



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

**NOTICE OF INTENT TO ACT
ON PROPOSED REGULATIONS
And
HEARING AGENDA**

**Notice of Hearing for the Adoption of Temporary Regulations
of the Mechanical Compliance Section of the Division of Industrial Relations,
Department of Business and Industry
Regarding Exemptions for Brazed Plate Heat Exchangers
February 20, 2025 at 11:00 a.m.**

You are hereby given notice that the Division of Industrial Relations of the Department of Business and Industry, State of Nevada (Division) will conduct a public hearing on proposed temporary regulations amending Chapter 455C of the Nevada Administrative Code (NAC).

The public hearing on these proposed regulations will be conducted in person, via Microsoft Teams, and by phone on February 20, 2025 at 11:00 a.m. Microsoft Teams allows for video and teleconferencing. Members of the public may attend and participate in this meeting in the following ways:

Teams Access

https://teams.microsoft.com/l/meetup-join/19%3ameeting_MDRkM2M0OTgtZTU5NC00NmJkLWExYmUtOWU3ODRjMDZjMjVj%40thread.v2/0?context=%7b%22Tid%22%3a%22e4a340e6-b89e-4e68-8eaa-1544d2703980%22%2c%22Oid%22%3a%22ae366e32-a299-4c0d-bfd7-6662ffd91060%22%7d

Meeting ID: 290 938 092 468

Meeting password: J7Uq3jZ3

Join By Phone

+1 775-321-6111,,748973239#

Phone Conference ID: 748 973 239#

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

Pursuant to NRS 233B.0608 and 233B.0609, the Division is providing the following statements pertaining to the public hearing on proposed changes to Chapter 455C of NAC.

The need and purpose of the proposed revisions to regulations: *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 temporary 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 temporary regulations would allow this mechanical equipment to be utilized in Nevada without a requirement to get a permit.*

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

The Division believes that the proposed regulation does not overlap or duplicate any existing regulation. *The proposed regulation is not required by federal law and there is no equivalent federal law.*

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

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. A copy of the proposed language of the regulation may be downloaded from the Division's website: <http://dir.nv.gov/Meetings/Meetings/>. Before the Public Hearing, persons may submit written comments to Christopher A. Eccles, Esq., Senior Division Counsel, Division of Industrial Relations, 2300 W. Sahara Avenue, #300, Las Vegas, Nevada 89102 or by email to ceccles@dir.nv.gov.

Persons with disabilities who require special accommodations or assistance at the hearing must notify Tina Buck at the Division of Industrial Relations, by email at tbuck@dir.nv.gov, or by calling (702) 486-9014 by 5:00 p.m., three (3) working days prior to this Public Hearing.

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 Chapter 241. A copy of the notice and the proposed temporary 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., Ste. 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 Temporary Regulation regarding brazed plate heat exchangers** - 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
AS REQUIRED BY NRS 233B.0608 AND 233B.0609
Temporary Regulation regarding NAC 455C.114
(Exemptions for brazed plate heat exchangers)

Note: Small Business is defined as “a business conducted for profit which employs fewer than 150 full-time or part-time employees.” (NRS 233B.0382).

1. Describe the manner in which comment was solicited from affected small businesses, a summary of their response and an explanation of the manner in which other interested persons may obtain a copy of the summary.

ANSWER: To determine whether the proposed regulation is likely to have an impact on small businesses, the Division considered the purpose and scope of the proposed regulation. The proposed temporary regulation would provide an exemption from the application of NAC Chapter 455C to brazed plate heat exchangers under certain instances.

On November 19, 2024, 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. 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 so choose. The deadline to return the questionnaire was November 26, 2024. As of this date, 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 temporary 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 temporary 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.”

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 adverse effect on small businesses. However, as indicated by Mr. Lowery’s response, there may be an indirect beneficial effect on small businesses as a result of the temporary regulation.

2. The manner in which the analysis was conducted.

ANSWER: As noted in Answer 1, on November 19, 2024 and November 20, 2024, the Division sent out a Small Business Impact Statement Questionnaire to interested parties on the Division’s various Listservs affecting the Mechanical Compliance Section. 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 deadline to return the questionnaire was November 26, 2024. As of this date, 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 temporary 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 temporary 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.”

3. The estimated economic effect of the proposed regulation on the small businesses which it is to regulate, including, without limitation:

- (a) Both adverse and beneficial effects; and
- (b) Both direct and indirect effects.

ANSWER: 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. As noted in Answer 1, and as indicated by Mr. Lowery’s response, there may be an indirect beneficial effect on small businesses as a result of the temporary regulation, namely 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.”

4. Describe the methods that the agency considered to reduce the impact of the proposed regulation on small businesses and a statement regarding whether the agency actually used any of those methods.

ANSWER: Because there will be no adverse impacts on small businesses in general, there are no methods available to reduce the impact the Division could have considered.

5. The estimated cost to the agency for enforcement of the proposed regulation.

ANSWER: There is no additional cost to the agency for enforcement of this regulation.

6. If the proposed regulation provides a new fee or increases an existing fee, the total annual amount the agency expects to collect and the manner in which the money will be used.

ANSWER: The proposed regulation does not provide for a new fee or increase an existing fee

payable to the Division.

7. If the proposed regulation includes provisions which duplicate or are more stringent than federal, state or local standards regulating the same activity, an explanation of why such duplicative or more stringent provisions are necessary.

ANSWER: The proposed regulation does not include any provisions which duplicate or are more stringent than existing federal, state, or local standards.

8. The reasons for the conclusions of the agency regarding the impact of a regulation on small businesses.

ANSWER: The Division complied with NRS 233B.0608 by considering the purpose and scope of the proposed amendments. The proposed temporary regulation would provide an exemption from the application of NAC Chapter 455C to brazed plate heat exchangers under certain instances.

The Division made a concerted effort to determine whether the proposed regulations impose a direct or significant economic burden upon small businesses, or directly restricts the formation, operation, or expansion of a small business. Specifically, on November 19, 2024 and November 20, 2024, the Division sent out a Small Business Impact Statement Questionnaire to interested parties on the Division's Listserv related to the Mechanical Compliance Section and the Administrator's list of business stakeholders. 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 deadline to return the questionnaire was November 26, 2024. The only response received by the Division to the Small Business Impact Statement Questionnaire appears in favor of the proposed temporary regulation. Thus, the Division determined that these regulations will have no adverse effect on small businesses and will not restrict the formation, operation or expansion of small businesses.

I, VICTORIA CARREÓN, Administrator of the 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 businesses and that the information contained in the statement was prepared properly and is accurate.

DATED this 3rd day of December, 2024.


VICTORIA CARREÓN, Administrator

**PROPOSED TEMPORARY REGULATION OF THE DEPARTMENT OF BUSINESS &
INDUSTRY, DIVISION OF INDUSTRIAL RELATIONS FOR THE
AMENDMENT OF NAC CHAPTER 455C**

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

AUTHORITY: NRS 455C.110; NRS 233B.040.

A REGULATION relating to public safety; creating and revising certain exemptions to the provisions governing boilers and pressure vessels; and providing other matters properly relating thereto.

Section 1. NAC 445C.114 is hereby amended to read as follows:

NAC 455C.114 Exemptions from provisions. ([NRS 455C.110](#), [455C.112](#)) 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 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. All brazed plate heat exchangers:

(a) 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 limited to use with A1 or A2L refrigerants;

(b) Installed within autoclave assemblies, regardless of size or rated pressure;

(c) Which are A1 refrigerants in a Type 1 system that are installed in any chiller, heat pump, or refrigeration equipment that is located within an indoor installation, and that:

(1) Do not exceed 50 pounds in volume of refrigerant per circuit;

and

(2) Do not exceed a tonnage of 50 tons cooling capacity per circuit;

or

(d) Which contain A2L refrigerants that are installed in any chiller, heat pump, or refrigeration equipment that is located within an indoor installation and that:

(1) Do not exceed 50 pounds in mass of refrigerant per circuit;

(2) Do not exceed a tonnage of 50 tons cooling capacity per circuit;

and

(3) Is not installed in a room or area that is less than 500 square feet floor space.