

591—11.4 (455B,455G) Tank and piping upgrades and replacements.**11.4(1) Definitions.**

“*Administrator*” means the Iowa comprehensive petroleum underground storage tank fund board administrator as provided in Iowa Code section 455G.5.

“*Automatic in-tank gauging*” means a device used for leak detection and inventory control in tanks that meets DNR’s standards as set out in 567—paragraph 135.5(4)“*d.*”

“*Board*” or “*UST board*” means the Iowa comprehensive petroleum underground storage tank fund board as provided for in Iowa Code section 455G.4.

“*DNR*” means the Iowa department of natural resources.

“*Environmentally sensitive site*” means, as classified under the Unified Soil Classification System as published by the American Geologic Institute or ASTM designation: D 248785, any site where the native soils outside or under the tank zone are materials where more than half of the material is larger than no. 200 sieve size. As used herein, “*tank zone*” means the native soils immediately outside the excavation area or nearest native soil under the tank.

The following classifications of soil descriptions are considered environmentally sensitive:

1. Well-graded gravels, gravel-sand mixtures, little or no fines, classified using the group symbol “GW”;
2. Poorly graded gravels, gravel-sand mixtures, little or no fines, classified using the symbol “GP”;
3. Silty gravels, gravel-sand-clay mixtures, classified using the symbol “GM”;
4. Clayey gravels, gravel-sand-clay mixtures, classified using the symbol “GC”;
5. Well-graded sands, gravelly sands, little or no fines, classified using the symbol “SW”;
6. Poorly graded sands, gravelly sands, little or no fines, classified using the symbol “SP”;
7. Silty sands, sand-silt mixtures, classified using the symbol “SM”.

In addition, environmentally sensitive sites include any site which is within 100 feet of a public or private well, other than a monitoring well on a site, and any site where the tank is installed in fractured bedrock or “*Karst*” formations. Any one of the above-specified conditions shall constitute an environmentally sensitive site under this rule.

A site shall be classified as environmentally sensitive when:

Fifty percent or more of the soils from a boring or a monitoring well are logged and classified as one or more of the areas noted in paragraphs “1” through “7” above and 50 percent of the total wells located on or immediately next to the property show the same or similar conditions. If no testing of the site has occurred and the soil condition as classified under the Unified Soil Classification System in or under the tank zone is one of the conditions as classified, the site shall be considered to be environmentally sensitive. Reports previously prepared on the site and available from DNR may be used to make the soil classification. At least three borings/wells must have been completed. If fewer than three have been completed, an additional well which triangulates the tank zone shall be completed to determine the types of soils present.

For the purposes of this definition, fractured bedrock or “*Karst*” formations appearing in the tank zone or piping run, or within a 25-foot diameter around the tank zone or piping run, or within 25 feet of the bottom of the tank excavation area shall be classified environmentally sensitive. Generally available data, including that available from local utilities, may be used when specific drilling has not determined that conditions specified in this definition have not been identified on the site. If the site shows any surface condition which is fractured bedrock or “*Karst*,” then the site shall be classified as being environmentally sensitive.

For the purposes of this definition, wells are those which are in use and the water is being used for human consumption. The well as developed shall generate a volume of two gallons per minute, unless a holding device or cistern is used for water pumped. An abandoned well, or a well being used for some other purpose, shall not be included in the definition, unless the end use may be for human consumption.

“Piping replacement” means any modernization or modification of piping at a site which includes the removal of the existing piping and the installation of new piping.

“Piping upgrade” means any modernization or modification of piping at a site which does not include the removal of the existing piping and the installation of new piping.

“System upgrade” or *“upgrading”* means the modernization or modification of underground storage tank system installations through tank and piping upgrades to comply with the rules of DNR under 567—subrule 135.3(2).

“Tank replacement” means any modernization or modification of a tank at a site which includes the removal of the existing tank and the installation of a new tank.

“Tank upgrade” means any modernization or modification of a tank at a site which does not include the removal of the existing tank and the installation of a new tank.

“Upgrade benefit” means the cost of board-approved systems specified in subrule 11.4(6). If the installation includes a board-approved secondary containment system, the upgrade benefit relates specifically to the cost difference attributable to the board-approved system specified in subrule 11.4(6). The upgrade benefit includes the following:

1. Cost of double walled tanks and pipes minus the cost of single wall tanks and piping, or
2. Cost of double walled steel tanks minus the cost of single wall steel tanks, or
3. Cost of nonmetallic double walled tanks minus the cost of nonmetallic single wall tanks.

In addition, the upgrade benefit shall include the cost of the additional labor, if any, to install the board-approved system which is in excess of the cost to install a single wall system. The upgrade benefit also includes the cost of automatic in-tank gauging equipment when installed in conjunction with secondary containment, but such costs shall be limited to the lowest expense for the system best suited to provide a reasonable degree of protection.

If the system does not include the approved secondary containment, no upgrade benefit is payable. Secondary containment as defined in subrule 11.4(6) is mandatory after March 25, 1992.

11.4(2) The maximum upgrade benefit payable from the remedial fund on any tank or system installed since January 1, 1985, to meet upgrading requirements shall be \$10,000 for any one site, subject to applicable copayment requirements as specified in Iowa Code section 455G.9. Benefits payable under subrule 11.4(6) cover the additional cost of the tank system upgrade or replacement as set forth in the definition of upgrade benefits. Prior to installation, budgets shall be provided to the administrator outlining the cost and scope of work proposed and the cost differences between a single wall system and the board-approved system which is proposed. The cost of the original upgraded or new system without board-approved secondary containment as defined herein is not subject to these fund upgrade benefits for tank system upgrades or replacements.

11.4(3) The cost for system upgrading or replacement shall be separated from all other corrective action costs incurred on an individual site classified as high risk or low risk by DNR. The upgrade benefits are not payable on any site classified by DNR as a No Action Required site.

11.4(4) Upgrade benefit payments under subrule 11.4(6) shall be made upon evidence that the upgrade met standards in 567—Chapter 135 and DNR registration Form 148 has been completed and

mailed to DNR and the administrator. These upgrade benefits shall be paid only if all requirements of 591—Chapter 15 have been met. If a site does not comply with the applicable provisions of 591—Chapter 15, the site is not eligible for these upgrade benefits unless installation or upgrade occurred prior to October 26, 1990. In that event, the individual reimbursement request will be reviewed to determine if other information is necessary before upgrade benefit payment can be made. In addition, the completed work must be within the budget previously approved by the administrator pursuant to Iowa Code section 455G.12A.

11.4(5) Upgrades and replacements allowed at contaminated sites. Iowa Code section 455B.474(1) “f”(8) provides that the replacement or upgrade of tank systems on high- or low-risk sites must be equipped with a secondary containment system with monitoring of the space between the primary and secondary containment structures or other board-approved methodology. The following are the upgrade and replacement options which are board approved for purposes of Iowa Code section 455B.474(1) “f”(8):

a. Tank upgrades. The following options are allowed for tank upgrades on any contaminated site:

- (1) The tank meets DNR’s new tank standards set forth in 567—paragraph 135.3(1) “a”; or
- (2) The tank meets DNR’s upgrade standards set forth in 567—paragraphs 135.3(2) “b” and “d.”

b. Tank replacements. The following options are allowed for tank replacements:

(1) On any contaminated site, a double walled tank or a tank equipped with a secondary containment system meeting DNR’s new tank standards set forth in 567—subrule 135.3(1) and with monitoring of the space between the primary and secondary containment structures in accordance with DNR’s standards set forth in 567—paragraph 135.5(4) “g.”

(2) On any contaminated site which is not environmentally sensitive the following additional options are allowed:

1. Tanks meeting DNR’s new tank standards set forth in 567—paragraph 135.3(1) “a” with automatic in-tank gauging acceptable under 567—subrule 135.5(4).

2. Tanks meeting DNR’s new tank standards set forth in 567—paragraph 135.3(1) “a” with an electronic tank level monitor used in conjunction with a DNR-approved statistical reconciliation method acceptable under 567—subrule 135.5(4). The owner must have monthly records on premises which show that all requirements for statistical reconciliation have been met.

c. Piping upgrades. The following options are allowed for piping upgrades at any contaminated site:

- (1) Double walled piping.
- (2) Single walled piping installed in a barrier providing secondary containment between soil and the piping.
- (3) Single wall piping meeting DNR’s upgrade standards set forth in 567—paragraph 135.3(2) “c” and leak detection standards set forth in 567—paragraph 135.5(2) “b.”

d. Piping replacements. The following options are allowed for piping replacements:

- (1) For any contaminated site:
 1. Double walled piping.
 2. Single walled piping installed in a barrier providing secondary containment between soil and the piping.
 3. On suction systems, single wall piping when only one check valve is on the line directly under the pump.

(2) For sites which are not environmentally sensitive, suction systems with single wall piping meeting DNR’s upgrade standards set forth in 567—subrule 135.3(2) on pipes with leak detection are allowed if there is no more than one valve on the piping. All suction systems shall be installed with the

slope of the pipe back to the tank and shall have only one check valve located directly under the suction pump.

e. Spill and overflow protection, cathodic protection, and leak detection. Nothing in this rule alters DNR's upgrade requirements for spill and overflow protection, cathodic protection, and leak detection.

11.4(6) Tank and piping upgrades and replacements eligible for upgrade benefits.

a. The following tank and piping upgrades or replacements are eligible for upgrade benefits if completed on or before March 17, 1999:

- (1) Double walled tanks.
- (2) Single walled tanks meeting DNR's requirements as specified in 567—paragraph 135.5(4) "g," the tank zone providing an impermeable barrier between native soils and the tank, thus providing secondary containment.
- (3) Double walled piping.
- (4) Single wall piping installed in a barrier system, providing secondary containment between the soil and the piping. Nothing in this rule alters upgrade requirements for spill/overflow protection, cathodic protection and leak detection.

b. The following tank and piping upgrades and replacements are eligible for upgrade benefits when the tank upgrade or replacement occurred on or after March 25, 1992, and on or before March 17, 1999, on sites which are classified as being environmentally sensitive:

- (1) Pressurized systems: Tanks and piping shall comply with one of the tank and piping options specified in 11.4(6) "a."
- (2) Suction systems: Tanks and piping shall be installed with the slope of the pipe back to the tank on all suction systems. All suction system pipes shall have the check valve located at the suction pump. These systems shall meet one of the options specified in 11.4(6) "a," except that piping may be single wall when one check valve is on the line, under the pump.

c. The following tank and piping upgrades and replacements are eligible for upgrade benefits when the tank upgrade or replacement occurred on or after March 25, 1992, and on or before March 17, 1999, on sites which are not classified as being environmentally sensitive:

(1) Pressurized systems: Piping shall comply with one of the pipe options specified in 11.4(6) "a." Tanks installed must be either one of the options specified in 11.4(6) "a" or be a DNR-approved tank with automatic in-tank gauging pursuant to 567—subrule 135.5(4) or, in lieu of automatic in-tank gauging, be a DNR-approved electronic tank level monitor in conjunction with a DNR-approved UST statistical inventory reconciliation method pursuant to 567—subrule 135.5(4). Should the statistical inventory reconciliation method be used, the owner shall have monthly records on premises showing that all requirements on the system have been met. If either the automatic in-tank gauging or the electronic level reconciliation device is used, the program shall pay only the cost of the system installed and not ongoing monthly or yearly expenses.

(2) Suction systems: Tanks and piping shall be installed with the slope of the pipe back to the tank on all suction systems. All suction system piping shall have the check valve located at the suction pump. These systems must be either one of the options specified in 11.4(6) "a" or:

1. Pipes: Single wall pipes meeting DNR's upgrade standards on the pipes with leak detection pursuant to 567—subrule 135.3(2). If more than one valve is on the pipe, this option is not available.

2. Tanks: Must be either one of the options specified in 11.4(6) "a" or be a DNR-approved tank with automatic in-tank gauging pursuant to 567—subrule 135.5(4) or, in lieu of automatic in-tank gauging, be a DNR-approved electronic tank level monitor in conjunction with a DNR-approved UST statistical inventory reconciliation method pursuant to 567—subrule 135.5(4). Should the statistical inventory reconciliation method be used, the owner shall have monthly records on premises showing that all requirements on the system have been met. If either the automatic in-tank gauging or the electronic level reconciliation device is used, the program shall pay only the cost of the system installed and not ongoing monthly or yearly expenses.

11.4(7) Any system upgrade or replacement installed prior to March 25, 1992, which complies with the provisions of this rule shall be eligible for upgrade benefits if the system has been fully upgraded or replaced in accordance with 567—Chapter 135.

11.4(8) The board reserves the right to establish cost controls on the purchase and installation of underground storage tank equipment and systems. Upgrade benefits are not equipment and capital improvements for purposes of Iowa Code section 455G.9(6).

11.4(9) Evidence of insurance or self-insurance shall be provided to DNR upon completion of the upgrade or replacement unless the Iowa UST program provides insurance coverage. If the Iowa UST program provides coverage, the administrator will notify DNR.

11.4(10) Failure to obtain approval or qualify for upgrade benefits may be appealed as provided in 591—Chapter 17.

This rule is intended to implement Iowa Code sections 455B.474(1) “*f*”(8) and 455G.9(1) “*a*”(5).