PROPOSED REGULATION OF THE

DIVISION OF INDUSTRIAL RELATIONS OF THE

DEPARTMENT OF BUSINESS AND INDUSTRY

LCB File No. R026-23

April 10, 2024

EXPLANATION – Matter in ***italics*** is new; matter in brackets [~~omitted material~~] is material to be omitted.

AUTHORITY: §§ 1-4, NRS 455C.110; §§ 5-26 and 28-35, NRS 455C.110 and 512.131; § 27, NRS 512.131.

A REGULATION relating to public safety; revising provisions relating to the safety of boilers and pressure vessels in the context of mines for consistency with similar provisions governing boilers, pressure vessels and water heaters generally; prohibiting the operation of a new boiler, pressure vessel or water heater in this State under certain circumstances; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing regulations define certain terms for the purposes of provisions governing the safety of boilers and pressure vessels in the context of mines. (NAC 512.500-512.594) Existing regulations also define certain terms for the purposes of the safety of boilers and pressure vessels, generally. (Chapter 455C of NAC) **Sections 6, 7, 9-26 and 31-35** of this regulation add, amend and repeal certain definitions relating to boilers and pressure vessels governed by chapter 512 of NAC to refer to and establish greater consistency with chapter 455 of NAC.

Existing regulations establish certain requirements relating to the safety of boilers and pressure vessels in mines, including requirements governing: (1) clearances; (2) platforms or runways; (3) safety or relief valves and indicating and controlling devices; (4) qualifications of persons who attend certain boilers; (5) the supervision of boilers; and (6) licensing requirements to perform certain actions relating to boilers and pressure vessels. (NAC 512.579, 512.581, 512.583, 512.587, 512.590, 512.592, 512.594) **Section 35** repeals these provisions. **Sections 1, 8 and 28** of this regulation revise similar existing provisions governing boilers and pressure vessels, generally, for applicability to boilers and pressure vessels in the context of mines.

Existing regulations adopt by reference certain codes and standards relevant to boilers and pressure vessels in mines. (NAC 512.562) **Section 28** instead adopts by reference the codes, standards and other publications which the Division of Industrial Relations of the Department of Business and Industry has previously adopted with respect to boilers and pressure vessels generally.

Existing regulations prohibit a new boiler, pressure vessel or water heater from being operated in this State unless it has been designed, constructed, inspected and installed in

accordance with certain requirements. (NAC 512.564) **Section 29** of this regulation requires the inspection to have been performed by the Mine Safety and Training Section or the Mechanical Compliance Section of the Division.

Sections 2-4, 27 and 30 of this regulation make conforming changes to indicate the placement of **sections 6-8** of this regulation in the Nevada Administrative Code.

Section 1. NAC 455C.114 is hereby amended to read as follows:

455C.114 The provisions of NAC 455C.020 to 455C.300, inclusive, and sections 2 and 3 of LCB File No. R033-21 do not apply to:

1. Boilers and pressure vessels governed by the provisions of chapter 512 of NRS and ***, except as otherwise provided in section 8 of this regulation,*** chapter 512 of NAC.

2. Boilers and pressure vessels installed or used in a single-family residence unless the boiler or pressure vessel is a:

(a) Hot water supply boiler;

(b) Hot water supply tank that has a storage capacity which exceeds 120 gallons;

(c) Low-pressure heating boiler;

(d) Power boiler; or

(e) Pressure vessel that:

(1) Operates at pressures that exceed 15 PSIG; or

(2) Has a storage capacity of 5 cubic feet or more by volume.

3. Boilers and pressure vessels under the control of the Federal Government.

4. Unfired pressure vessels meeting the requirements of the United States Department of Transportation for the shipment of liquids or gases under pressure.

5. Unfired pressure vessels having an inside diameter not exceeding 6 inches (152 millimeters).

6. Unfired pressure vessels containing cold water under pressure, including those containing air, the compression of which serves only as a cushion.

7. A water heater or a pressure vessel containing water heated by steam or by any other indirect means, if none of the following limitations is exceeded:

(a) An input of heat of 199,999 British thermal units per hour (58,600 watts).

(b) A water temperature of 210 degrees Fahrenheit (99 degrees Centigrade).

(c) A water capacity of 120 gallons (450 liters).

8. Unfired pressure vessels that do not exceed 5 cubic feet in volume and 15 PSIG.

9. An unfired pressure vessel that may be classified as a pressure container which is an integral part or component of a rotating or reciprocating mechanical device, including a pump, compressor, turbine, generator, engine and hydraulic or pneumatic cylinder where the primary considerations of or stresses in the design, or both, are derived from the functional requirements of the device.

10. Unfired pressure vessels used for the storage of compressed air only.

11. A hot water heater constructed of continuous coils, which is used only to produce steam vapor to clean machinery, equipment and buildings, if:

(a) The tubing or pipe size does not exceed three-fourths of an inch in diameter and drums and headers are not attached;

(b) The nominal water containing capacity does not exceed 6 gallons;

(c) The water temperatures do not exceed 350 degrees Fahrenheit; and

(d) Steam is not generated within the coil,

➥ except that the provisions of NAC 455C.020 to 455C.300, inclusive, and sections 2 and 3 of LCB File No. R033-21 do apply to safety relief valves on a hot water heater constructed of continuous coils.

12. Unfired pressure vessels and piping containing liquid petroleum gas and liquid natural gas.

Sec. 2. NAC 455C.616 is hereby amended to read as follows:

455C.616 1. The Mechanical Compliance Section may take any action described in subsection 2 if it determines that:

(a) A holder of an operating permit for a boiler or pressure vessel has violated any of the provisions set forth in NAC 455C.020 to 455C.300, inclusive, and section 1 of LCB File No. R034-21.

(b) A holder of an operating permit for an elevator has violated any of the provisions set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20;

(c) A holder of a certificate to work as a special inspector has violated any of the provisions set forth in NAC 455C.020 to 455C.300, inclusive, and section 1 of LCB File No. R034-21, or 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive ~~[;]~~ ***, or section 6, 7 or 8 of this regulation;***

(d) A holder of a certificate to work as an elevator mechanic has violated any of the provisions set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20;

(e) A holder of a certificate of competency or a certificate of accreditation as an authorized inspection agency has violated any of the provisions set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20;

(f) A holder of a work card as an elevator mechanic apprentice or elevator mechanic helper has violated any of the provisions set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20;

(g) A licensed contractor or licensed elevator contractor has violated any of the provisions of NAC 455C.020 to 455C.300, inclusive, and section 1 of LCB File No. R034-21, or NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20;

(h) The owner of a boiler, elevator or pressure vessel has violated any of the provisions set forth in NAC 455C.020 to 455C.530, inclusive, and section 1 of LCB File No. R045-20 and section 1 of LCB File No. R034-21; or

(i) A person who installs, maintains, relocates, improves, alters or repairs an elevator within this State and who is not certified as an elevator mechanic pursuant to NAC 455C.460, has violated any of the provisions set forth in NAC 455C.400 to 455C.530, inclusive, and section 1 of LCB File No. R045-20.

2. After determining a violation described in subsection 1 has occurred, the Mechanical Compliance Section may:

(a) Issue a notice of violation which requires the holder of the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card or the owner of a boiler, elevator or pressure vessel to correct the violation;

(b) Impose an administrative fine of not more than $5,000 and revoke the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card, as applicable;

(c) For a second violation within a period of 24 months:

(1) Impose an administrative fine of not more than $10,000;

(2) Revoke the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card, as applicable; and

(3) Require the holder of the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card or the owner of a boiler, elevator or pressure vessel to fulfill certain training or educational requirements;

(d) For a third violation within a period of 24 months:

(1) Impose an administrative fine of not more than $25,000;

(2) Revoke the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card, as applicable; and

(3) Require the holder of the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card or the owner of a boiler, elevator or pressure vessel to fulfill certain training or educational requirements; or

(e) For a fourth or subsequent violation within a period of 24 months:

(1) Impose an administrative fine of not more than $50,000;

(2) Revoke the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card, as applicable; and

(3) Require the holder of the operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card or the owner of a boiler, elevator or pressure vessel to fulfill certain training or educational requirements.

3. Each 30-calendar-day period during which a violation of subsection 1 continues constitutes a separate violation for which the Mechanical Compliance Section may impose an additional administrative fine of not more than $5,000.

Sec. 3. NAC 455C.624 is hereby amended to read as follows:

455C.624 1. The Mechanical Compliance Section may suspend, modify or revoke an operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card issued pursuant to this chapter if it finds that for any reason the protection of the general public requires such action.

2. For the purposes of this section, a violation of any provision of this chapter, or if the inspector or special inspector is inspecting a boiler or pressure vessel governed by the provisions of chapter 512 of NRS and chapter 512 of NAC, a violation of any provision set forth in NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, ***or section 6, 7 or 8 of this regulation*** may constitute a danger to the general public requiring immediate action if so determined by the Mechanical Compliance Section.

Sec. 4. NAC 455C.632 is hereby amended to read as follows:

455C.632 1. The Mechanical Compliance Section may suspend summarily an operating permit, certificate, certificate of competency, certificate of accreditation as an authorized inspection agency or work card issued pursuant to the provisions of this chapter if it finds that for any reason the protection of the general public requires such action.

2. For the purposes of this section, a violation of any provision of this chapter, or if the inspector or special inspector is inspecting a boiler or pressure vessel governed by the provisions of chapter 512 of NRS and chapter 512 of NAC, a violation of any provision set forth in NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, ***or section 6, 7 or 8 of this regulation*** may constitute a danger to the general public requiring immediate action if so determined by the Mechanical Compliance Section.

Sec. 5. Chapter 512 of NAC is hereby amended by adding thereto the provisions set forth as sections 6, 7 and 8 of this regulation.

Sec. 6. ***"Installation of a new boiler or pressure vessel" means the construction, installation or placing into operation of or contracting for any boiler or pressure vessel on or after January 28, 2000.***

Sec. 7. ***"Person" has the meaning ascribed to it in NAC 455C.078.***

Sec. 8. ***The provisions of NAC 455C.204, 455C.250, 455C.252, 455C.268, 455C.274, 455C.296 and 455C.300 apply to boilers and pressure vessels governed by the provisions of NAC 512.500 to 512.585, inclusive.***

Sec. 9. NAC 512.500 is hereby amended to read as follows:

512.500 As used in NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, ***and sections 6, 7 and 8 of this regulation,*** unless the context otherwise requires, the words and terms defined in NAC 512.502 to 512.558, inclusive, ***and sections 6 and 7 of this regulation*** have the meanings ascribed to them in those sections.

Sec. 10. NAC 512.502 is hereby amended to read as follows:

512.502 "Authorized inspection entity" means:

1. The ***Mechanical Compliance Section;***

2. The Enforcement Section;

~~[2.]~~ ***3.*** An insurance company that:

(a) Is licensed in this State to write insurance for a boiler or pressure vessel; and

(b) Employs or contracts with a special inspector who has been issued a certificate; or

~~[3.]~~ ***4.*** An inspection organization that employs or contracts with a special inspector who has been issued a certificate.

Sec. 11. NAC 512.504 is hereby amended to read as follows:

512.504 "Boiler" ~~[means a closed vessel in which water or another liquid is heated, steam or vapor is generated or steam is superheated, or any combination thereof, under pressure or vacuum, for use external to the boiler by the direct application of energy from the combination of fuels or from electricity. The term includes, without limitation, a fired unit for heating or vaporizing liquids other than water if the unit is separate from the processing system and is complete within itself.]~~ ***has the meaning ascribed to it in NAC 455C.026.***

Sec. 12. NAC 512.506 is hereby amended to read as follows:

512.506 "Boiler inspector" ~~[means a person who:~~

~~1. Inspects boilers or pressure vessels;~~

~~2. Holds a commission; and~~

~~3. Is employed or retained as an independent contractor by an authorized inspection entity.]~~ ***has the meaning ascribed to it in NAC 455C.028.***

Sec. 13. NAC 512.508 is hereby amended to read as follows:

512.508 "Certificate" ~~[means a certificate to work as a special inspector that is issued by the Occupational Safety and Health Administration of the Division pursuant to NAC 455C.130.]~~ ***has the meaning ascribed to it in NAC 455C.030.***

Sec. 14. NAC 512.510 is hereby amended to read as follows:

512.510 "*Code*" means ~~[:~~

~~1. The Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers with amendments and interpretations adopted by the Council of the Society and approved and adopted by the Division;~~

~~2. A code relating to the construction of boiler and pressure vessels that has been approved by the National Board and adopted by the Division; or~~

~~3. The National Board Inspection Code.]~~ ***any provision set forth in NAC 512.500 to 512.585, inclusive, and sections 6, 7 and 8 of this regulation, including, without limitation:***

1. The provisions of chapter 455C of NAC set forth in section 8 of this regulation; and

2. Any provision set forth in a publication adopted by reference in NAC 512.562.

Sec. 15. NAC 512.512 is hereby amended to read as follows:

512.512 "Commission" ~~[means the commission issued by the National Board to a person who is authorized to inspect boilers or pressure vessels.]~~ ***has the meaning ascribed to it in NAC 455C.034.***

Sec. 16. NAC 512.514 is hereby amended to read as follows:

512.514 "Contractor" has the meaning ascribed to it in ~~[NRS 624.020.]~~ ***NAC 455C.036.***

Sec. 17. NAC 512.526 is hereby amended to read as follows:

512.526 "Hot water supply boiler" ~~[means a boiler that is completely filled with water that furnishes hot water to be used outside the boiler at pressures not exceeding 160 PSIG or at temperatures not exceeding 250°F at or near the boiler outlet and which:~~

~~1. Uses a storage tank to supply hot water to the system;~~

~~2. Fires on demand to heat water which is supplied directly into the system; or~~

~~3. Is fired at a rate of not less than 200,000 British thermal units.]~~ ***has the meaning ascribed to it in NAC 455C.054.***

Sec. 18. NAC 512.532 is hereby amended to read as follows:

512.532 "National Board" ~~[means the National Board of Boiler and Pressure Vessel Inspectors.]~~ ***has the meaning ascribed to it in NAC 455C.068.***

Sec. 19. NAC 512.534 is hereby amended to read as follows:

512.534 "*National Board Inspection Code*" ~~[means the manual for boiler and pressure vessel inspectors published by the National Board and adopted by reference in NAC 512.562.]~~ ***has the meaning ascribed to it in NAC 455C.070.***

Sec. 20. NAC 512.542 is hereby amended to read as follows:

512.542 "Pressure vessel" ~~[means a vessel in which pressure is obtained from an external source or by the application of heat from a direct or indirect source. The term includes, without limitation, an unfired steam boiler.]~~ ***has the meaning ascribed to it in NAC 455C.084.***

Sec. 21. NAC 512.546 is hereby amended to read as follows:

512.546 "PSIG" ~~[means pounds per square inch gauge.]~~ ***has the meaning ascribed to it in NAC 455C.086.***

Sec. 22. NAC 512.550 is hereby amended to read as follows:

512.550 "Repair" ~~[means the work necessary to restore a pressure-retaining item to a safe and satisfactory operating condition if there is no deviation from the original design.]~~ ***has the meaning ascribed to it in NAC 455C.092.***

Sec. 23. NAC 512.552 is hereby amended to read as follows:

512.552 "Safety relief valve" ~~[means a relieving device that is:~~

~~1. Automatically pressure actuated; and~~

~~2. Suitable for use as a safety valve or relief valve, depending on the application.]~~ ***has the meaning ascribed to it in NAC 455C.094.***

Sec. 24. NAC 512.554 is hereby amended to read as follows:

512.554 "Safety valve" ~~[means an automatic pressure-relieving device that:~~

~~1. Is actuated by the static pressure upstream of the valve; and~~

~~2. Has a full-opening spring-pop type action that is used for gas or vapor service.]~~ ***has the meaning ascribed to it in NAC 455C.096.***

Sec. 25. NAC 512.555 is hereby amended to read as follows:

512.555 "Special inspector" ~~[means a boiler inspector who holds a certificate and who is employed or retained as an independent contractor by:~~

~~1. An insurance company that is licensed in this State to write insurance for a boiler or pressure vessel; or~~

~~2. An inspection organization.]~~ ***has the meaning ascribed to it in NAC 455C.100.***

Sec. 26. NAC 512.558 is hereby amended to read as follows:

512.558 "Water heater" ~~[means a hot water supply boiler or a closed vessel in which water is heated by the combustion of fuel, electricity or any other source and withdrawn from the heater for use outside the system of the water heater at pressures not exceeding 160 PSIG and which includes, without limitation, any control or device necessary to prevent the water temperature from exceeding 210°F (99°C).]~~ ***has the meaning ascribed to it in section 3 of LCB File No. R033-21.***

Sec. 27. NAC 512.560 is hereby amended to read as follows:

512.560 The Administrator may delegate any duties which the Administrator is assigned pursuant to NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, or section 4 of LCB File No. R033-20 ***or section 6, 7 or 8 of this regulation*** to the Mine Safety and Training Section of the Division, or its successor.

Sec. 28. NAC 512.562 is hereby amended to read as follows:

512.562 ~~[1. The]~~ ***For the purposes of NAC 512.500 to 512.585, inclusive, and sections 6, 7 and 8 of this regulation, the*** Administrator hereby adopts by reference ~~[the National Board~~

~~Inspection Code, 2001 edition and addenda, and any subsequent edition and addenda issued by the National Board of Boiler and Pressure Vessel Inspectors, unless the edition or addenda is disapproved by the Administrator within 60 days after the date the edition is published by the National Board of Boiler and Pressure Vessel Inspectors. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. A copy of the 2001 edition may be obtained from the National Board of Boiler and Pressure Vessel Inspectors, 1055 Crupper Avenue, Columbus, Ohio 43229, for the price of $85.~~

~~2. The Administrator hereby adopts by reference the following sections of the ASME Boiler and Pressure Vessel Code, 2001 edition and addenda, and of any subsequent edition and addenda issued by the American Society of Mechanical Engineers, unless the edition or addenda is disapproved by the Administrator within 60 days after the date the edition is published by the American Society of Mechanical Engineers. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. A copy of the sections of the 2001 edition and its addenda adopted by reference in this subsection may be obtained from ASME International, 22 Law Drive, P.O. Box 2900, Fairfield, New Jersey 07007-2900, for the price indicated:~~

~~Cost~~

~~(a) Section I, Power Boilers ..... $295~~

~~(b) Section II, - Part D: Properties ..... 435~~

~~(c) Section IV, Rules for Construction of Heating Boilers ..... 280~~

~~(d) Section V, Nondestructive Examination ..... 315~~

~~(e) Section VI, Recommended Rules for the Care and Operation of Heating Boilers..... 175~~

(f) Section VII, Recommended Guidelines for the Care of Power Boilers..... 180

(g) Section VIII, Pressure Vessels - Division 1 460

(h) Section IX, Welding and Brazing Qualifications 330

(i) Section X, Fiber-Reinforced Plastic Pressure Vessels 250

3. The Administrator hereby adopts by reference Controls and Safety Devices for Automatically Fired Boilers, CSD-1, 2002 edition, and any subsequent edition issued by the American Society of Mechanical Engineers, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the American Society of Mechanical Engineers. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. This publication applies to automatically fired boilers which are directly fired with gas, oil, a combination of gas and oil or electricity. The 2002 edition may be obtained from ASME International, 22 Law Drive, P.O. Box 2900, Fairfield, New Jersey 07007-2900, for the price of $56.

4. The Administrator hereby adopts by reference the Power Piping Code, B31.1, 2001 edition and addenda, and any subsequent edition and addenda issued by the American Society of Mechanical Engineers, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the American Society of Mechanical Engineers. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2001 edition and its addenda may be obtained from ASME International, 22 Law Drive, P.O. Box 2900, Fairfield, New Jersey 07007-2900, for the price of $230.

5. The Administrator hereby adopts by reference the National Fuel Gas Code, ANSI Z223.1/NFPA 54, 2002 edition, and any subsequent edition issued by the National Fire

~~Protection Association, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the National Fire Protection Association. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2002 edition may be obtained from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, for the price of $69.~~

~~6. The Administrator hereby adopts by reference the National Electrical Code, ANSI/NFPA 70, 2002 edition and any subsequent edition issued by the American National Standards Institute, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the American National Standards Institute. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2002 edition may be obtained from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, for the price of $284.~~

~~7. The Administrator hereby adopts by reference the Uniform Building Code, 1997 edition, and any subsequent editions issued by the International Conference of Building Officials, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the International Conference of Building Officials. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 1997 edition may be obtained from the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, for the price of $227.~~

~~8. The Administrator hereby adopts by reference the Uniform Mechanical Code, 2000 edition, and any subsequent edition issued by the International Conference of Building Officials, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the International Conference of Building Officials. The most current edition that~~

has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2000 edition may be obtained from the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, for a cost of $70.

9. The Administrator hereby adopts by reference the Uniform Fire Code, 2000 edition, and any subsequent editions issued by the International Conference of Building Officials, unless an edition is disapproved by the Administrator within 60 days after the date the edition is published by the International Conference of Building Officials. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2000 edition may be obtained from the International Conference of Building Officials, 5360 South Workman Mill Road, Whittier, California 90601, for the price of $94.95.

10. The Administrator hereby adopts by reference the Uniform Plumbing Code, 2000 edition, and any subsequent edition issued by the International Association of Plumbing and Mechanical Officials, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the International Association of Plumbing and Mechanical Officials. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2000 edition may be obtained from the International Association of Plumbing and Mechanical Officials, 20001 Walnut Drive South, Walnut, California 91789-2825, for the price of $89.

11. The Administrator hereby adopts by reference the Standard for the Installation of Oil-Burning Equipment, ANSI/NFPA 31, 2001 edition, and any subsequent edition issued by the National Fire Protection Association, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the National Fire Protection Association. The most current edition that has been approved by the Administrator may be determined by

~~contacting the Office of the Administrator. The 2001 edition may be obtained from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, for the price of $59.~~

~~12. The Administrator hereby adopts by reference the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15, 2001 edition, and any subsequent edition issued by the American Society of Heating, Refrigeration and Air-Conditioning Engineers, unless the edition is disapproved by the Administrator within 60 days after the date the edition is published by the American Society of Heating, Refrigeration and Air-Conditioning Engineers. The most current edition that has been approved by the Administrator may be determined by contacting the Office of the Administrator. The 2001 edition may be obtained from Global Engineering Documents, 15 Inverness Way East, Englewood, Colorado 80112, for the price of $46.]~~ ***the codes, standards and other publications adopted by reference by the Division in NAC 455C.108.***

Sec. 29. NAC 512.564 is hereby amended to read as follows:

512.564 A new boiler, pressure vessel or water heater must not be operated in this State unless it is ***:*** ~~[designed, constructed, inspected]~~

1. Designed;

2. Constructed;

3. Inspected by the Enforcement Section or the Mechanical Compliance Section; and

~~[installed]~~

4. Installed,

➥ in accordance with the *Code* ***.*** ~~[and the provisions of NAC 512.500 to 512.594, inclusive.]~~

Sec. 30. NAC 512.566 is hereby amended to read as follows:

512.566 The provisions of NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, ***and sections 6, 7 and 8 of this regulation*** do not apply to:

1. An unfired pressure vessel that meets the requirements of the United States Department of Transportation for the shipment of liquids or gases under pressure.

2. An unfired pressure vessel which has an inside diameter that does not exceed 6 inches (152 millimeters).

3. An unfired pressure vessel used for domestic purposes which contains cold water under pressure, including, without limitation, a vessel containing air, the compression of which serves only as a cushion.

4. A pressure vessel which contains water heated by steam or by any other means if none of the following limitations is exceeded:

(a) An input of heat of 199,999 British thermal units per hour (58,600 watts);

(b) A water temperature of 210□ (99□); and

(c) A water capacity of 120 gallons (450 liters).

5. A fired storage water heater that is directly fired with oil, gas or electricity if none of the following limitations is exceeded:

(a) An input of heat of 199,999 British thermal units per hour (58,600 watts);

(b) A water temperature of 210□ (99□); and

(c) A water capacity of 120 gallons (450 liters).

6. An unfired pressure vessel that does not exceed 5 cubic feet in volume and 250 PSIG.

7. A hot water heater constructed of continuous coils, which is used only to produce steam vapor to clean machinery, equipment and buildings, if:

(a) The tubing or pipe size does not exceed three-fourths of an inch in diameter and drums and headers are not attached;

(b) The nominal water containing capacity does not exceed 6 gallons;

(c) The water temperatures do not exceed 350□; and

(d) Steam is not generated within the coil,

➥ except that the provisions of NAC 512.500 to ~~[512.594,]~~ ***512.585,*** inclusive, ***and sections 6, 7 and 8 of this regulation*** do apply to safety relief valves on a hot water heater constructed of continuous coils.

8. An unfired pressure vessel and piping containing liquid petroleum gas and liquid natural gas.

9. Any vessel, regardless of its size, that has an internal or external operating pressure less than or equal to 15 PSIG.

10. As used in this section, "fired storage water heater" means a hot water supply boiler used to store or directly supply potable hot water for external use which has:

(a) A 100 percent makeup; and

(b) A firing rate of not less than 200,000 British thermal units.

Sec. 31. NAC 512.570 is hereby amended to read as follows:

512.570 1. An internal inspection conducted pursuant to this section must consist of as complete an examination as can reasonably be made of the internal and external surfaces of a boiler or pressure vessel while it is not operating and must not be conducted until any plates for a manhole or handhole or other closures of openings used for an inspection are removed. An external inspection conducted pursuant to this section must consist of an examination of the external surfaces of a boiler or pressure vessel and must be performed while the boiler or

pressure vessel is in operation. An inspection conducted pursuant to this section must include operational testing of all controls and safety devices.

2. A power boiler and a high-pressure, high-temperature ***water*** boiler must be inspected internally, if the construction and design of the boiler so allows, at least once each year and externally approximately 6 months after the date of the internal inspection. If an internal inspection is not possible, such a boiler must be inspected externally at least once every 6 months.

3. A low-pressure ~~[steam]~~ ***heating*** boiler must be inspected externally at least once every year and internally, if the construction and design of the boiler so allows, at least once every 2 years.

4. A hot water heating boiler and a hot water supply boiler must be inspected externally at least once every 2 years and internally, if the construction and design of the boiler so allows, at the request of the inspector or special inspector.

5. A potable water heater must be inspected externally at least once every 2 years.

6. Any other fired pressure vessel for which a frequency of inspection is not specified in subsections 1 to 5, inclusive, must be inspected internally, if the construction and design of the pressure vessel so allows, at least once each year.

7. Except as otherwise provided in this section, a pressure vessel must be inspected externally at least once every 3 years.

8. An inspector or special inspector may require any boiler or pressure vessel to be prepared for inspection if, in his or her opinion, an inspection is necessary to determine whether the boiler or pressure vessel is operating in a safe manner.

9. As used in this section:

(a) ***"External inspection" has the meaning ascribed to it in NAC 455C.042.***

(b) "Fired pressure vessel" ~~[means a vessel other than a boiler in which steam or vapor pressure is generated in excess of 15 pounds per square inch by direct firing with a solid, liquid or gaseous fuel or by an electric heating element.~~

~~(b)]~~ ***has the meaning ascribed to it in NAC 455C.046.***

(c) "High-pressure, high-temperature water boiler" has the meaning ascribed to it in NAC 455C.050.

(d) "Hot water heating boiler" has the meaning ascribed to it in NAC 455C.052.

(e) "Internal inspection" has the meaning ascribed to it in NAC 455C.062.

(f) "Low-pressure heating boiler" has the meaning ascribed to in NAC 455C.066.

(g) "Potable water heater" ~~[means a fired heater for the storage of water which has a corrosion-resistant lining and is used to supply potable hot water.]~~ ***has the meaning ascribed to it in NAC 455C.064.***

(h) "Power boiler" has the meaning ascribed to it in NAC 455C.082.

Sec. 32. NAC 512.575 is hereby amended to read as follows:

512.575 1. A contractor shall submit a written notice to the Administrator before installing a boiler or pressure vessel in this State that is constructed in a manner that meets the standards of this State, the American Society of Mechanical Engineers or the National Board. Except for an existing boiler or pressure vessel or a reinstalled boiler or pressure vessel, a boiler or pressure vessel must not be installed in this State unless it has been registered with the National Board.

2. Except as otherwise provided in subsection 4, the notice of installation of a boiler or pressure vessel must include the American Society of Mechanical Engineers' data report of the

manufacturer concerning the construction of the boiler or pressure vessel, or an equivalent standard which is approved by the National Board, unless the boiler is constructed of cast iron.

3. A notice of installation of a new boiler or pressure vessel must include the plans and specifications of the boiler room in which the boiler or pressure vessel is being installed which designates the location of the boiler or pressure vessel . ~~[and which complies with the requirements of NAC 512.579.]~~

4. Before a secondhand boiler or pressure vessel or portable boiler or pressure vessel may be installed or shipped for installation into this State, the owner or user or the contractor installing the boiler or pressure vessel must submit to the Administrator a notice of installation. The notice of installation must include, without limitation, a report of inspection. The report of inspection must be prepared by a person who holds a commission and who inspected the boiler or pressure vessel. The fittings and appurtenances of the boiler or pressure vessel must comply with the requirements for the installation of a new boiler or pressure vessel.

5. As used in this section:

(a) "Existing boiler or pressure vessel" means any boiler or pressure vessel constructed, installed, placed in operation or contracted for use in this State before January 28, 2000.

(b) "Portable boiler or pressure vessel" ~~[means a boiler or pressure vessel that is intended primarily for temporary use and has a construction that allows it to be moved readily from one location to another.]~~ ***has the meaning ascribed to it in NAC 455C.080.***

(c) "Reinstalled boiler or pressure vessel" ~~[means a boiler or pressure vessel removed from its original setting and reinstalled at the same location or at a new location with or without a change of ownership.]~~ ***has the meaning ascribed to it in NAC 455C.088.***

(d) "Secondhand boiler or pressure vessel" ~~[means a boiler or pressure vessel that has changed ownership and has been moved since its original installation.]~~ ***has the meaning ascribed to it in NAC 455C.098.***

Sec. 33. NAC 512.577 is hereby amended to read as follows:

512.577 1. If a boiler or pressure vessel is removed from its original site and reinstalled at the same location or reinstalled at a new location without a change of ownership before reinstallation, the contractor must submit to the Administrator a notice of installation before installing the boiler or pressure vessel. The fittings and appurtenances must comply with the requirements for the installation of a new boiler or pressure vessel.

2. If a standard boiler or pressure vessel is to be moved to another state for temporary use or repair, the owner or user must notify the Administrator in writing before reinstalling the boiler or pressure vessel within this State.

3. As used in this section, "standard boiler or pressure vessel" ~~[means a boiler or pressure vessel that:~~

~~(a) Bears the stamp of the American Society of Mechanical Engineers or meets a standard of construction approved by the National Board and adopted by the Division; and~~

~~(b) Is registered with the National Board.]~~ ***has the meaning ascribed to it in NAC 455C.102.***

Sec. 34. NAC 512.585 is hereby amended to read as follows:

512.585 1. A repair or alteration to a boiler or pressure vessel must conform to the applicable provisions of the *Code* or this chapter, and any jurisdictional requirements.

2. If a repair or alteration to a boiler or pressure vessel is necessary, an inspector or special inspector must be consulted regarding the appropriate method for making the repair or alteration. After the repair or alteration is made, the inspector or special inspector shall inspect it pursuant

to the *Code*. The person who makes such a repair or alteration shall submit to the Administrator the appropriate "R" form prescribed by the National Board within 30 days after completion of the repair or alteration.

3. A person who makes a repair or alteration to a boiler or pressure vessel must be qualified pursuant to the *National Board Inspection Code*.

4. A person who makes a repair or alteration to a boiler or pressure vessel by fusion welding to the pressure parts of the boiler or pressure vessel must hold a valid certificate of authorization and stamp designated as "R," which have been issued by the National Board.

5. A repair or alteration made by fusion welding must not be made to the pressure parts of a boiler constructed of cast iron.

6. A person who is in the business of repairing safety valves must have a certificate of authorization from the National Board for the use of a National Board Pressure Relief Valve Repair stamp, designated by the National Board as a "VR" stamp.

7. As used in this section, "alteration" ~~[means a change in any item described in the data report from the original manufacturer for the boiler or pressure vessel which affects the capability of the boiler or pressure vessel to contain pressure and which includes:~~

~~(a) Changes which do not physically alter the boiler or pressure vessel, including, without limitation, an increase in the maximum allowable internal or external working pressure in the boiler or pressure vessel or a change in the temperature at which a boiler or pressure vessel is designed to be operated; and~~

~~(b) A reduction in the minimum temperature of a boiler or pressure vessel which requires additional mechanical tests.]~~ ***has the meaning ascribed to it in NAC 455C.022.***

Sec. 35. NAC 512.520, 512.522, 512.524, 512.530, 512.536, 512.540, 512.548, 512.556, 512.579, 512.581, 512.583, 512.587, 512.589, 512.590, 512.592 and 512.594 are hereby repealed.

TEXT OF REPEALED SECTIONS

512.520 "Heat exchanger" defined. (NRS 455C.110, 512.131) "Heat exchanger" means a device for transferring energy in the form of heat from a warmer medium to a cooler medium, including, without limitation, a radiator.

512.522 "Heating boiler" defined. (NRS 455C.110, 512.131) "Heating boiler" means:

1. A steam or vapor boiler intended for operation at pressures not exceeding 15 PSIG; or

2. A hot water boiler intended for operation at pressures not exceeding 160 PSIG or temperatures of not more than 250°F,

↪ that is not used to heat potable water except through a heat exchanger.

512.524 "High-pressure, high-temperature boiler" defined. (NRS 455C.110, 512.131) "High-pressure, high-temperature boiler" means a boiler in which water or other liquid is heated and which is intended for operation at pressures in excess of 160 PSIG or at temperatures in excess of 250°F. The term includes, without limitation, a miniature boiler.

512.530 "Miniature boiler" defined. (NRS 455C.110, 512.131) "Miniature boiler" means a power boiler or high-pressure, high-temperature boiler that does not exceed the following limits:

1. An inside diameter of the shell of 16 inches (410 millimeters);
2. Except for electric boilers, a heating surface of 20 square feet (1.9 square meters);
3. A gross volume, not including casing and insulation, of 5 cubic feet (140 liters); and
4. A maximum allowable working pressure of 100 PSIG.

512.536 "New boiler or pressure vessel installation" defined. (NRS 455C.110, 512.131) "New boiler or pressure vessel installation" means the construction, installation or placing into operation of or contracting for any boiler or pressure vessel on or after January 28, 2000.

512.540 "Power boiler" defined. (NRS 455C.110, 512.131) "Power boiler" means a boiler in which steam or other vapor is generated at a pressure of more than 15 PSIG. The term includes, without limitation, a high-pressure, high-temperature boiler and a miniature boiler.

512.548 "Relief valve" defined. (NRS 455C.110, 512.131) "Relief valve" means an automatic pressure-relieving device as described in section I, IV or VII of the Boiler and Pressure Vessel Code of the American Society of Mechanical Engineers that is used primarily for liquid service.

512.556 "Unfired steam boiler" defined. (NRS 455C.110, 512.131) "Unfired steam boiler" means an unfired pressure vessel or a system of unfired pressure vessels intended for operation at a pressure in excess of 15 PSIG to produce and control an output of thermal energy. The term includes, without limitation, a boiler that heats water with waste heat.

512.579 Clearance: Generally. (NRS 455C.110, 512.131) Except as otherwise provided in NAC 512.577 and 512.581, if a boiler is replaced or a new boiler is installed in an existing or

new building, a minimum height of at least 3 feet must be provided between the top of the boiler, excluding appurtenances, and the ceiling and at least 3 feet between any side of the boiler and any adjacent wall or other structure. A boiler or pressure vessel that has a manhole must have a 5-foot clearance from the opening of the manhole to any wall, ceiling or piping that will prevent a person from entering the boiler or pressure vessel. A boiler or pressure vessel must be located so that adequate space will be provided for the proper operation of the boiler or pressure vessel and its appurtenances, for the inspection of all surfaces, tubes, waterwalls, economizers, piping, valves and other equipment, and for the necessary maintenance and repair and the replacement of tubes. When a pressure vessel is installed or replaced, there must be an area of unobstructed clearance which is at least 18 inches wide and provides access for inspection, maintenance and repair. Clearance for repairs and cleaning may be provided through a door or access panel into another area if the door or access panel is large enough to allow the repairs and cleaning to be performed adequately.

512.581 Clearance: Fired storage and fired coil water heater. (NRS 455C.110, 512.131) The clearance between a wall or other structure and a fired storage and fired coil water heater must be at least that specified by the manufacturer.

512.583 Platforms or runways. (NRS 455C.110, 512.131)

1. If a valve or any appurtenance of a boiler or pressure vessel requires frequent manipulation or is so located that it cannot be reached or operated from the floor, a platform or other safe means of operation must be provided. If a platform or runway is used, it must be at least 24 inches wide and be provided with standard handrails and toeboards and have at least 7 feet 6 inches of headroom. A runway must have at least two means of exit remotely located from one another and be connected to a permanent stairway or incline ladder leading to the floor.

2. When necessary for safety, a steel runway or platform of standard construction must be installed across the tops of adjacent boilers or pressure vessels or at some other convenient level to afford safe access. A runway must have at least two means of exit, remotely located from one another.

512.587 Safety appliances: Generally. (NRS 455C.110, 512.131) Each pressure vessel must be protected by safety or relief valves and indicating and controlling devices that will ensure its safe operation. These valves and devices must be so constructed, located and installed that the valves and devices cannot be rendered inoperative readily. The relieving capacity of safety valves must be sufficient to prevent a rise of pressure in the vessel of more than 10 percent above the highest pressure to which any device to relieve pressure is set, but in no case more than 6 percent above the maximum allowable working pressure. The opening (set) pressure of the device to relieve pressure must be no greater than the maximum allowable working pressure of the vessel.

512.589 Safety appliances: Capacity. (NRS 455C.110, 512.131)

1. The capacity of a safety valve that is designed primarily for steam or vapor service must be rated in pounds per hour.

2. The capacity of a relief valve that is designed primarily for liquid service must be rated in British thermal units per hour. The capacity of a relief valve used for liquid service with cold water may be rated in gallons per hour.

3. The capacity of a safety relief valve that is designed for use in steam or vapor and liquid service must be rated in pounds per hour when used for steam or vapor service and in British thermal units per hour when used for heated liquid service.

4. A pressure relief valve that is used for air service must be rated in PSIG and square cubic feet per minute.

512.590 Qualifications of attendant. (NRS 455C.110, 512.131) A person is qualified to attend a power boiler or high-pressure, high-temperature boiler if the person has the technical training, experience and knowledge necessary to start, operate and shut down the boiler.

512.592 Boilers: Supervision. (NRS 455C.110, 512.131)

1. Except as otherwise provided in subsection 5, a high-pressure, high-temperature boiler and a power boiler must be attended by a person who meets the qualifications set forth in NAC 512.590.

2. A steam boiler must be attended by a person who meets the qualifications set forth in NAC 512.590, unless the boiler is equipped with:

(a) A mechanism that cuts off fuel if the level of water in the boiler or pressure vessel is low;

(b) An automatic feed water regulator;

(c) Fireside regulators and controls;

(d) An audible alarm to indicate low water; and

(e) A pressure control.

3. The attendant shall check personally the operation of the boiler, the necessary auxiliaries and the level of water in the boiler at intervals necessary to ensure the safe operation of the boiler but not less than once every 60 minutes or for intervals in excess of the time required to evaporate the water from the normal operating level to the lowest water level permissible if the feed water is shut off or the boiler is forced to its maximum capacity. A log noting the time of all checks and observations must be kept in the boiler room.

4. If attendance of the boiler is required pursuant to this section, a time clock to start or stop the operation of the boiler automatically must not be used, unless the timing mechanism is a device or system that has been approved by the Administrator.

5. A high-pressure, high-temperature boiler and a power boiler do not need to be attended, if the boiler is equipped with the following protective devices which are functioning properly, as required by the applicable provisions of Controls and Safety Devices for Automatically Fired Boilers, CSD-I, which is adopted by reference pursuant to NAC 512.562:

(a) If the boiler is operated at less than supercritical pressure:

(1) A mechanism that cuts off fuel if the level of water in the boiler or pressure vessel is low;

(2) An automatic feed regulator;

(3) Fireside regulators and controls;

(4) An audible alarm to indicate low water;

(5) A pressure control; and

(6) A programmed flame safeguard system with an audible alarm on burners equipped with spark ignition.

(b) If the boiler is operated at supercritical pressure (3206 PSIG and 705ºF):

(1) All the devices set forth in paragraph (a);

(2) A cutoff device for high temperature or fuel; and

(3) An audible alarm to indicate high temperature.

512.594 Contractor's license required for certain activities. (NRS 455C.110, 512.131) A person shall not undertake to, or offer to undertake to, install, construct, add to, subtract from, improve or move any boiler, pressure vessel or water heater unless the person holds a current

contractor’s license issued pursuant to chapter 624 of NRS that authorizes him or her to install boilers or pressure vessels.