Aboveground Storage Tank Regulatory Workshop

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Spent Sulfuric Acid Tank Exploded at the Motiva Refinery on July 17, 2001
Regulations Governing Aboveground Storage Tanks

Requirements for:

- Registration
- Fees
- Signage
- Release Preparedness Plans
- Installation approval of new ASTs
- Inspecting, testing, maintenance, and repair
- Cathodic Protection
- Financial Responsibility
- Notification for removal and closure
- Corrective Action
What is an Aboveground Storage Tank under Delaware Rules?

- A single containment vessel
- Greater than 250 gallons
- Currently or previously having contained regulated substances on or after January 1, 1992.
- Includes all ancillary aboveground pipes up to the first point of isolation
- Includes all underground pipes and dispensing systems
To Determine Which Regulations Apply

Size Matters

Diesel, Heating Fuel, Kerosene

- >250 and ≤19,999: Registration, Release Reporting
- >20,000 and <40,000: Registration, Release Reporting, Signage
- ≥40,000: Registration, Release Reporting, Signage, Technical Regs, Fees ($750)

Gasoline and other Hazardous Chemicals

- >250 and <12,500: Registration, Release Reporting, Signage
- ≥12,500 and <40,000: Registration, Release Reporting, Signage, Technical Regs, Fees ($300)
- >40,000: Registration, Release Reporting, Signage, Technical Regs, Fees ($750)
Senate Bill 233


DELAWARE STATE SENATE
146th GENERAL ASSEMBLY
SENATE BILL NO. 233

AN ACT TO AMEND TITLE 7 OF THE DELAWARE CODE RELATING TO THE JEFFREY DAVIS ABOVEGROUND STORAGE TANK ACT.

Section 1. Amend Chapter 74A, Title 7 of the Delaware Code by making deletions as shown by making deletions as shown by underlining as follows and by redesignating accordingly.

§ 7402A Definitions.

(9) “Imminent threat of a release” means the potential for a release which requires action to prevent or mitigate damage to the environment or endangerment to public health or welfare which may result from such a release.

(10) “Indicated Release” means there are signs that an aboveground storage tank, or the secondary containment system are failing or could potentially fail to contain a regulated substance. Indicated Releases are releases that are not observable and are not directly attributable to another source.

(11) (c) "In-service tank" means an aboveground storage tank that:

a. → Is emptied solely for the purpose of cleaning, routine maintenance or a change in product, for a time period not to exceed 300 days.

(16) (d) "Out-of-service tank" means a tank an aboveground storage tank that is:

a. → Designated as an out-of-service tank by the owner or operator, and the owner or operator shall provide notification to the Department on a Department registration form; or

b. → An empty tank except as otherwise described in subparagraph (11) (c) of this section.

Not in use, in that it has not held, within any 5-year period, a regulated substance transferred into or
Senate Bill 233

- Changes definitions of in service and out of service to allow more time for tank inspection and maintenance activities.

- Adds definitions of Indicated Release and Imminent Threat of a Release

- Allows the Department to take over situations involving an indicated release or imminent threat situation when the Department has given the owner/operator notice and they have failed to take action.

- Authorizes Hazardous Substance Cleanup Funds to support preventative and cleanup activities associated with the AST Program.
Indicated Release/Imminent Threat
Indicated Release/Imminent Threat
Indicated Release/Imminent Threat
Indicated Release/Imminent Threat
Path Forward for Rule Changes

• If the legislation passes, we will need to wait till the Governor signs the bill into law before scheduling a public hearing on the regulations.
PART A
Throughout Regulations

• The statement “within X date of the effective date of the Regulations” has been amended to reflect the actual calendar date
Farm/Ag ASTs – Best Management Practices
Part A, §1.2.6.

- Farm/Ag ASTs Best Management Practices option to be used in place of the O&M requirements of the Regulations must be submitted in writing and approval from the Department must be in writing if the pre-approved BMP is not used.
• Pre-approved Ag BMP available on DNREC-TMS website.
• Ag ASTs with a BMP are subject only to Parts A and E of the Regulations.
• Ag ASTs with a BMP are not subject to FR requirements.
• Ag ASTs with a BMP are subject to registration fees.
Modified AST definition to clarify that ASTs that are Permanently Closed in Place in accordance with the Regulations are no longer an “AST” and thus not subject to registration, fees, etc.
The definition of AST was modified to add the clarification that AST “...includes all ancillary aboveground pipes and Dispensing Systems up to the first permanently installed point of isolation...”
• Modified AST definition to clarify that exempted Flow Through Process ASTs do not include:
  
  “A tank that stores fuel for combustion subsequently used to provide heat for a process”
• Draft Regulation changed regarding previous slide to move bullet point to “Flow Through Process Tank”

• Flow Through Process Tank...
  “...or 4) a tank that store fuels for combustion subsequently used to provide heat for a process.”
Modified definition of “Change In Service” means “any change to a registered AST to include but not be limited to permanent change in nature of contents, Removal, Permanent Change in Contents, Relocation, Permanent Closure in Place, change in status from either In Service or Out Of Service, conversion to storage of other than Regulated Substances or conversion to a use other than as an AST, or when the AST is Emptied.”
Modified definition of “Consumptive Use”

“with respect to Heating Fuel means consumed on the premises where stored, used solely for the operation of equipment used for the generation of heat and is connected directly or via a day tank to the heat generating equipment.”
Corrective Action Definition
Part A, §2.

- Added definition of “Corrective Action” means “the sequence of actions, or process that includes confirming a release, Site Assessment, interim remedial action, remedial action, monitoring, and termination of the remedial action.”
• Added definition of “Day”

means “a calendar day; however, when used to determine when a document is due, or an action is required, and the day falls on the weekend or a holiday, the document may be submitted, or the action started, on the first working day after the weekend or holiday.”
Empty/Emptying Definition
Part A, §2.

- Added definition of “Empty” or “Emptying”

means “to thoroughly clean the interior of the AST and all Ancillary Piping of all residual Regulated Substances including but not limited to all sludge, solids, liquids, vapors, and gases.”
• Added definition of “External Liner”

means “a layer or membrane constructed of a material compatible with the contents of the AST and is installed inside an existing Secondary Containment structure to provide additional assurance of impermeability.”
• The term “Free Product” will be deleted and replaced by the term “NAPL” means “a Non-Aqueous Phase Liquid composed of one or more organic compounds that are immiscible or sparingly soluble in water. The term encompasses all potential occurrences of NAPL including free, mobile, and residual.”
Indicated Release Definition
Part A, §2.

- Added definition of “Indicated Release”

means “there are signs that an AST, or the secondary containment system are failing or could potentially fail to contain a Regulated Substance. Indicated Releases are Releases that are not observable and are not directly attributable to another source.”
Motor Oil Definition
Part A, §2.

- Added definition of Motor Oil to clarify what tanks are exempted in Part A, §1.2.2.4. means “a petroleum product used to lubricate the internal parts of an engine. The term includes lubricating and operational fluids for the mechanical components associated with the engine. This includes any hydraulic, transmission, gear or braking lubricating or operational fluid that through use, storage or handling has become unsuitable for its original purpose due to the presence of impurities or loss of original properties.”
Modified definition of “Noncommercial”

means “a business or organization whose activities do not result in monetary gain, including but not limited to educational institutions, non-profit organizations under the terms of the Internal Revenue Service code definition in section 501(c), State, Federal and Local governmental entities and religious organizations.”
• Modified definition of “Owner” to be commensurate with new legislation (effective October 2014)

added language to protect the security interest of a person or entity that has only a financial interest in or has legal title to or manages an estate or trust for a property containing an AST or ASTs and does not operate or otherwise manage; in the case of foreclosure, 30 day notification to DNREC is required for either In Service or Out Of Service ASTs in order for a person or entity not to be considered the owner of the AST or ASTs.
Pipe Definition
Part A, §2.

- Modified definition of “Pipe” to include vapor recovery piping
Permanent Change in Contents
Definition Part A, §2.

- Modified definition of “Permanent Change in Contents”

means “the replacement of one substance stored in an AST and Ancillary Piping for another substance that would effect a change in the AST and Ancillary Piping's regulated status based on capacity and substance stored.”
• Added definition of “Remedial Action”

means “activities conducted to protect human health, safety, and the environment. These activities include but are not limited to evaluating risk, making no further action determinations, monitoring institutional and engineering controls, and designing and operating cleanup equipment.”
Site Assessment Definition
Part A, §2.

- Added definition of “Site Assessment” means “to measure for the presence of a Release where contamination is most likely to be present at an AST site. Selection of sample types, samples locations and measurement methods shall be based on the nature of the substance stored, the type of backfill, the depth to groundwater, and other factors appropriate for identifying the presence of a Release. A Site Assessment is not restricted to the property containing the AST System.”
Currently the Regulations state the most recent edition is utilized.

Amended the reference standards language so that the standards in effect are those listed by specific date and edition in the Regulations.
Each new registration or change in substance stored must have a Safety Data Sheet attached.

Safety Data Sheet as defined in OSHA 29 CFR 1910.1200.
New Installation Notification
Part A, §4.1.9

- Owner must notify Department within 7 days of date of final completion of a new installation.
- The Department shall issue written approval to operate or a letter detailing deficiencies within 7 days after the final Department inspection.
- Operation of an AST may not commence without written Department approval.
Any change in the schedule of work for a Change in Service must be communicated to the Department in writing a minimum of 48 hours prior to the new scheduled date of work.

Owner shall notify the Department in writing of the actual date of completion of any Change In Service.
Ownership Transfer Notification
Part A, §4.4.1

• New Owner must submit a completed registration form, all Safety Data Sheets, and proof of Financial Responsibility to the Department so that the Department receives forms no later than 72 hours after the transfer.

• Deleted erroneous reference to transfer of ownership form.
Registration Fee Schedule
Part A, §4.5.4

Registration Fee Table

<table>
<thead>
<tr>
<th>Tank Size</th>
<th>Substance Stored</th>
<th>Annual Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than or equal to 12,500 gallons and less than 40,000 gallons</td>
<td>Regulated Substance other than Diesel, Heating Fuel or Kerosene</td>
<td>$300.00</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Regulated Substance other than Diesel, Heating Fuel or Kerosene</td>
<td>$750.00</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Diesel, Heating Fuel, or Kerosene</td>
<td>$750.00</td>
</tr>
<tr>
<td>Greater than or equal to 12,500 gallons and less than 40,000 gallons</td>
<td>Ag/Farm ASTs</td>
<td>$300.00</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Ag/Farm ASTs</td>
<td>$750.00</td>
</tr>
</tbody>
</table>

- Fees remain in effect until the AST is removed, permanently closed in place, or permanently changes contents to Unregulated substances and the Department has received all sample results.
The initial AST registration fee shall not be assessed until the calendar year following the year in which the AST installation is completed.
The Department must receive notification of all retrofits or upgrades 30 days prior to beginning work.

Approval expires one year after the Department issues approval if work has not commenced.

The Department shall issue approval or denial within 30 days of receipt of notification.
• Added Department's authority to document the site assessment, inspection or monitoring with photographs.
Requirements for Labeling
Part A, § 9.1, 9.2, and 9.3

- Removed the words “diesel, Heating Fuel or kerosene” as this would limit labeling to those ASTs only
- Labeling requirements for “Empty” ASTs depending on substance stored and capacity
- Labeling of contents and Tank ID numbers
Compliance Dates for Labeling Part A, § 9.4.2

- All ASTs installed or brought into service after February 1, 2006 that are required to have a label in accordance with the requirements of PART A.9.1, 9.2, or 9.3 shall be appropriately labeled before Regulated Substance is stored in the AST.
Labeling Permanently Closed ASTs
Part A, § 9.5.1, 9.5.2

• Shall be labeled with the words Permanently Closed and the date of Permanent Closure within thirty (30) days of the closure date, or for ASTs that were Permanently Closed prior to the most recent effective date of these Regulations, labels must be affixed within ninety (90) days of the most recent effective date of these Regulations.
• Added requirement that AST and all equipment be compatible with the substance stored.
General Requirements
Part B, §1.1.10

- New ASTs must be installed no less than a 150 foot radius from a Public or Industrial Well unless otherwise approved by the Department.
General Requirements
Part B, §1.1.11

• New ASTs must be installed no less than a 100 foot radius from a Domestic Well unless otherwise approved by the Department.
## General Requirements

### Part B, §1.2.1

<table>
<thead>
<tr>
<th>Tank Size</th>
<th>Substance Stored</th>
<th>Construction Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greater than or equal to 12,500 gallons and less than 40,000 gallons</td>
<td>Regulated Substance other than Diesel, Heating Fuel or Kerosene</td>
<td>$1,500.00</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Regulated Substance other than Diesel, Heating Fuel or Kerosene</td>
<td>$3,750.00</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Diesel, Heating Fuel, or Kerosene</td>
<td>$3,750.00</td>
</tr>
<tr>
<td>Greater than or equal to 12,500 gallons and less than 40,000 gallons</td>
<td>Ag/Farm ASTs</td>
<td>$1,500.00 *Does not apply if approved BMP is on file with the Department</td>
</tr>
<tr>
<td>Greater than or equal to 40,000 gallons</td>
<td>Ag/Farm ASTs</td>
<td>$3,750.00</td>
</tr>
</tbody>
</table>
• Changed requirement that metallic field constructed ASTs are to be inspected and tested in accordance with the construction design standard utilized for the construction instead of API 650.
Requirements for Cathodic Protection Systems Certified Testers and Inspectors Parts B and C, All applicable sections

- Changed terminology from “Levels” as to current NACE certification titles to be consistent with current NACE terminology.
• Cathodic Protection Systems shall be installed at the time of installation of a new metallic AST and will be operational prior to AST being placed in service or other schedule as approved by the Department.
Testing must be done in accordance with Part C, §5.
Transfer areas from ASTs to vehicles must have spill containment capable of containing 110% of the volume of the largest compartment of the largest vehicle.

This is a restatement of previous Part B, §8.1.5 with the addition of a specification of 110% - the original language stated “capable of containing and collecting spills and overfills and preventing a Release”.
• Changed “lining materials” to “external liners”.
• Change also applies to Part B, §7.2.5.2
Overfill equipment must be installed on all new ASTs.
• Overfill equipment must be installed on all reactivated ASTs so they meet new tank standards.
• Added STI SP031 to repair requirements.
• The term “acceptable internal liner” was clarified.
Within 1 year of the most recent Effective Date of these Regulations, all ASTs, piping, appurtenances and secondary containment shall be compatible with the Regulated Substance stored in the AST.
Upgrade Requirements for Existing AST
Part B, §11.3.1 & §11.4.1

- Changed notification from 10 days to 60 days for conversion of AST from non-Regulated to Regulated
Out-Of-Service Requirements
Part B, §13.1.1

- Draft changes pertaining to the definition of out-of-service cannot be made because they must remain consistent with statutory language.

- 13.1.1 and associated subparagraphs will not be changed or deleted.
Out-Of-Service Requirements
Part B, §13.1.3

- Clarified wording for activities that must take place when an AST is taken Out-Of-Service for greater than 18 months.
Out-Of-Service Requirements
Part B, §13.1.4

• §13.1.4 now includes requirement that an Out-Of-Service AST that is not empty must be in compliance with applicable AST Regulations.
§13.1.5 now includes requirement that an Out-Of-Service AST that is empty is not required to perform any inspection, monitoring and testing while the AST is empty and Out-Of-Service.

Formerly Part B, §13.1.3
Out-Of-Service Requirements
Part B, §13.1.7

• An AST that is Out-Of-Service, empty and has had a site assessment performed is considered to be permanently closed.
• Formerly Part B, §13.1.5
ASTs that are used periodically, such as for seasonal use, are not Out-Of-Service, even when the tank is not storing a regulated substance.
Out-Of-Service Requirements
Part B, §13.2.2

• Empty Out-of-Service ASTs and appurtenances must be tested and inspected per requirements in Part C prior to being placed back in service.
An AST which was Out-Of-Service prior to 6/11/04 must now comply with all new AST standards in these Regulations prior to being placed back in service.
• Deleted the terms “Removal”, “Relocation” and “Closure in Place” as these are considered a “Change in service”.
Clarified that a site assessment must be performed after any “Change in Service” or when soil is excavated during retrofit, upgrade, repair or maintenance.
Site assessments shall be performed in accordance with AST Site Assessment Guidance or other approved procedures.
Site Assessment Requirements
Part B, §14.2.3

- A Site Assessment can not be performed without prior written approval from the DNREC-TMS.
Site Assessment Requirements
Part B, §14.2.4

- Analytes must be selected based upon all Regulated Substances stored in the tank over its lifetime and lab methods must be approved by the DNREC-TMS.
Site Assessment Requirements
Part B, §14.2.5

- Samples must be submitted to a lab that is certified to perform the required analyses.
• Samples must be obtained from locations with the highest suspected concentration of chemicals of concern.
Site Assessment Requirements
Part B, §14.2.7

- Site assessment due date changed from 30 days to 90 days.
Reactivating a Permanently Closed AST
Part B, §16.3

• Upon returning to service an AST that has been permanently closed in place, owner shall:
  ✓ notify the Department on a form provided in accordance with Part B prior to putting the tank back in service
  ✓ meet all new tank standards prior to putting the tank back in service
  ✓ Pay a required one-time construction fee and the annual registration fee
• Amended to specify that measuring gauges must be capable of measuring over the entire operating range of the AST, as opposed to the full range of the AST.
• Measuring gauges must be calibrated, tested, operated, and maintained per the manufacturer’s specifications.

• All manufacturer’s instructions and performance claims must be retained at the Facility for the life of the gauge.
• If the manufacturer of the measuring gauge cannot be determined, or if no standard is available, it must be calibrated to 1% of the AST’s volume.
Overfill protection systems must be calibrated, tested, operated, and maintained per the manufacturer’s specifications.

All manufacturer’s instructions and performance claims must be retained at the Facility for the life of the overfill equipment.
• Amended to clarify that existing underground piping not in compliance with an API 570 inspection and testing schedule must be pressure tested in accordance with API 570, manufacturer’s specifications, or as approved by the Department until upgraded.
Amended to require that impressed current cathodic protection system rectifier must be monitored at least once every thirty-one (31) days and the results recorded.
• Amended to specify that, where multiple inspection standards could apply, only one standard shall be applied.
Internal Inspection Reports
Part C, §6.4, §7.4, and §8.1

• Added specific requirements for internal inspection reports.
PART D
Financial Responsibility
Part D, §2.1.4, 2.1.5, 16.1.3

• Owner or Operator must send a copy of valid FR documentation to the Department within 30 days of confirmation of a release.

• No regulated substance may be placed in an AST without valid Financial Responsibility in effect.

• Owner or Operator must notify the Department of change from one financial responsibility mechanism to another type within 10 days of the change.
If an insurer does not renew or cancels a tank insurance policy the insurer must notify the DNREC not more than 30 days after the cancelation or non-renewal.
PART E
Proposed Part E: Corrective Action Requirements for ASTs

- Incorporation of Part A §8 and a clearer reporting requirements’ section
- A new section on Non-Aqueous Phase Liquid characterization and management
- New terminology
# Proposed Part E

## New Terminology

<table>
<thead>
<tr>
<th>Old</th>
<th>New</th>
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</thead>
<tbody>
<tr>
<td>Corrective Action</td>
<td>Remedial Action</td>
</tr>
<tr>
<td>Investigation</td>
<td>Hydrogeologic Investigation</td>
</tr>
<tr>
<td>Free Product</td>
<td>Non-aqueous phase liquid</td>
</tr>
<tr>
<td>Suspected</td>
<td>Indicated</td>
</tr>
</tbody>
</table>
Proposed Part E § 1
Leaks Inside Secondary Containment

- **Section 1.1 explains requirements for leaks inside secondary containment.**
  - Report to TMS within 7 days.
  - Maintain documentation for the operational life of the AST.
  - Prevent recurrence and mitigate within 30 days
Section 2 differentiates requirements in reporting for Releases and Indicated Releases.

Section 2.1 defines Indicated Releases as “signs that an AST, or the Secondary Containment are failing or could potentially fail to contain a Regulated Substance. Indicated Releases are not observable and not directly attributable to another source.”

Section 2.2.1 Indicated Releases must be reported to the DNREC Tank Management Section within 48 hours.
Section 2.3.2 Releases of Regulated Substances in excess of the reportable quantities shall be reported within 24 hours to the Departments 24-hour Release Hotline and the DNREC Tank Management Section.

Section 2.3.5 Releases of a Regulated Substance that is less than the reportable quantity shall be documented on the inspection report. If clean up activities cannot begin within 24 hours or cannot be completed in 7 days, the Tank Management Section must be notified, and the requirements of § 4.2 shall apply.
Proposed Part E § 3
Indicated Release Response Requirements

• Section 3.2.1 Initiate within 24 hours for completion in 7 days.
  • Through inspections and testing of equipment, or
  • Measuring for the presence of a Release where contamination is most likely to be present at the AST site.
Proposed Part E § 4 has three parts:

- **Asserts the Department’s Authority to assume control of a Release or Indicated Release.**

- **Defines initial release response requirements that include fixing faulty components and begin remedial action if NAPL is present.**

- **NAPL Corrective action requirements.**
Proposed Part E § 4.3 NAPL Corrective Action Requirements

- The Current AST Regulations currently require, “..the removal of Free Product to the maximum extent practicable as determined by the Department.”

- Proposed Changes require the same through a more scientific approach. Primarily the requirement for a NAPL Conceptual Site Model or NCSM.

- The NCSM should be communicated within 48 hours of a release of NAPL and updated throughout the project.
Proposed Part E § 5
Hydrogeologic Investigation Requirements

• Removes the requirement for the submittal of an investigation work plan, but requires the final report to be signed by a Delaware licensed Professional Engineer or Professional Geologist.

• Proposed § 5 replaces current § 1.
Proposed Part E § 6
Administrative Option for Remedial Action

- Proposed §6 replaces current §2.
- Addition of § 6.1.3.4 which states that initiating remedial action prior to approval does not absolve the Owner and Operator of the obligation to comply with § 7.
Proposed Part E § 7 Remedial Action Work Plan Requirements

- Proposed § 7 replaces current § 3.
- Addition of § 7.5 which requires post remedial monitoring.
Proposed Part E § 8
No Further Action

- Proposed § 8 replaces current § 3.6.

- Addition of § 8.2 which expands on the Department’s Response to a No Further Action request.
Regulatory Impact Statement & Regulatory Flexibility Analysis
Beginning January 1, 2016, state agencies submitting proposed new or amended Regulations that affect *small businesses or individuals* are required to submit a Regulatory Flexibility Analysis and Regulatory Impact Statement.

The RIS and RFA must be submitted with the proposed Regulation to the Registrar of Regulations 29 Del. C. Chp. 104.

Forms and Guidelines

In each RFA the agency must consider where applicable, lawful, feasible and desirable, specific methods of reducing the burdens of the regulation on individuals and/or small businesses, including:

1. Establishing less stringent requirements and deadlines;
2. Establishing performance standards to replace design standards;
3. Exempting individuals and small businesses from all or part of the regulation; and,
4. Examining other ways to accomplish the regulations’ purpose while minimizing the impact upon individuals and/or small businesses.
Each RIS must:

1. Describe the purpose of the regulation;
2. Identify the individuals and/or small businesses subject to it;
3. Provide an estimate of the potential costs of compliance; and,
4. Describe any less intrusive or less costly alternative methods of achieving the purpose of the regulation.