



**DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS**

NOTICE OF INTENT TO ACT UPON A REGULATION & HEARING AGENDA

Notice of Hearing for the Adoption of Permanent Regulations of the Mechanical Compliance Section of the Division of Industrial Relations, Department of Business and Industry, as proposed in LCB File No. R012-25

The Mechanical Compliance Section of the Division of Industrial Relations of the Department of Business and Industry, State of Nevada ("Division") will hold a public hearing will conduct a public hearing on proposed permanent regulations amending Chapter 455C of the Nevada Administrative Code (NAC). The purpose of the hearing is to receive comments from all interested parties regarding the adoption of the regulation that pertains to LCB File No. R012-25.

The public hearing on these proposed regulations will be conducted in person, via Microsoft Teams, and by phone on September 04, 2025 at 1:00 pm. Microsoft Teams allows for video and teleconferencing. Members of the public may attend and participate in this meeting in the following ways:

Microsoft Teams Access

Join the meeting now: https://teams.microsoft.com/l/meetup-join/19%3ameeting_Mjk0ZWE2YTQOTY3Ni00YjgzLWFiNzMtMzk4ZWQ0YTdjNWZi%40thead.v2/0?context=%7b%22Tid%22%3a%22e4a340e6-b89e-4e68-8eaa-1544d2703980%22%2c%22Oid%22%3a%228ee891eb-3c2a-4a4a-aba7-3ca1793553c3%22%7d

Meeting ID: 247 975 039 017 6

Meeting password: VF3Gf6CD

Join By Phone

+1 775-321-6111,360825627#

Phone Conference ID: 360 825 627#

Physical Locations

Division of Industrial Relations
Workers' Compensation Section, Executive
Conference Room
2300 W. Sahara Avenue, Suite 300,
Las Vegas, NV 89102

Division of Industrial Relations
Reno Training Room
4600 Kietzke Lane, Suite F-150,
Reno, NV 89502

A copy of the proposed language for LCB File No. R012-25 may be downloaded from the Division's website: <http://dir.nv.gov/Meetings/Meetings/>.

The Division invites representatives of regulated businesses and the public to attend the public hearing and/or prepare written and/or oral comments concerning the proposed regulations. Before the Public Hearing, comments may be submitted to Amber Williams, Esq., Senior Division Counsel, Division of Industrial Relations, Relations, by mail to 2300 W. Sahara Avenue #300, Las Vegas, Nevada 89102, or by email to amwilliams@dir.nv.gov. If no person who is directly affected by the proposed regulation appears to make oral comments, the Division may proceed immediately to act upon any written submissions.

Persons with disabilities who require special accommodations or assistance at the hearing must notify Tina Buck at the Division of Industrial Relations, by mail to 2300 W. Sahara Avenue #300, Las Vegas, Nevada 89102, or by email to tbuck@dir.nv.gov, or by calling (702) 486-9014 by 5:00 p.m., three (3) working days before this Public Hearing.

The following information is provided pursuant to the requirements of NRS 233B.0603:

The need and purpose of the proposed regulation:

Current Nevada Revised Statutes (NRS) and Nevada Administrative Codes (NAC) define a "pressure vessel" as "a vessel in which pressure is obtained from an external source or by the application of heat from a direct or indirect source." NAC 455C.114 provides for exemptions of certain boilers and pressure vessels from application of NAC 455C.020 to 455C.300. The proposed permanent regulation seeks to provide an exemption from the application of NAC Chapter 455C to brazed plate heat exchangers under certain instances. Brazed plate heat exchangers are broadly used throughout the country and are very cost effective and efficient. They carry third-party testing and label certification, including UL, ETL, and CSA. They have also been recognized in ASHRAE Standard 15 as having a low safety risk. The proposed permanent regulation would allow this mechanical equipment to be utilized in Nevada without a requirement to get a permit.

This proposed Permanent Regulation would exempt certain brazed plate heat exchangers from regulation under NAC 455C due to their low safety risk. Objects that would be exempt from regulation include brazed plate heat exchangers which are installed in any chiller, heat pump, or refrigeration equipment that is located within an outdoor installation, regardless of size, volume of refrigerant in the unit or rated pressure and is limited to use with A1 or A2L refrigerants. It also exempts brazed plate heat exchangers that are installed within autoclave assemblies, regardless of size or rated pressure; or which are A1 refrigerants that are installed in any chiller, heat pump, or refrigeration equipment that is located within an indoor installation, and that do not exceed 50 pounds in volume of refrigerant per circuit; and do not exceed a tonnage of 50 tons cooling capacity per circuit. Further the proposed regulation seeks to exempt those brazed plate heat exchangers which contain A2L refrigerants that are installed in any chiller, heat pump, or refrigeration equipment that is located within an indoor installation and that do not exceed 50 pounds in mass of refrigerant per circuit, do not exceed a tonnage of 50 tons cooling capacity per circuit, and is not installed in a room or area that is less than 500 square feet floor space.

The estimated economic effect of the proposed regulations on (a) regulated businesses and (b) the public, including, stated separately: (i) adverse and beneficial effects; and (ii) immediate and long-term effects:

(a) Regulated businesses:

(i) Adverse and beneficial effects:

The Division anticipates no adverse effects, either direct or indirect, on regulated businesses as the result of these regulations. The adverse effects, if any, are difficult to determine at this time. There will be no direct or indirect cost to regulated or small businesses.

The Division believes that there may be an indirect beneficial effect on regulated businesses as a result of the regulation, namely that with the code changes allowing non-ASME brazed plate heat exchangers, consumers will have additional funds to hire Nevada businesses to design Air Cooled Chiller systems.

(ii) Immediate and long-term effects:

The Division does not anticipate any immediate or long-term effects, either adverse or beneficial, on regulated or small businesses as a result of these regulations.

There will be no direct or indirect costs to regulated or small businesses.

(b) The public:

(i) Adverse and beneficial effects:

The Division does not anticipate any adverse or beneficial effects, either direct or indirect, on the public as the result of these regulations.

There will be no direct or indirect cost to the public.

(ii) Immediate and long-term effects:

The Division does not anticipate any immediate or long-term effects, either adverse or beneficial, on the public as a result of these regulations.

There will be no direct or indirect costs to the public.

The methods used by the Division in determining the impact on a small business: *The Division considered the purpose and scope of the proposed regulation, which will exempt certain brazed plate heat exchangers from regulation under NAC 455C due to their low safety risk. As such, the Division determined that it will have no direct effect on small businesses, either adverse or beneficial, and will also have no indirect effect on small businesses, either adverse or beneficial*

The estimated cost to the Division for enforcement of the proposed regulations: *The Division does not anticipate incurring any additional cost for the proposed regulation.*

Whether the proposed regulation overlaps or duplicates any regulations of other state or local governmental agencies or a federal regulation: *The Division believes that the proposed regulation does not overlap or duplicate any existing regulation.*

Whether the proposed regulation is required pursuant to federal law or is more stringent than federal law: *The proposed regulation is not required by federal law and there is no equivalent federal law.*

Whether the proposed regulation establishes a new fee or increases an existing fee: *The proposed regulation does not provide for a new fee or increase an existing fee payable to the Division.*

Upon adoption of any regulation, the agency, if requested to do so by an interested person, either before adoption or within 30 days thereafter, shall issue a concise statement of the principal reasons for and against its adoption, and incorporate therein its reason for overruling the consideration urged against its adoption.

This notice has been posted on Nevada's notice website: <http://leg.state.nv.us/App/Notice/A/>; State of Nevada notice website: <https://notice.nv.gov>; and the Division's website: <http://dir.nv.gov/Meetings/Meetings>, as set forth in NRS Chapters 233B and 241. A copy of the notice and the proposed permanent regulation to be adopted and/or amended is on file and has also been posted at the following locations: Division of Industrial Relations, 2300 W. Sahara Ave., Suite 300, Las Vegas, Nevada 89102, and 1886 College Parkway, Suite 110, Carson City, Nevada 89706.

**HEARING AGENDA
DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS**

Notice: (1) Items on the Agenda may be taken out of order; (2) the Division may combine two or more Agenda items for consideration; and (3) the Division may remove an item on the Agenda at any time.

- I. **Call to Order.**
- II. **Public Comment.** The opportunity for public comment is reserved for any matter listed below on the Agenda as well as any matter within the jurisdiction of the Division. No action on such an item may be taken by the Division unless and until the matter has been noticed as an action item. Comment may not be restricted based on viewpoint.
- III. **Discussion of Proposed Permanent Regulation regarding brazed plate heat exchangers,** an amendment of regulations that pertain to Chapter 455C of the Nevada Administrative Code.
- IV. **Public Comment.** The opportunity for public comment is reserved for any matter within the jurisdiction of the Division. No action on such an item may be taken by the Division unless and until the matter has been noticed as an action item. Comment may not be restricted based on viewpoint.
- V. **Adjournment.**



**DEPARTMENT OF BUSINESS AND INDUSTRY
DIVISION OF INDUSTRIAL RELATIONS**

**Small Business Impact Statement
LCB File No. R012-25**

EFFECTIVE DATE OF REGULATION:
Upon filing with the Nevada Secretary of State

1. Background:

NAC 455C.114 provides for exemptions of certain boilers and pressure vessels from application of NAC 455C.020 to 455C.300. The proposed permanent regulation seeks to provide an exemption from the application of NAC Chapter 455C to brazed plate heat exchangers under certain instances. Brazed plate heat exchangers are broadly used throughout the country and are very cost effective and efficient. The proposed permanent regulation would allow this mechanical equipment to be utilized in Nevada without a requirement to get a permit.

2. Description of Solicitation:

ANSWER: To determine whether the proposed regulations are likely to have an impact on small businesses, the Mechanical Compliance Section (MCS), of the Division of Industrial Relations (DIR), considered the purpose and scope of the proposed regulations. Based on this review, the Division determined that this regulation will have no direct effect on small businesses, either adverse or beneficial, and will also have no indirect effect on small businesses, either adverse or beneficial.

Additionally, the Division previously adopted a temporary regulation exempting brazed plate heat exchangers from the application of NAC Chapter 455C to under certain instances. At that time, the Division sent out a Small Business Impact Statement Questionnaire to interested parties on the Division's Mechanical Compliance Section Listserv, which includes 196 recipients, on November 19, 2024. Additionally, on November 20, 2024, the Division also sent out the Small Business Impact Statement Questionnaire to the Administrator's list of business stakeholders, which consists of 90 recipients. The Questionnaire inquired from small businesses whether they believed there

would be any economic effects, adverse or beneficial, direct or indirect, on their respective businesses from the proposed regulation. The Division also placed a link on its website to the questionnaire for interested parties to complete, should they choose. The deadline to return the questionnaire was November 26, 2024. The Division received one (1) response, which may be summarized as follows:

1. Waylon Lowery, PE, of Efficient Mechanical Systems Engineering – Mr. Lowery indicated that the proposed regulation would not have an economic effect, adverse or beneficial, on his business. Mr. Lowery further noted that he did not believe that the proposed regulation would have an indirect adverse effect on his business. Mr. Lowery believes the regulation would have an indirect beneficial effect on his business, noting, “I anticipate that with the code changes allowing non-ASME brazed plate heat exchangers[,] that will free up funds for more customers to hire my company to design Air Cooled Chiller systems.”

On December 19, 2024, the Division held a Public Workshop regarding the temporary regulation to solicit comments on the proposed regulation. Fifteen (15) people attended the workshop and one (1) person testified, which may be summarized as follows:

1. Alexis Motarex of Nevada Chapter AGC – Mr. Motarex stated the AGC would like language to be added exempt A2L refrigerants since A1 refrigerants are being phased out. The AGC would also like smaller systems to be exempted from regulation as a system.

At the conclusion of the December 19, 2024, Public Workshop, the Division invited members of the public to submit written public comments but did not receive any written comments.

Thereafter, the Division held a Public Adoption Hearing on February 20, 2025. Eight (8) people attended the workshop and two (2) individuals testified, which may be summarized as follows:

1. Alexis Motarex of Nevada Chapter AGC – Mr. Motarex thanked MCS for including the language addressing A2L refrigerants and stated the AGC is in support of the regulation and looks forward to working with MCS on adoption of the permanent regulations when that process begins.
2. Anthony Fragale - Mr. Fragale would like to understand what this regulation does. Safety Supervisor David Robinson stated that he will contact Mr. Fragale to provide more information.

Again, after the conclusion of the Public Adoption Hearing, the Division invited members of the public to submit written public comments but did not receive any written comments.

3. Does the proposed regulation impose a direct and significant economic burden upon a small business or directly restrict the formation, operation or expansion of a small business? (NRS 233B.0608(1))

ANSWER: As noted in Answer 2, above, there will be no direct or indirect financial effect on small businesses, either adverse or beneficial, and will not restrict the formation, operation or expansion of small businesses.

4. How was that conclusion reached?

ANSWER: See Answer 2 above.

I, Victoria Carreón, Administrator of Division of Industrial Relations, certify that, to the best of my knowledge or belief, a concerted effort was made to determine the impact of the proposed regulation on small business, and that the information contained in the statement above is accurate. (NRS 233B.0608(3))

DATED: August 5, 2025.



Victoria Carreón, Administrator
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Division of Industrial Relations
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**PROPOSED REGULATION OF THE
DIVISION OF INDUSTRIAL RELATIONS OF THE
DEPARTMENT OF BUSINESS AND INDUSTRY**

LCB File No. R012-25

July 30, 2025

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

AUTHORITY: § 1, NRS 455C.110 and 455C.112.

A REGULATION relating to public safety; exempting certain heat exchangers from certain provisions governing boilers and pressure vessels; and providing other matters properly relating thereto.

Legislative Counsel's Digest:

Existing regulations exempt certain boilers, pressure vessels and other related and associated equipment from the application of provisions governing boilers and pressure vessels generally. (NAC 455C.114) This regulation exempts brazed plate heat exchangers which satisfy certain criteria from the application of those provisions governing boilers and pressure vessels.

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

455C.114 The provisions of NAC 455C.020 to 455C.300, inclusive, 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 LCB File No. R026-23, 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 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, 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.

13. A brazed plate heat exchanger which:

(a) Is a component of an autoclave assembly, regardless of the size or rated pressure of the autoclave assembly;

(b) Is a component of a chiller, a heat pump or refrigeration equipment, regardless of the size or rated pressure of the chiller, heat pump or refrigeration equipment or the mass of refrigerant in the chiller, heat pump or refrigeration equipment, that:

(1) Is installed in an outdoor location; and

(2) Contains A1 or A2L refrigerants exclusively; or

(c) Is a component of a chiller, a heat pump or refrigeration equipment that:

(1) Is installed in an indoor location;

(2) Does not exceed 50 pounds in mass of refrigerant per circuit;

(3) Does not exceed 50 tons of cooling capacity per circuit; and

(4) Contains:

(I) A1 refrigerants; or

(II) A2L refrigerants and is installed in a room or area that consists of not less than 500 square feet of floor space.