TITLE XX

LEGISLATIVE RULE
DEPARTMENT OF ENVIRONMENTAL PROTECTION
DIVISION OF WATER AND WASTE MANAGEMENT

SERIES XX

ABOVEGROUND STORAGE TANKS

§XX-XX-1. General.

1.1. Scope. -- This legislative rule governs the construction, installation, upgrading, use, maintenance, testing, and closure of aboveground storage tanks in this State. This rule establishes three (3) levels for aboveground storage tank (AST) regulation based upon potential risk to public health or the environment.

1.2. Authority. -- W. Va. Code §22-30-23

1.3. Filing Date. --

1.4. Effective Date. –

1.5. Applicability –

1.5.a. The following are excluded from the requirements of this Rule because they do not meet the definition of an aboveground storage tank pursuant to W. Va. Code §22-30-3, or because the Secretary has determined that they are tanks that do not represent a substantial threat of contamination or they are tanks regulated under standards that are equally protective as the standards outlined in W. Va. Code § 22-30-1, et seq.:

1.5.a.1. Shipping container, such as a railroad freight car or tanker truck, subject to federal regulations under the Federal Railroad Safety Act or subject to federal law governing the transportation of hazardous materials under 49 CFR 172, 173 or 174.

1.5.a.2. Barges or boats subject to federal regulations under the United States Coast Guard, United States Department of Homeland Security, federal regulations promulgated at 33 CFR 1, et seq, or subject to other federal law governing the transportation of hazardous materials.

1.5.a.3. Swimming pools

1.5.a.4. Process vessels as defined in W. Va. Code §22-30-3.

1.5.a.5. Structures holding wastewater that is being actively treated or processed (e.g., clarifier, chlorine contact chamber, batch reactor, etc.). This does not include chemical storage/feed tanks, pre- or post-processing storage tanks, fuel storage tanks, etc., that are located at the treatment facility.

1.5.a.6. Mobile tanks which remain in one location on a continuous basis for less than sixty (60) days.

1.5.a.7. Surface impoundments, pits, ponds, lagoons, septic tanks, or home aeration systems.

1.5.b The following are excluded from the requirements of this Rule because they are equipment whose storage of substances in incidental to their predominant usage as equipment:

1.5.b.1. Electrical equipment such as transformers, circuit breakers, and voltage regulators transformers;

1.5.b.2. Heating and cooling equipment;

1.5.b.3. Equipment or machinery containing substances for operational purposes such as hydraulic lifts and lubricating oil reservoirs for pumps and motors.

1.5.c. This Rule establishes the following three (3) levels for AST regulation based upon potential risk to public health or the environment posed by the AST system:

1.5.c.1. Level 1 AST systems exhibit a high potential for harm to public health or the environment due to their contents, location, or size.

1.5.c.2. Level 2 AST systems exhibit a reduced potential for harm to public health or the environment than a Level 1 AST due to their contents, location, and size.

1.5.c.3. Level 3 AST systems exhibit a low potential for harm to public health or the environment due to their contents or because the ASTs are subject to strict regulations, including regular inspections, under another program.

1.5.c.3.A. The following Level 3 AST systems are excluded from the requirements of this Rule, except the requirements of Sections 3.1, 3.3, 3.5, 3.6, and 3.7.:

1.5.c.3.A.1. Potable water, filtered surface water, demineralized water, noncontact cooling water or water stored for fire or emergency purposes;

1.5.c.3.A.2. Food and food grade ingredients regulated under the Federal Food, Drug and Cosmetic Act (21 U.S.C.A. § § 301—392).

1.5.c.3.A.3. Hazardous waste tanks subject to regulation under 40CFR264.

1.5.c.3.A.3(i). Hazardous waste tanks subject to regulation under 40CFR264 are subject to Section 5.6 of this Rule.

1.5.c.4. If necessary to protect public health and the environment, the Secretary may designate a change in the level assigned for an AST system.

1.5.d. Nonoperational tanks are not subject to Sections 5 (Operation and Maintenance), 8 (AST Design, Construction, and Installation), 9 (Corrosion and Deterioration Prevention), and 10 (Release Prevention, Leak Detection, and Secondary Containment), of this Rule because by definition these tanks are empty and will not receive or dispense substances after June 6, 2014.

1.5.e. Storage tanks located in an underground area (such as a basement, vault, cellar, mine, or tunnel) are aboveground storage tanks if the tanks are situated upon or above the surface of the floor.

1.6 Reference Standards -- The industry standards listed below serve, in part, as the basis for the standards enacted under this Rule.

1.6.a. American National Standards Institute (ANSI), 1819 L Street, NW, 6th Floor, Washington, DC 20036

1.6.b. American Petroleum Institute (API), 1220 L Street, N.W., Washington, D.C. 20005

1.6.c. American Society of Mechanical Engineers (ASME), ASME International Three Park Avenue, New York, NY 10016-5990

1.6.d. American Society for Non-destructive Testing (ASNT), 1711 Arlington Lane, Columbus, Ohio 43228-0518

1.6.e. American Society for Testing and Materials (ASTM), 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19429-2959

1.6.g. National Association of Corrosion Engineers (NACE), P. O. Box 218340, Houston, Texas 77218

1.6.h. National Fire Protection Association (NFPA), Batterymarch Park, Quincy, MA 02269

1.6.i. Petroleum Equipment Institute, P. O. Box 2380, Tulsa, OK 74101-2380

1.6.j. Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, Illinois 60047

1.6.k. Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062

1.6.l. In this Rule, all referenced standards mean the most recent edition or version.

1.6.m. Where there is an irreconcilable conflict between the manufacturer's recommendation, a standard, or recommendation published by an industry or professional

organization, and a requirement in this Rule, this Rule applies.

§XX-XX-2. Definitions.

2.1. Unless the context in which used clearly requires a different meaning, the definitions contained in W. Va. Code § 22-30-3 apply to this Rule, in addition to those definitions set forth below:

2.2. “Accidental release” means any sudden or non-sudden release of a substance from an aboveground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage, neither expected nor intended, by the tank owner or operator.

2.3. “Aboveground storage tank system” means an aboveground storage tank as defined by W. Va. Code § 22-30-3(1), its piping, and all its ancillary components, including dispensing systems, spill containment devices, overfill protection devices, secondary containment systems, and any associated release detection equipment.

2.4. “Above the surface of the ground” means the outer solid surface of the earth or an underground area beneath the surface of the ground that is bounded by a floor and roof which provides space for physical inspection of the exterior of a tank.

2.5. “Ancillary equipment” means electrical, vapor recovery, access or other systems and devices, including, but not limited to; piping, fittings, flanges, sumps, valves and pumps used to distribute, meter, monitor or control the flow of fluids to or from a storage tank system.

2.7. “Cathodic protection” means a technique that prevents corrosion of a metal surface by converting all the anodic (active) sites on the metal surface to cathodic (passive) sites by supplying electrical current (or free electrons) from an alternate source.

2.8. “Cathodic protection tester” means a person who can demonstrate an understanding of the principles and measurements of a common type of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, the person shall have education and experience in soil resistivity, stray current, structure to soil potential and component electrical isolation measurements of buried metal piping and tank systems.

2.9. "Certified API Inspector" means an individual who holds a current certification by the American Petroleum Institute under the terms of the API 653 or API 570 certification programs to perform aboveground storage tank inspections.

2.10. "Certified STI Inspector" means an individual who holds a current certification by the Steel Tank Institute under the terms of the STI certification program to perform Shop-Fabricated aboveground storage tank inspections.

2.11. “Certifying person” means a person who may sign the annual inspection certification, pursuant to Section 5.3 below.

2.12. "Change in service" means any change to a registered aboveground storage tank to include, but not be limited to, change in nature of contents, relocation, permanent closure, or change in status from either currently in use (CIU) or temporarily out of service (TOS).

2.13. “Compartment tanks” means a single tank that has multiple sections and can contain different substances.

2.14. “Compatible or compatibility” means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the AST system and secondary containment structure.

2.15. “Confirmed release” means verification that a substance has been discharged from the AST system.

2.16. “Corrosion expert” means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. This person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers.

2.17. “Corrosion protection” means the protection of metal from deterioration. The deterioration may be due to a natural electrochemical reaction between the metal and the soil or other electrolyte, or because of stray direct currents.

2.18. “Currently in use, (CIU)” means that the tank is operational, storing fluids, receiving and dispensing fluids.

2.19. “Department” means the West Virginia Department of Environmental Protection.

2.20. “Dispenser system” means equipment located aboveground that meters the amount of fluids transferred to a point of use outside the AST system, such as, a motor vehicle. This system includes the equipment necessary to connect the dispenser to the aboveground storage tank system.

2.21. ”Discovery” means either actual knowledge or knowledge of facts that could reasonably lead to actual knowledge of the existence of an incident, discharge, or an unmaintained aboveground storage tank system and secondary containment structure.

2.22. “Emergency venting” means a tank opening designed to relieve excess pressure caused by fire exposure to the outside of a tank.

2.23. “Empty” means an AST system that has all substances, including fluids and residues, removed from it.

2.24. “Existing AST” means a tank for which physical installation began on or before the effective date of this rule.

2.25. “Facility” means a location containing, or that has contained, an AST system that is located on the same or geographically contiguous property as the AST system, that is under the same ownership or control, and which may be divided by a public or private right-of-way or an easement. However, oil or gas entities with multiple tanks at various locations may consider their or their operator’s company office or laydown yard as their facility location for purposes of AST registration.

2.26. “Field-erected storage tank” means an AST that is constructed by assembling it at the facility.

2.27. “First point of isolation” means the final termination point (e.g. fuel dispensers, loading arms, product mixing vessels, emergency generators, etc.) of the entire piping run associated with an AST. The first point of isolation would not be any piece of equipment (e.g. pumps, meters, valves, gauges, other tanks, etc.) located between the tank and the final termination point of the piping run.

2.28. “Imminent threat of failure or threatened release” means a condition that creates a substantial probability of harm from a potential discharge form the AST system, requiring immediate action to prevent, reduce, or mitigate the actual or potential damages to public health or the environment.

2.29. “Impermeable or impervious” means a material of sufficient thickness, density and composition that it is impenetrable, or has a permeability of less than 1×10^{-7} cm/sec., and will prevent the discharge to the lands, or waters of the State of any fluid for a period of at least as long as the maximum anticipated time during which the fluid will be in contact with the material.

2.30. "Impressed current system" means direct current supplied to a cathodic protection system.

2.31. “In contact with the soil or an electrolyte” means any portion of the AST system that physically touches the soil or any electrolyte such as water; or which is not in direct contact with the soil or electrolyte and is separated from the soil or electrolyte only by a casing, wrapping, or other material that is not impervious.

2.32. “Internal lining” means a material that is applied internally to an AST to protect the tank from internal corrosion or to meet compatibility requirements.

2.33. “Install” means activities to construct, reconstruct, erect, to put into service a storage tank, a storage tank system or storage tank facility.

2.34. “Interstitial monitoring” means a release detection method that is used to determine the presence of fluids outside of the primary containment and within the interstice.

2.35. “Level 1 AST” means an AST or AST system located within a zone of critical concern, wellhead protection area, groundwater intake area under the influence of surface water or any AST system designated by the Secretary as a Level 1. Additionally, a Level 1 AST is any tank that contains substances defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as a “hazardous substance” (42 U.S.C. § 9601(14)); or is on EPA’s “Consolidated List of Chemicals Subject to the Emergency Planning and Community Right to Know Act (EPCRA), CERCLA, and §112(r) of the Clean Air Act (CAA)” (known as “the List of Lists”) as provided by 40 C.F.R. §§ 355, 372, 302, and 68), regardless of the AST’s location. Furthermore, an AST with a capacity of 50,000 gallons or more is a Level 1 AST regardless of location or contents, except for tanks utilized for potable water, filtered surface water, demineralized water, noncontact cooling water, or water stored for fire or emergency purposes.

2.36. “Level 2 AST” means an AST or AST system that is considered to be low risk based upon location with respect to water intakes and populated areas. Additionally, a Level 2 AST or AST system is an AST that is not defined as a Level 1 or Level 3 AST system.

2.37. “Level 3 AST” means an AST or AST system that contains potable water, filtered surface water, demineralized water, noncontact cooling water, or water stored for fire or emergency purposes, food or food grade materials or hazardous waste tanks subject to regulation under 40C.F.R. §264.

2.38. “Location, service location, or site” means a facility where an AST system is located.

2.39. "Leak detection" means electronic, manual or mechanical measurement of the contents or other characteristics or parameters of an AST which notifies the owner or operator of the failure of an AST to contain the substance it is intended to contain.

2.40. “Maintenance” means the normal operational upkeep to prevent an aboveground storage tank system or secondary containment structure from releasing fluids in an uncontrolled manner.

2.41. “Manifolded tanks” means two or more tanks connected by piping which collectively contain the same type of substances.

2.42. “Major modification or substantial modification” means an activity to upgrade, repair, refurbish or restore all or any part of an existing storage tank system or storage tank facility which alters the design of that storage tank system or storage tank facility and may affect the integrity of that storage tank system or storage tank facility.

2.43. “Mobile tank” means an AST that is designed and constructed to be moved to different service locations, and its relocation from facility to facility is inherent in its use. An AST is not considered mobile if it is connected to stationary underground and/or aboveground piping or if the AST is otherwise installed as a fixed component (i.e. AST on saddles, legs, stilts, rack, or cradle; or is placed in a vault or building, etc.) at the site.

2.44. “Monitoring system” means a system capable of detecting releases from an aboveground storage tank.

2.45. "New AST" means a tank for which physical installation began on or after the effective date of this rule.

2.46. “Nonaqueous phase liquid” means a liquid solution that does not mix easily with water.

2.47. “Normal venting” means a tank opening that is provided primarily to relieve excess pressure caused by liquid filling a tank and to relieve vacuum that results from liquid being removed from a tank. Normal venting also allows equalization of interior and exterior pressures associated with atmospheric temperature and pressure changes.

2.48. “Operational life” means the period beginning when installation of the tank system has commenced until the time the tank system is closed in accordance with Section 11.4.

2.49. “Operational status” means the working condition of the AST such as currently in use, temporarily out of service, nonoperational or permanently out of service.

2.50. "Overfill" means a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of a fluid from an AST system to the environment.

2.51. "Permanent closure" means the AST system is empty, clean, and rendered incapable of holding fluid. Permanent closure may include the dismantling of the AST system and removal of AST components from the facility or it may be the closure in place of the AST system.

2.52. “Permanently out of service, (POS)” means an AST system which has been emptied and rendered incapable of holding fluids.

2.53. "Pipe" or "Piping" means a hollow cylinder or tubular conveyance through which fluids flow. It must be constructed of non-earthen materials and in accordance with NFPA, API, STI, UL or other nationally recognized piping standards for storage tanks.

2.54. “Professional engineer” means a person who has been duly registered or licensed as a professional engineer by the West Virginia Board of Registration for Professional Engineers, as set forth in W. Va. Code § 30-13-1, et seq.

2.55. “Qualified” means someone who by training or education is knowledgeable and experienced in AST design, construction and installation, maintenance of corrosion detection, release prevention and detection equipment including secondary containment structures.

2.56. “Reconstruction” means the work necessary to reassemble a storage tank that has been dismantled and relocated to a new site.

2.57. “Release detection” means the determination, through a method or combination of methods, whether a release of a fluids has occurred from an aboveground storage tank system into the environment or into a secondary containment structure, or for double walled tanks/piping, into the interstitial space between the primary tank and/or piping and the secondary tank or piping.

2.58 “Release prevention barrier” means a barrier such as steel bottoms, synthetic materials, clay liners, and concrete pads placed in the bottom of or under a tank, which has the function of preventing the escape of released material and channeling the released material for leak detection.

2.59. “Repair” means to restore a tank, pipe, spill prevention equipment, overfill prevention equipment, corrosion protection equipment, release detection equipment or other AST system component that has caused a release, or a suspected release of a product from the AST system or has failed to function properly. Replacement of a non-defective part is not a repair.

2.60. “Risk based inspection (RBI)” means an alternative method to performing internal inspections on a set schedule by requiring a systematic evaluation of both the likelihood of failure and the associated consequences of failure in order to determine a tank specific schedule for internal inspection. Risk Based Inspections must adhere to the requirements set forth in API 653 and API RP 580.

2.61. "Sacrificial anode system" means a system to control corrosion of a metal surface which entails installing an electrode of an electrochemical cell that will oxidize preferentially to the metal surface that has been made the cathode of the electrochemical cell.

2.62. “Secretary” means the Cabinet Secretary of the Department of Environmental Protection or his or her designee.

2.63. “Shop-fabricated storage tank” means an AST that is constructed at the tank manufacturer’s plant and transported to the facility for installation.

2.64. “Standard temperature and pressure” means “Standard ambient temperature and pressure” which is a temperature of seventy-seven degrees Fahrenheit (77°F) and an absolute pressure of 0.987 atmosphere.

2.65. “Sufficient freeboard” means additional capacity required by the secondary containment structure to contain rainfall or “freeboard” if rain can collect in the structure. The owner/operator is responsible for ensuring that secondary containment structures have capacity to contain the contents of the largest tank, assumed to be full, within the secondary containment structure, plus sufficient additional capacity for rainfall events as determined in accordance with Section 10.2.i. of this Rule.

2.66. “Sufficiently impervious” means a material or structure of enough thickness, density and composition, that it will prevent the discharge of fluids to the lands, or waters of the State, for a period of time sufficient to allow removal and disposal of the discharged material, but in no

case would that time be less than seventy-two (72) hours or a material or structure which has a permeability of less than 1 X 10^{-6} cm/sec..

2.67. “Suspected or threatened release” means a potential exists that a discharge of substance from the AST system may have occurred or may occur based upon information obtained from sources such as testing, sampling, monitoring results from a release detection method, or observed unusual operating conditions of an AST system.

2.68. “Temporarily out of service” means a tank that is not currently in use receiving and/or dispensing fluid, which may be storing liquids, but whose active use is intended in the near future.

2.69. “Transfer operator” means a product delivery person or other person who is knowledgeable about delivery procedure who ensures that product transfers are made in a manner to prevent spills and overfills.

2.70. “Underground vault” means a structure which is beneath the surface of the ground and is designed specifically to contain an aboveground storage tank.

2.71. “Underground area” means an underground room such as a basement, vault, cellar, mine, or tunnel, providing enough space for physical inspection of the exterior of a tank situated on or above the surface of the floor.

2.72. “Upgrade” means the addition or retrofit of some systems, which may include but may not be limited to, cathodic protection, lining, or spill and overfill controls, to meet a higher, new, or current standard and improve the ability of an aboveground storage tank system to prevent the release of fluids.

2.73. "Vault" means a structure that completely encloses the tank and must be constructed of materials compatible with the fluids to be contained in the AST.

2.74. “Zone of critical protection” means the zone of critical concern as that term is defined by W. Va. Code § 22-30-3(16).

§XX-XX-3 Registration.

3.1. Registration Requirements --Every owner of an aboveground storage tank or AST system, regardless of AST Level, shall register each AST that is located in this State, regardless of its operational state.

3.1.a. For compartment tanks, the total capacity of all compartments shall be calculated and utilized to determine whether the tank meets the size requirement (1,320 or more gallons of liquid) necessary to qualify as a regulated AST pursuant to W. Va. Code § 22-30-1, et seq. and this Rule.

3.1.b. For manifolded tanks, the total capacity of all manifolded tanks shall be calculated and utilized to determine whether the tank meets the requirements (1,320 or more

gallons of liquid) necessary to qualify as a regulated AST pursuant to W. Va. Code § 22-30-1, et seq., unless the tanks are connected in a manner that prevents fluids flowing from one tank to another under any conditions. For registration purposes, manifolded tanks will be treated as compartment tanks.

3.1.c. All aboveground storage tanks placed into service on or after October 1, 2014 shall be registered prior to being placed into active service.

3.1.c.1. On and after October 1, 2014, it shall be unlawful for any owner or operator to operate, use, or store substances in an aboveground storage tank that has not been properly registered or for which any applicable registration fee has not been timely paid.

3.1.c.2. Tank owners shall register each aboveground storage tank with the Department, except as specifically excluded by this Rule, on a form provided by the Department, within 30 days after installation or acquisition of an ownership interest in the storage tank. Unless otherwise approved by the Department in writing, fluids may not be placed in the tank and the tank may not be operated until the tank is properly registered, and the registration fee has been paid, and a certificate to operate has been issued for the AST system.

3.1.d. Tank owners shall submit a registration form to amend registration information previously submitted to the Department within thirty (30) days of a change in the previously submitted information, except a registration form to amend registration for change in substance stored in the tank or relocation of a tank to a zone of critical concern must be made within twenty-four (24) hours. Amended registrations shall be made for the following:

3.1.d.1. Removal or relocation of a storage tank to a new facility.

3.1.d.2. Change in operating status of the AST.

3.1.d.3. Change in use of a storage tank to or from regulated to non-regulated status, for example, changing a storage tank to use as a process vessel.

3.1.d.4. Change in substance or substances stored in the tank.

3.1.d.5. Change of ownership or change of operator.

3.1.d.6. Change of contact, mailing address or telephone number.

3.1.e. The Department may require submission of supporting documentation as necessary to confirm or clarify registration information as part of the registration process.

3.1.f. Any change in the corporate or business structure of the aboveground storage tank owner constitutes a transfer of ownership that requires notification to the Department.

3.2. The owner of the AST shall renew its registration annually by paying the registration fees in accordance with the Aboveground Storage Tank Fee Assessment Rule. The registration

fee must be paid annually until the owner provides the Department written notice that the AST has undergone permanent closure in accordance with this Rule or, if the tank is a mobile tank, that the tank has been permanently removed from the State.

3.2.a. Owners of mobile tanks are required to modify their registrations when the tank is moved from one facility to another facility.

3.3. Owners may register multiple aboveground storage tanks at a single facility using one aboveground storage tank registration process prescribed by the Secretary, but owners of aboveground storage tanks located at more than one facility, shall complete separate aboveground storage tank registration form for each facility.

3.4. Notification of Installation or Upgrade -- Owners of previously registered aboveground storage tanks or AST systems who are going to install or upgrade them must submit to the Department, at least thirty (30) days prior to beginning the installation or upgrade, a completed AST Installation/Upgrade Application Form prescribed by the Secretary. The thirty (30) day time period may be waived when the action is in response to a release from an existing aboveground storage tank or AST system on the site or at the discretion of the Secretary for good cause shown.

3.4.a. Owners of mobile tanks that are being relocated from one facility to another facility do not need to perform the requirements of Subsection 3.4 above, so long as the owner modifies the registration(s) of the moved tank(s) to reflect the tank(s) new location and contents, if the contents of the tanks changed.

3.4.b. Owners of tanks that were once mobile but are being installed as stationary at a facility must comply with the requirements of Subsection 3.4 above.

3.5. Notification of Closure -- An owner of an AST or AST system who must close a tank shall submit to the Department an AST closure form, at least thirty (30) days prior to beginning the closure. The Owner must adhere to the requirements for closure as specified in Subsection 11.4 of this Rule and as provided in closure guidance documents developed by the Department. The thirty (30) day time period may be waived when the action is in response to a release from an existing aboveground storage tank or AST system on the site or at the discretion of the Secretary for good cause shown.

3.6. Notification of Change in Service or Status. -- An owner of an AST or AST system who wishes to change its service or status shall submit to the Department, at least thirty (30) days prior to beginning the change in service or status, a completed AST Change in Service/Status From prescribed by the Secretary.

3.7. If an AST or AST system is transferred from one owner to another owner, the new owner shall submit to the Department, at least thirty (30) days prior to the transfer of ownership, a completed AST Change of Ownership Form prescribed by the Secretary and proof of financial responsibility in accordance with Section 13 of this Rule. The old owner shall notify the new owner, in writing, of the registration requirements of this Rule. The new owner shall not operate

the AST or AST system until it is properly registered, the appropriate registration fees have been paid, and a certificate to operate has been issued for the AST system.

§XX-XX-4 AST Certificates to Operate.

4.1.a. The owner's registration form shall also serve as a basis for an AST Certificate to Operate application.

4.1.a.1. An AST Certificate to Operate may be issued solely on the basis of the registration form if the Secretary determines that sufficient information to issue the Certificate to Operate is contained within the registration.

4.1.a.2. The Secretary may request supplemental information as needed in order to issue an AST Certificate to Operate.

4.1.b. Failure to register a tank, failure to obtain a Certificate to Operate, or revocation of a Certificate to Operate does not relieve a tank owner or operator from the obligation to fully comply with all applicable requirements of the AST Act and its Rules.

4.1.c. AST Certificates to Operate will be renewed automatically on an annual basis concurrent with the payment of tank registration fees as established in the Aboveground Storage Tank Fee Assessment Rule provided:

4.1.c.1. Tank registration fees are paid in a timely manner as established in the Aboveground Storage Tank Fee Assessment Rule;

4.1.c.2. The owner or operator maintains Financial Responsibility for the AST system in accordance with the requirements of Section 13 of this Rule.

4.1.c.3. The owner or operator continues to comply with the requirements of the AST Act and all Rules promulgated thereunder.

4.2 Siting Requirements for New ASTs

4.2.a. ASTs must be positioned to meet all applicable setback and distance from buildings requirements of the local jurisdiction and the State Fire Marshal office for flammable and combustible substances.

4.2.b. To allow for proper inspection, ASTs must have a minimum spacing of not less than three (3) feet between tanks, and between tanks and dike walls.

4.2.c. ASTs shall not be located above underground utilities or directly beneath overhead power lines.

4.2.d. The Secretary may not approve an installation application for ASTs at new facilities if:

4.2.d.1. The new facility is located within a current zone of critical concern unless a Professional Engineer's construction design criteria and engineering specifications indicate that sufficient controls are present to protect water supplies;

4.2.d.2. The new facility is located at a site with karst topography, unless a Professional Engineer's construction design criteria and engineering specifications indicate that surface or subsurface conditions will not result in excessive tank system settlement or unstable support of the proposed AST system.

4.2.d.3. The Secretary determines that the installation of the AST system poses a threat to public health and the environment.

XX-XX-5 Operation and Maintenance

5.1 General Operations and Maintenance -- An owner or operator shall implement a life-cycle preventive maintenance plan for Level 1 and Level 2 AST systems that provides mitigation and corrosion prevention plans which protects the integrity of the AST system for its lifetime in order to protect public health or the environment.

5.1.a. Life-cycle Preventive Maintenance Plan --The owner or operator shall establish, implement, and have on site a life-cycle preventive maintenance plan that shall at a minimum meet the following requirements:

5.1.a.1 Be developed in accordance with this Rule, industry standards, and nationally recognized associations such as API, NACE, NFPA, PEI, STI, and UL.

5.1.a.2. Specify the maintenance requirements for checking for and taking corrective action to manage the substances in the AST in order to prevent internal corrosion and/or deterioration of the AST from water or microbial activity that may corrode metals and deteriorate plastics potentially leading to releases to the environment and potential structural failure of the AST.

5.1.a.3. Specify the operation and maintenance activities that will be performed to ensure that the requirements for corrosion prevention, coatings, internal linings, overfill and spill prevention, leak detection, and secondary containment in Sections 9 and 10 of this Rule are met or exceeded.

5.1.a.4. Establish procedures for maintenance checks and inspections meeting the minimum requirements of Sections 5.2, 5.3 and 5.4 of this rule.

5.1.a.5. Establish and implement housekeeping practices including procedures for substance transfer that reduces the possibility of accidental spills and safety hazards to plant or facility personnel.

5.2 Routine Maintenance Inspections – The owner or operator shall establish and implement routine inspections of conditions at each storage tank facility.

5.2.a. Secondary Containment Structure Inspections --The owner or operator shall ensure that visual inspections of the secondary containment area are performed, at a minimum, once every seventy-two (72) hours for Level 1 AST systems and, at a minimum, at the time of the monthly check required in Section 5.2.b. of this Rule for Level 2 AST systems. The visual inspection may be accomplished by or supplemented with electronic surveillance and shall include:

5.2.a.1. A check of the facility to ensure that no potential hazardous environmental conditions exist. This includes a check for evidence of an obvious release, spill, overflow or leakage from the AST system including any ancillary equipment.

5.2.a.2. A check for signs of deterioration, discharges, or accumulation of liquid substances, including water, inside the secondary containment area and confirmation that containment drain valves are secured in a closed position when not in use.

5.2.a.3. If excessive water (e.g. capacity of containment has been reduced by 10% or more) has accumulated in the secondary containment, it shall be drained off and disposed of in accordance with applicable State and Federal requirements.

5.2.a.4. If a liquid substance other than water is found in the containment area, the owner or operator shall immediately, at a minimum report a suspected release to the WVDEP Spill Hotline (1-800-642-3074) in accordance with Section 6.2 of this Rule and take immediate action to determine if a confirmed release has occurred. The owner or operator shall report any confirmed releases immediately by a return call to the WVDEP Spill Hotline and begin corrective action.

5.2.a.5. The inspection of the secondary containment structure shall be documented by the individual who conducted it and records maintained for a minimum of twelve (12) continuous months for review upon request by the Secretary.

5.2.b. Monthly Facility Inspection-- An owner or operator shall ensure that a maintenance check of the facility and equipment is performed each month for Level 1 and Level 2 AST systems. The monthly maintenance check shall include:

5.2.b.1 Monitoring of the leak detection method for each AST and piping at least once every thirty (30) days in accordance with the requirements of Section 10.3 of this rule.

5.2.b.2. An inspection of the tank system exterior surfaces for deterioration and maintenance deficiencies including a visual check for cracks, areas of wear, distortion, corrosion, settlement and deterioration of the foundation and supports, condition of external coatings and paints, and condition of insulation, if present.

5.2.b.3. Ancillary equipment and appurtenances shall be visually checked for leaks, operational malfunctions and signs of deterioration. Additionally, an assessment should be made of the general condition of items such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, metal surfaces, gauge valves, etc.

5.2.b.4. A check of secondary containment in accordance with requirements of Section 5.2.a. of this Rule and a check of transfer areas for cracks, defects, leaks, and fire hazards.

5.2.b.5. A check of overfill prevention equipment.

5.2.b.6. A check of normal and emergency vents, where applicable, to ensure that they are operating properly and free of restrictions.

5.2.b.7. The monthly maintenance check shall be documented by the individual who conducted the check and records maintained for a minimum of twelve (12) continuous months for review upon request by the Secretary.

5.2.b.8. The owner or operator shall ensure that the results of the monthly routine checks are monitored and reviewed to ensure that any needed repairs can be made in a timely manner.

5.2.b.8.A. The owner or operator shall ensure that any changes to the AST system noted in the monthly inspection that could negatively affect AST integrity are immediately further assessed by a qualified Professional Engineer, API or STI certified inspector, or by a person holding certification under another program approved by the Secretary.

5.2.b.8.B. The owner or operator shall ensure that malfunctioning equipment and appurtenances are repaired, replaced, or removed from service, immediately in order to prevent releases.

5.2.b.8.C. The owner or operator shall ensure weakening equipment and appurtenances that pose an imminent threat of failure that could result in a release are repaired and/or replaced in a timely manner, but no longer than thirty (30) days, after discovering, or being notified by the Secretary, that the equipment is at risk for failure. The Secretary may specify another reasonable time period for completion of repairs.

5.3. Required Annual Inspections

5.3.a. By January 1, 2015, owners or operators of an existing aboveground storage tank facility shall have an annual inspection of each tank performed in accordance with the interpretive rule, 47CSR62. After the effective date of this Rule, every owner or operator of an aboveground storage tank shall have an inspection of each tank performed by:

5.3.a.1. A qualified professional engineer as determined by the State Board of Registration for Professional Engineers; or

5.3.a.2. A qualified person working under the direct supervision of a professional engineer; or

5.3.a.3. An individual certified to perform tank inspections by the American Petroleum Institute, or the Steel Tank Institute; or

5.3.a.4. A person holding certification under another program approved by the Secretary.

5.3.b. Every owner or operator shall submit, on a form prescribed by the Secretary, a certification attesting to the condition of each AST or AST system and secondary containment structure.

5.3.b.1. For Level 1 ASTs or AST systems, the initial inspection under this Rule and subsequent inspections every third year thereafter shall be certified by a Professional Engineer (PE), an API certified inspector, or a STI certified inspector.

5.3.b.2. For Level 2 ASTs or AST systems, the initial inspection under this Rule and subsequent inspections every fifth year thereafter shall be certified by a PE, an API certified inspector, or a STI certified inspector.

5.3.b.3. For both Level 1 and Level 2 ASTs or AST systems, the tank owner or operator shall certify annual inspections in intervening years between the PE, or API, or STI inspections and certifications.

5.3.b.4 The certification form shall be submitted to the Secretary on or before January 1, 2015, and each year thereafter for each duly registered AST or AST system, including the secondary containment systems.

5.3.b.4.A. A Fit for Service certification form shall be completed and signed by the applicable certifying person when it is determined that the AST system, including the secondary containment structure, meets the minimum standards established by W. Va. Code § 22-30-1, et seq and this Rule.

5.3.b.4.B. The certifying person shall document in writing any deficiencies found during the inspection of the AST system and the secondary containment structure and provide recommendations, including proposed schedule, for abating the deficiencies. This documentation shall be attached to and submitted with the Fit for Service certification form.

5.3.b.4.C. A Not Fit for Service certification form shall be completed and signed by the certifying person when it is determined that the AST or AST system, including secondary containment structure, does not meet the minimum standards established by W. Va. Code § 22-30-1, et seq and this Rule.

5.3.b.4.D The certifying person shall document in writing any deficiencies found during the inspection of the AST or AST system including the secondary containment structures and provide recommendations, including proposed schedule, for abating the deficiencies, including requirements for repairs, replacement, and removal from service of the AST, AST system, or secondary containment system, until the tank or secondary containment are made fit for continued service. This documentation shall be attached to and submitted with the certification form.

5.3.b.4.D.1. No AST or AST system, including secondary containment that was determined to be Not Fit for Service may be returned to service until it has been certified by a Professional Engineer, an API certified inspector, or a STI certified inspector as Fit for Service.

5.3.c. In certifying an AST or AST system, the certifying person shall, at a minimum, review all of the following items for each AST or AST system:

5.3.c.1. AST Design (determination that the AST continues to meet design standards)

5.3.c.2. AST Construction and Installation including but not limited to:

5.3.c.2.A. Determination of proper foundation;

5.3.c.2.B. Compatibility of AST system with material stored.

5.3.c.3. General Maintenance and Testing of AST system to include examination of the tank system exterior surfaces for:

5.3.c.3.A Flaws

5.3.c.3.B. Areas of wear

5.3.c.3.C. Corrosion

5.3.c.3.D. Distortions

5.3.c.3.E Deterioration

5.3.c.3.F. Any other conditions that might adversely affect structural integrity

5.3.c.3.G. Results of a leak test, internal inspection, or other tank integrity examinations that determine the suitability of the tank for continued use can be clearly established.

5.3.c.4. Corrosion Protection and Maintenance - Existing and past corrosion protection measures taken to protect the integrity of the AST system over its lifetime including,

as applicable, assessment of the following:

5.3.c.4.A. Galvanic and/or Impressed Current Systems;

5.3.c.4.B. External Coatings;

5.3.c.4.C. Internal Coatings or liners;

5.3.c.5. Release Detection Method and Procedures;

5.3.c.6. Release Prevention Methods and Procedures;

5.3.c.7. Secondary Containment structures (including, but not limited to, the following):

5.3.c.7.A. Capacity requirements (including sufficient freeboard for precipitation events);

5.3.c.7.B. Compatibility requirements;

5.3.c.7.C Determination of structural integrity/soundness.

5.3.c.8. Record Keeping for:

5.3.c.8.A. Leak Detection System;

5.3.c.8.B. Corrosion Protection system;

5.3.c.8.C. General Operation and Maintenance (including upgrades and repairs to AST system).

5.3.d. A certifying person shall not certify an AST system, including the secondary containment structure, without having direct knowledge of the AST system inspection and records review or having made inquiry of those individuals immediately responsible for obtaining the information.

5.3.e. The owner or operator must immediately remove from service any AST system and/or secondary containment structure that has been certified as Not Fit for Service.

5.4 Internal Inspection Requirements

5.4.a Formal internal inspection of ASTs installed prior to June 6, 2014 shall be performed in general accordance with requirements of STI SP001 or API 653, as applicable to the AST being inspected, and at a minimum shall include evaluation of the following:

5.4.a.1. Tank bottom integrity;

5.4.a.2. Shell thickness;

5.4.a.3. Weld or seam integrity;

5.4.a.4. Condition of liner, if present.

5.4.a.5. Overall fitness for service of the AST.

5.4.b. Formal internal inspection for new ASTs shall be performed at the following intervals:

5.4.b.1. The interval from initial service date until the first internal inspection shall not exceed ten (10) years for a Level 1 AST or twenty (20) years for a Level 2 AST.

5.4.b.2. Subsequent internal inspections shall be performed, at a minimum, every ten (10) years for Level 1 ASTs and every twenty (20) years for Level 2 ASTs unless findings from an inspection reveal that corrosion, deterioration, or other specific conditions necessitate a more frequent internal inspection.

5.4.c. As an alternative to the aforementioned intervals for internal inspections, an owner or operator may choose to establish an initial or subsequent internal inspection schedule using the Risk Based Inspection (RBI) assessment methodology in API 653 and API RP 580.

5.4.c.1 The RBI assessment shall be performed by a person or persons who have inspection and engineering expertise and are knowledgeable in the proper application of API RP 580 principles, tank design, construction, and modes of deterioration.

5.4.c.2. An RBI assessment must be tank specific.

5.4.c.3. A person or persons have inspection and engineering expertise must determine the appropriateness of RBI assessments for the tank based upon the level of tank information available. The RBI assessment methodology may not be appropriate if a number of the “likelihood factors” and “consequence factors” described in API 653 and API RP 580 are unknown.

5.4.d. When an internal inspection is due for an AST it should be scheduled by the tank owner or operator to coincide with the annual inspection required by Section 5.3 of this Rule in order to collect the maximum amount of data for determining fitness for service of the AST.

5.4.d.1. An internal inspection must be certified by a Professional Engineer, an API certified inspector, a STI certified inspector, or by a person holding certification under another program approved by the secretary.

5.4.e. If an internal inspection of the AST has been conducted "on schedule" before the effective date of this rule, the internal inspection is acceptable provided that:

5.4.e.1. The inspection, at a minimum, addresses the required items for assessment from Section 5.4 .a; and

5.4.e.2. The inspection was performed within five (5) years of the effective date of this Rule for Level 1 ASTs or within ten (10) years of the effective date of this Rule for Level 2 ASTs.

5.4.e.3. The internal inspection is reviewed, approved, and certified by a Professional Engineer, an API certified inspector, a STI certified inspector, or by a person holding certification under another program approved by the secretary.

5.4.f. If an internal inspection determines that an AST is not fit for service in its current state, the owner or operator shall:

5.4.f.1. Immediately remove the AST from active service;

5.4.f.2. Empty and clean the AST;

5.4.f.3. Upgrade the AST to meet or exceed the minimum requirements for AST system integrity and provide a certification that the AST has been made Fit for Service signed by a Professional Engineer, an API certified inspector, a STI certified inspector, or by a person holding certification under another program approved by the secretary, or;

5.4.f.4. Permanently properly close the AST.

5.5 Damaged Tanks

5.5.a An owner or operator shall ensure that an AST system subjected to damage is evaluated by a Professional Engineer, an API certified inspector, a STI certified inspector, or by a person holding certification under another program approved by the secretary to determine if the AST system is Fit for Service. Damage conditions, include but are not limited to the following;

5.5.a.1. Fire;

5.5.a.2. Natural disasters such as floods, derecho force winds, lighting strikes, seismic events, and tornados;

5.5.a.3. Excessive foundation settlement;

5.5.a.4 ASTs exposed to excessive internal pressure caused by overfill, failure of venting devices, or other reasons;

5.5.a.5. AST systems damaged by vehicular traffic or heavy equipment;

5.5.a.6. ASTs with evidence of cracks or cracking welds.

5.5.b After evaluation of a damaged AST system, the Professional Engineer, API or STI certified inspector, or a person holding certification under another program approved by the secretary shall certify the tank as Fit for Service or Not Fit for Service.

5.5.b.1. The evaluation shall occur with seven (7) days of discovery of the damage. The tank owner or operator shall submit to the Secretary a copy of the certification for the damaged AST system within thirty (30) days of completion of the evaluation.

5.6. Spill Prevention Response Plan --The owner or operator shall have a written Spill Prevention Response Plan approved by the Secretary. The plan shall be updated as required by this rule and a current copy of the plan shall be readily available at the facility at all times.

5.6.a. By December 3, 2014, owners or operators of an existing aboveground storage tank facility shall submit a spill prevention response plan in accordance with the interpretive rule, 47CSR62. On or after effective date of this Rule, an owner or operator of a new aboveground storage tank facility shall submit a spill prevention response plan prior to storing any substances in the aboveground storage tanks. Each plan shall be site-specific and developed in consultation with the Bureau for Public Health, County and Municipal Emergency Management Agencies. The Spill Prevention Response Plan shall at a minimum:

5.6.a.1. Be updated no less frequently than every three (3) years for Level 1 AST systems and no less frequently than every five (5) years for Level 2 AST systems. The owner or operator shall ensure that updated plans are submitted to the Secretary for review and approval in accordance with this schedule.

5.6.a.2. Each owner or operator of an aboveground storage tank with an approved Spill Prevention Response Plan shall submit to the Secretary a revised plan or addendum within thirty (30) days if any of the following occur:

5.6.a.2.A. There is a substantial (i.e. major) modification in design, construction, operation or maintenance of any aboveground storage tank system or associated AST system equipment, or there are other circumstances that increase the potential for fires, explosions or releases of fluids;

5.6.a.2.B. There is a substantial modification in emergency equipment at the facility;

5.6.a.2.C. There are substantial changes in emergency response protocols at the aboveground storage tank facility;

5.6.a.2.D. The plan fails in an emergency;

5.6.a.2.E. The removal or the addition of any aboveground storage tank; or

5.6.a.2.F. Other circumstances occur about which the Secretary requests an update.

5.6.b. If the Spill Prevention Response Plan is rejected, the Secretary will require modification as may be necessary and reasonable to protect public health or the environment. The owner or operator of the aboveground storage tank shall submit a revised plan to the Secretary for approval within thirty days of receipt of notification of the Secretary's decision.

5.6.c. The owner or operator shall ensure that the Spill Prevention Response Plan specifically addresses the following elements, at a minimum:

5.6.c.1. Fully identify and describe the activity that occurs at the site.

5.6.c.2. Identify applicable hazard and process information including a specific listing and inventory of all types of fluids stored, amount of fluids stored and wastes generated that are stored in ASTs.

5.6.c.3. Submittal of material safety data sheets (MSDS) currently required by OSHA or Safety Data Sheets (SDS), required by OSHA beginning June 1, 2015, for all fluids in use or stored in ASTs at the facility. The MSDS or SDS must include the health hazard number identified by the National Fire Protection Association.

5.6.c.4. The plan shall include drawings of the aboveground storage tank facility, including the following information at a minimum:

5.6.c.4.A. Show site boundary, abutting properties, nearby streets and/or waterways.

5.6.c.4.B. Identify and locate major facility structures, including all AST systems and buildings.

5.6.c.4.C. Identify and locate all drainage pipes and water outlets.

5.6.c.4.D. Identify and locate all monitoring and/or observation wells.

5.6.c.4.E. Show legend, north arrow, and scale, preferably 1"=10' to 1"=25'.

5.6.c.5. Provide a preventive maintenance program that includes the following:

5.6.c.5.A. Leak detection monitoring;

5.6.c.5.B. Inspection procedures;

5.6.c.5.C. Identification of AST system stress points;

5.6.c.5.D. Employee training programs;

5.6.c.5.E. Corrosion protection and monitoring;

5.6.c.5.F. Security systems;

5.6.c.5.G. Spill prevention measures.

5.6.c.6. Provide the following Emergency Response information:

5.6.c.6.A. Identify all facility staff and their responsibilities for developing, implementing, and maintaining the facilities Spill Prevention Response Plan

5.6.c.6.B. Provide detail description of the chain of command at the aboveground storage tank facility.

5.6.c.6.C. Contact information for all facility emergency coordinators.

5.6.c.6.D. Contact information for all known facility emergency response contractors.

5.6.c.6.E. Detail the specific response that the facility and contract emergency personnel shall take upon the occurrence of any release of fluids from an AST at the facility.

5.6.c.6.F. Provide contact information for the person or persons to be notified in the event of a release from an aboveground storage tank. At a minimum this list should include contact information for the following:

5.6.c.6.F.1. County and Municipal Emergency Management Agencies.

5.6.c.6.F.2. The nearest downstream public water supply.

5.6.c.6.F.3. WVDEP Spill line (1.800.642.3074).

5.6.d. The owner or operator of an aboveground storage tank located in a zone of critical concern shall annually obtain and annually update the contact information required under Section 5.6.c.6.F of this Rule.

5.6.d.1. The owner or operator shall ensure that the updated contact information is readily available in case of an emergency at the facility.

5.6.d.2. The update to contact information alone does not require a resubmittal of the Spill Prevention Response Plan for approval by the Secretary.

5.6.e. The owner or operator with an aboveground storage tank located in a zone of critical concern shall provide a copy of the Spill Prevention Response Plan and any updates

thereto, which have been approved by the Secretary to the applicable public water systems and County and Municipal Emergency Management Agencies.

5.6.f. Nothing contained in this section relieves the owner or operator of an aboveground storage tank from his or her obligation to report any release immediately to the Department's emergency notification telephone number (1.800.642.3074).

5.7 Labeling/Signage Requirements for ASTs -- The owner or operator shall ensure that all aboveground tank systems are labeled or marked as follows:

5.7.a. Tank labels/marks shall be easily legible from outside the containment area and shall be capable of readily identifying the substance stored. At a minimum, the following information shall be labeled/marked on all ASTs that have not undergone permanent closure:

5.7.a.1. Identity of substance stored;

5.7.a.2. Tank registration number;

5.7.a.3. Owner or operator emergency contact number;

5.7.a.4. DEP Spill Reporting Hotline number 1-800-642-3074;

5.7.a.5. Any labels required by OSHA, NFPA, SPCC, or other Federal or State programs, as may be applicable.

5.7.b. The owner or operator shall be capable of readily identifying the substances transferred in the regulated piping system and be able to determine flow control points, including pumps, valves and dispensers through labeling or other suitable means.

5.7.c. ASTs that have undergone permanent closure and left onsite shall be legibly marked by placing a stencil in a readily visible location that states the name of the last substance stored in the AST, the date of closure, and the words "Permanently Closed".

5.8 Security Requirements for ASTs-- Owners or operators are responsible to assure that appropriate security measures and procedures based on the facility location are established and implemented to protect the environment and the public. These security measures and procedures may include, but are not limited to monitoring, fencing, lighting, access control, locked entrances and securing of valves and dispensers.

XX-XX-6 Reporting and Recordkeeping

6.1 Owners or operators of AST systems must cooperate fully with inspections, monitoring and testing conducted by the Secretary, as well as requests for document submission for AST testing, monitoring results, AST system records, and other AST system related documentation/information requested by the Secretary that may be needed to determine compliance with applicable requirements.

6.1.a. Owners or operators must report and provide the following information to the Department:

6.1.a.1. Completed and certified registration forms for all AST systems, if applicable, including all supplemental documents specifically required by the registration form.

6.1.a.2. Prior to installation or upgrade of an AST system, requests for installation or upgrade of AST systems must be to submitted to the Secretary for regulatory review and approval. The Secretary may prescribe a form for this purpose and may request supplemental documentation as necessary in order to evaluate the request.

6.1.a.3. Reports of all releases including suspected releases, spills and overfills, and confirmed releases.

6.1.a.4. A corrective action plan that includes at a minimum, initial abatement measures, initial site characterization, free product removal, investigation of what caused the release, and a plan for soil and ground-water cleanup.

6.1.a.5. A notification before permanent closure or change-in-service must be submitted thirty (30) days before the closure or change-in-service.

6.1.a.6. Annual certification from a certifying person that each tank system, at a minimum, meets the standards required by W. Va. Code § 22-30-1, et seq. and this Rule for the AST system including all associated equipment, leak detection system and secondary containment structure requirements. The first certification is due on or before January 1, 2015, and then annually thereafter.

6.1.a.7. A Spill Prevention Response Plan for each AST system including secondary containment structures which is properly updated in accordance with requirements of Chapter 22-30-9 and Section 5.6 of this Rule. The Spill Prevention Response Plan must be submitted to the Secretary for approval.

6.1.b. Owners or operators must maintain, at a minimum, the following records and make them readily available to the Secretary upon request:

6.1.b.1. The current Certificate to Operate for each AST.

6.1.b.2. Proof of financial responsibility for each AST system.

6.1.b.3. The current leak detection records for each AST system. At a minimum, twelve (12) continuous months of leak detection records must be maintained at the facility and readily available for review.

6.1.b.4. Documentation of operation and maintenance of corrosion protection equipment when a cathodic protection system is used. This documentation should include, but not be limited, to the last two cathodic protection tests and twelve (12) months of rectifier readings for impressed current systems. Rectifier readings are to be taken every sixty (60) days.

6.1.b.5. A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used and the AST system has metal components routinely in contact with soil or an electrolyte such as water.

6.1.b.6. Documentation that each AST system is protected from corrosion. This documentation should include, but is not limited to, information on protective coatings and AST construction utilizing materials that are not subject to corrosion.

6.1.b.7. Proof that substances currently stored in each AST system are compatible with all AST system components. No owner or operator shall allow storage of any liquid that is not compatible with the AST system.

6.1.b.8. The records for the visual checks of the secondary containment system required every seventy-two (72) hours for Level 1 ASTs and the monthly routine maintenance checks for Level 1 and Level 2 ASTs. The records must be maintained for the past twelve (12) months.

6.1.b.9. The annual inspection of the AST system including secondary containment structures performed by the owner or operator.

6.1.b.10. Any internal inspections that are performed on the AST system.

6.1.b.11. Documentation of the AST system repairs performed within the last twelve (12) months.

6.1.b.12. A copy of the annual certification by the certifying person that each tank system is either Fit for Service or Not Fit for Service.

6.1.b.13. The owner or operator shall maintain written or electronic records, which are signed by the owner or a designated responsible supervisor, that log the following information for each aboveground storage tank so that current information is readily available for the tank system:

6.1.b.13.A Tank Number.

6.1.b.13.B Substance stored including additives.

6.1.b.13.C. Verifiable content levels.

6.1.b.13.D. Deliveries received.

6.1.b.13.E. Amounts and quantities currently being stored.

6.1.b.12.F. Dispensing activities.

6.1.b.12.G. Repairs and maintenance to the AST system.

6.1.c. Permanent records for new systems and available records for existing systems shall be maintained for the operational life of the tank system and retained for a minimum of three (3) years after the tank system has undergone permanent closure. Permanent records include the following:

6.1.c.1 Original installation and modification of tank system design specifications, including applicable manufacturer's documentation for the tank system and any ancillary equipment.

6.1.c.2. Floor and wall/shell thickness measurements for metallic ASTs shall be kept on file by the owner or operator for the life of the AST and shall be made available to the Secretary upon request.

6.1.c.3. Material certifications shall be kept on file by the owner or operator for the life of the AST and shall be made available to the Secretary upon request.

6.1.c.4. All manufacturer's instructions, and performance claims and their manner of determination described in writing by the equipment manufacturer or installer shall be retained by the owner or operator for the life of the AST and made available to the Secretary upon request.

6.1.c.5. Tank handling activity installation, relocation, reconstruction and major modification inspection results.

6.1.c.6. A corrosion expert's analysis of site corrosion potential, if corrosion protection equipment is not used.

6.1.c.7. Documentation that each AST system is protected from corrosion.

6.1.c.8. Documentation of AST system repairs.

6.1.c.9. The notices of reportable releases and documentation of investigations of suspected releases.

6.1.c.10. A properly completed closure report and results of the site assessment

conducted at permanent closure or change-in-service, when applicable.

6.1.d. Owners or operators must maintain records and keep them available either:

6.1.d.1. At the AST facility and immediately available for inspection by the Secretary upon request; or

6.1.d.2. At a readily available alternative site and be provided for inspection to the Secretary upon request.

6.1.d.3. In the case of permanent closure records, owners or operators are also provided with the additional alternative of mailing closure records to the Secretary, if they cannot be maintained at a closed facility or an alternative site as indicated above.

6.2 Reporting of Confirmed, Threatened, or Suspected Releases

6.2.a. Upon the occurrence of a Confirmed Release from an aboveground storage tank system that jeopardizes or has the potential to jeopardize a water of the State, the owner or operator shall immediately notify the County and Municipal Emergency Management Agencies, the Department's emergency notification telephone number (WVDEP Spill line (1.800.642.3074)), and the nearest downstream public water supplier.

6.2.b. The owner or operator of an aboveground storage tank shall report any Confirmed Release, regardless of its threat to a water supply, immediately to the Department's emergency notification telephone number (WVDEP Spill line 1.800.642.3074). However, overfill or spillage of up to twenty (20) gallons of fluid that occurs during its loading or unloading need not be reported, if the overfill or spillage is wholly contained within a secondary containment structure, it is promptly cleaned up, and no portion of it escapes onto the ground or into adjacent surface water.

6.2.c. Owners or operators of AST systems must report to the Department within twenty-four (24) hours, and follow the procedures in Section 6.3 of this Rule for any of the following Suspected or Threatened Release conditions:

6.2.c.1. Unusual operating conditions observed by owners or operators (such as, but not limited to, the erratic behavior of product dispensing equipment, the sudden loss of product from the AST system, discovery of holes in a storage tank and/or piping, or unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,

6.2.c.2. Testing, sampling, inspection, or monitoring results from a release detection method which indicate a release may have occurred unless the monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring or testing does not confirm the initial result; and,

6.2.c.3. Weakening of AST system equipment (such as, but not limited to, swelling of piping, thinning of AST structural material below the minimum design standard, or cracks in welds or steel plates) that pose an imminent threat of failure, unless the owner or operator takes immediate action to repair/replace the equipment or immediately remove substances from the AST system to prevent a release.

6.2.d. Upon determination that a suspected or threatened release is a confirmed release, the owner or operator shall immediately report the confirmed release to the Department in accordance with Section 6.2.b. of this Rule.

6.2.e. No person shall knowingly allow any release from an AST to continue. Owners or operators shall take immediate action to contain any release so as to minimize the impact to public health or the environment.

6.2.f. Documentation of a leak and the calculations of how the amount leaked was determined must be maintained by the owner or operator for the operational life of the AST.

6.2.g. Actions to prevent a reoccurrence of a leak and the actions to mitigate evidence of a leak shall be initiated immediately by the owner or operator.

6.2.h. When required by the Secretary, owners and operators of AST systems must follow the procedures in Sections 6.3 and/or Section 7.0 to determine if the AST system is the source of off-site impacts. These impacts may include the discovery of substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, or waters of the State) that has been observed by the implementing agency or brought to its attention by another party.

6.3 Release Investigation and Confirmation Steps

6.3.a. After the notification required by Subsection 6.2 above, unless corrective action is initiated in accordance with Section 7 of this Rule, owners or operators must immediately investigate and confirm all suspected or threatened releases of substances from the AST system within seven (7) days.

6.3.b. The suspected or threatened release investigation shall include a sufficient number of the procedures outlined in this subsection and be sufficiently detailed to confirm whether a release of a substance has occurred or not. The owner or operator shall investigate and fully document the indication of a release by one or more of the following procedures:

6.3.b.1. A check of product dispensing or other similar equipment.

6.3.b.2. A check of release detection monitoring devices.

6.3.b.3. A check of inventory records to detect discrepancies.

6.3.b.4. A visual inspection of the storage tank and the area immediately

surrounding the storage tank.

6.3.b.5. Testing of the storage tank for tightness or structural soundness.

6.3.b.6. Testing of the piping for tightness.

6.3.b.7. Sampling and analysis of soil or groundwater. Owners or operators shall measure for the presence of a release where contamination is most likely to be present at the AST site. In selecting sample types, sample locations and measurement methods, the type of initial indication of contamination, type of backfill and soil, the depth of groundwater, and other factors appropriate for identifying the presence and source of the release shall be considered.

6.3.b.8. Other investigation procedures which may be necessary to determine whether a release from the AST system has occurred.

6.3.c. If the investigation confirms that a release has occurred, the owner or operator shall immediately report the confirmed release to the Secretary and initiate corrective action.

6.3.d. If the investigation confirms that a release has not occurred, further investigation by the owner or operator is not required.

6.3.e. Documentation of all suspected and threatened release investigations must be maintained by the owner/operator for a minimum of three (3) years and made available to the Secretary upon request.

6.3.f. Documentation of a confirmed release must be maintained by the owner and operator for the operational life of the AST and made available to the Secretary upon request.

XX-XX-7 Corrective Action - Owners and operators of ASTs must, in response to any release or threatened release from an AST, comply with the requirements of this section.

7.1 Department Authority to Assume Control of Releases

7.1.a The Department reserves the right to assume control of any release or threatened release situation when it is determined that the owner and/or operator are not responding promptly or effectively to threats to human health, safety, water resources, or the environment. In such cases all liability, including payment to the Department of response costs, will remain with the owners and operators and their guarantors.

7.1.b To protect human health, safety, and the environment, the Department reserves the right for the Department and/or its contractors to enter and take appropriate actions on affected properties to investigate, abate and remediate contamination as provided in W.Va. Code §22-30-8.

7.2 Initial Release Response Requirements

7.2.a. In response to a confirmed release from an AST, the owner and operator shall promptly take the following steps to prevent or address an immediate threat to human health or the environment while at the same time initiating, as necessary, one or more of the tasks identified in section 7.5:

7.2.a.1 If a faulty AST component is determined to be the cause of a release, the component or, if necessary, the entire AST system, shall be taken out-of-service and all substance contained in the AST or AST compartment shall be removed to prevent further release to the environment. The faulty AST shall not be returned to service until the AST meets the Fit for Service requirements in Section 5.3 of this rule as certified by a PE.

7.2.a.2 Owners and operators shall:

7.2.a.2.A Conduct an investigation to determine an estimate of the amount and type of substance released.

7.2.a.2.B Identify and sample affected water supplies and water supplies with the potential to be affected in a reasonable and systematic manner. A water supply affected or diminished by the release shall be restored or replaced with an alternate water supply. A copy of the sample results shall be provided to the water supply owner and the Department within five (5) days of receipt of the sample results from the laboratory.

7.2.a.3 Owners and operators shall implement the following to contain the release:

7.2.a.3.A If NAPL is present, NAPL corrective action shall be immediately initiated in accordance with 7.4 of this section.

7.2.a.3.A(i) Nearby receptors shall be protected from impacts of released substances by preventing free and mobile NAPL migration through recovery and containment, and the Department shall be notified of all such activities.

7.2.a.3.B If contaminated soil exists at the site, the interim remedial action may include excavation of the soils for treatment or disposal. Prior to initiating excavation activities, owners and operators shall first notify the Department. Excavation activities shall be performed in compliance with 7.8.

7.2.a.3.C Identify, mitigate and continue to monitor and mitigate, fire, explosion and safety hazards posed by vapors and free product.

7.2.a.4 At sites where free product recovery, regulated substance removal, or contaminated soil excavation is performed, the owner and/or operator shall:

7.2.a.4.A Conduct recovery, removal, storage, treatment, and disposal

activities in a manner that prevents the spread of contamination into previously uncontaminated areas.

7.2.a.4.B Handle flammable products in a safe and competent manner to prevent fires or explosions.

7.2.a.4.C Obtain required state and local permits or approvals for treatment and disposal activities.

7.2.a.4.D Minimize the amount of soil and subsurface material affected by a release of a regulated substance by segregating the unaffected soil and subsurface material from the material affected by a release of a regulated substance.

7.2.a.4.E Where soil and subsurface material affected by a release is removed from the site, the person removing the material shall provide to the owner, operator, and/or landowner a receipt documenting acceptance of the material at a permitted treatment or disposal facility.

7.2.a.4.F Where soil is removed with the intent to treat at another location, the person removing the material and the owner and operator must obtain the permission of the Department and follow all state, federal, and local regulations, including section 7.8 of this rule.

7.3 NAPL Corrective Action Requirements

7.3.a In all cases the presence of NAPL at a site shall requires remediation to the full extent practicable.

7.3.b At sites where there is a release of NAPL, owners and operators shall remove and remediate the NAPL to the maximum extent practicable while continuing, as necessary, the release confirmation steps and the investigation.

7.3.c The owners and operators shall formulate a NAPL Conceptual Site Model (NCSM) to determine the most efficient and environmentally protective remedial approach for addressing the release.

7.3.c.1 Owners and operators shall verbally communicate a preliminary NCSM to the Department within forty-eight (48) hours of the discovery of a release of NAPL. The preliminary NCSM shall address as many of the criteria listed in section 7.3.d as possible.

7.3.d The NCSM shall, at a minimum, address the following factors with regard to the NAPL Release:

7.3.d.1 The feasibility and necessity of an immediate response.

7.3.d.2 The direct and potential impacts to human health and the environment.

7.3.d.3 The type and estimated volume of the NAPL released.

7.3.d.4 The nature of the NAPL's occurrence, in the environment such as mobile, residual, or free NAPL in a well or surface water body discovered during an investigation.

7.3.d.5 The potential recoverability of all NAPL phases.

7.3.d.6 The geometry of the NAPL body.

7.3.d.7 The estimated age and duration of the NAPL release.

7.3.d.8 The characteristics of the subsurface soils.

7.3.d.9 The chemical and physical properties of the NAPL.

7.3.d.10 Groundwater classification for the area such as wellhead protection areas, excellent recharge areas, or source water protection areas.

7.3.e Owners and operators shall base all short and long term remedial action decisions upon the information in the NCSM, which shall be updated, in writing, at a minimum of once every three (3) calendar months, or on a schedule approved by the Department.

7.3.f NAPL removal shall be conducted in a manner that minimizes the spread of contamination, including dissolved and vapor phases, into previously uncontaminated areas by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges, or disposes of recovery by-products in accordance with all applicable local, state, and federal requirements.

7.4 Affected or Diminished Water Supplies

7.4.a Owners and operators who affect or diminish a water supply as a result of a release shall restore or replace the affected or diminished supply with an alternate source of water adequate in quantity and quality for the purposes served by the supply, at no cost to the owner of the affected or diminished water supply.

7.4.b Where an owner or operator restores or replaces an affected or diminished water supply by providing access to a public water system, the owner or operator will not be required to pay for the quantity of water supplied to the water supply user by the public water system.

7.4.c A temporary water supply shall be provided as soon as practicable but not later than forty-eight (48) hours after one of the following:

7.4.c.1 The owner or operator receives information which establishes that the release has affected or diminished the water supply.

7.4.c.2 The owner or operator is notified by the Department that the release has affected or diminished the water supply.

7.4.d A permanent water supply shall be provided within ninety (90) days, or within an alternative time frame as determined by the Department, after one of the following:

7.4.d.1 The owner or operator receives information which establishes that the release has affected or diminished the water supply.

7.4.d.2 The owner or operator is notified by the Department that the release has affected or diminished the water supply.

7.5 Initial Site Characterization Requirements

7.5.a Upon confirming that a release has occurred or upon notification by the Department that a release has been confirmed, the owner and/or operator shall perform a site characterization.

7.5.b The objectives of a site characterization are to accomplish the following:

7.5.b.1 Determine whether additional interim remedial actions are necessary to abate an imminent hazard to human health or the environment.

7.5.b.2 Determine whether additional site investigation work is required upon completion of an interim remedial action.

7.5.b.3 Determine the nature of the release, including the chemical compounds present, their concentrations, quantity released, and their physical and chemical characteristics related to potential human health, safety, water resources, or environmental impacts and cleanup procedures.

7.5.b.3.A Determine the extent of the release, both horizontal and vertical, including whether the contaminant is distributed homogeneously or heterogeneously.

7.5.b.3.B Determine the physical characteristics of the site, including characteristics affecting the occurrence, distribution, and movement of the released contaminant and characteristics affecting access to the site, both horizontal and vertical, which may influence the feasibility of various investigatory and remediation procedures.

7.5.b.3.C Evaluate the potential risks posed by the release including identification of environmentally sensitive receptors, and estimate of the impacts to human health, safety, water resources, and the environment that may occur as a result of the release.

7.5.b.4 Provide sufficient physical data, through field investigations, to determine the released substances involved, and the extent of migration of those substances in

surface water, groundwater, soil, and/or sediment.

7.5.b.5 Determine, from measurements at the site, values for input parameters including, but not limited to, hydraulic conductivity, source dimensions, hydraulic gradient, water table fluctuation, and fraction organic carbon necessary for fate and transport analysis.

7.5.b.6 Provide sufficient information to allow for completion of a remedial action plan or a design for remedial action.

7.5.c The site characterization shall include the following tasks, as necessary, based on the nature, extent, type, volume, or complexity of the release:

7.5.c.1 Identifying the need for and initiating additional interim remedial actions.

7.5.c.2 A review of the site history.

7.5.c.3 A review and analysis of data from removal from service and interim remedial action activities, if applicable.

7.5.c.4 Opening and sampling storage tanks to determine the regulated substances stored in the tanks.

7.5.c.5 Tightness testing or other release detection testing and monitoring to determine the structural integrity of the storage tank.

7.5.c.6 Identifying and sampling affected water supplies and water supplies with the potential to be affected not previously identified or sampled under section 7.2. Owners and operators shall restore or replace an affected or diminished water supply in accordance with section 7.4. Owners and operators shall provide a copy of the sample results to the water supply owner and the Department within five (5) days of receipt of the sample results from the laboratory.

7.5.c.7 Determining the location of any ecological receptors.

7.5.c.8 Using geophysical survey techniques to locate conduits of migration and underground structures such as storage tanks and piping, and to determine geologic and hydrogeologic characteristics of affected hydrogeologic zones and hydrogeologic zones with the potential to be affected.

7.5.c.9 Drilling soil borings, conducting soil gas surveys and collecting soil samples to determine soil characteristics and the horizontal and vertical extent of soil contamination.

7.5.c.10 Using piezometers, well points, monitoring wells, and public and private wells to:

7.5.c.10(i) Determine the direction of groundwater flow.

7.5.c.10(ii) Determine soil, geologic, hydrogeologic and aquifer characteristics.

7.5.c.10(iii) Measure the horizontal extent and thickness of free product.

7.5.c.10(iv) Sample groundwater to determine the horizontal and vertical extent of groundwater contamination.

7.5.c.11 Sampling surface water and sediments to determine the extent of surface water and sediment contamination.

7.5.c.12 Assessing potential migration pathways, including sewer lines, utility lines, wells, geologic structures, and hydrogeologic conditions.

7.5.c.13 Performing site surveying and topographic mapping.

7.5.c.14 Developing a conceptual site model that describes the sources of contamination, fate and transport of contaminants, and potential receptors.

7.5.c.15 Handling and disposing of investigation derived wastes (IDW).

7.5.c.16 Preparing and implementing a site-specific plan for the provision of the following:

7.5.c.16(i) Worker health and safety in accordance with OSHA requirements established at 29 CFR 1910.120 (relating to hazardous waste operations and emergency response), including health and safety policies, medical monitoring, training and refresher courses, emergency and decontamination procedures, personal protective equipment, and standard work practices.

7.5.c.16(ii) The identification, management and disposition of solid, hazardous, residual, and other wastes generated as part of the site characterization.

7.5.c.16(iii) A quality assurance/quality control program for the performance of site characterization field activities and for the accurate collection, storage, retrieval, reduction, analysis, and interpretation of site characterization data.

7.5.c.17 An analysis of the data collected as a result of the site characterization.

7.5.c.18 Recommendation of preferred remedial action options.

7.5.c.19 Recommendation for further site characterization work.

7.5.c.20 Developing a conceptual design of the selected remedial action options

and identifying additional investigations or pilot studies needed to design and implement a detailed remedial action plan.

7.5.c.21 Additional tasks necessary to characterize the site.

7.5.d Site Characterization Report

7.5.d.1 Owners and operators shall prepare and submit to the Department within 120 days of reporting a release under section 6.2, or within an alternative time frame as determined by the Department, two (2) hard copies and one (1) electronic copy of a site characterization report which describes the activities undertaken in accordance with this section. The site characterization report shall be complete and concisely organized and shall contain the following elements, as necessary, based on the nature, extent, type, volume, or complexity of the release:

7.5.d.1.A Site Description

7.5.d.1.A(i) A narrative description of the site and the historical and current operations conducted at the site.

7.5.d.1.A(ii) A site map showing location of buildings, roads, storage tanks, including those removed from service or closed in place, utilities, property boundaries, topographic contours, potential receptors, and other information pertinent to the site characterization.

7.5.d.1.A(iii) A description of natural and manmade features pertinent to the site characterization.

7.5.d.1.B Remedial Actions Performed

7.5.d.1.B(i) A description of the type and volume of the regulated substance removed from the storage tank.

7.5.d.1.B(ii) A discussion of fire, explosion, and safety hazards which have been identified, mitigated, and monitored.

7.5.d.1.B(iii) A discussion of necessary relocation of affected residents.

7.5.d.1.B(iv) Where free product recovery is performed:

7.5.d.1.B(iv)(a) The regulated substance released and the thickness of free product in wells, boreholes or excavations.

7.5.d.1.B(iv)(b) The type of free product recovery system used.

7.5.d.1.B(iv)(c) Whether a discharge has or will take place during the recovery operation and where this discharge is or will be located.

7.5.d.1.B(iv)(d) The type of treatment applied to, and the effluent quality expected from, a discharge.

7.5.d.1.B(iv)(e) The steps that have been or are being taken to obtain necessary permits or approvals for a discharge.

7.5.d.1.B(iv)(f) The volume and disposition of the recovered free product.

7.5.d.1.B(iv)(g) The date free product recovery was initiated.

7.5.d.1.B(iv)(h) The date free product recovery was completed.

7.5.d.1.B(v) Where excavation of contaminated soil is performed:

7.5.d.1.B(v)(a) The regulated substance released and actual volume of soil excavated.

7.5.d.1.B(v)(b) The method used to determine the existence and extent of contaminated soil.

7.5.d.1.B(v)(c) The treatment method or disposition of the excavated soil, including receipts documenting acceptance of the material at a permitted treatment or disposal facility.

7.5.d.1.B(v)(d) The date excavation was initiated.

7.5.d.1.B(v)(e) The date excavation was completed.

7.5.d.1.B(v)(f) The rationale for terminating soil excavation where the contaminated soil has not been excavated, including the volume of contaminated soil remaining in place, and a description of what steps will be taken to address the soils that remain unexcavated.

7.5.d.1.B(vi) The steps that have been or are being taken to restore or replace affected or diminished water supplies.

7.5.d.1.C Contaminant Information

7.5.d.1.C(i) A description of the type and characteristics of

regulated substances involved, including quantities, physical state, concentrations, toxicity, tendency to accumulate in the tissues of living organisms, persistence, and mobility.

7.5.d.1.C(ii) The identification of the sources of contamination, including the actual or estimated date and quantity of release from each source.

7.5.d.1.C(iii) The location and description of affected water supplies and water supplies with the potential to be affected.

7.5.d.1.D AST System Information

7.5.d.1.D(i) The results of tightness testing or other release detection method used or conducted to determine the structural integrity of the storage tanks.

7.5.d.1.D(ii) The details of removal from service activities conducted at the site.

7.5.d.1.E Site Specific Plans Prepared and Implemented

7.5.d.1.E(i) Worker health and safety in accordance with OSHA requirements established at 29 CFR 1910.120 (relating to hazardous waste operations and emergency response), including health and safety policies, medical monitoring, training and refresher courses, emergency and decontamination procedures, personal protective equipment, and standard work practices.

7.5.d.1.E(ii) The identification, management, and disposition of solid, hazardous, residual, and other wastes generated as part of the site characterization.

7.5.d.1.E(iii) A quality assurance/quality control program for the performance of site characterization field activities and for the accurate collection, storage, retrieval, reduction, analysis, and interpretation of site characterization data.

7.5.d.1.F Methods and Results of Investigation

7.5.d.1.F(i) The rationale, equipment, methodology, and results of geophysical surveys.

7.5.d.1.F(ii) Sampling locations and rationale for selection of these locations.

7.5.d.1.F(iii) The location, rationale, and logs of soil borings.

7.5.d.1.F(iv) The location, rationale, construction details, including methods and materials, and depth to groundwater of piezometers, well points, and monitoring wells.

7.5.d.1.F(v) A description of methods and equipment used to determine site-specific soil, geologic, hydrogeologic, and aquifer properties.

7.5.d.1.F(vi) A report of additional tasks performed to characterize the site.

7.5.d.1.F(vii) The results of a survey used to identify and sample public and private wells.

7.5.d.1.F(viii) Parameters analyzed for, analytical methods used, and detection limits of these methods.

7.5.d.1.F(ix) Information to demonstrate sufficient quality assurance/quality control samples to generate data of known quality.

7.5.d.1.F(x) Field and laboratory analytical results and interpretations.

7.5.d.1.F(xi) Groundwater contour maps depicting groundwater flow direction at the site.

7.5.d.1.F(xii) Contaminant distribution maps in the media and contaminant phases.

7.5.d.1.F(xiii) The disposition of IDWs.

7.5.d.1.G Conclusions and Recommendations

7.5.d.1.G(i) A discussion and conclusions that demonstrate the site characterization objectives outlined in section 7.6.b have been satisfied.

7.5.d.1.G(ii) The impacts to ecological receptors.

7.5.d.1.G(iii) The impacts to surface water.

7.5.d.1.G(iv) A conceptual site model describing the sources of contamination, fate and transport of contaminants, and potential receptors.

7.5.d.1.G(v) A discussion of the remedial action options selected to remediate the site.

7.5.d.1.G(vi) A conceptual design of the remedial action options selected.

7.5.d.1.G(vii) A description of further site characterization work needed.

7.5.e If the owner and operator determine, after completion of interim remedial actions, that further site characterization is not required, that soil is the only media of concern, and that interim remedial actions have remediated the site, the owner and operator may submit a site characterization report to the Department, in lieu of the report required in section 7.5.d, which contains the following:

7.5.e.1 A concise statement that describes the release, including information such as the amount of regulated substance that was released, the extent of contamination, and interim remedial actions taken under section 7.3.

7.5.e.2 Data demonstrating that the interim remedial actions have attained the standard for the site as determined based on the nature of the substance released, as well as standards as set forth in W.Va. Code §22-11 Water Pollution Control Act, W.Va. Code §22-12 Groundwater Protection Act, W.Va. Code §22-15 Solid Waste Management Act, and/or W.Va. Code §22-18 Hazardous Waste Management Act.

7.5.e.3 Additional information as necessary to fully describe the release, the extent of contamination, and the interim remedial actions taken to address the release.

7.5.f Following submission of a complete site characterization report, the Department will do one or more of the following:

7.5.f.1 Review and approve the site characterization report as submitted.

7.5.f.2 Review and approve the site characterization report upon satisfactory response to comments made by the Department.

7.5.f.3 Review and disapprove the site characterization report, citing deficiencies.

7.5.f.4 Review and disapprove the site characterization report and direct, require, or order the owner or operator to perform other tasks or make modifications as necessary to meet the requirements of this section of the rule.

7.5.f.5 Review the site characterization report without further action.

7.5.g At any point after reviewing the information contained in the site characterization report, the Department may require the owner or operator to submit additional information or to develop and submit a remedial action plan to address contaminated soils, surface water, or groundwater.

7.5.g.1 Additional investigation information or remedial action work plans requested by the Department shall be submitted within ninety (90) days or within an alternative time frame approved by the Department.

7.6 Corrective Action Plans

7.6.a. The Department may waive the requirement of an investigation when the owner and operator has taken the appropriate initial response steps to eliminate imminent dangers and to prevent any further release and the owner and operator chooses to submit a corrective action plan (CAP) to remediate contaminated soil, groundwater, surface water, and/or sediments.

7.6.b If the Department determines that the implementation of corrective actions are not achieving adequate protection of human health and the environment, the Department may require additional responses to be taken.

7.6.c The owner and operator may, in the interest of minimizing environmental contamination and promoting more effective corrective action, begin remediation of contaminated soil, groundwater, and/or surface water before the CAP is approved provided that they:

7.6.c.1 Notify the Department of their intention to begin remediation.

7.6.c.2 Comply with any conditions imposed by the Department, including halting remediation or mitigating adverse consequences from cleanup activities.

7.6.c.3 Incorporate these self-initiated remediation measures in the CAP that is submitted to the Department for approval.

7.6.c.4 Recognize that any actions taken by the owner and operator without prior Department approval is at the risk of the owner and operator and does not absolve the owner and operator of the obligation to comply with the corrective action requirements of this section.

7.6.d Corrective Action Plan Requirements

7.6.d.1 General Remedial Action Requirements

7.6.d.1.A At any point after reviewing the information contained in the site characterization report, the Department may require the owner and operator to submit additional information or to develop and submit a CAP for responding to contaminated soils, surface water, and groundwater.

7.6.d.1.B The CAP shall address the contamination of soils, groundwater, surface water, and sediments, including all occurrences of NAPL resulting from a release, as well as impacts or potential impacts to water supplies, and shall be submitted to the Department within sixty (60) days of the approval of the site characterization report. The CAP shall provide for adequate protection of human health, safety, water resources, and the environment, and shall establish cleanup goals for the site.

7.6.d.1C The owner and operator shall modify any CAP that does not provide for adequate protection of human health, safety, water resources, and the environment,

as necessary to meet the requirements of this subsection.

7.6.d.1D The CAP shall include sufficient design information that demonstrates that the remedial technology shall meet the cleanup goals approved by the Department and shall include an estimated time to cleanup completion for the remediation method proposed in the CAP.

7.6.d.2 A CAP shall propose a remedial action method for the site that shall:

7.6.d.2A Reduce the contaminant levels at the site to meet the cleanup goals proposed in the CAP and approved by the Department; or

7.6.d.2B Reduce the contaminant levels to achieve the cleanup goals established by the Department.

7.6.d.3 The Department shall approve the CAP when satisfied that implementation of the CAP provides for measures considered adequate to protect human health, safety, water resources, and the environment.

7.6.d.4 The CAP shall be organized in report form and signed by a qualified environmental professional.

7.6.d.5 The CAP shall be of site specific design and shall be based on the results of the hydrogeologic investigation, or contain appropriate investigatory steps if submitted without a prior hydrogeologic investigation having been completed.

7.6.d.6 The CAP may propose a phased approach to site remediation. If data can justify site closure, the owner and operator may request site closure in accordance with the requirements of subsection 8 of this section. Remedial action will be considered complete only upon the Department's evaluation and approval of a satisfactory no further action request.

7.6.d.7 The CAP shall include a summary of past efforts and a description of any new or continued efforts to effectively remove NAPL where NAPL is present.

7.6.d.8 The CAP shall contain the following elements, as necessary, based on the nature, extent, type, volume, or complexity of the release:

7.6.d.8.A A brief summary of the site characterization report conclusions.

7.6.d.8.B A copy of the plans relating to worker health and safety, management of wastes generated, and quality assurance/quality control procedures, as they relate to the remedial action, if different from the plans submitted in the interim measures and/or site characterization report.

7.6.d.8.C A list of required federal, state, and local permits or approvals

to conduct the remedial action.

7.6.d.8D A discussion of how the remedial action will attain the remediation standard for the site.

7.6.d.8E The results of treatability, bench scale, or pilot scale studies, or other data collected to support the remedial action.

7.6.d.8.F Design and construction details for the remedial action, including expected effectiveness.

7.6.d.8G Operation and maintenance details for the remedial action, including:

7.6.d.8.G(i) A schedule including initiation and completion dates for all elements of the remedial action plan.

7.6.d.8.G(ii) The expected concentrations and quantities of regulated substances in any discharge.

7.6.d.8.G(iii) The disposition of the discharge.

7.6.d.8.G(iv) A schedule for monitoring, sampling, and site inspections.

7.6.d.8.H A site map showing the location of buildings, roads, property boundaries, remedial equipment locations, and other information pertinent to the remedial action.

7.6.d.8.I A description of the media and parameters to be monitored or sampled during the remedial action.

7.6.d.8.J A description of the analytical methods to be utilized and an appropriate reference for each.

7.6.d.8.K A description of the methodology for post-remediation monitoring, that will be utilized to demonstrate attainment of the remediation standard.

7.6.d.8.L A description of additional items necessary to develop the remedial action plan.

7.6.d.9 Owners and operators shall develop and implement a site specific Quality Assurance/Quality Control (QA/QC) plan for the activities to be carried out during implementation of the CAP, and the QA/QC plan shall be included in the CAP submitted to the Department.

7.6.d.10 Owners and operators shall develop a site-specific health and safety plan

which shall be included in the CAP and shall cover all remedial action tasks. The health and safety plan shall, at a minimum, address site worker protection levels, protection of persons living near the site, and site access control during the remediation.

7.6.e Upon approval of the CAP by the Department, the owner and operator shall implement the CAP, including any modifications to the CAP, according to the schedule contained therein.

7.6.e.1 The owner and operator must notify the Department of any proposed changes to the schedule in writing.

7.6.f During implementation of the remedial action plan, remedial action progress reports shall be submitted to the Department quarterly or at an alternative interval as determined by the Department. Such progress reports shall include copies of all records documenting the transport and disposal of any free product, contaminated water and soil, or other waste that is generated at the site while remedial action work is being performed.

7.6.f.1 The first remedial action progress report shall be received by the Department within 120 days following the date of remedial action plan implementation. Subsequent reports shall be submitted within thirty (30) days of the end of the quarterly monitoring period. Owners and operators shall submit two (2) hard copies and one (1) electronic copy of each progress report.

7.6.f.2 The final remedial action progress report shall be submitted to the Department as part of a remedial action completion report.

7.6.f.3 Each remedial action progress report shall provide the data generated during the reporting period and shall show the progress to date toward attainment of the remediation standard. Each report shall be complete and concisely organized and shall contain the following elements, as necessary, based on the nature, extent, type, volume, or complexity of the release:

7.6.f.3.A A summary of site operations and remedial progress made during the reporting period.

7.6.f.3.B Data collected from monitoring and recovery wells showing depth to groundwater and thickness and horizontal extent of free product.

7.6.f.3.C Groundwater contour maps depicting groundwater flow direction.

7.6.f.3.D Quantitative analytical results from groundwater, surface water, soil, and sediment sampling.

7.6.f.3.E Maps for all media and all phases at specified times that indicate the distribution of concentrations of regulated substances.

7.6.f.3.G An isoconcentration map showing the configuration and concentrations of contaminants within the plume being analyzed.

7.6.f.3.H Sufficient information from monitoring data to establish whether the plume is stable, shrinking, or expanding.

7.6.f.3.I Reporting period and cumulative amounts of free product recovered, groundwater treated, and soil and sediment treated or disposed.

7.6.f.3.J Treatment and disposal documentation for waste generated during the reporting period.

7.6.f.3.K Demonstration that required federal, state, and local permits and approvals are being complied with.

7.6.f.3.L A report of additional items necessary to describe the progress of the remedial action. This shall include information on treatment system efficiencies and percent operation times.

7.6.f.3.M Recommendations for optimization and improvement as needed to achieve the cleanup goals established in the CAP.

7.6.f.4 At least once per twelve (12) month period, the remedial action progress report shall include an evaluation of the effectiveness of the remedial action to determine whether additional measures must be implemented to meet the cleanup goals established in the CAP. The evaluation shall include an estimate of time to remedial action completion.

7.6.f.4.AShould the evaluation indicate the remedial action is no longer effective, or the Department notify the owner or operator that the remedy is no longer effective, the owner and operator shall submit a revised CAP to propose a more effective remedy.

7.6.g If, during implementation of the CAP, the owner or operator decides to change the remedial action plan, the owner or operator shall prepare and submit to the Department a new or modified CAP for approval.

7.6.h If, during implementation of the CAP, the owner or operator determines that continued implementation of the CAP will cause additional environmental harm, the responsible party shall suspend remedial action and notify the Department, by telephone, within twenty-four (24) hours of suspension. The owner or operator shall prepare and submit a new or modified remedial action plan in accordance with this subsection.

7.6.i Upon completion of remedial action activities, the owner and operator shall perform four (4) consecutive quarters of groundwater sampling and/or surface water sampling, or other sampling schedule as approved by the Department, to ensure the remediation standard has been met.

7.7 Onsite Storage of Contaminated Soil

7.7.a Onsite storage of contaminated soil is prohibited unless performed in accordance with this section of the rules and all other applicable federal, state, and local regulations. Owners and operators must notify the Department of their intent to temporarily store contaminated soils at the site, and submit a written plan to the Department prior to storing any soils.

7.7.b Onsite storage of contaminated soil may be performed if the soil does not present a threat to human health, safety, water resources, or the environment and one of the following applies:

7.7.b.1 Soil excavation is necessary to perform a removal from service.

7.7.b.2 Soil excavation is performed as part of an interim remedial action.

7.7.b.3 Soil excavation is performed as part of remedial action.

7.7.c Where excavated contaminated soil is stored onsite in accordance with subsection (b), the excavated soil shall be disposed of or active treatment of the excavated soil shall be initiated, within ninety (90) days from the first day of storage or within an alternative time frame authorized by the Department in writing.

7.7.d If contaminated soil is stored onsite, the owner and operator shall manage the soil in accordance with applicable Department regulations and policies relating to solid and hazardous wastes. In addition to these requirements, unless otherwise specified in applicable Department regulations, contaminated soil shall be completely and securely covered, for the duration of the storage period, with an impermeable material of sufficient strength, thickness, anchoring, or weighting to prevent tearing or lifting of the cover, infiltration of precipitation or surface water, discharge of any leachate, and exposure of the soil to the atmosphere, and to prevent runoff. Contaminated soil shall not be stored in such proximity to adjacent properties, public areas, or residences as to cause nuisance odor. Appropriate steps shall be taken to deter public access to the storage area. This may include fencing, similar barriers, security patrols, or warning signs.

7.7.e The Department may require immediate removal of contaminated soil if the soil is not being properly stored or managed in accordance with subsection (c) or (d), or if the Department determines that storage poses a threat to human health, safety, water resources, or the environment.

7.8 No Further Action

7.8.a Request for No Further Action Determination

7.8.a.1 After all remedial action goals have been achieved, the owner and operator shall submit a written request to the Department for no further action (NFA) status. NFA documentation shall include, but is not limited to, the following:

7.8.a.1.A A demonstration that the site does not threaten human health, safety, water resources, and the environment based on current conditions at the site and surrounding areas.

7.8.a.1.B NAPL has been addressed in accordance with section 7.4.

7.8.a.1.C All contaminated soils previously stored at the site have been properly disposed.

7.8.a.2 The owner and operator shall submit all documents, permits, certificates, approvals, etc. relating to the transportation of impacted environmental media and materials from the site including ASTs, soils, regulated substances, and water that has not been previously submitted to the Department. Documentation shall include tipping fees, waste receipts, bills of lading, or any other documentation verifying that all waste has been properly disposed.

7.8.b The Department shall issue a letter requiring NFA and documenting that site cleanup objectives have been met. The NFA letter does not absolve the owner and operator from previously incurred or potential future liability.

7.8.c The NFA letter applies to site conditions at the time that the NFA request was made. If the risk posed by the site changes in the future, or the presence of contamination related to the release in question is discovered at a later date, the Department reserves the right to reopen the release case and require owners and operators to perform additional investigation and/or remediation to eliminate the risk to human health, safety, water resources and the environment.

7.9 Alternative Corrective Action

7.9.a Owners and operators have the option to remediate releases from ASTs to risk-based standards through the Voluntary Remediation and Redevelopment Program (VRRP) as authorized by W.Va. Code §22-22 Voluntary Remediation and Redevelopment Act. If owners and operators choose this option, they shall inform the Department in writing, and make application to the VRRP within thirty (30) days of such notification. Subsequent corrective action activities will be governed by the requirements of the VRRP until a Certificate of Completion is issued, or unless/until either party (owner and operator or the Department) withdraws from the voluntary remediation agreement. If remediation is not completed under the VRRP, owners and operators must meet the requirements of this section of the rules.

7.10 Violations

7.10a Owners and operators who fail to comply with the requirements for investigation and corrective action of releases from ASTs shall be subject to the enforcement provisions of this rule, as authorized under W. Va. Code §22.

XX-XX-8 AST Design, Construction and Installation

8.1 Performance standards for aboveground storage tanks -- Tank construction shall meet or exceed nationally recognized industry association standards or codes of practice for all ASTs.

8.1.a. New aboveground storage tank systems shall be installed in accordance with manufacturer's or fabricator's specifications and with applicable industry standards as specified in Section 8.2 (relating to new aboveground tank installations and reconstructions) of this Rule.

8.1.b. Aboveground storage tank system modifications/upgrades shall be performed in accordance with manufacturer's or fabricator's specifications and with applicable industry standards in Section 8.4 (relating to aboveground tank modifications) of this rule.

8.1.c. Aboveground storage tank systems shall be protected from corrosion and deterioration as specified in Section 9 (relating to corrosion and deterioration prevention) of this Rule.

8.1.d. A release prevention system shall be installed as specified in Section 10.1 and 10.2 (relating to overfill prevention requirements and secondary containment requirements) of this Rule.

8.1.e. A leak monitoring system shall be installed as specified in Section 10.3 (relating to leak detection requirements) of this Rule.

8.2 New aboveground tank installations and reconstructions –

8.2.a. Owners or operators shall ensure that all tanks installed at facilities have been designed, constructed, and installed, according to manufacturer's or fabricator's instructions, this Rule, and in accordance with the appropriate, most current Code of Practice developed by nationally-recognized associations such as API, ASME, NACE, NFPA, PEI, STI, or UL following applicable engineering specifications.

8.2.a.1. Shop-fabricated tanks shall be constructed in accordance with one of the following:

8.2.a.1.A ASME B96.1;

8.2.a.1.B. API Standard 620, API Specification 12B, API Specification 12F, or API Specification 12P;

8.2.a.1.C. STI F911-93 or STI F921;

8.2.a.1.D. UL 142 or UL 2085.

8.2.a.2 Field-erected tanks shall be constructed in accordance with one of the following:

8.2.a.2.A ASME B96.1;

8.2.a.2.B. API Standard 620, API Standard 650, API Specification 12B, or API Specification 12D.

8.2.b. Aboveground storage tanks must have a stable foundation, capable of supporting the total weight of the tank when full of product without movement, rolling or unacceptable settling:

8.2.b.1. The foundation design and construction must be based on sound engineering practices.

8.2.b.2. The foundation must minimize corrosion of the tank bottom and meet or exceed the specifications of the tank manufacturer.

8.2.b.3. The foundation design shall provide positive drainage of water away from the base.

8.2.b.4. Aboveground storage tanks located in areas subject to flooding must be protected from floatation.

8.2.c. Aboveground storage tanks shall be tested for tightness in accordance with current Codes of Practice developed by nationally-recognized associations and manufacturer's specifications:

8.2.c.1. If a pneumatic test is used for manufactured (shop fabricated) tanks, the fittings, welds, joints and connections, shall be coated with a soap solution and checked for leaks.

8.2.c.2. Aboveground field-erected storage tanks shall be hydrostatically tested.

8.2.c.3. Deficiencies shall be remedied prior to tanks being placed into service.

8.2.c.4. Hydrostatic test fluids shall be discharged or disposed of in accordance with State and Federal requirements.

8.2.d. Reconstruction of aboveground storage tanks must follow the current Codes of Practice developed by nationally-recognized associations and be accomplished in accordance with sound engineering practices.

8.2.d.1 Reconstructed aboveground storage tanks must be inspected and hydrostatically tested before being placed into service.

8.2.d.2. Hydrostatic test fluids shall be discharged or disposed of in accordance with State and Federal requirements.

8.2.e. Owners or operators shall ensure that mobile aboveground storage tanks that are relocated to another facility are checked by a qualified person before being placed in service to ensure that no damage to the tank occurred during transportation or installation at a site. Documentation of the checks must be maintained for twelve (12) months and made available to the Secretary for inspection upon request.

8.2.e.1. Owners or operators shall ensure that any mobile aboveground storage tank that has been damaged in the transportation and/or installation is inspected for fitness for service prior to placing the tank into service.

8.2.e.2. The owner or operator shall ensure that a thorough internal and external cleaning of the AST prior to relocation is performed.

8.2.e.3. Mobile tanks that are relocated from facility to facility are not subject to the installation documentation requirements of Section 8.2.e of this Rule, but remain subject to the registration amendment requirements of Section 3.1.d. of this Rule.

8.2.e.4. Mobile tanks that are made stationary tanks are subject to the installation documentation requirements of Section 8.2.f of this Rule.

8.2.f. The tank owner or operator must submit to the Secretary documentation of new construction design criteria and engineering specifications approved by a professional engineer or by an individual certified by API or STI to perform installations or by a person holding certification under another program approved by the Secretary.

8.2.f.1. The installation documentation must be submitted for review at least thirty (30) days prior to the new AST system construction or relocation of a stationary AST system.

8.2.f.2. A review of the installation paperwork will be performed by the Secretary to ensure compliance with the regulatory requirements for AST system installations and relocations.

8.2.f.3. If deficiencies are noted in the installation paperwork, the owner or operator will need to address the deficiencies noted by the Secretary prior to performing installation of an AST system.

8.2.f.4. New AST system installation or relocation of a stationary AST work must:

8.2.f.4.A. Be commenced within six (6) months from the date of approval; and

8.2.f.4.B. Be completed within one (1) year of commencement.

8.2.f.4.C. If the installation or relocation work has not started or is not completed

during the stated time periods, the application to perform the work shall expire and a new application shall be required, unless a written extension is granted by the Secretary.

8.2.g. All AST system components, including piping and ancillary equipment installed after the effective date of this Rule shall have base line data including:

8.2.g.1. Floor and wall/shell thickness measurements for metallic ASTs shall be kept on file by the owner or operator for the life of the AST and shall be made available to the Secretary upon request.

8.2.g.2. Material certifications shall be kept on file by the owner or operator for the life of the AST and shall be made available to the Secretary upon request.

8.2.g.3. All manufacturer's instructions, and performance claims and their manner of determination described in writing by the equipment manufacturer or installer shall be retained by the owner or operator for the life of the AST and made available to the Secretary upon request.

8.2.h. All metallic ASTs installed after the effective date of this Rule with tank bottoms in contact with soil or an electrolyte like water, shall be protected from corrosion in accordance with Section 9 of this Rule.

8.2.i. All new ASTs installed after the effective date of this Rule shall be placed on a Release Prevention Barrier. The integrity of the barrier shall not deteriorate due to exposure to the elements or soil in the presence of a released substance. The following are acceptable Release Prevention Barriers:

8.2.i.1. An impervious soil layer or geosynthetic clay liner with a permeability of 10^{-7} cm/sec or less; or

8.2.i.2. An impervious geosynthetic liner installed in accordance with manufacturer's recommendations, such as, a 60 mil unreinforced liner, 40 mil reinforced liner, or a material of similar or more stringent specifications and that is compatible with the substances being stored; or

8.2.i.3. A double bottom with Leak Detection for the presence of leakage; or

8.2.i.4. An impervious concrete slab foundation with a permeability of 10^{-7} cm/sec or less; and

8.3 General Upgrade Requirements for Existing AST Systems – Owners or operators shall ensure that upgrade to all existing AST systems is performed in accordance with manufacturer's and/or fabricator's instructions and appropriate industry standards.

8.3.a. All existing ASTs storing flammable or combustible liquids shall be upgraded with normal and emergency venting to meet the requirements of Section 8.6 of this Rule and any

standards mandated by the West Virginia Fire Marshall. All existing ASTs storing other liquids required by the Industry Standards to have normal and/or emergency venting, shall be upgraded to meet the requirements of Section 8.6 of this Rule.

8.3.b. All existing metallic ASTs and piping in direct contact with soil or other electrolytes which are not equipped with cathodic protection shall be upgraded to meet the requirements of Section 9 of this Rule.

8.3.c. All existing metallic ASTs and piping not in direct contact with the soil that is utilizing exterior coatings as a means of corrosion protection, shall have an appropriate external coating to meet the requirements of Section 9.4.

8.3.d. All existing ASTs shall be upgraded with a gauge or other measuring device that accurately shows the volume of material being stored in the AST to meet the requirements of Section 10.1.

8.3.e. All existing ASTs shall be upgraded with overfill prevention protection to meet the requirements of Section 10.1.

8.4 Aboveground tank modifications -- Owners or operators shall ensure that modifications to all AST systems are performed in accordance with manufacturer's and/or fabricator's instructions, appropriate industry standards, and this Rule.

8.4.a. Aboveground tanks which are modified shall be inspected and tested according to industry standards before being put in service when a major modification has been performed on the tank shell, tank roof or tank bottom. Deficiencies shall be remedied before returning the AST system to service.

8.4.b. The tank owner or operator shall submit to the Secretary documentation of construction modification design criteria and engineering specifications for review at least thirty (30) days prior to the work being performed.

8.4.b.1. A review of the construction modification documents will be performed by the Secretary to ensure compliance with the regulatory requirements for the AST system.

8.4.b.2. If deficiencies are noted in the construction modification paperwork, the owner or operator will need to address the deficiencies noted by the Secretary prior to performing modifications to the AST system.

8.4.b.3. AST system modification/upgrade work must be commenced within six (6) months from date of approval and be completed within one (1) year of commencement.

8.4.b.4. If the modification/upgrade work has not started or is not completed during the stated time periods, the application to perform the work shall expire and a new application shall be required, unless a written extension is granted by the Secretary.

8.5 Aboveground storage tanks in underground vaults -- The owner or operator shall ensure that the following requirements are met for all ASTs installed in an underground vault:

8.5.a. The vault shall completely enclose the tank and must be constructed of materials compatible with the substance to be stored in the AST.

8.5.b. A tank must be in its own vault. Adjacent vaults may share a common wall.

8.5.c. Vaults shall be designed according to sound engineering practices and shall be designed so that:

8.5.c.1. The floor is constructed to withstand stress resulting from fully loaded ASTs within the vault.

8.5.c.2. The top, walls and floor of the vault is constructed to withstand the anticipated loading including loading from traffic, soil and groundwater.

8.5.d. There may be no backfill around the tank and there shall be sufficient space between the tank and the vault to allow inspection of the tank and ancillary equipment.

8.5.e. Tanks installed in vaults shall be listed for aboveground use.

8.5.f. A vault and its tank must be suitably anchored to withstand uplifting by either water or released substance, including when the tank is empty.

8.5.g. All lines to and from ASTs installed in vaults must pass through the roof of the vault. No lines may penetrate the walls or floor of the vault. There may be no openings in the vault enclosure except those necessary for access to, inspection of, and filling, emptying and venting of the tank.

8.5.h. Connections shall be provided to permit venting of each vault to dilute, disperse, and remove vapors prior to personnel entering the vault.

8.5.i. A vault must be equipped with a continuous leak detection system capable of detecting vapors and liquids including water. The detection system must activate an alarm that automatically shuts down the dispensing system if a release occurs.

8.5.j. A vault must have a means for personnel entry, and:

8.5.j.1. The entry point must have a warning sign indicating the need for procedures for safe entry into a confined space.

8.5.j.2. The entry point must be secured against unauthorized entry and vandalism.

8.5.k. A suitable means to admit a fire suppression agent shall be provided for each vault that contains a flammable or combustible substance.

8.5.l. When a vault is used as the form of secondary containment for an AST system, owners or operators shall ensure that the vault is adequately designed and constructed to be sufficiently impervious to prevent a released substance from penetrating the vault until the release can be detected and recovered, but in no case will that time be less than seventy-two (72) hours.

8.5.m. At installation of a new tank or reconstruction or relocation of an existing tank in a vault, the requirements of this section shall be met before placing the AST in service.

8.6 Ancillary Equipment For ASTs -- Owners or operators shall ensure that ancillary equipment utilized in all AST systems are constructed, designed, installed, and operated in accordance with manufacturer's and/or fabricator's instructions and appropriate industry standards.

8.6.a. Ancillary equipment includes, but is not limited to, the following:

8.6.a.1. Normal and emergency vents;

8.6.a.2. Sumps, spill buckets, and overfill equipment;

8.6.a.3. Dispensers, dispenser hoses, and filters;

8.6.a.4. Connectors, valves, flanges, vent lines, swing lines, and gauges;

8.6.a.5. Roofs, hatches, and manways;

8.6.a.6. Submersible turbine pump.

8.6.a.7. Grounding and bonding for AST systems containing flammable and combustible liquids.

8.6.b. The owner or operator shall ensure that ancillary equipment is compatible with the stored substance(s). No owner or operator shall allow storage of any liquid that is not compatible with the AST system.

8.6.c. Ancillary equipment shall be in good working order and maintained according to manufacturer's specifications and accepted industry practices.

8.6.d. Tank connections through which fluids can flow shall be equipped with an operating valve adjacent to the tank to control flow of substance.

8.6.e. New ASTs storing flammable liquids, combustible liquids, or other liquids required by Industry Standards or the manufacturer to have normal and/or emergency vents shall be so equipped to protect the tank from over pressurization, excessive vacuums, and provide relief from excessive internal pressure caused by exposure to fire. All ASTs, as applicable, shall be equipped with normal and emergency vents in accordance with API 2000, NFPA 30, UL 142

or UL 2085. Nothing in this Subdivision supersedes any requirements placed on these types of tanks by the West Virginia Fire Marshall.

8.6.e.1. ASTs shall be equipped with normal vents in order to allow the tank to breath when transferring product.

8.6.e.2. ASTs shall be equipped with emergency vents to ensure that the safe pressure for the tank is not exceeded.

8.6.e.3 Normal and emergency vents must be of adequate size and capacity pursuant to the manufacturer's requirements and industry standards such as API 2000, NFPA 30, UL 142 and UL 2085, as applicable.

8.6.e.4. The requirement for normal and emergency venting shall apply to each compartment of a compartmented tank and the interstitial space (annulus) of a secondary containment-type double walled tank.

8.6.e.5. For vertical tanks, the emergency relief venting construction shall be permitted to be a floating roof, a lifter roof, a weak roof-to-shell seam, or another approved pressure-relieving construction in accordance with NFPA guidance.

8.6.e.6. The normal and/or emergency vents must be operable and in good condition with all components moving freely and vent passageways kept unobstructed.

8.6.e.7. Normal and/or emergency vents shall not be disabled for any reason.

8.6.f. For existing AST systems certified as Fit for Service but having normal or emergency vent deficiencies, the vents shall be upgraded to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

8.6.f.1 For existing Level 1 ASTs, normal and emergency vents shall be installed by December 31, 2015.

8.6.f.2. For existing Level 2ASTs normal and emergency vents shall be installed by June 30, 2016.

8.6.f.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service, shall be upgraded with normal and emergency vents, as applicable, prior to being put back in service.

8.7 Piping for aboveground storage tanks—Owners or operators shall ensure that piping installed in all AST systems is compatible with the substance stored and properly designed to protect against corrosion, physical damage; including damage from stresses arising from settlement, expansion, contraction, vibration and shock.

8.7.a. New and replacement piping shall be designed, fabricated and tested in accordance with current codes of practice developed by nationally recognized associations such as API, NACE, NFPA, PEI, STI, or UL.

8.7.a.1. Installation of piping shall meet or exceed current codes of practice and be in strict accordance with manufacturer's specifications.

8.7.a.2. Piping shall be tested for tightness before being placed in service and all deficiencies remedied.

8.7.a.3. All metal piping conveying fluids shall be protected from corrosion and deterioration. Metal piping in contact with soil or other electrolytes must be cathodically protected and maintained in accordance with Section 9 of this Rule.

8.7.a.4. Aboveground piping shall be adequately supported and be protected from physical damage caused by freezing, frost heaving, and vehicular traffic.

8.7.a.5. Piping that passes through or pierces a dike wall or the wall of a structure shall be designed to prevent damaging stresses and leakage due to settlement or fire exposure.

8.7.a.6. Underground piping shall have an annual tightness test. If the underground piping conveys a substance under pressure, the piping must be equipped with automatic line leak detectors which alert the operator to the presence of a leak by restricting or shutting off the flow of substances.

8.7.a.6.A. The annual line tightness test must be capable of detecting a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

8.7.a.6.B. The automatic line leak detector must be tested annually and must be capable of detecting leaks of three (3) gallons per hour at ten (10) pounds per square inch line pressure within one (1) hour.

8.7.a.7. All fill pipes leading to a pump-filled AST shall be equipped with a properly functioning check valve or equivalent device which provides automatic protection against backflow whenever the piping arrangement of the fill pipe is such that backflow from the AST is possible.

8.7.a.8. Each AST connection through which a substance can normally flow shall be equipped with an operating valve to control flow, unless the AST connection is located at a point higher than the highest liquid level in the AST, such as, at the top of a horizontal AST. The valve shall be located on a nozzle welded to the shell of the AST.

8.7.a.9. The underground piping layout shall be designed to minimize crossed lines and interference with conduit and other AST components. If crossing of lines is unavoidable,

clearance must be provided in accordance with manufacturer recommendations or industry standards in order to prevent contact that may lead to deterioration of the AST system components.

XX-XX-9 Corrosion and Deterioration Prevention

9.1 General corrosion requirements – Owners or operators shall ensure that all AST systems are maintained with corrosion prevention measures, such as, cathodic protection systems, external and internal tank coatings, and/or internal tank liners in order to prevent releases.

9.1.a. Owners or operators shall ensure that AST systems are maintained with corrosion and deterioration prevention measures in order to prevent releases until the AST system has undergone permanent closure.

9.1.b. Acceptable corrosion and deterioration protection methods may include any one or a combination of various methods, such as, cathodic protection systems (galvanic and/or impressed current), external and internal coatings, and or internal tank liners.

9.2 Cathodic Protection Systems – Owners or operators shall ensure that cathodic protection systems are designed by a NACE certified (or equivalent) corrosion expert and maintained to provide protection against external corrosion for the operational life of the tank system (tank, tank bottoms, piping) and/or have provisions to allow for the periodic rehabilitation of the cathodic protection system as needed to affect repairs of failing or defective systems.

9.2.a. For new, reconstructed or relocated tanks, the owner or operator shall ensure that special consideration for monitoring the cathodic protection status of the underside of the AST bottom shall be provided for in the cathodic protection system designed by the corrosion expert.

9.2.b. Metallic AST systems with tank bottoms in direct contact with soil or other electrolytes shall be cathodically protected, unless the tank is installed at a site that is determined by a NACE certified, or equivalent, corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life.

9.2.c. The cathodic protection system for the external bottom of a new or existing metallic AST must be designed, installed, inspected and maintained to meet or exceed the requirements for cathodic protection required by NACE Standards RP01-93, RP0169 or API 651.

9.2.d. Each cathodic protection system shall have an access point which enables the owner or operator to check on the adequacy of cathodic protection. The cathodic protection systems shall be monitored in accordance with Section 9.3 of this rule.

9.2.e. After installation of a sacrificial anode system, measurements of AST- to- soil potential must be made no sooner than sixty (60) days and no later than 180 days after

installation of the cathodic protection system by a person, who at a minimum, is NACE certified as a cathodic protection tester. If inadequate cathodic protection is indicated, the cause shall be determined, and the owner or operator shall ensure that necessary repairs are made within ninety (90) days, or other time period approved by the Secretary.

9.2.f. AST and piping connections of two dissimilar metals which create a galvanic cell are prohibited.

9.2.g. For existing AST systems certified as Fit for Service but having cathodic protection deficiencies, the cathodic protection system shall be upgraded to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

9.2.g.1. For Level 1ASTs, the AST system component not meeting cathodic protection standards must be upgraded/ repaired and tested by December 31, 2015.

9.2.g.2. For Level 2 ASTs, the AST system component not meeting cathodic protection standards must be upgraded/repaired and tested by June 30, 2016.

9.2.g.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have the cathodic protection upgraded/repaired and tested prior to placing the AST back into service.

9.3 Operation and Maintenance of Cathodic Protection Systems -- Owners or operators of all AST systems with cathodic protection shall ensure compliance with the following requirements to ensure that releases due to corrosion are prevented for as long as the AST system is used to store fluids.

9.3.a. All cathodic protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain fluid substances and are in contact with soil or an electrolyte.

9.3.b. All AST systems equipped with galvanic or impressed current cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

9.3.b.1. Cathodic protection systems must be tested by a person, who at a minimum, is NACE certified as a cathodic protection tester within six (6) months of installation and every three (3) years thereafter, except for cathodic protection systems on tank bottoms in direct contact with soil or other electrolytes shall be tested within six (6) months of installation and annually thereafter; and,

9.3.b.2. The owner or operator must maintain the results of the last two (2) cathodic protection tests and provide those to the Secretary upon request.

9.3.c. The owner or operator of an AST system with impressed current cathodic protection systems must have the rectifier inspected every sixty (60) days to ensure the equipment is operating properly. The owner or operator must maintain the results of the last six (6) rectifier readings from the impressed current system and make those available to the Secretary for inspection upon request.

9.3.d. All impressed current systems shall be checked by the owner or operator and tested by a NACE certified cathodic protection tester every twelve (12) months as part of a preventative maintenance program to minimize in-service failure. The check and tests shall include a check for electrical shorts, ground connections, meter accuracy, and circuit resistance. The effectiveness of isolating devices, continuity bonds, and insulators shall be evaluated during this inspection.

9.3.e. The impressed current source shall not be deenergized at any time including periods when the facility is closed (except during power failures or during service work on the AST, underground piping or the impressed current system), and the impressed current source shall be equipped with a continuously operating meter or meters which displays voltage, amperage and run time to show that the system is working.

9.3.f. If any inspection, monitoring or testing indicates that the cathodic protection system is not functioning properly, the owner or operator shall determine the cause and immediately initiate the necessary repairs.

9.3.f.1. If a cathodic protection system on a Level 1 AST system is found to be defective and the cathodic protection system is not repairable within ninety (90) days, the owner or operator shall take immediate action to remove substances from the affected AST, and/or underground piping, as applicable, in order to protect public health or the environment.

9.3.f.2. Substances shall not be returned to any affected part of the AST system until the defective cathodic protection system has been repaired and passed a cathodic protection test.

9.3.g. The criteria for determining the effectiveness of cathodic protection shall be a negative (cathodic) potential of at least 850 millivolts (mV) with the cathodic protection current applied. This potential shall be measured with respect to a saturated copper/copper sulfate reference electrode contacting the electrolyte. Consideration must be given to voltage drops other than those across the structure-to-electrolyte boundary in accordance with NACE standard RP0193 for valid interpretation of this voltage measurement.

9.3.h. Corrosion protection testing required by this section shall be performed by a person having, at a minimum, NACE certification (or equivalent) to perform corrosion testing.

9.4 Exterior Coatings – For metallic ASTs and piping that are not in direct contact with soil, corrosion protection may consist of an appropriate external coating as specified in a nationally recognized standard, or practice of a nationally recognized association such as the Society for Protective coatings, or an independent testing laboratory.

9.4.a. The owner or operator shall ensure that the exterior surfaces of all aboveground tanks and piping shall be protected by a suitable coating which prevents corrosion and deterioration in accordance with the requirements of this Section.

9.4.b. The owner or operator shall ensure that the coating is able to permanently bond to the AST and/or piping and be of sufficient thickness, density, and strength in order to resist corrosion, deterioration, and degradation of the exterior of the AST and/or piping.

9.4.c. The owner or operator shall ensure that the exterior tank and piping surfaces are properly prepared prior to the application of a coating so that visible rust, moisture or foreign matter is not present immediately prior to the application of the coating.

9.4.d. The owner or operator shall ensure that the exterior coating system shall be maintained in good condition to prevent corrosion throughout the entire operational life of the tank and/or piping.

9.4.e. In order to prevent AST system deterioration, the owner or operator shall ensure that the AST system is repaired when painting/coating failures such as, but not limited to the following, are visually evident:

9.4.e.1. Rust spots;

9.4.e.2. Blisters;

9.4.e.3 Peeling;

9.4.e.4. Cracking;

9.4.e.5. Coating bond failure.

9.4.f. For existing AST systems certified as Fit for Service but having corrosion deficiencies of their coating, the corrosion protection shall be repaired and/or upgraded to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

9.4.f.1. For Level 1 ASTs, the AST system component not meeting corrosion protection standards for coatings must be repaired and/or upgraded by December 31, 2015.

9.4.f.2. For Level 2 ASTs, the AST system component not meeting corrosion protection standards for coatings must be repaired and/or upgraded by June 30, 2016.

9.4.f.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have deficiencies in the coatings upgraded/repaired prior to placing the AST back into service.

9.5 Interior Linings and Coatings -- Coating or lining systems may be used to protect tank interiors from corrosion and to meet requirements of compatibility of the AST with substances stored within the AST.

9.5.a The owner or operator shall ensure that coating or lining systems that are used in all ASTs are designed in accordance with current codes of practices such as API 652 or associations such as NACE. Any appropriate coating which is bonded firmly to the interior surfaces may be used to protect a tank from corrosion. Specific requirements are as follows:

9.5.a..1 Coatings and linings shall be chemically compatible with the substance to be stored. No owner or operator shall allow storage of any liquid that is not compatible with the AST system.

9.5.a.2. Coating material shall be applied and cured in strict accordance with manufacturer's specifications.

9.5.a.3. Surfaces shall be prepared and inspected in accordance with applicable Nationally-recognized codes and standards.

9.5.a.4. Coatings used to protect the bottom of a tank shall extend up the side of the tank a minimum of 18 inches, while some forms of lining may cover the entire tank interior.

9.5.a.5. Coatings shall be examined for blisters and air pockets, and tested for pinholes. The coating thickness shall be checked to assure compliance with manufacturer's specifications and industry standards.

9.5.a.6. Defects in coating or lining systems shall be repaired or corrected prior to putting the tank or system into service.

9.5.b. The owner or operator shall ensure that interior linings or coatings shall be inspected by an API or STI certified aboveground storage tank inspector, NACE certified corrosion technician, or other qualified individual:

9.5.b.1. At installation;

9.5.b.2. When the AST undergoes a major modification;

9.5.b.3. As warranted or recommended by the manufacturer or design engineer;

9.5.b.4. At a minimum, at least every 10 years.

9.5.c. For existing AST systems certified as Fit for Service but having corrosion deficiencies of their internal lining, the corrosion protection shall be repaired and/or upgraded to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

9.5.c.1. For Level 1 ASTs, the AST system component not meeting corrosion protection standards for internal lining must be repaired and/or upgraded by December 31, 2015.

9.5.c.2. For Level 2 ASTs, the AST system component not meeting corrosion protection standards for internal lining must be repaired and/or upgraded by June 30, 2016.

9.5.c.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have deficiencies in the internal lining upgraded/repaired prior to placing the AST back into service.

XX-XX-10 Release Prevention, Leak Detection and Secondary Containment

10.1 Spill and Overfill Prevention General Requirements-- Owners or operators must ensure that releases from ASTs due to spilling and overfilling do not occur. ASTs that do not receive deliveries of substances (e.g. an AST at an oil or gas site that is connected directly to a pipeline or well) are only subject to the spill and overfill prevention requirements of Subsection 10.1 through subdivision 10.1.b. of this section.

10.1.a. The owner or operator must ensure that the volume of storage capacity available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly by the owner's or operator's personnel to prevent overfilling and spilling.

10.1.a.1. For ASTs that do not receive deliveries of substances (e.g. an AST at an oil or gas site that is connected directly to a pipeline or well), the requirement for constant monitoring of transfer operations is not applicable; however, the owner or operator must ensure that the AST is monitored in a manner as to prevent spills and overfills.

10.1.a.2. Immediate action shall be taken by the owner or operator to stop the flow of fluids, prior to exceeding tank capacity, or in the event that an equipment failure occurs.

10.1.b. The owner or operator shall report, investigate and clean up spills and overfills in accordance with the requirements of Section 7 of this Rule.

10.1.c. To prevent spilling associated with product transfer, owners or operators shall ensure that their systems have spill prevention equipment (such as a spill catchment basin or spill containment bucket) that will prevent a release of product to the environment.

10.1.d. Owners or operators must ensure that releases due to overfilling do not occur by ensuring that new ASTs are installed with the following:

10.1.d.1. A gauge or monitoring device which accurately indicates the level or volume in the tank and is visible to the individual responsible for the transfer of the product. The monitoring device shall be installed, calibrated and maintained in accordance with manufacturer's specifications.

10.1.d.2. A high-level alarm with an automatic high-level cut-off device or a high-level alarm with a manned operator shutdown procedure in operation.

10.1.e. Owners or operators must ensure that releases due to overfilling do not occur by ensuring that existing ASTs without overfill protection meeting the requirements of Subdivisions 10.1.d.1 and 10.1.d.2 are upgraded on the following schedule:

10.1.e.1. For existing AST systems certified as Fit for Service but having overfill and/or spill protection deficiencies, the overfill and/or spill protection system shall be upgraded to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

10.1.e.1.A. For Level 1 ASTs, the AST system component not meeting overfill and/or spill requirements must be upgraded by December 31, 2015.

10.1.e.1.B. For Level 2 ASTs, the AST system component not meeting overfill and/or spill requirements must be upgraded by June 30, 2016.

10.1.e.1.C. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have the overfill and/or spill protection upgraded prior to placing the AST back into service.

10.1.f. Prior to receiving deliveries, the owner or operator shall ensure that fill valves are properly labeled, all AST fill valves not in use are secured, and that only the ASTs designated is receiving deliveries. The owner or operator shall ensure the transfer operation is monitored either by manual or automatic means to prevent an overfill.

10.1.g. If the transfer operations are not being continuously monitored by a transfer operator appropriately trained in safe transfer procedures:

10.1.g.1. The AST must be equipped with overfill prevention equipment that will automatically shut off the flow into the AST when the AST is no more than 95% full.

10.1.g.2. All automatic shutoff equipment shall be equipped with a fail-safe mechanism that will function in the event of a power failure, malfunction or similar event.

10.1.h. If the transfer operations are being continuously monitored by a transfer operator, the AST must be equipped with a high level alarm or another automatic mechanism approved by the Secretary that will immediately alert the operator to prevent an overfill event.

10.1.h.1. The owner or operator shall ensure that the person(s) performing substance transfers is trained and knowledgeable concerning safe transfer procedures.

10.1.h.2. The high level alarm shall be monitored continuously and upon alert the operator will implement safe shut down procedures to prevent an overfill.

10.1.h.3. The alarm shall consist of a visual and audible device capable of alerting the transfer operator both by sight and hearing, to prevent an overfill situation. If the operator is in a surveillance station, this alarm shall cause a warning light and audible signal in that station to activate. In addition, this system shall alarm on failure, malfunction or power loss.

10.1.i. The owner or operator shall ensure that immediate action is taken to stop the flow of the substance being transferred when the capacity of the tank has been reached or in the event of an equipment failure or emergency.

10.1.j. Overfill prevention devices that are designed for use with gravity deliveries must not be used when a pump is used to fill the tank.

10.1.k. All ASTs shall be equipped with a gauge or other measuring device that is readily visible and accurately indicates the level of substance or quantity of substance in the AST.

10.1.l. The overfill prevention and measuring device must be independent of each other.

10.1.m. Overfill and spill equipment must be properly installed, operated, inspected, tested, and maintained in accordance with manufacturer's specifications.

10.2 Secondary Containment Requirements for AST Systems -- The owner or operator shall ensure that all AST systems have a secondary containment system which collects and contains a leak or spill.

10.2.a. The secondary containment system must prevent spills from entering the environment that might result from a release from an AST system.

10.2.b. All secondary containment structures shall be compatible with all substance(s) stored within the containment structure.

10.2.c. Owners or operators shall ensure that secondary containment for existing AST systems shall be adequately designed and constructed to be sufficiently impervious to prevent the released substance from penetrating the containment structure until the release can be detected and recovered, but in no case will that time be less than seventy-two (72) hours.

10.2.d. The owner or operator shall ensure that secondary containment structures for Level 1 ASTs are visually inspected for the presence of released fluids from the AST system at least every seventy-two (72) hours and Level 2 ASTs are visually inspected, at a minimum, at the time of the monthly inspection required in Section 5.2.b of this Rule.

10.2.d.1. If liquids are found in the secondary containment area, owners or operators shall take action as required under Section 5.2.a.3. and 5.2.a.4. of this Rule.

10.2.e. Secondary containment structures shall be designed, maintained and constructed

in accordance with sound engineering practices adhering to Nationally-recognized standards such as API, NFPA, and STI.

10.2.e.1. For ASTs containing flammable and/or combustible materials, the walls of the diked area shall be of steel, concrete, or solid masonry designed to be liquid tight and to withstand a full hydrostatic head.

10.2.f. Owners or operators shall ensure that new secondary containment systems installed after the effective date of this Rule are designed to direct any release to a monitoring point to meet leak detection requirements on a new tank at installation, reconstruction or relocation of an existing tank, or when any part of the tank floor is replaced. Permeability of the secondary containment must be less than 1×10^{-7} cm/sec at anticipated hydrostatic head and shall be verified at the time of installation.

10.2.g. Owners or operators are required to notify the Secretary within twenty-four (24) hours of determining that a secondary containment structure does not meet the requirements of this section.

10.2.g.1. The owner or operator must take immediate action to correct deficiencies found in secondary containment areas in order to prevent releases to the environment.

10.2.g.2. In the event that the owner or operator determines that they cannot effectively repair the secondary containment to meet the minimum requirements of this Rule within seventy-two (72) hours, they shall submit a plan with a schedule, for approval by the Secretary, detailing action items for the repair of the secondary containment.

10.2.g.2.A. If a secondary containment structure for a Level 1 AST is found to be defective and the structure is not immediately repairable, the owner or operator shall take immediate action to remove substances from the AST system(s) affected in order to protect public health or the environment.

10.2.g.2.B. Substances shall not be returned to the AST system until the defective secondary containment structure has been repaired and is certified by a professional engineer, an API certified inspector, or a STI certified inspector as meeting the minimum requirements of this Rule.

10.2.g.2.C. Transfers of substances to and from an AST within the secondary containment shall be monitored by personnel designated by the owner or operator for the duration of the transfer.

10.2.h. Double walled ASTs serve as secondary containment provided that the interstitial space is monitored; therefore, a separate secondary containment basin is not required for the AST, but the piping, dispenser, and ancillary equipment would require secondary containment.

10.2.i. The owner or operator shall ensure that secondary containment areas, such as,

dikes and curbing/paving, shall be designed and certified by a registered professional engineer to prevent the discharge from the containment area of the entire capacity of the largest single tank, assuming a full tank, and sufficient freeboard to contain precipitation.

10.2.i.1. Calculations for dike capacity must account for the presence of other ASTs within the dike. To allow for the volume occupied by other tanks within the secondary containment area, the dike capacity for an area that encloses more than one (1) tank shall be calculated after deducting the volume of all tanks, other than the largest tank, below the height of the dike.

10.2.i.2. Where data is available, the engineer should consider the appropriateness of the twenty-five (25) year, twenty-four (24) hour storm event precipitation design criteria for determining containment freeboard.

10.2.i.3. Factors to be considered in determining the appropriate capacity for the secondary containment area shall be documented and include, without limitation:

10.2.i.3.A. Size of largest AST;

10.2.i.3.B. Size of other ASTs and their effect on the overall capacity of the secondary containment area;

10.2.i.3.C. Local precipitation conditions;

10.2.i.3.D. Height of existing containment area;

10.2.i.3.E. Frequency of containment drainage and inspections;

10.2.i.3.F Site safety considerations.

10.2.i.4. The secondary containment system shall not be used to store materials, such as combustible materials, empty or full drums, or barrels.

10.2.i.5. ASTs within a dike should have a minimum separation between ASTs and between the ASTs and the dike wall of at least three (3) feet to allow for proper inspection of the ASTs.

10.2.i.6. The area within the dike shall be kept free of vegetation, debris, and any other material not necessary to the operation of the dispensing facility.

10.2.i.7. Drains on secondary containment systems shall be kept in good operating condition, closed, and secured, preferably locked.

10.2.i.8. Drains and drain valves constructed of low melting point materials, such as, brass or PVC shall not be utilized in secondary containment systems.

10.2.j. An external liner is a liner which is installed inside an existing secondary containment structure, such as a dike, to provide additional assurance of impermeability. External liners must be compatible with the substance(s) stored in the AST system.

10.2.k. When a vault is used as a form of secondary containment for an AST system, owners or operators shall ensure that the vault is adequately designed and constructed to be sufficiently impervious to prevent a released substance from penetrating the vault until the release can be detected and recovered, but in no case will that time be less than seventy-two (72) hours.

10.2.l. Stormwater shall be removed from secondary containment areas as soon as possible or when the water is in contact with the tank or piping and prior to the capacity of containment being reduced by 10% or more. Manually operated pumps, siphons, and manually operated gravity drains may be used to empty the containment. If drain valves are used they shall be secured in the closed position at all times except during controlled drainage events. Discharge or disposal of substances from the containment structure must comply with applicable State and Federal requirements.

10.2.m. For existing AST systems certified as Fit for Service but having secondary containment deficiencies, the secondary containment system shall be upgraded, repaired or otherwise brought into compliance to meet minimum requirements of this Rule and industry standards on the schedule provided by the certifying person but in no case later than the following:

10.2.m.1. For Level 1 ASTs, the AST system component not meeting secondary containment requirements must be upgraded within three (3) months of the effective date of this Rule.

10.2.m.2. For Level 2 ASTs, the AST system component not meeting secondary containment requirements must be upgraded within three (3) months of the effective date of this Rule.

10.2.m.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have meet the secondary containment requirements prior to placing the AST system back into service.

10.3 Leak Detection Requirements – The owner or operator shall ensure that all aboveground storage tank systems are monitored for leak detection at least every thirty (30) days using a method or combination of methods that are capable of detecting a release from any portion of the AST.

10.3.a. The leak detection method/equipment, other than visual, shall be installed, calibrated, operated and maintained in accordance with the manufacturer's specifications including routine maintenance checks for operability to ensure that the device is functioning as designed.

10.3.a.1. All manufacturer's instructions, performance claims, and their manner of determination described in writing by the equipment manufacturer or installer, shall be retained at the facility for the life of the AST and made available to the Secretary upon request.

10.3.a.2. The leak detection method utilized, other than visual, , must be capable of detecting a release from the AST system with a 0.2 gallon per hour leak rate within a thirty (30) day period, with a probability of detection of 0.95 and a probability of false alarm of 0.05.

10.3.b. The owner or operator shall ensure that the area beneath the tank bottom is monitored for leakage by visual, mechanical or electronic leak detection methods

10.3.c. Visual testing is only an acceptable form of leak detection for AST systems provided that the entire area of concern (e.g. the entire AST and/or aboveground piping, flanges, valves, etc.) must be readily accessible for view and properly illuminated (minimum of 50-foot candles or 100 lumens). Visual tests may be remote by using mirrors, cameras, or other suitable instruments.

10.3.c.1. A double bottomed tank that is designed and constructed to channel fluids to an area for observation is an acceptable form of visual testing.

10.3.c.2. A release prevention barrier that is designed and constructed to channel fluids to an area for observation is an acceptable form of visual testing.

10.3.c.3. Liquids discovered in a double bottomed tank or release prevention barrier structures must be immediately removed in order to continue using visual testing of these systems for leak detection.

10.3.d. Acceptable forms of leak detection for all existing AST systems include any one or a combination of the following methods:

10.3.d.1. Visual inspection;

10.3.d.2. Automatic tank gauging;

10.3.d.3. Statistical inventory reconciliation;

10.3.d.4. Interstitial monitoring;

10.3.d.5. Tank tightness testing;

10.3.d.6. Other forms approved by the Secretary upon request and for good cause shown.

10.3.e. Visual inspection alone does not satisfy the leak detection requirements for new, reconstructed, major modifications or upgraded Level 1 AST systems after the effective date of this Rule but visual inspection can be used in combination with the following:

10.3.e.1. Automatic tank gauging, except that the use of an automatic tank gauge cannot be used as a form of leak detection for piping;

10.3.e.2. Statistical inventory reconciliation;

10.3.e.3. Interstitial monitoring;

10.3.f. Other forms approved by the Secretary upon request and for good cause shown.

10.3.g. Visual inspection alone will satisfy the leak detection requirements for new or upgraded Level 2 AST systems after the effective date of this Rule provided the requirements of Subdivision 10.3.c. of this Rule are met.

10.3.h. Tank tightness test must follow a nationally-recognized procedure that is based on a volumetric/mass measurement, or an acoustic measurement, such as those addressed in API Publication 334 ‘‘Guide to Leak Detection in Aboveground Storage Tanks.’’

10.3.h.1. The test shall be performed by a third-party inspector or third-party technician who has experience with the selected method and is qualified by the test equipment manufacturer or certified by the relevant industry association and is not an employee of the tank owner.

10.3.h.2. The tank tightness test must be able to detect a 0.1 gallon per hour leak rate with a probability of detection of 0.95 and a probability of a false alarm of 0.05.

10.3.i. Any interstitial spaces, including but not limited to those located in double-walled ASTs, double-walled piping, and double bottomed tanks that are installed as part of a new or upgraded AST system, shall be equipped with interstitial monitoring equipment capable of detecting a discharge of substance into the interstitial space under all operating conditions and the interstitial space monitored every thirty (30) days.

10.3.j. The Secretary may approve other leak detection methods if the owner and/or operator can demonstrate that the method can detect a release as effectively as any of the methods listed above. In comparing methods, the Secretary shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner or operator must comply with any conditions imposed by the Secretary on its use to ensure the protection of public health or the environment.

10.3.k. When a combination of leak detection methods are utilized to meet the monthly leak detection requirement, a failure of any one method (e.g. automatic tank gauge indicates a failure during monthly test) is considered a failure of the leak detection equipment or test method for the component being tested.

10.3.l. Two consecutive months of inconclusive results or three non-consecutive months of inconclusive results in a twelve (12) month period is considered a failure of the leak detection method for automatic tank gauge and statistical inventory reconciliation methods.

10.3.m. Underground piping shall be annually leak tested to detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

10.3.n. All underground piping lines must be equipped with automatic line leak detectors which alert the operator to the presence of a leak by restricting or shutting off the flow of substances through piping if they detect leaks of three (3) gallons per hour at ten (10) pounds per square inch line pressure within one (1) hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

10.3.o. All leak detection records shall be kept at the facility for a minimum of twelve (12) continuous months and made available to the Secretary upon request.

10.3.o.1. The records should clearly demonstrate and document that leak detection monitoring performed was capable of detecting a release from any portion of the AST system; and

10.3.o.2. Leak detection was performed at least every thirty (30) days for the AST system(s); and

10.3.o.3. The person performing the monitoring activity shall document the following:

10.3.o.3.A. Name of the person doing the monitoring;

10.3.o.3.B. Monitoring method or methods used;

10.3.o.3.C. Monitoring date;

10.3.0.3.D. Monitoring results;

10.3.o.3.E. Reports of suspected or confirmed releases;

10.3.o.3.F. Corrective actions taken, if applicable.

10.3.p. For existing AST systems certified as Fit for Service but having leak detection deficiencies, the leak detection system shall be upgraded, repaired, or leak detection brought up to meet minimum requirements of this Rule and industry standards by the owner or operator on the schedule provided by the certifying person but in no case later than the following:

10.3.p.1. For Level 1 ASTs, the AST system component not meeting the requirements for leak detection must be upgraded or otherwise brought into compliance by December 31, 2015, except that leak detection by visual means must be begun no later than the effective date of the this Rule.

10.3.p.2 For Level 2 ASTs, the AST system component not meeting the requirements for leak detection must be upgraded, repaired, or otherwise brought into

compliance by June 30, 2016 except that leak detection by visual means must be begun no later than the effective date of the this Rule.

10.3.p.3. An existing tank system which is taken out of service for internal inspection, major modification to the tank, or which has been temporarily out of service and being returned to service shall have meet the leak detection requirements prior to placing the AST system back into service.

XX-XX-11 Nonoperational, Change in Service and Closures of AST Systems

11.1 Nonoperational Storage ASTs --An AST is considered nonoperational when the tank is empty and in which fluids will not be deposited or from which fluids will not be dispensed on or after June 6, 2014.

11.1.a. When an AST system becomes nonoperational, owners or operators shall:

11.1.a.1. Complete and submit a registration form to the Secretary showing the status of the tank as nonoperational. Ensure that the AST has been emptied and cleaned by removing all liquids and accumulated sludge.

11.1.a.2. Protect the AST against flotation if it is in an area subject to potential flooding.

11.1.a.3. Secure the AST against unauthorized entry. All piping entering or exiting the tank, excluding vents, shall be capped or blinded.

11.1.a.4. Ensure that the AST is not placed back into service.

11.1.a.5. Maintain records at the facility documenting information concerning the nonoperational status of the tank (i.e. date tank was placed in nonoperational status, dates of product removal, tank contents and cleaning material disposal records, etc.).

11.1.a.6. The owner or operator must permanently close AST systems which have been in nonoperational status for two (2) years unless the time frame for retaining the AST system in nonoperational status is extended by the Secretary upon request and for good cause shown.

11.2 Temporarily Out of Service

11.2.a. An AST system is considered to be in a temporary out of service status when the tank is not actively receiving or dispensing fluids.

11.2.b. When an AST system is temporarily out of service, owners or operators must:

11.2.b.1. Complete and submit an amended registration form to the Secretary within thirty (30) days of the change in tank status.

11.2.b.2. Continue operation and maintenance of the corrosion protection system.

11.2.b.3. Remove fluids from the tank system to the extent possible utilizing common employed practices. Reuse, treat or dispose of the AST system contents in accordance with State and Federal requirements.

11.2.b.4. Perform monthly leak detection, if the AST has not been emptied and cleaned by removing all liquids and accumulated sludge.

11.2.b.5. Perform annual owner or operator required inspections including certification of AST system integrity.

11.2.b.6. The AST system must be protected against flotation if it is in an area subject to potential flooding.

11.2.b.7. Secure the AST against unauthorized entry if it is TOS for three (3) months or more. All piping entering or exiting the tank, excluding vents, shall be capped or blinded.

11.2.b.8. Maintain records at the facility documenting Temporary Closure periods (i.e. dates of product removal, dates of returning to service, tank inspections, etc.).

11.2.c. Prior to returning an AST system that was in temporary out of service status back into service, the owner or operator must:

11.2.c.1. Conduct or cause to be conducted an annual inspection of the AST to ensure that the secondary containment for the AST meets or exceeds the minimum standards of this rule.

11.2.c.2. Conduct or cause to be conducted an annual inspection and certification in accordance with Section 5.3 of this Rule if it has been more than one (1) year since the last inspection was certified by a Professional Engineer, an API certified inspector, or a STI certified inspector.

11.2.c.3. Conduct or cause to be conducted a tightness test on piping that is part of the AST system.

11.2.c.4. Conduct or cause to be conducted a functionality check on any automatic line leak detector installed on piping.

11.2.c.5. Install overfill protection with a high-level alarm with a cut-off device or a high-level alarm with a manned operator shutdown procedure prior to being put back in service, if the AST does not already meet these requirements for overfill protection.

11.2.c.6. Submit a modified Spill Prevention Response Plan as required by Section 5.6 of this Rule.

11.2.d. The owner or operator must permanently close AST systems which have been temporarily out of service for two (2) years unless the time frame for retaining the AST system in temporarily out of service status is extended by the Secretary upon request and for good cause shown.

11.3 Changes In Service for ASTs – A change in service is a change to a registered aboveground storage tank, to include but not be limited, to change in nature of contents, relocation, permanent closure, or change in status from either currently in use (CIU) or temporarily out of service (TOS).

11.3.a. Within thirty (30) days before beginning a change in service, the owner or operator shall notify the Secretary in writing of their intent to perform a change in service. A waiver of the thirty (30) day notice may be granted by the Secretary upon request and for good cause shown.

11.3.b. Tank owners shall submit a registration form to amend registration information previously submitted to the Department within thirty (30) days of a change in service for the relocation of a mobile tank or for a change of service going from CIU to TOS status, or vice versa.

11.3.c. The owner or operator shall ensure that any new substance to be placed in the AST is compatible with the AST system components and with the secondary containment measures for the AST system.

11.3.d. The owner or operator shall ensure proper handling, storage, and disposal procedures of all of the AST system contents and cleaning materials during a change in service procedure. These materials must be reused, treated or disposed, in accordance with State and Federal requirements.

11.3.e. The owner or operator shall submit to the Secretary within thirty (30) days of the change in service an amended registration form providing the change in tank status. A Material Safety Data Sheet for the new substance(s) being stored shall be submitted with the amended registration form.

11.3.f. The owner or operator shall submit a modified Spill Prevention Response Plan as required by Section 5.6 of this Rule.

11.4 Permanent Closure of AST Systems

11.4.a. To place an AST system in permanent closure, owners or operators must empty and clean the AST, piping, and any associated equipment by removing all liquids and accumulated sludges. All tanks taken out of service must be either dismantled and removed from the site or rendered unusable for the storage of any substance.

11.4.b. At least thirty (30) days before beginning a permanent closure, the owner or operator shall notify the Secretary in writing of their intent to permanently close the AST system unless the action is in response to a corrective action. A waiver of the thirty (30) day notice may be granted by the Secretary upon request and for good cause shown.

11.4.c. Closure activities must be performed in accordance with industry standards such as API, NFPA, and STI and closure guidance documents developed by the Secretary.

11.4.d. Closure activities must be performed by qualified persons under the direction of a qualified professional engineer, a person certified by API or STI, or a person holding certification under another program approved by the Secretary.

11.4.e. The owner or operator shall submit a closure plan for review and approval by the Secretary at least thirty (30) days prior to closure. The Closure Plan should, at a minimum, include the detailed procedures for the following:

11.4.e.1 Identity of the substance(s) stored in the AST system being closed.

11.4.e.2. A procedure for rendering the AST system free of hazardous vapors.

11.4.e.3. AST system cleaning procedures detailing the removal process for all liquids and accumulated sludges.

11.4.e.4. Handling, temporary storage, and disposal procedures of all of the AST system contents and cleaning materials. These materials must be reused, treated or disposed in accordance with State and Federal requirements.

11.4.e.5. Removal of piping and ancillary AST equipment. Piping shall be removed or capped and fill ports shall be secured, capped or dismantled.

11.4.e.6. Closure procedures for the AST by either dismantling and removing the AST from the site or rendering it unusable for the storage of any substance by cutting a hole in the bottom of the AST.

11.4.e.7. Procedures for closure sampling for the AST system closures. Owners or operators must measure for the presence of a release where contamination is most likely to be present at the AST site. Owners or operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The closure sampling information detailed in the plan should include:

11.4.e.7.A. Sample types;

11.4.e.7.B. Sample locations;

11.4.e.7.C. Analytical measurement methods;

11.4.e.7.D. Propose action levels for clean-up and how the levels were determined.

11.4.e.7.E. Sufficient description of physical and chemical properties of the substance(s) being sampled for to determine if sampling procedures and analytical methods are adequate to properly detect a release if one occurred.

11.4.e.8. The Secretary shall notify the tank owner or operator will be notified of any deficiencies in the closure plan and the owner or operator will be allowed to address said deficiencies by submitting a revised plan or supplementing documentation to the original plan, as directed by the Secretary.

11.4.f. A minimum of three (3) closure reports describing the AST system closure with closure sample data, shall be submitted to the Secretary no later than thirty (30) days after the closure has been completed. The owner or operator shall retain a copy of the closure report for a minimum of three (3) years.

11.4.g. If contaminated soil, sediment, surface water or groundwater, or free product is discovered, or confirmed by either direct observation or indicated by the analytical results of the closure sampling, the owner or operator shall proceed with the corrective action as directed by the Secretary.

11.4.h. Tanks that undergo permanent closure and left onsite shall be rendered unusable for the storage of any substance and be secured against unauthorized entry. The AST is to be legibly marked by placing a stencil in a readily visible location that states the name of the last substance stored in the AST, the date of closure, and the words “Permanently Closed”.

XX-XX-12 Delivery Prohibition

12.1. Product deliverers/transporters, including any person who approves a delivery order or delivers or deposits fluids into an aboveground storage tank, shall not deliver product into an aboveground storage tank, unless the owner or operator provides proof of compliance to the product delivers for the following requirements:

12.1.a. Compliance with registration requirements and payment of annual registration fee assessments; and

12.1.b. Compliance with the proof of Financial Responsibility requirements set forth in Section 13 of this Rule.

12.2 Ineligibility to Receive Product for Compliance Related Violations

12.2.a. In addition to the delivery prohibition requirements of Section 12 above, the Secretary may classify an aboveground storage tank as ineligible to receive product if the AST is found to be in violation of one or more of the following compliance issues and the owner or operator has failed to resolve the violation in a timely manner.

12.2.a.1. Leak detection is performed in accordance with the requirements of Section 10.3 of this Rule. As applicable, leak detection equipment must be installed and properly operated and maintained.

12.2.a.2. Corrosion protection equipment is installed, properly operated, maintained, and tested in accordance with the requirements of Section 9 of this Rule.

12.2.a.3. Required secondary containment is installed and maintained in accordance with the requirements of Section 10.2 of this Rule.

12.2.a.4. Required financial responsibility is maintained in accordance with the requirements of Section 13 of this Rule.

12.2.a.5. Spill prevention and overfill prevention equipment must be installed and properly operated and maintained in accordance with the requirements of Section 10.1 of this Rule.

12.2.b. All ASTs registered as nonoperational are prohibited from receiving deliveries of substances.

12.2.c. The Secretary shall notify the owner or operator in writing that an aboveground storage tank is in violation of the requirements of paragraph 12.2.a. and is ineligible to accept deposit or delivery. The Secretary may affix a tag, notice, or locking device to the aboveground storage tank until compliance with the requirements under paragraph 12.2.a is achieved.

12.2.d. Product deliverers/transporters shall not deliver or deposit into an aboveground storage tank, nor shall an aboveground storage tank accept or allow delivery or deposit to an AST that does not meet the requirements of paragraph 12.1 or for an AST which the Secretary has identified as ineligible to receive product per requirements of paragraph 12.2.a.

12.2.e. If an eligible AST is connected or manifolded to an ineligible AST, the Secretary may determine that both ASTs are ineligible to receive delivery, deposit, or acceptance of fluid substances for purposes of this Rule, unless the eligible AST tank meets both of the following requirements:

12.2.e.1. The eligible AST is designed to receive fluids through a means not connected, manifolded, or otherwise dependent on the ineligible AST; and

12.2.e.2. The eligible AST is prevented from delivering or receiving fluids to or from the ineligible AST.

12.2.f. For a multiple compartment AST; the red tag shall only be attached to the fill pipe of the compartment associated with the condition or violation which resulted in the compartment being determined ineligible for the delivery, deposit, or acceptance of fluid substances.

12.2.g. The Secretary may choose to classify an AST as ineligible to receive product but then authorize delivery in an emergency situation.

12.2.h. Any product deliverer, owner, or operator who violates the provisions of this section is subject to enforcement action.

XX-XX-13. Bonding and Financial Assurance.

13.1. General Bonding and Financial Assurance Requirements

13.1.a. All forms of bonding and financial assurance must be submitted in accordance with the AST Act and this Rule on a form prescribed by the Secretary, must be made payable to the State of West Virginia, and must remain in effect for the operational life of the tank or tank facility.

13.1.b. The mechanisms used to demonstrate financial assurance under this section must be conditioned upon the owner or operator complying with the Aboveground Storage Tank Act, any rules promulgated thereunder, any order of the Secretary, and the terms and conditions of the certificate to operate, and ensure that the funds necessary to meet the costs of containment and corrective action for known releases will be available whenever they are needed.

13.1.c. Owners or operators shall demonstrate financial responsibility in an amount calculated as follows:

13.1.c.1. For Level 1 ASTs, an amount equal to twenty cents per gallon (20¢/gal.) of the aggregate storage capacity for the tank or tank facility, at a minimum of five thousand dollars ($5,000).

13.1.c.2. For Level 2 ASTs, an amount equal to ten cents per gallon (10¢/gal.) of the aggregate storage capacity for the tank or tank facility, at a minimum of five thousand dollars ($5,000).

13.1.d. The financial assurance mechanisms must be legally valid, binding, and enforceable under State and federal law.

13.1.e. All forms of financial assurance mechanisms will be placed with the State Treasurer to be held in the name of the State in trust for the purpose for which the deposit is made when the certificate to operate is issued.

13.1.f. The owner or operator may remove the deposit if the owner or operator first replaces it with an equivalent or greater deposit, upon approval by the Secretary.

13.1.g. If, for any reason, an owner or operator fails to maintain proper financial assurance or bonding, the Secretary shall issue a cease and desist order and revoke the certificate

to operate, and the owner or operator becomes fully liable for the amount of the bond.

13.1.h. The penal sum of any financial assurance must be in an amount at least equal to the sum of the current containment and corrective action cost estimate, as applicable.

13.2. Allowable Mechanisms of Financial Assurance or Bonding

13.2.a. Surety bond;

13.2.b. Collateral bond, including:

13.2.b.1. Cash deposits, certified checks, cashiers' checks or treasurer's checks that are issued, drawn on or certified by a bank or banking institution authorized to do business in this State;

13.2.b.2. Collateral securities;

13.2.b.3. Certificates, including:

13.2.b.3.A. Bonds of the United States or its possessions;

13.2.b.3.B. Bonds of the Farm Credit Bank;

13.2.b.3.C. Full Faith and General Obligation bonds of the State of West Virginia or other states and of any West Virginia county, district or municipality, or any county, district or municipality of other states;

13.2.b.3.D. Letters of credit from banks or banking institutions authorized to do business in this State and that are automatically renewable and irrevocable;

13.2.b.3.E. Certificates of deposit from banks or banking institutions authorized to do business in this State and that are automatically renewable and assignable; or

13.2.b.3.F. Negotiable bonds of the United States or its possessions; the Farm Credit Bank; or Full Faith and General Obligation bonds of the State of West Virginia or other states and of any West Virginia county, district or municipality, or any county, district or municipality of other states.

13.2.c. Escrow account;

13.2.d. Performance bonding fund participation as established by the Secretary;

13.2.e. Trust fund;

13.2.f. Tank insurance for performing corrective action;

13.2.g. Other forms approved by the Secretary upon request and for good cause shown; or

13.2.h. Use of multiple financial mechanisms.

13.3. Special Terms and Conditions for Surety Bonds Guaranteeing Payment or Performance

13.3.a. An owner or operator may demonstrate financial assurance for containment or corrective action by obtaining a payment or performance surety bond that conforms to the requirement of this subsection.

13.3.b. The Secretary will not accept the bond of a surety company that has failed or unduly delayed, as determined by the Secretary, in making payment on a forfeited surety bond.

13.3.c. The surety company issuing the bond must, at a minimum, be among those listed as acceptable sureties on federal bonds in Circular 570 of the U.S. Department of the Treasury.

13.3.d. The Secretary will accept only the bond of a surety authorized to do business in this State and the surety bond is signed by an appropriate official of the surety as determined by the Secretary. If the principal place of business of the surety is outside of this State, the surety bond must also be signed by an authorized resident agent of the surety.

13.3.e. The bond must provide that full payment will be made under the bond within thirty (30) days of receipt of the Secretary's declaration of forfeiture by the surety.

13.3.f. The Secretary will not accept surety bonds from a surety company when the total bond liability to the Department for bonds filed by the owner or operator, the principal, and related parties exceed the surety company's single risk limit.

13.3.g. Under the terms of the bond, the surety may cancel the bond by sending notice of cancellation by certified mail to the owner or operator and to the Secretary one hundred twenty (120) days in advance of cancellation.

13.3.g.1. If the surety cancels the bond, the owner or operator must obtain alternative financial assurance as specified in this part.

13.3.g.2. The owner or operator may cancel the bond only if alternative financial assurance is substituted as specified herein or if the owner or operator is no longer required to demonstrate financial responsibility in accordance with subdivision 13.12.b. of this Rule.

13.3.h. The bond must provide that the surety and the principal are jointly and severally liable for payment of the bond amount.

13.3.i. Surety Bond Forfeiture.

13.3.i.1. The Secretary will provide in the bond that the amount must be confessed to judgment and execution upon forfeiture.

13.3.i.2. Any surety bond obtained by the owner or operator must state that the surety will become liable on the bond obligation should the owner or operator fail to perform as guaranteed by the bond.

13.3.j. The Department will retain, during the term of the bond and upon forfeiture of the bond, a property interest in the surety's guarantee of payment under the bond, which may not be affected by the bankruptcy, insolvency or other financial incapacity of the owner or operator or principal on the bond.

13.3.k. The bond must provide that the surety will give written notice to the principal and the Department within ten (10) days of a notice received or an action filed by or with a regulatory agency having jurisdiction over the surety alleging one of the following:

13.3.k.1. The insolvency or bankruptcy of the surety.

13.3.k.2. Violations of regulatory requirements applicable to the surety when, as a result of the violations, suspension or revocation of the surety's license to do business in this State or another state is under consideration by the regulatory agency.

13.3.*l*. Surety Bonds for Containment and Corrective Action

13.3.*l*.1. An owner or operator may demonstrate financial assurance for containment and corrective action by obtaining a performance bond that conforms to the requirements of this Rule.

13.3.*l*.2. A bond for corrective action must be in accordance with subsection 13.12. of this Rule.

13.3.*l*.3. A bond for containment or corrective action must be effective no later than one hundred twenty (120) days after the corrective action remedy has been selected, in accordance with the requirements of section 7 of this Rule.

13.3.m. Standby Trust Fund.

13.3.m.1. A standby trust fund must meet the requirements of this Rule, except the requirements for initial payment and subsequent annual payments specified in subdivision 13.10.c. below.

13.3.m.2. Payments made under the terms of the bond will be deposited by the surety directly into the standby trust fund.

13.3.m.3. Payments from the trust fund must be approved by the trustee.

13.4. General Terms and Conditions for Collateral Bonds.

13.4.a. The owner or operator may submit a collateral bond in one or more of the forms listed in section 13.2.b. above.

13.4.b. The market value of the collateral deposited must be at least equal to or greater than the sum of the required bond amount.

13.4.c. The Secretary will deposit collateral submitted under this Rule with the State Treasurer, who is responsible for its custody and safe keeping until released or collected and deposited in an appropriate fund designated by the Secretary.

13.4.d. Collateral must be in the name of the owner or operator and pledged and assigned to the State free and clear of claims or rights. The pledge or assignment must vest in the State a property interest in the collateral that must remain until released under the terms of this Rule, and may not be affected by the bankruptcy, insolvency or other financial incapacity of the owner or operator.

13.4.e. The State will ensure that its ownership rights to collateral deposited are established to make the collateral readily available to the State upon forfeiture. The Secretary may require proof of ownership and other means, such as secondary agreements, as he or she deems necessary to meet the requirements of this Rule. If the Secretary determines that collateral deposited does not meet the requirements of this Rule, he or she may take action under the law to protect the State's interest in the collateral.

13.5. Collateral Bonds; Escrow.

13.5.a. The Secretary may authorize the owner or operator to establish an escrow account deposited in one or more federally-insured accounts payable on demand only to the Secretary or directly deposited with the Secretary.

13.5.b. Escrow funds deposited in federally-insured accounts must not exceed the maximum insured amount under applicable federal insurance programs, such as the Federal Deposit Insurance Corporation (FDIC).

13.5.c. Interest paid on an escrow account must be retained in the escrow account and applied to the bond value of the escrow account, unless the Secretary has approved that the interest be paid to the owner or operator. In order to qualify for interest payment, the owner or operator must request such action in writing during the registration process.

13.6. Collateral Bonds; Letters of Credit.

13.6.a. Bank letters of credit submitted as collateral for collateral bonds are subject to the following conditions:

13.6.a.1. The letter of credit must be a standby or guarantee letter of credit issued by

a federally-insured or equivalently protected bank or banking institution authorized to do business in this State. The letter of credit may not be issued without a credit analysis substantially equivalent to a credit analysis applicable to a potential borrower in an ordinary loan situation. A letter of credit so issued must be supported by an owner's or operator's unqualified obligation to reimburse the issuer for monies paid under the letter of credit.

13.6.a.2. The letter of credit must be irrevocable and must be so designated. The letter of credit must be issued for a period of at least one (1) year in an amount at least equal to the current cost estimate for containment and corrective action.

13.6.a.3. The letter of credit must provide that the expiration date will be automatically extended for a period of at least one (1) year unless the issuing institution has canceled the letter of credit by sending notice of cancellation by certified mail to the owner or operator and to the Secretary ninety (90) days in advance of cancellation.

13.6.a.3.A. If the letter of credit is canceled by the issuing institution, the owner or operator must obtain alternative financial assurance or bonding.

13.6.a.3.B. The owner or operator may cancel the letter of credit only if alternative financial assurance or bonding is substituted as specified in this Rule or if the owner or operator is released from the requirements of this Rule in accordance with subdivision 13.12.b. below.

13.6.a.3.C. A letter from the owner or operator referring to the letter of credit by number, issuing institution, and date and providing the name and address of the facility and the amount of funds assured.

13.6.a.4. The Secretary may not accept letters of credit issued for an owner or operator when the amounts of the letter of credit, aggregated with other loans and credits extended to the applicant, exceeds the issuer's legal lending limit for that applicant as defined in the United States Banking Code (12 U.S.C. §§ 21-220).

13.6.a.5. Letters of credit must name the West Virginia Department of Environmental Protection as beneficiary and must be payable to the Department upon demand, in part or in full, upon presentation of the Department's drafts at sight. The Department's right to draw upon the letter of credit does not require documentary or other proof by the Department that the applicant has violated the conditions of the bond, the certificate to operate or another requirement.

13.6.a.6. The Secretary will not accept letters of credit from a bank that has failed or delayed in making payment on a letter of credit previously submitted as collateral to the Department.

13.6.a.7. The Secretary will not accept letters of credit from a bank for any person, for all certificates to operate held by that person, in excess of three (3) times the company's maximum single obligation as provided by State law.

13.6.a.8. The Secretary will provide in the indemnity agreement that the amount will be confessed to judgment upon forfeiture.

13.6.a.9. The issuing bank must waive the rights of setoff or liens that it has or might have against the letter of credit.

13.6.a.10. If the Secretary collects an amount under the letter of credit due to failure of the owner or operator to replace the letter of credit after demand by the Secretary, the Department will hold the proceeds as cash collateral.

13.6.a.11. After the letter of credit is approved by the Secretary, the owner or operator must retain a copy of the letter of credit in its records.

13.6.a.12. The issuing institution must be an entity that has the authority to issue letters of credit and whose letter-of-credit operations are regulated and examined by a federal or State agency.

13.6.b. The letter of credit must provide that:

13.6.b.1. The bank will give prompt notice to the owner or operator and the Secretary of any notice received or action filed alleging the insolvency or bankruptcy of the bank or alleging any violations of regulatory requirements that could result in suspension or revocation of the bank's charter or license to do business.

13.6.b.2. In the event the bank becomes unable to fulfill its obligations under the letter of credit for any reason, the bank must give notice immediately to the owner or operator and the Secretary.

13.6.b.3. Upon the incapacity of a bank by reason of bankruptcy, insolvency, suspension or revocation of its charter or license, the owner or operator must be deemed to be without bond coverage. The Secretary shall issue an order against any owner or operator who is without bond coverage. The notice will specify the period within which bond coverage must be replaced. If the owner or operator cannot replace the bond within the specified period of time, then the Secretary shall immediately revoke the certificate to operate. The owner or operator will be fully liable for the amount of the bond coverage.

13.6.b.4. The estimated bond value of all collateral posted as bond assurance will be subject to a margin-bond-value-to-market-value ratio as determined by the Secretary. This margin will reflect legal and liquidation fees, as well as value depreciation, marketability, and fluctuations that might affect the net cash available to the Secretary in performing cleanup, containment, corrective action or other remedial measures. The bond value of collateral may be evaluated at any time, but must be evaluated as part of registration renewal. In no case may the bond value exceed the market value.

13.7. Collateral Bonds; Certificates of Deposit. – Certificates of deposit submitted as

collateral for collateral bonds are subject to the following conditions:

13.7.a. The certificates of deposit must be made payable to the Department or the owner or operator and the Department and must be assigned to the Department by the owner or operator, in writing, as required by the Secretary and on forms prescribed by the Secretary. The assignment must be recorded upon the books of the bank issuing the certificate.

13.7.b. The certificate of deposit must be issued by a federally insured or equivalently protected bank or banking institution that is authorized to do business in this State.

13.7.c. The Secretary shall not accept certificates of deposit from a bank or banking institution when the accumulated total of certificates of deposit issued by the bank or banking institution for the owner or operator is in excess of one hundred thousand dollars ($100,000) or the maximum insurable amount as determined by the FDIC or the FSLIC, if the banking institution is insured by the FDIC or FSLIC. If it is insured by an equivalent method administered by the State, similar limits apply.

13.7.d. The certificate of deposit must state that the bank issuing it waives the rights or setoff or liens that it has or might have against the certificate.

13.7.e. The certificate of deposit must be automatically renewable and fully assignable to the Department. Certificates of deposit must state on the face that they are automatically renewable.

13.7.f. The owner or operator must submit certificates of deposit in amounts that will allow the Department to liquidate the certificates prior to maturity, upon forfeiture, for the full amount of the bond determined in accordance with and required by this Rule, without penalty to the Department.

13.7.g. The Secretary will not accept certificates of deposit from banks that have failed or unduly delayed in making payment on certificates of deposit that have previously been submitted as collateral to the Department.

13.7.h. The owner or operator is not entitled to interest accruing after forfeiture is declared by the Department, unless and until the forfeiture declaration is ruled invalid by a court having jurisdiction over the Department and the ruling is final, including resolution of appeals.

13.8. Collateral Bonds; Negotiable Bonds. – Negotiable bonds submitted and pledged as collateral for collateral bonds are subject to the following conditions:

13.8.a. The Secretary may determine the current market value of governmental securities for the purpose of establishing the value of the securities for bond deposit.

13.8.b. The current market value must be at least equal to the amount of the required bond.

13.8.c. The Department may periodically revalue the securities and may require additional amounts if the current market value is insufficient to satisfy the bond amount requirements for the facility.

13.8.d. The owner or operator may request and receive the interest accruing on governmental securities with the Department as the same becomes due and payable. No interest will be paid for post-forfeiture interest accruing during appeals and after resolution of the appeals when the forfeiture is adjudicated, decided or settled in favor of the Department.

13.9. Use of Multiple Mechanisms.

13.9.a. The Secretary may accept financial assurance or bond that is comprised of more than one financial mechanism per facility, as listed in this Rule, except that it is the combination of mechanisms, rather than the single mechanism, that must provide financial assurance for an amount at least equal to the current cost estimate for closure, post-closure care or corrective action, whichever is applicable.

13.9.b. The instruments chosen must be construed as part of the entire bond for the tank or tank facility.

13.9.c. The Secretary may refuse to accept the bond if he or she determines that the financial guarantee of the bond is unacceptable or it, for any other reason, does not meet the purposes of the Act, this Rule or orders of the Secretary.

13.9.d. The financial test and a guarantee provided by a corporate parent, sibling or grandparent may not be combined if the financial statements of the two firms are consolidated.

13.10. Trust Fund. – An owner or operator may satisfy the requirements of this subsection by establishing a trust fund that conforms to the requirements below:

13.10.a. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal or State agency.

13.10.b. A copy of the trust agreement must be maintained in the owner's or operator's records of the tank or tank facility.

13.10.c. The owner or operator shall make payments into the trust fund annually over the operational life of the tank or tank facility. This period is referred to as the pay-in period.

13.10.d. If the owner or operator establishes a trust fund after having used one or more alternative mechanisms specified in this Rule, the initial payment into the trust fund must be at least the amount that the fund would contain if the trust fund were established initially and annual payments made according to the specifications of subdivision 13.10.c. above. The owner or operator may request reimbursement from the trustee for these expenditures.

13.10.d.1. Requests for reimbursement will be granted by the trustee only if

sufficient funds are remaining in the trust fund to cover the remaining costs of containment or corrective action, and if justification and documentation of the cost is maintained in the owner's or operator's records for the tank or tank facility.

13.10.d.2. The owner or operator must notify the Secretary that the documentation of the justification for reimbursement has been placed in the owner's or operator's records for the tank or tank facility and that reimbursement has been received.

13.10.e. The trust fund may be terminated by the owner or operator only if the owner or operator substitutes alternative financial assurance as specified in this Rule or if he or she is no longer required to demonstrate financial responsibility in accordance with the requirements of subdivision 13.12.b. of this Rule.

13.11. Replacement of Existing Bond.

13.11.a. The Secretary may allow an owner or operator to replace an existing surety or collateral bond with another surety or collateral bond, if the liability that has accrued against the bond, the owner or operator, and the tank or tank facility is transferred to the replacement bond. The replacement bond must include an endorsement by the owner or operator acknowledging the retroactivity of the liability to the date of issue of the original certificate to operate or a prior date determined by the Secretary. The bond amount for this replacement bond will be determined in accordance with this Rule, but may not be less than the amount on deposit with the Department.

13.11.b. The Department will not release existing bonds until the owner or operator has submitted and the Secretary has approved acceptable replacement bonds that are in full force and effect. A replacement of bonds as provided herein does not constitute a release of the bond.

13.12. Financial Assurance for Corrective Action.

13.12.a. An owner or operator required to undertake a corrective action program under section 7 of this Rule must have a detailed written estimate, in current dollars, of the cost of hiring a third party to perform the corrective action in accordance with the program required by section 7 above.

13.12.a.1. The corrective action cost estimate must account for the total costs of corrective action activities as described in the corrective action plan for the entire corrective action period.

13.12.a.2. The owner or operator must annually adjust the estimate for inflation until the corrective action program is completed in accordance with section 7 above.

13.12.a.3. The owner or operator must increase the corrective action cost estimate and the amount of financial assurance, if changes in the corrective action program or operating conditions of the tank or tank facility increase the maximum costs of corrective action.

13.12.a.4. The owner or operator may reduce the amount of the corrective action cost

estimate and the amount of financial assurance provided pursuant to this Rule, if the cost estimate exceeds the maximum remaining costs of corrective action. The owner or operator shall notify the Secretary that the justification for the reduction of the corrective action cost estimate and the amount of financial assurance is being maintained in the owner's or operator's records for the tank or tank facility.

13.12.b. The owner or operator required to undertake a corrective action program under section 7 above must establish, in a manner in accordance with this subsection, financial assurance for the most recent corrective action program. The owner or operator must provide continuous coverage for corrective action until released from financial assurance requirements for corrective action by demonstrating compliance with section 7 of this Rule.