

Rough Draft AST Emergency Rule

Operation and Maintenance
Reporting and Recordkeeping
Design, Construction and Installation



An Introduction

- Joe Sizemore, Assistant Chief Inspector
- Moderator – Wendy Radcliff
- Note taker
- Working Meeting – questions, answers and comments
- The Rule is a ROUGH DRAFT



Sections to Discuss

- Section Five – Operation and Maintenance
- Section Six – Reporting and Recordkeeping
- Section Eight – Design, Construction and Installation

- These Sections do not apply to Level 3 Tanks (defined in 2.37) per 1.5.c.3.A



Section 5 – Operation & Maintenance

- Life Cycle Maintenance Plan (5.1.a)
 - Mandated by 22-30-5(b)(9)
 - Must specify maintenance requirements for inspections, corrosion prevention, spill and overflow prevention and leak detection and secondary containment



Routine Maintenance Inspections (5.2)

- Inspections of Secondary Containment (5.2.a)
 - Level 1 – every 72 hours
 - Level 2 – every 30 days
- Document and Report Problems
- Keep 12 months of records



Monthly Inspections (5.2.b)

- Monitor the Leak Detection Method
- Evaluate exterior surfaces
- Evaluate ancillary equipment (8.6)
- Secondary Containment
- Find, document and correct problems
- Keep 12 months of records



Annual Inspections (5.3.a)

- Mandated by 22-30-6
- Due by the first day of each year
- Level 1 tanks – inspection completed by a PE, API or STI inspector every three years
- Level 2 tanks – inspection completed by a PE, API or STI inspector every five years
- owner / operator will inspect in intervening years



Annual Inspections (5.3.a)

- Inspection is certified on a form prescribed by the Secretary
- Fit for Service or Not Fit for Service
- List deficiencies and provide a proposed schedule for abating the deficiencies.
- If tank is NOT Fit for Service schedule will include a plan for removal from service (5.3.e)



Annual Inspections (5.3.a)

- Items to Inspect (5.3.c)
 - AST Design
 - AST Construction and Installation
 - Proper foundation
 - Compatibility
 - General Maintenance and Testing
 - Review exterior surfaces and previous exam results
 - Corrosion Protection and Maintenance of CP System



Annual Inspections (5.3.a)

- Items to Inspect (cont.)
 - Release Detection Methods and Procedures
 - Release Prevention Methods and Procedures
 - Secondary Containment structures
 - Capacity, compatibility and structural integrity
 - Record Keeping
 - Leak detection, corrosion protection, O&M



Internal Inspections (5.4)

- Existing Tanks (5.4.a)
 - Performed in accordance with STI SP001 or API 653
- New Tanks (5.4.b)
 - From initial service date to first internal inspection:
 - 10 years for a level 1 AST
 - 20 years for a level 2 AST
 - Frequency may be increased if problems are documented



Internal Inspections (5.4)

- An alternative schedule (5.4.c):
 - Risk Based Inspections
 - Provided for in API 653 and API RP 580
- If the internal inspection show the tank is not Fit for Service (5.4.f):
 - it must be taken out of service, emptied, cleaned, repaired or closed.



Damaged Tanks (5.5)

- Must be inspected by PE, API or STI Certified Individual (5.5.a)
- Inspection occurs within seven days of documenting the damage (5.5.b.1)
- Certification (Fit for Service determination) to the Secretary within 30 days (5.5.b.1)



Spill Prevention Response Plans (5.6)

- Mandated by 22-30-9
- Initial is due by December 3, 2014 (5.6.a)
- Updated (submitted for review) every 3 years for a Level One tank and every 5 years for a Level Two tank (5.6.a.1)
- Provisions for early resubmittal (5.6.a.2)
 - Site modifications, plan failures



Spill Prevention Response Plans (5.6)

- Required elements (5.6.c):
 - Describe site activities
 - Hazard / process information, types and amounts of fluids stored
 - MSDS or SDS sheets
 - Site Maps / drawings
 - Preventative Maintenance Program
 - Emergency Response Information
 - Includes nearest downstream water supply



Spill Prevention Response Plans (5.6)

- For tanks in the ZCC, copies of approved SPRP are provided to (5.6.e):
 - Applicable public water systems
 - County and Municipal Emergency Management Agencies



Labeling and Signage (5.7)

- Mandated by 22-30-11
- Requirements include:
 - Substance Stored
 - Tanks Registration number (assigned by DEP)
 - Owner / operator emergency contact info
 - DEP Spill Reporting Number – (800) 642-3074
 - Plus any other applicable labeling requirements
 - OSHA, NFPA, SPCC, etc.



Security (5.8)

- Must be appropriate; may include
 - Fencing
 - Lighting
 - Access Control
 - Locked entrances
 - Securing of valves and dispensers



Reporting and Recordkeeping - 6

- What must be submitted to the DEP (6.1.a):
 - Tank Registration forms
 - Request for Installation / Upgrade
 - Reports of suspected releases, spills, overfills and confirmed releases
 - Corrective Action Plans
 - Notification of permanent closure and change in service
 - Annual Tank Certification (inspection)
 - SPRP



Reporting and Recordkeeping - 6

- What must be maintained and available (6.1.b):
 - Current Certificate to Operate
 - Proof of Financial Responsibility
 - 12 Months of Leak Detection Records
 - Documentation of O&M of Cathodic Protection System
 - Corrosion expert's analysis if tank is in contact with an electrolyte and CP equipment is not used



Reporting and Recordkeeping - 6

- What must be maintained and available (6.1.b):
 - Documentation of corrosion protection
 - Proof of AST system compatibility with substance stored
 - Secondary Containment inspection records (12 months)
 - Annual Inspection records
 - Internal Inspection records (all)
 - Documentation of AST system repairs



Reporting and Recordkeeping - 6

- What must be maintained and available (6.1.b):
 - Annual Tank Certifications (Fit for Service)
 - Info Specific to tank contents (22-30-5 b (16)):
 - Tank number
 - Substance stored
 - Amount stored
 - Deliveries / dispensing activities



Reporting and Recordkeeping - 6

- Permanent Records (6.1.c)
- Maintained for operational life of tank and three years after closure
- Include by not limited to:
 - Original installation and any modification info
 - Floor and wall/shell thickness measurements
 - Notices of reportable releases and investigations of suspected releases
 - Closure Reports



Reporting Confirmed, Threatened and Suspected Releases (6.2)

- All confirmed releases are immediately reported to the Spill Line – (800) 642-3074
- Releases that threaten waters of the State are ALSO reported to County and Municipal Emergency Agencies and the nearest downstream public water supplier (6.2.a)
- Knowingly allowing a release is prohibited (6.2.e)



Threatened and Suspected Releases (6.2.c)

- Reported within 24 hours unless they are resolved
- These events include:
 - Unusual operating conditions
 - Unusual testing or monitoring results
 - Structural Problems



Release Investigation and Confirmation (6.3)

- After notification suspected / threatened releases will be investigated within 7 days (6.3.a)
- Methods used to confirm a release (6.3.b):
 - Check dispensers
 - Check release detection systems
 - Check Inventory records
 - Visual Inspection
 - Testing, sampling, analysis



Section 8 – Design, Construction and Installation

- General Performance Standards (8.1)
 - Must be designed, constructed and installed according to manufacture's instructions, WV requirements and current Code of Practice by nationally recognized associations.
 - Must have corrosion protection, leak detection and release prevention



New Tanks (8.2)

- Constructed in accordance with applicable national standards (8.2.a)
- Have a stable foundation (8.2.b)
- Be tightness tested (8.2.c)
- Mobile Tanks must be inspected for damaged prior to being used (8.2.e)
- Provide 30 days notice prior to installation of a new tank (does not include mobile tanks (8.2.e.3))
- Work must commence within six months and be complete within one year of approval (8.2.f.4)



New Tanks (8.2)

- Baseline Data (8.2.g)
 - Thickness, material certifications, instructions and claims
- Corrosion Protection in accordance with Section 9 (8.2.h)
- Release Prevention Barrier (8.2.i)
 - Double bottom, synthetic material, clay liner, concrete pad
 - Prevents escape and channels released materials



Upgrading Requirements for Existing USTs (8.3)

- Done in accordance with industry standards
- Shall include:
 - Venting in accordance with 8.6 (8.3.a)
 - Corrosion Protection in accordance with 9 (8.3.b and c)
 - Gauge in accordance with 10 (8.3.d)
 - Overfill prevention in accordance with 10 (8.3.e)



Tank Modifications (8.4)

- Done in accordance with industry standards
- 30 days notice given to the DEP (8.4.b)
- Work begins within six months and concludes in one year. (8.4.b.3)



Tanks in Vaults (8.5)

- “Underground” tanks in a box
- Durability of the vault, access for inspection, material compatibility, fire suppression and worker safety are all considered.



Ancillary Equipment (8.6)

- Must meet all applicable standards and manufacturer's instructions
- Includes but not limited to:
 - Normal and emergency vents
 - Sumps, spill buckets and overflow equipment
 - Dispensers, hoses and filters
 - Connectors, valves, vent lines and gauges
 - Hatches, roofs and manways
 - Pumps



Ancillary Equipment (8.6)

- Must be compatible with substance stored (8.6.b)
- In good working order and properly maintained (8.6.c)
- Properly valved (8.6.d)



Normal and Emergency Venting (8.6.e)

- For flammable and combustible liquids
- Protection from over pressurization, excessive vacuums and relieve pressure caused by exposure to fire
- Allows tanks to “breathe” during deliveries or dispensing
- Existing ASTs must be upgraded to meet venting requirements
 - Level 1 by December 31, 2015
 - Level 2 by June 30, 2016



A Tale of Two Tanks

- <http://www.youtube.com/watch?v=DECyAxDk88U>



Piping (8.7)

- Must be compatible with substance stored (8.7)
- Protected from corrosion and damage (8.7.8.3, 4 & 5)
- Designed, fabricated and tested in accordance with current Code of Practice (8.7.a)
- Installed in accordance with manufacture's specifications (8.7.a.1)
- Underground piping must be tightness tested and if under pressure must have an automatic line leak detector (8.7.a.6)
- Proper valving (8.a.7 and 8)



Comments and Questions



Conclusion



