

**Study Guide for**  
**West Virginia Department of Environmental**  
**Protection**  
**Underground Storage System Closure and**  
**Change-in-Service Certification (Class B)**

**This document has been prepared in conjunction with the West Virginia Department of  
Environmental Protection and Marshall University**

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## **Suggestions for using this study guide**

This study guide is intended to help you prepare for the West Virginia Department of Environmental Protection Class B Underground Storage System Closure and Change-in-Service Exam. The study guide consists of an extensive list of questions together with the documents in which the answers to the questions can be found. All of the questions from a specific document are grouped together in the study guide. After each question, the document section or page number where the answer can be found is given in parentheses. The process of reading the question, finding the answer, and writing the answer in your study guide will help you learn and remember the information you need to know to pass the certification exam.

The actual certification exam will include only the material covered in these study questions. The only difference is the exam will be in multiple choice format. The exam will be open book. During the examination, you may refer to this study guide and any other reference materials that you wish. You are cautioned, however, that you will not have sufficient time to look up the answers to the exam questions. You should be thoroughly familiar with the materials in the study guide before you take the exam.

The study guide is based on industry publications and manufacture's literature. The use of these documents does not constitute endorsement of specific products by the West Virginia Department of Environmental Protection. These documents are here as representative, authoritative sources of information regarding the proper closure or change-in-service of underground storage systems.

**Suggested Study Guide Documents for the West Virginia Underground  
Storage System Closure and Change-in-Service Exam  
(Class B Worker Certification)**

**Study Documents**

New England Interstate Water Pollution Control Commission  
*“Tank Closure without Tears: An Inspection’s Safety Guide”*

*API 1604* – Closure of Underground Petroleum Storage Tanks, 3 Edition

*API 2016* – Guidelines and Procedures for Entering and Cleaning Petroleum Storage Tanks

*NIOSH* – Working in Confined Spaces (Publication 80-106)

*OSHA* – Excavation Rules 29 CFR 1926, Subpart P, 650-652  
(including Appendix A, B, and F)

*OSHA* – Permit Required Confined Spaces, 29 CFR 1910.146, Subpart J

*USEPA* – Federal Underground Storage Tank Regulations (40 CFR 280)

*WVDEP* – Appendix D-2 UST/LUST Closure Guidance Memo

*WVDEP* – Underground Storage Tanks Rules (Title 33 Series 30)

It is highly recommended that you obtain a copy of each of the study materials to review prior to taking the examination. Some of the study materials are free publications and are being provided as a courtesy to you by the WVDEP. For study materials that must be purchased, we have included information on where they can be obtained. Please note that information on purchasing study guide materials may change at any time. For this reason, the purchasing information provided may not be correct. **It is the sole responsibility of the applicant to obtain the necessary study guide materials to prepare for this exam.**

**“Tank Closure Without Tears: An Inspection’s Safety Guide”  
(New England Interstate Water Pollution Control Commission  
{NEIWPCC}, 1988, Reprinted 1990)**

*Study Guide Questions for West Virginia Underground Storage  
Tank Closure and Change-in-Service Exam*

According to the New England Interstate Water Pollution Control Commission, how many points of the fire triangle are necessary to support combustion? **(NEIWPCC, page 2)**

According to the New England Interstate Water Pollution Control Commission, which of the following causes static electricity? **(NEIWPCC, page 3)**

If static-producing movement cannot be eliminated, the New England Interstate Water Pollution Control Commission states that a contractor can provide a “safe” discharge of static electricity by providing a conductive path for continuous discharge of static electricity by \_\_\_\_\_. **(NEIWPCC, page 3)**

The New England Interstate Water Pollution Control Commission states that meteorological conditions can affect a tank closure. How? **(NEIWPCC, page 4)**

The New England Interstate Water Pollution Control Commission states that plastic (PVC) pick-up tubes should be avoided on the stripping lines of vacuum trucks. Why? **(NEIWPCC, page 5)**

According to the New England Interstate Water Pollution Control Commission, what is the flammable range of vapor given off by most petroleum products like gasoline and fuel oil? **(NEIWPCC, page 6)**

According to the New England Interstate Water Pollution Control Commission, “purging” a tank controls which point of the fire triangle? **(NEIWPCC, page 6)**

According to the New England Interstate Water Pollution Control Commission, which point of the fire triangle is dealt with in “inerting” the atmosphere of a tank? **(NEIWPCC, page 6)**

According to the New England Interstate Water Pollution Control Commission, what is the goal of “inerting” a tank used for petroleum product storage? **(NEIWPCC, page 6)**

According to the New England Interstate Water Pollution Control Commission, which of the following are recommended methods for purging a tank? **(NEIWPCC, page 7)**

According to the New England Interstate Water Pollution Control Commission, which method of purging using air pumps fresh air into the tank? **(NEIWPCC, page 7)**

According to the New England Interstate Water Pollution Control Commission, when using a diffused-air blower to purge a tank, the contractor must take into account the size of the tank vent opening and the rate at which air is pumped into the tank. Pressure in the tank must not exceed \_\_\_\_ psi to avoid rupturing the tank. **(NEIWPCC, page 7)**

According to the New England Interstate Water Pollution Control Commission, what are the minimum heights above grade allowed for venting exhaust fumes from tank purging? **(NEIWPCC, page 7)**

According to the New England Interstate Water Pollution Control Commission, when testing with a Combustible Gas Indicator (CGI), a reading of 100% Lower Explosive Limit (LEL) would indicate what percent of gasoline vapors are present? **(NEIWPCC, page 8)**

According to the New England Interstate Water Pollution Control Commission, when purging a tank and testing with a Combustible Gas Indicator (CGI), what CGI reading is considered a "practical" target reading by the petroleum industry? **(NEIWPCC, page 8)**

According to the New England Interstate Water Pollution Control Commission, when purging a tank and testing with a Combustible Gas Indicator (CGI), at what location(s) inside the tank should the CGI probe be placed to take a reading during and after purging? **(NEIWPCC, page 8)**

Per New England Interstate Water Pollution Control Commission guidelines, when inerting a tank with dry ice, how much dry ice should be used for every 1,000 gallons of tank capacity? **(NEIWPCC, page 9)**

The New England Interstate Water Pollution Control Commission warns that carbon dioxide (CO<sub>2</sub>) fire extinguishers should definitely not be used for inerting flammable atmospheres. Why? **(NEIWPCC, page 10)**

The New England Interstate Water Pollution Control Commission states that a reading of 11% on an oxygen meter theoretically indicates a non-combustible atmosphere in tanks that have contained most petroleum products, but an oxygen reading of \_\_\_\_ should be targeted for inerted tanks for a more conservative safety rule of thumb. **(NEIWPCC, page 11)**

The New England Interstate Water Pollution Control Commission states what percent oxygen by volume indicates a safe range for breathing? **(NEIWPCC, page 11)**

What safety procedure does the New England Interstate Water Pollution Control Commission state should be followed if a tank must be entered once the inerting process is complete? **(NEIWPCC, page 11-12)**

According to the New England Interstate Water Pollution Control Commission, should combustible gas indicators (CGI's) be used to monitor a tank which is being inerted? **(NEIWPCC, page 13)**

The New England Interstate Water Pollution Control Commission warns that checking the atmosphere in a tank before cleaning should occur, even when the tank has already been purged or inerted, due to flammable vapor regeneration from what potential sources? **(NEIWPCC, page 14)**

According to the New England Interstate Water Pollution Control Commission, what is the procedure for sealing corrosion holes in a tank prior to transport? **(NEIWPCC, page 17)**

According to the New England Interstate Water Pollution Control Commission, what type of pump should be used to remove product and residue from a tank? **(NEIWPCC, page 4)**

The New England Interstate Water Pollution Control Commission states that, prior to a tank being removed from the site, a 1/8-inch vent plug is to be located on what part of the tank for transport? **(NEIWPCC, page 17)**

The New England Interstate Water Pollution Control Commission states that a safe work place must be prepared before a tank is approached or excavation begins, including eliminating all potential sources of ignition. Electrical and internal combustion equipment must be removed, unless it's designed to be \_\_\_? **(NEIWPCC, page 3)**

The New England Interstate Water Pollution Control Commission states that it is important to control sources of ignition when purging an UST with air. Why? **(NEIWPCC, page 6)**

The New England Interstate Water Pollution Control Commission cautions personnel when using dry ice to inert an UST, because of what potential hazard associated with handling dry ice? **(NEIWPCC, page 9)**

The New England Interstate Water Pollution Control Commission states, when using nitrogen to inert an UST, the hose or nozzle delivering the nitrogen into the UST must be \_\_\_?\_\_\_ to prevent static buildup. **(NEIWPCC, page 10)**



**“API 1604: Closure of Underground Petroleum Storage Tanks”  
(American Petroleum Institute, Third Edition, March 1996, Reaffirmed  
November 2001)**

*Study Guide Questions for West Virginia Underground Storage  
Tank Closure and Change-in-Service Exam*

API 1604 states which of the following personnel should be familiar with the potential hazards, and the appropriate health and safety measures, required for tank closure? **(API 1604, Section 1.1)**

According to API 1604, which of the following are symptoms of inhaling high concentrations of petroleum hydrocarbon vapors? **(API 1604, Section 1.3.1)**

API 1604 states, in the event a vacuum truck is used for removal of liquids and residues from a tank, the truck should be located \_\_\_\_ from the excavation. **(API 1604, Section 4.2.3)**

According to API 1604, what blood disorder is associated with high exposure to benzene (gasoline typically contains 1-3% benzene)? **(API 1604, Section 1.3.1.1)**

According to API 1604, which of the following procedures should be followed when storing a used tank? **(API 1604, Section 5.2.1)**

API 1604 states, prior to permanent closure or change in service of an underground tank, a pre-closure evaluation should be conducted. Which of the following should be included in this evaluation? **(API 1604, Section 3.3.1)**

According to API 1604, which of the following is **not** required information that should be placed on a removed tank before transporting off the site? **(API 1604, Section 4.6.4)**

API 1604 states, in the event a vacuum truck is used for removal of liquids and residues from a tank, vacuum pump exhaust gases should be discharged through a hose of adequate size and length \_\_\_\_ of the truck and tank area. **(API 1604, Section 4.2.3)**

API 1604 states testing of the tank atmosphere for flammable and combustible liquids should be regularly conducted until what has occurred? **(API 1604, Section 4.4.1)**

According to API 1604, when should "closure in place" of a tank be considered? **(API 1604, Section 4.5.1)**

API 1604 states, when an UST has been temporarily out of service for more than 12 months and does not meet EPA standards, which of the following is an allowable option for that tank? **(API 1604, Section 4.4.1)**

API 1604 states, under what conditions can tanks that previously contained gasoline be used for drainage culverts or storage of food or liquids intended for animal or human consumption? **(API 1604, Section 6.1.2)**

According to API 1604, how can the minor effects of exposure to petroleum hydrocarbon vapors from inhalation be treated? **(API 1604, page 1)**

According to API 1604, once the top of the tank has been excavated for removal or closure in place and tank fixtures have been removed, all tank openings should be plugged except one until the tank is purged. Which opening is to remain open and connected to the tank? **(API 1604, page 4-5)**

**“API 2016: Guidelines and Procedures for Entering and Cleaning  
Petroleum Storage Tanks”  
(American Petroleum Institute, First Edition, August 2001,  
Reaffirmed May 1, 2006)**

*Study Guide Questions for West Virginia Underground Storage  
Tank Closure and Change-in-Service Exam*

According to API 2016 and regarding confined spaces, what is the responsibility of an “attendant”? **(API 2016, Section 3.2.1)**

API 2016 recommends the “normal” amount of fresh air required to ventilate a tank after de-gassing and while workers are inside is “5 air changes per hour”. This means replacing the volume of air in the tank how often? **(API 2016, Section 5.1)**

A location meets the definition of a “confined space”. According to API 2016, which of the following makes the location a “permit-required confined space”? **(API 2016, Section 3.2.8.1)**

API 2016 warns of the potential hazard of “channeling” to occur in a large tank during ventilation of hazardous vapors, resulting in most of the tank atmosphere remaining in a vapor rich condition. What causes “channeling”? **(API 2016, Section 4.2.2.4)**

API 2016 cautions that conditions within tanks can lead to oxygen deficient or oxygen enriched atmospheres. What is the normal ambient oxygen content of air? **(API 2016, Section 4.2.1)**

According to API 2016, which of the following conditions do **not** apply to a Class I, Zone 0 location? **(API 2016, Section 3.2.12.1)**

API 2016 states that vapors from liquid hydrocarbons can displace air within a tank because of what characteristic? **(API 2016, Section 4.2.2)**

According to API 2016, when removing vapors from a tank, why should educators and air blowers be electrically bonded to the tank shell? **(API 2016, Section 5.3.2.1)**

A petroleum tank has been checked for oxygen levels before entering and found to contain 19% oxygen. According to API 2016, what is required for an entrant to use in order to safely enter the tank? **(API 2016, Section 4.2.3.1)**

A 6,000 gallon tank is determined to have nearly 45,000 cubic feet of space. Based on API 2016 guidance, assuming one blower is used (100% blower efficiency and no airflow obstructions) to introduce fresh air into the tank with a capacity rating of 9,000 cubic feet per minute, how long would it take for one air change (displace the volume of the tank) to occur? **(API 2016, Section 5.3.3.1, based on example 5.1)**

When removing remaining tank product prior to cleaning and a portable air-driven suction pump is used, what does API 2016 recommend the pump be grounded and electrically bonded to? **(API 2016, Section 10.3.4)**

API 2016 states what type of plan should be developed for each tank being cleaned that provides information on what to do in case of an emergency? **(API 2016, Section 10.2.9)**

When performing tank cleaning activities, API 2016 cautions that it is important to monitor weather conditions in the area for potential lightning. Why? **(API 2016, Section 9.6)**

API 2016 states that combustible gas indicators are used to determine the amount of \_\_\_\_ in the atmosphere. **(API 2016, Section 11.3.2)**

When testing for flammable vapors, API 2016 states that the amount of oxygen in the atmosphere must be within what range in order for combustible gas indicators to operate properly? **(API 2016, Section 11.2.2.2)**

When determining the appropriate number, capacity and location of air blowers and educators to be used during tank cleaning activities, API 2016 states which of the following factors must be considered? **(API 2016, Section 5.3.3)**

API 2016 recommends the “normal” amount of fresh air required to ventilate a tank after de-gassing and while workers are inside is “5 air changes per hour”. This means replacing the volume of air in the tank how often? **(API 2016, Section 5.1)**

While a worker is inside a gasoline tank performing cleaning activities, the lower explosive limit (LEL) is monitored and has exceeded 10%. According to API 2016, what should immediately occur next? **(API 2016, Section 6.6.2.4)**

API 2016 cautions that combustible gas indicators are not to be used to measure toxic substances. Why? **(API 2016, Section 11.4.1.1)**

When removing remaining tank product prior to cleaning and a portable air-driven suction pump is used, what does API 2016 recommend the pump be grounded and electrically bonded to? **(API 2016, Section 10.3.4)**

According to API 2016 and regarding confined spaces, what function does an “entrant” serve? **(API 2016, Section 3.2.15)**

According to API 2016, which of the following are potential ways that a toxic substance can enter the body of a worker? **(API 2016, Section 4.2.2)**

API 2016 states that artificial lighting equipment, like flashlights, can be used during tank cleaning activities, provided it meets what requirements? **(API 2016, Section 9.4.2.2)**

**“Working in Confined Spaces”**  
**(National Institute of Occupational Safety and Health {NIOSH},**  
**December 1979, Publication 80-106)**

*Study Guide Questions for West Virginia Underground Storage  
Tank Closure and Change-in-Service Exam*

Which of the following statements, according to the National Institute for Occupational Safety and Health, best defines a Class B confined space? **(NIOSH, Section 1, Definitions, page 1)**

The National Institute for Occupational Safety and Health defines a “standby person” as a person trained in \_\_\_\_ and assigned to remain on the outside of the confined space and to be in communication with those working inside. **(NIOSH, Section 1, Definitions, page 3)**

The National Institute for Occupational Safety and Health classifies a Class A confined space atmosphere as having what oxygen level? **(NIOSH, Section 2, Entry and Rescue, page 4)**

According to the National Institute for Occupational Safety and Health, which class of confined space work is atmospheric testing required before the space is entered? **(NIOSH, Section 2, Entry and Rescue, page 5)**

According to the National Institute for Occupational Safety and Health, which class of confined space work is a permit required before the space is entered? **(NIOSH, Section 2, Entry and Rescue, page 5)**

According to the National Institute for Occupational Safety and Health, which class of confined space work is a standby person required? **(NIOSH, Section 2, Entry and Rescue, page 5)**



According to the National Institute for Occupational Safety and Health, what length of time is a confined space entry permit valid? **(NIOSH, Section 3, Permit System, page 7)**

The National Institute for Occupational Safety and Health states that before entering a confined space what testing, at a minimum, must be performed to ensure that the atmosphere is safe? **(NIOSH, Section 6, Testing and Monitoring, page 9)**

According to the National Institute for Occupational Safety and Health, below what percentage of oxygen in a confined space must approved respiratory equipment be used? **(NIOSH, Section 6, Testing and Monitoring, page 10)**

According to the National Institute for Occupational Safety and Health, which of the following are physiologic (physical) effects of breathing in an atmosphere that contains 17% oxygen? **(NIOSH, Confined Space Hazards, Hazardous Atmospheres, page 27)**

According to the National Institute for Occupational Safety and Health, for which class of confined space work must there be always be someone readily available who is currently trained in cardio-pulmonary resuscitation (CPR) and basic first-aid procedures? **(NIOSH, Section 4, Medical, page 8)**

According to NIOSH, what is the definition of "lower flammable limit"? **(NIOSH, page 2)**

According to NIOSH, who is responsible for securing a confined space entry permit? **(NIOSH, page 6)**

# **Occupational Safety and Health Standards Safety and Health Regulations for Constructions, “Excavations” (Standard Number 1926 Subpart P)**

## *Study Guide Questions for West Virginia Underground Storage Tank Closure and Change-in-Service Exam*

According to OSHA 1926 Subpart P standards pertaining to excavations, what term is used to define a method of protecting employees from cave-ins by excavating to form sides of an excavation that are inclined away from the excavation so as to prevent cave-ins. **(OSHA 29 CFR 1926.650(b))**

According to OSHA 1926 Subpart P standards pertaining to excavations, a stairway, ladder, ramp or other safe means of egress must be located in trench excavations whenever the depth of the excavation is \_\_\_\_ feet or more. **(OSHA 29 CFR 1926.651(c)(2))**

According to OSHA 1926 Subpart P standards pertaining to excavations, whenever a stairway, ladder, ramp or other safe means of egress must be used in trench excavations, it must be located no more than \_\_\_?\_\_\_ of lateral travel for employees. **(OSHA 29 CFR 1926.651(c)(2))**

According to OSHA 1926 Subpart P standards pertaining to excavations, employees should not be exposed to atmospheres where the concentration of a flammable gas is greater than what percent of the lower flammable limit of that gas? **(OSHA 29 CFR 1926.651(g)(1)(iii))**

According to OSHA 1926 Subpart P standards pertaining to excavations, in order to protect employees from excavated materials or any other materials or equipment that might fall into an excavation, at least how far back from the edge of the excavation must materials or equipment be kept? **(OSHA 29 CFR 1926.651(j)(2))**

According to OSHA 1926 Subpart P standards pertaining to excavations, each employee in an excavation shall be protected from cave-ins by an adequate protective system unless the excavation is less than \_\_\_\_ feet deep, and examination of the ground by a competent person provides no indication of a potential cave-in. **(OSHA 29 CFR 1926.652(a)(1)(ii))**

According to OSHA 1926 Subpart P standards pertaining to excavations, what is the maximum allowable simple slope for an excavation made in Type A soil that is 20 feet or less in depth, which will be open for more than 24 hours? **(OSHA 29 CFR 1926 Subpart P, Appendix B, Figure B-1.1)**

According to OSHA 1926 Subpart P standards pertaining to excavations, if a soil is not classified by a competent person, what must be the minimum slope of the excavation if protection from cave-ins by sloping the walls of the excavation is to be provided, assuming the depth of the excavation is 18 feet? **(OSHA 29 CFR 1926 Subpart P, Appendix F, Figure 2)**

According to OSHA 1926 Subpart P standards pertaining to excavations, what are examples of emergency rescue equipment that should be present whenever hazardous atmospheric conditions exist or may reasonably be expected to develop during work in an excavation? **(OSHA 29 CFR 1926.651(g)(2)(i))**

According to OSHA 1926 Subpart P standards pertaining to excavations, whenever a stairway, ladder, ramp or other safe means of egress must be used in trench excavations, it must be located no more than \_\_\_\_ of lateral travel for employees. **(OSHA 29 CFR 1926.651(c)(2))**

**Occupational Safety and Health Standards**  
**General Environmental Controls “Permit Required Confined Spaces”**  
**(Standard Number 1910.146 Subpart J)**

*Study Guide Questions for West Virginia Underground Storage  
Tank Closure and Change-in-Service Exam*

According to OSHA 1910.146 pertaining to confined spaces, which of the following is **not** a potential cause for a hazardous atmosphere? **(OSHA 1910.146 (b))**

According to OSHA 1910.146 pertaining to confined spaces, who is the person responsible for determining if acceptable entry conditions are present at a permit space where entry is planned, for authorizing entry and overseeing entry operations, and for terminating entry? **(OSHA 1910.146 (b))**

According to OSHA 1910.146 pertaining to confined spaces, the internal atmosphere of a confined space be tested before entry is allowed. Which of the following is tested **first**? **(OSHA 1910.146 (c)(5)(ii)(C))**

According to OSHA 1910.146 pertaining to confined spaces, when using forced air ventilation in a confined space, how long must air ventilation continue? **(OSHA 1910.146 (c)(5)(ii)(E)(2))**

According to OSHA 1910.146 pertaining to confined spaces, at least one person on the identified rescue team must hold a current certification in basic first-aid and what additional health-related area? **(OSHA 1910.146 (k)(2)(iii))**

Under OSHA 1910.146 guidelines for entry of confined spaces, when is an “attendant” required? **(OSHA 1910.146 (d)(6))**

According to OSHA 1910.146 pertaining to confined spaces, when is a written permit space program required? **(OSHA 1910.146 (c)(4))**

According to OSHA 1910.146 pertaining to confined spaces, when are employers required to provide training to employees on confined space entry? **(OSHA 1910.146 (g)(2)(i) through (g)(2)(iv))**

According to OSHA 1910.146 pertaining to working in confined spaces, when are mechanical devices designed to retrieve personnel required? **(OSHA 1910.146 (k)(3)(ii))**

According to OSHA 1910.146 and regarding confined spaces, which of the following are duties of the "attendant"? **(OSHA 1910.146(i)(1) through (i)(10))**

According to OSHA 1910.146, when can entry permits be cancelled? **(OSHA 1910.146(e)(5)(i) and (e)(5)(ii))**

According to OSHA 1910.146 pertaining to confined spaces, which of the following is **not** a potential cause for a hazardous atmosphere? **(OSHA 1910.146 (b))**

# **West Virginia Underground Storage Tank Rule Title 33 Series 30**

## *Study Guide Questions for West Virginia Underground Storage Tank Closure and Change-in-Service Exam*

According to the West Virginia Underground Storage Tank Rule, during what parts of the tank change-in-service or closure process is a person who holds a current applicable certification required to be present? **(WV, Section 33-30-3.2.a.4)**

According to the WV UST Rule, applications for certificate renewal must be submitted by \_\_\_\_ of the year in which the certificate expires. **(WV UST Rule, Section 33-30-3.5)**

According to the West Virginia Underground Storage Tank Rule, which of the following will a Class B certificate allow an individual to perform? **(WV, Section 33-30-3.3.b)**

According to the West Virginia Underground Storage Tank Rule, on what date do certificates and certificate renewals expire for a Class B certificate? **(WV, Section 33-30-3.5)**

According to the WV UST Rule, how many hours of continuing education training are required in order to renew certification? **(WV UST Rule, Section 33-30-3.5.a.2)**

**Code of Federal Regulations 40 CFR Part 280**  
**“Technical Standards and Corrective Requirements for Owners and Operators of Underground Storage Tanks (USTs)”**

*Study Guide Questions for West Virginia Underground Storage Tank Closure and Change-in-Service Exam*

According to 40 CFR Part 280, underground storage tanks placed in temporary closure, after 12 months, can apply for an extension of temporary closure status to the WVDEP. What must be completed in order for an extension to be granted? **(40 CFR 280.70)**

According to 40 CFR Part 280, how long before an underground storage tank system is to be permanently closed must the WVDEP be notified if the closure is not in response to corrective action? **(40 CFR 280.71)**

According to 40 CFR Part 280, when permanently closing an underground storage tank system, where must an owner or operator measure for the presence of a release? **(40 CFR 280.72)**

According to 40 CFR Part 280, how long before an underground storage tank system is to have a change-in-service must the WVDEP be notified if the change-in-service is not in response to corrective action? **(40 CFR 280.71)**

According to 40 CFR Part 280, which of the following is considered a “change-in-service” of an underground storage tank system? **(40 CFR 280.71)**

**West Virginia Department of Environmental Protection**  
**UST/LUST Closure Guidance Memo, Revised September 17, 2018**

*Study Guide Questions for West Virginia Underground Storage  
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According to the WVDEP's UST/LUST Closure Guidance memorandum, what can be done with the contents of a petroleum underground tank that the WVDEP considers to be "legitimate" recycling? **(UST/LUST Closure Guidance Memo, page 3)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, when performing an UST closure and a minor amount of soil contamination is discovered, it can be treated on-site in an aboveground bio-pile, as long as the bio-pile does not exceed what size? **(UST/LUST Closure Guidance Memo, page 7)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, when sampling a bio-pile, a representative sample should be collected from what location of the bio-pile? **(WVDEP's UST/LUST Closure Guidance, page 7)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, in the event a release has been discovered during closure of a UST, and contaminated soil cannot be treated on-site, either due to lack of space or above allowable amounts to be treated in a bio-pile, no additional excavation of contaminated soils may proceed until what document is submitted to WVDEP? **(WVDEP's UST/LUST Closure Guidance, page 8)**

The WVDEP's UST/LUST Closure Guidance memorandum states, when performing an UST closure assessment and collecting samples for laboratory testing, how many samples are to be collected at each product dispenser and along the product piping? **(WVDEP's UST/LUST Closure Guidance, page 5)**



The WVDEP's UST/LUST Closure Guidance memorandum states, If evidence of a petroleum release is discovered during an UST removal or change-in-service, the appropriate DEP contact must be notified, and within what time frame? **(WVDEP's UST/LUST Closure Guidance, page 1)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, what form must accompany samples being sent to a laboratory for testing as part of an UST closure assessment? **(WVDEP's UST/LUST Closure Guidance, page 6)**

The WVDEP's WVDEP's UST/LUST Closure Guidance memorandum states soil and groundwater samples collected as part of an UST closure assessment for laboratory testing are to be kept at \_\_\_\_ degrees F (Fahrenheit), and must be analyzed within \_\_\_\_ days. **(WVDEP's UST/LUST Closure Guidance Memo, page 6)**

The WVDEP's UST/LUST Closure Guidance memorandum states when a tank storing gasoline is being closed, the certified worker should be analyze for which of the following? **(WVDEP's UST/LUST Closure Guidance, page 6)**

The WVDEP's UST/LUST Closure Guidance memorandum states, when closing or performing a change-in-service on an UST, the tank and piping must be emptied, and the tank must be purged of flammable vapors or inerted. What API document is recommended to be followed to perform these activities? **(WVDEP's UST/LUST Closure Guidance Memo, page 4)**

According to the WVDEP's WVDEP's UST/LUST Closure Guidance memorandum, if tank contents are not being reused or recycled, which of the following are allowable options regarding determining whether the material is a hazardous waste? **(WVDEP's UST/LUST Closure Guidance, page 3)**

As stated in the WVDEP's UST/LUST Closure Guidance Memorandum, who must certify a laboratory that is testing samples from a tank closure site assessment? **(WV Tank Closure Memo, page 6)**

The WVDEP's UST/LUST Closure Guidance memorandum states, when constructing a bio-pile treatment cell for storage of contaminated soil from an UST closure, what must the contaminated soil be placed on, and covered by, at all times? **(WVDEP's UST/LUST Closure Guidance, page 7)**

As stated in the WVDEP's UST/LUST Closure Guidance Memorandum, the Closure Report is to be submitted to [DEP.AST@wv.gov](mailto:DEP.AST@wv.gov) with how many days of the closure sampling? **(WVDEP's UST/LUST Closure Guidance Memo, page 6)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, when sampling a bio-pile, a representative sample should be collected from what location of the bio-pile? **(WVDEP's UST/LUST Closure Guidance, page 7/8)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, results of the excavation zone assessment must be maintained by the UST owner/operator for at least \_\_\_\_ years after completion of the permanent closure, or can be mailed to the WVDEP Office of Waste Management, UST Unit if they cannot be maintained at the closed facility. **(WVDEP's UST/LUST Closure Guidance, page 7)**

Six months after a bio-pile was created from closure of an UST, a petroleum odor was still present. The WVDEP's UST/LUST Closure Guidance memorandum states that the bio-pile must continue to be maintained, and after another six-month period, what must occur? **(WVDEP's UST/LUST Closure Guidance, page 8)**

The WVDEP's UST/LUST Closure Guidance memorandum states soil and groundwater samples collected as part of an UST closure assessment for laboratory testing are to be collected from any areas that displays obvious contamination from an UST release. At a minimum, which of the following are correct regarding samples that must be collected? **(WVDEP's UST/LUST Closure Guidance, page 5)**

As stated in the WVDEP's UST/LUST Closure Guidance, each tank must be cleaned by removing all liquids and accumulated tank bottoms. Personnel cleaning the tank are recommended to follow what API document for tank cleaning? **(WVDEP's UST/LUST Closure Guidance, page 4)**

According to the WVDEP's UST/LUST Closure Guidance memorandum, when UST contents have been determined to be hazardous, in order to ship hazardous wastes off-site, what number must be obtained from the DEP (if the site does not already have this number)? **(WVDEP's UST/LUST Closure Guidance, page 4)**