AUTOMATIC TANK GAUGING SYSTEMS
Achieving Compliance

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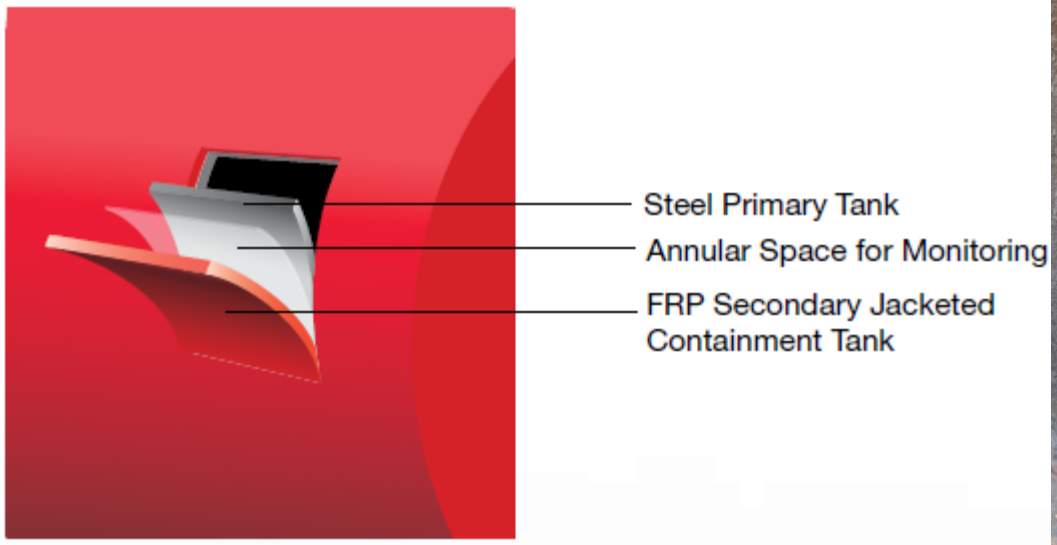
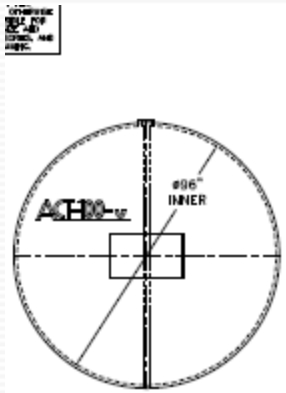
MEMBER PECA

The Objective: Monitor the Tanks & Piping Systems for leaks

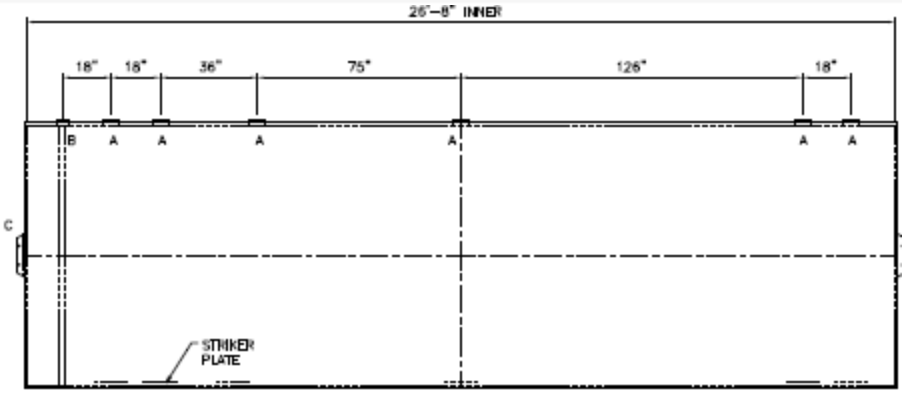
TANK GAUGING SYSTEM BRANDS

DOUBLE WALL STEEL TANK MONITORING





END VIEW



ELEVATION

DOUBLE WALL TANK MONITORING
DRY FIBERGLASS

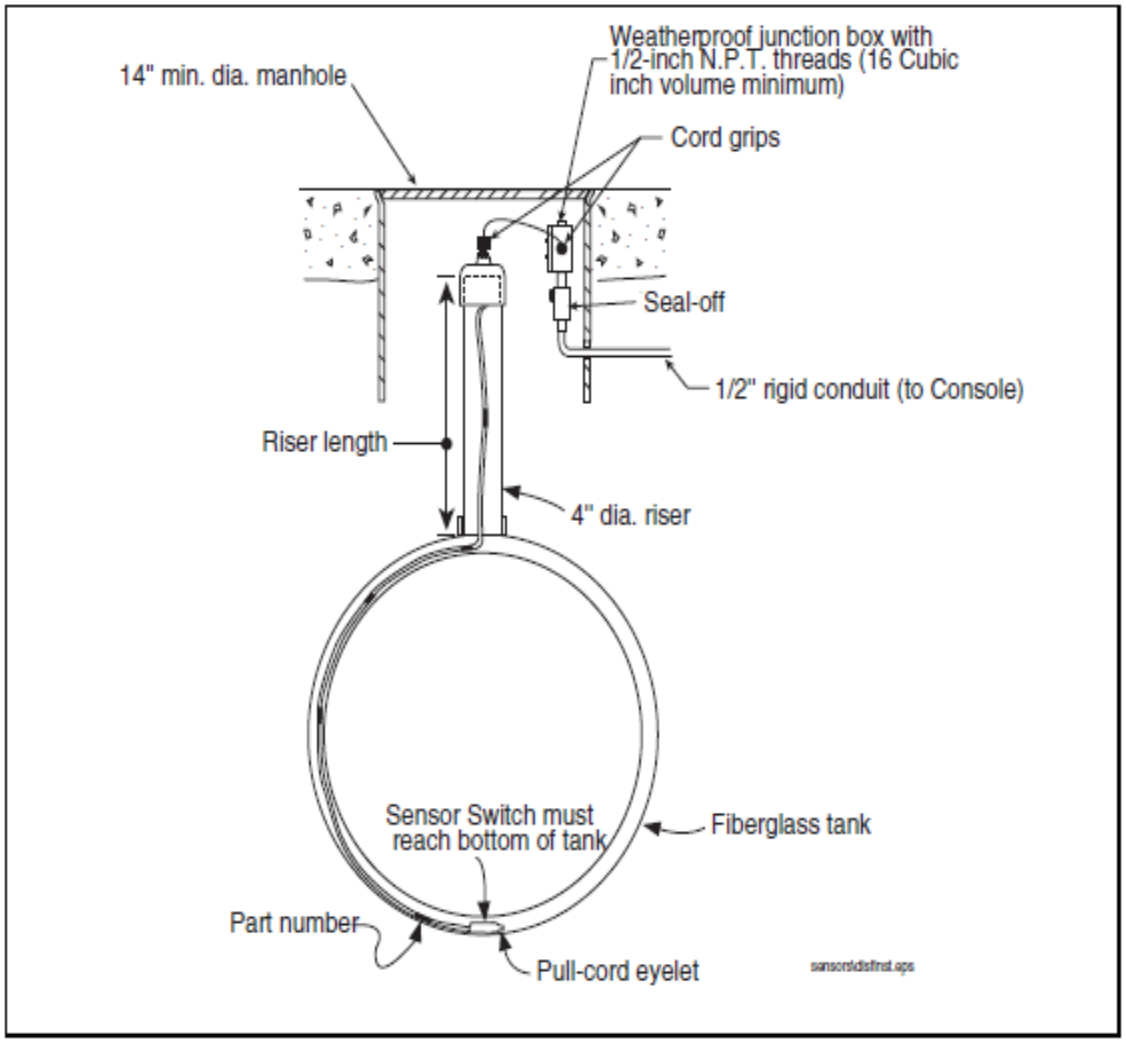
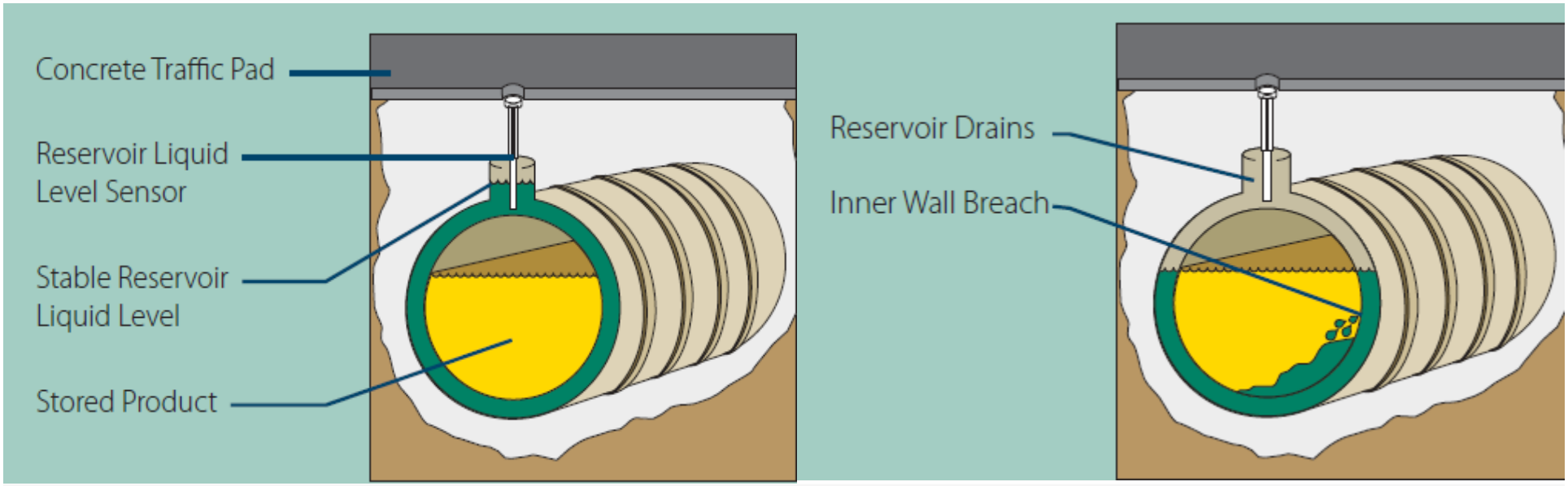


Figure 30. Example Interstitial Sensor Installation - Fiberglass UST

DOUBLE WALL TANK MONITORING
WET FIBERGLASS



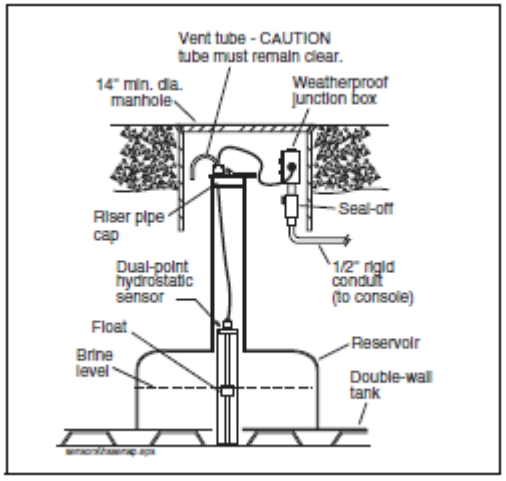
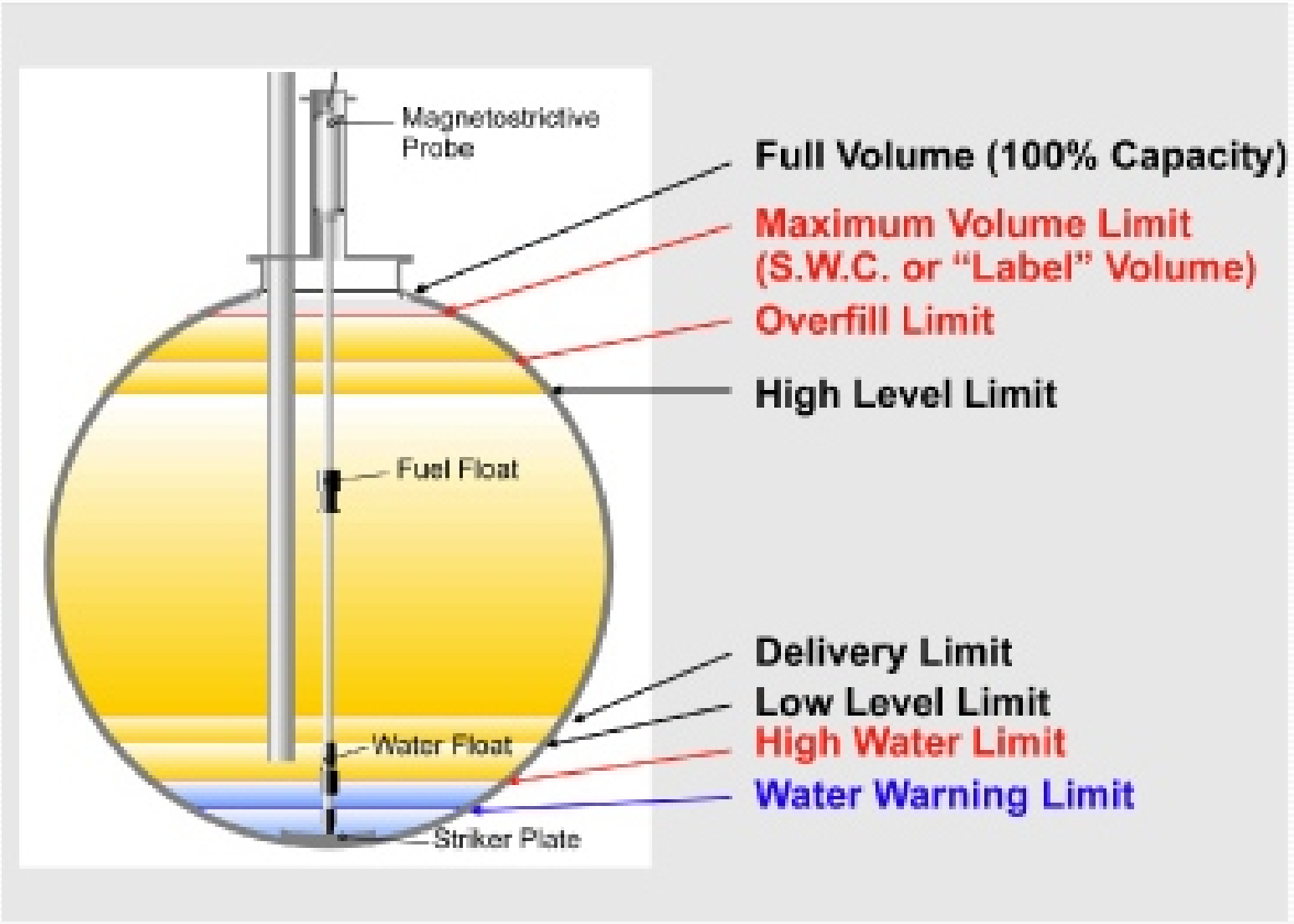


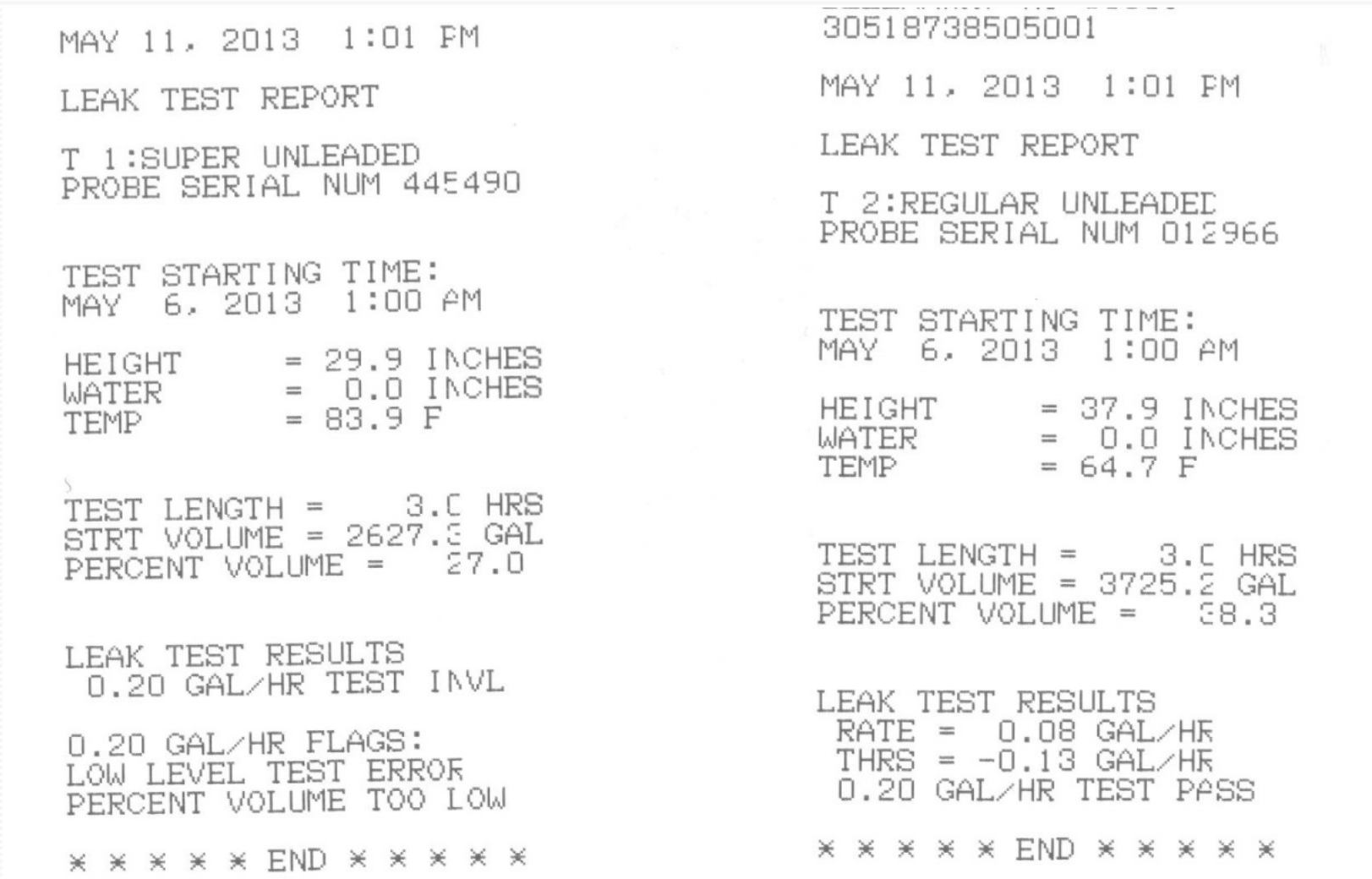
Figure 3. Dual-Point Sensor Installation

SINGLE WALL TANK MONITORING via MAGNETOSTRICTIVE PROBE



SINGLE WALL UST MONTHLY MONITORING via 0.2 GPH STATIC TESTING

- NJDEP & USEPA Release Detection Monitoring requirements require at least 1 Passing 0.2 (Gallon Per Hour) GPH leak test, Monthly, for each UST on a facility.
- Commonly set to operate on a weekly basis, at a time when the facility is not in operation. This allows just 4 opportunities per month to achieve a passing test.
- The monitoring console is programmed to run the test for 2, 3, 4 or more hours.
- The results of the test print-out as soon as the test is completed.
  - **NOTE:** The printed results of at least 1 Passing 0.2 GPH in-tank leak test for each registered UST on a facility should be kept for 3 years' time.
- Common problems achieving a passing monthly test in a given month:
  - ❖ 24-Hour station doesn't afford enough down-time for the tank.
  - ❖ In-Tank product level is too low upon the date/time the test is set to be run.
  - ❖ A fuel delivery occurs within 8 hours of, or during a test in progress.
  - ❖ Static tests are being attempted on a set of siphon-manifolded tanks.
- The most popular means of achieving compliance when the factors above are routinely encountered is to add a CSLD (Veeder Root) or SCALD (Incon) software upgrade to enable 24-hour continuous leak detection capabilities to the ATG console.
- The Veeder Root and Incon consoles store passing test results in memory, by month. This memory will be accessed by NJDEP or County Health Inspectors.



MAY 11, 2013 1:01 PM

LEAK TEST REPORT

T 1:SUPER UNLEADED
PROBE SERIAL NUM 44E490

TEST STARTING TIME:
MAY 6, 2013 1:00 AM

HEIGHT = 29.9 INCHES
WATER = 0.0 INCHES
TEMP = 83.9 F

TEST LENGTH = 3.0 HRS
STRT VOLUME = 2627.3 GAL
PERCENT VOLUME = 27.0

LEAK TEST RESULTS
0.20 GAL/HR TEST INVL

0.20 GAL/HR FLAGS:
LOW LEVEL TEST ERROR
PERCENT VOLUME TOO LOW

* * * * * END * * * * *

30518738505001

MAY 11, 2013 1:01 PM

LEAK TEST REPORT

T 2:REGULAR UNLEADED
PROBE SERIAL NUM 012966

TEST STARTING TIME:
MAY 6, 2013 1:00 AM

HEIGHT = 37.9 INCHES
WATER = 0.0 INCHES
TEMP = 64.7 F

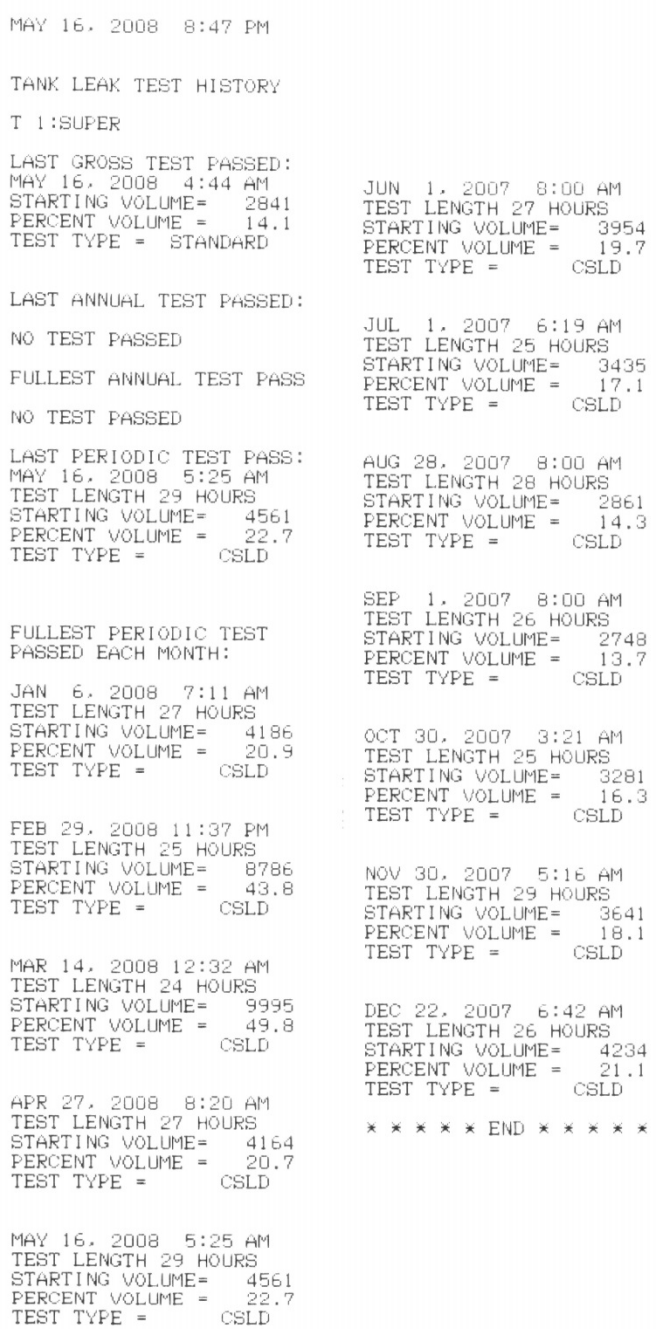
TEST LENGTH = 3.0 HRS
STRT VOLUME = 3725.2 GAL
PERCENT VOLUME = 38.3

LEAK TEST RESULTS
RATE = 0.08 GAL/HR
THRS = -0.13 GAL/HR
0.20 GAL/HR TEST PASS

* * * * * END * * * * *

Example of an “Invalid” leak test result on the left. A “Passing” result on the right.

Example of “Good” leak test results stored in the TLS console memory



MAY 16, 2008 8:47 PM

TANK LEAK TEST HISTORY

T 1:SUPER

LAST GROSS TEST PASSED:
MAY 16, 2008 4:44 AM
STARTING VOLUME= 2841
PERCENT VOLUME = 14.1
TEST TYPE = STANDARD

LAST ANNUAL TEST PASSED:

NO TEST PASSED

FULLEST ANNUAL TEST PASS

NO TEST PASSED

LAST PERIODIC TEST PASS:
MAY 16, 2008 5:25 AM
TEST LENGTH 29 HOURS
STARTING VOLUME= 4561
PERCENT VOLUME = 22.7
TEST TYPE = CSLD

FULLEST PERIODIC TEST PASSED EACH MONTH:

JAN 6, 2008 7:11 AM
TEST LENGTH 27 HOURS
STARTING VOLUME= 4186
PERCENT VOLUME = 20.9
TEST TYPE = CSLD

FEB 29, 2008 11:37 PM
TEST LENGTH 25 HOURS
STARTING VOLUME= 8786
PERCENT VOLUME = 43.8
TEST TYPE = CSLD

MAR 14, 2008 12:32 AM
TEST LENGTH 24 HOURS
STARTING VOLUME= 9995
PERCENT VOLUME = 49.8
TEST TYPE = CSLD

APR 27, 2008 8:20 AM
TEST LENGTH 27 HOURS
STARTING VOLUME= 4164
PERCENT VOLUME = 20.7
TEST TYPE = CSLD

MAY 16, 2008 5:25 AM
TEST LENGTH 29 HOURS
STARTING VOLUME= 4561
PERCENT VOLUME = 22.7
TEST TYPE = CSLD

JUN 1, 2007 8:00 AM
TEST LENGTH 27 HOURS
STARTING VOLUME= 3954
PERCENT VOLUME = 19.7
TEST TYPE = CSLD

JUL 1, 2007 6:19 AM
TEST LENGTH 25 HOURS
STARTING VOLUME= 3435
PERCENT VOLUME = 17.1
TEST TYPE = CSLD

AUG 28, 2007 8:00 AM
TEST LENGTH 28 HOURS
STARTING VOLUME= 2861
PERCENT VOLUME = 14.3
TEST TYPE = CSLD

SEP 1, 2007 8:00 AM
TEST LENGTH 26 HOURS
STARTING VOLUME= 2748
PERCENT VOLUME = 13.7
TEST TYPE = CSLD

OCT 30, 2007 3:21 AM
TEST LENGTH 25 HOURS
STARTING VOLUME= 3281
PERCENT VOLUME = 16.3
TEST TYPE = CSLD

NOV 30, 2007 5:16 AM
TEST LENGTH 29 HOURS
STARTING VOLUME= 3641
PERCENT VOLUME = 18.1
TEST TYPE = CSLD

DEC 22, 2007 6:42 AM
TEST LENGTH 26 HOURS
STARTING VOLUME= 4234
PERCENT VOLUME = 21.1
TEST TYPE = CSLD

* * * * * END * * * * *

Example of “BAD” leak test results stored in the TLS console memory

MAY 16, 2008 8:47 PM

TANK LEAK TEST HISTORY

T 3:REGULAR UNLEADED

LAST GROSS TEST PASSED:
MAY 11, 2008 3:03 AM
STARTING VOLUME= 9859
PERCENT VOLUME = 49.1
TEST TYPE = STANDARD

LAST ANNUAL TEST PASSED:
JAN 27, 2008 1:00 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 12060
PERCENT VOLUME = 60.1
TEST TYPE = STANDARD

FULLEST ANNUAL TEST PASS
JAN 6, 2008 1:00 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 15777
PERCENT VOLUME = 78.6
TEST TYPE = STANDARD

LAST PERIODIC TEST PASS:
MAR 30, 2008 12:30 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 11694
PERCENT VOLUME = 58.2
TEST TYPE = STANDARD

FULLEST PERIODIC TEST
PASSED EACH MONTH:

JAN 6, 2008 1:00 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 15777
PERCENT VOLUME = 78.6
TEST TYPE = STANDARD

FEB 28, 2007 3:23 AM
TEST LENGTH 15 HOURS
STARTING VOLUME= 9815
PERCENT VOLUME = 48.9
TEST TYPE = CSLD

MAR 30, 2008 12:30 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 11694
PERCENT VOLUME = 58.2
TEST TYPE = STANDARD

APR 9, 2007 8:00 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 10999
PERCENT VOLUME = 54.8
TEST TYPE = CSLD

MAY 30, 2007 3:32 AM
TEST LENGTH 7 HOURS
STARTING VOLUME= 11015
PERCENT VOLUME = 54.9
TEST TYPE = CSLD

JUN 14, 2007 8:00 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 11551
PERCENT VOLUME = 57.5
TEST TYPE = CSLD

JUL 28, 2007 1:59 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 9149
PERCENT VOLUME = 45.6
TEST TYPE = CSLD

AUG 15, 2007 2:57 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 9762
PERCENT VOLUME = 48.6
TEST TYPE = CSLD

SEP 30, 2007 1:39 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 8821
PERCENT VOLUME = 43.9
TEST TYPE = CSLD

OCT 1, 2007 8:00 AM
TEST LENGTH 6 HOURS
STARTING VOLUME= 8593
PERCENT VOLUME = 42.8
TEST TYPE = CSLD

NOV 11, 2007 1:00 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 10054
PERCENT VOLUME = 50.1
TEST TYPE = STANDARD

DEC 9, 2007 1:00 AM
TEST LENGTH 3 HOURS
STARTING VOLUME= 13156
PERCENT VOLUME = 65.5
TEST TYPE = STANDARD

* * * * * END * * * * *

Note the lack of a passing 0.2 GPH static test in the months of Feb. & Apr. 2008.

Monitoring Piping Systems

DOUBLE WALL PIPING MONITORING via CONTAINMENT SUMP SENSORS

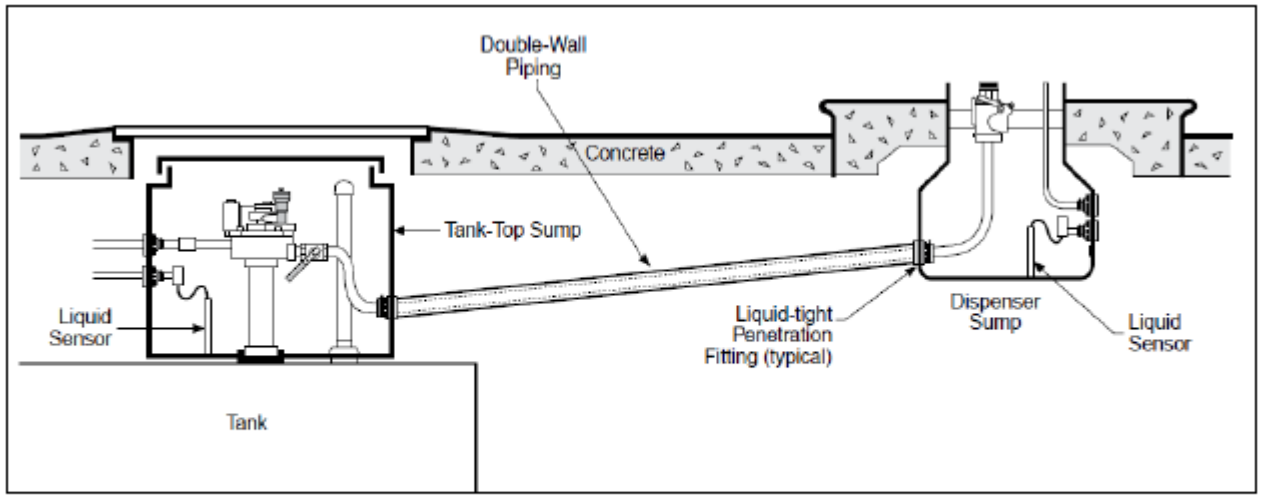


Diagram of a double-walled pressurized piping system. Any fuel leakage that occurs in the piping itself will flow down to the tank-top sump where the liquid sensor will trigger an alarm inside the facility. Leaks from piping components at the tank top are contained in the tank-top sump, while leaks from the dispenser are contained in the dispenser sump.

SINGLE WALL PIPING MONITORING
via ELECTRONIC LINE LEAK DETECTION

TLS-350 PLLD (Pressurized Line Leak Detection)

The setup printout will have a section detailing the PLLD setup for each line: Q1, Q2, Q3, etc.

```
PRESSURE LINE LEAK SETUP
- - - - - - - - - - - -

Q 1:REGULAR UNLEADED

TYP:2.0/3.0IN FIBERGLASS
2.0IN DIA LEN:175 FEET
3.0IN DIA LEN:  0 FEET
0.20 GPH TEST: REPETITIV
0.10 GPH TEST: DISABLED
SHUTDOWN RATE:  3.0 GPH
LOW PRESSURE SHUTOFF:YES
LOW PRESSURE :   6 PSI

T 1:REGULAR UNLEADED
DISPENSE MODE:
  STANDARD
SENSOR: NON-VENTED
PRESSURE OFFSET: 0.0PSI
```

Note that the 0.2 GPH mode is set to "Repetitive" or constant.
Note that the 0.1 GPH mode is set to "Disabled".

Note that the shutdown rate is set for 3.0 GPH. This can be disabled also, allowing the line to continue to be used even though a catastrophic leak is being detected.

A printout of the PLLD Alarm History looks like these.

```
ALARM HISTORY REPORT

----- SENSOR ALARM -----
Q 1:REGULAR UNLEADED
PLLD SHUTDOWN ALARM
DEC 23, 2007 11:03 PM

GROSS LINE FAIL
DEC 23, 2007 11:03 PM

FUEL OUT
DEC 22, 2007  3:00 PM

FUEL OUT
DEC 15, 2007  6:12 PM

FUEL OUT
DEC  7, 2007  4:03 PM

FUEL OUT
OCT 28, 2007  9:13 AM

PLLD SHUTDOWN ALARM
OCT 13, 2007 11:17 PM

GROSS LINE FAIL
OCT 13, 2007 11:17 PM

FUEL OUT
OCT  8, 2007  3:25 PM

FUEL OUT
SEP 23, 2007  9:06 PM
```

```
ALARM HISTORY REPORT

----- SENSOR ALARM -----
Q 4:DIESEL
PLLD SHUTDOWN ALARM
OCT 28, 2007 10:07 PM

GROSS LINE FAIL
OCT 28, 2007 10:07 PM

PLLD SHUTDOWN ALARM
OCT 26, 2007 11:13 PM

GROSS LINE FAIL
OCT 26, 2007 11:13 PM

PLLD SHUTDOWN ALARM
OCT 18, 2007 11:36 PM

GROSS LINE FAIL
OCT 18, 2007 11:36 PM

PLLD SHUTDOWN ALARM
OCT 18, 2007  8:17 AM

GROSS LINE FAIL
OCT 18, 2007  8:17 AM

PLLD SHUTDOWN ALARM
OCT 16, 2007 12:02 AM

GROSS LINE FAIL
OCT 16, 2007 12:02 AM
```

TLS-350 WPLLD (Wireless Pressurized Line Leak Detection)

The setup printout will have a section detailing the WPLLD setup for each line: W1, W2, etc. The setup will look similar to that of the PLLD example.

A printout of the WPLLD Line Test Results from the front menu looks like this.

```
MAY  2, 2008 12:56 PM

WPLLD LINE LEAK
TEST RESULTS


W 3:REGULAR UNLEADED


 3.0 GAL/HR RESULTS:

LAST TEST:
MAY  2,2008 12:56PM PASS

NUMBER OF TESTS PASSED
  PREV 24 HOURS :    94
 SINCE MIDNIGHT :    47


0.20 GAL/HR RESULTS:

APR 14,2008  3:05AM PASS
APR 10,2008  2:45AM PASS
MAR 31,2008  3:26AM PASS
MAR 19,2008  1:57AM PASS
MAR  7,2008  1:51AM PASS
FEB 24,2008  2:40AM PASS
FEB  6,2008  3:25AM PASS
JAN  7,2008  3:16AM PASS
DEC 20,2007  3:16PM PASS
NOV 18,2007  3:14AM PASS


0.10 GAL/HR RESULTS:

NOV 18,2007  3:46AM PASS
FEB 12,2007  1:02AM PASS



* * * * * END * * * * *
```

This is the 0.2 GPH diagnostic menu printout for the WPLLD

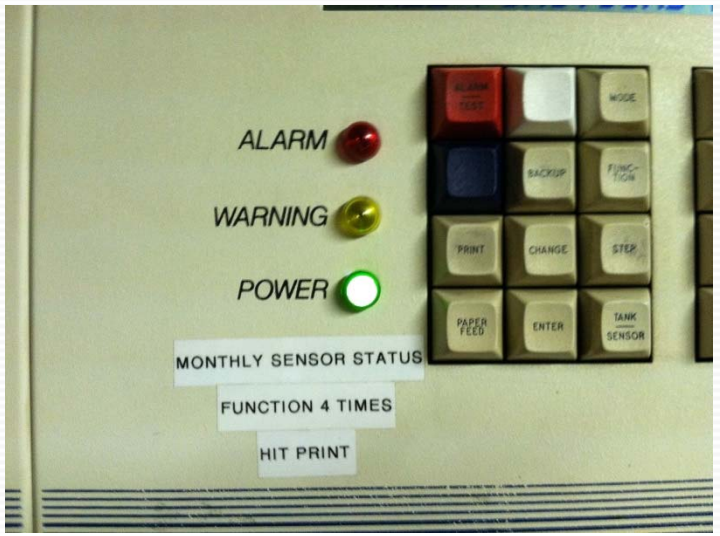
```
WPLLD LINE LEAK DIAG
MAY  2, 2008 12:57 PM

W 3:REGULAR UNLEADED

0.20 GPH TEST DIAG


CURRENT TEST:
---TIME--PRESS

PREVIOUS DATA:
---TIME--PRESS
APR 30
 3:18 AM   43.0   0.00
 2:12 AM   42.2   0.00
12:57 AM   40.5   0.00
12:26 AM   41.4   0.00
APR 28
 3:19 AM   37.2   0.00
 3:01 AM   34.7   0.00
 2:34 AM   34.9   0.00
 2:01 AM   35.9   0.00

AUTO-CONFIRM DATA
- - - - - - - - - - - -
CURRENT TEST:
START TIME: APR 16, 2008
DURATION:         15 DAYS
SEQUENTIAL PASSES:      0
SEQUENTIAL FAILS:       0
TOTAL PASSES:           0
TOTAL FAILS:            0
RESULT REASON CODE:
 WORKING
RESULT: NONE

LAST TEST:
START TIME: APR 12, 2008
DURATION:          1 DAYS
SEQUENTIAL PASSES:      2
SEQUENTIAL FAILS:       0
TOTAL PASSES:           2
TOTAL FAILS:            0
RESULT REASON CODE:
 SEQUENTIAL
RESULT: TEST PASSED

0.20 TEST RESULTS
- - - - - - - - - - - - -
  PON   RATIO   DUR RESULT
APR 14, 2008   3:05 AM
  34.1  0.19  65525 PASS
APR 14, 2008   3:11 AM
  33.9  0.19     33 PASS
APR 10, 2008   2:45 AM
  31.9  0.00     33 PASS
APR  8, 2008   2:42 AM
  35.1  0.25     33 PASS
MAR 31, 2008   3:26 AM
  34.4  0.17     33 PASS
MAR 25, 2008   1:50 AM
  32.8  0.12     33 PASS
MAR 19, 2008   1:57 AM
  36.3  0.32     33 PASS
MAR 17, 2008   3:19 AM
  37.3  0.46     33 PASS
MAR  7, 2008   1:51 AM
  35.1  0.30     33 PASS
MAR  3, 2008   3:18 AM
  32.8  0.10     48 PASS

NO-VENT TEST ABORTS:
  0 OUT OF 10 TEST
```

GENERAL RECORDKEEPING REQUIREMENTS FOR ATG SYSTEMS

- NJDEP & USEPA Release Detection Monitoring requirements require that the O/O (Owner/Operator) of a regulated UST and Piping system be prepared to demonstrate compliance with Release Detection requirements for the previous 3 years. This demonstration will usually entail the ability to produce printouts from the ATG system console to support a “Normal” or non-leaking condition of the facility’s underground tanks and piping systems. The printouts needed in archive will depend on the configuration of the facility (single wall vs. double wall). A general listing of them is as follows:
  1. Passing 0.2 (Gallon Per Hour) GPH In-Tank static leak tests, at least Monthly, for each UST on a facility. (single wall tanks)
  2. Passing 0.2 GPH in-line pressurized leak tests, at least monthly, for each line being monitored by the console with electronic in-line leak detection. This will generally be for single-wall piping where electronic line leak detection is the registered means of compliance.
  3. Monthly Liquid Sensor Status verification for any sensor being used to monitor the secondary space of a Double-wall UST or Piping system. This will apply when Secondary Containment Monitoring is the registered means of compliance for the tanks and/or piping.
- Some ATG console manufacturers (Incon) have provided programming in their console to enable the O/O to receive an automatic printout from the console that summarizes all “compliance” items (in-tank leak tests and sensor status.

GENERAL RECORDKEEPING REQUIREMENTS FOR ATG SYSTEMS cont.

- Unfortunately, the Veeder Root TLS 350 and earlier consoles must have their sensor status reports retrieved manually. In order to stay consistent with archive retrieval, we recommend that the O/O pick a set day of the month to retrieve and file their sensor status reports. It does not matter if it is the 1st, 15th or last day of the month that these reports are retrieved, so as long as they are retrieved every 30 days.
  - NOTE: The ATG console memory keeps track of the Alarm History of Probes and Sensors. With the Veeder Root consoles, for example, the 3 most recent alarms are stored in its on-board memory.
- Bottom line, a conscientious O/O, should be able to ask his/her trusted contractor for guidance on what you should need to do with your ATG console in order to maintain compliance with the NJDEP requirements for Release Detection Monitoring of your underground tanks and piping systems.



Liquid Sensor Status

This printout shows the status of all 2-wire sensors L1, L2, L3, etc.
Some Veeder Root sensors are not "Smart" as they can not distinguish from Fuel or Water, simply that liquid has been detected.

A low resistance value received at the console can cause "False" alarms as well.

```
AUG  6, 2007  9:20 AM

LIQUID STATUS

AUG  6, 2007  9:20 AM


L 1:GAS STP SUMP
SENSOR NORMAL


L 2:DSL STP SUMP
FUEL ALARM


L 3:UNLEADED ANNULAR
SENSOR NORMAL


L 4:DIESEL ANNULAR
FUEL ALARM


L 5:DSL DISPENSER PAN
SENSOR NORMAL


L 6:UNL DISPENSER PAN
SENSOR NORMAL


* * * * * END * * * * *
```

```
LIQUID DIAGNOSTIC

L 1:GAS STP SUMP
  SAMPLES=        5
 LOW REF1=      818
HIGH REF1=     5517
   VALUE1=    99471

L 2:DSL STP SUMP
  SAMPLES=        5
 LOW REF1=      818
HIGH REF1=     5519
   VALUE1=    98671

L 3:UNLEADED ANNULAR
  SAMPLES=        5
 LOW REF1=      818
HIGH REF1=     5517
   VALUE1=    80506

L 4:DIESEL ANNULAR
  SAMPLES=        5
 LOW REF1=      818
HIGH REF1=     5516
   VALUE1=    19081

L 5:DSL DISPENSER PAN
  SAMPLES=        5
 LOW REF1=      820
HIGH REF1=     5528
   VALUE1=   144003

L 6:UNL DISPENSER PAN
  SAMPLES=        5
 LOW REF1=      820
HIGH REF1=     5530
   VALUE1=   128105

L 7:
  SAMPLES=        5
 LOW REF1=      820
HIGH REF1=     5527
   VALUE1= 14325677

L 8:
  SAMPLES=        5
 LOW REF1=      820
HIGH REF1=     5531
   VALUE1= 14323514
```

UST w/ 95% Limiting Drop Tubes

ALARM HISTORY REPORT

---- IN TANK ALARM ----

T 1:REG. UNLEADED

OVERFILL ALARM
MAR 7. 2008 2:13 PM
JAN 17. 2008 2:31 PM
JAN 11. 2008 9:10 AM

LOW PRODUCT ALARM
APR 24. 2008 2:52 PM
APR 4. 2008 7:06 PM
MAR 29. 2008 1:59 PM

HIGH PRODUCT ALARM
NOV 1. 2006 4:54 PM
AUG 29. 2005 7:24 AM
MAR 29. 2005 8:18 AM

INVALID FUEL LEVEL
DEC 15. 2007 4:25 PM
APR 25. 2007 9:42 PM
OCT 21. 2006 12:24 PM

PROBE OUT
JAN 16. 2006 11:53 AM
JAN 16. 2006 9:12 AM
JAN 10. 2006 11:14 AM

DELIVERY NEEDED
APR 23. 2008 10:55 AM
APR 16. 2008 9:05 PM
APR 11. 2008 10:02 AM

LOW TEMP WARNING
JAN 16. 2006 12:32 PM
NOV 8. 2004 11:46 AM

UST w/ 90% Limiting Ball Floats

ALARM HISTORY REPORT

---- IN-TANK ALARM -----

T 1:UNLEADED 10K

HIGH WATER ALARM
AUG 17. 2007 7:36 AM

OVERFILL ALARM
JAN 7. 2008 1:41 PM
NOV 29. 2007 8:47 AM
NOV 18. 2007 5:19 AM

LOW PRODUCT ALARM
JAN 26. 2008 11:37 AM
JAN 25. 2008 11:18 AM
JAN 3. 2008 8:44 PM

HIGH PRODUCT ALARM
DEC 10. 2007 4:42 PM
AUG 26. 2007 5:35 PM
AUG 26. 2007 12:21 AM

95% alarm within the past 30 days

INVALID FUEL LEVEL
DEC 7. 2007 8:23 PM
DEC 7. 2007 5:55 PM
NOV 30. 2007 9:14 PM

PROBE OUT
DEC 7. 2007 8:22 PM
DEC 7. 2007 8:11 PM
AUG 27. 2007 5:05 PM

HIGH WATER WARNING
DEC 7. 2007 8:18 PM
AUG 17. 2007 7:36 AM

DELIVERY NEEDED
JAN 26. 2008 11:15 AM
JAN 25. 2008 9:46 AM
JAN 3. 2008 7:26 PM

MAX PRODUCT ALARM
AUG 26. 2007 5:39 PM
AUG 26. 2007 12:22 AM
AUG 25. 2007 11:39 AM

100% alarm within the past 90 days

PERIODIC TEST FAIL
DEC 8. 2007 8:00 AM
NOV 22. 2007 3:56 AM
NOV 13. 2007 4:35 AM

Per. test fails in past 30 days

Incon TS-1001/2001 Regulatory Report Pg 1

This printout summarizes all items a DEP inspector could ask for
This report shows the status of all components of the system, the last 12 months of passing Static Tests & 12 months of Sensor Status Reports.

BELLMAWR VALERO
220 S. BLACKHORSE PK.
BELLMAWR NJ 08108
856-933-1404
CONSOLE SN 108941

04/09/2008 15:48

REGULATORY REPORT

HARDWARE STATUS

TS-CIM	NOT INSTALLED
TS-ROM	NOT INSTALLED
TS-SEM 1	NOT INSTALLED
TS-SEM 2	NOT INSTALLED
TS-CPM	NOT INSTALLED
PRINTER	OPERATIONAL
FAX/MOD	NOT INSTALLED

PROBES

PROBE 1	OPERATIONAL
PROBE 2	OPERATIONAL
PROBE 3	OPERATIONAL

SENSORS

SENSOR 1	OPERATIONAL
SENSOR 2	OPERATIONAL
SENSOR 3	OPERATIONAL
SENSOR 4	OPERATIONAL
SENSOR 5	OPERATIONAL
SENSOR 6	OPERATIONAL

AUXILIARY INPUTS

AUX IN 1	OPERATIONAL
AUX IN 2	OPERATIONAL

PASSED LEAK TESTS

TANK 1

05/01/2006	2:19
LEAK TEST	0.20 GPH
SLOPE	-0.00 GPH

TANK 2

05/01/2006	3:39
LEAK TEST	0.20 GPH
SLOPE	0.05 GPH

TANK 3

05/01/2006	3:44
LEAK TEST	0.20 GPH
SLOPE	0.04 GPH

CVS TANKS
PASSED SENSOR
COMPLIANCE TESTS

CVS TANK 1

04/09/2008	12:00
SENSOR NO. 1	
93 ANNULAR	
03/28/2008	12:00
SENSOR NO. 1	
93 ANNULAR	
02/27/2008	12:00
SENSOR NO. 1	
93 ANNULAR	
01/28/2008	12:00
SENSOR NO. 1	
93 ANNULAR	
12/29/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
11/29/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
10/30/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
09/30/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
08/31/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
08/01/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
07/02/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
06/02/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
05/03/2007	12:00
SENSOR NO. 1	
93 ANNULAR	
04/03/2007	12:00
SENSOR NO. 1	
93 ANNULAR	

CVS TANK 2

04/09/2008	12:00
SENSOR NO. 3	
87 ANNULAR	
03/28/2008	12:00
SENSOR NO. 3	
87 ANNULAR	
02/27/2008	12:00
SENSOR NO. 3	
87 ANNULAR	
01/28/2008	12:00
SENSOR NO. 3	
87 ANNULAR	
12/29/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
11/29/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
10/30/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
09/30/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
08/31/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
08/01/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
07/02/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
06/02/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
05/03/2007	12:00
SENSOR NO. 3	
87 ANNULAR	
04/03/2007	12:00
SENSOR NO. 3	
87 ANNULAR	

CVS TANK 3

04/09/2008	12:00
SENSOR NO. 5	
DSL ANNULAR	
03/28/2008	12:00
SENSOR NO. 5	
DSL ANNULAR	
02/27/2008	12:00
SENSOR NO. 5	
DSL ANNULAR	
01/28/2008	12:00
SENSOR NO. 5	
DSL ANNULAR	
12/29/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
11/29/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
10/30/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
09/30/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
08/31/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
08/01/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	
07/02/2007	12:00
SENSOR NO. 5	
DSL ANNULAR	

Incon TS-1001/2001 Regulatory Report Pg 2

This printout summarizes all items a DEP inspector could ask for
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06/02/2007 12:00
SENSOR NO. 5
DSL ANNULAR

05/03/2007 12:00
SENSOR NO. 5
DSL ANNULAR

04/03/2007 12:00
SENSOR NO. 5
DSL ANNULAR

CVS LINES
PASSED SENSOR
COMPLIANCE TESTS

CVS LINE 1

04/09/2008 12:00
SENSOR NO. 2
93 STP SUMP

03/28/2008 12:00
SENSOR NO. 2
93 STP SUMP

02/27/2008 12:00
SENSOR NO. 2
93 STP SUMP

01/28/2008 12:00
SENSOR NO. 2
93 STP SUMP

12/29/2007 12:00
SENSOR NO. 2
93 STP SUMP

11/29/2007 12:00
SENSOR NO. 2
93 STP SUMP

10/30/2007 12:00
SENSOR NO. 2
93 STP SUMP

09/30/2007 12:00
SENSOR NO. 2
93 STP SUMP

08/31/2007 12:00
SENSOR NO. 2
93 STP SUMP

08/01/2007 12:00
SENSOR NO. 2
93 STP SUMP

07/02/2007 12:00
SENSOR NO. 2
93 STP SUMP

06/02/2007 12:00
SENSOR NO. 2
93 STP SUMP

05/03/2007 12:00
SENSOR NO. 2
93 STP SUMP

04/03/2007 12:00
SENSOR NO. 2
93 STP SUMP

CVS LINE 2

04/09/2008 12:00
SENSOR NO. 4
87 STP SUMP

03/28/2008 12:00
SENSOR NO. 4
87 STP SUMP

02/27/2008 12:00
SENSOR NO. 4
87 STP SUMP

01/28/2008 12:00
SENSOR NO. 4
87 STP SUMP

12/29/2007 12:00
SENSOR NO. 4
87 STP SUMP

11/29/2007 12:00
SENSOR NO. 4
87 STP SUMP

10/30/2007 12:00
SENSOR NO. 4
87 STP SUMP

09/30/2007 12:00
SENSOR NO. 4
87 STP SUMP

08/31/2007 12:00
SENSOR NO. 4
87 STP SUMP

08/01/2007 12:00
SENSOR NO. 4
87 STP SUMP

07/02/2007 12:00
SENSOR NO. 4
87 STP SUMP

06/02/2007 12:00
SENSOR NO. 4
87 STP SUMP

05/03/2007 12:00
SENSOR NO. 4
87 STP SUMP

04/03/2007 12:00
SENSOR NO. 4
87 STP SUMP

CVS LINE 3

04/09/2008 12:00
SENSOR NO. 6
DSL STP SUMP

03/28/2008 12:00
SENSOR NO. 6
DSL STP SUMP

02/27/2008 12:00
SENSOR NO. 6
DSL STP SUMP

01/28/2008 12:00
SENSOR NO. 6
DSL STP SUMP

12/29/2007 12:00
SENSOR NO. 6
DSL STP SUMP

11/29/2007 12:00
SENSOR NO. 6
DSL STP SUMP

10/30/2007 12:00
SENSOR NO. 6
DSL STP SUMP

09/30/2007 12:00
SENSOR NO. 6
DSL STP SUMP

08/31/2007 12:00
SENSOR NO. 6
DSL STP SUMP

08/01/2007 12:00
SENSOR NO. 6
DSL STP SUMP

07/02/2007 12:00
SENSOR NO. 6
DSL STP SUMP

06/02/2007 12:00
SENSOR NO. 6
DSL STP SUMP

05/03/2007 12:00
SENSOR NO. 6
DSL STP SUMP

04/03/2007 12:00
SENSOR NO. 6
DSL STP SUMP

ANNUAL TANK GAUGING SYSTEMS CERTIFICATION

- Contrary to statements by ATG system manufacturers who state their systems are “self-testing”, ensuring the monitoring system’s equipment will perform properly when needed by physically manipulating the components into an alarm condition and ensuring that the required audible/visual indications are received at the ATG system console is recommended in many circles within the industry.
- What is done:
  - Liquid-level Probes are removed & placed on the surface of the tank-field, re-connected to their probe cables, and then the floats are moved to positions to trigger fuel and water level alarms.
    - ✓ An external audible overfill horn’s proper function (if present) is also verified with these steps.

TANK MONITORING SYSTEMS (ATG) CERTIFICATION continued

- Field Sensors are removed for testing:
  - ✓ Interstitial/Annular space sensors
  - ✓ Turbine/Piping Sump sensors
  - ✓ Dispenser Sump/Pan sensors
- Electronic Line Leak Detectors should receive a 3.0 GPH functionality test.
  - NOTE: NJDEP RDM regulations do not require the ATG system to specifically shut-down the line system in the event a leak is detected. But it must provide an audible/visual indication of the problem when detected.

o Any components of the system found to not be working should be reported to the owner/operator for immediate repair since the ATG system's ability to provide Release Detection or Overfill Prevention could be ineffective or completely unavailable.

o Testers should attain manufacturer's Certification for the specific gear being tested.

Any Questions?

Thank you for your attention and participation in this presentation today.