Registration & Insurance

- Is the registration / insurance effective?
- Is the owner and operator information correct?

- If the insurance policy had expired since the last registration renewal, proof of insurance renewal will be required.
Corrosion Protection

Sacrificial Anodes
- Anodes are buried and attached to the UST
- Anodes suffer destructive effects of corrosion instead of the steel tank they are attached to

Impressed Current
- Rectifier provides direct current protection through anodes
- Steel is protected because the current going to the steel overcomes the corrosion-causing current
CP Testing

- Sacrificial Anode & Impressed Current Systems
- Testing conducted by NJ certified CP tester
- Passing criteria
  - -0.850 v (or more negative)
  - 100 mv shift (impressed only)
  - Minimum 3 readings per tank
  - 2 remote readings per tank for STI test method
- 3 year test
- 6 months retest after a repair or upgrade
- Impressed system must maintain a 60 day rectifier log
## Sacrificial Anode Passing Test

<table>
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<tr>
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### Impressed Current Passing System

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<tr>
<th>Structure</th>
<th>Local Soil Location</th>
<th>Remote (1)</th>
<th>Remote (2)</th>
<th>Local On (mv)</th>
<th>Instant Off (mv)</th>
<th>Polarization Decay</th>
<th>Result</th>
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<td>Regular 1 Tank Bottom</td>
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<td>-858</td>
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<td>-904</td>
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<td>-1261</td>
<td>-1151</td>
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<td>Super STP Transition</td>
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<td></td>
<td>-891</td>
<td>-864</td>
<td></td>
<td>Pass &gt; 850mv inst off</td>
</tr>
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</table>

**Comments:**
2 mv @5140 shunt. Unable to verify output settings. No containment on site at MPDs or STPs. Lines are SW FRP, STP transition is steel in soil and reads continuous with tanks and IC CP system. At both gasoline MPDs, all steel transition is fully visible above soil and CP is not needed. Diesel dispenser transition enters pan through a PVC sleeve, cannot Pivot.

---

This table lists potential measurements for different structures and their respective local soil locations, along with remote measurements and results. Each entry includes Local On (mv), Instant Off (mv), Polarization Decay, and a Result indicating whether the system meets the pass criteria.
<table>
<thead>
<tr>
<th>Location</th>
<th>Remote</th>
<th>Local</th>
<th>P/F</th>
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<tbody>
<tr>
<td>reg front frsr</td>
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<tr>
<td>reg stp rsr</td>
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<tr>
<td>reg2 frsr</td>
<td>-0.666</td>
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<tr>
<td>reg2 stp rsr</td>
<td>-0.872</td>
<td>pass</td>
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</table>
Transition Piping Protection

Sacrificial Anode ADDED

Isolation boot

Containment
Internal Lining

- Installed for CP or for compatibility
- Update tank registration to identify lining installation date

- Inspection schedule:
  - 10 years after installation
  - Every 5 years after
Release Detection Monitoring

- 1 method minimum for tank
- 2 methods minimum for lines (pressure)
- Method of release detection depends on construction and installation date
Release Detection Monitoring
Automatic Tank Gauging (ATG)

- Most common for single wall tanks
- Can detect a 0.2 gph leak
- Passing test every 30 days
- Certified annually
- Needs 2-4 hours downtime and 50% volume to complete a test

- CSLD/SCALD
  - Volume decrease to 10-15% volume
  - Less downtime - “grabs” data and calculates result

- ATG certified every year
- Keep certifications and monthly pass - 5 years
- IF ATG is not functioning = high level overfill alarm will NOT function
Proof of ATG monitoring

- Monitoring system can be programmed to auto print testing
- System will print last attempted test
- Look at the slip!
  - Did the test pass or fail?
  - Was the test done in the last 30 days?
Release Detection Monitoring
Interstitial Monitoring

- Double wall tanks only
- Continuously monitors the space between the inner and outer tank walls
- Sensor normal = passing RDM
  - Fuel alarm / sensor out alarm must be investigated within 7 days
- Sensors certified annually
Proof Of Monitoring

- Systems do not automatically print this report!
- At least 1 time a month, print and save sensor status printout
- Keep printouts for 5 years
Release Detection Piping

Pressurized Piping

- Turbine in sump pumps fuel to dispensers
- Faster fueling
- Always under pressure
- 2 forms of monitoring
  - Line Leak Detector
  - 2\textsuperscript{nd} form depends on construction
Line Leak Detector

- Required for ALL pressurized systems
- Mechanical or Electronic
- Tested annually
- 3.0 gph leak rate
Pressurized Leak Detection

- Line Tightness Test - annual 0.1 gph test
- Pressurized LLD - monthly 0.2 gph test
- Continuous Interstitial
  - Annual sensor certification
  - 3 year containment testing - STP & UDC
Not in Compliance
Suction Systems

- European Suction
  - No check valve at tank top
  - Product drains back into tank
  - NO RDM required

- American Suction
  - Check valve at tank top
  - Product remains in line
  - 3 year tightness test - single wall
  - Continuous interstitial - double wall
    - Sensor certification / integrity testing
7-day investigation

What to do?
- Confirm or disprove a suspected release
  - Visual inspection
  - Contractor testing
- Confirmed discharge - shut down system & call DEP hotline

When?
- Sudden loss
- Leak alarm
- Fuel alarm
- High water alarm
- Sensor out
- ATG/CSDL test fail
- Warm Start Mode
Spill Prevention

- Located at each fill port
- Inspected before/after each delivery OR once every 30 days (whichever is more often)
- Remove water/fuel/debris
- Integrity tested once every 3 years
  - 1st round was due by Oct. 13, 2018
Failing Spill Buckets

Take out of service if:
1. Crack or hole visible
2. Integrity test fails
Overfill Prevention: High Level Alarm

- Gravity or Pressurized Deliveries
- Visible/Audible to delivery driver
- Activate at 90% full
- Certified annually
Overfill Prevention: Flapper Shutoff

- Gravity Deliveries
  - 61 F-stop is compatible with pressurized
- Installed in drop tube
- Shutoff at 95% full
- Certified every 3 years
  - 1st round was due Oct. 13, 2018
- Bypassing shutoff device = no overfill prevention. No gauging sticks in drop tube!
Overfill Prevention: Ball Floats

- Gravity Deliveries
  - No compatible with suction systems
- Set at 90% full
- Certified every 3 years
  - 1st round was due Oct. 13, 2018

- Failing ball floats can not be repaired or replaced
  - Must install alternate overfill device
  - If installing shutoff flapper, entire cage must be removed (not just the float)
Release Response

- Release Response Plan
- Immediately stop the discharge
- Take necessary actions to contain and cleanup
- NJDEP hotline (877) WARN DEP
  - Failure to notify will result in a penalty assessment
    - $5,000 - 1st offense
    - $10,000 - 2nd offense
    - $20,000 - 3rd offense
Walk Through Inspections

- 30 day inspections
  - Spill buckets
  - Document passing release detection
  - Visual inspection of uncontained sumps or UDCs with no sensor

- Annual Inspection
  - Visual inspection
    - Piping sumps, STP sumps, dispensers
  - Document annual testing & certifications