Environmental Protection Agency

Proposed 608 Refrigerants Management Rule

Public Hearing

Tuesday, October 16, 2018

2:00 p.m.

Environmental Protection Agency 1200 Room 111

7A EPA East Pennsylvania Ave, NW

Washington, DC 20460

Reported by: Gary Euell

APPEARANCES

Jerry Weiss, ESCO

Howard Weiss, ESCO

Jason Obrzut, HVAC Excellence

Eugene Silberstein, Cengage Learning

Satish Natarajan, Seva EHS, Inc.

Helen Walter-Terrinoni, Chemours

Stephen Mandracchia, Hudson Technologies

Russ LaMotte, Beveridge & Diamond, P.C.

Alex Hillbrand, NRDC

Alexander von Biskmarck, EIA

P R O C E E D I N G S

MR. LUKE HALL-JORDAN: All right, folks, we're going to get started. I think the last batch of folks has come through the security, so we'll go ahead and get the hearing started as folks take their seats. And I'm not used to using a microphone, so forgive me if I pause with this. Thank you everyone for coming. We really appreciate your interest in this proposal and in commenting on the rule. My name is Luke Hall-Jordan. I'm the Branch Chief for the Stratospheric Program Implementation Branch. It's a mouthful. My group is responsible for managing the day to day on this proposed rule making as well as the Section 608 Refrigerant Management program. With me today is Sara Kemme, who will be calling speakers. She also helped develop the proposed rule, and manages our 608 program. On my left is Jeremy Arling, who is our refrigerants team leader and is also involved with the rule making, as well as day to day management of the program. There are some other EPA folks in the

room as well, so you'll probably see some other faces you recognize. Feel free to chat with any of us. Also up here to the right – my right, your left – is Gary Euell, who is our court reporter. He will be transcribing your comments.

So, before we get started, I suspect everyone has already signed in. There was a sign-in sheet by the front door but if you haven't, please do. We use this to sort of docket the meeting and make sure we have complete attendance, so thank you for doing that. So, why are we here today? We're here to receive oral comments on the proposed rule titled "Protection of Stratospheric Ozone: Revisions to the Refrigerant Management Program's Extension to Substitutes," which was published in the Federal Register on October 1st of this year. I'd also like to note that the purpose of today's hearing is not to answer individual questions on the proposed rule; it's our opportunity for you to provide oral feedback and comments on the rule. However, if you do have questions or would like to discuss the proposal in more detail, please let

one of us know. We'd be happy to set up an additional time to talk with you about any concerns you may have. Any documents that you provide today or in those meetings would also be put into the docket for this rule making.

As I noted, we do have a court reporter here. Your remarks will be transcribed and we will have a transcript of the meeting that gets put into the docket. Now, we would expect that to be available in about three weeks so that should be up in the not-too-distant future. Now, providing oral comments this afternoon does not prevent you from providing written comments; in fact, we'd encourage you to do that as well if you're so inclined. You can do that directly to the docket. As a reminder, the comment period for this rule closes 30 days from today on Nov. 15, 2018. You can visit www .regulat ions.gov and look up our docket ID number which is EPA-HQ-OAR-2017-0629. It's also in the rule, so you can look there as well.

Now, we have a list of folks who RSVP'd in

advance to speak. Sara momentarily will be calling speakers in the order in which the registration was submitted, and if there is anyone else here who would like to provide oral comments today, but did not RSVP in advance, that's okay, too. We welcome that, but please see Sean in the back. Sean, if you want to raise your hand – just to make sure he knows that you do want to speak so that we can get you added to the queue.

Finally, so instructions for testifying, or providing your oral feedback. Please come to the podium up here. You're going to use this microphone which we'll be moving up in a second. State your name and affiliation and if you have a name that's difficult to spell or a company name or organization name that's difficult to spell, please spell it out for Gary so that he can get that in accurately. Speak slowly, clearly, and directly into the microphone. And to ensure that everyone has time to provide their oral comments, let's try and keep it to ten minutes or less for any comments. It's not going to be a hard and

fast timing, since there are not a ton of speakers, but I would certainly encourage you to keep it short, sweet and to the point to the extent possible. Now, if you're reading from a prepared statement, please consider providing a copy of that to one of us or to Gary before you leave, so that we can make sure that we transcribe your comments accurately. So, for those people that signed up – that didn't sign up, definitely even more important, so making sure we have your name and affiliation just so we can make sure that's accurately reflected. With that, I'm going to hand this over to Sara to walk through the names.

MS. SARA KEMME: Our first speaker is Jerry Weiss, ESCO.

MR. JERRY WEISS: Okay, hopefully everybody can hear me and there is a tremendous echo in this room, so I'm going to make it less than 10 minutes. We have a little group here, but each have something else to offer and contribute to the entire conversation. In looking at the proposed

rule there was one section that stood out blatantly, and that was the expense of repairing equipment versus just refrigerant replacement. And that's predominantly what I'm going to address at the moment. Somewhere along the line someone came up with 39 million dollars to repair equipment, and I presume that meant annually repair because something else is breaking down every year, with only 15 million dollars for the cost of replacement refrigerant. The first problem is it doesn't take into consideration a ton of different expenses. Fifteen million dollars worth of refrigerant on a 39 billion dollar – and I don't buy either of those numbers – it's going to be higher – but nonetheless, the entire point is that systems don't leak less the following year. They're going to continue to leak, so the leaks that were not repaired that first year, by the third year you've now exceeded the cost of repairing it. Moreover, there is the cost of energy. When systems are running low, the compressors run longer, the systems consume more

power overall. So, you're talking about small leaks can lead to anywhere between an 18 and 23 percent increase in energy usage that wasn't considered in those numbers. The lifespan of the equipment, or service life of the equipment, is diminished by about the same percentage because of the additional run time. I don't think those were considered, so when we start talking about getting rid of these repair requirements, particularly for larger systems, then realistically most corporations are going to look at it as an ineffective method of doing business and not repairing it. And we can show numbers and prove those numbers as to energy consumption, lifespan change, and a variety of other issues that we'll put in our comments as we go along rather than try to take up a lot of time for this moment, but I think everyone's got something to say and if everything goes right today we'll probably cover a broad range of subjects that are necessary to cover relative to this proposed rule. Thank you.

MS. SARA KEMME: Howard Weiss, ESCO.

MR. HOWARD WEISS: Good afternoon everyone. I'd just like to cover a few things. I don't think that the ruling appropriately addresses the entities financially impacted. I took a look at a lot of different groups not covered. HVAC education, which has the responsibility for incorporating the regulations into their curriculum. These instructors at high schools, community colleges, trade schools, apprenticeship programs, they have to actually undergo a training to learn the current regulations and revise their curriculum. In doing so, they had to submit that to a state, accrediting body or both. This was a costly and timely process. What we're now asking them to do again, potentially, is to do this again. That's a lengthy and costly process most schools can't afford. We're talking in the tens of millions of dollars. Publishers have already encouraged – excuse me, have already incurred a cost to redo their textbooks, training manuals, software, and supplementals. These companies have already built these new – produced these new

textbooks. None of this has been accounted for. This would essentially make all of their training manuals need to be revised yet again.

HVAC equipment which is distributed through authorized dealers who buy it through thousands of wholesalers: These wholesalers have spent a lot of time redoing their point of sales software, retraining their customers, retraining all their clientele to meet the 2016 rulings, and now we're asking them to do all of this again. Many of these wholesalers are small companies. This is a large capital expenditure that they put out. I'm not sure that all of them could do this again, especially in this short of time.

Certifiers were issued a new bank of test questions earlier this year, asked to produce new training materials, and new certification exams. We haven't accounted for that. We just completed this costly project. At this point we would now be asking everybody to redo these programs yet again. Worse yet, we could wind up with three different certification programs in one year.

The tasks of refrigerant tracking and leak detection spurred the creation of new American businesses. These companies have invested to develop instruments and software to assure compliance. No one's taken a look at all these small companies that essentially these regulations will make their products obsolete, costing American manufacturing and programming jobs.

When we do a complete accounting of all of the business types, we still haven't talked about the cost of retraining everyone again. If you look at the Bureau of Labor statistics and look at how many people are in HVAC, but start looking at related trades that use refrigerants, steam fitters, sheet metal workers, operating engineers: We're looking at – we just spent two years training one million people. What would it cost to retrain one million people again? If I take the average supply house cost of $150 for a class, that's 150 million dollars right there. It seems like just a couple of years ago the EPA went and asked the industry for help. As a result,

manufacturers HRI, AHAM; wholesalers Hardy; contractors ACA, MSCA; educators HVAC Excellence; technicians RCSC – we all worked together to help the EPA create something that helped them move the program forward and eliminate all the ambiguity. It just seems right now what we're doing is actually moving everything backwards and going to create a great deal of chaos within the industry considering everyone has pretty much already moved to comply with the regulations. Thank you.

MS. SARA KEMME: Jason Obrzut.

MR. JASON OBRZUT: Good afternoon everyone. That's O-B-R-Z-U-T, it's pronounced Ub-zoot. Yeah, it's out there. I'm here on behalf of HVAC Excellence and I'm going to address a few things. One of the things I'm going to speak to is the illegal authority, or the lack of authority, to propose changes or the authority that was granted or taken for granted in the 2016 ruling. And as one of my colleagues pointed out, I'm also going to touch on the energy consumption of systems that are leaking.

One of the statements in the proposed ruling is that it's based on feedback from some in the regulated community, in particular more on the industrial process refrigeration. Now this, by itself, is a small portion of the industry itself. There's many more entities in the industry. The November 2016 ruling was the result of two years of industry engagement declared by regulations to remove ambiguity and to modernize the program. In pursuit of these changes, the EPA actively conducted stakeholder meetings starting all the way back in October of 2014. They presented at industry events. They were at different trade shows. And they published in different media seeking industry comment on the proposed rule. Only after this two-year process did we come with the 2016 ruling. The newer ruling here, this proposed ruling, is going to undo the clarity that was provided and the readability of the existing regulations. The 2016 ruling, we believe, was in the best interests of the environment, done in the spirit of the Clean Air Act, and in line with the

EPA's core mission of protecting the environment and its occupants. It was supported by leading manufacturers, contractors, the education industry and many more.

I'll try to make this quick. Getting to the statutory authority, one of the themes that I noticed was that they're constantly referring to 608A, 608C, C1, C2 and how they're individually taken as individual statutes and its our interpretation that the Clean Air Act should be interpreted as a document in its entirety. It's the sum of all of its parts. It shouldn't be picked apart section by section to conclude legal authority. We do believe that it should be taken as an entire document and not piece by piece.

In the 2016 ruling, there were a few different things that were stated for authority, in particular Section 301, Section 114, and the Supreme Court case Chevron. I would also like to add to that Section 615. We believe that these individual sections would give, absent congressional authority, the EPA the statutory

standing to do the things that they stated in the 2016 ruling. So, I believe these are arguments made in favor of the authority proposed in the 2016 ruling.

Also stated in the proposed ruling is they were taking comment on rescinding the full set of subparagraph requirements. This would be a very big – is this the appropriate time to comment on that? All right. This would be a big disturbance to the industry. Subpart F requirements are used for sales, certification, recovery, disposal, things like that. They are necessary to enforce or to comply with section 608C2 which is the prevention of substitute refrigerant venting. I don't believe – we don't believe at this time that without Subpart F there would be any kind of enforcement or compliance with Section 608C2. Rescinding the leak repair rate, as stated earlier, is going to cause systems to consume much more energy. Systems that leak are running at an under-charged condition. As little as two ounces in a residential unit can significantly impact its

capacity which makes the coolant run longer. The longer run times associated with systems that leak were resulted in an increase in energy consumption. When the number of systems that are currently operating with leaks is added to the number of systems that are going to be allowed to operate with leaks after this ruling, the numbers are going to be significant. There is going to be a substantial increase in the amount of energy consumption. We can show, using the government website, that HVAC equipment is responsible for at least 40% of the consumption on the grid and we're going to magnify that by allowing these systems to continue to operate in an undercharged condition. As mentioned earlier, that there's a lot of businesses that are going to continue, as a means of doing business, to add refrigerant to systems in lieu of replacing it, until the tipping point hits the point where it now makes sense to repair it. There's no motivation to repair this system until the cost of refrigerant gets to the cost of repairing it. That could take years and, as

stated earlier, leaks don't get better, they get worse.

There's an Executive Order, actions that significantly affect supply, distribution or use of energy. It is Executive Order 13211. It is stated in this ruling that this particular 2018 proposed ruling won't add a significant impact on the energy consumption in this country, and I believe that it's going to. Thank you.

MS. SARA KEMME: Eugene Silberstein.

MR. EUGENE SILBERSTEIN: Good afternoon. My name is Eugene Silberstein and I am the co-author of Cengage Learning's Refrigeration and Air Conditioning Technology. This title is a comprehensive, 1700 page HVACR textbook that is used in approximately 1000 HVACR training programs nationwide. I am not here as an official representative of Cengage Learning but as an individual who is concerned about the changes in the HVACR industry that will likely occur should the 2016 rule, or parts thereof, be rescinded. Although there are many concerns about the

proposed revisions to the refrigerant management program's extension to substitutes, I will briefly address the one area that is of particular concern to me, namely the effects of this proposed rule change on the HVACR industry publishers and authors. The Regulatory Flexibility Act states that a rule will not have a significant economic impact on a substantial number of entities if the rule relieves regulatory burden and its known that burden or results in a positive economic effect on the affected entities. The potential affected entities listed in table 1 of the proposed rules are industrial process refrigeration; commercial refrigeration; comfort cooling; plumbing, heating and air conditioning contractors; manufacturers and distributors of small cans of refrigerant; refrigerant reclaimers; disposers and recyclers of appliances; refrigerant wholesalers; and certifying organizations such as environmental test labs. All the areas of concern that will definitely be affected by this proposed rule change include, as mentioned by some of my

colleagues, education and training, publishing, personal health, product loss, energy costs and emergency HVACR system repairers. The costs associated with this proposed rule change do not take into account the economic effects on the companies and organizations that encompass and/or participate in these areas.

On the publishing front, there are four major publishers of comprehensive HVACR textbooks. These companies are: Cengage Learning, American Technical Publishers (ATP), Goodheart-Wilcox, and Pearson. Although I cannot speak on the costs that will be incurred by other publishing companies, I do have information that was provided to me by the administration and management at Cengage Learning. In an effort to avoid providing a line-by-line assessment of the economic challenges to be faced, the areas of concern include, but are definitely not limited to, development, printing, designing, project management, composition, outside vendors, digital platforms, engineering, web updates,

representative training, web events, flyers, publications and, in worst case scenario, book destruction. The total financial exposure to Cengage Learning would be in excess of 1 million dollars in addition to a total turnaround time for incorporating changes of between 12 and 18 months. Changes to regulations could negatively impact sales and also have a negative impact on the Cengage Learning grant. Inaccurate or incomplete materials would translate to a large number of students in the HVACR industry having incorrect information. With 25,000 copies of the Refrigeration and Air Conditioning Technology title being printed at any given time, this would have a major impact on the economic health of the company. Warehouse inventory of this type alone never falls below 15,000 units at any given time. Although the numbers I have presented represent this one title, Cengage has numerous other titles on its trades and technology list that will be affected by the proposed regulatory changes. Since Cengage Learning is only one of the largest

of the four publishing companies that produce HVACR textbooks, the negative economic impact would be felt at all of these organizations.

On the certification front, there are over six dozen EPA certified bodies with the largest eight being the ESCO Institute, BGI, North American Technician Excellence (NATE), Refrigeration Service Engineers' Society (RSES), Air Conditioning Contractors of America (ACCA), Florida State University, Main Stream Engineering and the UA – United Association. Each of these organizations has invested heavily, to the tune of at least one to two million dollars each, to prepare new examinations, study materials, webinars, proctor packets, proctor presentation materials, internal training, marketing, advertising and other associated costs. It is, therefore, quite reasonable to conclude that the costs associated with publishing and certifying will significantly increase the financial burden of implementing these proposed changes. This, of course, has not even addressed the costs

associated with the results of having unskilled and/or uncertified individuals working on our HVAC systems. These areas of concern include inefficient system operation, increased energy costs, sacrificed human health, premature system and equipment failure, and refrigerated product losses due to improper system operation. Keeping systems properly charged and operating correctly by periodic inspections and service saves money. Prescriptive, predictive and preventative maintenance is much less expensive than emergency repair service. Removing the very regulations that have been put in place to increase the quality of our industry will only serve to move the industry in the wrong direction. Thank you.

MS. SARA KEMME: Mr. Satish Natarajan.

MR. SATISH NATARAJAN: Good afternoon. I am Satish Natarajan. I'm a small business owner. I have some big clients, international companies in the U.S. and the world. I think about most of the questions, or whatever comments I wanted to but I just want to add that this rule has got a very big

impact on our industry and my clients specifically, because the last two years we have been planning for this rule we've spent over, I would say almost 10,000 man hours between us and our clients because they have real estate buildings. They own buildings of more than like 1 000 buildings in the country and we are going to be impacted – it's going to create a lot of confusion because we have created software, done a lot of training and we are all ready to go. You know, and now this rule – we just happened to come upon it accidentally, we didn't have time to prepare for it and to go back and tell them that everything goes out. It's like we have to again redo the software. It's a big task. So, basically I would like EPA to reconsider rescinding this rule and we could probably look at the rule as it stays now and see what small tuneups you could do to, you know, make it a little more efficient and less burdensome.

So, a couple of things which I would like to talk about is 82.156, the record-keeping. The

regulations do not require a breakdown of all the refrigerants as disposed when an appliance is greater than 50 pounds of charge. You don't need any documentation if it's reclaimed or destroyed, whereas for small equipment, equipment between 5 and 50 pounds of charge, if they are disposed, the current rule has the technician to require the document to break down the quantity transferred for reclamation and quantity transferred for destruction. So, we're just trying to – it's kind of unclear why there is more or less tasked, all of this paperwork for smaller appliances compared with the ones greater than 50 pounds.

The second one is when you talk about the definition about venting, either way you guys go you have to clarify how you define venting so that it excludes leaks. The regulations should explicitly clarify that leaks, which are not yet repaired within the 30-day windows, are not subject to the venting prohibition. If you say a leak was there since day zero, but the parts which are required to repair it only arrive on day 20,

then the appliances are still allowed – they should be continued to operate between days zero and 20 and that should not be counted as knowing release, if you know what I'm saying. So, you should at least clarify and define venting a little more also. Thank you.

MS. SARA KEMME: Helen Walter-Terrinoni, Chemours

MS. HELEN WALTER-TERRINONI: Hi, my name is Helen Walter-Terrinoni and I work for the Chemours company which is a 200-year-old start up born three years ago. As part of our history for the last 85 years our business has been integral to the development of industry-changing refrigerants and other products that provide critical societal value across a variety of applications including refrigeration and air conditioning business. Chemours continues to pioneer innovation today as we near completion of a more than 300 million dollar investment in Corpus Christi, Texas, for the production of new refrigerants. We also have significant experience as a regulated entity using

the same significant quantities of the same refrigerants that we produce. My first job as a new engineer with Dupont was to work on leak reduction. At the time we were working to operate in a more environmentally responsible manner. Accidentally, we saved a tremendous amount of money, both in refrigerant costs and also in energy savings. Proper leak management reduces releases of sometimes hazardous chemicals cooled by these systems by reducing the load to abatement equipment and reducing the risk of operation outside of safe parameters. We view this rule as a mere extension of maintenance best practices to HFCs that does not require any significant modification to our current maintenance procedures. The rule provides much needed clarification on what actions constitute a violation of the venting prohibitions with respect to HFCs and other substitutes. The requirements of the rule with respect to ozone depleting substances are also perfectly reasonable. Little in the way of new management processes or software

or additional personnel are necessary to comply with these provisions. The extension of this rule to HFCs also does not require significant modification to our current best practices of maintenance procedures already adopted by many users of HFCs including ours. Without this rule, substances used in the same application would be subject to different regulatory schemes depending on whether the substance is an MPS, an ozone-depleting substance, or a substitute creating confusion in enforcement in the industry before the rule was promulgated. The rule mistake-proofs the industry. Altering the final rule would create some uncertainty for the industry businesses in terms of potential liability for violations of the venting prohibition and could negatively impact businesses involved in maintaining, servicing, repairing or disposing of refrigerant and cooling equipment.

During the rule making process, EPA had significant stakeholder engagement and removed the portions of the rule that might have recreated a

significant burden such as replacement requirements. The agency modified leak limits based on stakeholder feedback and made other modifications to ease the compliance burden. We found that the EPA was r\very responsive to feedback from the affected industry, including us. We agree that as EPA stated in the preamble to the final rule that a clear regulatory framework for determining what requirements apply during maintenance, servicing, repair and disposal of such equipment containing a non-exempt substitute refrigerant, the regulated community and the public would not have the same measure of certainty as to whether such releases violate the venting prohibition or fall within the diminished exception to that prohibition and what steps must be taken to comply with the Clean Air Act obligations for such substitute refrigerants in undertaking such actions.

The rule provides a responsible, reasonable, cost-effective framework, reducing industry costs and mistake-proofing refrigerant _____. We

encourage you to maintain the previous status of the rule.

MS. SARA KEMME: Steve Mandracchia.

MR. STEVE MANDRACCHIA: Actually, I have two statements to deliver, one on behalf of the Alliance for Responsible Atmospheric Policy and one on behalf of my company, Hudson Technologies.

My name is Steve Mandracchia, and I am Vice President of Legal and Regulatory for Hudson Technologies, which is the largest reclamation company in the United States. I am also Chair of the Legal Committee for the Alliance for Responsible Atmospheric Policy.

The Alliance was established in 1980 as a means for businesses that relied on chlorofluorocarbons (CFCs) to coordinate their participation in the development of

U.S. and international policies addressing stratospheric ozone depletion. It represented businesses that produced CFCs, as well as manufacturers that used CFCs in air conditioning, refrigeration, appliances, foam insulation, other

foam products, electronics, aerosols, and metered dose inhalers.

In the late 1980s, the Alliance was the first industry organization to call for an international environmental agreement to address ozone depletion. The Alliance concurrently monitors policy developments at the international, federal, and state government levels. Its overarching goal is to encourage responsible, reasonable, and cost-effective ozone protection and other related policies at the national level.

Today, there are approximately 50 Alliance member companies and trade associations, including those in related industry associations whose members' services rely on these chemicals. The Alliance also includes distributors, wholesalers, contractors, and refrigerant reclaimers. According to a recent study, the US fluorocarbon using and producing industries contribute more than $206 billion annually in goods and services to the US economy and provide employment to more than 593,000 individua ls with an industry-wide payroll

of more than $34 billion.

The Alliance is now primarily concerned with developing an orderly transition away from the use of HCFCs and HFCs in a managed process which allows its members to move towards alternative substances while continuing to meet the public's increasing demand for safe, efficient products such as refrigeration, heat pumps, fire safety systems and medical devices, as living standards and societal needs increase across the world.

With respect to the proposed modifications to refrigerant management rules under Section 608 of the Clean Air Act, the Alliance makes the following points:

- We do not support the proposed rule to the extent that it seeks to rescind the leak rate and leak repair requirements.
- We urge EPA to retain the extension of all of the 608 regulations to all non- exempt substitutes
- As EPA has previously stated, the agency has absolute authority under section 608 (a) and

(c), and section 301 to require reasonable measures for proper management of HFC refrigerants contained in the 2016 rule. The only reasonable interpretation of the statutory prohibition on venting requires the Agency to specify how the statutory mandate will be enforced.

- The Notice of Proposed Rulemaking offers little justification as to why EPA has now determined to reverse its prior interpretation and conclude that any part of the 2016 rule is no longer justified or authorized.
- Industry embraced the 608 regulations and invested in training, equipment and policies to ensure compliance as reported by one of the speakers earlier today. Extension of 608 requirements to HFCs imposes no significant burden and is just a continuation of business as usual for the industry.
- Introduction of broader range of substitutes requires increased training and professionalism within the service industry, both to ensure proper operation of equipment as well as

to ensure safety for customers and service technicians themselves.

- Proper handling of all refrigerants is necessary to avoid contamination, with ozone depleting substances and non-fluoridated refrigerants alike, and to avoid mistaken emission of all classes of refrigerants.
- The industry needs to maintain leak repair requirements for equipment above a 50-pound charge due to the importance of operation, performance, and energy efficiency considerations. The EPA itself has stated that properly charged equipment are 5-20% more efficient than improperly charged equipment.

The elimination of the reclaim requirement will eliminate any restriction or prohibition on the use of contaminated refrigerant for service and will undoubtedly lead to an increase in premature catastrophic system failures, resulting in loss of the refrigerant, voiding of equipment warranties and significant consumer/end user costs to replace these failed systems

- The recovery and reclaim requirements are essential to ensure compliance with the statutory no-vent rule and provide guidance to industry as to practices needed to ensure compliance.
- EPA has already determined that these rules are reasonable and necessary to enforce the statutory mandate. Rescission of these rules as applied to HFCs would be arbitrary and capricious and abuse of EPA's authority.
- Elimination of 608 requirements for HFCs will create confusion and inconsistency in the service industry allowing different rules and practices for different refrigerant.

In sum, we strongly encourage the EPA to maintain a holistic approach to refrigerant management and an inclusive approach to covered compounds. A consistent set of requirements is critical to good performance and safety. It is simply not true that eliminating these requirements would minimize service visits and reduce repair requirements or costs. The single largest expense of owning and operating cooling

and refrigeration systems is its lifelong energy consumption. Poor or improper service of this equipment can significantly increase the cost of ownership over time. Further the confusion with respect to dealing with several classes of refrigerant compounds could lead to mistakes in the field.

We appreciate this opportunity to comment today, and look forward to elaborating on our comments in writing by the comment deadline.

I put my other hat on. As I said before, I'm the Vice President of Legal and Regulatory at Hudson Technologies. Hudson is the largest refrigerant replacing company in the country. We are a small business that started in a garage in 1990 and now employ close to 300 people. We create considerable value to our customers by buying used, contaminated refrigerant and returning it to the purity standard of new refrigerant that can be reused in the after market. Without compliant reclamation companies like Hudson Technologies, systems owners would be

forced to replace their systems with old refrigerants like CFCs and HFCs which are no longer produced. The EPA initiated this rulemaking due to its determination that the agency exceeded its authority in the 2016 rule with respect to leak repair and maintenance requirements for HFCs. We disagree with that determination and believe that EPA's 2016 rule is entirely within its authority. That being said, we are pleased that EPA has again concluded that it has full authority to retain the remaining six requirements. However, we are somewhat puzzled and greatly concerned that, despite recognition of its authority, the EPA is nonetheless considering and soliciting comment on whether to rescind the extent of the entire 608 rule for substitutes. While there are many aspects of the Section 608 rule that impact our business, we are particularly concerned that EPA is considering eliminating the requirement that recovered HFCs be reclaimed before they can be resold in some market or reduce it to a different system.

The importance of requiring used refrigerant to be reclaimed cannot be overstated. Refrigerant recovered from a system is almost always contaminated. Absent the regulation requirements of Section 608 regulation, there would be no legal restriction or prohibition against service contractors that recover contaminated refrigerant from one system from charging the same contaminated refrigerant into another system. This would be like having your car oil changed and instead of getting clean oil, you get the oil from a car that was serviced earlier that day. Consumers would not be aware that they are getting service-contaminated refrigerants. There are no obvious or immediate signs, but it will lead to substantial decrease in the system efficiency and significant increase in premature compressor failures.

Some may claim that eliminating the reclamation requirements for HFCs will have little consequence because the requirement was only put in place for HFCs in 2016. However, even before

2016, contractors and distributing operators operated and actually believed that the requirement existed for HFCs as it had for more than 25 years for CFCs and HFCs, which until relatively recently were the most prevalent refrigerants used. That HFC is now having an increasingly dominant position in the market, any effort to roll back the reclamation requirement will have a devastating impact on our business and our ability to ensure consumers have access to the refrigerants they need to sustain their existing equipment. If the EPA does decide to rescind Subpart F Refrigerant Management Requirements in full it would have a devastating impact on the entire reclamation industry. There will be no requirement or incentive for a contractor to recover the refrigerant and send it off for reclamation if they were legally allowed to reuse it and resell it as is. Rescinding the reclamation requirement would clearly be a message to contractors that selling used, untested, contaminated refrigerant to homeowners is

acceptable. It is true we pay contractors for dirty gas, but why would they send the gas to the reclaimer when the contractors would make more money if they were able to resell the recovered dirty gas? If the reclaimers cannot require that dirty gas from contractors and wholesalers, the long-term businesses of recovery would be in jeopardy.

Over the years, Hudson Technologies alone has paid hundreds of millions of dollars to contractors and end users for their used refrigerant which has helped them to create a cost-free refrigerant replacement for the systems. The aggregate buyback from all reclaimers over the years is over a billion dollars and that money will clearly disappear as a source of funds received by end users.

There is no question the agency has the authority on the no-leak rule to maintain the Subpart F reclamation requirements, but we would prefer the EPA to maintain the entire rule in full. We cannot overstate the importance of

retaining the reclamation requirements or the negative impact to the reclamation industry and consumers if the EPA decides to fully rescind the reclamation requirements in Subpart F of the entire rule. Thank you.

MS. SARA KEMME: Alex Hillbrand.

MR. ALEX HILLBRAND: Good afternoon, Alex Hillbrand with the Natural Resources Defense Council. NRDC continues to support EPA's 2016 update to the Section 608 Refrigerant Management Regulations (RDS) and in its extension to HFCs or substitutes. The 2016 rule in its entirety is an important step to limiting climate and ozone layer harm from emissions of refrigerants from major sources. We agree with EPA's prior articulation of its legal authority to address agencies under 608. The Section 608 (c) (2) venting prohibition demonstrates that congress recognized the environmental harm that substitutes for ODS can cause and the necessity of preventing their release. The original 608 update rule reasonably extended the existing regulatory regime to mon-ODS

substitutes to implement this venting prohibition. A single robust regime for refrigerant management across all appliances is a common sense, efficient way to regulate major uses of refrigerant. Extending the regulations to substitutes allows for, and incentivizes, safe recycling, recapture and disposal of HFCs and ODS alike. EPA in 2016 interpreted 608(c) and put requirements in place such that if a person adds refrigerant to an appliance that he or she knows is leaking, he or she also violates the venting prohibition unless he or she has complied with the applicable practices. This sensible approach addresses the increasing harm coming from refrigerant facilities using substitutes in addition to ODS.

The reduced economic burden associated with rescinding the leak repair provisions for substitutes is minimal compared to the climate harms of the foregone HFC emission reductions.; EPA estimates that rescinding the leak repair provisions for substitutes will result in 3 million metric tons of CO2 equivalent emissions

per year, an estimated projected to rise to 4.7 million metric tons in 2020 and to more than double to 6.2 in 2025. Rescinding the leak repair provisions is expected to produce annual compliance costs by 39 million dollars. The EPA estimates that the proposal would increase costs for additional refrigerant purposes by approximately 15 million and higher energy use will exacerbate these additional costs even further.

Further, if EPA were to monetize the foregone climate benefit using a scientifically and economically sound cost estimate for those emissions, it would vastly outweigh the estimated annual net savings of 24 million.

The EPA's proposal is a significant retreat in the effort to minimize the climate impact of air condition and refrigeration while reducing the sector's contribution to stratospheric ozone depletion. NRDC urges EPA to withdraw this proposal and leave the 608 update rule in place. Short of that, EPA should not rescind the other

Subpart F requirements. Thank you.

MS. SARA KEMME: Alexander von Biskmarck, EIA.

MR. ALEXANDER VON BISKMARCK: Good afternoon. Thank you very much. My name is Alexander Von Biskmarck. I'm the Executive Director of the Environmental Investigation Agency. The EIA is a campaigning organization working worldwide to protect the global climate and environment. We have undertaken investigations into the illegal production, use and trade of ozone-depleting substances around the world including recently the CFC 11 reduction in China. We've been closely involved in the international ozone and climate negotiations for more than two decades and have, from the beginning, supported the U.S. efforts to pass the amendment to the Montreal Protocol to phase down HFCs which we think is a win-win effort for American jobs, economy and the climate.

This proposal to reverse central elements of EPA's 2016 Section 608 Rulemaking is a disastrous step backwards for human health and the environment and an abandonment of a common sense,

economical approach to reducing venting and life cycle emissions of refrigerants. EPA's authority to deal with this issue is clearly recognized in the Section 608 venting prohibition that has been in effect since 1995 which expressly prohibits: "knowingly venting or otherwise knowingly releasing or disposing "ODS" or "their substitutes" including clearly HFCs. Venting and emissions of HFCs and other chlorinated refrigerants is a massive environmental problem which also represents, on the other hand, a great opportunity for cost effective, economic approaches to tackling climate change. The 2016 rulemaking would have reduced annual emissions in the United States by 7.5 million metric tons CO2 equivalent, about equal to taking 1.6 million passenger cars off the road, while also encouraging industry best practices and safe handling of refrigerant gases. And yet, the emissions addressed by the 2016 will represent just the tip of the iceberg. According to a report commissioned by EPA earlier this year,

about 39,000 metric tons of combined HCFC and HFC refrigerant banks could be recovered and destroyed annually in the U.S. in 2020 through a more ambitious and robust regulatory approach. This would be equivalent to roughly 64 million metric tons CO2 equivalent annually or nearly ten times the annual emissions of the 2016 rule. Ideally, therefore, the 2016 rule should have far more comprehensively tackled the bigger issues of banks and leaks. However, EIA and other environmental groups supported this rulemaking as a good first step in the right direction because we recognize it would help industry reduce illegal venting of refrigerants by requiring technicians handling these refrigerants to be trained and certified in best practices and by setting thresholds to trigger reasonable and timely repairs of the worst of the worst leaking refrigeration and air conditioning systems. These requirements were petitioned for by leading U.S. industry groups and supported by environmental organizations across the board because we all recognize this as a

common sense way to support compliance and enforcement of the statutory venting prohibition.

The EPA cites reduced cost for industry to justify the proposal, but these calculations include critical omissions. While the EPA estimates this rule would increase the need to purchase substitute refrigerants for leaking appliances at an overall cost of approximately 15 million per year, it does not account for the foregone reductions in costs from more efficient operation of equipment due to improved maintenance and leak repair, which can improve performance by up to 50% over equipment lifetime.

Finally, with more robust refrigerant management requirements already in place in California, today's proposal is likely to trigger a renewed effort from other individual states to regulate this source of emissions which will result in a more complex and more costly patchwork of regulatory frameworks for industry to navigate in comparison to the existing federal requirements.

In closing, therefore, EIA strongly recommends the EPA withdraw this proposal and restore the 2016 rule's extension of 608 Refrigerant Management Requirements to HFCs and Substitutes covered by the 1995 Venting Prohibition. Thank you.

MS. SARA KEMME: We are at the end of our list. Are there any additional speakers?

MR. LUKE HALL-JORDAN: All right. Thanks again, everyone, for your time. We do appreciate your feedback and, obviously, if folks want to set up an individual time to talk through specific concerns, we more than welcome that, so please reach out to us, any one of us, and we can work to set something up. I'll remind folks the comment period ends on November 15, 2018, so get any additional written comments you want in on the docket by then. I think with that we can conclude. Thank you so much for coming.

[Whereupon, the above titled proceeding was concluded.]