



STATE OF WASHINGTON  
**DEPARTMENT OF ECOLOGY**

PO Box 47600, Olympia, WA 98504-7600 • 360-407-6000

## Summary notes ODS Technical Working Group Meeting #4

### Topic #1: Additional refrigerants

What additional context or considerations should Ecology be aware of?

Has HCFC-22 refrigerant destruction been a significant component of destruction projects through ACR's 1.2 or 2.0 protocol?

- R-22 destruction is a source for offset credits, but destruction has been somewhat limited because reclamation is often more cost effective.
- R-22 continues to be used as a feedstock

Given that HCFC-123 and HFC's are not fully phased out of production – is there a risk that destruction of this gas would simply result in an increase in production?

- The gases are in the process of a phase down, so production is still regulated however there may be a risk that a destroyed gas could be replaced with the same gas if the cost of production was less than the value of destruction
- Allowing credit generation from HFC's would incentivize early transition to lower GWP alternatives
- There is a lack of research on HFC demand elasticity, so the additionality risk is unknown
- Ecology could consider restricting destruction to lower purity HFC's where reclamation would be less economically viable

Could destruction of contaminated or mixed gases that are not phased out of production lead to an increase in production?

- Contaminated and mixed gases need to be defined in order for the risk to be understood
- Some mixed gases cannot be feasibly separated, some can

Is "contaminated" a defined term in industry practice?

- A definition of contaminated is needed, the purity level at which a gas becomes functionally unusable differs by gas and changes over time as technology's improve

Most HFC's are already phased out for use in new products and equipment in Washington, per WAC 173-443 – could registries adequately enforce a requirement 100% of HFC's used for destruction must be sourced from facilities in Washington?

- Point of origin requirements would need to change in order to facilitate this
- Small quantities of gas would need to be individually traced to their origin which creates a significant challenge for verification

Should Ecology allow credits to be generated for the destruction of HCFC-22?

- Mixed views; primarily in support of allowing crediting for destruction of HCFC-22
  - Concern regarding ongoing use of HCFC-22 as a feedstock, destruction would not be additional if virgin HCFC-22 is created for feedstock use

Should Ecology allow credits to be generated for the destruction of HCFC-123?

- Primarily not in support of HCFC-123 crediting due to low GWP and low likelihood of economic feasibility

Should Ecology allow credits to be generated for the destruction of contaminated or mixed HFC's?

- Too many uncertainties at this time regarding demand elasticity, phase out timing, additionality and definition of "contaminated" or "mixed"

Should Ecology allow credits to be generated for the destruction of select HFC refrigerants? (E.g. HFC-134a, R-410a, R-404a, R-407c)

- Mixed views; primarily not in support given the uncertainties mentioned above

## Topic #2: Additional foams

What additional context or considerations should Ecology be aware of?

- The foam component of the protocol would need to be broadly overhauled to be financially feasible for developers

For substances that have not been fully phased out – could protocol eligibility lead to production for the purpose of destruction?

- There are many barriers in place for foam disposal compared to refrigerant disposal, making production for the purpose of destruction less likely for foams

Are these additional foams a potential significant source for destruction?

- Significant overhauls to the protocol are needed for destruction of foams to be financially viable. However this is a significant quantity of foams that could potentially be destroyed, if a financially viable means was available

Should Ecology allow credits to be generated for the destruction of foams that have been fully phased out of production (CFC-114, HCFC-142b)?

- Primarily in support; but with the caveat that allowing these additional foams to receive credits for destruction will not make foam destruction financially viable

Should Ecology allow credits to be generated for the destruction of foams that have been fully phased out of production (HFC-134a, HFC-245fa, HFC-365mfc)?

- Mixed views; allowing credit generation for these substances would improve foam project viability

### Topic #3: Medical Aerosols

What additional context or considerations should Ecology be aware of?

- ODS aerosols are not labeled as medical vs non medical use, eligibility is based off of marketing/packaging
- The medicine component of these aerosols complicates destruction

Have medical aerosols been a source for destroyed ODS material using ACR's protocols?

- It has not been a significant source, a lot of work is required for the destruction of a small amount of gas

Does destruction of medical aerosols stockpiled for medical use have the potential for adverse public health impacts?

- Without information on demand this questions is difficult to answer
- Stockpiled ODS may have expired or otherwise be unusable, which would mitigate any adverse public health impacts due to the destruction of this medication

Should Ecology allow credits to be generated from the destruction of medical aerosols?

- Mixed views; eligibility for CFC's is more clear than for HCFC's
- Medical aerosols would not need to follow different eligibility criteria than refrigerants, and the distinction between these substances is just based on packaging and marketing

### Topic #4: Unused Solvents

What additional context or considerations should Ecology be aware of?

- As with medical aerosols, solvents from other uses of ODS by marketing and labeling, not composition
- Available eligible supply of these substances is uncertain

Have unused solvents been a source for destroyed ODS material using ACR's protocols?

- Yes, but availability is limited and use has not been widespread

Should Ecology allow credits to be generated from the destruction of medical aerosols?

- Primarily in support, this is not likely to be a significant source but allowing eligibility of these substances would remove some undue administrative restrictions

### Topic #5: Fire Suppressants

What additional context or considerations related to this topic should Ecology be aware of?

- Halons are needed and will continue to be needed for the foreseeable future
- The US stance has been that halons should not be eligible for offsets because of demand and lack of alternatives

Have halons been a significant source for credit issuance through ACR's protocols?

- Reclamation is the dominant use for unused halons, and destruction would only be a compelling option if the purity of the destroyed materials is low

Halon 1301 is generally projected to continue to be used at a significant level in aviation and other industries through 2050. If halon destruction was incentivized such that significant quantities were destroyed, would this adversely impact these industries or risk resulting in exemptions to allow further halon production?

- Demand will continue, particularly from the use of older aircraft that are sold internationally
- Allowing for credits to be generated from the destruction of halons is unlikely to significantly impact global halon availability, particularly from Washington's program alone
- If halons were to become less available on a global scale the industry impact could be significant and may result in production exemptions

Should Ecology allow credits to be generated from the destruction of halon 1211?

- Mixed; some in favor, some uncertain and some opposed

Should Ecology allow credits to be generated from the destruction of halon 1301?

- No differences from 1211. Views are mixed; some in favor, some uncertain and some opposed