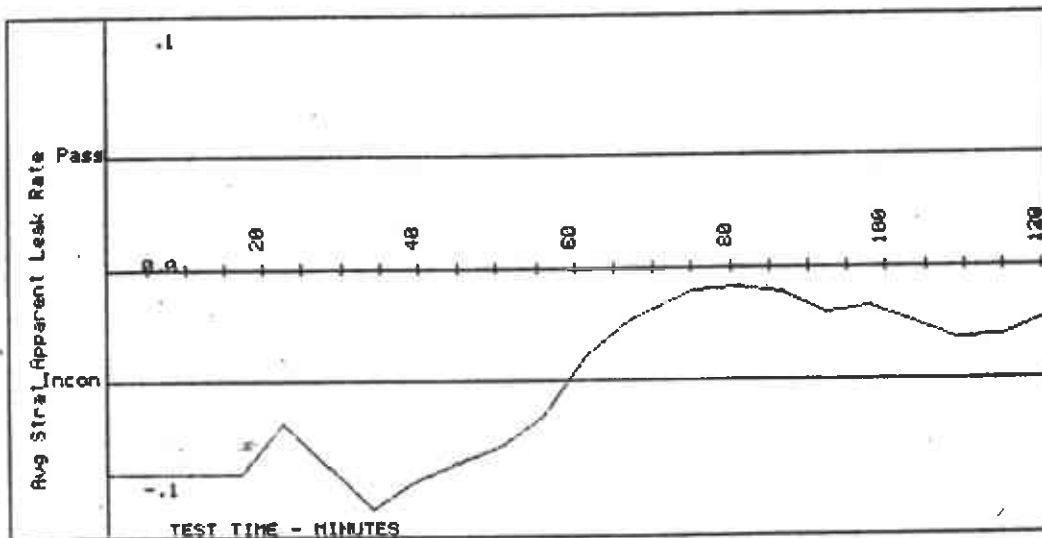
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 This measurement is within the legal limits as defined in (b).

NDE TECHNOLOGY, INC. PROPRIETARY

COMPUTERIZED PRINTOUT OF DIGITAL LEAKAGE RATE DATA

Tank Owner .....	UNLEAD
Tank Number .....	4186
Measurement # .....	20
Date of Test .....	04.03.1989
Time of measurement .....	12:15:33
Tank Temperature .....	61.3800 degrees F.
Tank Pressure .....	.2246 psi.
Basic Tank Volume .....	10000.643 Gallons.
Temperature Correction .....	6.818 Gallons.
Pressure Correction .....	.012 Gallons.
Corrected Volume .....	10009.473 Gallons.
Stratified Corrected Volume .....	10009.320 gallons.
Total Fluid Level .....	135.70195 inches.
Fluid Pressure on tank bottom .....	3.6870 psi
Total Temperature Change .....	.01840 degrees F.
Total Level Change .....	.70195 inches.
Leak Rate Calculation Time .....	01:04:40
Geometry Band .....	.0016 Gallons/Hour.
Rate of Temperature Change .....	.01293 degrees F/Hour.
Volume Change .....	.090 Gallons.
Expected Level Change .....	.46437 inches.
Measured Level Change .....	.54249 inches.
Primary Apparent Leak .....	-.0151 gallons.
Primary Apparent Leak Rate .....	-.014 Gallons/Hour.
Strat Volume Change .....	.0957 gallons.
Strat Expected Level Change .....	.49522 inches.
Strat Apparent Leak .....	-.0089 Gallons.
Strat Apparent Leak Rate .....	-.008 Gallons/Hour.
Avg Measured Level Change .....	.61051 inches.
Avg Volume Change .....	.0905 Gallons.
Avg Expected Level Change .....	.46948 inches.
Avg Apparent Leak .....	-.0272 Gallons.
Avg Apparent Leak Rate .....	-.025 Gallons/Hour.
Avg Strat Volume Change .....	.0929 Gallons.
Avg Strat Expected Level Change .....	.48102 inches.
Avg Strat Apparent Leak .....	-.0248 Gallons.
Avg Strat Apparent Leak Rate .....	-.023 Gallons/Hour.
Total Elapsed Test Time .....	02:00:36

COMPUTERIZED PLOTS OF LEAKAGE RATE DATA



NDE'S VPLT COMPUTERIZED TANK TESTING SYSTEM Patent Pending  
 PRECISION UNDERGROUND TANK TESTING RESULTS AND CERTIFICATION  
 PAGE 1, GENERAL REPORT FORM - Copyright 1985  
 NDE TECHNOLOGY, INC. PROPRIETARY

TEST DATE: 04/3/1989

- |     |                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                      |              |
|-----|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------|
| 1.  | Owner of storage tanks<br>Company Representative<br>Title                                                                                                                                                                                                                                                                                                                                | UNOCAL CORP.<br>Tony Yap                                                             |              |
| 2.  | Mailing address of owner                                                                                                                                                                                                                                                                                                                                                                 | 2175 N. California Blvd., Suite 650<br>Walnut Creek, CA 94596                        |              |
| 3.  | Phone of owner                                                                                                                                                                                                                                                                                                                                                                           | (415) 945-7676                                                                       |              |
| 4.  | STATION NUMBER<br>Location and address of<br>the tanks<br>Phone number<br>Regulatory Agency                                                                                                                                                                                                                                                                                              | 4186<br>1771 First St.<br>Livermore, CA 94550<br>(415) 455-0121<br>County of Alameda |              |
| 5.  | TANK DESIGNATION OR ID #                                                                                                                                                                                                                                                                                                                                                                 | Unleaded                                                                             |              |
| 6.  | Date each tank was tested                                                                                                                                                                                                                                                                                                                                                                | 04/3/1989                                                                            |              |
| 7.  | The name of the test method                                                                                                                                                                                                                                                                                                                                                              | VPLT COMPUTERIZED TANK TESTING SYSTEM                                                |              |
| 8.  | Business name of tank<br>testing company                                                                                                                                                                                                                                                                                                                                                 | WESTERN AMERICA TANK TESTING, INC.                                                   |              |
| 9.  | Mailing address of tank<br>testing company                                                                                                                                                                                                                                                                                                                                               | 3131 FAIRHAVEN DRIVE<br>BAKERSFIELD, CA 93308                                        |              |
| 10. | Person conducting test<br>and completing report                                                                                                                                                                                                                                                                                                                                          | Stephen Frasch                                                                       | (TECHNICIAN) |
| 11. | Station Operator or<br>manager                                                                                                                                                                                                                                                                                                                                                           | N/A                                                                                  |              |
| 12. | Phone number                                                                                                                                                                                                                                                                                                                                                                             | (415) 455-0121                                                                       |              |
| 13. | Owner name and<br>title                                                                                                                                                                                                                                                                                                                                                                  | UNOCAL CORP.                                                                         |              |
| 14. | Capacity of the tank                                                                                                                                                                                                                                                                                                                                                                     | 10,000                                                                               | gallons      |
| 15. | Present or past contents                                                                                                                                                                                                                                                                                                                                                                 | Unleaded                                                                             |              |
| 16. | Tank construction material                                                                                                                                                                                                                                                                                                                                                               | Steel                                                                                |              |
| 17. | Testing fluid                                                                                                                                                                                                                                                                                                                                                                            | Unleaded                                                                             |              |
| 18. | (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT<br>HEIGHT EQUAL TO THE GRADE LEVEL. Yes.<br>(b) Allowable leak resolution of instrumentation or allowable change<br>per California Administrative Code Title 23 Waters, Chapter 3<br>Water Resources Control Board Subchapter 16 Underground Storage<br>Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour. |                                                                                      |              |
| *** | (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR<br>NUMERICAL LEAK RATE IS: -0.023 Gal/Hr.                                                                                                                                                                                                                                                                                    |                                                                                      |              |

-----  
 This measurement is within the legal limits as defined in (b).

1. Capacity of the tank 10,000 Gallons
2. Present or past contents Unleaded
3. Tank construction material Steel
4. Tank end deflection 0"
5. Internal diameter of tank 95"
6. Fill pipe internal diameter 4"
7. Fill pipe length 30"
8. Air vents 1
9. Type of fill pipe cap Cam
10. Type of pumps associated with the appurtenant piping Turbine
11. Coefficient of thermal expansion .0006340 volumetric coefficient of expansion/deg
12. Specific gravity .752
13. Bulk modulus 188,000
14. Type of phase II vapor recovery system OPW
15. Depth of groundwater from grade level BELOW BOTTOM OF TANK
16. Date and Time storage tank system was filled for testing 04/03/89  
Time Unknown
17. Testing fluid Unleaded
18. NOTES: Used 1 bottom shield protector.



NDE TECHNOLOGY, INC. PROPRIETARY

Individual steps taken as part of the test but not limited to:

1. Topping of the tanks 04/04/89  
Time Unknown
2. Tank inclination 0  
0, 90, 180, 270 degrees  
Temperature calibration (see reduced data plots & raw data part III)  
Pressure calibration (see reduced data plots & raw data part III)  
Level readings (see reduced data plots & raw data part III)
3. Log entries: None
4. Other measurement or readings not included in the computer printout:  
None
5. Any special procedures other than NDE Computerized VPLT Tank Testing Procedures:  
None
6. Description of any repairs made to the storage tank prior to or during the test:  
None
7. Were tanks subject to sludge deposits during normal use properly cleaned prior to testing:  
Yes, to the best of our knowledge.

TANK # Unleaded

PAGE 4

STAT # 4186

TEST PROCEDURES

TEST DATE: 04/3/1989

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NDE TECHNOLOGY, INC. PROPRIETARY

1. (a) THE UNDERGROUND STORAGE TANK SYSTEM CERTIFIED TIGHT AT PRODUCT HEIGHT EQUAL TO THE GRADE LEVEL. Yes.
- (b) Allowable leak resolution of instrumentation or allowable change per California Administrative Code Title 23 Waters, Chapter 3 Water Resources Control Board Subchapter 16 Underground Storage Regulations, Part 2643 (b), Page 4.14; 0.05 gallons per hour.
- \*\*\* (c) MEASURED HOURLY CHANGE: LOSS (+) OR GAIN (-) GALLONS OR NUMERICAL LEAK RATE IS: -0.023 Gal/Hr.

-----  
This measurement is within the legal limits as defined in (b).  
(See also computer plots or reduced data of leakage rate, Part III)

Product level of the storage system at the time of testing:

2. Total product level 135"
3. Fill pipe height from bottom of tank 125"
4. Test pipe height from bottom of tank 155"
5. Grade level from bottom of tank 125"
6. Tank top height from bottom of tank excluding piping, or tank diameter 95"
7. Test conduction -  
total time  
Time leak rate calculated 2:01 Hours
8. Start 10:14
9. End 12:15

(See also computer plots or reduced data of leakage rate, Part III)

(Calculated leak rate shall be based on data generated during the second hour of testing)

Distance from grade level and/or location at which the test was conducted (tank top level, distance below grade level, distance above grade, etc.)

10. Distance from grade level to location test conducted: +10"
11. Fluid level where the test was conducted. Test Stand
12. Does the tank show the presence of vapor pockets?  
No

If yes, was the owner informed of steps that must be taken to release all vapor pockets in order to complete testing?

Owners of storage tanks are under a legal obligation to report any leaking tanks to the agency having jurisdiction of the tank test.

TANK # Unleaded

PAGE 5

STAT # 4186

TEST PROCEDURES

TEST DATE: 04/3/1989

Copyright 1985

NDE TECHNOLOGY, INC. PROPRIETARY

1. Piping Pressure Test - N/A
2. Pneumatic Pressure Data  
Amount of pressure applied  
to system: N/A
3. Amount of pressure drop if any: N/A
4. Amount of time elapsed during the test N/A
5. Piping Pressure Test Leak Rate is N/A

If computer is used see computer printout of leakage rate and all test parameters on Test Results, Part IV, Page 11, 12  
Test results of storage systems that utilize pressurized piping systems will not be recognized unless the turbine pump is activated after the completion of a successful system test

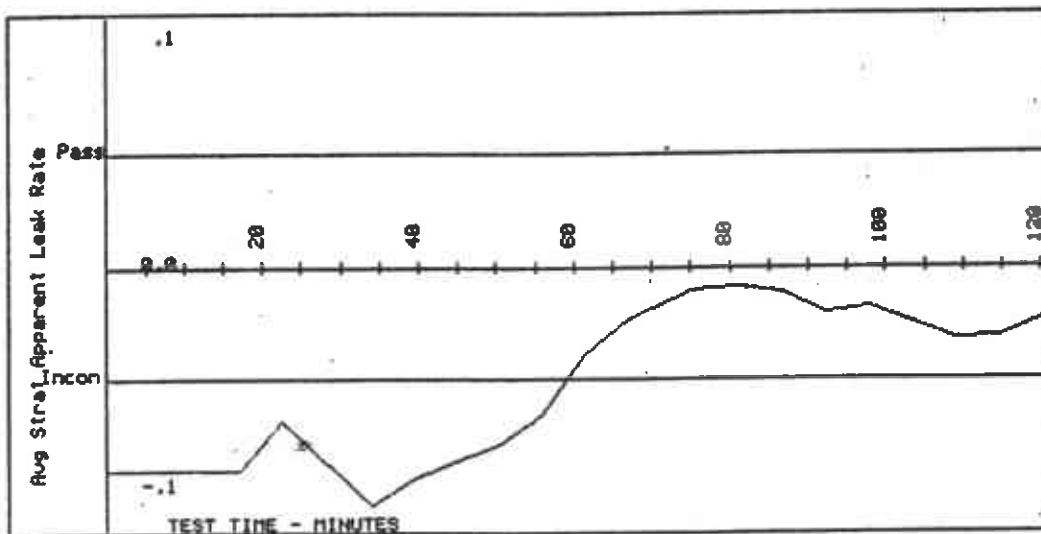
6. Was turbine pump activated? N/A
7. Pressure piping systems shall be tested under actual operating pressures, and statement describing results must be included.  

See #1 Above
8. If applicable, has the isolation procedure in addition to the product line been completed? N/A

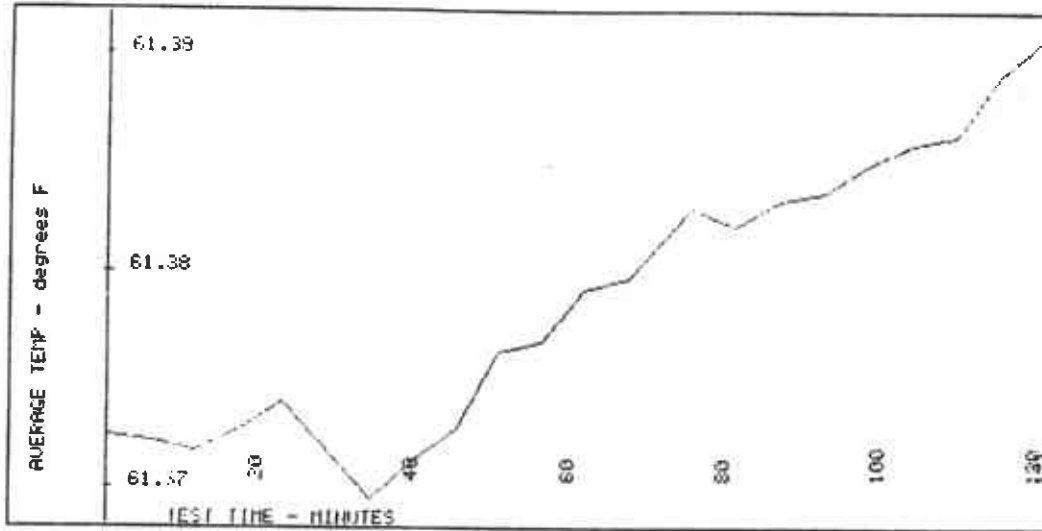
NDE TECHNOLOGY, INC. PROPRIETARY  
 COMPUTERIZED PRINTOUT OF DIGITAL LEAKAGE RATE DATA

Tank Owner .....	= UNOCAL
Tank Number .....	= UNL.
Measurement # .....	= 20
Date of Test .....	= 04/03/1989
Time of measurement .....	= 12:15:33
Tank Temperature .....	= 51.3908 degrees F.
Tank Pressure .....	= .2245 psi.
Basic Tank Volume .....	= 10000.643 Gallons.
Temperature Correction .....	= 8.810 Gallons.
Pressure Correction .....	= .012 Gallons.
Corrected Volume .....	= 10009.473 Gallons.
Stratified Corrected Volume .....	= 10009.320 Gallons.
Total Fluid Level .....	= 135.70195 inches.
Fluid Pressure on Tank Bottom .....	= 3.6870 psi
Total Temperature Change .....	= .01840 degrees F.
Total Level Change .....	= .70195 inches.
Leak Rate Calculation time .....	= 01:04:40
Geometry Band .....	= .0015 Gallons/Hour.
Rate of Temperature Change .....	= .01299 degrees F/Hour.
Volume Change .....	= .090 Gallons.
Expected Level Change .....	= .46437 inches.
Measured Level Change .....	= .54249 inches.
Primary Apparent Leak .....	= -.0151 Gallons.
Primary Apparent Leak Rate .....	= -.014 Gallons/Hour.
Strat Volume Change .....	= .0957 Gallons.
Strat Expected Level Change .....	= .49622 inches.
Strat Apparent Leak .....	= -.0089 Gallons.
Strat Apparent Leak Rate .....	= -.008 Gallons/Hour.
Avg Measured Level Change .....	= .61051 inches.
Avg Volume Change .....	= .0905 Gallons.
Avg Expected Level Change .....	= .46948 inches.
Avg Apparent Leak .....	= -.0272 Gallons.
Avg Apparent Leak Rate .....	= -.025 Gallons/Hour.
Avg Strat Volume Change .....	= .0929 Gallons.
Avg Strat Expected Level Change .....	= .48182 inches.
Avg Strat Apparent Leak .....	= -.0248 Gallons.
Avg Strat Apparent Leak Rate .....	= -.023 Gallons/Hour.
Total Elapsed Test Time .....	= 02:00:36

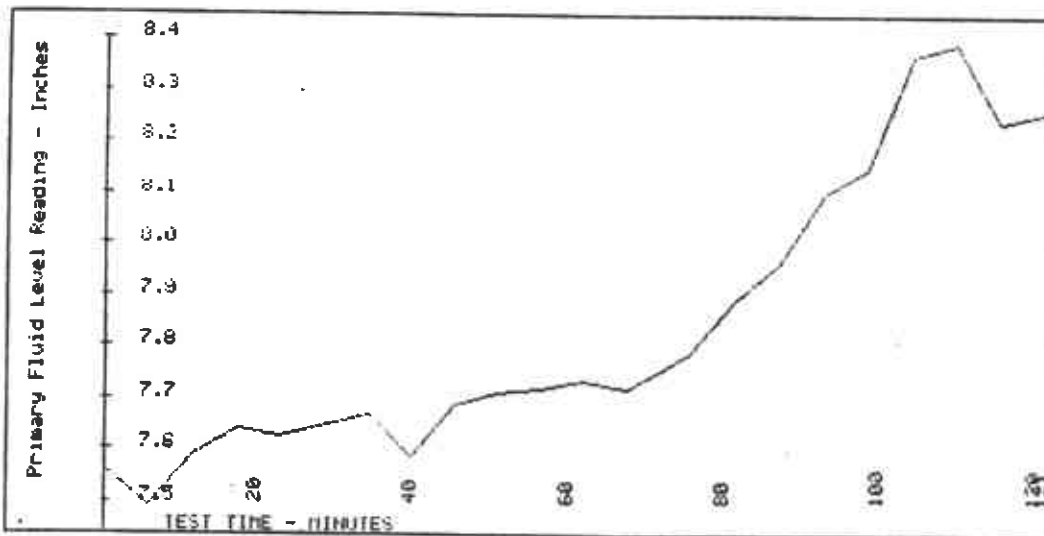
COMPUTERIZED PLOTS OF LEAKAGE RATE DATA



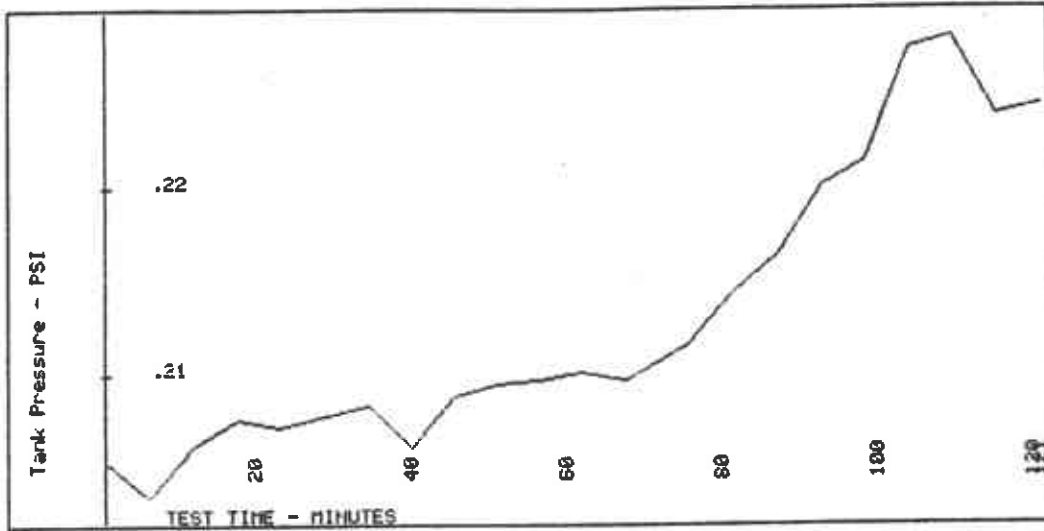
NDE TECHNOLOGY, INC. PROPRIETARY  
 COMPUTERIZED PRINTOUT OF AVERAGE TEMPERATURE



LEVEL DATA



PRESSURE DATA



# CERTIFICATE OF PRECISION LEAK TEST

Certification #

Associated Environmental Systems, Inc. has tested and certifies  
the following:

886416

DATE: 04/25/88 CERTIFIED TESTER: LWS 87112

LOCATION: Unocal #4186 1771 First Street, Livermore, CA

TANKS:	TANK	LINE	PROD/LINE
1. <u>10K U/L</u>	<u>PASS</u>	<u>PASS</u>	<u>PASS</u>
2. <u>10K S/UL</u>	<u>PASS</u>	<u>PASS</u>	<u>PASS</u>
3. <u>XXXXXX</u>	<u>XXXX</u>	<u>XXXX</u>	<u>XXXX</u>
4. <u>XXXXXX</u>	<u>XXXX</u>	<u>XXXX</u>	<u>XXXX</u>
5. <u>XXXXXX</u>	<u>XXXX</u>	<u>XXXX</u>	<u>XXXX</u>
6. <u>XXXXXX</u>	<u>XXXX</u>	<u>XXXX</u>	<u>XXXX</u>

**ANY FAILURE LISTED MAY REQUIRE  
NOTIFICATION OF AGENCY.**

Recertification Date Recommended:

04/89



**Associated Environmental Systems, Inc.**

Home Office P.O. Box 80427, Bakersfield, CA 93380 • 805 / 393-2212



Associated Environmental Systems, Inc.

P.O. Box 80427  
Bakersfield, CA 93380  
(805) 393-2212

**PRECISION TANK & LINE TEST RESULTS**

Invoice Address:

UNOCAL CORP  
P O BOX 8175  
WALNUT CREEK, CA94596

Tank Location:

UNOCAL #4186  
1771 FIRST ST.  
LIVERMORE, CA

W.O.#: 6416

I.D. Number: 6416  
Technician: SHELDON  
Tech.#: 87130 Van#: 6104

Date: 4-25-88 Time Start: 11:45 End: 15:00 County: AL  
Facility Phone#: 415-455-0121 Groundwater Depth: 25+ Blue Prints: N/A  
Contact: GARY MCELROY Date; Time system was filled: 4-25-88 AM

Tank	Tank Capacity	Product	Tank	Fill/Vent Vapor Lines	Product Line	Type Of Vapor Recovery	Inches of Water/Tank	Pump Type	Tank Material
1	10K	U/L	PASS	PASS	PASS	II	0	TURB	STEEL
2	10K	S/UL	PASS	PASS	PASS	II	0	TURB	STEEL
3									
4									
5									
6									

Additional Information: THESE TANKS HAVE COAXIAL DROP TUBES. THE TURBINES WERE VENTED PRIOR TO TESTING.

**SITE LOG**

**TIME**

Set Up Equip: 11:50  
Bled Product Lines: N/A  
Bled Vapor Lines: 11:55  
Bled Vent lines: N/A  
Bled Turbine: 11:45  
Bled Suction Pump: N/A  
Risers Installed: N/A

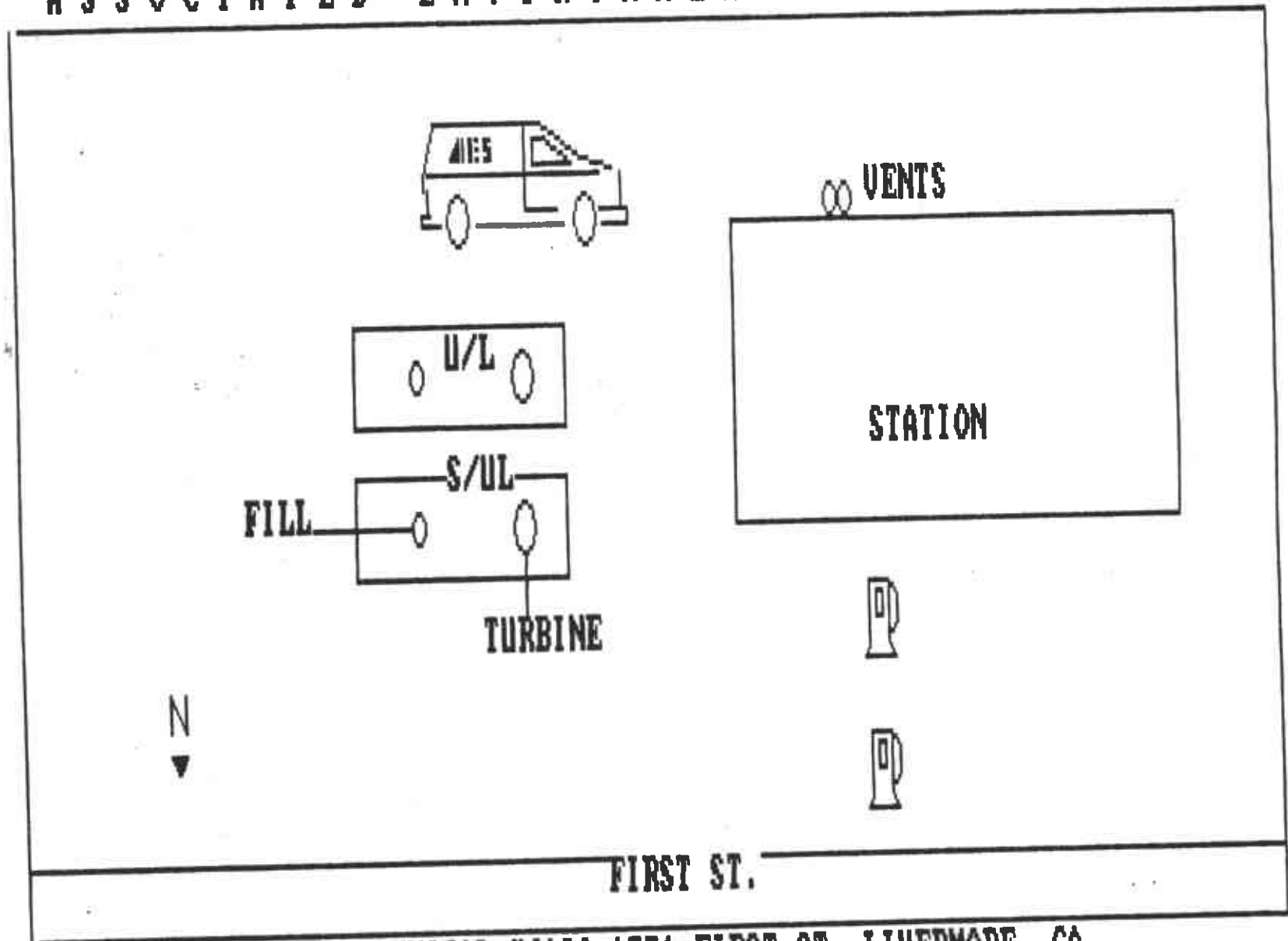
- a) These results obtained using the patented A.E.S./Brockman system.
- b) This system and method meets the criteria set forth in NFPA #329.
- c) Any failure listed above may require further action, check with all regulatory agencies.

Certified Technician Signature

Date: 4-25-88



# ASSOCIATED ENVIRONMENTAL SYSTEMS

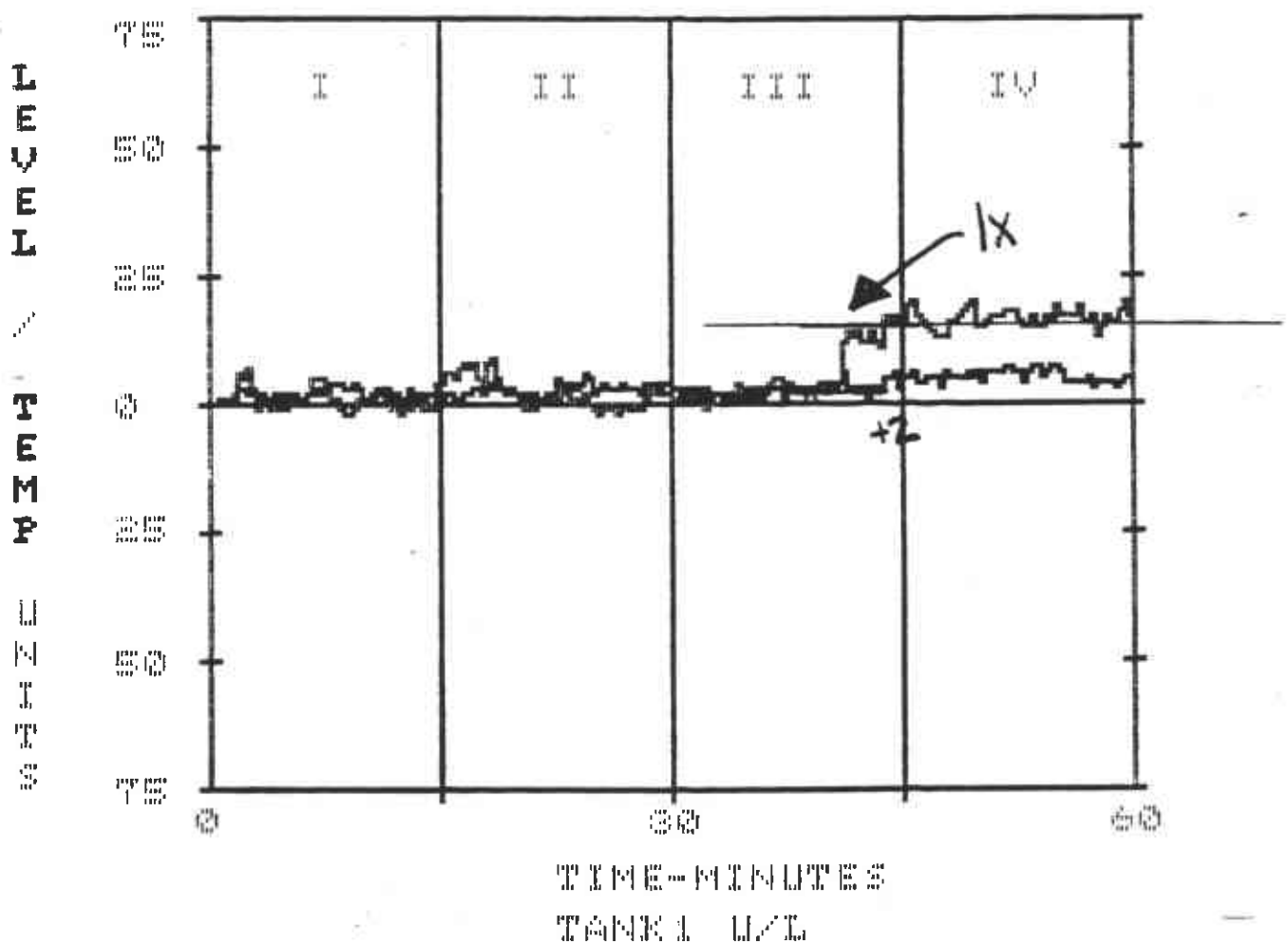


Site Layout For : UNOCAL #4186 1771 FIRST ST. LIVERMORE, CA

# AES/Brockman Precision Leak Test

P.O. Box 80427 Berkeley, CA 94780 (905) 393-2212

Technician	SHELDON	Calibration Value	12 UNITS = .05 Gal.
Date	4/25/88	System Variation	UNITS   GPH
Time Started	13:01	HIGH LEVEL (FULL SYSTEM)	+2.8   +.011
Gallons	10K	LOW LEVEL ( ) MID LEVEL ( )	
Tank Diameter	92"	PRODUCT LINE	
Ground Water	25+"	TEST IS	X PASSED ( ) FAILED ( ) INCONCLUSIVE
TEST CONDUCTED AT	126 INCHES	GRADE LEVEL AT	126 INCHES



FOCUS 1.00 L/ 1.00 T

ORDER NO. 6416

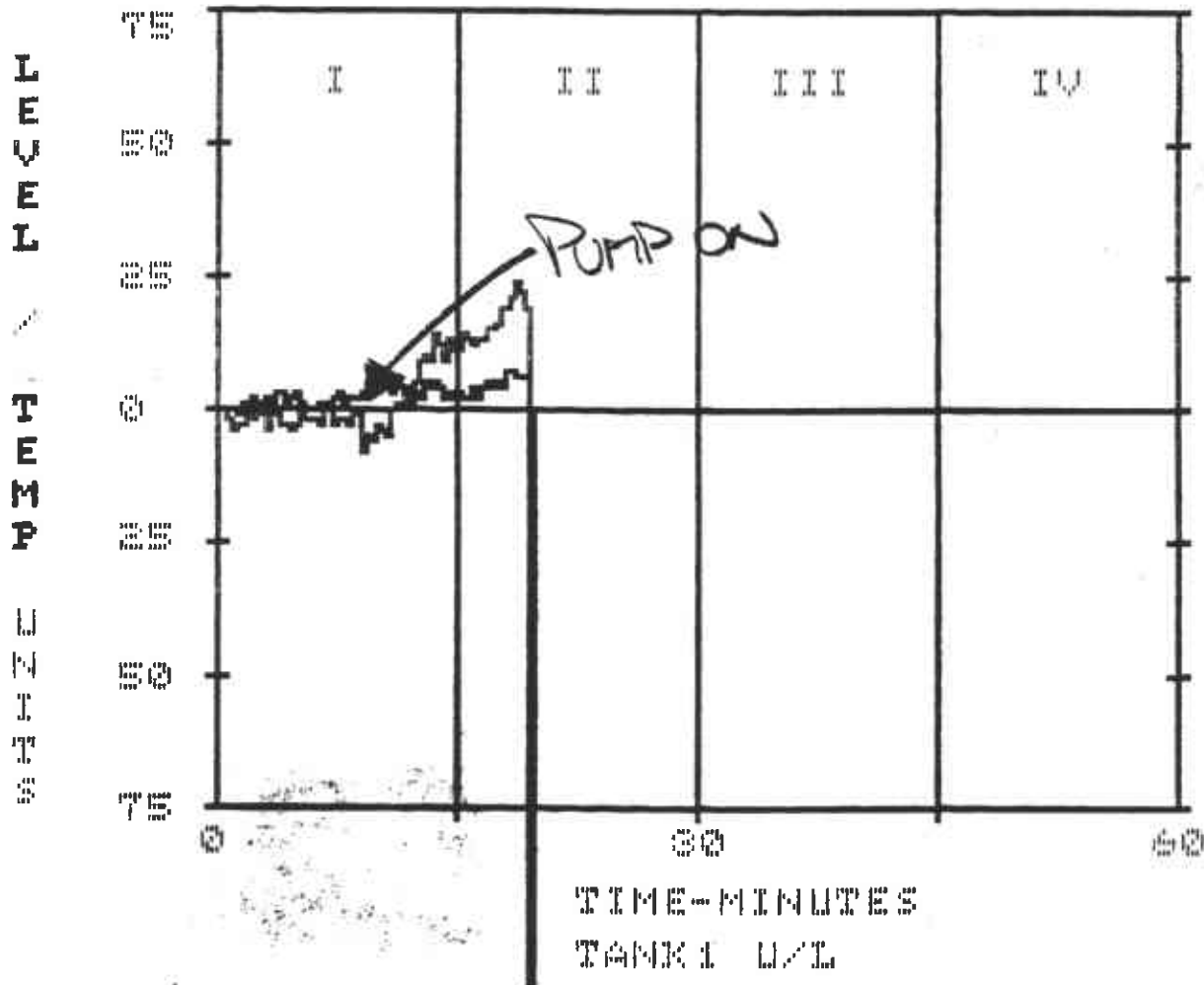
**\*\* Notes**

UN86AL #4106.  
THIS IS A HIGH LEVEL TEST VAPOR RECOVERY INCLUDED.  
CALIBRATION = 1X.

# AES/Brockman Precision Leak Test

P.O. Box 80427 Bakersfield, CA 93380 (805) 393-2212

Technician	SHELDON	Calibration Value	UNITS	=	Gal.
Date	4/25/88	System Variation	UNITS		GPH
Time Started	13:57	HIGH LEVEL (FULL SYSTEM)			
Gallons	10K	LOW LEVEL ( ) MID LEVEL ( )			
Tank Diameter	92"	PRODUCT LINE	No Loss		
Ground Water	25+'	TEST IS	<input checked="" type="checkbox"/> PASSED	( ) FAILED	( ) INCONCLUSIVE
TEST CONDUCTED AT	INCHES	GRADE LEVEL AT	INCHES		



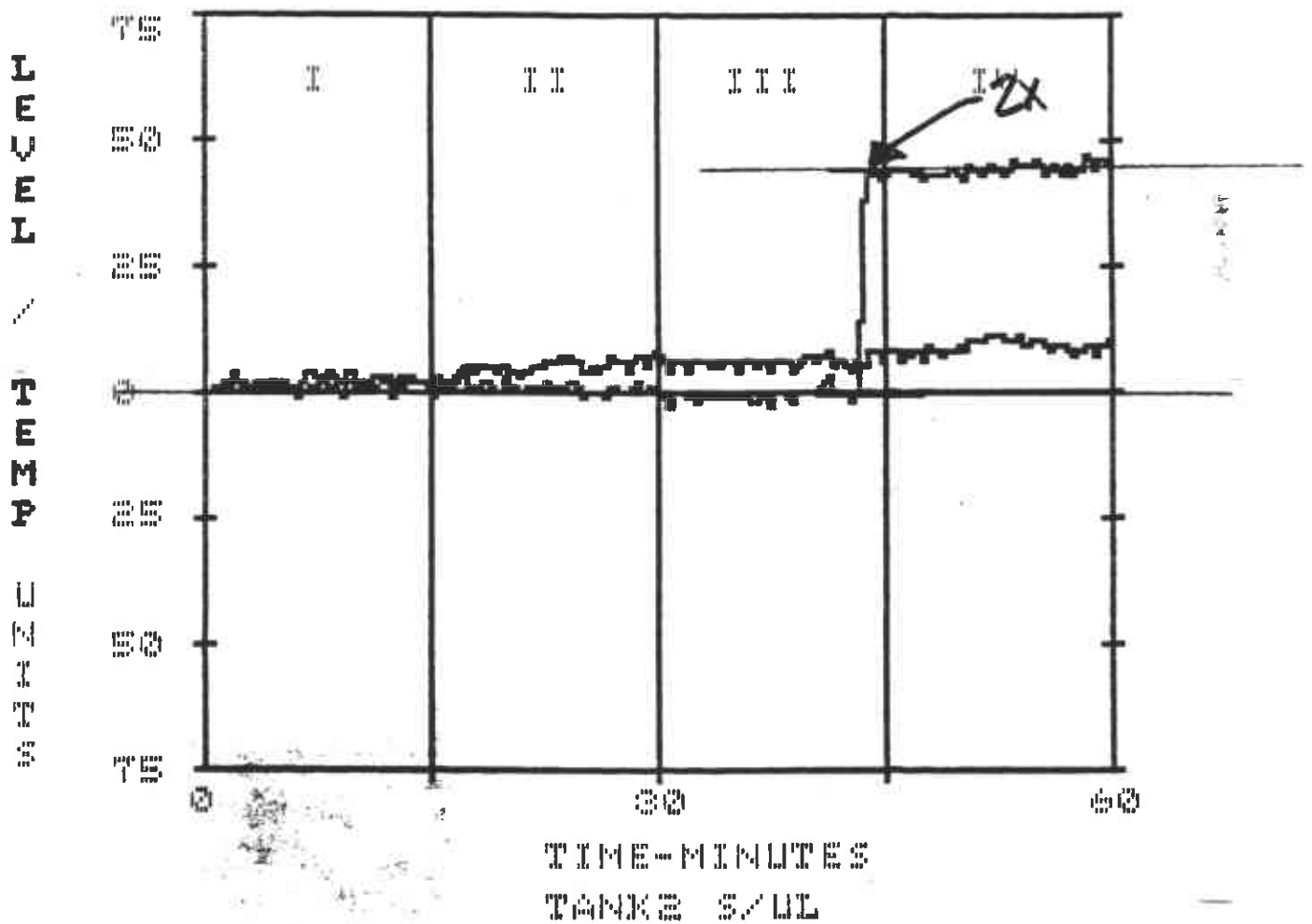
FOCUS 1.00 L/ 1.00 T

ORDER NO. 6416A

\*\* Notes  
UNOCAL #4186.  
PUMP TEST.

**AES/Brockman Precision Leak Test**  
 P.O. Box 80427 Bakersfield, CA 93380 (805) 393-2212

Technician	SHELDON	Calibration Value	22 UNITS = .05 Gal.
Date	4/25/88	System Variation	UNITS   GPH
Time Started	13:01	HIGH LEVEL (FULL SYSTEM)	<input checked="" type="checkbox"/>   <input checked="" type="checkbox"/>
Gallons	10K	LOW LEVEL ( ) MID LEVEL ( )	
Tank Diameter	92"	PRODUCT LINE	
Ground Water	25+'	TEST IS	<input checked="" type="checkbox"/> PASSED ( ) FAILED ( ) INCONCLUSIVE
TEST CONDUCTED AT	126 INCHES	GRADE LEVEL AT	126 INCHES



FOCUS 1.00 L/ 1.00 T

ORDER NO. 6416

**\*\* Notes**

UUNOCAL #4186.

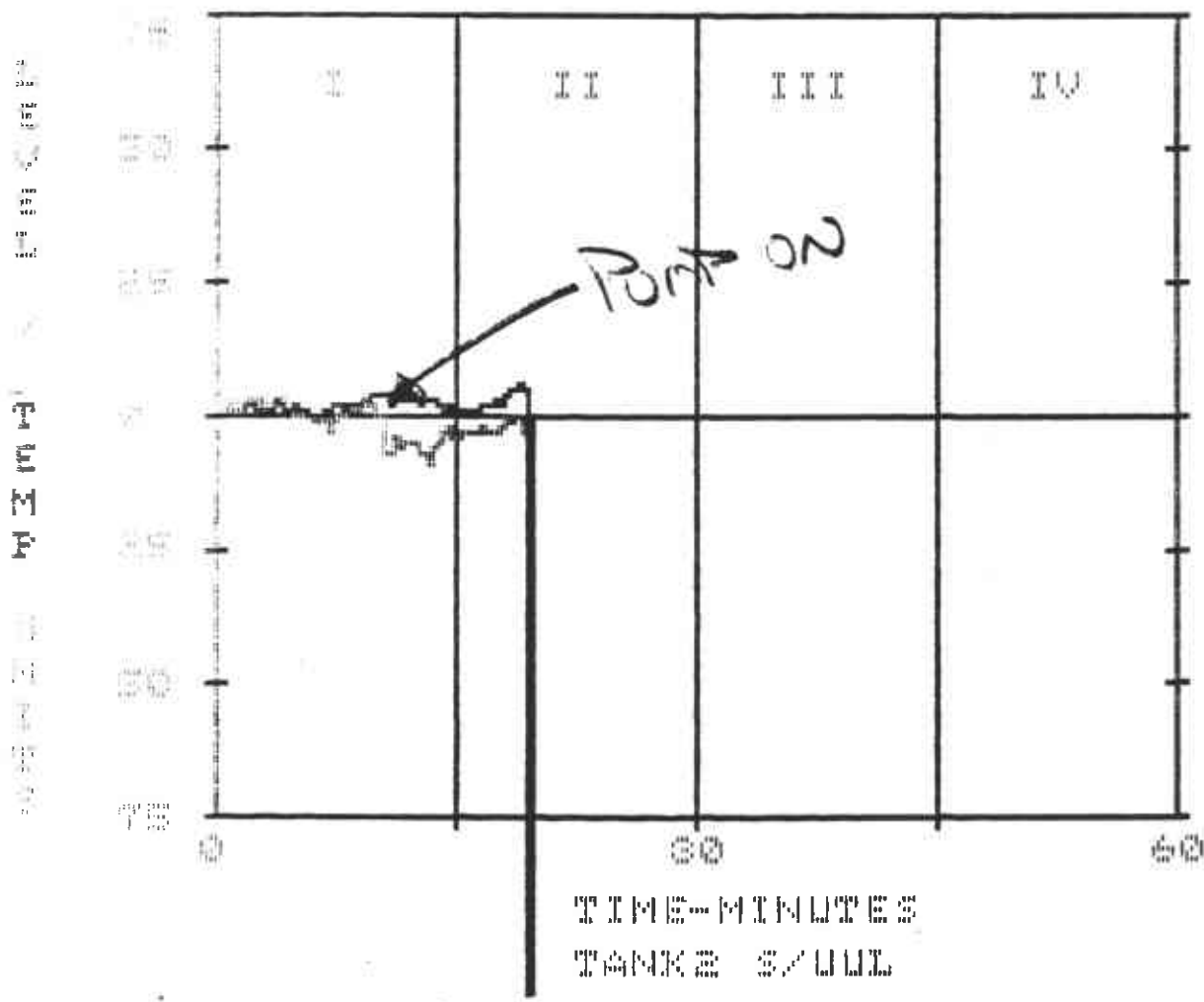
THIS IS A HIGH LEVEL TEST VAPOR RECOVERY INCLUDED.

CALIBRATION = 2X.

# AES/Brockman Precision Leak Test

PLD. BOX 80427 BAKERSFIELD, CA 93380 (805) 393-2212

Technician	SHELDON	Calibration Value	UNITS =	Gal.
Date	4/25/88	System Variation	UNITS	GPH
Time Started	13:57	HIGH LEVEL (FULL SYSTEM)		
Gallons	10K	LOW LEVEL ( ) MID LEVEL ( )		
Tank Diameter	92"	PRODUCT LINE	No Loss	
Ground Water	25+'	TEST IS	<input checked="" type="checkbox"/> PASSED ( ) FAILED ( ) INCONCLUSIVE	
TEST CONDUCTED AT	INCHES	GRADE LEVEL AT	INCHES	



FOCUS 1.00 L/ 1.00 T

ORDER NO. 6416A

\*\* Notes  
UNOCAL #4186.  
PUMP TEST.

*W. Yamamoto*

HUNTER ENVIRONMENTAL SERVICES, INC.  
15405 REDHILL AVENUE, SUITE C  
TUSTIN, CA 92680  
800-247-9014 800-247-2186

FINAL TEST RESULTS  
TEST DATE: 8-17-87

CUSTOMER: UNOCAL  
ADDRESS: 1777 First Street  
Livermore, CA

LOCATION/IDENTIFICATION NO.: 4186

TEST RESULTS SUMMARY

NO.	SYSTEM PRODUCT	TANK SIZE		WATER INCHES	LEVEL INCHES	LEAK LOKATOR RESULTS		
		GALLONS	DIA/MATL			ALR GPH	CONCLUSION	RECOMMENDATIONS
1	Super U/L	10000	92"	0	165	-.029	Tight	
2	U/L	10000	92"	0	160	-.034	Tight	
3	Waste Oil	550	45"	0				

PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS

NO.	SYSTEM PRODUCT	TYPE OF PUMP		POUNDS APPLIED	POUNDS HELD	MINUTES HELD	PRODUCT LOSS CC's	PRODUCT LOSS GPH	CONCLUSION /RESULT
		REMOTE	SUCTION						
1	Super U/L	Red Jacket		50	50	10			Tight
2	U/L	Red Jacket		50	50	10			Tight

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.

DETAIL OF TEST RESULTS

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (IN.)	TIME		LEAK RATE		TEMPERATURE COMPENSATION		ABSOLUTE LEAK RATE		CHECK TEST Y/N
				CLOCK STATE	DURATION (HR-MIN)	CC/DIV	CC/MIN	DELTA °F	CC/MIN	CC/MIN	GPA	
1	Super U/L	1	165	11:30	0-32	+1.315	+28.590	+0.071	+30.456	-1.866	-.029	N
2	U/L	1	160	10:30	0-34	+1.562	+30.281	+0.078	+32.475	-2.194	-.034	N
3	Waste Oil											

\*LEVEL - Inches from Tank Bottom to Test Level

ALR - Absolute Leak Rate (Measured Leak Rate - Temperature Compensation) in Gallons Per Hour

CONCLUSION - NFPA 329 criterion of +/- 0.05 GPA is used to certify tightness

CERTIFICATION

This is to certify that the above tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

Tests Conducted and Certified By: Test Van No. 21  
Team Manager: P. Wheeler  
Tank Testing Specialist: S. Anderson



ENVIRONMENTAL SERVICES, INC.

115 DEWALT AVENUE, N.W.  
SUITE 400  
CANTON, OH 44702  
216-453-1800 800-523-4370



TEST RESULTS

DATE OF TEST 8-17-87
CONTRACT NUMBER

CUSTOMER: 4/c

LOCATION - IDENTIFICATION NUMBER: 4186 NAME: \_\_\_\_\_

ADDRESS: 1777 FIRST ST CITY: LIVERMORE STATE: CA

TEST RESULTS SUMMARY								LEAK LOKATOR USE ONLY		
SYSTEM PRODUCT	TANK SIZE		WATER INCHES	LEAK LOKATOR RESULTS*			RECOMMENDATIONS	CONCL. CODE		
	GALLONS	DIA/MATL		LEVEL INCHES	ALR GPH	CONCLUSION		TEST	TANK	SYS
<u>I 54 4/c</u>	<u>10,000</u>	<u>92</u>	<u>0</u>	<u>165</u>	<u>1.071</u>	<u>T</u>				
<u>II 4/c</u>	<u>10,000</u>	<u>92</u>	<u>0</u>	<u>160</u>	<u>1.034</u>	<u>T</u>				
<u>III WASTE OIL</u>	<u>5,50</u>	<u>45</u>	<u>0</u>							

OTHER INFORMATION

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PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS

NO.	SYSTEM PRODUCT	TYPE OF PUMP		# APPLIED	MINUTES APPLIED	PRODUCT LOSS CC'S	PRODUCT LOSS GPH	CONCLUSION/ RESULT
		REMOTE	SUCTION					
<u>I</u>	<u>54 4/c</u>	<u>RT</u>		<u>50/50</u>	<u>10</u>			<u>T</u>
<u>II</u>	<u>4/c</u>	<u>RT</u>		<u>50/50</u>	<u>10</u>			<u>T</u>

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.

OTHER CONTRACTORS, OFFICIALS, CUSTOMER REPRESENTATIVES PRESENT

---

DETAIL OF TEST RESULTS

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (INCHES)	TIME		LEAK RATE		TEMPERATURE COMPENSATION		ABSOLUTE LEAK RATE		CHECK TEST Y or N
				CLOCK START	DURATION HRS.-MIN.	CC/DIV	CC/MIN	Δ °F	CC/MIN	CC/MIN	GPH	
<u>I</u>	<u>54 4/c</u>	<u>1</u>	<u>165</u>	<u>11:30</u>	<u>0-32</u>	<u>+1.315</u>	<u>+28.590</u>	<u>1.071</u>	<u>+30.456</u>	<u>-1.866</u>	<u>1.029</u>	<u>N</u>
<u>II</u>	<u>4/c</u>	<u>1</u>	<u>160</u>	<u>10:30</u>	<u>0-34</u>	<u>+1.562</u>	<u>+30.281</u>	<u>1.078</u>	<u>+32.475</u>	<u>-2.194</u>	<u>1.034</u>	<u>N</u>
<u>III</u>	<u>WASTE OIL</u>											

\* LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL  
 ALR - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR  
 CONCLUSION - NFPA 329 CRITERION OF ± 0.05 GPH IS USED TO CERTIFY TIGHTNESS

CERTIFICATION This is to certify that the above described tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

TESTS CONDUCTED BY				CERTIFIED BY			
TEST VAN NO.	TANK TESTING SPECIALIST	SIGNATURE	DATE	NAME		TITLE	
<u>21</u>	<u>P. WHEELER</u>	<u>[Signature]</u>	<u>8-17-87</u>	<u>P. WHEELER</u>	<u>TEAM MANAGER</u>		
	<u>S. ANDERSON</u>						

TANK AND LOCATION DATA

DATE: 8-17-87

CUSTOMER: 4/C

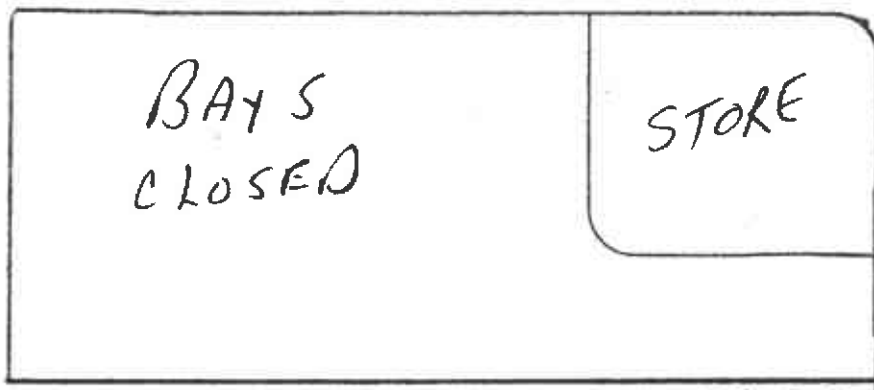
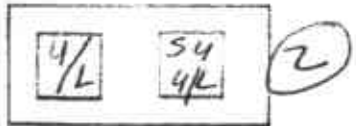
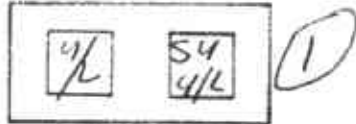
CITY: LIVERMORE

I.D. # 4186

STATE: CA

WEATHER	TIME	TEMPERATURE	COMMENTS
BEFORE TEST -			
AFTER TEST -			

SCHEMATIC:



JEETS 00

BEFORE DELIVERY	PRODUCT/TANK NO.	54. 4/L		4/L		OIL WASTE		Fill	Gauge	Fill	Gauge
	LEVEL	Fill	Gauge	Fill	Gauge	Fill	Gauge				
	GALLONS	10,000	/	10,000	/	550	/				
	WATER	0	/	0	/	0	/				
	TOP OF RISER	124	/	124	/	76	/				
	GRADE	133	/	133	/	84	/				
	DROP TUBE	ALU	/	ALU	/	NONE	/				
	CAPACITY, GALLONS	10,000	/	10,000	/	550	/				
	DIAMETER, INCHES	92	/	92	/	45	/				
	MATERIAL	GLASS	/	GLASS	/	STEEL	/				
	PUMP TYPE	R.J.	/	R.J.	/	NONE	/				
	TYPE OF COVER	CONCRETE	/	CONCRETE	/		/				
	AGE OF TANK	7 YEARS	/	7 YEARS	/	4/K	/				
	SIPHON	NONE	/	NONE	/	NONE	/				
	TANK OPENINGS	1	/	1	/	1	/				
	EXTRACTORS	NONE	/	NONE	/	NONE	/				
VAPOR RECOVERY	TYPE	CO-AX	/	CO-AX	/	NONE	/				
	VENT CONFIGURATION	OPEN	/	OPEN	/	OPEN	/				
	P-V VENT VALVE TYPE	NONE	/	NONE	/	NONE	/				

REPLACEMENT PARTS:	PART #	DESCRIPTION	QUANTITY	PRICE
		O Ring Kits	2	\$3 FA

ADDITIONAL CHARGES: (pumpovers, overtime, etc.) \_\_\_\_\_

\*Data obtained from  Station  LL Charts  Other \_\_\_\_\_

6 HRS ON SITE 2 HRS TRAVEL





UNOCAL  
Paul Yamamoto



ENVIRONMENTAL SERVICES, INC.

FINAL REPORT  
TEST  
RESULTS

DATE OF TEST MAY 8, 1986
CONTRACT NUMBER

115 DEWALT AVENUE, N.W.  
SUITE 400  
CANTON, OH 44702  
216-453-1800 800-523-4370

CUSTOMER UNOCAL	
LOCATION - IDENTIFICATION NUMBER # 3-4186	NAME
ADDRESS 1771 FIRST STREET	CITY Livermore
	STATE California

TEST RESULTS SUMMARY								LEAK LOKATOR USE ONLY		
SYSTEM	TANK SIZE		WATER INCHES	LEAK LOKATOR RESULTS*			CONCL. CODE			
	PRODUCT	GALLONS		DIA/MATL	LEVEL INCHES	ALR GPH	CONCLUSION	RECOMMENDATIONS	TEST	TANK
1 SUPER	9738	9 1/2	FG	0	121	+1.026	TIGHT		1	
2 UNLEAD	9738	9 1/2	FG	1.5	143	+0.22	TIGHT		1	

OTHER INFORMATION

PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS

NO.	SYSTEM PRODUCT	TYPE OF PUMP		# APPLIED	MINUTES APPLIED	PRODUCT LOSS CC'S	PRODUCT LOSS GPH	CONCLUSION/ RESULT
		REMOTE	SUCTION					
1	SUPER	RED JACKET		50	10			TIGHT
2	UNLEAD	RED JACKET		50	10			TIGHT

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.

OTHER CONTRACTORS, OFFICIALS, CUSTOMER REPRESENTATIVES PRESENT

DETAIL OF TEST RESULTS

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (INCHES)	TIME		LEAK RATE		TEMPERATURE COMPENSATION		ABSOLUTE LEAK RATE		CHECK TEST V OF N
				CLOCK START	DURATION HRS.-MIN.	CC/DIV	CC/MIN	Δ °F	CC/MIN	CC/MIN	GPH	
1	SUPER	1	134	1025	11 mins	1.381	+18.785	+0.043	+17.160	+1.623	+1.026	N
		2	143	1050	24 mins	1.308	+3.461	+0.012	+4.828	-1.367	-0.22	N
2	UNLEAD											

\* LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL  
 ALR - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR  
 CONCLUSION - NFPA 329 CRITERION OF ± 0.05 GPH IS USED TO CERTIFY TIGHTNESS

CERTIFICATION This is to certify that the above described tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

TESTS CONDUCTED BY		CERTIFIED BY	
TEST VAN NO.	TANK TESTING SPECIALIST	SIGNATURE	DATE
	E. Price A. Durcan	<i>[Signature]</i>	05-08-86
	TANK TESTING SPECIALIST	NAME	TITLE
4-17	K. Rover	VICTOR E. BOYD	Team Manager

*Signature*

HUNTER ENVIRONMENTAL SERVICES, INC.  
15405 REDHILL AVENUE, SUITE C  
TUSTIN, CA 92680  
800-247-9014 800-247-2186

FINAL TEST RESULTS  
TEST DATE: 8-17-87

CUSTOMER: UNOCAL  
ADDRESS: 1777 First Street  
Livermore, CA

LOCATION/IDENTIFICATION NO.: 4186

TEST RESULTS SUMMARY

NO.	SYSTEM PRODUCT	TANK SIZE		WATER INCHES	LEAK LOKATOR RESULTS		
		GALLONS	DIA/MATL		LEVEL INCHES	ALR GPH	CONCLUSION
1	Super U/L	10000	92"	0	165	-0.029	Tight
2	U/L	10000	92"	0	160	-0.034	Tight
3	Waste Oil	550	45"	0			

PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS

NO.	SYSTEM PRODUCT	TYPE OF PUMP		POUNDS APPLIED	POUNDS HELD	MINUTES HELD	PRODUCT LOSS CC's	PRODUCT LOSS GPH	CONCLUSION /RESULT
		REMOTE	SUCTION						
1	Super U/L	Red Jacket		50	50	10			Tight
2	U/L	Red Jacket		50	50	10			Tight

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.

DETAIL OF TEST RESULTS

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (IN.)	TIME		LEAK RATE		TEMPERATURE COMPENSATION		ABSOLUTE LEAK RATE		CHECK TEST Y/N
				CLOCK STATE	DURATION (HR-MIN)	CC/DIV	CC/MIN	DELTA °F	CC/MIN	CC/MIN	GPA	
1	Super U/L	1	165	11:30	0-32	+1.315	+28.590	+0.071	+30.456	-1.866	-0.029	N
2	U/L	1	160	10:30	0-34	+1.562	+30.281	+0.078	+32.475	-2.194	-0.034	N
3	Waste Oil											

\*LEVEL - Inches from Tank Bottom to Test Level  
ALR - Absolute Leak Rate (Measured Leak Rate - Temperature Compensation) in Gallons Per Hour  
CONCLUSION - NFPA 329 criterion of +/- 0.05 GPA is used to certify tightness

CERTIFICATION

This is to certify that the above tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

Tests Conducted and Certified By: Test Van No. 21  
Team Manager: P. Wheeler  
Tank Testing Specialist: S. Anderson



leak lokator LD 2000

ENVIRONMENTAL SERVICES, INC.

115 DEWALT AVENUE, N.W.  
SUITE 400  
CANTON, OH 44702  
216-453-1800 800-523-4370

TEST RESULTS

DATE OF TEST 8-17-87  
CONTRACT NUMBER

CUSTOMER 4/K  
LOCATION - IDENTIFICATION NUMBER 4186  
NAME  
ADDRESS 1777 FIRST ST  
CITY LIVERMORE STATE CA

TEST RESULTS SUMMARY table with columns: SYSTEM, TANK SIZE, WATER INCHES, LEAK LOKATOR RESULTS\* (LEVEL INCHES, ALR GPH, CONCLUSION, RECOMMENDATIONS), LEAK LOKATOR USE ONLY (CONCL. CODE, TEST TANK SYS)

OTHER INFORMATION

PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS table with columns: SYSTEM, TYPE OF PUMP, # APPLIED, MINUTES APPLIED, PRODUCT LOSS CC'S, PRODUCT LOSS GPH, CONCLUSION/RESULT

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.  
OTHER CONTRACTORS, OFFICIALS, CUSTOMER REPRESENTATIVES PRESENT

DETAIL OF TEST RESULTS table with columns: SYSTEM PRODUCT, TEST NO., TEST LEVEL (INCHES), TIME (CLOCK START, DURATION HRS-MIN), LEAK RATE (CC/DIV, CC/MIN), TEMPERATURE COMPENSATION (Δ°F, CC/MIN), ABSOLUTE LEAK RATE (CC/MIN, GPH), CHECK TEST Y/N

LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL  
ALR - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR  
CONCLUSION - NFPA 329 CRITERION OF ±0.05 GPH IS USED TO CERTIFY TIGHTNESS

CERTIFICATION This is to certify that the above described tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

TESTS CONDUCTED BY: TANK TESTING SPECIALIST P. WHEELER, TANK TESTING SPECIALIST S. ANDERSON  
CERTIFIED BY: SIGNATURE Pat Wheeler, DATE 8-17-87, NAME P. WHEELER, TITLE TEAM MANAGER

TANK AND LOCATION DATA

DATE: 8-17-87

CUSTOMER: 4/C

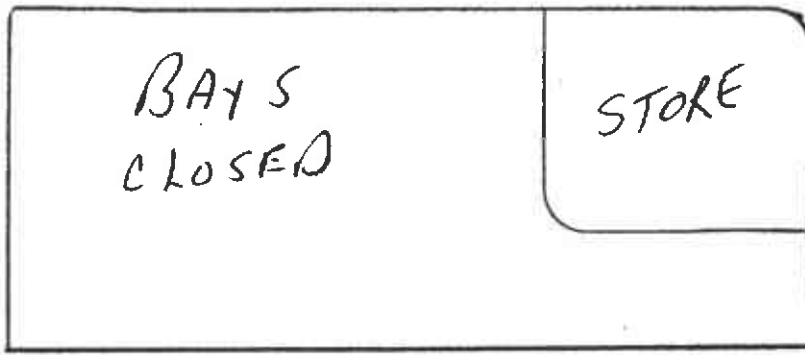
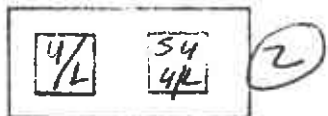
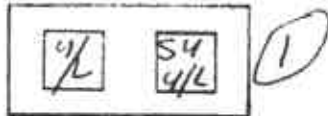
CITY: LIVERMORE

I.D. # 4186

STATE: CA

WEATHER	TIME	TEMPERATURE	COMMENTS
BEFORE TEST -			
AFTER TEST -			

SCHEMATIC:



JEETS 00

BEFORE DELIVERY	PRODUCT/TANK NO.	54, 4/L		4/L		OIL WASTE					
	LEVEL	Fill	Gauge	Fill	Gauge	Fill	Gauge	Fill	Gauge	Fill	Gauge
GALLONS		Full		Full		12					
WATER		0		0		0					
TOP OF RISER		124		124		76					
GRADE		133		133		84					
DROP TUBE		ALL		ALL		NONE					
CAPACITY, GALLONS		10,000		10,000		550					
DIAMETER, INCHES		92		92		45					
MATERIAL		GLASS		GLASS		STEEL					
PUMP TYPE		R.J.		R.J.		NONE					
TYPE OF COVER		CONCRETE		CONCRETE							
AGE OF TANK		7 YEARS		7 YEARS		4/K					
SIPHON		NONE		NONE		NONE					
TANK OPENINGS		1		1		1					
EXTRACTORS		NONE		NONE		NONE					
VAPOR RECOVERY	TYPE	CO-AX		CO-AX		NONE					
	VENT CONFIGURATION	OPEN		OPEN		OPEN					
	P-V VENT VALVE TYPE	NONE		NONE		NONE					

REPLACEMENT PARTS:	PART #	DESCRIPTION	QUANTITY	PRICE
		O Ring Kits	2	\$3 FH

ADDITIONAL CHARGES: (pumpovers, overtime, etc.) \_\_\_\_\_

\*Data obtained from  Station  LL Charts  Other \_\_\_\_\_

6 HRS ON SITE 2 HRS TRAVEL



Paul Yamamoto



ENVIRONMENTAL SERVICES, INC.

FINAL REPORT  
TEST  
RESULTS

DATE OF TEST MAY 8, 1986
CONTRACT NUMBER

115 DEWALT AVENUE, N.W.  
SUITE 400  
CANTON, OH 44702  
216-453-1800 800-523-4370

CUSTOMER: UNOCAL

LOCATION - IDENTIFICATION NUMBER: # 3-4186

ADDRESS: 1771 FIRST STREET

CITY: Livermore

STATE: California

TEST RESULTS SUMMARY								LEAK LOKATOR USE ONLY		
SYSTEM	TANK SIZE		WATER INCHES	LEAK LOKATOR RESULTS*				CONCL CODE		
	PRODUCT	GALLONS		DIA/MATL	LEVEL INCHES	ALR GPH	CONCLUSION	RECOMMENDATIONS	TEST	TANK
1 SUPER	7728	92/FG	0	1.51	+1026	TIGHT		1		
2 UNLEAD	9728	92/FG	1.5	143	-1022	TIGHT		1		

OTHER INFORMATION

PRODUCT LINES - HYDROSTATIC PRESSURE TEST RESULTS

NO.	SYSTEM PRODUCT	TYPE OF PUMP		# APPLIED	MINUTES APPLIED	PRODUCT LOSS CC'S	PRODUCT LOSS GPH	CONCLUSION/ RESULT
		REMOTE	SUCTION					
1	SUPER	RED Jacket		50	10			TIGHT
2	UNLEAD	RED Jacket		50	10			TIGHT

NOTE: On suction systems, NEVER put more than 15 psi on any pump system.

OTHER CONTRACTORS, OFFICIALS, CUSTOMER REPRESENTATIVES PRESENT

DETAIL OF TEST RESULTS

NO.	SYSTEM PRODUCT	TEST NO.	TEST LEVEL (INCHES)	TIME		LEAK RATE		TEMPERATURE COMPENSATION		ABSOLUTE LEAK RATE		CHECK TEST Y/N
				FLOOR START	DURATION HRS. MIN.	CC/DIV	CC/MIN	Δ °F	CC/MIN	CC/MIN	GPH	
1	SUPER	1	134	1025	11:05	1.381	+18.785	+0.043	+17.160	+1.623	+1026	N
2	UNLEAD	1	143	1050	24:00	1.308	+3.461	+0.012	+4.828	-1.367	-1022	N

\* LEVEL - INCHES FROM TANK BOTTOM TO TEST LEVEL  
 ALR - ABSOLUTE LEAK RATE (MEASURED LEAK RATE - TEMPERATURE COMPENSATION) IN GALLONS PER HOUR  
 CONCLUSION - NFPA 329 CRITERION OF ± 0.05 GPH IS USED TO CERTIFY TIGHTNESS

CERTIFICATION This is to certify that the above described tank systems were tested, using the HUNTER ENVIRONMENTAL SERVICES, INC. LEAK LOKATOR according to all standard operating procedures. Those indicated as tight at full system meet the criterion established by the National Fire Protection Association Pamphlet 329 for Precision Testing.

TESTS CONDUCTED BY		CERTIFIED BY	
TEST VAN NO.	TANK TESTING SPECIALIST	SIGNATURE	DATE
LL-17	E. Price A. Duncan	<i>William E. Boyle</i>	05-08-86
	TANK TESTING SPECIALIST	NAME	TITLE
	K. Royer	WILLIAM E. BOYLE	Team Leader



Paul W. Armento  
TANK AND LOCATION DATA

CUSTOMER: UNOCAL

DATE: May 8, 1986

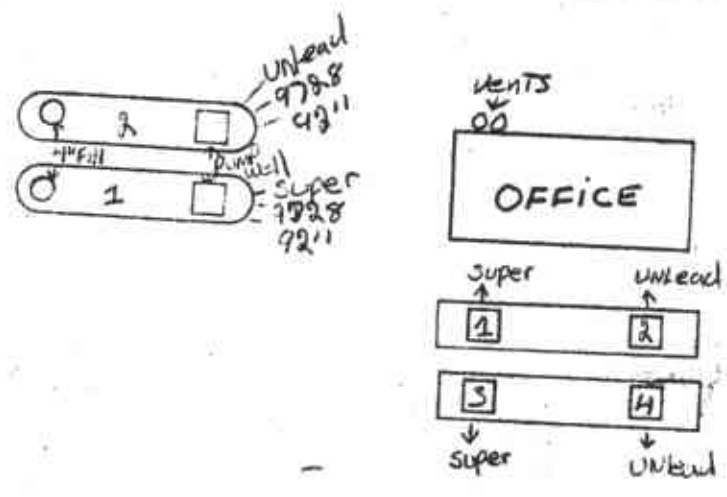
I.D. # 4186

CITY: Livermore

STATE: California

WEATHER	TIME	TEMPERATURE	COMMENTS
BEFORE TEST -	0700	64°	CLEAR
AFTER TEST -	1330	71°	

SCHEMATIC:



BEFORE DELIVERY	PRODUCT/TANK NO.		SUPER/1		UNLEAD							
	Fill	Gauge	Fill	Gauge	Fill	Gauge	Fill	Gauge	Fill	Gauge	Fill	Gauge
LEVEL	715		76									
GALLONS	8097		8097									
WATER	0		15									
TOP OF RISER	1357		126									
GRADE	1325		132									
DROP TUBE	yes		yes									
CAPACITY, GALLONS	9798		9793									
DIAMETER, INCHES	92		92									
MATERIAL	Fiber Glass		Fiber Glass									
PUMP TYPE	RED JACKET		RED JACKET									
TYPE OF COVER	Cement		Cement									
AGE OF TANK	-		-									
SIPHON	NO		NO									
TANK OPENINGS	1		1									
EXTRACTORS												
VAPOR RECOVERY	TYPE	PH II	PH E									
	VENT CONFIGURATION											
	P-V VENT VALVE TYPE	/	/									

REPLACEMENT PARTS:	PART #	DESCRIPTION	QUANTITY	PRICE
	6337C-4	4" COAXIAL Adapter	2	18.90 EA
	1411-062-5	R.T. KENTON ELEMENT	2	55.00 EA
	4890	R.T. O-RING KIT	2	3.00 EA
ADDITIONAL CHARGES:	(pumpovers, overtime, etc.)	4" Gaskets	2	2.00 EA

\*Data obtained from  Station  LL Charts  Other