



# **SOC Development Release Prevention**

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# **SOC Spill Prevention Team**

- **Bob Hutchinson, SC**
- **John Kneese, SC**
- **Carol Gill, CO**
- **Norm Stewart, WA**
- **Sheldon Schall, WI**

# Considerations Toward SOC Measures

- ☞ SOC Workgroup Springboard Performance Measures
- ☞ Combined “Existing” and “New”
- ☞ CFR regulatory language presented vs. how is it applied in current day practice
- ☞ Determine if non-compliance is considered “significant” release potential
- ☞ Attempted to *minimize* individual inspector “discretion,” but allow inspector discretion
- ☞ Reduced SP measures from 62 to 27

# Field Application / Expectations

- Regulatory inspector has an understanding of system components (CP, LD, Spill & Overfill, etc.) and their respective operation.
- Observe & report with minimal inspector or facility intervention actions to verify
- Utilize material/component listings & approvals
- Records are an option for the O/O to demonstrate compliance
- Facility is in compliance until determined to be out-of-compliance”
- State enforcement protocol accepted

# Factors the Prevention Team Recognized

- Pre-construction plan review
- Installation inspections
- Experience of state program (recordkeeping)
- State's policy on inspectors performing physical assessments, functionality tests, etc
- Frequency of inspection
- Interpretation / Application

## • State program variables

## • Facility variables

- Length of ownership
- Quality of management / ownership
- Nature of technology

## • Seasonal / climatic variables

## • Inspector practices / discretion

## • "Hints & Tips" reference

EPA		United States Environmental Protection Agency Washington, DC 20460		Right to Know Order No. 200-2000	
Notification for Underground Storage Tanks					
D. DESCRIPTION OF UNDERGROUND STORAGE TANKS (Complete for all tanks and piping at this location.)					
Tank Identification Number	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank (check only one)					
Currently In Use	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temporarily Closed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Permanently Closed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Date of Installation (month/year)					
3. Estimated Total Capacity (gallons)					
4. Material of Construction (check all that apply)					
Asphalt Coated or Bare Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Cathodically Protected Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Coated and Cathodically Protected Steel	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Composite (Other than Fiberglass)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Fiberglass Reinforced Plastic	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Lined Interior	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

# Elements the Prevention Team did not “factor in”:

- ➡ To what extent the state regulatory authority reviews installation / system design, installation standard compliance oversight or start-up operational assessment
- ➡ To what extent the state regulatory authority qualifies contractors or maintains contractor oversight.
- ➡ How complying with the “Spirit” of the rule impacts SOC.
- ➡ What is expected in terms of “ferreting” out information.
- ➡ Maintenance vs. repair vs. replacement
- ➡ How “Hints & Tips’ would be used

# Release Prevention Measure

## Release Prevention

I... Spill Prevention	1	1412	Spill prevention device is present and functional. [280.20(c)(1)(i), 280.21(d)]
II... Overfill Prevention	2	1420 1424	Overfill prevention device is present and operational. [280.20(c)(1)(ii), 280.21(d)]
		1421 ¶	<input type="checkbox"/> +Automatic shutoff is operational (i.e., device not tampered with or inoperable) [280.20(c)(1)(ii)(A), 280.21(d)]
		1422	<input type="checkbox"/> +Alarm is operational. [280.20(c)(1)(ii)(B), 280.21(d)]
		1423	<input type="checkbox"/> +Alarm is audible or visible to delivery driver. [280.20(c)(1)(ii)(B), 280.21(d)]
		1421	<input type="checkbox"/> +Ball float is operational. [280.20(c)(1)(ii)(B), 280.21(d)]

# The Wisconsin Approach:

## *Spill prevention (spill bucket)*

- ☉ Rule does not mandate size - most spill buckets are undersize for the delivery hose from the get-go
- ☉ Functionality is assessed - cracks, obstructed operating valve mechanism
- ☉ Product in the spill bucket - O/O fault or transport driver fault?
- ☉ Water in the spill bucket - demonstrates that bucket is tight vs. non compliance?
- ☉ Debris in spill bucket - anything other than miniscule reflects poor installation / poor design and/or poor maintenance management.

# The Wisconsin Approach:

## *Overfill*

- ☉ If it can not be visually verified O/O must prove it exists (WI verify during installation inspections)
  - Record or service provider's verification
  - 30 days to comply
  - Failure to comply with a second notice - red-tag
- ☉ Inspector should understand manufacturer's specifications
- ☉ Functionality is not likely to be witnessed or verified by inspector
  - Staining/free product may be a sign of overfill failure
  - Spot-check records for high capacity or large product drop
- ☉ Delivery records - Manifests checked randomly primarily to spot-check IC and SIR records.
- ☉ Transport drivers using sticks to over-ride overfill obstruction expediting product drop.

# Release Prevention Measure

## Corrosion Protection

III.b. Operation and Maintenance of Corrosion Protection	4	1434	CP systems were tested/inspected within 6 months of repair of any cathodically protected UST system. [280.33(e)]
	5	1427	Corrosion protection system is properly operated and maintained to provide continuous protection. [280.31(a)(b), 280.70(a)]
		NA	<input type="checkbox"/> +UST system (Choose one) <input type="checkbox"/> +UST in operation <input type="checkbox"/> +UST in temporary closure <input type="checkbox"/> +CP System is properly operated and maintained <input type="checkbox"/> +CP system is performing adequately based on results of testing [280.31(b)]; or <input type="checkbox"/> +CP system tested within required period and operator is conducting or has completed appropriate repair in response to test results reflecting CP system not providing adequate protection.

# The Wisconsin Approach cont.

## CP

- ☞ Corrosion resistant material or approved coating
  - Listed or recognized National Standard materials (e.g., STI-P3, UL )
  - Tape + approved coating material
- ☞ Compatible materials
  - Listed materials
- ☞ Compatible product not assessed
- ☞ Qualified tester - NACE or STI
- ☞ Focus on test cycle compliance and O/O *reaction* to a low test rather than on the low test.

# Release Prevention Measure

## Repair

III a. Operation and Maintenance □	3□	1433¶ 1435□	Repaired tanks and piping were tightness tested within 30 days of repair completion (not required w/internal inspections or if monthly monitoring is in use). [280.33(d)]□
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# The Wisconsin Approach:

- *Repairs*
- There is not a standard available for every repair
- Standards seldom address repairs in a comprehensive and definitive manner
- Focus more on who did the repair and what they did, rather than the standard by which it was performed
- TT if repair involved primary pipe or tank wall. No TT for spill bucket, drop tube, etc.
- No TT of interstitial space unless the outer wall was the recipient of the repair.
- Tester certification required only for individual testing tank or pipe.

# How is Wisconsin responding to the “gray” areas?

## 2001 rule revision:

- CP test for IC annually
- CP test for SA annually after 10 year of install

## Pending proposed rule revision:

- Annual functionality assessments
- CP test form
- Requirement to bring CP into compliance
- Double wall tank and pipe - new and replacement
- Dispenser & tank sump containment - new and within 2 yr. for existing
- Sump containment TT on install
- Prohibit groundwater and vapor monitoring
- Tampering or disabling CP, LD, spill or overflow prevention
- Installed on dedicated circuit
- Must have rectifier meter
- Established record keeping time periods

# SOC Perceptions / Issues

- An SOC violation does not mean that the O/O was willfully negligent.
- Fed rule does not address tank sump or dispenser sump containment - the area where we find the most current day problems.
- The SOC statistics appear to place the “weight” of non-compliance equally on all measures.
- One violation places a facility out of SOC regardless of the complexity or the number of tank systems at the facility.
- Reporting period - state 12 months vs. federal 12 month period.

# Miscellaneous Questions

## ☞ Gravity vs. metered flow

- ▮ What are the technical differences between gravity and metered flow?
- ▮ How can we visually tell the difference?
- ▮ Can both be used at the same facility?

## ☞ Does the term “any portion of the system that routinely contains product” include the fill tube?

## ☞ For what purpose and what procedure do we follow to compare the delivery records with the ullage at the time of the product delivery?

- ▮ Are there such records and how do we obtain them?

## ☞ What if records are unattainable?

## ☞ How long should we wait (e.g. 90 days) for the records until we determine SOC and forward the report?

## ☞ How much police work and enforcement should we do if the RP is uncooperative

# Miscellaneous Questions cont'd

- ☞ Should we verify compliance with all parts of 40 CFR 280.33 “Repairs Allowed”?
  - ▣ Repairs to FRP Tanks only by manufacturer’s authorized rep.
  - ▣ Replacement of leaking rusted metal piping; Manufacturer’s specs for fiberglass piping.
  - ▣ Tightness testing w/in 30 days, except for (1)–(3)
  - ▣ CP protected UST repair – CP system operationally tested within 6 months
- ☞ Maintain compliance records
- ☞ Is the UST owner/operator required to notify the implementing agency of UST repairs and subsequent tests?
- ☞ If we know of repairs, but they do not have documentation of UST system repairs and subsequent tests are they non-compliant?
- ☞ Is excavating the soil which can cave or wash back in at a later date (e.g. underneath dispensers) an acceptable corrosion protection method?

40 CFR 281.32(e) Have records of monitoring, testing, repairs, and closure maintained that are sufficient to demonstrate recent facility compliance status, except that records demonstrating compliance with repair and upgrading requirements must be maintained for the remaining operating life of the facility. These records must be made readily available when requested by the implementing agency.

# Miscellaneous Questions cont'd

- ☞ Who can answer our compliance questions about the corrosion protection systems (tank lining compatibility with additives 40CFR280.32), galvanic anode location, size & material, etc.), if the UST owner/operator doesn't know?
- ☞ Do we have to verify that non corrosive materials (e.g. piping) are compliant with 40 CFR 280.32 compatibility requirements?
- ☞ If the information is unattainable, do we list the UST facility as non-compliant?
- ☞ Who can provide training on corrosion protection systems (e.g. impressed current, sacrificial anodes, tank linings, etc.) and the referenced corrosion protection codes for our inspectors?