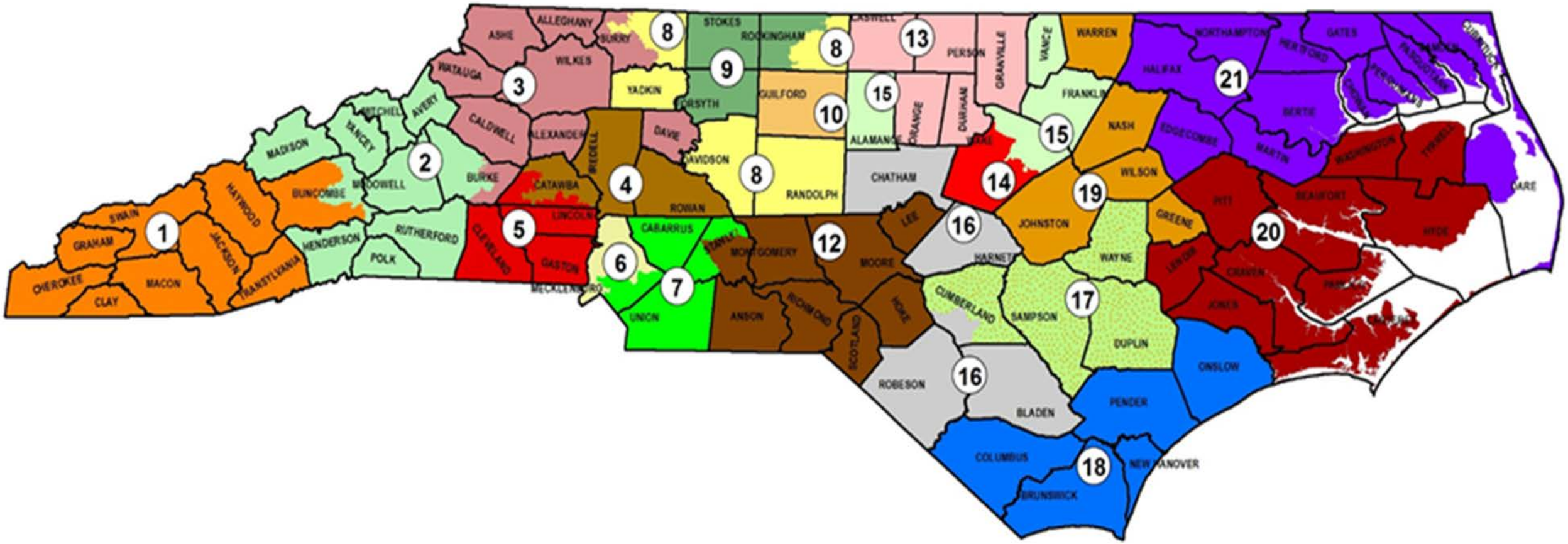
May 2, 2018

Department of Environmental Quality

Public Information Session for NC's Update UST Regulations

NC Inspectors Map



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NC Inspector Assignments: West

Area	Inspector	Area	Inspector
1)	Jeff Robinson	7)	Jack Stutts
2)	Matthew Rosone	8)	Jason Chapple
3)	Keith Mosteller	9)	Jenny Lilley
4)	Kevin Fite	10)	Avery Waring
5)	James Cook	12)	John Hasty
6)	Jerren Rogers		

NC Inspector Assignments: East

Area	Inspector	Area	Inspector
13)	Doug Mustian	18)	John Hooks
14)	Becky Loyd	19)	Ed Owen
15)	Michelle Sclafani	20)	Kim Cole
16)	Pamela Harrelson	21)	Vacant
17)	Gina Williams		

Topics

- Vapor and Groundwater Monitoring
- SIR Performance Criteria
- USTs Used for Emergency Power Generation
- Monthly Requirements
  - UST-27 – Walkthrough Inspections

Topics

- Annual Requirements
  - UST-22B – Walkthrough of Leak Detection Equipment
  - UST-22C – Walkthrough of Sumps
- Triennial Requirements
  - UST-22A – Overfill Operability Testing
  - UST-23A – Spill Bucket Integrity Testing
  - UST-23B – Containment Sump Integrity Testing

Vapor and Groundwater Monitoring

- Must keep a record of site assessments for as long as the method is used.

Statistical Inventory Reconciliation Performance Criteria

- What is different about SIR?
- When did the change go into effect?

SIR

- **What is different now?**
  - Owners/operators must be able to report the SIR results within a 30-day monitoring period.

SIR

- **What does that mean?**
  - You must have your leak detection results for that month. You can not wait until the 15th day of the next month to get last months results.
  - Ex) You need your March 2018 SIR results by March 31, 2018.

SIR

- **How?**
  - Most SIR vendors require between 20 to 25 days of good data to calculate your leak rate for a "month".
  - You must send your records promptly so that you will receive your results back in a timely manner.
  - Contact your SIR provider to determine the best method to meet this requirement.

SIR

- **When did the change go into effect?**
  - Effective June 1, 2017

USTs Used for Emergency Power Generation

- USTs and associated piping installed prior to 11/1/07 are required to conduct release detection.

- Release detection requirements must be met by **October 13, 2018**

USTs Used for Emergency Power Generation

- **What does this mean?**
  - Must have release detection for tanks
  - Must have release detection for piping
  - Must meet all other requirements we have talked about today.

Tank Release Detection

- Must implement a method of monthly release detection for tanks
  - Automatic Tank Gauge
  - Interstitial Monitoring

Piping Release Detection

- Must implement a method of release detection for **ALL** piping
- The type of release detection you need depends on the set up of supply and return lines
  - Pressurized Piping
  - Suction Piping
  - “Gravity” Fed Piping

Piping Release Detection

- Pressurized piping
  - Annual Line Tightness Test
  - Monthly Interstitial Monitoring
  - Electronic Line Leak Detector
    - Monthly 0.2 GPH test
    - Annual 0.1 GPH test
  - All pressurized piping must also have a Automatic Line Leak Detector

Piping Release Detection

- All pressurized piping must also have a Automatic Line Leak Detector that must be tested annually
  - Mechanical Line Leak Detector
  - Electronic Line Leak Detector
  - If an ALLD cannot be installed then interstitial monitoring is required with sump sensors wired to shut down pumping system.

Piping Release Detection

- All pressurized piping must also have a Automatic Line Leak Detector that must be tested annually
  - Mechanical Line Leak Detector
  - Electronic Line Leak Detector
  - If an ALLD cannot be installed then interstitial monitoring is required with sump sensors wired to shut down pumping system.

Piping Release Detection

- Suction Piping
  - European (Safe) Suction
    - Exempt from release detection
    - Requires completed UST-19
  - American (Standard) Suction
    - Line Tightness Test every 3 years
    - Monthly Interstitial Monitoring

Piping Release Detection

- "Gravity" Fed Piping
  - Release detection required if fuel could continuously flow in piping
    - Annual Line Tightness Test
    - Interstitial Monitoring

Questions?

- For Emergency Generator Questions, Contact
  - UST Section – 919-707-8171
  - Michael Phelps – 336-776-9684 or michael.phelps@ncdenr.gov

Monthly Walkthrough Inspections – Form UST-27

- Spill Containment
- Leak Detection
- Corrosion Protection

- First Walkthrough Inspection must be completed prior to **October 13, 2018**

UST-27

Insert Page

Monthly Walkthrough Inspections

- This form must be used to document the monthly walkthrough inspections. Only complete the sections that apply to your facility.
- Inspect the applicable items below for your site. If an item is not applicable, then choose **N/A**. Enter the month and day of the inspection below the month along with inspectors initials. If no problem is observed, then mark **P** (Pass). If a problem is observed, then mark **F** (Fail). If **Fail**, indicate what action was taken and date it was taken to repair the issue in the table at bottom of form or attach documentation of any repairs.
- Inspections may be conducted in accordance with PEI RP 900, "Recommended Practices for the Inspection and Maintenance of UST Systems".

UST FACILITY								Year
Facility ID		Facility Name						

By entering your name below, you certify, under penalty of law, that the inspection data provided on this form documents the UST system equipment was checked in accordance with 40 CFR 280.36 (as incorporated by 15A NCAC 2N .0407).

ALL TANKS		**Month/Day**						
		First Initial Last Name						
Spill Containment Manhole (Spill Bucket) If a UST system receives deliveries at an interval greater than every 30 days, then check prior to delivery.	No dirt, trash, water, or product in the spill-containment manhole							
	No cracks, bulges, or holes in the spill-containment manhole. For metal buckets, no significant corrosion/pitting							
	All clamps and rings that seal bucket around fill riser are tight							
	No obstructions inside the fill pipe.							
	Fill cap in good condition and seals tightly on fill pipe.							
	For double-walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area.							
LEAK DETECTION								
Electronic	The power is on and console operational							

Form UST-27 - Spill Containment

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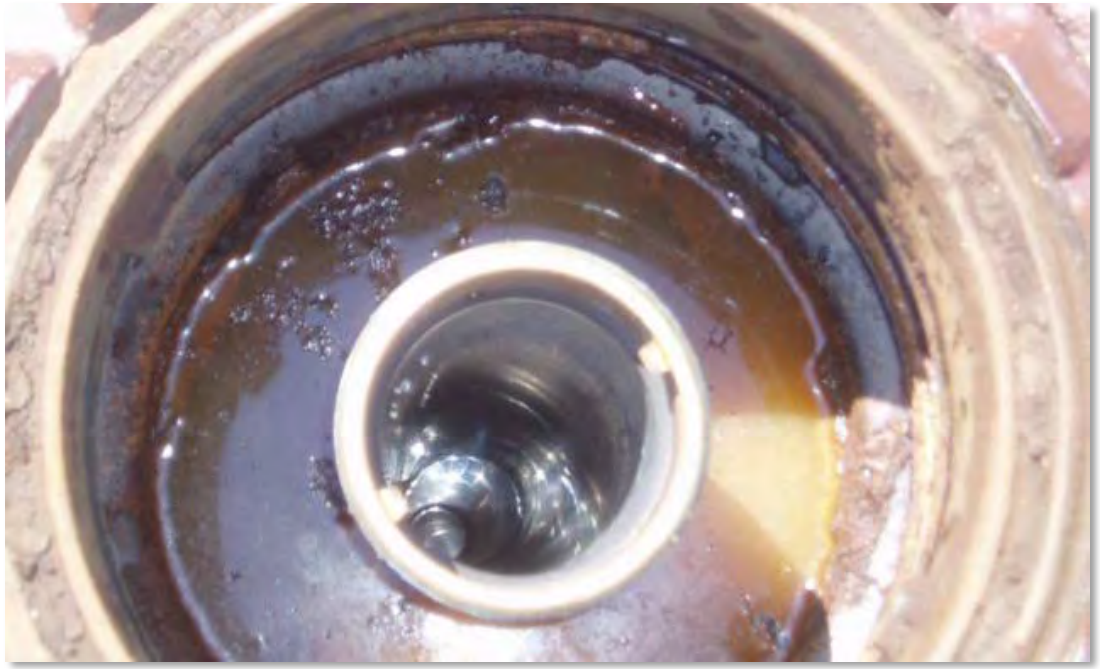
Spill Containment

- No dirt, trash, water, or product in the spill-containment manhole



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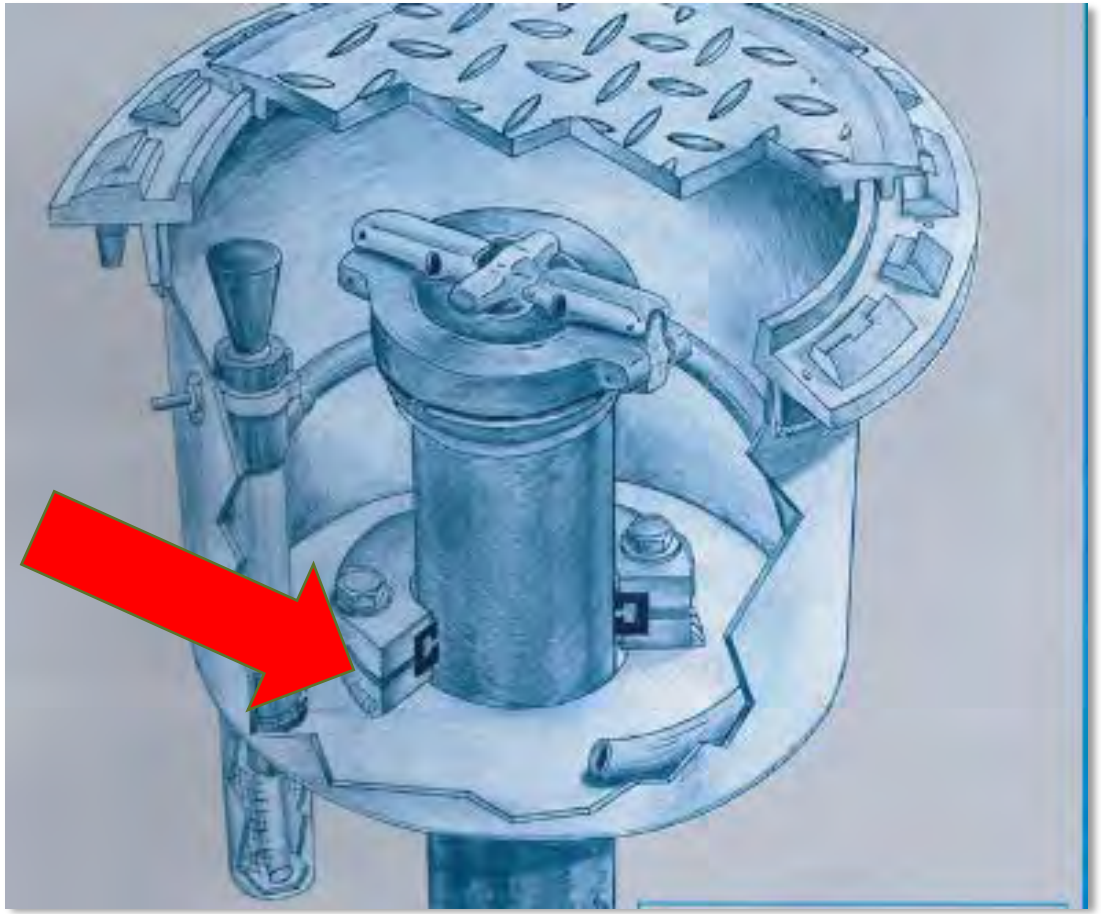
Spill Containment

- No cracks, bulges, or holes in the spill- containment manhole. For metal buckets, no significant corrosion/pitting

Form UST-27 - Spill Containment

- All clamps and rings that seal bucket around fill riser are tight



Form UST-27 - Spill Containment

- No obstructions inside the fill pipe.

Form UST-27 - Spill Containment

- Fill cap in good condition and seals tightly on fill pipe.

Form UST-27 - Spill Containment

- For double-walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area.
  - Spill Buckets installed prior to November 1, 2007
    - Sensor Status report or Manual Monitoring
  - Spill Buckets installed after November 1, 2007
    - Sensor Status report AND Alarm History report

Form UST-27 - Spill Containment

- If a UST system receives deliveries at an interval greater than every 30 days, then check prior to delivery.

Form UST-27 - Leak Detection

- Electronic Monitoring Console
- Automatic Tank Gauge (ATG)
- Interstitial Monitoring – Electronic & Manual for Tanks and Piping
- Statistical Inventory Reconciliation (SIR)
- Other – Manual Tank Gauging, Vapor Monitoring, Groundwater Monitoring

Form UST-27 - Leak Detection

- Electronic Monitoring Console
  - Has power, No Warning or Alarm lights flashing, Printer has paper and functions.

Form UST-27 - Leak Detection

Department of Environmental Quality

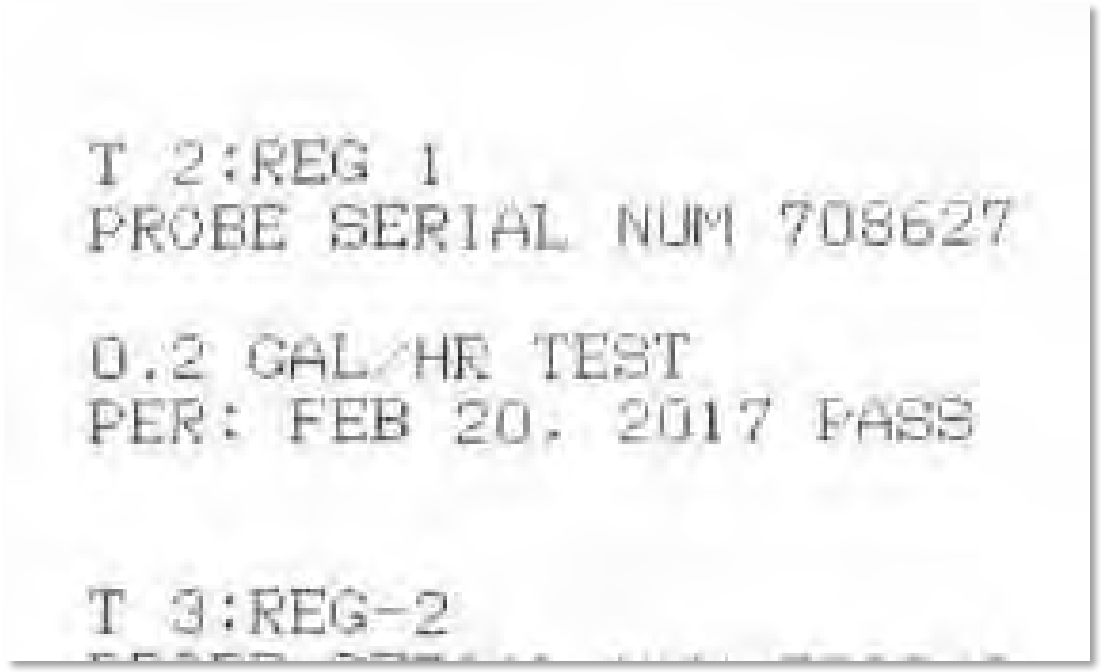
Form UST-27 - Leak Detection

Department of Environmental Quality

Form UST-27 - Leak Detection

- Automatic Tank Gauge (ATG)
  - Liquid Measurements taken and appears accurate
  - Passing Tank Test – CSLD, SCALD, 0.2 GPH

Leak Detection – ATG – 0.2 GPH



08/14/2017 6:31 AM

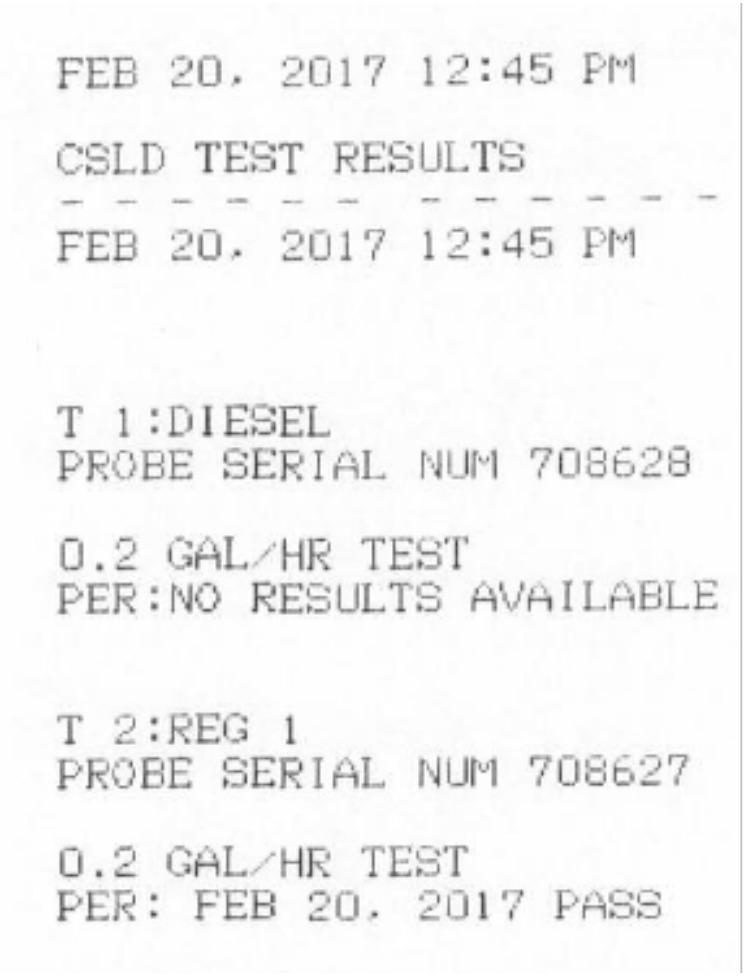
LEAK TEST REPORT

REG3 9814.3 GAL

REG3

LEAK TEST	0.200 GPH
LEAK THRESHOLD	0.100 GPH
CONFIDENCE LEVEL	99.0%
TEST STARTED	12:30 AM
TEST STARTED	08/14/2017
END TIME	4:49 AM
END DATE	08/14/2017
LEVEL	21.4 IN
GROSS	1708.1 GAL
TEMP	80.8 F
TEST RESULT	PASSED

Leak Detection – ATG – CSLD/SCALD



FEB 20. 2017 12:45 PM

CSLD TEST RESULTS

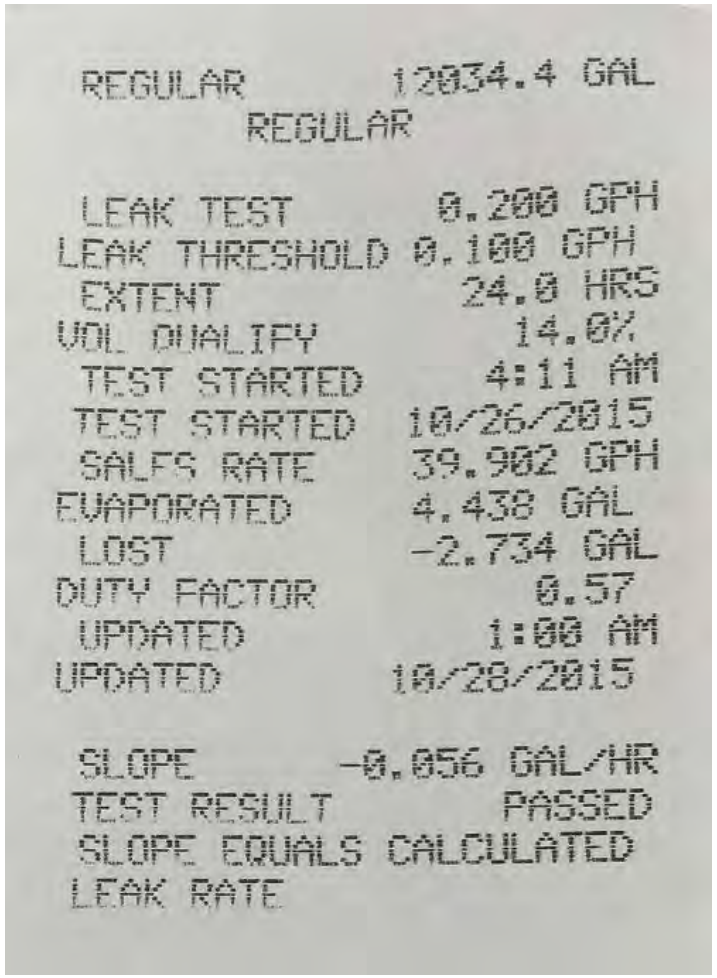
FEB 20. 2017 12:45 PM

T 1:DIESEL
PROBE SERIAL NUM 708628

0.2 GAL/HR TEST
PER:NO RESULTS AVAILABLE

T 2:REG 1
PROBE SERIAL NUM 708627

0.2 GAL/HR TEST
PER: FEB 20. 2017 PASS



REGULAR	12034.4 GAL
REGULAR	
LEAK TEST	0.200 GPH
LEAK THRESHOLD	0.100 GPH
EXTENT	24.0 HRS
VOL QUALIFY	14.0%
TEST STARTED	4:11 AM
TEST STARTED	10/26/2015
SALES RATE	39.902 GPH
EVAPORATED	4.438 GAL
LOST	-2.734 GAL
DUTY FACTOR	0.57
UPDATED	1:00 AM
UPDATED	10/28/2015
SLOPE	-0.056 GAL/HR
TEST RESULT	PASSED
SLOPE EQUALS CALCULATED LEAK RATE	

Form UST-27 - Leak Detection

- Monthly Piping Leak Detection for ELLDs
  - Passing 0.2 GPH Test

Leak Detection – ELLD 0.2 GPH

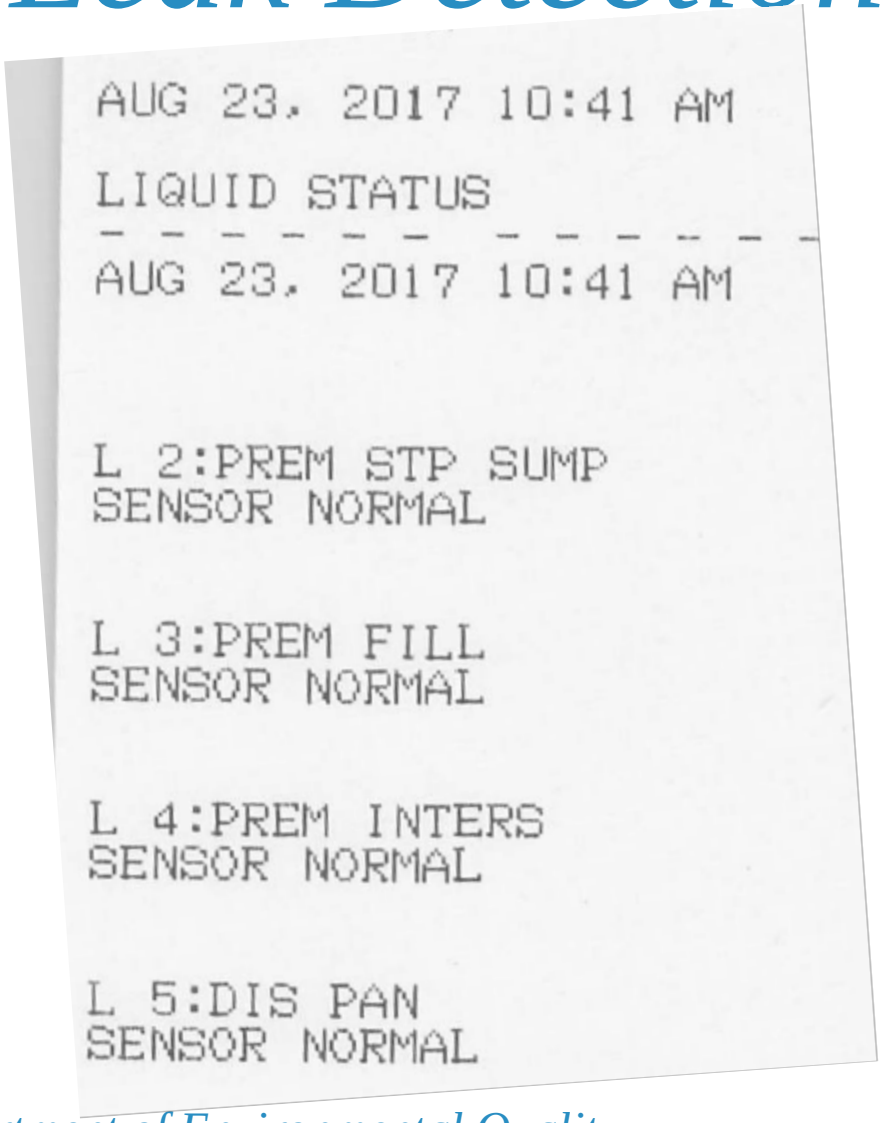
```
PRESSURE LINE LEAK
TEST RESULTS


Q 1:REG


 3.0 GAL/HR RESULTS:

LAST TEST:
NOV 28,2017   4:53PM PASS

NUMBER OF TESTS PASSED
  PREV 24 HOURS :    122
 SINCE MIDNIGHT :     81
```

```
0.20 GAL/HR RESULTS:

NOV 27,2017   6:47AM PASS
NOV 23,2017   3:44AM PASS
NOV 17,2017   2:32AM PASS
NOV 13,2017   6:55AM PASS
NOV  9,2017   5:15AM PASS
NOV  5,2017   3:20AM PASS
NOV  1,2017   2:40AM PASS
OCT 28,2017   3:00AM PASS
OCT 25,2017  12:32AM PASS
OCT 20,2017   2:22AM PASS


0.10 GAL/HR RESULTS:

NO 0.10 DATA AVAILABLE


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

Form UST-27 - Leak Detection

- Interstitial Monitoring – Electronic
  - Passing Sensor Status for each Sensor
  - Alarm History reports for each Sensor
    - Only needed for equipment installed after November 1, 2007

Leak Detection – Interstitial Electronic



AUG 23. 2017 10:41 AM

LIQUID STATUS

AUG 23. 2017 10:41 AM

L 2:PREM STP SUMP
SENSOR NORMAL

L 3:PREM FILL
SENSOR NORMAL

L 4:PREM INTERS
SENSOR NORMAL

L 5:DIS PAN
SENSOR NORMAL

ALARM HISTORY REPORT

----- SENSOR ALARM -----
L 2:PREM STP SUMP
STP SUMP
FUEL ALARM
JUL 20. 2017 10:01 AM

FUEL ALARM
JUL 3. 2017 3:43 PM

SENSOR OUT ALARM
MAY 3. 2017 2:25 PM

* * * * * END * * * * *

Department of Environmental Quality

Form UST-27 - Leak Detection

- Interstitial Monitoring for Tanks – Manual
  - Dry Interstice – Interstitial Space checked and dry
  - Brine Filled Interstice – Level of monitoring fluid within normal range
  - Vacuum Interstice – Vacuum level within tolerance

- Interstitial Monitoring for Piping – Manual
  - Containment Sumps (STP, Transition, Dispenser) checked and no liquid found

Form UST-27 - Leak Detection

- Statistical Inventory Reconciliation (SIR)
  - Check Water Level in Tank and record

MONTHLY INVENTORY RECORD

Tank Identification & Type of Fuel: #1 UNLEADED GASOLINE

Tank Size (gallons): 3008

Date of Water Check: 21 JULY 2017 Level of Water (inches): 0"

Department of Environmental Quality

Form UST-27 - Leak Detection

- Statistical Inventory Reconciliation (SIR)
- This month's Inventory analyzed. Last month's results passed and available.

Form UST-27 - Leak Detection

Monthly Statistical Inventory Reconciliation (SIR) Report March 2018

Company:	Get It & Go Gas, LLC	**Phone:**	123/456-7890
Address:	2020 Clear View Lane Pascagoula, NC 20202		

Station:	Get It & Go Gas 2	**Phone:**	N/A - x
Address:	247365 Day Lane Pasqcagoula, NC 20202		

SIR Provider:	TANKS BE US	**Phone:**	1-800-123-1234
SIR Version:	95.3C/Rev. 90 *	**Report Date:**	3-30-2018

Tank	Tank and Line Status	Calculated Leak Rate gph	Product	Capacity Gallons	Sales Gallons	Deliveries Gallons
GIGOD01	Pass	-0.01	HWY DIESEL	10000	2808	0
GIGOR03	Pass	-0.01	REGULAR	10000	2113	0
GIGOPrem02	Pass	-0.01	PREMIUM	10000	1619	0

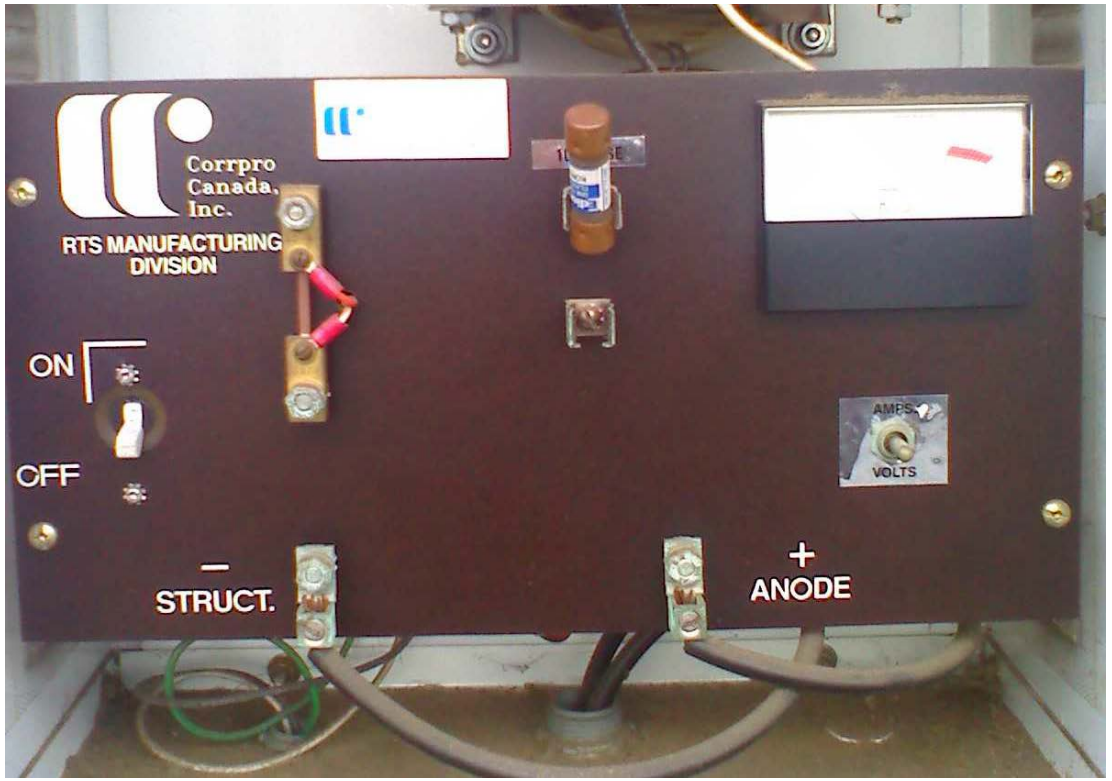
Form UST-27 - Leak Detection

- Others
  - Manual Tank Gauging
    - This month's inventory analyzed; Results compared to Weekly/Monthly standard. Last month's results passed and available for inspection
  - Groundwater Monitoring or Soil Vapor Monitoring
    - Wells sampled and results passed

Form UST-27 - Corrosion Protection

- Impressed Current Cathodic Protection Systems

Impressed Current Rectifier



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Form UST-27 - Corrosion Protection

- Impressed Current Cathodic Protection Systems
  - At least every 60 days
  - Record Volt and/or Amp Readings
  - Ensure Volt and Amp Readings are consistent with previous readings (no more than 20% change from last triennial test)
  - Record Hour meter reading (if available)
  - Use UST-27, UST-21, or other method

Form UST-27

- How do you fill out the form?
  - Must use either P (Pass), F (Fail), or N/A (Not Applicable)
  - **DO NOT** use checkmarks!!!!
  - Only need to use pages that apply to your facility.

Form UST-27

Facility ID#: 0-0-98765	Facility Name Get It & Go, LLC

By entering your name below, you certify, under penalty of law, that the inspection data provided on this form documents the UST system equipment was check (as incorporated by 15A NCAC 2N .0407).

ALL TANKS		**January**	**February**	**March**	**April**
	Month/Day	1-23	2-23	3-21	4-24
	First Initial Last Name	G. Williams	G. Williams	K. Fite	K. Fite
Spill Containment Manhole (Spill Bucket) If a UST system receives deliveries at an interval greater than every 30 days, then check prior to delivery.	No dirt, trash, water, or product in the spill-containment manhole	P	P	P	P
	No cracks, bulges, or holes in the spill-containment manhole. For metal buckets, no significant corrosion/pitting	P	P	P	P
	All clamps and rings that seal bucket around fill riser are tight	P	P	P	P
	No obstructions inside the fill pipe.	P	P	P	F
	Fill cap in good condition and seals tightly on fill pipe.	P	P	P	P
	For double-walled spill prevention equipment with interstitial monitoring, check for a leak in the interstitial area.	N/A	N/A	N/A	N/A

Form UST-27

- Find a problem during your Walkthrough Inspection?
  - Correct the problem and record what action was taken on page 4.
  - Keep and attach testing results, repair invoices, and/or other documentation for you next State inspection.

Date	Action Taken
4-24-2018	Removed tank stick from the regular 01 drop tube. Contacted transporter company to report issue. K. Fite
4-24-2018	Failure 0.2 gph test for Diesel tank. Contacted petroleum equipment contractor on 4-24-2018, he serviced probe and cleared alarm on 4-27-2018. K. Fite

Annual Walkthrough Inspections

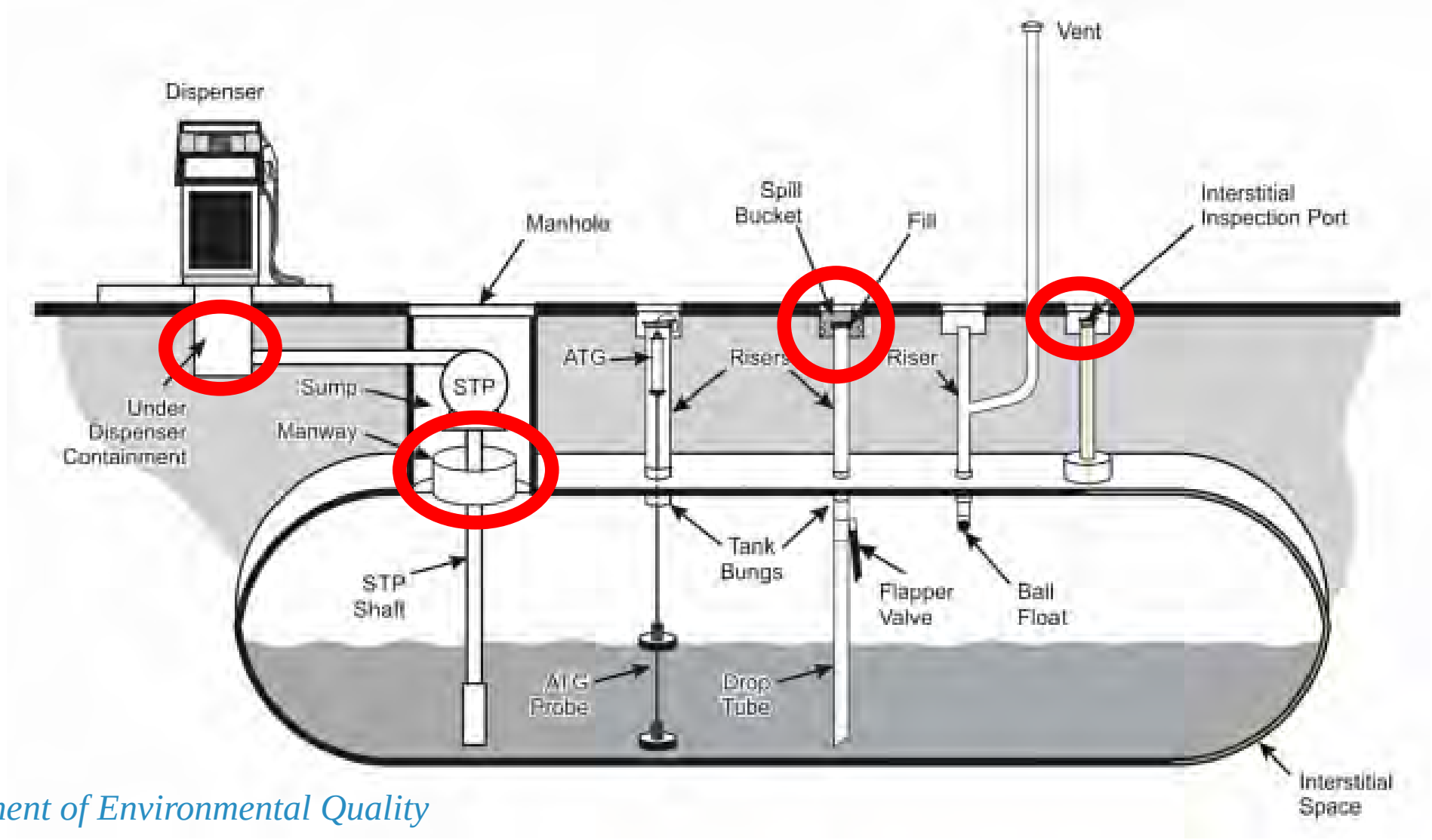
- UST-22B – Leak Detection Equipment Operability
- UST-22C – Sump Visual Inspections

- First Walkthrough Inspections and Testing must be completed prior to **October 13, 2018**

Annual Leak Detection Equipment Operability Check

- Form UST-22B
  - Sensors used for Interstitial Monitoring
  - Automatic Tank Gauge (ATG) and Probes
  - Tank Gauge Stick (SIR and Manual Tank Gauging)
  - Vacuum/Pressure Monitoring Equipment
  - Automatic Line Leak Detectors
  - Other – Groundwater or Vapor Monitoring

Form UST-22B – Interstitial Sensors



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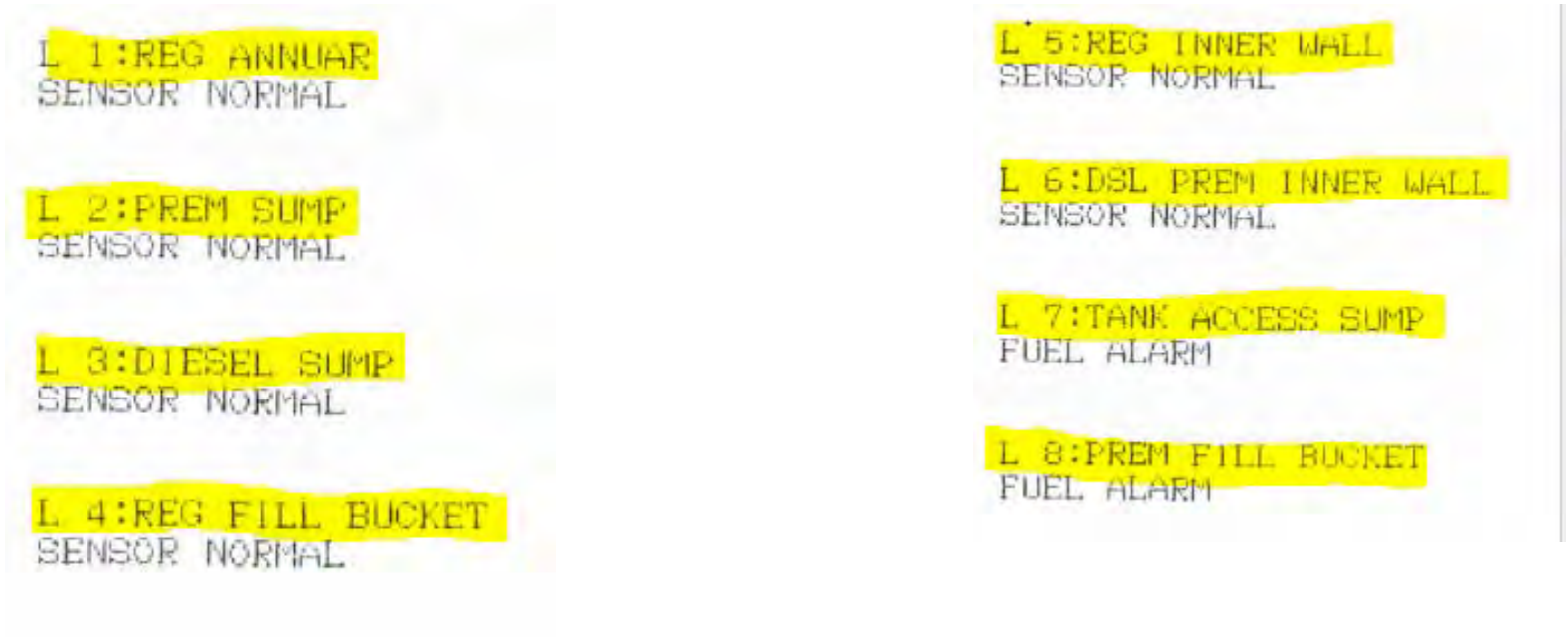
Form UST-22B – Interstitial Sensors

- All Sensors should be listed with location and labeled correctly – must match labeling/location on Sensor Status reports

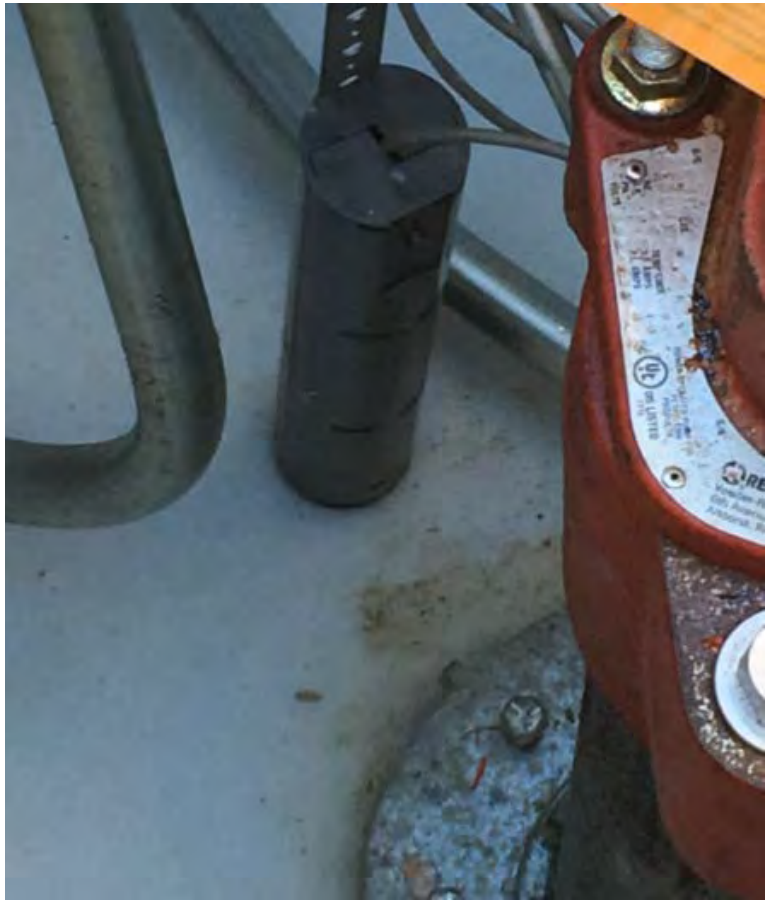


Form UST-22B - Sensors

- Type of Sensors
  - Discriminating or Non-Discriminating
  - Position Sensitive
  - Water or Product or Both

Form UST-22B - Sensors

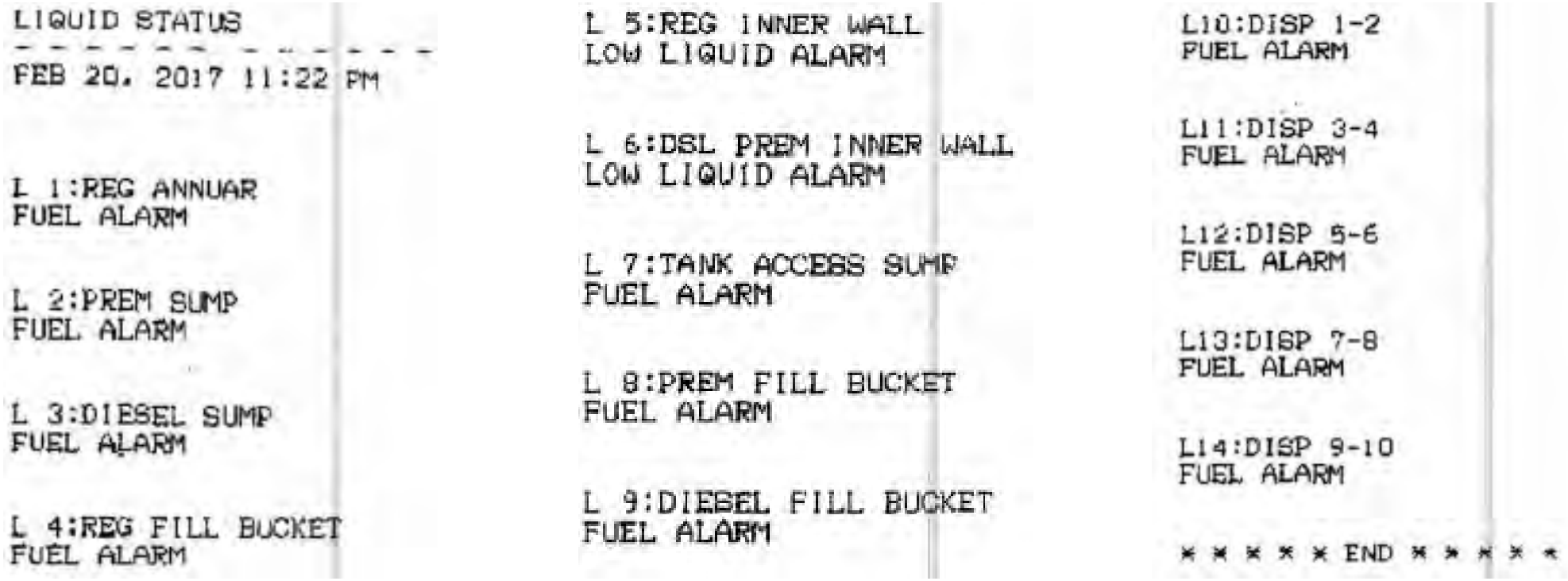
- When placed in liquid, does the sensor trigger, is the sensor properly identified on the ATG console?
- Sensor mounted at the lowest point of the interstice?



Department of Environmental Quality

Form UST-22B - Sensors

- Alarm Report from ATG must be attached.



LIQUID STATUS

FEB 20. 2017 11:22 PM

L 1:REG ANNUAR
FUEL ALARM

L 2:PREM SUMP
FUEL ALARM

L 3:DIESEL SUMP
FUEL ALARM

L 4:REG FILL BUCKET
FUEL ALARM

L 5:REG INNER WALL
LOW LIQUID ALARM

L 6:DSL PREM INNER WALL
LOW LIQUID ALARM

L 7:TANK ACCESS SUMP
FUEL ALARM

L 8:PREM FILL BUCKET
FUEL ALARM

L 9:DIESEL FILL BUCKET
FUEL ALARM

L10:DISP 1-2
FUEL ALARM

L11:DISP 3-4
FUEL ALARM

L12:DISP 5-6
FUEL ALARM

L13:DISP 7-8
FUEL ALARM

L14:DISP 9-10
FUEL ALARM

* * * * * END * * * * *

Form UST-22B - ATG

- ATG probes accurately measures fuel and water levels?
- Probe is not damaged and float moves freely?
- 90% alarm is set at proper level and activates?
- Water alarm is set at proper level and activates?

Form UST-22B – Tank Gauge Stick

- Can be clearly read, not warped or broken.
- Plastic button must be on bottom of stick.

Form UST-22B – Vacuum/Pressure Monitoring

- Vacuum/Pressure gauge is functional and calibration has been checked?

Form UST-22B – ALLDs

- Two types of Automatic Line Leak Detectors
  - Mechanical Line Leak Detectors (MLLD)
  - Electronic Line Leak Detectors (ELLD)

Form UST-22B – MLLDs

Department of Environmental Quality

Form UST-22B – ELLDs

Form UST-22B – ALLDs

- **Both** types of ALLDs must be tested annually using an approved testing method.
  - This is new for ELLDs – Self Test will no longer be accepted
- Appropriate section of the UST-22B must be completely filled out AND supporting documentation from contractor must be attached.

Form UST-22B – Groundwater/Vapor Monitoring

- Handheld or Electronic equipment operable, serviceable and/or calibrated?
- Equipment alarm and battery backup functional?
- Equipment configuration checked and within specifications?

Form UST-22B – Groundwater/Vapor Monitoring

- Probes and sensors have no residual buildup?
- Floats move freely, shaft not damaged, wires free of kinks/breaks?
- Alarm tested and operable?

Form UST-22B

- Any “No” marked on the form indicates that section fails the inspection and must be explained and corrected.
- New equipment (sensors, ALLDs) must be tested at installation.

Form UST-22C

- Annual Sump Visual Inspections
  - Dispenser Sump
  - STP, Transition, Other Sump

- First Visual Inspection must be completed prior to **October 13, 2018**

UST-22C

Insert Page

Delete Page

Annual Sump Visual Inspections (Dispenser Sumps)

Lock Form Data Entry

Underground Storage Tank (UST) system owners and operators are required to conduct a STP, dispenser, or other sump visual check at least annually for any UST system regardless of installation date. Results must be maintained for at least one year at the UST site or the tank owner or operator's place of business, and be readily available for inspection.

- Visually inspect STP, dispenser and other sump areas (whether containment present or not) for liquids (water or regulated substances), sump damage, penetration boot damage, faulty equipment, and equipment leaks. If none of the above items are observed during the inspection, check **Pass** in the appropriate column, otherwise check **Fail**. If **Fail**, indicate what action was taken to repair the containment sump or faulty equipment in the comment portion of this form or attach documentation of any repairs.
- If the sump contains a regulated substance or there are other indications of a release of a regulated substance, it must be reported as a suspected release using the UST-17A form, *UST Suspected Release 24 Hour Notice*.

UST FACILITY

Owner / Operator Name	Facility Name	Facility ID
Facility Street Address	**Facility City**	**County**

CONTRACTOR/PERSON CONDUCTING INSPECTIONS

Company Name	Phone	Email address

I certify, under penalty of law, that the testing data provided on this form documents the UST system equipment was checked in accordance with the manufacturer's guidelines and the applicable national industry standards listed in 15A NCAC 2N .0407/.0900.

Print Name of person conducting inspection	Signature of person conducting inspection	Inspection Date

Dispenser Sump		Disp #	Disp #	Disp #	Disp #	Disp #
ALL	No leaks, weeps, or drips observed					

Form UST-22C

Underground Storage Tank (UST) system owners and operators are required to conduct a STP, dispenser, or other sump visual check at least annually for any UST system regardless of installation date.

Form UST-22C

- What is considered a sump?
  - Any opening in the ground where you can access piping components.
    - Beneath Dispensers
    - Tank Tops
    - Transition areas
  - Does not need to be a manufactured containment sump

Form UST-22C

- Beneath Dispensers

Form UST-22C

- Tank Tops

Form UST-22C

- Transition Areas

Dispenser Sump - All

- No leaks, weeps, or drips
- Piping is free of defects
- Sump does not contain trash, debris, and used filters
- Flex connectors not frayed, twisted, kinked, or bent beyond manufacturer specifications
- Shear valves operate freely, close completely and are anchored correctly

STP/Transition/Other Sump - All

Dispenser Sump – All

Dispenser Sump		Disp # 1/2
ALL	No leaks, weeps, or drips observed	Pass
	Piping is free of defects	Pass
	Sump does not contain trash, debris and used filters	Fail
	Flexible connectors not frayed, twisted, kinked or bent beyond manufacturer specifications	N/A
	Shear valves operate freely, close completely and are anchored correctly	Pass

Without Containment

- Flex connector(s) and other metallic product piping and piping components are not in contact with soil or water or are cathodically protected

WITHOUT CONTAINMENT	Flex connector(s) and other metallic product piping and piping components are not in contact with soil or water or are cathodically protected	Pass

Without Containment

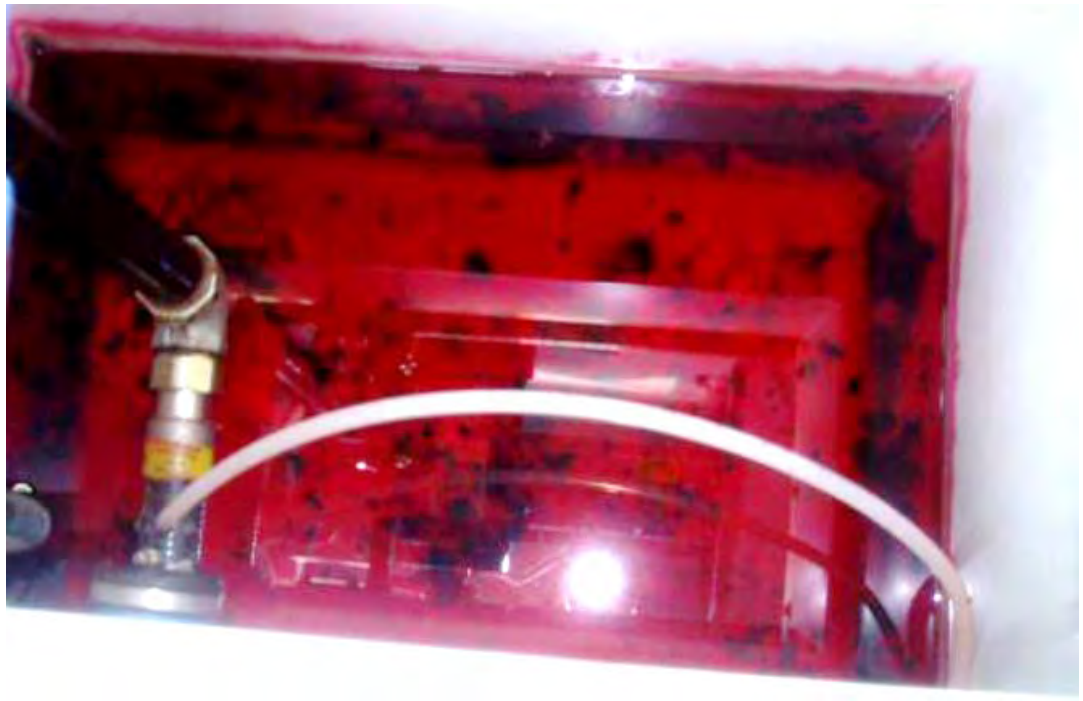
Without Containment

- What is the method of corrosion protection for the flex connectors and other metallic product piping and piping components at this dispenser?
- We can’t verify something we can’t see.

With Containment

- Sump is dry and doesn’t contain product and/or water
- Sump walls/bottom are not damaged (i.e., cracks, bulges, holes, etc.) (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)

With Containment



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With Containment

- Penetration fittings intact and in good condition (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)
- Sump Sensor is < 2” from lowest point (N/A if not conducting interstitial monitoring)

With Containment

With Containment

- Piping interstitial space is open to the sump (Open systems only, N/A if closed system or not conducting interstitial monitoring)

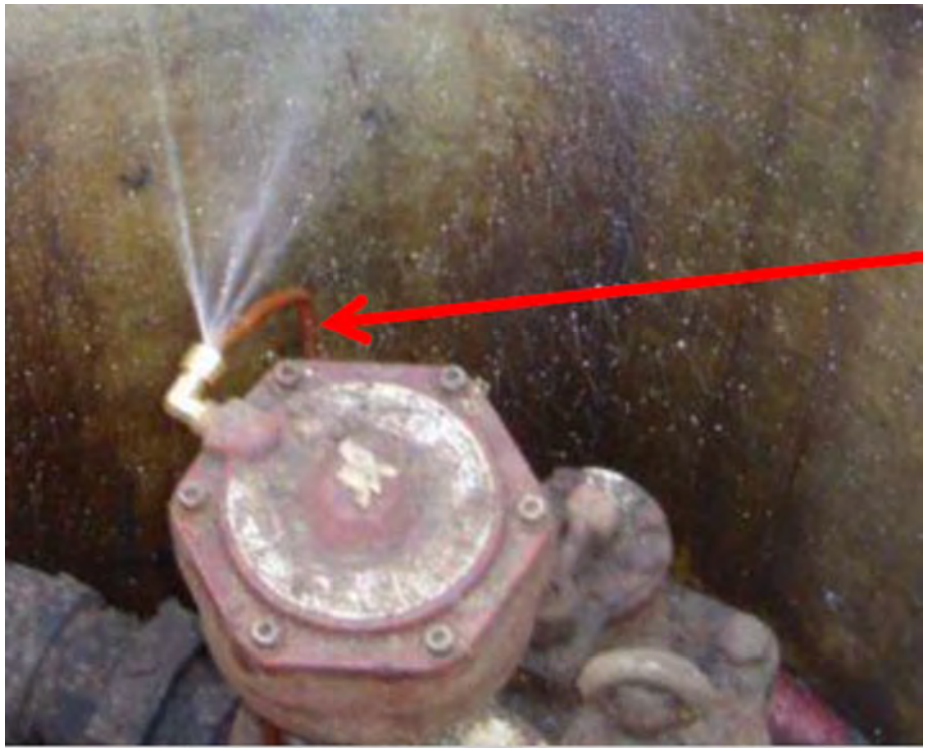
With Containment

WITH CONTAINMENT	Sump is dry and does not contain product and/or water	Pass
	Sump walls/bottom are not damaged (i.e., cracks, bulges, holes, etc.) (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)	Pass
	Penetration fittings intact and in good condition (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)	Fail
	Sump Sensor is < 2" from lowest point (N/A if not conducting interstitial monitoring)	Fail
	Piping interstitial space is open to the sump (Open systems only, N/A if closed system or not conducting interstitial monitoring)	N/A

STP/Transition/Other Sump - All

- No leaks, weeps, or drips
- Piping is free of defects
- Sump does not contain trash and debris
- Flex connectors not frayed, twisted, kinked, or bent beyond manufacturer specifications
- Mechanical line leak detector properly vented, vent tube not kinked or twisted, vent tube fittings intact and tightened

STP/Transition/Other Sump - All



STP/Transition/Other Sump - All

STP/Transition/ Other Sump	**Tank Size/Location:**	10,000
	Product:	Regular
ALL	No leaks at submersible pump, ALLD, or other pipe components	Pass
	Piping is free of defects	Pass
	Sump does not contain trash and debris	Fail
	Flexible connectors not frayed, twisted, kinked or bent beyond manufacturer specifications	N/A
	Mechanical line leak detector properly vented, vent tube not kinked or twisted, vent tube fittings intact and tightened	Pass

Without Containment

- Submersible pump head, flex connector(s) and other metallic product piping and piping components are not in contact with soil or water or are cathodically protected

WITHOUT CONTAINMENT	Submersible pump head, flex connector(s) and other metallic product piping and piping components are not in contact with soil or water or are cathodically protected	Pass

Without Containment

- What is the method of corrosion protection for the flex connectors and other metallic product piping and piping components in this sump?
- We can’t verify something we can’t see.

With Containment

- Sump is dry and doesn't contain product and/or water
- Sump walls/bottom are not damaged (i.e., cracks, bulges, holes, etc.) (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)

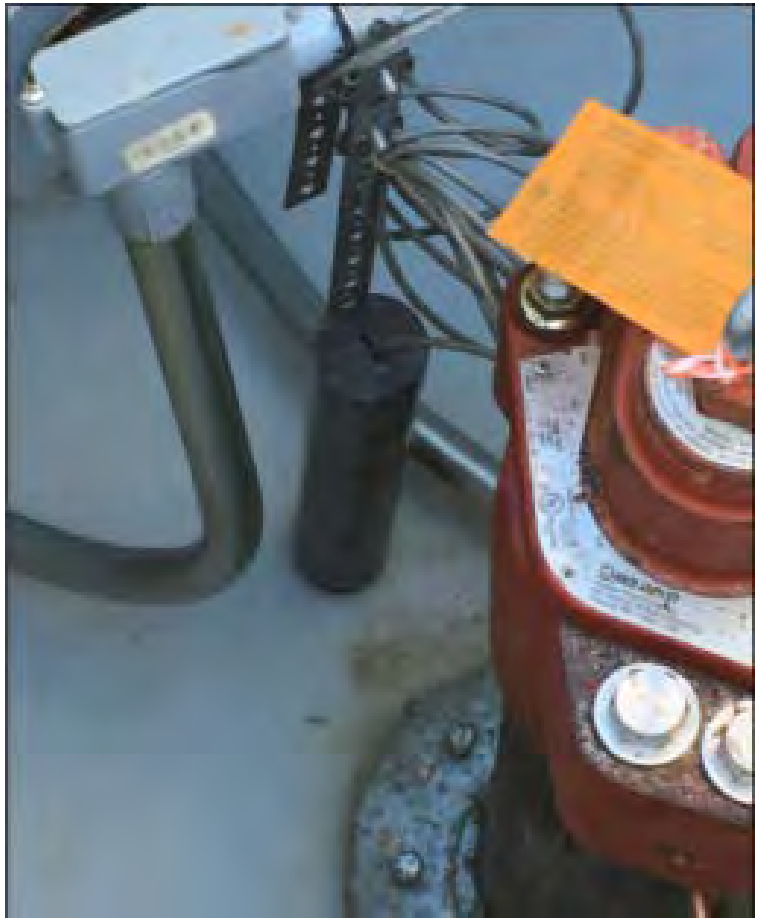
With Containment

With Containment

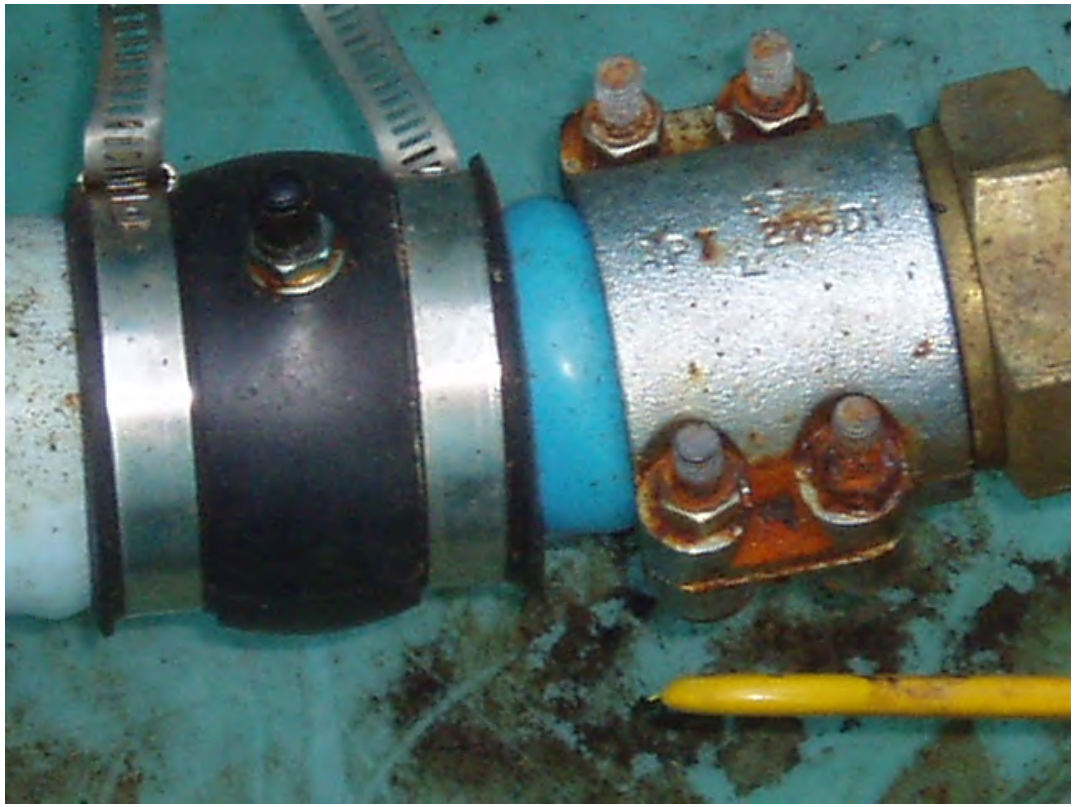
- Penetration fittings intact and in good condition (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)

With Containment

- Sump Sensor is < 2” from lowest point (N/A if not conducting interstitial monitoring)



With Containment



- Piping interstitial space is open to the sump (Open systems only, N/A if closed system or not conducting interstitial monitoring)

With Containment

- Sump lid, gasket and seals present and in good condition

With Containment

WITH CONTAINMENT	Sump is dry and does not contain product and/or water	Pass
	Sump walls/bottom are not damaged (i.e., cracks, bulges, holes, etc.) (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)	Pass
	Penetration fittings intact and in good condition (If conducting sump/interstitial monitoring then any failing item must be repaired. Repair is optional if not conducting sump/interstitial monitoring)	Fail
	Sump Sensor is < 2" from lowest point (N/A if not conducting interstitial monitoring)	N/A
	Piping interstitial space is open to the sump (Open systems only, N/A if closed system or not conducting interstitial monitoring)	N/A
	Sump lid, gasket and seals present and in good condition	Pass

Form UST-22C

- Mark each box with a Pass, Fail or N/A for each sump
- If **Fail**, indicate what action was taken to repair the containment sump or faulty equipment in the comment portion of this form **or** attach documentation of any repairs.
- Repair of containment sump is optional if not conducting sump/interstitial monitoring

Form UST-22C

- If the sump contains a regulated substance or there are other indications of a release of a regulated substance, it must be reported as a suspected release using the UST-17A form, UST Suspected Release 24 Hour Notice.

Triennial Testing

- UST-22A – Overfill Operability Check
- UST-23A – Spill Bucket Integrity Testing
- UST-23B – Containment Sump Integrity Testing

- Testing must be completed prior to **October 13, 2018**

Overfill Operability Check – Form UST-22A

- Overfill operability must be tested every 3 years. (only applies if installed prior to 11/1/07).
- Overfill equipment installed after 11/1/07 must be tested annually.
- Any newly installed overfill equipment must be tested annually.

Form UST-22A

- Flapper Valve/Auto Shut Off
  - Installed as part of the drop tube
  - Must be clear of obstructions to function

Form UST-22A

- Flapper Valve/Auto Shut Off
  - Must be removed to test operability
  - Must be set to activate at no more than 95% of tank volume (unless tank tilt criteria are met)

Form UST-22A

- High Level Alarm
  - Not the alarm on your Automatic Tank Gauge
  - Must be audible and identifiable by delivery person

Form UST-22A

- High Level Alarm
  - Must be removed to test operability
  - Must be set to activate at no more than 90% of tank volume (unless tank tilt criteria are met)

Form UST-22A

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Form UST-22A

- Ball Float Valve
  - Must be removed to test operability
  - Must be set to activate at no more than 90% of tank volume (unless tank tilt criteria are met)
  - Not approved for suction systems

Form UST-22A

- Each section must be filled out completely for each tank for the method of overfill on that tank
  - All questions must be answered
- Tank Tilt Determination must be completed for overfill above the allowed limits to pass
  - 95% for Flapper/Auto Shutoff
  - 90% for Ball Floats or High Level Alarms

Flow Restrictors (Ball Float Valves)

- Effective June 1, 2017
  - Can no longer install new ball floats
- If existing ball float is too short, then it must be replaced with another method of overfill
  - The UST Section is not aware of any manufacturer with procedures to increase the length of an existing ball float

Flow Restrictors (Ball Float Valves)

- Must be removed completely **OR** prove that it is set higher than other overfill methods used.
  - If level can’t be proven, then new overfill method must be set lower than 90%

Spill Bucket Integrity Testing – UST-23A

- Spill Bucket Integrity must be tested every 3 years.

- Testing must be completed prior to **October 13, 2018**

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Form UST-23A

- Visual inspection must pass
- Vacuum or Hydrostatic test
- Each section should be filled out for every tank.
- Spill Buckets installed after 11/1/07 must have both primary and secondary sections tested.

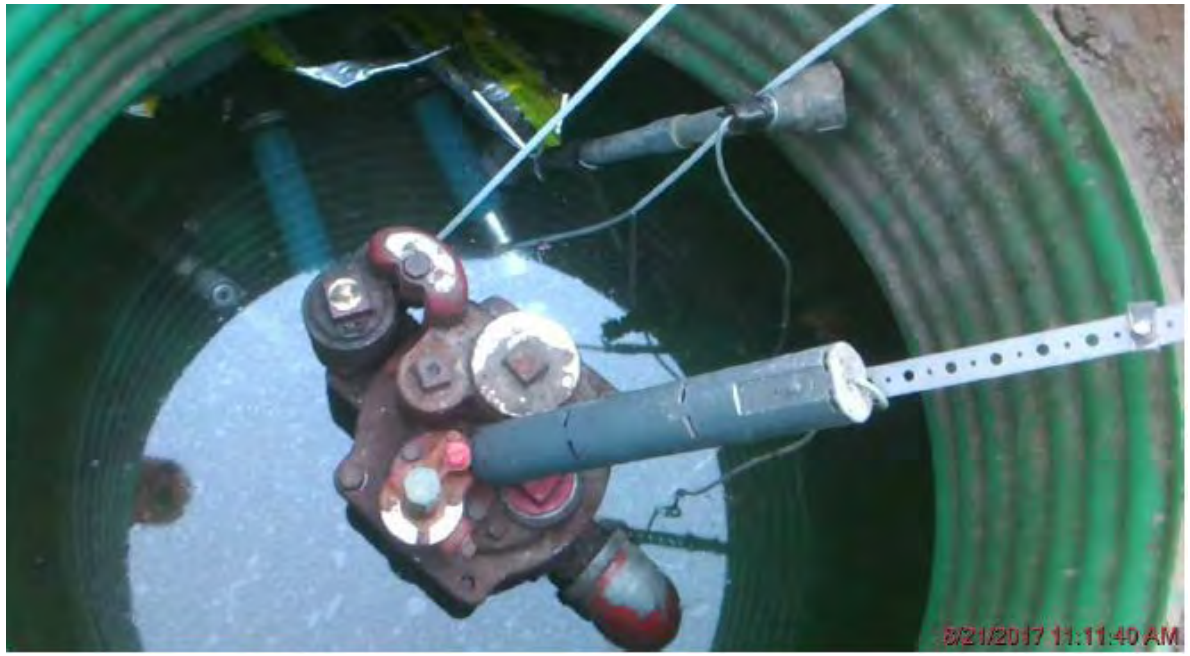
Form UST-23A

- Any Fail is considered a suspected release and should be investigated. (UST-17A & 17B must be submitted)
- Failed equipment must be repaired according to manufacturer's instructions or replaced.
  - Must use approved liner
  - New Spill Buckets must be double walled and interstitially monitored.

Containment Sump Integrity Testing – UST-23B

- Containment Sumps used for Interstitial Monitoring must be integrity tested every 3 years.

- Testing must be completed prior to **October 13, 2018**



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Form UST-23B

- Visual Inspection must pass
- Hydrostatic test
- Each section should be filled out for every sump/dispenser.

Form UST-23B

- Any Fail is considered a suspected release and should be investigated. (UST-17A & 17B must be submitted)
- Failed equipment must be repaired according to manufacturer's instructions or replaced.
  - New sumps must be monitored using sump sensors

Wrap up

- Forms
  - https://deq.nc.gov/about/divisions/waste-management/ust/forms
  - Make sure you look at all forms you receive from contractors
  - Have forms available at your next inspection

Wrap up

- Make sure the most recent version of the form is used
  - Check website for most recent versions

	Permits and Inspection	Revision Date	PDF	DOC
UST-24	Certification of No Visible Corrosion on Metallic Piping Components	10/2015		
UST-27	Monthly Walkthrough Inspections	2/2018		

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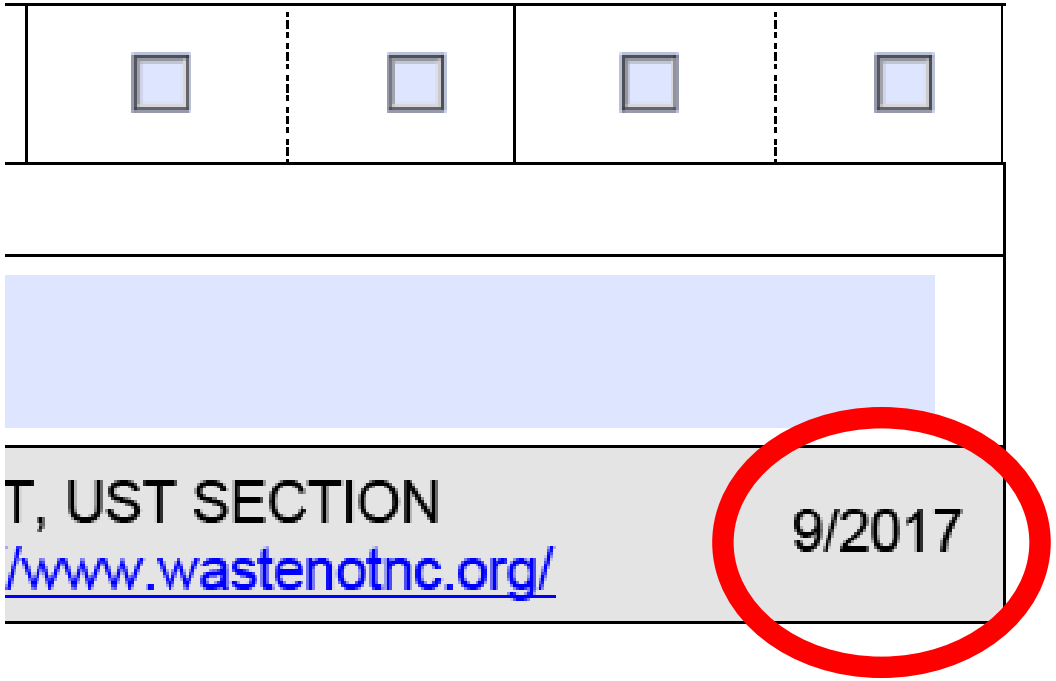
Wrap up

- Make sure the most recent version of the form is used
  - Check website for most recent versions



Questions?

- Gina Williams – gina.williams@ncdenr.gov or 910-567-5683
- Kevin Fite – kevin.fite@ncdenr.gov or 704-528-4748
- Michael Phelps – michael.phelps@ncdenr.gov or 336-776-9684
- Steve Booe – steve.booe@ncdenr.gov or 336-983-0561
- Your Inspector
- UST Section Central Office – 919-707-8171

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