

1 **TITLE 20 ENVIRONMENTAL PROTECTION**  
 2 **CHAPTER 5 PETROLEUM STORAGE TANKS**  
 3 **PART 4 NEW AND UPGRADED STORAGE TANK SYSTEMS: DESIGN,**  
 4 **CONSTRUCTION AND INSTALLATION**

5  
 6 **20.5.4.1 ISSUING AGENCY:** New Mexico Environmental Improvement Board.  
 7 [20.5.4.1 NMAC - Rp, 20.5.4.1 NMAC, 04/04/2008]  
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9 **20.5.4.2 SCOPE:** This part applies to owners and operators of storage tanks as provided in 20.5.1 NMAC.  
 10 If the owner and operator of a storage tank are separate persons, only one person is required to comply with the  
 11 requirements of this part, including any notice and reporting requirements; however, both parties are liable in the  
 12 event of noncompliance.  
 13 [20.5.4.2 NMAC - Rp, 20.5.4.2 NMAC, 04/04/2008]  
 14

15 **20.5.4.3 STATUTORY AUTHORITY:** This part is promulgated pursuant to the provisions of the  
 16 Hazardous Waste Act, sections 74-4-1 through 74-4-14 NMSA 1978, and the general provisions of the  
 17 Environmental Improvement Act, sections 74-1-1 through ~~74-1-15~~ 74-1-17 NMSA 1978.  
 18 [20.5.4.3 NMAC - Rp, 20.5.4.3 NMAC, 04/04/2008]  
 19

20 **20.5.4.4 DURATION:** Permanent.  
 21 [20.5.4.4 NMAC - Rp, 20.5.4.4 NMAC, 04/04/2008]  
 22

23 **20.5.4.5 EFFECTIVE DATE:** April 4, 2008, unless a later date is indicated in the bracketed history note  
 24 at the end of a section.  
 25 [20.5.4.5 NMAC - Rp, 20.5.4.5 NMAC, 04/04/2008]  
 26

27 **20.5.4.6 OBJECTIVE:** The purpose of 20.5.4 NMAC is to set forth the requirements for the design,  
 28 construction, installation and upgrading of storage tank systems in a manner that will prevent releases and to protect  
 29 the public health, safety and welfare and the environment of the state.  
 30 [20.5.4.6 NMAC - Rp, 20.5.4.6 NMAC, 04/04/2008]  
 31

32 **20.5.4.7 DEFINITIONS:** The definitions in 20.5.1 NMAC apply to this part.  
 33 [20.5.4.7 NMAC - Rp, 20.5.4.7 NMAC, 04/04/2008]  
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35 **20.5.4.8 GENERAL PERFORMANCE STANDARDS FOR UST SYSTEMS:** In order to prevent  
 36 releases due to structural failure, corrosion or spills and overfills for as long as a UST system is used to store  
 37 regulated substances, owners and operators of any UST system shall properly design, construct, and initially test  
 38 each new UST system; provide project drawings; and ensure that any portion of a UST system that routinely  
 39 contains regulated substances and is in contact with the ground or water shall be protected from corrosion, in  
 40 accordance with the current edition of an industry standard or code of practice developed by a nationally recognized  
 41 association or independent testing laboratory approved in advance by the department. Owners and operators shall  
 42 ensure that the entire UST system is compatible with any regulated substance conveyed, as required by 20.5.5.16  
 43 NMAC.  
 44 [20.5.4.8 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]  
 45

46 **20.5.4.9 PERFORMANCE STANDARDS FOR FIBERGLASS-REINFORCED PLASTIC USTS:** If  
 47 a UST is constructed of fiberglass-reinforced plastic, owners and operators shall comply with the requirements of  
 48 the current edition of an industry standard or code of practice developed by a nationally recognized association or  
 49 independent testing laboratory approved in advance by the department. The following may be used to comply with  
 50 this requirement:

- 51 A. underwriters laboratories standard 1316, "*standard for safety for glass-fiber-reinforced plastic*  
 52 *underground storage tanks for petroleum products, alcohols, and alcohol-gasoline mixtures;*"  
 53 B. underwriters' laboratories of Canada CAN4-S615-M83, "*standard for underground reinforced*  
 54 *plastic tanks;*" or  
 55 C. American society of testing and materials D4021 "*specification for glass-fiber-reinforced*  
 56 *polyester underground petroleum storage tanks.*"

1 [20.5.4.9 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]  
 2

3 **20.5.4.10 PERFORMANCE STANDARDS FOR STEEL USTS:**

4 A. Owners and operators shall cathodically protect steel USTs by:

- 5 (1) coating the tank with a suitable dielectric material;  
 6 (2) ensuring that field-installed cathodic protection systems are designed by a corrosion expert;  
 7 (3) designing impressed current systems to allow determination of current operating status as required  
 8 in Subsection C of 20.5.5.15 NMAC; and  
 9 (4) operating and maintaining cathodic protection systems in accordance with 20.5.5 NMAC.

10 B. In addition, owners and operators shall ensure that for any new or existing steel UST systems,  
 11 owners and operators shall design and install any cathodic protection system (whether impressed current or  
 12 sacrificial) to allow ready determination of current operating status.

13 C. If a UST is constructed of steel, owners and operators shall comply with the requirements of the  
 14 current edition of an industry standard or code of practice developed by a nationally recognized association or  
 15 independent testing laboratory approved in advance by the department. The following may be used to comply with  
 16 applicable requirements of this section:

17 (1) steel tank institute "*specification for sti-P3 system of external corrosion protection of*  
 18 *underground steel storage tanks;*"

19 (2) underwriters laboratories standard 1746, "*external corrosion protection systems for steel*  
 20 *underground storage tanks;*"

21 (3) underwriters' laboratories of Canada CAN4-S603-N85, "*standard for underground steel tanks;*"  
 22 (4) underwriters' laboratories of Canada CAN4-G603.1-M85, "*standard for galvanic corrosion*  
 23 *protection systems for underground steel;*"

24 (5) underwriters' laboratories of Canada CAN4-S631-M84, "*isolating bushings for steel*  
 25 *underground tanks protected with coatings and galvanic systems;*"

26 (6) national association of corrosion engineers standard RP0285, "*corrosion control of underground*  
 27 *storage tanks systems by cathodic protection;*"

28 (7) underwriters laboratories standard 58, "*standard for safety for steel underground tanks for*  
 29 *flammable and combustible liquids;*"

30 (8) national fire protection association 30, "*flammable and combustible liquids code;*"

31 (9) national fire protection association 30A, "*code for motor fuel dispensing facilities and repair*  
 32 *garages;*"

33 (10) American petroleum institute publication RP 1615, "*installation of underground petroleum*  
 34 *storage systems;*"

35 (11) American petroleum institute publication RP 1632, "*cathodic protection of underground*  
 36 *petroleum storage tanks and piping systems;*"

37 (12) national association of corrosion engineers international standard RP0169 "*control of external*  
 38 *corrosion on underground or submerged metallic piping systems;*"

39 (13) steel tank institute R892, "*recommended practice for corrosion protection of underground*  
 40 *piping networks associated with liquid storage and dispensing systems;*"

41 (14) American petroleum institute publication RP 1631, "*interior lining and periodic inspection of*  
 42 *underground storage tanks;*"

43 (15) national leak prevention association standard 631, "*spill prevention, minimum 10 year life*  
 44 *extension of existing steel underground tanks by lining without the addition of cathodic protection;*"

45 (16) American society of testing and materials G158, "*standard guide for three methods of assessing*  
 46 *buried steel tanks;*" or

47 (17) international code council, "*international fire code.*"

48 [20.5.4.10 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]  
 49

50 **20.5.4.11 PERFORMANCE STANDARDS FOR STEEL-FIBERGLASS-REINFORCED-PLASTIC**

51 **COMPOSITE USTS:** If a UST is constructed of a steel-fiberglass-reinforced-plastic composite, owners and  
 52 operators shall meet the current edition of an industry standard or code of practice developed by a nationally  
 53 recognized association or independent testing laboratory approved in advance by the department. The following  
 54 may be used to comply with this requirement:

55 A. underwriters laboratories standard 1746, "*external corrosion protection systems for steel*  
 56 *underground storage tanks;*" or

1           B.       association for composite tanks ACT-100, “*specification for the fabrication of FRP clad*  
2 *underground storage tanks.*”  
3 [20.5.4.11 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]

4  
5 **20.5.4.12       PERFORMANCE STANDARDS FOR METAL USTS WITHOUT CORROSION**

6 **PROTECTION:** If a UST is constructed of metal without additional corrosion protection measures, owners and  
7 operators shall only install the tank at a site that is approved in writing in advance of installation by a corrosion  
8 expert not to be corrosive enough to cause the UST to have a release due to corrosion during its operational life.  
9 [20.5.4.12 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]

10  
11 **20.5.4.13       PERFORMANCE STANDARDS FOR EXISTING UST SYSTEMS:**

12       A.       Not later than December 22, 1998, all existing UST systems shall comply with one of the  
13 following requirements:

- 14           (1)   new UST performance standards in 20.5.4 NMAC;  
15           (2)   upgrading requirements in Subsection B of 20.5.4.13 NMAC; or  
16           (3)   closure requirements in 20.5.8 NMAC.

17       B.       UST upgrading requirements. Owners and operators shall upgrade existing steel USTs to meet  
18 one of the following requirements in accordance with the current edition of an industry standard or code of practice  
19 developed by a nationally recognized association or independent testing laboratory approved in advance by the  
20 department.

21           (1)   Internal lining. A UST may be upgraded by internal lining if the lining is installed in accordance  
22 with the current edition of an industry standard or code of practice developed by a nationally recognized association  
23 or independent testing laboratory approved in advance by the department. If a UST has been internally lined,  
24 owners and operators shall, within 10 years after installation of internal lining and every five years thereafter,  
25 internally inspect the lined tank in accordance with the current edition of an industry standard or code of practice  
26 developed by a nationally recognized association or independent testing laboratory, or manufacturer’s  
27 recommendation, approved in advance by the department. National leak prevention association 631, Chapter B may  
28 be used to comply with this requirement. If the internal lining is not performing in accordance with the original  
29 design specifications, owners and operators shall either:

30           (a)   close the tank in compliance with the requirements of 20.5.8 NMAC until the lining is  
31 repaired to original design specifications in accordance with the current edition of an industry standard or code of  
32 practice developed by a nationally recognized association or independent testing laboratory approved in advance by  
33 the department; American petroleum institute RP 1631 may be used to comply with this requirement; or

34           (b)   discontinue use of the tank until owners and operators perform an integrity test approved in  
35 advance by the department and ensure that the tank meets the requirements of Subsection B of this section.

36           (2)   Cathodic protection. USTs may be upgraded by cathodic protection if the cathodic protection  
37 system meets the requirements of 20.5.4.10 NMAC and if owners and operators ensure the integrity of the tank by:

38           (a)   performing internal inspections and assessments to ensure that the tank is structurally sound  
39 and free of corrosion holes prior to installing the cathodic protection system; or

40           (b)   if the tank has been installed for less than ten years, by either monitoring monthly for  
41 releases in accordance with 20.5.6 NMAC; or by assessing for corrosion holes by conducting 2 tightness tests that  
42 meet the requirements of 20.5.6 NMAC and that are approved in advance by the department; owners and operators  
43 shall conduct the first tightness test prior to installing the cathodic protection system; owners and operators shall  
44 conduct the second tightness test between 3 and 6 months following the first operation of the cathodic protection  
45 system.

46           (3)   Internal lining combined with cathodic protection. A UST may be upgraded by internal lining  
47 combined with cathodic protection if:

48           (a)   the lining is installed in accordance with the current edition of an industry standard or code  
49 of practice developed by a nationally recognized association or independent testing laboratory; and

50           (b)   the cathodic protection meets the requirements of 20.5.4.10 NMAC.

51       C.       Piping upgrade requirements. Owners and operators shall upgrade piping in existing UST systems  
52 to meet the requirements of 20.5.4.21 NMAC, 20.5.4.22 NMAC, or 20.5.4.24 NMAC.

53       D.       Spill and overflow prevention equipment. Owners and operators shall comply with the spill and  
54 overflow prevention requirements in 20.5.4.33 NMAC.  
55 [20.5.4.13 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]

56

1 **20.5.4.14 INSTALLATION OF UST SYSTEMS:**

- 2 A. Owners and operators shall properly install all USTs and piping:
- 3 (1) in accordance with the current edition of an industry standard or code of practice developed by a
- 4 nationally recognized association or independent testing laboratory approved in advance by the department; and
- 5 (2) in accordance with the manufacturer's instructions.
- 6 B. The following may be used to comply with the requirements of this section:
- 7 (1) American petroleum institute publication RP 1615, "*installation of underground petroleum*
- 8 *storage systems;*"
- 9 (2) petroleum equipment institute publication RP100, "*recommended practices for installation of*
- 10 *underground liquid storage systems;*" or
- 11 (3) American society of mechanical engineering standard B31.3, "*process piping.*"
- 12 [20.5.4.14 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]
- 13

14 **20.5.4.15 SECONDARY CONTAINMENT FOR UST SYSTEMS:**

- 15 A. After April 4, 2008 owners and operators shall install secondary containment:
- 16 (1) for any new or replaced UST system ~~(including dispenser and piping);~~
- 17 ~~(2) for any new or replaced dispenser system; and~~
- 18 ~~(3) for any UST dispenser or piping replaced after April 4, 2008.~~
- 19 ~~(4)(a)~~ Owners and operators shall design, provide project drawings for, and construct the entire new
- 20 UST system with the secondary containment system in compliance with the current edition of an industry standard
- 21 or code of practice developed by a nationally recognized association or independent testing laboratory approved in
- 22 advance by the department. The secondary containment system shall include all tanks, piping, dispensers ~~systems,~~
- 23 and all containment sumps for any piping and ancillary equipment that routinely contains regulated substances, and
- 24 shall include interstitial monitoring that meets the requirements of 20.5.6 NMAC.
- 25 ~~(2)(b)~~ If owners and operators replace a UST, they shall install a double-walled tank with an inner
- 26 and outer barrier and a release detection system that meets the requirements of 20.5.6 NMAC.
- 27 ~~(3)(c)~~ If owners and operators replace a dispenser system, they shall install, in accordance with
- 28 manufacturer's recommendations, an under-dispenser containment system that shall be hydrostatically tested and
- 29 approved by the department prior to use. Types of under-dispenser containment systems include, but are not limited
- 30 to, dispenser liners, containment sumps, dispenser pans and dispenser sump liners.
- 31 ~~(4)(d)~~ If owners and operators replace piping, they shall install only double-walled piping with an
- 32 inner and outer barrier and a release detection system that meets the requirements of 20.5.6 NMAC for the replaced
- 33 piping.
- 34 ~~(5)(e)~~ The following may be used to comply with secondary containment requirements:
- 35 ~~(a)(i)~~ petroleum equipment institute publication RP100, "*recommended practices for*
- 36 *installation of underground liquid storage systems;*" or
- 37 ~~(b)(ii)~~ American petroleum institute publication RP 1615, "*installation of underground*
- 38 *petroleum storage systems.*"
- 39 B. The department shall not require owners and operators to install secondary containment required
- 40 in this section if the owners and operators demonstrate to the department's satisfaction that no part of the UST
- 41 system is within 1,000 feet of a community water system, potable drinking water well, or source water.
- 42 (1) In advance of construction or replacement, owners and operators shall submit in advance of
- 43 construction or replacement, for approval by the department, a detailed to-scale map of the proposed UST system
- 44 that demonstrates that no part of the UST system is within 1,000 feet of any existing community water system, any
- 45 existing potable drinking water well, any potable drinking water well the owner or operator plans to install at the
- 46 facility, or any source water.
- 47 (2) The map shall be accompanied by a certified statement by owners and operators explaining who
- 48 researched the existence of community water systems, potable drinking water wells, and source water; how the
- 49 research was conducted; and how the proposed UST system complies with this subsection.
- 50 (3) To determine if any part of a UST system is within 1,000 feet of any existing community water
- 51 systems, potable drinking water well, or source water, at a minimum owners and operators shall measure the
- 52 distance from the closest part of the new or replaced UST, piping or dispenser system, or other part of a UST
- 53 system, to the closest part of the nearest community water system, potable drinking water well, or source water,
- 54 including such components as the location of wellheads for groundwater, depth to groundwater, the location of the
- 55 intake point for surface water, water lines, processing tanks, water storage tanks, and water distribution or service
- 56 lines.

1 C. In a manifolded UST system, secondary containment is only required for a new or replaced UST;  
 2 existing USTs in the manifolded system are not required to have secondary containment. Additionally, the  
 3 secondary containment requirements of this section shall not apply to:

- 4 (1) repairs meant to restore a UST, piping or dispenser system to operating condition;
- 5 (2) piping runs that are not new or replaced for USTs with multiple piping runs; ~~or~~
- 6 (3) suction piping that meets the requirements of Subparagraphs (a) through (e) of Paragraph (2) of  
 7 Subsection B of ~~20.5.6.10~~ 20.5.6.11 NMAC; or
- 8 (4) non-pressurized piping that manifolds two or more underground tanks together, such as a siphon  
 9 piping system.

10 [20.5.4.15 NMAC - N, 04/04/2008]

#### 11 **20.5.4.16 PERFORMANCE STANDARDS FOR AST SYSTEMS:**

12 A. In order to prevent releases due to structural failure, corrosion or spills and overfills for as long as  
 13 an AST system is used to store regulated substances, owners and operators of new AST systems shall properly  
 14 design, construct and initially test each new AST system, provide project drawings, and ensure that any portion of an  
 15 AST system that routinely contains regulated substances and is in contact with soil, concrete or water shall be  
 16 protected from corrosion, in accordance with the current edition of an industry standard or code of practice  
 17 developed by a nationally recognized association or independent testing laboratory approved in advance by the  
 18 department. Owners and operators shall ensure that the entire AST system is compatible with any regulated  
 19 substance conveyed.

20 B. Owners and operators shall install and operate only ASTs made of steel.

21 C. The following may be used to comply with the requirements of this section:

- 22 (1) underwriters laboratories 142, "*steel aboveground tanks for flammable and combustible liquids;*"
- 23 (2) underwriters laboratories 2085, "*standard for safety for protected aboveground tanks for*  
 24 *flammable and combustible liquids;*"
- 25 (3) underwriters laboratories 2245, "*standard for safety for below-grade vaults for flammable liquid*  
 26 *storage tanks;*"
- 27 (4) American petroleum institute standard 650, "*welded steel tanks for oil storage;*"
- 28 (5) national fire protection association 30, "*flammable and combustible liquids code;*"
- 29 (6) national fire protection association 30A, "*code for motor fuel dispensing facilities and repair*  
 30 *garages;*"
- 31 (7) petroleum equipment institute publication RP200, "*recommended practices for installation of*  
 32 *above ground storage systems for motor vehicle fueling;*"
- 33 (8) American petroleum institute publication RP 1632, "*cathodic protection of underground*  
 34 *petroleum storage tanks and piping systems;*"
- 35 (9) national association of corrosion engineers international standard RP0169, "*control of external*  
 36 *corrosion on underground or submerged metallic piping systems;*"
- 37 (10) steel tank institute R892, "*recommended practice for corrosion protection of underground*  
 38 *piping networks associated with liquid storage and dispensing systems;*"
- 39 (11) steel tank institute R893, "*recommended practice for external corrosion protection of shop*  
 40 *fabricated aboveground tank floors;*"
- 41 (12) international code council, "*international fire code;*" or
- 42 (13) American petroleum institute publication RP651, "*cathodic protection of aboveground*  
 43 *petroleum storage tanks.*"

44 [20.5.4.16 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]

#### 45 **20.5.4.17 USTS USED AS ASTS:**

46 A. Before August 15, 2003, owners and operators shall close any above ground storage tank that was  
 47 designed and built for underground use unless the tank meets one of the following requirements:

- 48 (1) the tank is certified for above-ground use by the original equipment manufacturer, in accordance  
 49 with the current edition of an industry standard or code of practice developed by a nationally recognized association  
 50 or independent testing laboratory approved in advance in writing by the department;
- 51 (2) a professional engineer certifies that the tank meets the standards for above-ground use in the  
 52 current edition of an industry standard or code of practice developed by a nationally recognized association or  
 53 independent testing laboratory approved in advance in writing by the department; or

1 (3) the tank is certified for above-ground use by either an authorized inspector with certification from  
 2 the American petroleum institute, or a steel tank institute trained and certified tank inspector, approved in advance in  
 3 writing by the department; the inspector shall personally inspect the tank in order to complete the certification  
 4 process.

5 B. After April 4, 2008 owners and operators shall not install USTs for use as ASTs.  
 6 [20.5.4.17 NMAC - Rp, 20.5.4.401 NMAC and 20.5.4.405 NMAC, 04/04/2008]

7  
 8 **20.5.4.18 ADDITIONAL PERFORMANCE STANDARDS FOR FIELD-ERECTED ASTS:**

9 A. If owners and operators install a field-erected tank, owners and operators shall comply with the  
 10 current edition of an industry standard or code of practice developed by a nationally recognized association or  
 11 independent testing laboratory approved in advance by the department.

12 B. The following may be used to comply with the requirements of this section:

13 (1) American petroleum institute standard 620, "*design and construction of large, welded, low*  
 14 *pressure storage tanks;*"

15 (2) American petroleum institute standard 650, "*welded steel tanks for oil storage;*"

16 (3) American petroleum institute specification 12B, "*bolted tanks for storage of production liquids;*"

17 (4) American petroleum institute specification 12D, "*field welded tanks for storage of production*  
 18 *liquids;*" or

19 (5) American society of mechanical engineers B96.1, "*welded aluminum- alloy storage tanks.*"

20 [20.5.4.18 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]

21  
 22 **20.5.4.19 INSTALLATION OF AST SYSTEMS:**

23 A. Owners and operators shall properly install all ASTs and piping in accordance with the  
 24 manufacturer's instructions and :

25 ~~(4)~~ in accordance with the current edition of an industry standard or code of practice developed by a  
 26 nationally recognized association or independent testing laboratory approved in advance by the department, that  
 27 includes or provides for the following:

28 ~~(a)(1)~~ support, if required in the sole discretion of the department, by the use of saddles or  
 29 longitudinal supports;

30 (2) concrete foundation for, support and anchorage with minimum compression strength of 3,000  
 31 pounds per square inch at 28 days. The concrete foundation shall be of sufficient thickness to support the tank when  
 32 the tank is filled to maximum capacity with a regulated substance, and shall be used for:

33 (a) double-walled or double-bottomed above ground storage tanks;

34 (b) horizontal tanks with saddles, which shall be placed at a minimum on concrete footings;

35 (c) horizontal tanks with longitudinal supports, which shall be placed on a concrete slab that  
 36 extends at least twelve inches beyond the perimeter of the tank;

37 (d) vertical tanks, which shall be placed on a concrete slab that extends at least twelve inches  
 38 beyond the perimeter of the tank; and

39 (e) single-walled above ground storage tanks, which shall be installed inside secondary  
 40 containment that meets the requirements of Section 29 of 20.5.4 NMAC;

41 ~~(3)~~ anchorage;

42 ~~(b)(4)~~ fills, gauges and vents;

43 ~~(e)(5)~~ environmental protection; and

44 ~~(d)(6)~~ testing and inspection; and

45 ~~(2)~~ in accordance with the manufacturer's instructions.

46 B. The following may be used to comply with the requirements of this section:

47 (1) American petroleum institute standard 650, "*welded steel tanks for oil storage;*"

48 (2) national fire protection association 30, "*flammable and combustible liquids code;*"

49 (3) national fire protection association 30A, "*code for motor fuel dispensing facilities and repair*  
 50 *garages;*"

51 (4) petroleum institute publication RP200, "*recommended practices for installation of above ground*  
 52 *storage tank systems for motor vehicle fueling;*"

53 (5) steel tank institute RP R912, "*installation instructions for shop fabricated stationary aboveground*  
 54 *storage tanks for flammable, combustible liquids;*" or

55 (6) international code council, "*international fire code.*"

1 C. In addition to other requirements of this section, if owners or operators want to place into service  
2 any shop-fabricated AST that has been permanently closed at any location, owners and operators shall:

- 3 (1) not use the AST until they have provided to the department:  
4 (a) the age and type of tank;  
5 (b) the tank manufacturer;  
6 (c) a list of regulated and non-regulated substances previously stored in the tank and for what  
7 duration;  
8 (d) a description of any unusual circumstances involving the AST; and  
9 (e) any other information requested by the bureau based on the circumstances; and  
10 (2) install the system in compliance with all requirements for new AST systems in this part.

11 D. Based on the information received in Subsection C of this section, the department may require  
12 owners and operators who want to relocate an AST that has been temporarily or permanently closed to have the tank  
13 recertified by a certified tank inspector, the tank manufacturer, or a professional engineer prior to use.  
14 [20.5.4.19 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
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#### 16 **20.5.4.20 GENERAL PERFORMANCE STANDARDS FOR PIPING:**

17 A. Owners and operators shall properly design and construct new piping, provide project drawings,  
18 initially test piping, and ensure that any steel portion of piping that routinely contains regulated substances and is in  
19 contact with the ground or water shall be protected from corrosion, in accordance with the current edition of an  
20 industry standard or code of practice developed by a nationally recognized association or independent testing  
21 laboratory approved in advance by the department. The following may be used to comply with this requirement:

- 22 (1) third party certification from a nationally recognized laboratory;  
23 (2) American society of mechanical engineering standard B31.3, "*process piping*;"  
24 (3) American society of testing and materials A53, "*standard specification for pipe, steel, black and*  
25 *hot-dipped, zinc-coated, welded and seamless*;"  
26 (4) American society of testing and materials A106, "*standard specification for seamless carbon steel*  
27 *pipe for high-temperature service*;" or  
28 (5) American society of testing and materials A135, "*standard specification for electric-resistance-*  
29 *welded steel pipe*."

30 B. Owners and operators shall ensure that piping is compatible with any regulated substance  
31 conveyed.

32 C. Owners and operators shall protect all piping from impact, settlement, vibration, expansion,  
33 corrosion, and damage by fire.

34 D. Owners and operators shall install a containment sump at any point where piping transitions from  
35 above the surface of the ground to below the ground surface.

36 E. If owners and operators install more than one type of piping at a storage tank system, then owners  
37 and operators shall comply with the requirements applicable to each type of piping for that run of piping.  
38 [20.5.4.20 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
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#### 40 **20.5.4.21 PERFORMANCE STANDARDS FOR FIBERGLASS-REINFORCED PLASTIC AND** 41 **FLEXIBLE PIPING:**

42 A. If owners and operators construct or operate piping of fiberglass-reinforced plastic or flexible  
43 piping, the piping shall:

- 44 (1) be completely underground;  
45 (2) be within secondary containment that includes a release detection system that meets the  
46 requirements of 20.5.6 NMAC;  
47 (3) have a suitable cover approved by the piping manufacturer; or  
48 (4) have equivalent protection approved by the piping manufacturer and approved by the department  
49 prior to installation.

50 B. If owners and operators install fiberglass-reinforced or flexible piping in an AST system, the  
51 piping shall be double-walled.

52 C. Owners and operators shall ensure that the piping meets the requirements of the current edition of  
53 an industry standard or code of practice developed by a nationally recognized association or independent testing  
54 laboratory approved in advance by the department, and that the piping is approved by the manufacturer for the  
55 application for which it is to be used. The following may be used to comply with this requirement:

1 (1) underwriters laboratories standard 971, “*standard for safety for nonmetallic underground piping*  
2 *for flammable liquids;*”

3 (2) underwriters laboratories standard 567, “*pipe connectors for petroleum products and lp-gas;*”

4 (3) underwriters’ laboratories of Canada guide ULC-107.7, “*glass-fibre reinforced plastic pipe and*  
5 *fittings for flammable liquids;*” or

6 (4) underwriters’ laboratories of Canada standard CAN 4-S633-M81, “*flexible underground hose*  
7 *connectors.*”

8 [20.5.4.21 NMAC - Rp, 20.5.4.400 and NMAC 20.5.4.401 NMAC, 04/04/2008]

9  
10 **20.5.4.22 PERFORMANCE STANDARDS FOR STEEL PIPING FOR UST SYSTEMS:**

11 A. If owners and operators construct or operate piping of steel for a UST system, owners and  
12 operators shall:

13 (1) coat the piping with a suitable dielectric material;

14 (2) field-install a cathodic protection system designed by a corrosion expert; and

15 (3) design any impressed current system to allow ready determination of current operating status as  
16 required in Subsection C of 20.5.5.15 NMAC.

17 B. If owners and operators construct piping of steel for a UST system without additional corrosion  
18 protection measures, owners and operators shall only install the piping at a site that is approved in writing in  
19 advance of installation by a corrosion expert to not be corrosive enough to cause the piping to have a release due to  
20 corrosion during its operational life.

21 [20.5.4.22 NMAC - Rp, 20.5.4.400 NMAC, 04/04/2008]

22  
23 **20.5.4.23 PERFORMANCE STANDARDS FOR STEEL PIPING FOR AST SYSTEMS:** If owners  
24 and operators construct or operate piping of steel for an AST system, owners and operators shall properly design and  
25 construct and provide project drawings for piping that routinely contains regulated substances in accordance with the  
26 current edition of an industry standard or code of practice developed by a nationally recognized association or  
27 independent testing laboratory approved in advance by the department. Owners and operators shall install all piping  
28 in accordance with the piping manufacturer’s recommendations.

29 A. Steel piping for ASTs shall be coated with a suitable material approved by the piping  
30 manufacturer and shall be either:

31 (1) totally above the ground with all surfaces visible, or

32 (2) entirely contained in secondary containment that complies with the requirements of 20.5.4.27  
33 NMAC and either the requirements of 20.5.4.28 or 20.5.4.29 NMAC.

34 B. The following may be used to comply with the requirements of this section:

35 (1) American society of mechanical engineering standard B31.3, “*process piping;*”

36 (2) American society of testing and materials A53, “*standard specification for pipe, steel, black and*  
37 *hot-dipped, zinc-coated, welded and seamless;*” or

38 (3) American society of testing and materials A 135, “*standard specification for electric-resistance-*  
39 *welded steel pipe.*”

40 [20.5.4.23 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]

41  
42 **20.5.4.24 SECONDARY CONTAINMENT FOR PIPING:**

43 A. To install new piping or replace existing piping in an AST system, owners and operators shall use  
44 only piping that is:

45 (1) double-walled in compliance with 20.5.4.28 NMAC;

46 (2) designed and constructed with secondary containment that meets the requirements of 20.5.4.27  
47 and 20.5.4.29 NMAC; or

48 (3) steel piping that meets the requirements of 20.5.4.23 NMAC.

49 B. After April 4, 2008, to install new piping or replace existing piping in a UST system, owners and  
50 operators shall use only piping that meets the requirements of 20.5.4.15 NMAC.

51 [20.5.4.24 NMAC - N, 04/04/2008]

52  
53 **20.5.4.25 ADDITIONAL REQUIREMENTS FOR AST SYSTEMS:**

54 A. Above ground tanks located at an elevation so as to produce a gravity head on the dispenser  
55 system or piping shall be equipped with an anti-siphon or solenoid valve which meets the requirements of the  
56 current edition of an industry standard or code of practice developed by a nationally recognized association or

1 independent testing laboratory approved in advance by the department. Owners and operators shall install and  
 2 adjust the anti-siphon or solenoid valve so that fuel cannot flow by gravity from the tank to the dispenser system if  
 3 the piping fails when the dispenser is not in use.

4 B. The following may be used to meet the requirements of this section:

5 (1) national fire protection association 30A, "*code for motor fuel dispensing facilities and repair*  
 6 *garages;*" or

7 (2) international code council, "*international fire code.*"  
 8 [20.5.4.25 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 9

10 **20.5.4.26 STORAGE TANKS AT MARINAS:**

11 A. Owners and operators of storage tank systems at marinas shall install an automatic break-away  
 12 device to shut off flow of fuel from on-shore piping, which shall be located at the connection of the on-shore piping  
 13 and the piping leading to the dock. Owners and operators shall install another automatic break-away device to shut  
 14 off flow of fuel located at any connection between flexible piping and hard piping on the dispenser system and dock.  
 15 The automatic break-away devices shall be easily accessible, and their location shall be clearly marked.

16 B. Owners and operators of storage tank systems at marinas shall electrically isolate dock piping  
 17 where excessive stray electrical currents are encountered.

18 C. Owners and operators of storage tank systems at marinas shall protect piping from stress due to  
 19 tidal action.

20 [20.5.4.26 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 21

22 **20.5.4.27 SECONDARY CONTAINMENT FOR NEW AST SYSTEMS:** Owners and operators shall  
 23 design, provide project drawings for, and construct all new AST systems with a secondary containment system  
 24 approved in this part, except for any piping that meets the requirements of 20.5.4.23 NMAC. Owners and operators  
 25 shall base all secondary containment systems on the current edition of an industry standard or code of practice  
 26 developed by a nationally recognized association or independent testing laboratory approved in advance by the  
 27 department. The following may be used to comply with this requirement:

28 A. petroleum equipment institute publication RP 200, "*recommended practices for installation of*  
 29 *above ground storage systems for motor vehicle fueling;*"

30 B. society of protective coatings SSPC-TU2/NACE6G197, "*design, installation and maintenance of*  
 31 *coating systems for concrete used in secondary containment;*"

32 C. American concrete institute publication ACI 350R, "*environmental engineering of concrete*  
 33 *structures;*"

34 D. American petroleum institute standard 650, "*welded steel tanks for oil storage;*" or

35 E. steel tank institute RP R912, "*installation instructions for shop fabricated stationary aboveground*  
 36 *storage tanks for flammable, combustible liquids.*"

37 [20.5.4.27 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 38

39 **20.5.4.28 AST SECONDARY CONTAINMENT: DOUBLE-WALLED TANKS AND PIPING:**

40 Owners and operators may use double-walled ASTs and piping as secondary containment. The following may be  
 41 used to comply with the requirements of this section and 20.5.4.27 NMAC:

42 A. underwriters laboratories standard 971, "*standard for safety for nonmetallic underground piping*  
 43 *for flammable liquids;*"

44 B. underwriters laboratories standard 567, "*pipe connectors for petroleum products and lp-gas;*"

45 C. underwriters' laboratories of Canada guide ULC-107.7, "*glass-fibre reinforced plastic pipe and*  
 46 *fittings for flammable liquids;*"

47 D. underwriters' laboratories of Canada standard CAN 4-S633-M81, "*flexible underground hose*  
 48 *connectors;*"

49 E. underwriters laboratories 142, "*steel aboveground tanks for flammable and combustible liquids;*"

50 F. underwriters laboratories 2085, "*standard for safety for protected aboveground tanks for*  
 51 *flammable and combustible liquids;*" or

52 G. underwriters laboratories 2245, "*standard for safety for below-grade vaults for flammable liquid*  
 53 *storage tanks.*"

54 [20.5.4.28 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 55

1 **20.5.4.29 AST SECONDARY CONTAINMENT: SINGLE-WALLED TANKS AND PIPING:** Owners  
 2 and operators shall construct a containment area under and around single-walled ASTs and piping, except for piping  
 3 that meets the requirements of 20.5.4.23 NMAC. Internal lining of ASTs shall not be used as a method of secondary  
 4 containment.

5 A. General requirements:

6 (1) Owners and operators shall design and construct secondary containment to minimize damage to  
 7 the surfaces of the tanks due to corrosion, accumulation of water, and stray electrical current.

8 (2) Owners and operators shall ensure that any regulated substance stored in an AST system is  
 9 chemically compatible with the secondary containment material. If owners and operators store more than one type  
 10 of regulated substance within a single containment area, owners and operators shall ensure that the substances are  
 11 chemically compatible with each other and with the containment material.

12 (3) Owners and operators shall construct a containment area which has a capacity of at least one  
 13 hundred ten percent of the size of the largest AST in the containment area plus the volume displaced by the other  
 14 AST(s).

15 (4) Owners and operators shall not use clay for the construction of secondary containment.

16 (5) Owners and operators may use a vault which complies with the requirements of this section as  
 17 secondary containment.

18 B. Concrete secondary containment. Owners and operators may use concrete for construction of the  
 19 containment area.

20 (1) If owners and operators use concrete for construction of secondary containment installed on or  
 21 after (the effective date of this rule), the concrete containment shall be designed and constructed in accordance with  
 22 the current edition of an industry standard or code of practice developed by a nationally recognized association or  
 23 independent testing laboratory, which shall be approved in advance of construction by the department. Concrete  
 24 secondary containment shall be coated or internally lined with a material which, in conjunction with the concrete,  
 25 has a permeability rate to the regulated substance stored of  $1 \times 10^{-7}$  centimeters per second or less.

26 (a) Owners and operators shall submit to the department a set of plans for the concrete  
 27 secondary containment that have been stamped by a professional engineer. The plans shall be submitted at least  
 28 thirty (30) days in advance of the start of construction.

29 (b) Owners and operators shall submit to the department a report stamped by a professional  
 30 engineer that the concrete secondary containment has been constructed in accordance with the industry code or  
 31 standard listed in the plans within thirty (30) days of the completion of the construction of the secondary  
 32 containment.

33 (c) Storage tank systems shall not be installed in the concrete secondary containment until the  
 34 department receives a document stamped by a professional engineer approving placement of the AST.

35 (2) ~~Existing AST systems with s~~Secondary containment constructed of concrete existing on (the  
 36 effective date of this rule) shall meet the requirements of this section on the schedule established in 20.5.4.35  
 37 NMAC, if the secondary containment is made impervious in accordance with the standard in Paragraph (1) of this  
 38 subsection. Owners and operators shall install the coating or internal lining in accordance with the current edition of  
 39 an industry standard or code of practice developed by a nationally recognized association or independent testing  
 40 laboratory, which shall be approved by the department in advance of installation, and shall meet the following:

41 (a) the requirements in Paragraph 1 of this subsection;

42 (b) provide a report stamped by a professional engineer demonstrating that the system is able to  
 43 contain a release of regulated substances for seven (7) days and properly support the above-ground storage tank  
 44 systems within the secondary containment;

45 (c) coat or internally line the concrete containment in compliance with manufacturer's  
 46 instructions, or in accordance with an industry standard or code of practice developed by a nationally recognized  
 47 association or independent testing laboratory, which shall be approved by the department in advance of the coating  
 48 or lining; or

49 (d) obtain department approval for an alternate method following 20.5.4.38 NMAC.

50 (3) ~~Owners and operators of AST systems shall submit to the department a report on the installation~~  
 51 ~~of the coating or internal lining for concrete secondary containment which shall certify that the coating or internal~~  
 52 ~~lining has been installed in accordance with the manufacturer's recommendations or an industry standard or code of~~  
 53 ~~practice developed by a nationally recognized association or independent testing laboratory. The report shall~~  
 54 ~~contain the date of the inspection or installation, the test methods used during the inspection, the data collected~~  
 55 ~~during the inspection, and the standard or code of practice according to which the installation was conducted. One~~  
 56 ~~of the following shall conduct the inspection and prepare the inspection report:~~

- 1                   ~~(a)~~ a coating inspector who is certified by the national association of corrosion engineers; or  
 2                   ~~(b)~~ a protective coatings specialist who is certified by the society for protective coatings.  
 3           (4)(3) The following may be used to comply with the concrete secondary containment requirements:  
 4                   (a) American concrete institute 350R, “*environmental engineering of concrete structures;*”  
 5                   **(b)** American concrete institute 350.2R, “*concrete structures for containment of hazardous*  
 6 *materials;*”  
 7                   ~~(b)(c)~~ American concrete institute 224R, “*control of cracking in concrete structures;*”  
 8                   ~~(e)(d)~~ national association of corrosion engineers international RP0892, “*coatings and linings*  
 9 *over concrete for chemical immersion and containment service;*”  
 10                   ~~(d)(e)~~ society of protective coatings TU2/NACE6G197, “*design, installation and maintenance*  
 11 *of coating systems for concrete used in secondary containment;*”  
 12                   ~~(e)(f)~~ national association of corrosion engineers international standard number 6/SSPC 13,  
 13 “*surface preparation of concrete;*”  
 14                   ~~(f)(g)~~ national association of corrosion engineers international RP0281, “*method for*  
 15 *conducting coating (paint) panel evaluation testing in atmospheric exposures;* or  
 16                   ~~(g)(h)~~ American society for testing and materials D4258, “*standard practice for cleaning*  
 17 *concrete for coating.*”  
 18           C. Liners as secondary containment.  
 19                   (1) If owners and operators use geo-synthetic membrane for secondary containment, the geo-  
 20 synthetic membranes or liners shall have a minimum thickness of 60 mils.  
 21                   (2) Owners and operators shall install liners in accordance with the current edition of an industry  
 22 standard or code of practice developed by a nationally recognized association or independent testing laboratory  
 23 approved in advance by the department, or in accordance with the manufacturer’s specifications. Owners and  
 24 operators shall submit to the department a report on the installation of the geo-synthetic membrane which shall  
 25 certify that the geo-synthetic membrane has been installed in accordance with the manufacturer's recommendations  
 26 or an industry standard or code of practice developed by a nationally recognized association or independent testing  
 27 laboratory. The report shall contain the date of the inspection and installation of the geo-synthetic membrane, the  
 28 test methods used during the inspection, data collected during the inspection, and the standard or code of practice  
 29 according to which the installation was conducted. An installer or inspector with appropriate certification or  
 30 experience (which shall be documented in the report) shall prepare the report.  
 31                   (3) Earthen dike fields shall be lined with a geo-synthetic membrane to qualify as secondary  
 32 containment.  
 33           D. Steel as secondary containment. If owners and operators use steel for construction of the  
 34 secondary containment area, and if the steel is routinely in contact with soil, water or concrete, owners and operators  
 35 shall cathodically protect the containment area in accordance with the current edition of an industry standard or code  
 36 of practice developed by a nationally recognized association or independent testing laboratory approved in advance  
 37 by the department.  
 38 [20.5.4.29 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 39

#### 20.5.4.30 VENTING FOR NEW AST SYSTEMS:

- 40           A. Owners and operators shall design and construct venting for all new AST systems, following the  
 41 current edition of an industry standard or code of practice developed by a nationally recognized association or  
 42 independent testing laboratory approved in advance by the department.  
 43           B. Types of vent pipes.  
 44                   (1) Vent pipes that are provided for normal tank venting shall extend at least 12 feet above ground  
 45 level.  
 46                   (2) If attached to a structure, vent pipes shall extend at least 5 feet above the highest projection of the  
 47 canopy or roof.  
 48                   (3) Vent pipes for normal tank venting shall be of appropriate size for the capacity and operating  
 49 conditions of the tank.  
 50                   (4) Emergency vents shall be of appropriate size for the capacity of the AST and shall be installed on  
 51 the primary tank and on the interstice of all double-walled tanks.  
 52           C. The following may be used to comply with the requirements of this section:  
 53                   (1) petroleum equipment institute publication RP200 “*recommended practices for installation of*  
 54 *above ground storage systems for motor vehicle fueling;*”  
 55                   (2) national fire protection association 30, “*flammable and combustible liquids code;*”  
 56

- 1 (3) underwriters laboratories 142, "*steel aboveground tanks for flammable and combustible liquids*;"  
 2 or  
 3 (4) international code council, "*international fire code*."  
 4 [20.5.4.30 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]  
 5

6 **20.5.4.31 VAULTS:**

7 A. Owners and operators shall provide project drawings for and install new AST systems which  
 8 include vaults in accordance with the following requirements:

9 (1) A vault must completely enclose each tank, with no openings in the vault enclosure except those  
 10 necessary for access to, inspection of, and filling, emptying, and venting of the tank. Each tank shall be enclosed in  
 11 its own vault, although adjacent vaults may share a common wall. However, for good cause shown, the department,  
 12 in its sole discretion, may grant a variance from the one-tank-one-vault requirement, for existing tanks only, if  
 13 owners and operators demonstrate that the variance will provide equivalent protection of health, safety and welfare  
 14 and the environment.

15 (2) Every vault shall be liquid tight or sealed with no backfill around the tank. If a vault is  
 16 constructed of concrete, owners and operators shall ensure it meets the requirements of Subsection B of 20.5.4.29  
 17 NMAC.

18 (3) There shall be adequate space between the tank and the vault for inspection of the tanks and its  
 19 appurtenances.

20 (4) Above-grade vaults shall be resistant to damage from the impact of a motor vehicle, or suitable  
 21 collision barriers shall be installed.

22 (5) A vault shall include connections to permit venting of each vault to dilute, disperse, and remove  
 23 any vapors prior to personnel entering the vault.

24 (6) A vault shall be equipped with a detection system capable of detecting liquids, including water,  
 25 and capable of activating an audible alarm.

26 (7) A vault shall include a means for recovering liquid from the vault.

27 (a) If a pump is used to meet this requirement, it shall not be permanently installed in the vault.

28 (b) Electric-powered portable pumps shall meet the requirements of the current edition of an  
 29 industry standard or code of practice developed by a nationally recognized association or independent testing  
 30 laboratory approved in advance by the department.

31 (c) National fire protection association 70, "*national electrical code*," may be used to comply  
 32 with the requirements of Paragraph (7) of Subsection A of 20.5.4.31 NMAC.

33 B. Vault construction. Owners and operators shall design and construct:

34 (1) the walls and floor of a vault of reinforced concrete at least six inches thick;

35 (2) the top of an above-grade vault of noncombustible material, and shall design and construct the  
 36 top:

37 (a) to be weaker than the walls of the vault, to ensure that the thrust of any explosion occurring  
 38 inside the vault is directed upward before significantly high pressure can develop within the vault; and

39 (b) to safely relieve or contain the force of any explosion occurring inside the vault;

40 (3) the top and floor of the vault and the tank foundation to withstand the anticipated loading,  
 41 including loading from vehicular traffic, where applicable;

42 (4) the walls and floor of any vault installed below grade in compliance with good engineering  
 43 practice to withstand anticipated soil and hydrostatic loading.

44 C. All tanks, piping and other associated equipment in the interior of a vault shall meet the  
 45 requirements of the current edition of an industry standard or code of practice developed by a nationally recognized  
 46 association or independent testing laboratory approved in advance by the department. The following may be used to  
 47 comply with this requirement:

48 (1) national fire protection association 70, "*national electrical code*;" or

49 (2) underwriters laboratories 2245, "*standard for safety for below-grade vaults for flammable liquid*  
 50 *storage tanks*;"

51 D. Venting of vaults.

52 (1) Vent pipes that are provided for normal tank venting shall extend at least 12 feet above ground  
 53 level.

54 (2) Emergency vents shall be vapor tight and may be permitted to discharge inside the vault.

55 (3) Owners and operators shall not use long-bolt manhole covers for this purpose.

1 (4) Owners and operators shall ensure that all vault vents meet the requirements of the current edition  
 2 of an industry standard or code of practice developed by a nationally recognized association or independent testing  
 3 laboratory approved in advance by the department. The following may be used to comply with this requirement:  
 4 national fire protection association 91, “*standard for exhaust systems for air conveying of vapors, gases, mists, and*  
 5 *noncombustible particulate solids.*”

6 E. Vault entry.

7 (1) A vault shall include a method of personnel entry.

8 (2) Owners and operators shall post a warning sign indicating procedures for safe entry at each entry  
 9 point.

10 (3) Owners and operators shall secure each entry point against unauthorized entry and vandalism.

11 (4) Owners and operators shall provide each vault with a suitable means for admission of a fire  
 12 suppression agent.

13 [20.5.4.31 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]

14  
 15 **20.5.4.32 SECONDARY CONTAINMENT FOR AST DISPENSERS:** Owners and operators shall  
 16 install a containment sump underneath each dispenser ~~system~~ associated with an AST, unless the dispenser is  
 17 located within secondary containment.

18 A. Owners and operators shall hydrostatically test the sump upon installation, in accordance with  
 19 manufacturer’s recommendations.

20 B. The following may be used to comply with this containment sump requirement: dispenser liners,  
 21 under-dispenser containment, dispenser pans, and dispenser sump liners.

22 [20.5.4.32 NMAC - Rp, 20.5.4.401 NMAC, 04/04/2008]

23  
 24 **20.5.4.33 SPILL AND OVERFILL PREVENTION:**

25 A. Except as provided in Subsection B of this section, to prevent spilling and overfilling associated  
 26 with transfers of regulated substances to storage tank systems, owners and operators shall use the following spill and  
 27 overfill prevention equipment as of August 15, 2004, for ASTs and as of December 22, 1998, for USTs:

28 (1) spill prevention equipment that will prevent release of regulated substances to the environment  
 29 when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

30 (2) overfill prevention equipment for USTs that will:

31 (a) automatically shut off flow into the tank when the tank is no more than 95 percent full; or  
 32 (b) alert the transfer operator when the tank is no more than 90 percent full by restricting the  
 33 flow into the tank or triggering a high-level audible alarm;

34 (3) overfill prevention equipment for ASTs that will:

35 (a) automatically shut off flow into the tank when the tank is no more than 95 percent full; or  
 36 (b) alert the transfer operator when the tank is no more than 90 percent full by restricting the  
 37 flow into the tank or triggering a high-level audible and visual alarm.

38 B. Owners and operators are not required to use the spill and overfill prevention equipment specified  
 39 in Subsection A of this section if approved in writing in advance by the department where:

40 (1) alternative equipment is used that is determined by the department to be no less protective of  
 41 public health, safety and welfare and the environment than the equipment specified in Paragraphs (1), (2) or (3) of  
 42 Subsection A of this section; or

43 (2) the storage tank system is filled by transfers of no more than 25 gallons at one time;

44 C. Owners and operators are not required to install and operate spill and overfill prevention  
 45 equipment required in Paragraphs (1) and (3) of Subsection A of this section for any AST system where the fill port  
 46 is located within a secondary containment system meeting the requirements of 20.5.4.27 NMAC and 20.5.4.29  
 47 NMAC.

48 D. Owners and operators shall install any AST for a marina with a system that will allow the level of  
 49 regulated substance in the AST to be monitored during a delivery of fuel to the AST in addition to spill catchment  
 50 basins. Unless the AST system is equipped with an audible overfill alarm that will alert the transfer operator at 90  
 51 percent of capacity, and overfill protection which will shut off flow of product during a fuel delivery to the tank at  
 52 95 percent, owners and operators shall visually monitor the delivery of fuel.

53 [20.5.4.33 NMAC - Rp, 20.5.4.402 NMAC, 04/04/2008]

54  
 55 **20.5.4.34 LOADING RACKS:**

1           A. Owners and operators shall design, construct and install loading racks following the current  
2 edition of an industry standard or code of practice developed by a nationally recognized association or independent  
3 testing laboratory approved in advance by the department. The following may be used to comply with this  
4 requirement:

5           (1) American petroleum institute standard 2610, "*design, construction, operation, maintenance &*  
6 *inspection of terminal and tank facilities;*"

7           (2) national fire protection association 30, "*flammable and combustible liquids code;*" or

8           (3) international code council, "*international fire code.*"

9           B. Owners and operators shall install a containment system that is designed to contain all releases of  
10 regulated substances that occur during loading and unloading operations at the loading rack. For all loading racks,  
11 owners and operators shall install either:

12           (1) a drainage system, or secondary containment system meeting the requirements of 20.5.4 NMAC,  
13 with a catchment basin capable of containing the largest compartment of a tank car or tanker truck that is loaded or  
14 unloaded at the facility; or

15           (2) a drainage system that is connected to a treatment facility designed to receive releases of  
16 regulated substances that occur during loading and unloading operations.

17           C. Owners and operators shall ensure that loading racks are at least 25 feet from ASTs, buildings, and  
18 property lines.

19 [20.5.4.34 NMAC - N, 04/04/2008]

20  
21 **20.5.4.35 DEADLINES FOR CLOSING OR UPGRADING EXISTING AST SYSTEMS AND**  
22 **EXISTING EMERGENCY GENERATOR SYSTEMS:**

23           A. Not later than July 1, 2011 all owners and operators shall upgrade existing AST systems to meet  
24 all performance standards for new AST systems in 20.5.4 NMAC, with the exception that existing AST systems  
25 need not submit project drawings; or close any AST system that does not meet the performance standards in 20.5.4  
26 NMAC, except for the following:

27           C. (1) Owners and operators may delay compliance with AST system secondary containment  
28 requirements of 20.5.4.29 NMAC until July 1, 2013;

29           (2) Owners and operators must close any UST being used as an AST no later than July 1, 2013;

30           (3) Any good faith upgrades to AST system secondary containment made in compliance with  
31 this part prior to December 3, 2010 shall be deemed in compliance with this section.

32           B. Not later than July 1, 2013 owners and operators shall:

33           (1) upgrade AST and UST emergency generator systems existing as of the effective date of this  
34 rule to meet all performance standards for new AST and UST systems in 20.5.4 NMAC, with the exception that  
35 existing systems need not submit project drawings; or

36           (2) close any AST or UST emergency generator system that does not meet the performance  
37 standards in 20.5.4 NMAC.

38 [20.5.4.35 NMAC - Rp, 20.5.4.405 NMAC, 04/04/2008]

39  
40 **20.5.4.36 REQUIRED NOTIFICATION PRIOR TO INSTALLATION:** To ensure that an inspector has  
41 an opportunity to be present during the steps in procedures which are important to the prevention of releases,  
42 owners, operators, and certified tank installers shall give the department notice of the dates on which critical  
43 junctures in the installation of a storage tank system are to take place. The inspector may require that critical  
44 junctures be performed from Monday through Friday during regular business hours.

45           A. For installations, the term "critical junctures" means:

46           (1) preparation of the excavation immediately prior to receiving backfill and a UST or piping for an  
47 AST or UST;

48           (2) installation of any tank pad, vault, or secondary containment for a storage tank system;

49           (3) setting of a storage tank and piping, including placement of any anchoring devices, backfill to the  
50 level of the tank, and strapping, if any;

51           (4) any time during the installation in which components of piping are connected;

52           (5) all pressure testing or integrity testing of a storage tank system, including associated piping,  
53 performed during the installation; and

54           (6) completion of backfill and filling of the excavation.

55           B. Owners, operators and certified tank installers shall give at least 30 days written notice before the  
56 installation of a storage tank system. At a minimum, the installation notice shall contain the following information:

- 1 (1) date the form is completed;
- 2 (2) facility name, number, address (with county), and telephone number;
- 3 (3) owner name, number, address, and telephone number;
- 4 (4) contractor name, address, and telephone number;
- 5 (5) tank details (number and size, type and materials, products to be stored);
- 6 (6) piping material and type of leak detection;
- 7 (7) type of spill and overflow prevention;
- 8 (8) type of corrosion protection (sacrificial, impressed current, or none with explanation why
- 9 corrosion protection not required);
- 10 (9) method of leak detection (statistical inventory reconciliation, automatic tank gauges, visual, vapor
- 11 monitoring, interstitial monitoring, inventory control with tightness testing);
- 12 (10) whether any part of the system is within 1,000 feet of a community water system or a potable
- 13 drinking water well;
- 14 (11) approximate date installation will take place; and
- 15 (12) the signature of the owner or owner's representative filling out the form.

16 C. In addition to the written notice described in this section, owners, operators and certified tank  
 17 installers shall give oral notice at least 24 hours in advance of the commencement of the procedure. In the oral  
 18 notice, owners, operators and certified tank installers shall describe any changes to the 30-day written notice  
 19 required in Subsection B of this section, such as different equipment or installation methods.

20 D. If owners, operators and certified tank installers are separate persons, only one person is required  
 21 to comply with the notice requirements of this section; however, all parties are liable in the event of noncompliance.  
 22 [20.5.4.36 NMAC - Rp, 20.5.5.505 NMAC, 04/04/2008]  
 23 [The department provides an optional form that may be used for notification of installation. The form is available  
 24 on the department's website, [www.nmenv.state.nm.us](http://www.nmenv.state.nm.us) or by contacting the Petroleum Storage Tank Bureau at 505-  
 25 476-4397 or 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.]

#### 26 20.5.4.37 REQUIRED CERTIFICATIONS:

27 A. Certification of compliance. All owners and operators of new storage tank systems shall certify in  
 28 the registration form required by 20.5.2 NMAC compliance with the following requirements:

- 29 (1) installation of tanks and piping in 20.5.4.14 NMAC for UST systems, 20.5.4.19 NMAC for AST
- 30 systems or 20.5.4.38 NMAC for either;
- 31 (2) cathodic protection of steel tanks and piping in 20.5.4.10 NMAC and 20.5.4.22 NMAC for UST
- 32 systems, or 20.5.4.12 NMAC for UST systems, or 20.5.4.16 and 24 NMAC for AST systems;
- 33 (3) financial responsibility under 20.5.9 NMAC; and
- 34 (4) release detection in 20.5.6 NMAC.

35 B. Installer certification. All owners and operators of new storage tank systems shall ensure that the  
 36 installer certifies in the registration form required by 20.5.2 NMAC that the methods used to install the tanks and  
 37 piping comply with the requirements in 20.5.4.14 NMAC for UST systems and 20.5.4.19 NMAC for AST systems.

38 C. Certification of installation. For installations after August 15, 2003, owners and operators shall  
 39 demonstrate compliance with the installation standards in 20.5.4.19 NMAC (for ASTs) and 20.5.4.14 NMAC (for  
 40 USTs). Owners and operators shall provide a certification of installation on the UST or AST registration form  
 41 required by 20.5.2 NMAC, which asserts that one or more of the following methods of certification, testing, or  
 42 inspection was used to demonstrate compliance with installation requirements of the AST or UST system:

- 43 (1) the installer has been certified by the tank and piping manufacturers;
- 44 (2) the installer has been certified or licensed as required in 20.5.14 NMAC;
- 45 (3) the installation has been inspected and certified by a registered professional engineer with
- 46 education and experience in UST system or AST system installation (whichever is applicable);
- 47 (4) the installation has been inspected and approved by the department; or
- 48 (5) all work listed in the manufacturer's installation checklists has been completed.

49 [20.5.4.37 NMAC - Rp, 20.5.4.402 NMAC and 20.5.4.406 NMAC, 04/04/2008]

#### 50 20.5.4.38 ALTERNATE METHODS:

51 A. If owners and operators want to install tanks, piping, storage tank systems, spill and overflow  
 52 equipment, secondary containment, or any other requirement of this part ~~by another method~~ with materials or  
 53 methods that are not in accordance with the current edition of an industry standard or code of practice developed by  
 54 a nationally recognized association or independent testing laboratory, owners and operators shall apply in writing to  
 55

1 the department, shall provide supporting documentation, and shall not begin the installation unless and until the  
 2 department approves the request in writing. At a minimum, the request for an alternate method shall contain the  
 3 following:

- 4 (1) date the form is completed;
- 5 (2) facility name, number, address (with county) and telephone number;
- 6 (3) owner name, number, address and telephone number;
- 7 (4) citation to regulation for which alternate method or material (such as type of piping) is requested;
- 8 (5) brief description of the proposed alternate method or material; ~~and~~
- 9 (6) justification of proposed alternate method or material, including citation to ~~the~~ a standard or code  
 10 supporting its use, if available, and;
- 11 (7) demonstration of its equivalent protection of public health, safety and welfare and the  
 12 environment.

13 B. The department shall not grant the request unless owners and operators demonstrate that the  
 14 request will provide equivalent protection of public health, safety and welfare and the environment.

15 [20.5.4.38 NMAC - Rp, 20.5.4.404 NMAC, 04/04/2008]

16 [The ~~bureau~~ department provides an optional form that may be used to request approval of an alternate method. The  
 17 form is available on the department's website, [www.nmenv.state.nm.us](http://www.nmenv.state.nm.us) or by contacting the Petroleum Storage Tank  
 18 Bureau at 505-476-4397 or 1301 Siler Road, Building B, Santa Fe, New Mexico 87507.]

#### 21 **HISTORY OF 20.5.4 NMAC:**

22 **Pre-NMAC History:** The material in this part was derived from that previously filed with the commission of  
 23 public records - state records center and archives.

24 EIB/USTR-4, Underground Storage Tank Regulations - Part IV - New and Upgraded UST Systems: Design,  
 25 Construction, and Installation, filed 9/12/88

26 EIB/USTR-4, Underground Storage Tank Regulations - Part IV - New and Upgraded UST Systems: Design,  
 27 Construction, and Installation, filed 8/4/89

28 EIB/USTR-4, Underground Storage Tank Regulations - Part IV - New and Upgraded UST Systems: Design,  
 29 Construction, and Installation, filed 6/12/90

30 **History of Repealed Material:** 20 NMAC 5.4, Underground Storage Tanks, New and Upgraded UST Systems:  
 31 Design, Construction, and Installation (filed 2/27/97), repealed 8/15/03.

32 20.5.4 NMAC, Petroleum Storage Tanks, New and Upgraded Tank Systems: Design, Construction and Installation  
 33 (filed 7/16/03) repealed 4/4/08.

#### 34 **Other History:**

35 EIB/USTR-4, Underground Storage Tank Regulations - Part IV - New and Upgraded UST Systems: Design,  
 36 Construction, and Installation (filed 6/12/90), renumbered, reformatted and replaced by 20 NMAC 5.4, New and  
 37 Upgraded UST Systems: Design, Construction, and Installation, effective 11/5/95.

38 20 NMAC 5.4, Underground Storage Tanks, New and Upgraded UST Systems: Design, Construction, and  
 39 Installation (filed 10/6/95) replaced by 20 NMAC 5.4, New and Upgraded UST Systems: Design, Construction, and  
 40 Installation, effective 4/1/97.

41 20 NMAC 5.4, Underground Storage Tanks, New and Upgraded UST Systems: Design, Construction, and  
 42 Installation (filed 2/27/97) was renumbered, reformatted and replaced by 20.5.4 NMAC, New and Upgraded Tank  
 43 Systems: Design, Construction and Installation, effective 08/15/03.

44 20.5.4 NMAC, Petroleum Storage Tanks, New and Upgraded Tank Systems: Design, Construction and Installation  
 45 (filed 7/16/03) replaced by 20.5.4 NMAC, Petroleum Storage Tanks, New and Upgraded Tank Systems: Design,  
 46 Construction and Installation, effective 4/4/08.