

# Trakref

My Name is Ted Atwood, I am submitting comments related to the pending rule making - Chapter 173-443 WAC, Hydrofluorocarbons (HFCs) on behalf of Trakref, a Fexa Solution. We look forward to supporting your goals and helping to reduce emissions of HFC refrigerants.



August 30, 2023

SENT VIA

State of Washington  
Department of Ecology  
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Regarding: Comments on proposed Rule WAC 173-443  
HYDROFLUOROCARBONS (HFCs) AND OTHER FLUORINATED GREENHOUSE GASES

Regarding the opportunity to comment on the pending State of Washington Regulation to manage HFCs, we would like to offer several comments and suggestions. Our preliminary analysis is focused on the operational gaps and outstanding questions we have related to the actions needed to support the proposed regulation. We appreciate the hard work of the Washington Ecology team on the proposed wording and the investment you have all made to listening to comments and soliciting input from stakeholders.

Related to section 173-443-020

1. Can the state Clarify if this rule applies to vessels (ships), and portable Trailor mounted rental chillers from out of state providers.
  - a. If it does apply can the State, please provide details about the amount of time a vessel or vehicle or device mounted to a vehicle would need to be in the state before the conditions were applicable.
  - b. Example: A company rents a portable chiller mounted to a trailer to cool their building while they wait for a permanent remedy, the chiller which contains 200 LBS of R-410A arrives on May 1,2023 would this fall under the seasonal operation provision and if so, would the operator of the facility be responsible for reporting or the provider of the chiller? Would the 1<sup>st</sup> leak inspection be due 90 days later or July 30, 2023?

Related to section 173-443-030 Definitions and Acronyms

1. Regarding the definition for "Air Conditioning Equipment" Could the state clarify the definition so that data centers, hospitals, morgues, and those responsible for other non-traditional cooling can better understand how to

align their asset registries, with the states expectations and meet their responsibilities.

- a. The EPA definitions remain somewhat vague as well, however they accommodate other modes of cooling including Rankine Heat Cycles (listed under non-mechanical cooling)  
<https://www.epa.gov/snap/substitutes-refrigeration-and-air-conditioning>. Additionally, there are other uses such as cooling lasers, fluid pumps and others.
  - i. Applicability applies to paper and pulp mills, power plants and Cogen facilities.
- b. Capital cost - We seek further clarification related to the definition of "Capital cost". For instance, does capital cost include related financing and or intangibles like design and environmental associated consulting associated expenses.
- c. Facility - regarding this definition can the state clarify if campus-based locations would need to include more than 1 account if they have more than 1 building. For instance, if a company or university or college has 5 buildings & 3 have cooling systems that qualify:
  - i. Do they require 3 registrations in the WAC RMP?
  - ii. Do they require 1 registration in the WAC RMP?
  - iii. Do they have to report all refrigerant related information for 5 buildings or 3?
- d. Full Charge: Has the state determined that the full refrigerant charge and the refrigerant capacity are the same? The EPA has a special recognition for this distinction:
  - i. *"Industrial process refrigeration- These are complex customized appliances that are directly linked to the processes used in, for example, the chemical, pharmaceutical, petrochemical, and manufacturing industries. This sector also includes industrial ice machines, appliances used directly in the generation of electricity, and ice rinks. Where one appliance is used for both industrial process refrigeration and other applications, it will be considered industrial process refrigeration equipment if 50 percent or more of its operating capacity is used for industrial process refrigeration."*  
<https://www.epa.gov/section608/stationary-refrigeration-leak-repair-requirements>

- ii. The difference between capacity and actual charge is the difference between what is in the system and the size of the capacity of the system. The capacity will usually be larger than the charge, we seek clarity and if the state has determined both to be the same, we seek that to be added to the definition.
  - 1. Use Example: A grocery rack can be running less than capacity by under filling receivers.
  - 2. IPR chemical plants have multiple Heat exchanger EVAPS (5+) and depending on production can have 4 of 5 shut down so charge can drop from 95,000 lbs. down to 18,000 lbs.
- e. Can the state clarify the distinction between refrigeration and Air Conditioning and Process cooling if a system is providing both or all three from the same compression system. For example, if a system uses x% of its cooling for AC and x% for refrigeration, what is the calculus the state applies when determining the applicable regulatory framework?
- f. Refrigeration: can the state clarify or simplify the definition of refrigeration and/or align with the EPA definition, published June 6, 2023
  - i. *“Commercial refrigeration- These are refrigeration appliances used in the retail food and cold storage warehouse sectors. Retail food appliances include the refrigeration equipment found in supermarkets, convenience stores, restaurants, and other food service establishments.”*
  - ii. <https://www.epa.gov/section608/stationary-refrigeration-leak-repair-requirements#:~:text=Commercial%20refrigeration%2D%20These%20are%20refrigeration,and%20other%20food%20service%20establishments>.
- g. We request the state add definitions to section 174-443-030 to include non-mechanical devices, Marine applications, portable rental chillers.
  - i. Further will the State require a facility registration and EPA ID for each of these items?
- h. Regarding leak rate definitions and expectations: the State of Washington has chosen a leak rate calculation: 12 Month Rolling average and then added further clarity related to the method for performing a leak inspection which is documented in section 173-

443-145 section (ii) where the service provider must "conduct a leak inspection of the full system" not just the leak location being repaired, therefore we seek clarity regarding the calculus:

- i. We seek clarification between a Leak Inspection and leak verification
- ii. Based on this, is it the States understanding that the operator can return the leak rate to -0- with a successful result from both the initial and follow up verification. Or does the state expect the user to record the refrigerant transfers for the entire 365 day rolling period?
- iii. Or does the state expect the calculation to only include the refrigerant added since the last failed initial or follow up verification test?
- iv. Clarification requested related to whether under section 173-443-195 the leak rate Calculation which is not included in that section was omitted on purpose or is assumed to be part of the records listed in section (c). If the data is assumed, then we request that the State add in the specifics related to the leak records the state expects to be included or alternately that the state specifically define that the leak rate is not part of the documentation needs under section 173-443-175.

Related to sections 173-443-115, 173-443-135, 173-443-115 & 173-443-185

1. Fees: It does not appear that the State is applying a *registration, implementation or filing* fees for facilities with appliances 50-199 pounds. Can the state clarify this by providing a specific statement or would you please point me in the right direction to find the associated fees.
  - a. The State has provided clarity when no fees are required, documented in section 173-443-135 section (3): There are no implementation fees for refrigerant wholesalers, distributors, or reclaimers
  - b. It would be helpful if the State could add in a section (iii) which would include specific wording related to Appliances in the 50-199 range.
2. Install Date: Can the State clarify the specific needs related to install date. Is it the date where refrigerant is added to the system? Is it the date of turnover from the service provider to the owner? Or is it the date that is commissioned to perform work?

3. In section 173-443-145, under section (1) The State mentions "charge capacity" whereas in the definitions section there is no mention of the term 'capacity' instead the state provides a definition for refrigerant charge and not Charge Capacity, can the state please clarify or amend the definitions as noted previously.
4. 173-443-145, section (2) Automatic leak detection (ALDS) is required for *refrigeration*, but we see no mention for Comfort Cooling or Process Cooling, can the State please clarify. Is the option to include ALDS and therefore not requirements?
  - a. Air Conditioning systems 1500 LBS and larger do require the same monthly leak inspection obligation as refrigeration systems *however* they do not seem to have the same requirement to install a leak detection system nor is it clearly defined that they enjoy the same remedy related to monthly inspections, we seek clarity from the State, can you please provide specific wording to indicate that the Air Conditioning, ALDS is optional and when installed further clarification is needed related to the changes to the Leak Inspection cadence that result from installing an ALDS.
    - i. 173-443-145, section (3) related to 200 to 1500-pound system leak inspection requirements, Air Conditioning is mentioned *however* we did not find this same section related to 1500 pound and larger systems:
      1. ...unless an automatic leak detection system that meets the requirements of subsection (2)(b) or (c) of this section is installed and functioning correctly on the system.
5. Does the requirements under section 173-443-145 section (iii) and (iv) qualify as a independent leak inspection separate and unique from a service event or is it the States expectation that these are the same common service.
6. Regarding section 173-443-145 (5) the States determination of Seasonal Operation would indicate that the state is aware of certain unique operational characterizes of equipment, *however* section 173-443-115 **Registration Requirements**, does not include any appropriate attribute to reflect the equipment's status or operational status, we request that the State add the attribute field of Status and operational Status to section 173-443-115.
  - a. This would also apply to pending retrofit, shutdown, pending retrofit, mothballed and retrofitted



appliances (reference to the post retrofitted appliance).

Related to sections 173-443-060 Prohibitions and additional requirements...

1. Dry Ship or Field assembled equipment: How does the State intend to apply requirements in this section to field assembled equipment?

Related to section 173-443-175, Retrofits.

1. We request that like our earlier request that the State add an attribute field to 173-443-115 (operational status) to recognize both the pre and post retrofit status of an asset.
2. We further seek clarification related to assets effected by the retrofit process.
  - a. Does the state accept that the leak rate calculation is reset once a retrofit has been performed?
  - b. Does the state expect, require, or dismiss the need to set a new asset ID for an asset when the retrofit has been performed? We seek this clarification since the old and new asset will have had two profiles with different refrigerants, capacities, oils and performance.

Related to sections 173-443-165

1. Section (3) subsection (b) regarding the type of record needed for documentation and specifically refers to "*statement from the certified technician regarding the necessity of the parts and a written statement from the manufacturer regarding the availability of the parts;*" Why is a tech required if the firm purchasing the parts is buying directly? Would the state consider expanding this option to enable businesses who buy direct to provide direct communication from the source that is unable to deliver in a timely manner? Since this a common real-world scenario.
2. Regarding 173-443-165 section (5) suggests that a leak must be repaired and complete before being documented, since the wording provided only allows for an initial leak inspection **after** the leak has been repaired. However, in our experience more than 30% of the time, leaks are not fixed on the first attempt which is commonly indicated by a failed initial verification test. The states specific

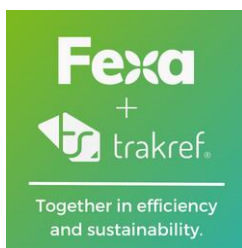


guidance could influence service providers to skip the process of inspecting the leak if they believed they failed to fix the leak - so the only indication of the failed leak repair would be their word instead of the definitive process of performing an initial leak inspection. We encourage the state to either remove this concept or amend it to require an initial leak inspection thereby requiring the service provider to include that result in their documentation. We understand that no follow up verification test should be required if the initial verification test failed.

3. Regarding 173-443-165 section (7) we seek clarity regarding proper management of the repair timeline. The state allows between 45 - to - 120, day repair window. However, this section references a second time frame, which we are seeking clarity. Is this second time frame a clock reset and extends the leak deadline? A clearer statement might look like:
  - a. Ensure the leak is fixed within the same number of days allowed under subsections (2) to (4) of this section; otherwise, make additional repair attempts. Until you have reached the maximum repair window identified in subsections (2) to (4) but not to exceed that time frame provided"

The state has outlined a comprehensive plan for stakeholders to manage and report on emissions, specifically targeting HYDROFLUOROCARBONS (HFCs) and other fluorinated greenhouse gases, in line with the objectives defined by RCW. We deeply respect Ecology's commitment to reducing these emissions. To fully support and operationalize this mission, we seek further clarity on the expectations and look forward to providing additional comments or context as needed. Thank you again for the opportunity to comment.

Have a great safe day,



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