

## **Suggested Changes to Proposed Above Ground Storage Tank Rules and Inspection Check Lists**

*Changes suggested by Bob Hedden on behalf of VFDA are in italics.*

Tank Rules:

Page 7 Subchapter 2, Definitions- Bulk Storage Facility  
(3) that is stationary and located at a fixed location.

*Making this a separate section is confusing. I think it should be part of section (2). If it needs to be separate make it subsection (2) (A).*

Page 11- *The new Rules have a good definition of Skid Tanks, and include the following clarification of how they are to be treated. "For the purposes of these Rules, skid tanks that are mobile or semi-mobile are not included in the definition of "aboveground storage tank system". Skid tanks that are fixed in place and are not utilized for mobile or semi-mobile use, defined as mobility within six months, are not included in this definition of "skid tank" and are considered aboveground storage tank systems that are subject to regulation under this rule."*

### **Subchapter 3: DESIGN, INSTALLATION, AND INSPECTION STANDARDS FOR ABOVEGROUND STORAGE TANK SYSTEMS**

(1) Tank Foundations

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(B) All new tanks shall be installed on a stable foundation- *Section (A) says all existing tanks should be on a stable foundation. I think we mean to say that all new tanks should be on a **solid** foundation.*

*This section also contains the following good clarification of the location of the shut off valve: "(3) Shutoff valve. Any aboveground storage tank system with a fuel line attached to the bottom portion of the tank shall be equipped with an accessible shutoff valve located within 12 inches of the fuel outlet of the tank system. Any aboveground storage tank system which draws a regulated substance from the top of the tank system shall be equipped with a shutoff valve before the filter. The valve shall be a positive shutoff valve designed solely for the purpose of shutting off the supply of heating fuel, motor fuel, or used oil."*

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*Section (B) says- "All new tanks shall have fill and vent piping constructed in accordance with **§ 9-303(b)**. The new tank fill and vent pipes shall be made of black iron". Black iron is for waste lines.*

*NFPA 31 8.2.1.1 says "For above ground fill and vent piping, only the following types and materials shall be permitted: (1) Minimum Schedule 40 steel pipe (2) Minimum Schedule 40 brass pipe (3) Other piping that is part of an engineered fuel storage system that is listed, installed in accordance with manufacturer's instructions, and approved by the authority having jurisdiction." Note-Part (3) refers to the Roth fill and vent system.*

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*The new Rules call for the installation of anti-siphon valves. "12. Any new tank where the tank gravity feeds to a fuel burning appliance shall be installed with an anti-siphon valve at the tank." This will cause some problems. Anti-siphon valves cannot be installed outdoors and must be installed after the filter. Some are also sensitive to high head pressures from tanks higher than as little as 3 feet above the valve. The result is there will be many installations that cannot comply with this rule with the current technology.*

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*9-305 (4) the aboveground storage tank system shall be inspected once every three years; It was my understanding that this was going to be changed to once every 5 years. The reason we would like this changed is 3 years proved to be too short a time for us to get it done. We just do not have enough people. Also, three years was originally picked randomly before any of us realized how much work was involved with this program. I am aware of no study that shows that inspecting every three years will prevent more releases than doing it every five years. What is going to happen to a compliant tank in the extra two years?*

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*I would suggest an addition to the inspection protocol. There are currently two popular tanks with double wall protection: the Roth double wall tank, and the Granby Eco-Gard Tanks with a double bottom. Both feature a leak indicator on their interstitial space to indicate the inner wall has failed. I think we should call for this to be checked on the tank inspection for these tanks. We could include this at the end of section (5) on this page. If the inner wall has failed but the tank is not leaking we could yellow tag the tank, and if the outer wall is leaking we would red tag the tank anyway.*

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*"(i) Conditional fuel delivery. Fuel may be delivered to an aboveground storage tank system that has an affixed yellow tag only under the following conditions:  
Maximum of 100 gallons per delivery; and  
Fuel delivery rate shall not exceed five gallons per minute."*

*The first concern is the liability if this delivery causes a release. The other concerns are the maximum delivery and pumping speed. This will be very hard on the fuel distribution system, and expensive to implement. The whistle will not blow at 5 gpm so there will be no overfill warning, this will be a pump until it spits system. It will take 20 minutes just to pump 100 gallons of fuel! I think we need to give this more thought.*

## **Aboveground Storage Tank (AST) Routine/New Customer Inspection Checklist**

*I am not sure what we mean by the following: **"USE THIS CHECKLIST ONLY FOR TANKS INSTALLED BEFORE XXXXX, 2024"***

*Will we use the new installation check list for tanks installed after this date, or create a third checklist?*

*Type of Inspection- Please change once every three years, to once every five.*

*Are buried fuel line(s) and tank piping coated/sleeved to protect against corrosion?  
Instead of a slash we should say coated or sleeved.*

*I am really uncomfortable that we do not do anything about the material the fill and vent pipe are made of. This allows for way too much creativity. We have fills and vents made of PVC pipe and even radiator hose. I understand that making copper fills and vents red tags is too much, but couldn't we at least require fills and vents be made of metal pipe?*

*It could be inserted in the section that says, "the fill and vent pipe diameter a minimum 1 1/4 inches?"*

*In the section labeled: "Is tank free of the following deficiencies?" Should we add "if there is an interstitial space leak indicator is it showing there is a leak?"*

*I do not understand why we include **"Additional Inspection Items- these items do not result in a red tag of tank"***

*It is confusing and makes the form much longer. If the tank is in compliance it does not matter what the answers are and no one will ever see this form.*

*If we feel we must leave this section in than we have to change "Is the fill piping made of black iron?" to "For above ground fill and vent piping, only the following types and materials shall be permitted: (1) Minimum Schedule 40 steel pipe (2) Minimum Schedule 40 brass pipe (3) Other piping that is part of an engineered fuel storage system that is listed, installed in accordance with manufacturer's instructions, and approved by the authority having jurisdiction."*

*I think "Are all unused tank openings plugged/closed?" should be a red tag issue, especially for a basement tank.*

*I am not sure about the need for anti-siphon valves required by July 1, 2030. They must be installed in a heated space.*

*In the "RECOMMENDED REPAIRS/ UPGRADES" section "Replace w/ coated lines and/or sleeve fill/vent pipes" should be changed to, "Replaced unprotected oil lines to sleeved and coated oil lines."*

## **Aboveground Storage Tank (AST) New Tank System Installation/First Fill Inspection Checklist**

*In the Type of Tank section replace "Polyethylene/Other Plastic Polymer Double Wall" with the wording from the Rules: "Double-wall tanks with polyethylene or other plastic polymer inner wall and metallic outer wall "*

*In the question that starts, "Are piping and fuel lines that are in direct contact with earthen materials or concrete " I think it is OK if the pipes are lying on a concrete floor, what we don't want is them buried in concrete.*

*Change, "is the fill piping made of black iron?" to : " is the fill and vent piping made of (1) Minimum Schedule 40 steel pipe (2) Minimum Schedule 40 brass pipe (3) Other piping that is part of an engineered fuel storage system that is listed, installed in accordance with manufacturer's instructions, and approved by the authority having jurisdiction."*

*In the question, "Does the tank have a shut-off valve within 12 inches of the AST fuel outlet? If tank draws fuel from the top of tank, is the shutoff valve installed before the fuel filter?" Should we add the word "OR" between the two questions?*

*The question, "If the tank gravity feeds a heating appliance, is it installed with an anti-siphon valve at the tank? " needs further discussion.*

*Note: The previous New Tank checklist did not specify if this was a pre or post delivery inspection, so two forms had to be filled out.*

*The new one clarifies this. One form can be used for both inspections.*

*A question that needs to be clarified is which form should be used if we bring a minor red tag issue into compliance? I would think we use the Routine form and indicate the red tag issue was brought into compliance and be sure to let the Agency of Natural Resources know so the red tag is removed.*

## GENERAL COMMENTS

### Proposed changes to AST Rules for 2023

One of the biggest concerns is that the new Rules have expanded the requirement for a solid foundation by July 1, 2030. It is now proposed the following items are required to be brought into compliance with AST new system standards by July 1, 2030.

- The tank must be installed on a continuous concrete pad at least 4 inches thick and a footprint exceeding dimensions of tank by at least 10%. (This is in the old Rules)
- The piping or fuel lines in direct contact with earthen materials or concrete must be coated and sleeved to protect from corrosion and damage.
- The fill piping must be made of black iron and the fill and vent pipes must be fitted with appropriate caps. (This is a mistake in the Rules. According to NFPA 31 the pipes must be either: *of (1) Minimum Schedule 40 steel pipe (2) Minimum Schedule 40 brass pipe (3) Other piping that is part of an engineered fuel storage system that is listed, installed in accordance with manufacturer's instructions, and approved by the authority having jurisdiction.*" I have suggested they make this change.
- Tanks with gravity feed to the appliance must have an anti-siphon valve installed.

A big suggested change that still needs some work is the use of a yellow tag for tanks that should be red tagged, but doing so will involve hardship for the customer. The tank inspector may affix a "Conditional Fill" yellow tag to the tank and tank fill port in lieu of a red tag if the sole reason for noncompliance with the requirements and standards does not constitute an immediate threat of a release of a petroleum product.

The Rules are specific as to which red tag issues can be yellow tagged. They are: fuel lines not coated or sleeved, no vent alarm for an outdoor tank, less than inch and a quarter fill or vent, Dents or bulges visible in tank, Moderate pitting on tank, Moderate rust on legs, Moderate rust on tank, Visible evidence of leak at the fill or vent pipe (top of tank).

For aboveground storage tank systems that have been affixed with a yellow tag, a written explanation documenting the grounds for being granted a yellow tag along with photo documentation must be submitted the same way red tags are. All yellow tags installed leading up to or during the current heating season will expire on the first day of May. Yellow tags shall not be renewed.

Upon the expiration of the yellow tag, the aboveground storage tank system is noncompliant with the requirements and standards and may not be filled. Filling an aboveground storage tank system with an expired yellow tag is prohibited. Affixing a yellow tag to any aboveground storage tank system found out of compliance with any items other than those listed is prohibited.

Aboveground storage tank systems with yellow tags may only be filled per the following conditions: Maximum of 100 gallons per delivery; and Fuel delivery rate shall not exceed five gallons per minute.

Yellow tags are applicable only to tanks located on and serving a residential property. Application of a yellow tag to a tank used for non-residential purposes is prohibited. Some other changes that have been made are:

- The new Rules have a good definition of Skid Tanks, and include the following clarification of how they are to be treated. "For the purposes of these Rules, skid tanks that are mobile or semi-mobile are not included in the definition of "aboveground storage tank system". Skid tanks that are fixed in place and are not utilized for mobile or semi-mobile use, defined as mobility within six months, are not included in this definition of "skid tank" and are considered aboveground storage tank systems that are subject to regulation under this rule."
- *A good clarification of the location of the shut off valve: "(3) Shutoff valve. Any aboveground storage tank system with a fuel line attached to the bottom portion of the tank shall be equipped with an accessible shutoff valve located within 12 inches of the fuel outlet of the tank system. Any aboveground storage tank system which draws a regulated substance from the top of the tank system shall be equipped with a shutoff valve before the filter. The valve shall be a positive shutoff valve designed solely for the purpose of shutting off the supply of heating fuel, motor fuel, or used oil."*
- *The new Rules call for the installation of anti-siphon valves. "Any new tank where the tank gravity feeds to a fuel burning appliance shall be installed with an anti-siphon valve at the tank." This will cause some problems. Anti-siphon valves must be installed in a heated space after the filter. Some are also sensitive to high head pressures from tanks higher than as little as 3 feet above the valve. The result is there will be many installations that cannot comply with this rule with the current technology.*
- *For aboveground storage tank system determined to be noncompliant, the tank inspector shall photo document all noncompliant tank components.*

- *The previous New Tank checklist did not specify if this was a pre or post delivery inspection, so two forms had to be filled out. The new one clarifies this. One form can be used for both inspections.*

**Unfortunately, one thing has not changed- the routine inspection every three years is still required.**

**We should get this changed to AT LEAST every five years.**