

# ABOVEGROUND STORAGE TANK REGULATIONS -ADAM WILSON SLS LAND & ENERGY DEVELOPMENT

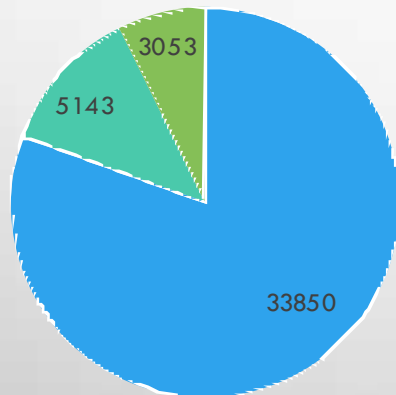


# WHAT IS AN AST?

- VOLUME GREATER THAN 1 320 GALLONS
- CONTENTS ARE LIQUID AT STANDARD TEMPERATURE AND PRESSURE
- GREATER THAN 90% ABOVE THE GROUND
- REMAINS IN ONE LOCATION FOR MORE THAN 365 DAYS
- EXCLUDES SWIMMING POOLS, PROCESS VESSELS, WASTEWATER TREATMENT, DRINKING WATER

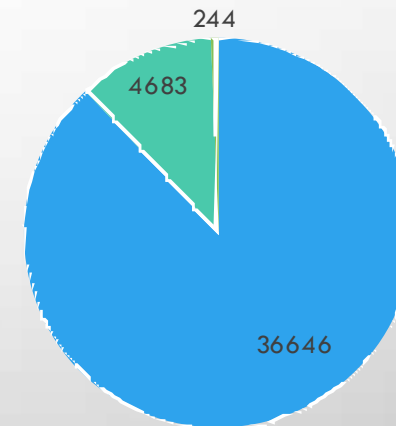
# TANKS BY THE NUMBERS

Tank Levels



■ R&L ■ Level 1 ■ Level 2 ■

Tank Capacity



■ 10,000 or less ■ 10,000 to 50,000 ■ Greater than 50,000 ■

# STARTING THE PROCESS

- REQUIRES ACCESS TO WV DEP ELECTRONIC SUBMISSION SYSTEM
- THREE MAIN ACTIONS
  - REGISTER
  - SPILL PREVENTION RESPONSE PLANS OR SPCC PLAN
  - INSPECTION

# DETERMINATIONS FROM REGISTRATIONS

- REGISTER AND LABEL
- THESE TANKS **DO NOT** FALL INTO A REGULATED CATEGORY
  - NOT LOCATED IN A ZONE OF CRITICAL CONCERN
  - NOT LOCATED IN A ZONE OF PERIPHERAL CONCERN (OR LOCATED IN ZPP BUT SMALLER 210 BBLS OR LESS AND OIL AND GAS ASSOCIATED)
  - SMALLER THAN 50,000 GALLONS
  - CONTENTS NOT ON THE LIST OF LISTS (CERCLA)
- REGISTER AND LABEL REQUIREMENTS
- REGISTER (ALREADY COMPLETE)
- TANK LABELS AT A MINIMUM MUST INCLUDE:
  - WV DEP TANK REGISTRATION NUMBER
  - OWNER/OPERATOR EMERGENCY CONTACT PHONE NUMBER
  - WV DEP SPILL HOTLINE PHONE NUMBER
  - DOES NOT REQUIRE SPRP

\*INFO REGARDING THE LETTER SIZING CAN BE FOUND ON THE WV DEP WEBSITE.

## **EXAMPLE TANK LABEL**

TANK REGISTRATION # 000-00000000

ABC COMPANY CONTACT JOHN DOE:

304-867-5309

WV DEP SPILL HOTLINE:

1-800-642-3074

**\*TANKS SHOULD ALSO BE LABELED WITH CONTENTS  
AND HAZARD INFORMATION**

# DETERMINATIONS FROM REGISTRATIONS

- LEVEL 1 REGULATED AST
- LOCATED WITHIN A **ZONE OF CRITICAL CONCERN** (FLOW CAN REACH WATER INTAKE IN A 5 HOUR TRAVEL TIME)
- OVER 50,000 GALLONS
- CONTENTS ON THE LIST OF LISTS (CERCLA)

- LEVEL 1 REQUIREMENTS
  - FORMAL INSPECTION BY PE, API, OR STI CERTIFIED INDIVIDUAL EVERY 3 YEARS.
  - NO CHANGE INSPECTION EVERY 30 DAYS (OWNER/OPERATOR)\*
  - SECONDARY CONTAINMENT INSPECTION EVERY 14 DAYS (OWNER/OPERATOR)\*
  - REQUIRES SPRP OR EQUIVALENT

# DETERMINATIONS FROM REGISTRATIONS

- LEVEL 2 REGULATED AST
- LOCATED WITHIN A **ZONE OF PERIPHERAL CONCERN** (FLOW CAN REACH WATER INTAKE IN A 10 HOUR TRAVEL TIME)
  - VOLUME MUST BE LARGER THAN 210 BBLS IF OIL AND GAS RELATED.
- LEVEL 2 REQUIREMENTS
  - FORMAL INSPECTION BY PE, API, OR STI CERTIFIED INDIVIDUAL EVERY 5 YEARS.
  - NO CHANGE INSPECTION EVERY 30 DAYS (OWNER/OPERATOR)\*
  - SECONDARY CONTAINMENT INSPECTION EVERY 30 DAYS (OWNER/OPERATOR)\*
  - REQUIRES SPRP



# INSPECTION REFERENCE SHEET

August 1, 2016	<p><b>Routine Maintenance Inspections</b></p> <ul style="list-style-type: none"> <li>➤ Every 14 days Inspection of Secondary Containment for Level 1 ASTs - §5.1.a</li> <li>➤ Monthly Inspection of Secondary Containment for Level 2 ASTs - §5.1.a</li> <li>➤ Monthly Visual Inspections of AST and Ancillary Equipment up to the First Point of Isolation for Level 1 and Level 2 ASTs - §5.1.b</li> <li>➤ Recordkeeping §5.1.b.5 and - §6.1.a</li> </ul>
January 28, 2017	<p><b>Fit for Service Certification of Inspection</b> of AST and Associated Secondary Containment by “certified individual” for Level 1 ASTs (and every 3<sup>rd</sup> year thereafter) and Level 2 ASTs (and every 5<sup>th</sup> year thereafter) [<b>however, no inspection or certification required for tanks inspected and certified by 6/1/2015 pursuant to Interpretive Rule</b>] - §§ 5.2.a and 5.2.b</p>
August 1, 2017	<p><b>Internal inspection</b> of existing Level 1 and Level 2 ASTs, older than 75 years that have not had an internal inspection since 8/1/1986 (excluding ASTs with capacity less than 30,000 gallons if compliant with § 10.1 (spill and overflow protection) and §10.3 (leak detection)) - §§5.3.f.1 and 5.3.e</p>
January 1, 2018	<p><b>Certification of “no obvious change” Inspection</b> by owner or operator of Level 1 and Level 2 ASTs, “provided that the individual performing the inspection is qualified to perform tank inspections” and annually thereafter (except for fit for service inspection years) - §5.2.b</p>
August 1, 2018	<p><b>Internal inspection</b> of Level 1 and Level 2 ASTs, 50-75 years old that have not had an internal inspection since 8/1/1986 (excluding ASTs with capacity less than 30,000 gallons if compliant with §§ 10.1 and 10.3) - §§5.3.f.2 and 5.3.e</p>
January 1, 2019–2021	<p><b>Certification of “no obvious change” Inspection</b> by owner or operator or qualified representative for Level 2 ASTs (applicable to Level 1 ASTs for 1/1/2019 only) - §5.2.b</p>
August 1, 2019	<p><b>Internal inspection</b> of Level 1 and Level 2 ASTs, 30-49 years old that have not had an internal inspection since 8/1/1986 (excluding ASTs with capacity less than 30,000 gallons if compliant with §§ 10.1 and 10.3) - §§5.3.f.3 and 5.3.e</p>
January 1, 2020	<p><b>Fit for Service Certification of Inspection</b> by “certified individual” for Level 1 - §5.2.b.1</p>
January 1, 2022	<p><b>Fit for Service Certification of Inspection</b> by “certified individual” for Level 2 - §5.2.b.2</p>

# PHASE IN REFERENCE SHEET

November 1, 2016	Level 1 ASTs not meeting secondary containment requirements - §10.2.l.1
December 31, 2016	Level 1 ASTs normal and emergency vents - §8.6.f.1
February 1, 2017	Level 2 ASTs not meeting secondary containment requirements - §10.2.l.2
June 30, 2017	<ul style="list-style-type: none"> <li>➤ Level 2 ASTs normal and emergency vents - §8.6.f.2</li> <li>➤ Level 1 ASTs not meeting cathodic protection standards - §9.2.g.1</li> <li>➤ Level 1 ASTs not meeting corrosion protection standards for exterior coatings - §9.4.c.1</li> <li>➤ Level 1 ASTs not meeting corrosion protection standards for internal lining or coatings - §9.5.c.1</li> <li>➤ Level 1 ASTs not meeting overflow or spill requirements - §10.1.e.1.A</li> <li>➤ Level 1 ASTs not meeting leak detection requirements - §10.3.m.1 (except that visual leak detection must begin August 1, 2016 - §5.5.b)</li> </ul>
December 31, 2017	<ul style="list-style-type: none"> <li>➤ Level 2 ASTs not meeting cathodic protection standards - §9.2.g.2</li> <li>➤ Level 2 ASTs not meeting corrosion protection standards for exterior coating - §9.4.c.2</li> <li>➤ Level 2 ASTs not meeting corrosion protection standards for internal lining or coatings - §9.5.c.2</li> <li>➤ Level 2 ASTs not meeting overflow or spill requirements - §10.1.e.1.B</li> </ul>
June 30, 2018	Level 2 ASTs not meeting leak detection requirements - §10.3.m.2 (except that visual leak detection must begin August 1, 2016 - §5.5.b)

# NEW INSTALLATION REFERENCE SHEET

August 1, 2016	<ul style="list-style-type: none"><li>➤ New Level 1 and 2 AST installations are subject to new and reconstructed AST requirements and new Level 1 AST installations must be double walled, double bottomed, or placed on a release prevention barrier - §8.2</li><li>➤ New Level 1 and 2 AST installations in karst designated terrain must submit documentation of the new construction design criteria and engineering specifications to indicate that surface or subsurface conditions will not result in excessive settling or unstable support of the proposed AST, as approved by a professional engineer or an individual certified by API or STI to perform installations or a person holding certification under another program. - §8.2.f</li></ul>
December 3, 2019	Update Spill Prevention and Response Plan (if submitted on December 3, 2014, or 5 years following initial plan submission) - §5.5.a.1



# **SPILL PREVENTION RESPONSE PLANS**



# WHAT NEEDS TO BE INCLUDED IN A SPILL PLAN?


- IDENTIFY AND DESCRIBE THE ACTIVITIES AND PROCESSES THAT OCCUR AT THE SITE
  - IDENTIFY APPLICABLE HAZARD AND PROCESS INFORMATION
  - SAFETY DATA SHEETS FOR ANY FLUIDS STORED
  - PREVENTATIVE MAINTENANCE PROGRAM
  - GENERAL RESPONSE PROCEDURES
  - EMERGENCY RESPONSE INFORMATION
- \*ITEMS THAT CAN BE USED IN LIEU OF SPRP
- CERTIFIED GROUNDWATER PROTECTION PLAN
  - SPILL PREVENTION CONTROL & COUNTERMEASURES PLAN (REQUIRES CERTIFICATION)

# TANK INSPECTIONS





# WHAT WILL BE INCLUDED?

- TANK SHELL INTEGRITY
  - VENTING (EMERGENCY & NORMAL)
  - CORROSION PREVENTION
  - CONTINUOUS RELEASE DETECTION METHODS
  - OVERFILL PREVENTION
  - PIPING (UP TO THE FIRST POINT OF ISOLATION/VALVE)
  - SECONDARY CONTAINMENT
- 



# COMMON DEFICIENCIES

## SECONDARY CONTAINMENT

- DOES NOT HOLD 110% OF LARGEST TANK VOLUME
- WORN DOWN OR ERODED BERMS
- NOT SUFFICIENT TO PASS THE 72 HOUR TEST (EARTHEN COMPACTION)





# COMMON DEFICIENCIES

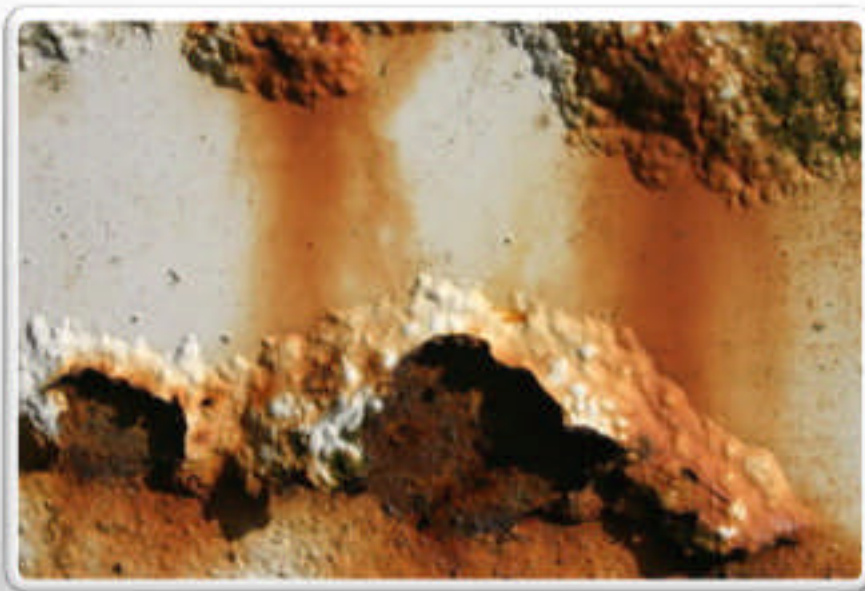
## VENTING

- NO EMERGENCY VENT PRESENT
- FAILING GASKETS
- INCORRECT INSTALLATION

# COMMON DEFICIENCIES

## CORROSION PREVENTION

- PEELING COATINGS
- RUSTY EXTERIOR
- INCORRECTLY INSTALLED CATHODIC PROTECTION
- NO MEANS OF PREVENTING CORROSION ON TANK BOTTOM



## OTHER PIECES TO THE AST PUZZLE

- NOTIFICATION TO LOCAL WATER INTAKES (SURFACE & GROUNDWATER)
  - PUBLIC WATER SYSTEM
  - COUNTY & MUNICIPAL EMERGENCY RESPONSE
- FINANCIAL RESPONSIBILITY
  - \$0.20/GALLON AGGREGATE STORAGE (LEVEL 1)
  - \$0.10/GALLON AGGREGATE STORAGE (LEVEL 2)
  - MINIMUM OF \$5000 COVERAGE



# CLOSURE PLAN REQUIREMENTS

- PLAN MUST BE SUBMITTED 30 DAYS PRIOR TO CLOSURE AND APPROVED BY THE STATE
- WHO WILL BE OVERSEEING THE CLOSURE?
- HOW WILL THE TANK BE CLEANED? (API OR STI STANDARDS)
- WHAT IS THE FATE OF THE TANK AFTER CLEANING?
- SOIL SAMPLING (OVERSEEN BY THE OFFICE OF ENVIRONMENTAL REMEDIATION)
  - DIRECTLY UNDER THE TANK
  - LOWEST POINT INSIDE SECONDARY CONTAINMENT
  - UNDER ANY CONNECTIONS OR DRAINS

# CAN I GET OUT OF THE REGULATIONS?



- MOVE LEVEL 1 & LEVEL 2 TANKS OUT OF THE ZCC OR ZPC
- DISCONNECT TANK AND HOLD IN INVENTORY (SPECIFIC PROCESS FOR TANK CLOSURE)
- REPLACE LARGER TANKS WITH SMALLER TANKS (BELOW 1 320 GALLONS/31.5 BBLs)
  - PROBLEMS WITH THIS OPTION HAVE BEEN NOTED IN THE INDUSTRY

**THANK YOU!**



**SLS**

***Land & Energy Development***

***Solutions from the ground up.***