

West Virginia UST/LUST Program Update



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UST - Revised Federal Rule

- The revised federal rule mirrors requirements of the Energy Policy Act of 2005 (adopted by WV in 2008).
- First major revision since 1988.
- Effective October 13, 2015



UST- WV State Rule

- Adopts federal UST rule by incorporation
- Significant changes to the Worker certification program and minor changes in the notification section.
- State Rule - Effective Date June 1, 2018



Worker Certification Update

Class A activities have generally not changed with the exception that Class A Certified Workers may no longer do installations and repairs associated with corrosion protection or linings.

Class B has not changed.



Worker Certification Update

Class C worker may perform

- tank and/or piping tightness testing,
- tank integrity testing,
- tightness testing of spill buckets, UDCs, and sumps
- testing of line leak detectors,



Worker Certification Update

Class D activities were expanded to include:

- installation and repair of internal liners, and/or external coatings..

Class E had no changes.



Worker Certification Update

Class F, repair technician, was created.

- Verify ball floats or overflow,
- Replace vapor recovery adapters, replace fill shut offs, replace STP motors, check and replace probes and sensors,



Worker Certification Update

- fix unions under dispensers,
- replace fuel adapters,
- replace line leak detectors, replace flex connectors, check and replace valves, replace pipe fittings accessible without excavating,
- perform hydrostatic testing

Worker Certification Update

Worker Certification Fees have changed.

– Initial certification

- Changed from \$75.00 to \$185.00

– Renewal

- Changed from \$50.00 to \$125.00

– Retesting after failing a test

- Changed from \$35.00 to \$60.00



Worker Certification Update

- Certification period has increased from 2 years to 3 years.
- All new applicants starting on June 1, 2018 will go immediately to the 3-year cycle.
- Current certified workers will go to the 3-year cycle when they renew their certification or if they would apply as a new applicant.



Worker Certification Update

- For Renewal of a license(s)
 - Continuing education credits remains at 16 hours per class of certification (8 hours of which may be safety)
 - You must show that you participated in at least one job annually applicable to the class of certification within the prior certification period.



Notification Changes

- There is a revised UST notification form.
 - First page - allows owner to provide information on ownership, operator, and/or address changes
- Must notify within 30 days of discovery of any deficiency in the structural integrity of the tank(s).



Previously Deferred UST Systems

- Emergency Generators must now perform Leak Detection
- Airport Hydrant Fuel Systems
- Field Constructed Tanks
 - Must meet the requirements no later October 13, 2018



Walkthrough Inspections

- Beginning on October 13, 2018 – must conduct walkthrough inspections
- Must keep documents of inspections
- Must check the following every 30 days



Walkthrough Inspections

- **Spill prevention equipment**
 - Check for damage
 - Remove any liquid or debris
 - Check for and remove any obstructions in the fill pipe
 - Check the fill cap to make sure it is securely on the fill pipe
 - Double walled spill prevention equipment with interstitial monitoring check for a leak in the interstitial area



Walkthrough Inspections

- **Release detection equipment**
 - Ensure it is operating with no alarms or other unusual operating conditions present
 - Ensure records of release detection testing are reviewed and current



Walkthrough Inspections

- Must check the following annually:
 - **Containment sumps**
 - Check for damage, leaks into the containment area, or releases to the environment
 - Remove any liquid or debris
 - Double walled containment sumps with interstitial monitoring check for a leak in the interstitial area



Walkthrough Inspections

- Must check the following annually:
 - Hand held release detection equipment (for example tank gauge sticks or groundwater bailers)
 - Check for operability and serviceability



Walkthrough Inspections

- **As an Option,**

Conduct walkthrough inspections according to a standard code of practice developed by a nationally recognized association or independent testing laboratory.

- PEI RP 900



Secondary Containment

- The WV UST rule previously required tanks and piping installed after July 1, 2008 to be secondarily contained.
- This requirement remains unchanged.



Containment Sumps & UDCs

- Tightness testing at the time of installation, and every three years thereafter (required since July 2008).
- Periodic testing of double walled containment sumps used for interstitial monitoring of piping is not required if the integrity of both walls of the containment sump is periodically monitored (i.e. monthly).



Containment Sumps

- Containment sump testing must follow criteria developed by the manufacturer or an industry standard
 - (PEI) RP1200
 - Sump must be tested above the highest penetration point.



Spill Prevention

- For new installs, spill prevention devices must be tightness tested at the time of installation and every three (3) years thereafter.
- For previously installed spill prevention equipment, testing must be conducted not later than October 13, 2018 and every three (3) years thereafter.



Overfill Protection

- For new installs, overfill protection devices must be tightness tested at the time of installation and every three (3) years thereafter.
- For previously installed overfill protection equipment, testing must be conducted not later than October 13, 2018 and every three (3) years thereafter.



Overfill Protection

- No new install or replacement of Ball float valves
- Existing ball float valves may continue to be used until they **fail** a functionality test.
 - Once failed, the ball float must be removed and a new overfill device must be used.



Release Detection

- Beginning on October 13, 2018 - must test electronic and mechanical components of release detection equipment at least annually
- - Manufacturer's instructions
 - A code of practice developed by a nationally recognized association or independent testing laboratory



Release Detection

- Must maintain records of release detection equipment testing for at least 3 years.
- The record must include each component tested, pass or fail, any action needed and taken to correct an issue.



Release Detection

- Statistical Inventory Reconciliation
 - Report a quantitative result with a calculated leak rate;
 - Be capable of detecting a leak rate of at least 0.2 gallon per hour or a release of 150 gallons within a 30-day period with a probability of detection of not less than 0.95 and a probability of false alarm of no greater than 0.05;

Compatibility

- Must demonstrate compatibility by notifying WVDEP at least 30 days prior to storing biofuels containing greater than 10% ethanol or greater than 20% biodiesel.
- information regarding compatibility may be found at <https://www.epa.gov/ust/ust-system-compatibility-biofuels>



Operator Training

- Mostly unchanged
 - On or After October 13, 2018, Class A and/or Class B operator may train Class C operator.



UST closures

- Updated closure memo reminders:
 - Class B certified worker **MUST** be on site supervising the closure or change-in-service
 - Report the release, even if it going to be remediated immediately.
 - **Spill line 1-800-642-3074**
 - Plan ahead
 - petroleum contaminated soils (whether removed from the ground or lying loose within the excavation) must be properly handled and disposed of at an approved landfill.



UST closures

- Accumulated water with a sheen observed within the excavation zone must be removed
- Observed excavated area to determine if groundwater recharge occurs
- Any water removed shall be properly disposed, recycled, or treated as appropriate
- After removal of the tanks and piping, it is highly recommended that the excavation be backfilled with soil not gravel or sand.



UST closures; sampling

- Site assessments must be performed according to Section 280.72 and sampling performed to measure for the presence of a release where contamination is most likely to be present.
- All samples shall be collected from native soil, sampling of non-soil like backfill material is not acceptable.
- Sample depths to the nearest foot and soil type must be documented and included in the closure report. If sampling depths are not documented, all data will be compared against the more conservative Tier 1 action level.
- Closure sampling data must be reflective of the soils remaining in the pit.
- At a minimum, samples shall be collected as:
 - One (1) sample in the native soil below each tank;
 - One (1) discrete sample in native soil from each of the four (4) pit walls from the tank pit;
 - One (1) from under each dispenser in native soil;
 - One (1) sample from native soil every 15 feet along the product piping;
 - Stained soils, obvious contamination from a release.



Corrective Action

- In process of updating the August 2001 version of the Corrective Action Guidance Document (CAGD)
 - Scientifically backed numbers
 - Complete overhaul of the Leaking Underground Storage Tank section
 - Incorporated the Leaking Aboveground Storage Tank section



CAGD highlights

- Will be applied to ALL regulated AST and UST
- Offer flexibility, while remaining protective
- Reduced remediation costs
- Return more sites to productive use/more efficient property redevelopment
- Remain fully compliant with laws and regulations



CAGD highlights

- Updated reporting requirements
 - templates
 - checklists
 - DEP.AST@wv.gov
- Analytical methods/analysis
 - No more TPH analysis for closure confirmation; VOCs (BTEX), MTBE, TBA
 - TPH is required as part of waste characterization for disposal



CAGD - Regulated ASTs and USTs

- ASTs
 - Registered Level 1 and Level 2 tanks.
 - Substances from A to Z
- USTs
 - Any substance defined in section 101 (14) of the comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (except hazardous waste under Subtitle C)
 - Mostly petroleum-based



Flexible/Protective

- Applies to SOILS ONLY contamination
 - 3-Tier Approach for Soil Contamination
 - Tier 1 can be applied to soil and any elevation bgs
 - Tier 2 (0-8') and Tier 3 (>8') must meet certain conditions and property use.
 - Preferential Pathways (vapor intrusion)
 - Significant Foundation Openings (vapor intrusion)
 - Soil type (silt loam or with less soil saturated hydraulic conductivity)



Cost Reduction/Effective/Efficient - Presumptive Remedies

- Technologies or techniques that have been proven for specific types of sites or types of contamination. EPA approved.
 - Soil Excavation, Soil Vapor Extraction (SVE), Low Temp Thermal Desorption (LTTD), Air Sparging (AS), Dual Phase Extraction (DPE), *In situ* Chemical Oxidation (ISCO), Aggressive Fluid Vapor Recovery (AFVR)



Cost Reduction/Effective/Efficient - Presumptive Remedies

*Site MUST be fully characterized and plume delineated, prior to use.

SOIL VAPOR EXTRACTION			
Facility or Task ID:	Task ID:		
Do not proceed unless a site characterization has been completed that fully delineates the extent of contamination.			
I. Applicability Determination (Initial Screening)	Effective	Somehow Effective	Ineffective
<p>1. Provide a general description of the link/link permeability (L₀)¹ of soil at this site in the area of remediation in cm².</p> <p><input type="checkbox"/> Based on soil type <input type="checkbox"/> Delineated <input type="checkbox"/> Field/lab test</p> <p><small>200/200' soils may require smaller scale field tests. In design, it is more than possible that errors will occur. This will require site assessment.</small></p>	<input type="checkbox"/> L > 1000 ²	<input type="checkbox"/> 1000 ² > L > 100 ²	<input type="checkbox"/> L < 100 ²
<p>2. What is the general bearing level range in "T" for materials subject to remediation at this site?</p> <p><small>For example, medium, select the bearing level range that is most representative of the condition of concern to be remediated to conduct the trial.</small></p>	<input type="checkbox"/> + 200	<input type="checkbox"/> + 200 - + 300	<input type="checkbox"/> + 300
<p>3. What is the depth to groundwater based on the shallowest well in area where remediation is being performed?</p> <p><small>Water table depth of 10' or greater (verify local conditions) or even greater are not suitable. This will require site assessment.</small></p>	<input type="checkbox"/> > 10'	<input type="checkbox"/> 0.5 - 10.0'	<input type="checkbox"/> < 0.5'
<p>4. What is the wetland content (%) at site in area of remediation?</p> <p><small>High wetland content reduces soil permeability by creating air flow. This is of particular concern in the capillary zone and may require soil moisture measurements if contaminated area within the capillary zone.</small></p>	<input type="checkbox"/> < 5%	<input type="checkbox"/> 5-30% - 50%	<input type="checkbox"/> > 50%
<p>5. What is the vapor pressure range (in psi) of the chemicals being remediated?</p> <p><small>PSI* contains material, select the vapor pressure range that is most representative of the chemicals of concern to be remediated to conduct the remedy.</small></p>	<input type="checkbox"/> > 0.2	<input type="checkbox"/> < 0.2 - > 0.1	<input type="checkbox"/> < 0.1
<p>6. What is the Henry's law constant² (K_{ow}) for the chemicals being remediated?</p> <p><small>PSI* contains material, select the lowest law constant range that is most representative of the chemicals of concern to be remediated by using the remedy.</small></p>	<input type="checkbox"/> > 100	<input type="checkbox"/> < 100 - > 1000	<input type="checkbox"/> < 1000

¹ Link/link permeability is a measure of the ability of soils to transmit fluids and is the single most important parameter determining the effectiveness of SVE.

² Data is available on EPC website with common Henry's law constants for various chemicals. Please fill in partial pressure (psia) fraction. <https://www2.epa.gov/external/pubs/Download/pubs/Download%20of%20soilvapor.htm>

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SOIL VAPOR EXTRACTION			
II.a. SVE System Design	Effective	Somehow Effective	Ineffective
<p>1. What is the radius of influence (ROI) for the proposed extraction well?</p> <p><small>ROI will must be defined or shown on plan or cross section.</small></p>	<input type="checkbox"/> > 100 ft	<input type="checkbox"/> > 50 ft, but < 100 ft	<input type="checkbox"/> < 50 ft.
<p>2. Has the radius of influence (ROI) been calculated for each well type at the site?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>3. Is the proposed well density appropriate, given the total area to be cleaned up and the radius of influence for each well?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>4. Is the flow rate selected appropriate for the site conditions?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>5. Is the type of well proposed appropriate for the site conditions present?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>6. Do the proposed well screen materials match soil conditions at the site?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
II.b. SVE System Design			
<p>1. Are air injections of positive inlet wells proposed?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>2. Is the proposed air injection/inlet well design appropriate for this site?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>3. Are surface sealing materials proposed appropriate for this site?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>4. Will your center decision be necessary?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>5. If groundwater depression is necessary, are the pumping wells correctly spaced?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>6. Is a vapor treatment system required?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO
<p>7. Is a vapor treatment system required, is the proposed system appropriate for the contaminant concentration at the site?</p>	<input type="checkbox"/> YES		<input type="checkbox"/> NO

Appendices

Fast Track to Remediation

SUBMITTER: _____
 PROJECT OF STATE: _____
 WQSIC: _____
 DATE OF RELEASE: _____

WHY WAS THE RELEASE OCCURRED?
 How was the release reported?

WQSIC Spill Line SPVSDP Toxic Contactor Action Web

I. RESULTS OF THE REMEDIATION

1. How was the release corrected?

During Cleanups During Upgrades During Turnover/Operator Inexperience
 During Repair Other (Specify): _____

2. Source:

Tank Solen Submersible Turbine Pump (STP) Control
 Piping Solen Failure/Degradation Solen
 Bypasses Solen Inlet/Outlet
 Other (Specify): _____

3. Has the release been stopped?

Yes No

4. Has the source of the initial release been resolved, repaired or removed?

Yes No

II. Substances

1. Substance suspected or confirmed to be released (check all that apply)

Acetone Cellulose Ethyl Methylene
 Diesel PVC/CPVC LUB Resins
 Gasoline Standard Fuel Oil Steam/Water Sodium Hydroxide
 Grease Oil Hydraulic Diesel Pre-treatment Fluids Unknown
 Other (Specify): _____

2. Volume of material released to provide estimate in gallons: _____

III. Contamination and Impact

1. What is the extent of contaminated soil that was removed in ft. (Length x Width x Depth).

Length: _____ Width: _____ Depth: _____

2. Provide information on the disposal location of contaminated soil.


- Reporting requirements
 - Streamlined
 - Checklists
 - Templates



Appendices

DOCUMENT SUBMITTAL FORM

NR 110-01 (Code/Version) Rev. 1/02
 DE 175 2004 26
 Columbia, WV 25704
 (304) 251-3176



Submission Date: _____
 AST or facility ID: _____
 Leak ID: _____

Facility Information		Response/Process Information	
Facility Name:		Name:	
Address:	State:	Address:	
City:	Zip:	Phone:	
County:	City:	Facility:	
Contact:		SCM/SP/SD/MS/ST/DC/MS/ST	
Owner:		Name:	
Small:		Address:	
Responsible Party Information			
Owner:		Operator:	
Address:		Address:	
City:	State:	City:	State:
County:	Zip:	County:	Zip:
Owner:		Operator:	
Phone:		Phone:	
Small:		Small:	

1. Identify the facility type:

<input type="checkbox"/> Recycled tires	<input type="checkbox"/> Refinery	<input type="checkbox"/> Railroad
<input type="checkbox"/> Petroleum distillate	<input type="checkbox"/> Motor/transport	<input type="checkbox"/> Mining
<input type="checkbox"/> Auto dealership	<input type="checkbox"/> State/federal government	<input type="checkbox"/> Oil & Gas site
<input type="checkbox"/> Truck/trailer	<input type="checkbox"/> Airport	<input type="checkbox"/> Chemical facility
<input type="checkbox"/> Vacant or abandoned	<input type="checkbox"/> Other (identify): _____	

2. Identify the current release event(s) - Check all that apply:

<input type="checkbox"/> Initial abatement measures and site check	<input type="checkbox"/> Quarterly monitoring report for year _____
<input type="checkbox"/> Initial site characterization report	<input type="checkbox"/> 1st quarter <input type="checkbox"/> 3rd quarter
<input type="checkbox"/> Site characterization report (SCR)	<input type="checkbox"/> 2nd quarter <input type="checkbox"/> 4th quarter
<input type="checkbox"/> Supplemental SCR	<input type="checkbox"/> Fuel tank report
<input type="checkbox"/> Corrective action plan (CAP)	<input type="checkbox"/> Remedial remedies
<input type="checkbox"/> Revised CAP	<input type="checkbox"/> Air sparging <input type="checkbox"/> Soil extraction
<input type="checkbox"/> Free product removal report	<input type="checkbox"/> Chemical oxidation <input type="checkbox"/> Soil vapor extraction
<input type="checkbox"/> Closure report	<input type="checkbox"/> Thermal abatement <input type="checkbox"/> Dual phase extraction
<input type="checkbox"/> Monitoring well abandonment	<input type="checkbox"/> Aggressive fluid vapor recovery

3. Are you reporting as MS in the attached flowchart? No Yes

Add Local Rules or Comments

Free Product Recovery Attachment Sheet

Facility Leak ID: _____ Leak ID: _____

I. Free Product Report

1. Is this the initial free product report? (Yes, go to question #2)

Yes No

2. Has the free product been removed from the site and is it being reported to the appropriate agency? (Yes, go to question #3)

Yes No

Initial Abatement Measures and Site Check

Submit Date: _____
 Facility or Leak ID: _____
 Leak ID: _____

I. Release Information

1. Elapsed time over which the release occurred (if known): _____

2. Volume of water(s) released (estimate in gallons): _____

II. Nature of the Confirmed Release

1. Source

<input type="checkbox"/> Tank <input type="checkbox"/> Spill	<input type="checkbox"/> Submersible Fuel Oil Pump (STP) <input type="checkbox"/> Spill
<input type="checkbox"/> Piping <input type="checkbox"/> Spill	<input type="checkbox"/> Delivery Problem <input type="checkbox"/> Spill
<input type="checkbox"/> Truck/trailer <input type="checkbox"/> Spill	<input type="checkbox"/> Unknown



Soils ONLY

- Does NOT apply to sites with Groundwater contamination!
 - Groundwater standard of 0.5 ppb Benzene is mandated by law.



ANY QUESTIONS ?

Thank you for your time.



west virginia department of environmental protection
Promoting a Healthy Environment

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