



**Midwest Environmental
Compliance Conference**

CROWNE PLAZA CHICAGO O'HARE
November 1-3, 2016



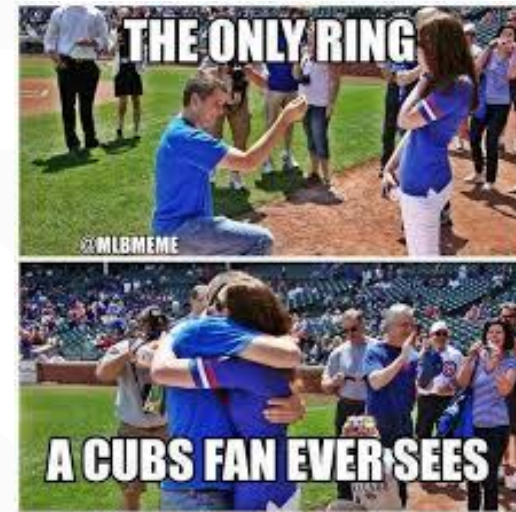
FUEL SYSTEM PLANNING, REPLACEMENTS & RELEASE

November 3, 2016

Frank Capic, P.E.

Associate Civil/Environmental
Engineer







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Objectives

- Awareness of the 2015 CFR Updates
- Planning for Systems & Preparing for Operational Needs
- Replace? Or Continue Repairs & Upgrades?
- Releases

**AWARENESS OF 2015 CODE OF
FEDERAL REGULATIONS (CFR)
UPDATES**



2015 Regulation Changes vs. 1988

- Certain portions of the UST rules - 40 CFR 280
- Similar to key portions of Energy Policy Act of 2005
- New O&M requirements
- Addresses UST systems deferred in the 1988 regs
- Implementation dates by:
 - Oct. 13, 2015 (inception)
 - April 11, 2016
 - Oct. 13, 2018



2015 Regulation Changes vs. 1988

Includes:

- Operator Training
- Secondary Containment
- Operations & Maintenance (O&M)
- Past deferrals on 3 types
- Compatibility – biofuel blends
- Non-categorical changes
- Update Codes of practice & Editorial/Tech corrections



Operator Training – by Oct. 13, 2018

- Definitions for all 3 operator Classes:
 - Class A
 - Class B
 - Class C
- Owner or Operator (O/O) designate 1 individual for Class A and B operator classes
- Remaining individuals meet Class C operator
- O/O retain list designated operators trained



Secondary Containment & Interstitial Monitoring – by Apr. 11, 2016

- For new and replaced tanks and piping
- Replace entire piping run for 50% or more of piping is removed and other piping installed
- Under dispenser containment (UDC) for all new dispenser systems



"EPA Musts for USTs"

<https://www.epa.gov/ust/musts-usts>



Operations & Maintenance Added Requirements – by Oct. 13, 2018

- Walkthrough Inspections: of spill prevention equipment – every 30 days; of containment sumps & hand held release detection - annually
- Release detection equipment tests (and LLDs) annually



"EPA Musts for USTs"

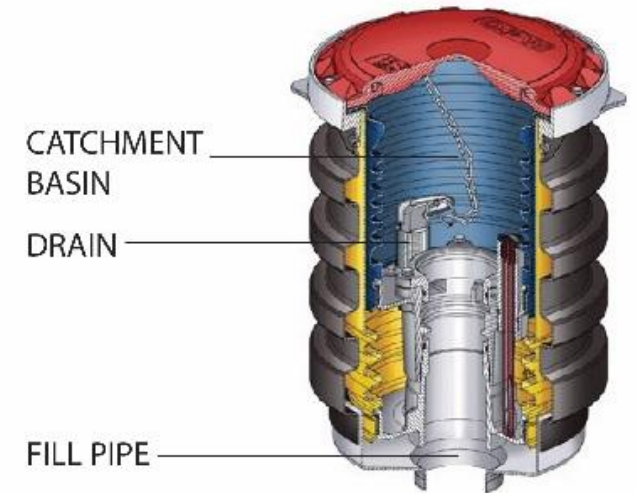
<https://www.epa.gov/ust/musts-usts>



Operations & Maintenance Added Requirements – by Oct. 13, 2018

- Spill prevention equipment (i.e., spill bucket) test every 3 years for liquid tightness test or use double-walled spill bucket with interstitial monitoring¹
- Containment sumps - every 3 years liquid tightness test or use double-walled with interstitial monitoring¹
- Overfill prevention equipment inspection every 3 years¹

¹ = USTs installed after Oct. 15, 2015 required at installation



“EPA Musts for USTs”

<https://www.epa.gov/ust/musts-usts>

Removed Past Deferrals – by Oct. 13, 2018



Airport Hydrant Systems



Field Constructed Tanks



Emergency Generator Systems



“EPA Issues Stronger UST Requirements”

<http://www.csnews.com/product-categories/fuels/epa-issues-stronger-ust-requirements>



Removed Past Deferrals – by Oct. 13, 2018

- Airport Hydrant Systems & Field Constructed Tanks
 - Notification & financial responsibility Oct. 13, 2018

HOWEVER:

- Release reporting & closure **Oct. 15, 2015**

Airport Hydrant Systems



Field Constructed Tanks



“EPA Issues Stronger UST Requirements”
<http://www.csnews.com/product-categories/fuels/epa-issues-stronger-ust-requirements>



Removed Past Deferrals – by Oct. 13, 2018

- EPA reclassified or excludes
 - Wastewater treatment tank systems
 - Containing radioactive materials
 - At Nuclear Regulatory Commission (NRC) facilities
 - ASTs associated with airport hydrant or field constructed



Compatibility Requirements Biofuels – by Oct. 13, 2015

- USTs must be compatible with fuel stored
- Notify no less than 30 days if switch to:
 - >10% ethanol or >20% biodiesel
 - Other biofuels substance – more information



Non-Categorical Changes – by Oct. 15, 2015

- Flow Restrictors/Ball Float Valves in vent lines eliminated for new systems
- Internal Lining – close tanks if lining fails inspection and no repair available
- Interstitial Monitoring Results – Per 280.50 & 280.52
- Repairs- definition revised; test within 30 days post-repair
- Vapor & Groundwater Monitoring Allowed – record site assessments (**before Oct. 13, 2018**)



Updates Codes & Tech Corrections

– by Oct. 15, 2015

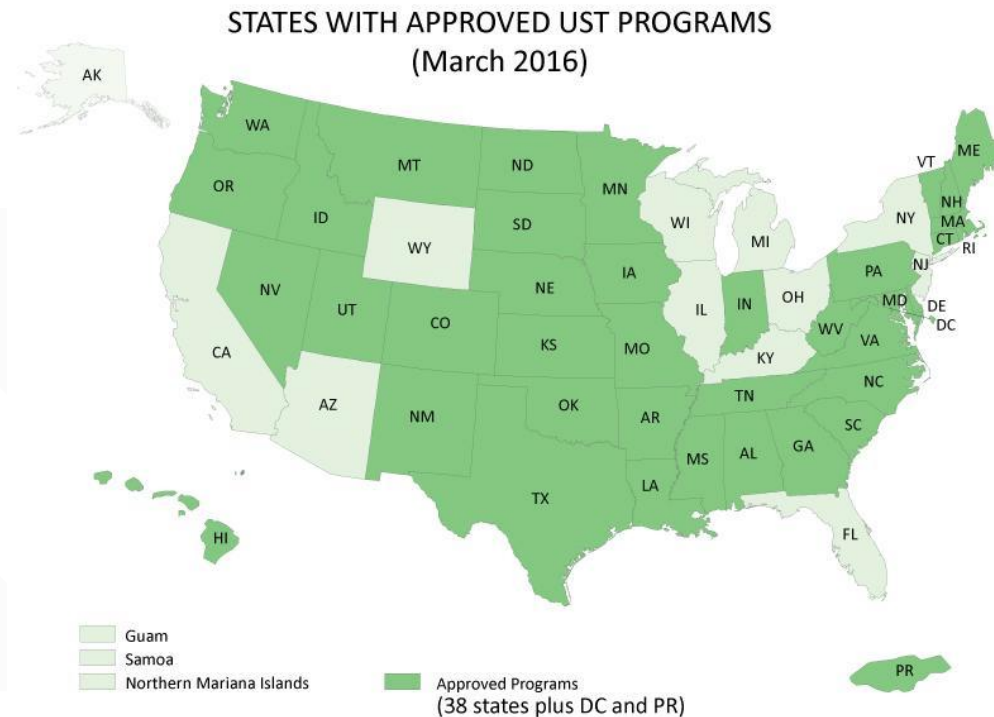
- Various code references updated or removed in 40 Part 280
- Technical corrections and new guidance and interpretations since original code developed in 1988



EPA Grant State Program Approval (SPA) – by Oct. 13, 2018

- Under 1988 regs, 38 states enacted statutes and state agencies developed regulations to obtain SPA to operate in lieu of federal program

EPA Grant State Program Approval (SPA) – by Oct. 13, 2018



“State Underground Storage Tank (UST) Programs”

<https://www.epa.gov/ust/state-underground-storage-tank-ust-programs>



EPA Grant State Program Approval (SPA) – by Oct. 13, 2018

- 2015 regs includes SPA updates in 40 CFR 281
- 38 states have until Oct 13, 2018 to re-apply
- Remaining 16 non-SPA states apply anytime
- What are benefits of SPAs?

OPERATIONAL NEEDS FOR EXISTING SYSTEMS

What does this mean for my system?

- Maintain Operator Training
- Maintain Operations & Maintenance needs
- Upgrade if needed Secondary Containment & Interstitial Monitoring
- Alarm Reporting for Interstitial Monitoring
- If internal lining fails and no cathodic protection (pre-1988 tanks) – if lining cannot be repaired, get tank closed
- Testing required following repairs (whether release is or is not reported)

PLANNING OPTIONS FOR NEW & EXISTING SYSTEMS

Planning Options for Fuel Systems

- Complete an Evaluation & Assessment of Your Fueling Needs
- Who are end users?
- Pros vs. Cons
 - Pros:
 - Eliminate 3rd party distribution station
 - Control volume
 - Travel time to 3rd party distribution station
 - Cons:
 - Costs to Manage/Maintain system
 - Notification requirements
 - Self-insured or need to obtain insurance to cover?

Planning Options for Fuel Systems

- Existing systems – how prioritize each one?
- Develop desktop matrix to evaluate which systems prioritize if multiple, consider:
 - Size of facility
 - Fuel Capacity
 - Throughput/Usage
 - Quantity/Type of USTs
 - Repair costs
 - Environmental Exposure/Liabilities

REPAIR/UPDATE VS. REPLACE EXISTING FUEL SYSTEMS

Repair vs. Replace?

- Based on site assessment results
- Determine rough order of magnitude costs or obtain quotes on repairs
- 2015 UST rules towards regulatory impacts such as UDCs, or internal linings, testing after repairs. May impact question?

Repair vs. Replace?

- If replacement option, be prepared for:
 - Develop design for new system to meet 2015 regs
 - Pre-design tasks:
 - Geotechnical and environmental soil investigations
 - Survey – utilities and surface elevations
 - Asbestos and LBP assessments/abatement
 - Closure of Tanks Prior to New Tank Installations
 - Temporary vs. Permanent vs. Abandoned-in-Place



MANAGING RELEASES

Managing Releases... Entire Context

- As of March 2016 USEPA estimates:
 - 562,751 active USTs (at approximately 202,000 sites) regulated by EPA's UST program
 - Since 1984 program inception = 1,832,148 USTs have been properly closed

Managing Releases... Entire Context

- As of March 2016 USEPA estimates:
 - +529,000 release incidents & +457,000 cleanups completed since 1984 program inception

Fiscal Year	Confirmed Releases		Cleanups Remaining	Percent Of Confirmed Releases Pending Cleanup Completion*
	Each Year	Cumulative		
Mid 2016	2,591	529,390	72,046	13.6%
2015	6,830	528,521	71,861	13.6%
2014	6,847	521,271	73,948	14.2%
2013	6,128	514,123	77,717	15.1%
2012	5,674	507,540	82,903	16.3%
2011	5,998	501,723	87,983	17.5%
2010	6,328	494,997	93,123	18.8%
↓	↓	↓	↓	↓
2005	7,421	452,041	119,242	26.4%

*Divide cleanups remaining by cumulative confirmed releases

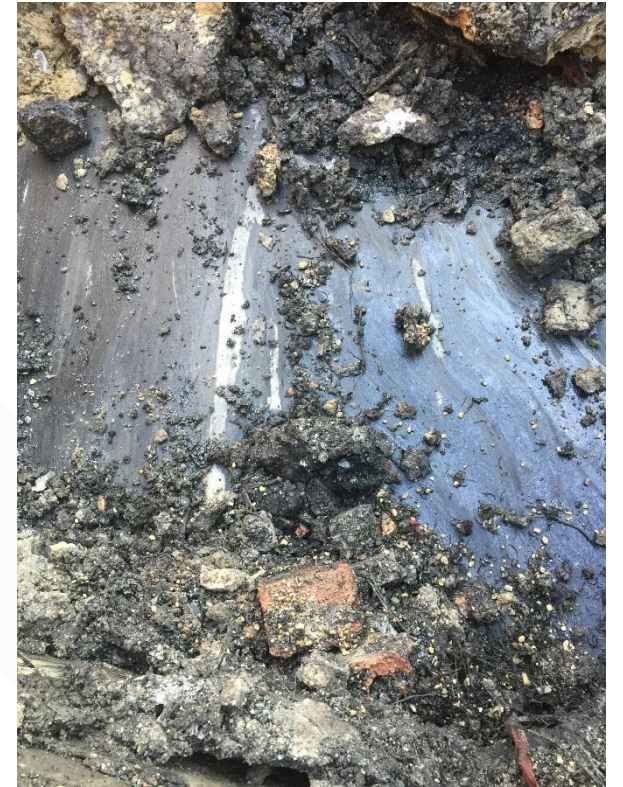
Managing Releases... If release occurs

- Maintain records demonstrating financial responsibility
 - To pay for any clean-up required
 - To correct for any environmental damages
 - Compensate 3rd parties for injures to properties/persons



Managing Releases... If release occurs

- Release Response/Corrective Action measures
- Correspondence with State LUST agencies
- Eligibility for reimbursement from state Trust Fund programs for cleanup costs



Conclusions

- Awareness of the 2015 CFR Updates to Fuel Systems
 - Relevance to your systems
 - Regulatory viewpoints
- Planning for Systems & Preparing for Operational Needs
 - Desktop evaluations
 - Site assessments
- Replace or continue repairs and upgrades? - Pros vs. Cons
- Managing releases:
 - Financial responsibility identify
 - Proactive cleanup

QUESTIONS?

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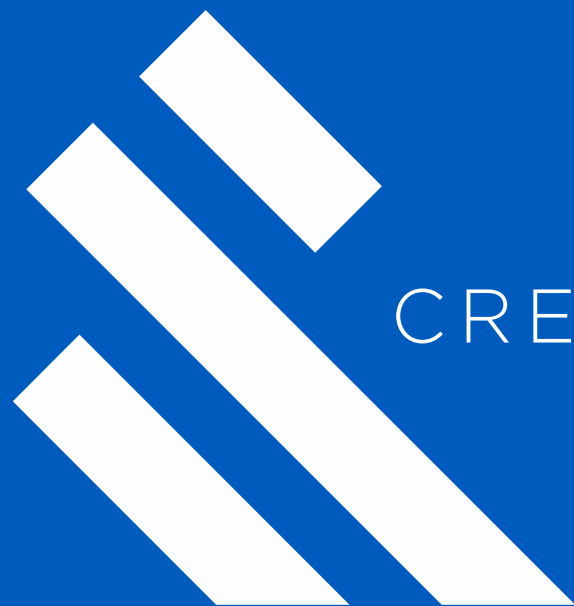
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CREATE AMAZING.