

North American Association of Food Equipment Manufacturers  
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October 20, 2014

Air and Radiation Docket  
Stratospheric Protection Division  
Office of Atmospheric Programs  
Environmental Protection Agency  
1200 Pennsylvania Ave. NW  
Washington, DC 20460

**RE: Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes under the Significant New Alternatives Policy Program [Docket Number EPA-HQ-OAR-2014-0198]**

Dear Sir or Madam:

**I. Introduction**

The North American Association of Food Equipment Manufacturers (NAFEM) submits the following comments on the U.S. Environmental Protection Agency (“the Agency”) proposed rulemaking, *Change of Listing Status for Certain Substitutes Under the SNAP Program* (Docket No. EPA-HQ-OAR-2014-0198)(“Proposed Rule” or “Proposal”). NAFEM is comprised of more than 500 manufacturers of foodservice equipment. These member companies have a long history of implementing measures to improve energy efficiency and reduce emissions of substances that are harmful to human health and the environment.

The Agency’s Proposed Rule is not justified and its compliance dates are impossible for the commercial refrigeration industry and end-users to accomplish. This Proposal also disproportionately affects small entities. EPA must conduct a Small Business Regulatory Enforcement Fairness Act (SBREFA) required panel before the Proposed Rule can be finalized. NAFEM requests the Agency review the following comments and address NAFEM’s issues in a supplemental proposed rule after the statutorily mandated SBREFA panel has met.

## **II. Failure to Comply with the Regulatory Flexibility Act**

EPA incorrectly certified that the Proposed Rule would not have a significant impact on a substantial number of small businesses. While recognizing that the Proposal would impact roughly 500,000 small businesses across the country, EPA concluded that those businesses would “experience zero compliance costs.” 79 Fed. Reg. at 46,157. While this conclusion on its face is confusing – how can an entity be “impacted” without any resulting cost? – the very real fact is that most if not all of those small businesses will experience significant direct and indirect costs, many of which will be threatened with possible closure as a result.

The Agency’s analysis of the impacts on small businesses is incomplete and flawed. The Agency must conduct a complete analysis of the impacts on small entities before any final regulation can be promulgated. SBREFA requires federal agencies to take steps to collect input from small entities on regulations and to determine whether a rule is expected to have a significant economic impact on a substantial number of small entities. EPA’s analysis is too narrow, incomplete and its conclusions are unsupported.

The Agency failed to collect input from small businesses that are both manufacturers and end users and that will be affected by the proposed changes to existing regulations. Restaurants, hospitals, schools, prisons, florists, food trucks, food transportation, airlines, shipping companies are examples of the types of businesses that rely on the commercial refrigeration products this Proposal would impact, including possibly eliminating production of certain existing product lines critical to those industries’ day-to-day operations. Thus, NAFEM believes that the Agency must collect new input from small entities in these industries, as well as from NAFEM’s small business members. The Agency also must consult with small business service technicians that will be responsible for the installation and maintenance of future products that would comply with EPA’s Proposed Rule. Additionally, the Agency should consult with the testing organizations responsible for testing and certifying the industry’s products to learn about their limited testing capacities. These organizations are already predicting challenges and significant delays associated with products that must be tested and certified to satisfy other recently finalized regulatory requirements, including the Department of Energy’s energy conservation standards.

Had the Agency performed a more comprehensive analysis of the impacts on small businesses, including conducting a SBREFA panel, it would have more adequately identified alternative regulatory approaches for small businesses. Such alternatives are specifically lacking from EPA’s Proposed Rule. As a result, many small businesses face little chance of complying with EPA’s unrealistic and uninformed compliance deadlines.

The EPA could take fairly simple measures to reduce the harmful effects of this Proposal. For example, if the Agency sped up the process to review alternative substances submitted for approval as acceptable alternatives companies would have more options of refrigerants and blowing agents that do not have the safety concerns associated with flammable, high pressure and

toxic refrigerants. Adding these substances to the list of SNAP approved alternatives would create an opportunity for manufacturers to transition to lower GWP refrigerants and foam blowing agents with less burdensome costs. NAFEM refers the Agency to True and Hoshizaki's comments for a discussion on alternatives that should be approved.

Further, this Proposed Rule represents a "major rule" as identified by SBREFA and therefore requires congressional review before it goes into effect. This Proposal will have a \$100 million effect on the economy and will definitely have a major impact on the commercial refrigeration industry and its consumers. The Proposal, if finalized, will affect the industry's competitive marketplace because the cost of implementing these rules will directly result in reducing the number of companies in the market as small manufacturers without the available capital to support up-front costs pull out of the market or go out of business. This rule will affect productivity for small and large manufacturers alike because making the switch to the alternative refrigerants within the short compliance window provided requires significant resources to be reallocated away from new (and more efficient) product development. It also will require manufacturers to stop production while plants are retrofitted to accommodate high-pressure and/or flammable refrigerants. EPA's Proposal also will negatively impact small American manufacturers' ability to sell in the domestic market because it opens the doors to international companies that already have greater access to alternative refrigerants and related component technologies.

#### A. Specific Comments on Small Business Impacts

a. **Reduced Market Variety & Customization:** The Proposal would require manufacturers to redesign and retest every single product they produce. The significant costs, resources and time involved in this process means that manufacturers will have to reduce the variety of models they sell. Customizing products, which is typically the rule in the foodservice industry, will be cost prohibitive.

A significant number of NAFEM's members have expressed their intent to or recent discussions about discontinuing certain commercial refrigeration products as a direct result of the costs associated with implementing this rule. This will reduce the number and types of product offerings in the market with significant impacts on not only the overall economy, but also individual manufacturers and end-users revenue. .

b. **Decreased Market Supply:** If EPA finalizes its SNAP Proposal, the available supply of models will decrease when the compliance dates arrive because the manufacturers will not be allowed to sell any existing supply and will not have a portfolio of products ready to sell that also comply with the new rule.

For example, a NAFEM member company had specific plans with projects underway and scheduled to expand the number and type of commercial refrigeration products they offer. The costs associated with transitioning to acceptable alternatives now represent a barrier that stopped

the development process and indefinitely delay future projects scheduled to be unveiled in the future. The manufacturer also identified increased insurance costs to account for the potential for danger of explosions and fires. On top of the insurance costs, the manufacturer was deterred by the cost and time of developing special safety procedures, training staff in those procedures and equipment necessary to carry out safety procedures, which includes purchasing necessary personal protective equipment to perform the procedures. Finally, the manufacturer noted the significant investments required to install an exhaust hood system to be used with flammable refrigerants. The enormous sum of peripheral costs of transitioning to acceptable alternatives on top of product development and testing has stopped this small American manufacturer from expanding the business. This case illustrates how this rule may lead to plant closures and eliminate competition from the commercial refrigeration market.

These are costs and impacts that EPA failed adequately to assess in its Proposed Rule and which would have been identified through a properly conducted SBREFA panel.

c. **Safety Concerns:** The alternate refrigerants the Agency has approved to replace existing refrigerants that are closest to market availability to commercial refrigeration manufacturers pose several safety concerns. Several of EPA's proposed alternatives are only now available in extremely limited quantities to the entire commercial refrigeration industry. The industry must rely on either flammable or much higher pressure refrigerants to comply with the Proposed Rule.

i. Flammability: The use of flammable refrigerants, such as ethane, isobutane, propane, HFC-32 and R-441A, poses significant safety risks to factories, the appliance service and repair industry, to consumers' premises and to consumers, end-users and workers. There are additional concerns related to providing proper ventilation for this equipment.

NAFEM refers the Agency to ICOR's comments to understand the difficulties associated with servicing commercial refrigeration equipment and supports ICOR's position that the Agency should not finalize the rule without requirements to train service technicians to properly deal with flammable refrigerants and establish proper ventilation during installation. This guidance must include specifications to determine safe distances between standard plant equipment such as welding, assembly and tube brazing areas. Several manufacturers report having these types of potentially hazardous equipment and activities within close proximity to the refrigeration assembly, charging and storage areas. The Agency should not finalize the rule until the Agency determines how to improve the enforcement of guidance to create a safe environment to install, operate and maintain commercial refrigeration equipment with flammable refrigerants.

If the Agency moves forward with its SNAP Proposal, it must provide guidance for small entities that rely on commercial refrigeration equipment to train their employees on safe usage and to prevent dangerous behavior around the products with flammable

refrigerants. This is necessary because it is not intuitive to the average person that an appliance used for cooling may explode if exposed to open flame or sparks.

ii. Differences in Refrigerant Pressure: The use of refrigerants with higher pressure than refrigerants in the current market requires research and may result in dangerous malfunctions with high pressure fissures. NAFEM refers the Agency to ICOR's comments to understand the difficulties associated with servicing commercial refrigeration equipment that relies upon high pressure refrigerants.

d. **Cost Increases Will be Passed to Consumers**: Cost increases related to this change would impose a substantial economic burden on a significant number of small entities including smaller manufacturers and thousands of small foodservice establishments and retailers that are end-users of commercial refrigeration products. The following cost increases will be passed on to consumers and end-users of commercial refrigeration products, if the market allows, or will have to be absorbed by manufacturers.

- Research and Development Costs
- Engineering Costs
- Listing and Compliance Testing Costs (Including Shipping Costs to Third-Party Testing Lab and the Loss of the Unit)
- Plant Retrofitting Costs
- Increased Cost of Insurance Premiums to Accommodate for Flammability
- Increased Distribution and Installation Costs
- Employee Safety and Product Feature Training Costs
- Revenues Lost During Installation Period Due to Need to Stop Operating Open Flame Equipment

e. **Negative Impacts on Productivity**: The proposed rule's compliance timeline, as currently drafted, is impossible for manufacturers to meet because it does not provide adequate time for product research and development, product testing, certification and time for the approved alternate refrigerants to become widely available on the marketplace for commercial refrigeration products. Manufacturers will be forced to dedicate the majority of their engineering and development resources to redesigning products currently sold. This will impair manufacturers' ability to conduct product quality reviews and new product development because they will not be able to spare experts or physical space for product review or new product development projects. Instead the experts' time, revenue previously allocated for product development and quality review and space used to develop new products will have to be diverted to reengineering and testing the current product line to meet the standard and to retrofit plants to ensure products with flammable and high-pressure refrigerants can be assembled and transported safely.

EPA's Proposal also directly conflicts with recently promulgated energy efficiency standards established by the Department of Energy, which relies on specific refrigerants that EPA is

proposing to ban. In fact, EPA's proposed new refrigerants are less energy efficient than the ones it would ban. If less efficient refrigerants and insulation blowing agents are required by the EPA SNAP, this puts commercial refrigeration manufacturers in an impossible situation – manufacture more efficient products using less efficient refrigerants. The new acceptable substitute refrigerants and blowing agents may be less efficient than the present products, which will only exacerbate the issue of the DOE rulemaking's increased efficiency requirements, and vice versa. DOE and EPA must be better coordinated on this issue and both should revisit these intertwined standards as a result.

f. **Unintended Consequences:** The Proposed Rule will have unintended consequences that undermine the Agency's goal of decreasing the emissions of ozone-depleting substances. The increased costs of bringing new commercial refrigeration equipment into compliance need to be passed to consumers to make up for the significant upfront costs required to reengineer the current product line. This will result in consumers keeping older, less efficient products in service longer to avoid purchasing the newer, more expensive equipment, assuming an adequate supply of new equipment can even be made available.

Additionally, any small entity that requires a customized commercial refrigeration product may be forced to keep older products because the costs associated with developing and testing customized products will prohibit manufacturers from offering customized products. Even if products were available, it is likely consumers will still be forced to continue using older products because local fire and building codes may limit the placement of products with the amount of flammable refrigerants required to cool and freeze food at safe temperatures.

Manufacturers and end-users will face dramatic increases in the cost of insurance policies as insurance companies levy against the increased risks of accident and injury with the use of flammable, high pressure, or toxic refrigerants and blowing agents. In addition to insurance costs, it is likely that a portion of manufacturers and end-users will have the added costs of attorney's fees and lost productivity due to local building codes prohibiting these higher-risk substances in small spaces.

### **III. Compliance Timeline**

Foodservice equipment manufacturers cannot switch the refrigerants, aerosols and foam blowing agents in commercial refrigeration products by EPA's proposed compliance deadlines. The Agency must extend the compliance deadline in any final rule. NAFEM suggests an extension of at least ten years to allow sufficient time for safe product development and testing. This also allows businesses to spread the costs over several years instead of assuming the burden of investing high sums of capital up front. NAFEM strongly expresses the manufacturers' conclusions that any

compliance deadline before 2025 will be completely unfeasible to meet and will have dire consequences for small manufacturers.

#### A. Grandfathering

In addition to extending deadlines, NAFEM asks the Agency to consider allowing manufacturers to qualify for additional deadline extensions under SNAP's grandfathering provisions. The Agency has historically allowed manufacturers that transitioned to a substitute deemed acceptable by the Agency to continue using the previously acceptable substitute until the current supply was used up, even if that occurred after the rule's compliance date. The SNAP rule states,

"EPA is authorized to permit the continuation of activities otherwise restricted where the balance of equities supports such grandfathering. Consequently, where appropriate, EPA may grandfather the production and use of particular substitutes by setting the effective date of unacceptability listings in the future. The United States District Court for the District of Columbia Circuit has established a four-part test to judge the appropriateness of Agency grandfathering (see *Sierra Club v. EPA*, 719 F.2d 436(DC Cir. 1983)). This test involves balancing the results of four analyses, including whether the new rule represents an abrupt departure from previously established practice, the extent to which a party relied on the previous rule, the degree of burden which application of the new rule would impose on the party, and the statutory interest in applying the new rule immediately. In each rulemaking listing a substitute as unacceptable where grandfathering seems appropriate, EPA will conduct these four analyses and weigh their results. Where the balance of equities favors grandfathering, EPA will set a delayed effective date for such listings." (59 FR 13044 Section VI.B.)

In this case, commercial refrigeration manufacturers' use of substances on the marketplace now meets the four-part test that makes grandfathering appropriate and necessary. First, the proposed rule's abbreviated period for manufacturers to switch to approved alternatives is abrupt and a bold departure from the current market. The proposed rule also can be qualified as an abrupt departure from previously established practice because the alternatives identified by the Agency as acceptable are not readily available on the marketplace and not currently utilized by American manufacturers.

Second, foodservice equipment manufacturers have relied on the previous iterations of the SNAP rule issued by the Agency that designated the substances currently in use as acceptable alternatives. These companies and small entities redesigned products and built entire product lines based on the use of the substances previously identified as acceptable alternatives. Several manufacturers relied on previous SNAP determinations of acceptable alternatives and chose to transition to 404A to ensure compliance well into the future. The reasonable reliance on the

previous SNAP rulemaking resulted in significant investments by manufacturers. If this rule is finalized as proposed, the change from using 404A will be very costly.

Third, the application of the new rule would impose significant economic burdens on the manufacturers and may endanger human health as workers interact with hastily developed products using the dangerous alternatives the proposed rule requires. NAFEM member manufacturers report compliance cost estimates from \$500,000 to several million dollars depending on the number and variety of custom products the manufacturer offers. The most conservative estimate a member reported was \$500,000, and this was from a manufacturer with less than ten percent of their products in the commercial refrigeration section. The members estimated the costs by determining the number of hours and cost of those hours used for evaluation, research, redesign, testing, implementation and training. Several members cited the estimates assumed each phase of the process went smoothly with no delays or complications. This is significant because these conservative costs estimates could dramatically increase should minor issues occur at any phase. Additionally, several manufacturers did not include the costs to retrofit the plant or lost productivity and revenue while the plants were unable to operate during construction. These costs should also be included in the Agency's revised analyses.

Finally, the Agency's interest in applying this new rule immediately does not have a strong logical or scientific basis. Instead, the Agency capriciously set an arbitrary and unrealistic date contrary to any input the Agency received from commercial refrigeration manufacturers. The environmental benefits from reducing the GWP of refrigerants are de minimis. The life-cycle climate performance of manufacturers show that only about 10% of the environmental impact is due to a combination of refrigerant leak, charge amount and GWP of the refrigerant, the rest relates to energy efficiency. Therefore, the proposed SNAP rule does not account for nor can EPA claim any significant environmental benefits to offset significant costs.

Commercial refrigeration manufacturers have challenged certain unreasonable Department of Energy's regulations that require significant improvements in energy efficiency by 2017 (yet they continue to work on compliance strategies during that legal challenge) and are engaging DOE on other such standards. Manufacturers are now finding that developing a product that may meet both the energy conservation standards and also utilizes acceptable alternatives to existing refrigerants and blowing agents is daunting if not impossible.

These rulemaking actions include:

- Department of Energy's Automatic Commercial Ice Makers Energy Conservation Standards Rulemaking, Docket No. EERE-2010-BT-STD-0037;
- Department of Energy's Commercial Refrigeration Equipment Energy Conservation Standards Rulemaking, Docket No. EERE-2010-BT-STD-003;
- Department of Energy's Walk-in Coolers and Walk-in Freezers Energy Conservation Standards Rulemaking, Docket No. EERE-2008-BT-STD-0015; and



- Environment Protection Agency’s Protection of Stratospheric Ozone: Listing of Substitutes for Refrigeration and Air Conditioning and Revision of the Venting Prohibition for Certain Refrigerant Substitutes, Docket No. EPA-HQ-OAR-2013-0748-0001

To provide the greatest benefit to the environment and human health, the Agency should delay finalizing this rule on refrigerant transitions until the energy conservation standards have been met. EPA also is not under a statutory deadline for the SNAP rule.

Another reason the Agency does not have a statutory interest that requires the immediate application of the rule is that the commercial refrigeration industry makes up a very small percentage of the emissions of ozone-depleting substances. In fact, it makes up a significantly smaller percentage of emissions than the automobile industry, which the Agency granted a significantly longer compliance window to move to acceptable alternatives. The Agency based this on the industry’s design cycles. However, foodservice equipment manufacturers also operate on five year design cycles. Therefore the Agency’s logic is flawed or at best applied arbitrarily. The Agency must set a delayed effective date for these listings as SNAP’s grandfathering provisions require, or withdraw its Proposal in light of DOE’s various rulemakings.

## B. Conversion Timeline

EPA’s SNAP Proposal is vague and has resulted in confusion about what products manufacturers must convert and how EPA will enforce its rule. NAFEM refers the Agency to manufacturer comments that clearly express confusion and suggest language to clarify the proposed rule. For example, BIS’s comments point to industry confusion around EPA’s inconsistent titles for product categories.

Second, the Agency must extend the compliance timeline because it will realistically take manufacturers ten to twelve years to convert to acceptable alternatives. After, consulting with suppliers, testing facilities and engineers, NAFEM member manufacturers concluded that it will take ten to twelve years for manufacturers to convert their product lines to use isobutene or propane. The manufacturers estimate that it will take the following time to complete each phase of the process.

- i. Vendor Development Period for Compressors and Approved Alternatives to be Widely Commercially Available for Commercial Refrigerators in the US Market : 2-3 years
- ii. Development of Related Parts to be Redesigned and Third Party Certified: 2 years
- iii. Rework and Approval of Manufacturing Facility by OSHA: 2 years
- iv. Redesign, Test & Third Party Approval of Models: 4-5 years

NAFEM refers the Agency to other foodservice equipment manufacturers’ comments, such as Unified Brands, that state it would take their company “9-11 years to transition from R404A to suitable non-flammable alternatives.” This is true for the majority of manufacturers and nearly

all small manufacturers. Therefore, delisting of R404A should not be effective until ten years after the rule is finalized and in no case should any manufacturer be expected to transition prior to 2022.

After consulting with condenser unit suppliers, NAFEM member manufacturers report that they will be unable to convert their products from R134a and R404A to R290 by 2016 because the condenser unit suppliers do not currently have air-cooled R290 condensing units available for testing or product design needs. Furthermore, the condenser unit suppliers have stated that they need one to two years to develop air-cooled condensing units that are capable of using R290. As a result, if the delisting goes into effect in January 2016, as EPA has indicated, manufacturers will be forced to close refrigeration factories and layoff a significant portion of their workforce.

In addition to uncertainty surrounding component parts, small manufacturers are faced with the uncertainty of which refrigerants and blowing agents will be available in the marketplace in the future. Small manufacturers cannot compete with large manufactures that can use their influence with their suppliers to dominate the market for certain refrigerants or condensers using those refrigerants. Therefore, small manufacturers have no choice but to wait to see what products will become available. This fact requires an extension of the compliance deadline to switch to acceptable alternative substances in commercial refrigeration products.

Once a product is developed, manufacturers will have to test each product model. Testing costs are routinely several hundred thousand dollars and increase with the variety and level of customization offered. In addition to the significant costs associated with testing, manufacturers will lose revenues waiting for the limited number of testing facilities to accommodate the entire industry's products. Manufacturers with in-house testing facilities will also incur significant costs. Several manufacturers with in-house testing facilities only have one or two engineers qualified to address refrigeration products. These manufacturers state that those individuals' time will have to be completely dedicated to the transition, resulting in the delay of scheduled products.

NAFEM offers the following suggestions for EPA's consideration. First, NAFEM suggests the Agency reviews manufacturers' comments that suggest the responsibility of quickly developing acceptable alternative substances be placed on the suppliers, not the manufacturers. The Agency should repropose the SNAP rule to modify its applicability appropriately.

Second, the Agency should clarify several product categories and establish new product categories as discussed in these comments. Necessary clarifications include determining what factors determine a product is a "large-sized unit" that must comply with additional requirements. The Agency also should analyze the language that covers transport refrigeration. These provisions need to be clarified to explain what products fall into this category and provide additional options for transport refrigeration compliance. The Agency also needs to rewrite the provisions related to blowing agents because as it currently reads it applies to products outside the scope of

commercial refrigeration. The Agency has publicly stated that this is not their intention so they must bring their intent and the rule's language into accordance.

#### **IV. Technical Concerns**

When choosing a refrigerant and designing a commercial refrigeration product, manufacturers must consider several factors to ensure a product meets the needs of all end-users. The criteria manufacturers consider include food safety, energy consumption, environmental impact, product life-cycle costs, reliability, worker safety and an assessment of the full range of regulations affecting the industry.

NAFEM requests the Agency consider the need to maintain refrigerants under 2500 GWP as acceptable alternatives for commercial refrigeration equipment. Specifically, R134a should not be delisted for this application until such time that the transition from R404A can be finished and suitable non-flammable alternatives are available for R134a. Similarly, for blowing agents, we urge EPA to maintain R134a as an acceptable alternative until 2025. Meeting the proposed January 2016 deadline is impossible.

##### **A. Flammable Refrigerants**

NAFEM requests that EPA allow refrigerants from the A1 group as acceptable alternatives. The consideration for the environment, flammability, consumer risk and cost are important factors when considering acceptable refrigerants for machines. NAFEM also requests that the Agency refers to the safety concerns based on technical interactions between equipment, placement location during manufacture and operation, and unavailability of critical component parts discussed in these comments and comments submitted by other foodservice equipment manufacturers.

The Agency must consider the complications associated with using flammable refrigerants and charge limits. One issue is that when using alternatives the limitations on the amount of refrigerant permitted in the commercial refrigeration equipment is not enough to sufficiently cool or freeze the contents of the commercial refrigeration equipment, especially following a defrost cycle, through door openings/closings or during product temperature pull-down. The charge limit and need to use capillary tubes in all products' applications invariably will require more energy consumption, conflicting with the Department of Energy's new energy conservation standards.

##### **B. High Pressure Refrigerants**

Currently, the Agency has identified carbon dioxide as an acceptable alternate. NAFEM also requests an extension of the compliance date for commercial refrigeration equipment transitioning to carbon dioxide. Carbon dioxide requires very high pressure to operate in

commercial refrigeration equipment. Building and selling products with high pressure refrigerants has several safety concerns for workers and end users.

The variance in pressure levels means carbon dioxide is also not a 'drop-in' replacement. Therefore, manufacturers will need until at least 2025 to redesign, manufacture and safety test models.

### C. Toxic Refrigerants

The Agency lists ammonia as an acceptable alternative to replace refrigerants currently on the market. This refrigerant is also not a drop in replacement and will similarly require a compliance deadline of no less than ten years after the date the rule is finalized. Ammonia is of particular concern to human health and safety because of its toxicity.

### D. Blowing Agents

The compliance deadline to transition away from blowing agent R134a does not provide manufacturers with sufficient time to integrate removing such agents that have been delisted and incorporate the new blowing agents into products. The transition away from R134a requires similar capital investments, dedicated research and development resources, employee training, product testing and certification. Therefore, NAFEM requests that R134a is considered an acceptable alternative for ten years after the rule is finalized, and under no circumstances should it be delisted before 2022.

EPA has failed to recognize important complications with the blowing agents that it now deems acceptable alternatives. Unified Brands describes such complications in their comments, specifically with the alternatives pentane, water-based blowing agents and methyl formate:

"Pentane based blowing agents are strong candidates due to their insulation performance, but require all foam fixtures and processes to be redeveloped due to the flammable nature of the refrigerant. Water based blowing agents are environmentally friendly but suffer from poorer insulation performance and are also more affected by processing temperature which requires improved control of fixture temperatures. Methyl Formate is also environmentally friendly, but has had significant shrinkage issues once units have been placed in the field. This agent requires very specific foaming processes to be developed to ensure proper stability of the foam over time. While viable alternatives do exist, the amount of testing and factory / process upgrades required make it impossible to transition to any replacement by January 1, 2017."

These complications are not unique to any one manufacturer. Manufacturers require more time to safely transition to these alternatives. The Agency must extend the compliance deadline to no less than ten years after the date the rule is finalized.

NAFEM requests the Agency conducts a study to determine the effect on the environment of the discontinued use of the targeted refrigerants for each segment using the refrigerant escape estimates noted in the comments submitted by Nor-Lake, Inc., rather than overall use of refrigerants per segment. This method of analysis will give a more accurate picture of real life conditions and emissions. NAFEM also refers the Agency to foodservice equipment manufacturers' comments that suggest a more appropriate order for delisting refrigerants per segment. For example, Nor-Lake suggests the Agency delists in the following order:

- 1) Aerosols,
- 2) Foam blowing agents,
- 3) Automotive AC and
- 4) Stand-alone factory charged retail food refrigeration systems.

#### E. Response to the Agency's Icemakers Inquiry

The Agency asked for comments on commercial icemakers in the proposed rule. NAFEM refers the Agency to comments submitted by Hoshizaki America. An excerpt of the comments is below:

"Compared with Commercial refrigerators/freezers Commercial ice makers are limited in the size of the system to use with propane/isobutene. UL requires that each refrigeration system cannot use more than 150 grams of flammable refrigerant for safety purposes. Tests show that the maximum size ice machine that can run on 150 grams of propane is around 700 pounds. Our ice machines range up to 2500 pounds of ice per day. Ice machines should not consider [i]sobutane or [p]ropane at this time so as to not have a mix of flammable and non-flammable choices on the same production lines. Having to mix the use of a flammable and a non-flammable refrigerant on a main production line would cause much complications and would necessitate a full redesign of our production line which would translate to much cost that would have to be passed on to the end user.

Added to the confusion, commercial ice machines are used in the front of the restaurant on top of drink dispensers. Many local municipalities will not allow for flammable refrigerants to be put in contact with customers. This would disadvantage this market and add problems in transitioning to new refrigerants if our machines cannot be placed where they currently are used... Hoshizaki America recommends that the EPA hold off on any changes to the use of R-134a or R-404A with commercial ice machines until there is a viable alternative that would be a drop in non-flammable choice. There are blends in

development and would be a great benefit to wait for the improvements to be tested and listed for use with this application to show all the possible benefits.”

NAFEM agrees refrigerants used by commercial icemakers should not be delisted for the reasons listed above.

## **V. Conclusion**

EPA’s Proposed Rule must either be withdrawn or undergo significant changes before it is finalized. The Agency must reevaluate the analyses associated with the impacts to small entities and conduct a SBREFA panel. The Agency must extend the timeline to transition to acceptable alternatives for blowing agents and refrigerants to no less than ten years after the date the rule is finalized. The Agency must clarify language defining product categories that are covered by any future regulation. The Agency also must create a certification program for service technicians and generate guidance for end-users to ensure that any employees working with products with flammable and high pressure substances operate them safely and are appropriately protected. Without significant modifications to the Proposal, the commercial refrigeration manufacturing industry – and industries that rely on commercial refrigeration products – will face dire consequences and future shutdowns, including, a significant number of small entities that use these products to serve the general public.

NAFEM supports other comments submitted by foodservice equipment manufacturers and directs the Agency to those comments for information on the realities specific manufacturers are facing and specific technical information related to their product categories (some of which may be submitted as confidential business information). These comments include, but are not limited to, documents submitted to the docket by: Aladdin; Emerson; Franke Foodservice Systems; Hatco; Hoshizaki America; Intermetro; Nor-Lake; RPI Industries; Structural Concepts; Traulsen; True; and Unified Brands. NAFEM also refers the Agency to the comments submitted by downstream stakeholders and end-users that express significant concerns that the Agency has failed to acknowledge or consider their impacts in the analyses associated with this rule.

NAFEM appreciates the opportunity to comment on the proposed rule and looks forward to working with the Agency to develop alternatives, including but not limited to, a feasible compliance timeline for the refrigerants and foam blowing agents and to establish terms to incorporate commercial refrigeration manufacturers into the grandfather provision provided in the SNAP rule.

Respectfully submitted,

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