

SUMMARY OF PUBLIC CONSULTATION

VM0016 Destruction of Ozone-Depleting Substances and Hydrofluorocarbons, v2.0 and VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerants, v2.0

Drafts of VM0016 Destruction of Ozone-Depleting Substances and Hydrofluorocarbons, v2.0 and VMD0048 Activity Method for the Determination of Additionality for Recovered and Stockpiled ODS Refrigerants, v2.0 were open for public consultation between September 5, 2025 and October 6, 2025. This document includes a list of all comments received and the developer's response.

KEY QUESTIONS

Q1: Do you consider the methodology has an appropriate level of safeguards for the destruction of HCFCs that have not yet been fully phased out in the host country? If you consider there are risks that are not sufficiently addressed, please describe them and provide your suggestions on how they could be mitigated.

#	Organization	Comment	Developer's Response
1	Environmental Investigation Agency	No. The safeguards proposed in the draft methodology for the destruction of HCFCs in countries that have not yet completed phase-out are insufficient.	Thank you for your input. End-of-life management is not covered under the Montreal Protocol. Destruction under a voluntary or
		The proposed eligibility conditions are	compliance market is currently the only mechanism for creating an incentive to manage end-of-life emissions of



#	Organization	Comment	Developer's Response
		relatively easy to meet and risk incentivising the diversion or continued production of HCFCs for destruction revenues, which could lead to the creation of a perverse incentive. Crucially, the proposed methodology does not prevent destroyed quantities of HCFC being deducted from a Party's production or consumption reporting under the Montreal Protocol, potentially enabling the quotas for these to be increased, leading to additional production-related emissions and leakage. The lack of robust controls on provenance, conflict of interest and host country accounting mean that destruction could produce large volumes of credits with little or no additional environmental benefit. Such weaknesses not only jeopardise environmental integrity but also undermine the Montreal Protocol's legacy by allowing companies to profit from dangerous substances while delaying structural transitions. The methodology also fails to address equity and transparency concerns, with no requirement for benefit-sharing or disclosure of how much revenue actually supports climate action versus private profit. Without stronger safeguards, these credits risk being little more than paper claims that enable polluters elsewhere to	ODS and HFCs. While there are clear benefits to end-of-life management, it is beyond the scope of the methodology to inform direction of the Montreal Protocol and other relevant bodies. Verra believes that the current requirements, including those for HCFCs and eventually HFCs, strike a balance between ensuring sufficient safeguards and promoting project activity.



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		On top of these concerns, it is worth noting that countries operating under Article 5 of the Montreal Protocol are permitted a "servicing tail" following the final HCFC phase-out step in 2030. This allows, until 2040, the continued consumption of a limited quantity of HCFCs for the purposes of servicing the remaining stock of HCFC-based equipment (as it stands in 2030). Many Article 5 countries still have large stocks of equipment running on HCFC-22, which will continue to have a servicing requirement after 2030. This requirement should be met with refrigerant that has been reclaimed; however, introducing HCFCs to Verra's methodology as proposed would incentivise destruction over reclamation, creating a risk that either equipment is retired early (thereby forcing an accelerated transition to HFC-based equipment), or that additional, unnecessary HCFCs are produced.	
2	Anonymous 1	In its current form, the methodology does not adequately safeguard against the risk that refrigerants could be manufactured/purchased solely for the purpose of destruction. The criteria on page 11 states that refrigerants must be "owned and held by an individual company (not an HFC importer or producer) for more	Thank you for your input. Please see responses to each sub-comment below: Verra has considered these concerns and revised the HFC start date exception in Section 4.1.2 to remove eligibility for virgin material held for at least a year. Otherwise, with the current requirements, Verra is trying to strike a balance between ensuring sufficient safeguards and promoting project activity. As the HCFC



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		than one year and consist of virgin, recycled, or reclaimed material." However, if the value of carbon credits significantly exceeds the market price of refrigerants, this could incentivize stockpiling refrigerants for one year prior to destruction. Additional guidance is also needed on how PPs can credibly demonstrate "end-of-life" status. How is it ensured that servicing occurs at the correct intervals? It is assumed that the VCS Standard will need to be revised based on the revision of this methodology, as this now allows for virgin HFC gases owned for more than one year, whereas the standard - which only mentions ODS and not HFCs - limits eligible sources.	phaseout is nearing completion and equipment continues to transition to alternatives, Verra believes stockpiles of virgin HCFCs should be eligible to avoid venting. Guidance on demonstrating EOL status is outside the scope of this methodology revision. Verra takes note of the suggestion and may include further guidance in a clarification or subsequent revision. Lastly, the VCS Standard already included ODS and the seven Kyoto Protocol gases, which includes HFCs. Separately, the VCS Standard is being revised into its version 5, which includes updates to specifications for ODS and HFC destruction projects.
3	Anonymous 2	Yes	Thank you for your input.
4	A-Gas	Since production and consumption of virgin HCFCs have phased out in the non-Article 5 countries and in the final stages of phase down in Article 5 countries, A-Gas strongly believes that it is timely to allow and supports destruction of HCFCs for carbon credits.	Thank you for your input.
5	Recoolit	We believe that the methodology requirements for HCFC recovered from	Thank you for your input. With the current requirements, Verra is trying to strike a balance between ensuring



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		devices are appropriate. However, there may not be enough safeguards for stockpiled (virgin) HCFC. The methodology only requires that the HCFC exist in a government stockpile, or have been in the possession/storage of a third party for a year – which may be insufficient.	sufficient safeguards and promoting project activity. As the HCFC phaseout is nearing completion and equipment continues to transition to alternatives, Verra believes stockpiles of virgin HCFCs should be eligible to avoid venting.
6	Carbon Containment Lab	HCFC eligibility: We support the eligibility of recovered HCFCs from countries that have not completed a full phaseout. Today, the installed bank of HCFCs in Article 5 countries amounts to nearly 4 billion tons of CO2 equivalent (Climate and Ozone Protection Alliance, 2025). Much of this gas is contained in equipment that will reach end-of-life before phaseout is complete. Most countries do not have financial incentives, regulations nor infrastructure to support the proper disposal of these gases. The carbon market can and should fill this gap. Chain-of-custody requirements: As an additional safeguard, we propose that Verra implement robust chain-of-custody requirements. In particular, we recommend that developers be required to collect information at the point of recovery,	Thank you for your input. Verra may consider the inclusion of additional guidance on chain of custody requirements for project developers for recovered material in future methodology revisions.
		that developers be required to collect	



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		Virgin gas eligibility: We believe that the methodology, as written, may provide insufficient safeguards for the destruction of virgin gas. Criterion 4.1.1 3(b) in particular provides low protection against potential bad actors. Criteria 4.1.1 1 is also problematic, as it relies on production/import date, without providing guidance on how these dates can be tracked and verified. The safeguards must be calibrated to recognize that in many Article 5 countries there are limited incentives and	
		infrastructure for safe end-of-life handling; the methodology should therefore enable carbon finance to support building those systems.	



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7	Environmental Investigation Agency	The safeguards set out in Section 4.1.1 of the draft methodology would not be onerous from the perspective of project developers; however, their leniency does undermine their effectiveness. The criteria outlined in Section 4.1.1 (that the substance in question must have been imported prior to methodology approval, stored by a government or waste handler for more than a year, or "obtained in the stream of commerce") are broad and too easily met. For example, a one-year storage requirement is far too short to meaningfully distinguish between genuine stockpiles and refrigerants deliberately withheld from the market in order to qualify for credit generation. The main concern is not feasibility, but rather that the proposed conditions are too permissive, creating significant scope for questionable material to be channelled into projects, and doing little to prevent perverse incentives or abuses of national accounting. As proposed, the methodology risks enabling a flow of low-integrity credits that undermine the Montreal Protocol and further undermine the credibility of the	Thank you for your input. Please see response to comment #1.



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		voluntary carbon market.	
8	Anonymous 1	In its current form, the methodology does not adequately safeguard against the risk that refrigerants could be manufactured/purchased solely for the purpose of destruction. The criteria on page 11 states that refrigerants must be "owned and held by an individual company (not an HFC importer or producer) for more than one year and consist of virgin, recycled, or reclaimed material." However, if the value of carbon credits significantly exceeds the market price of refrigerants, this could incentivize stockpiling refrigerants for one year prior to destruction. Additional guidance is also needed on how PPs can credibly demonstrate "end-of-life" status. How is it ensured that servicing occurs at the correct intervals? It is assumed that the VCS Standard will need to be revised based on the revision of this methodology, as this now allows for virgin HFC gases owned for more than one year, whereas the standard - which only mentions ODS and not HFCs - limits eligible sources.	Thank you for your input. Please see response to comment #2 above.
9	Anonymous 2	No	Thank you for your input.



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10	A-Gas	The safeguards provided in this section are sufficient and realistic. However, the language in this section that allows countries that have not fully phased out production/consumption to also use this methodology contradicts with the language in section 4.1 that requires completion of final step of phaseout to be eligible. Please see specific comments in the general feedback section.	Thank you for your input. Verra clarified that Sections 4.1.1 and 4.1.2 are exceptions to the general start date requirements.
11	Coolimpact	"We commend Verra for introducing clear and critical safeguards in Section 4.1.1 (Additional HCFC Project Start Date Eligibility) to govern HCFC destruction in countries undergoing phaseout. These criteria are essential to ensure the additionality of projects by strictly limiting eligibility to aged or hard-to-access HCFC banks. While the safeguards are realistic in principle, we foresee potential compliance challenges for project developers, especially concerning the rigorous documentation required to prove the material's history and status: 1. Proving 'Not Recycled or Reclaimed' (Section 4.1.1(3)(a)): Demonstrating definitively that recovered HCFC was not processed for reuse is inherently challenging. Project verification bodies will need clear, prescriptive guidance on the chain-of-custody evidence required from the point of recovery to the destruction	Thank you for your input. Your recommendation for Verra to develop supplemental guidance is noted.



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		facility to satisfy this negative proof, particularly in jurisdictions with informal recycling sectors. 2. Verifying Non-Importer/Non-Producer Status (Section 4.1.1(3)(b)): The requirement to prove that the material was held by an entity 'not an HCFC importer or producer' for over one year places a substantial administrative burden on project developers. This necessitates access to and verification of a third party's historical business and import/production records, which may not be publicly available or reliably maintained, especially for small private stockpiles. We recommend that Verra issue supplemental guidance or clarifications detailing the minimum acceptable forms of point of origin documentation and independent verification procedures necessary to satisfy the specific time and ownership requirements mandated in Section 4.1.1(2) and 4.1.1(3)."	
12	Recoolit	No issues.	Thank you for your input.
13	Carbon Containment Lab	The methodology should acknowledge the limited incentives and infrastructure in many Article 5 countries for safe end-of-life handling, and the relevant safeguards must be calibrated to enable carbon finance to support building the lacking systems. There is precedent for doing this, for example, ICVCM.	Thank you for your input. The scope of VMD0048 revision is limited to HCFCs. Verra may consider including HFCs in a subsequent revision.



#	Organization	Comment	Developer's Response
		We also recommend that VMD0048 needs to be amended to include recovered HFCs in Article 5 countries in a positive list approach to ODS and HCFCs.	

Q3: Do you agree to include HFC as an eligible substance as per the Kigali Amendment to the Montreal Protocol, subject to the conditions proposed in section 4.1.2 (government stockpiles, 70% phase-down, etc.)? If you think it should be eligible earlier or later, or under different conditions, please provide your rationale.

#	Organization	Comment	Developer's Response
14	Environmental Investigation Agency	HFCs should not be included as eligible substances for the generation of carbon credits. Including HFCs under the draft methodology raises many of the same concerns that EIA has articulated with regard to ODS (see our recent briefing 'Polluting the Protocol': https://eia-international.org/report/polluting-the-protocol), and the safeguarding criteria proposed in Section 4.1.2 are insufficient to	Thank you for your input. Please see response to comment #1.



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		prevent abuses. The conditions set out in Section 4.1.2	
		(limiting eligibility to government stockpiles or requiring that a host country has achieved at least a 70% phase-down) are	
		weak safeguards. In practice, they are unlikely to prevent perverse incentives or accounting loopholes. Government	
		stockpiles often consist of confiscated material; if adequate regulatory and financial support were provided by	
		governments and through mechanisms such as the Multilateral Fund, this material could be destroyed or auctioned within the	
		phase-down quota system (avoiding the equivalent new production or import), without recourse to offset markets. The	
		70% phase-down threshold is also arbitrary, leaving significant scope for developers to profit from substances that	
		are still widely produced and consumed. While the Kigali Amendment establishes a	
		framework for the global phase-down of HFCs, the logic of turning their destruction into carbon credits risks repeating the	
		problems exposed by previous market- based approaches. The sale of offsets linked to refrigerant destruction undermines	
		the Montreal Protocol's climate legacy by converting a clear mitigation opportunity into a tradable permit, used to justify	



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		continued emissions elsewhere. The destruction of HFCs should be mandated and financed through public or producer-responsibility mechanisms, not commodified into carbon credits that risk prolonging dependence on polluting practices.	
15	Anonymous 1	70% seems to be a reasonable phase-down level to start allowing HFC destruction. However, further safeguards should be put in place to (1) demonstrate end-of-life status, and (b) to prevent stockpiling virgin gases for the purpose of destruction.	Thank you for your input. Verra revised the HFC start date exception in Section 4.1.2 to remove eligibility for virgin material held for at least a year. Guidance on demonstrating EOL status is outside the scope of this methodology revision. Verra takes note of the suggestion and may include further guidance in a clarification or subsequent revision.
16	Anonymous 2	Yes	Thank you for your input.
17	A-Gas	A-Gas agrees with including HFC as eligible substance. The eligibility requirement of 70% phasedown is fine for non-Article 5 countries that are required to meet this by 2029. However, Article 5 countries will reach 50% phase down only in 2040 which is 15 years from now. These countries will be unable to use this methodology for HFC destruction for next 15 years when they will be needing most carbon finance to help/accelerate transition. For Article 5 countries the eligibility phasedown threshold should be	Thank you for your input. Please see responses to each sub-comment below: With the current requirements, Verra is trying to strike a balance between ensuring sufficient safeguards and promoting project activity. Verra is concerned with creating perverse incentives around mixing clean and dirty material. Any proposed exemption criteria for unreclaimable material would be difficult to verify. Verra added the definition of "government stockpile." Regarding the 70% HFC phasedown, Verra clarified that



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		removed, and crediting should be allowed as soon as possible. In most Article 5 countries and some non-Article 5 countries, due to poor recovery and collection practices and networks, multiple gases are recovered and collected in common containers. This results in heavily mixed gases that are technologically or economically inseparable and hence cannot be reclaimed and reused. HFCs that are mixed with other gases (e.g. CFCs and HCFCs) that cannot be technologically or economically separated (usually when a single species of gas in less than 90% of the mix) should be eligible for destruction upon publication of the methodology (i.e. not wait for the 70% phasedown). The term "government stockpile" for HFC should be defined. Please see specific comments in general feedback section.	the 70% threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries.
18	Coolimpact	Yes, based on the material provided, I agree with and strongly support the inclusion of Hydrofluorocarbons (HFCs) as an eligible substance in the revised VM0016 methodology, specifically subject to the conditions proposed in Section 4.1.2. This inclusion is necessary and appropriate	Thank you for your input.



#	Organization	Comment	Developer's Response
		because it aligns the methodology with the objectives of the Kigali Amendment to the Montreal Protocol, which calls for the phasedown of HFCs. HFCs are recognized as man-made compounds with high Global Warming Potential (GWP) and are therefore classified as greenhouse gases. The goal of the methodology is to quantify GHG emission reductions from activities that recover and destroy HFCs that would otherwise result in a partial or total atmospheric release in the baseline scenario. The conditions set out in Section 4.1.2 effectively serve as safeguards to ensure that HFC destruction projects are genuinely additional while minimizing risks related to perverse incentives during the early phases of the Kigali phasedown.	
19	Recoolit	In general, we are extremely supportive of adding HFC as an eligible substance to the methodology. However: 1. Under the proposed amendment, recovered HFC is only eligible when a country has reached 70% phasedown of baseline under the Kigali Amendment (4.1.2.2). This is too strict from an additionality perspective, and will slow down the deployment of sustainable technologies and practices. Destruction of recovered HFC can be additional as soon as there is a cap at all, even if that cap is still at the baseline level. The justification	Thank you for your input. Please see responses to each sub-comment below: 1. With the current requirements, Verra is trying to strike a balance between ensuring sufficient safeguards and promoting project activity. The 70% threshold was determined as a reasonable indicator of intent to phasedown, and showing a downward trajectory over time that reflects actual replacement strategies for HFC use. That being said, Verra clarified that the 70% phasedown threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries. 2. Verra revised the HFC start date exception in Section 4.1.2 to remove eligibility for virgin material held for at



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		for this 70% figure is unclear and would not allow destruction of HFC in Article 5, Group 1 Countries until 2035: this methodology has the potential to drive massive emissions prevention in Article 5 countries over the next 10 years if this condition is changed. a. In particular it is unclear why this criteria is stricter than the methodology's treatment of HCFC, which allows destruction of recovered HCFC to be eligible when a country has initiated its phasedown (but before hitting any specific phasedown threshold). 2. 4.1.2.2.c.ii is very similar to, but laxer than 4.1.2.2.b: it is unclear why both are needed. Further, both seem too lax: ownership by a third party for a single year does not add demonstrable additionality to any destruction. In general, stockpiles of virgin HFC should have much higher standards for additionality than recovered HFC. 3. We suggest amending VMD0048 to include recovered HFC in Article 5 countries under a positive list approach. The same rationale that VMD0048 uses to apply a positive list approach to ODS and HCFC (lack of viable alternatives, the Revenue Streams approach under Section C of the VCS standard) apply to HFCs in Article 5 countries as well.	least a year. 3. The VCS Standard already included ODS and the seven Kyoto Protocol gases, which includes HFCs. Separately, the VCS Standard is being revised into its version 5, which includes updates to specifications for ODS and HFC destruction projects.



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20	Carbon Containment Lab	We strongly agree with including HFC as an eligible substance as per the Kigali Amendment to the Montreal Protocol. As the world gets warmer, and access to cooling technology increases, so too will the volume of HFCs in the equipment reaching end-of-life. Today, in most settings, no viable financing mechanism exists to ensure their recovery and proper disposal. The carbon market can and should fill this gap. We believe that this methodology should amend its eligibility criteria to differentiate between virgin and recovered gas. Recovered gas should be eligible for destruction, even before a country has reached 70% phasedown. The eligibility requirement in 4.1.2(2) "The country has reached a phasedown of at least 70% of the baseline" needs clarification, whether it means that a phasedown to 70% of baseline levels or that consumption has been reduced by 70% from the baseline. The 70% phasedown excludes Article 5 countries until 2035 at the earliest, which misses important emissions reduction opportunities that could happen today. Moreover, the 70% threshold is not well defined; and doesn't consider imports or	Thank you for your input. Please see responses to each sub-comment below: With the current requirements, Verra is trying to strike a balance between ensuring sufficient safeguards and promoting project activity. The 70% threshold (i.e., 70% of the baseline has been phased down and 30% is left) was determined as a reasonable indicator of intent to phasedown, and showing a downward trajectory over time that reflects actual replacement strategies for HFC use. That being said, Verra clarified that the 70% phasedown threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries. These phasedown thresholds are relative to each country's Kigali timeline. Verra revised the HFC start date exception in Section 4.1.2 to remove eligibility for virgin material held for at least a year.



#	Organization	Comment	Developer's Response
		other market distortions such as stockpiling. In Article 5 countries, especially, even more so than non-A5 countries, there do not exist financial incentives nor infrastructure for proper management of refrigerants from servicing and equipment end-of-life. We therefore strongly recommend that Verra allow eligibility for all parties to the Montreal Protocol when gases are recovered from end-of-life equipment or servicing. As noted in our response to question 1, we believe that the methodology, as written, may provide insufficient safeguards for the destruction of virgin gas. Criterion 4.1.2 2c(ii) in particular provides low protection against potential bad actors. Criteria 4.1.2 2a and 2b are also problematic, as they rely on conditions on production/import date, without providing guidance on how these dates can be tracked and verified.	



Q4: Do you see benefits in allowing the destruction of intact foam instead of requiring the extraction of the blowing agent? Are there any significant risks or issues not addressed in the draft methodology? If any, please describe them and provide your suggestions on how they could be mitigated.

Q4: Do you see benefits in allowing the destruction of intact foam instead of requiring the extraction of the blowing agent? Are there any significant risks or issues not addressed in the draft methodology? If any, please describe them and provide your suggestions on how they could be mitigated.

#	Organization	Comment	Developer's Response
21	Anonymous 2	No. No.	Thank you for your input.
22	A-Gas	Yes, there are benefits to allowing destruction of intact foam because the availability of equipment de-manufacturing facilities is scarce (even more so in the Article 5 countries). However, to make destruction of intact foam practically possible, the methods to determine the mass of blowing agent in intact foams and methods to determine recovery efficiency should be simplified for cost effectiveness. ACR's ODS destruction methodology v2.0 allows simplified methods. Please see more specific comments in the general feedback section.	Thank you for your input. Please see responses in the General Feedback section.
23	Coolimpact	We have no further comments on this section. No additional concerns have been identified regarding the allowance for destruction of intact foam or potential risks beyond those already addressed in the draft methodology.	Thank you for your input.
24	Carbon Containment Lab	N/A We do not have experience with this issue.	Thank you for your input.



Q5: Do you see benefits in including substances recovered from fire suppression systems/equipment or from used/discarded aerosol cans or canisters? Are there any risks or issues not addressed by the draft methodology? If any, please describe them and provide your suggestions on how they could be mitigated.

Q5: Do you see benefits in including substances recovered from fire suppression systems/equipment or from used/discarded aero sol cans or canisters? Are there any risks or issues not addressed by the draft methodology? If any, please describe them and provide your suggestions on how they could be mitigated.

#	Organization	Comment	Developer's Response
25	Anonymous 2	Yes. No.	Thank you for your input.
26	A-Gas	Yes, there are benefits to including these substances. The ODS recovered from these substances should also be eligible to use the Positive List for additionality. Please see more specific comments in the general feedback section.	Thank you for your input. The scope of VMD0048 revision is limited to ODS refrigerants. Verra may consider including other sources in a subsequent revision.
27	Carbon Containment Lab	As written, it appears that fire suppressants using HFCs, CFCs, and HCFCs are eligible, but not halons. We believe halons should be considered as eligible as long as strong safeguards are provided.	Thank you for your input. Halons were out of the scope this revision. Verra can assess their inclusion in a subsequent revision with further safeguards due to the critical nature of its use.



Q6: Are the weighing, sampling, and analysis requirements clear and appropriate? Do you foresee any challenges for project proponents in complying with them?

#	Organization	Comment	Developer's Response	
28	Anonymous 2	Yes. No.	Thank you for your input.	
29	A-Gas	The sampling method requirements for intact foam is impossible to achieve economically. The method for determining recovery efficiency for intact foam is also prohibitive. Please see more specific comments in the general feedback section.	Thank you for your input. Please see responses in the General Feedback section.	
30	Coolimpact	We welcome the comprehensive and stringent monitoring requirements detailed in Section 9.3 of the draft VM0016 methodology. The provisions on weighing, sampling, and analysis for both concentrated and dilute sources are clear and appropriate, and they play a critical role in safeguarding the accuracy of quantified destruction volumes given the very high GWP of the substances involved. That said, while the requirements are highly appropriate, they may create notable compliance challenges for project proponents, particularly in Article 5 countries where logistical and regulatory infrastructure is less developed. Specific areas where additional clarification or flexibility may help include:	Thank you for your input. Verra has considered these concerns and believes that the current requirements ensure credits remain high-quality. Verra also notes that supplemental guidance for meeting these requirements may be useful but is outside the scope of this methodology revision. Verra takes note of the suggestion and may include further guidance in a clarification or subsequent revision.	



#	Organization	Comment	Developer's Response
		Weighing Requirements (Section 9.3.1.1): The two-day window for pre- and post-destruction weighing is rigorous and enhances integrity, but delays in facility operations could force unnecessary re-weighing. We suggest clarifying acceptable procedures in cases of unforeseen delays, or considering a modestly extended window where custody of containers remains fully monitored and sealed. Sampling Requirements (Section 9.3.1.2): The requirement that samples be taken by an independent technician is appropriate, but may be challenging in remote or resource-constrained regions. We recommend clarifying options for ensuring independence in contexts with limited availability of accredited technicians, while still upholding data integrity. Mixed Substances (Sections 9.3.1.3 & 9.3.1.4): The conservative procedures for mixed ODS/HFC streams are well justified. However, requirements such as circulation at defined flow rates and complex moisture content analysis could create barriers for smaller facilities. We suggest that Verra consider guidance on practical compliance pathways, including the use of standardized temporary holding equipment	
		or cost-effective laboratory analysis protocols.	



#	Organization	Comment	Developer's Response
		Dilute Sources (Foam): The quarterly calibration of weighing scales and detailed sampling/analysis of foam are appropriate for ensuring accuracy, but represent a significant recurring cost for smaller operators. Additional guidance on costeffective implementation, or recognition of regional calibration standards, may help lower the barrier to participation while maintaining rigor.	
31	Recoolit	1. Some commonly-used HFCs are commercially-produced blends, e.g. R410A is a blend of R32 and R125. Please clarify whether these count as "mixed" for the purposes of the additional requirements in Section 9.3.1.4. Our view is that commercial blends should not count as "mixed". They do not separate into their individual components under gravitational force (unlike oil vs. water), hence circulation is not needed. If they did, technicians all over the world would have been required to circulate before injecting commercial blends into AC units. There have been no such requirements in the industry. 2. Please clarify that the requirements for "weighing instruments" in 9.3.1.1 only apply to the weighing instruments used to determine the final destroyed weight of the ODS or HFC, and not to other weighing instruments used during project activities. 3. The requirement for sample cylinders to	Thank you for your input. Please see responses to each sub-comment below: 1. Verra clarified that commercial blends are excluded from what is considered mixed ODS/HFCs. 2. Yes, the weighing instruments described in Section 9.3.1.1 only apply to those used to determine the final weight of destroyed material. 3. The current requirements, as written, do not preclude use of EN standards to meet the requirements.



#	Organization	Comment	Developer's Response
		meet U.S. DOT or equivalent national/ISO standards should explicitly include EN 1964-3:2000, which is technically equivalent to ISO 9809 and widely adopted for transportable high-pressure gas cylinders. Recognizing EN standards would ensure practical compliance for equipment manufactured to those specifications while maintaining the same safety and performance integrity.	
32	Carbon Containment Lab	The requirement for third-party testing can be challenging in countries & regions lacking labs and complicated further by Basel Convention controls on transboundary movement of waste. We recommend clearer guidance on acceptable lab accreditation and regional alternatives and possibly explicit provisions for verifier review when local capacity is missing.	Thank you for your input. Verra also notes that supplemental guidance for meeting these requirements may be useful but is outside the scope of this methodology revision. Verra takes note of the suggestion and may include further guidance in a clarification or subsequent revision.

Q7: Do you have any other comment or suggestion to include?

Q7: D	Q7: Do you have any other comment or suggestion to include?		
#	Organization	Comment	Developer's Response
33	Anonymous 2	No.	Thank you for your input.



Q7: Do	Q7: Do you have any other comment or suggestion to include?			
#	Organization	Comment	Developer's Response	
34	A-Gas	Used SF6 recovered from equipment should also be added as an eligible substance when recovery, reclamation and reuse is not technologically or economically feasible. This is a highly potent GHG and even small amounts of losses at recovery during either equipment servicing or end-of-life can significantly contribute to global warming. Many countries around the world have poor awareness and practices around SF6 recovery including misconception that reclaimed SF6 has inferior quality compared to virgin SF6. This often leads to venting of SF6. Carbon credits from SF6 destruction can greatly increase proper recovery and management of SF6 around the world. Please see more specific comments in the general feedback section.	Thank you for your input. SF6 was not included in this methodology revision since it is not a controlled substance under the Montreal Protocol, but may be considered for future revisions or methodologies.	
35	Recoolit	1. We see several issues with the treatment of stockpiled virgin materials (ODS, HCFC, HFC) in the previous version of the methodology that are not addressed here: a. Leak rates of stockpiled refrigerants can be highly variable, and the 10% default leak rate for government stockpiles is probably too high. Given that CFCs were mostly phased out of production decades ago, it is implausible that any currently-existing stockpile is subject to such a high yearly leak rate (or it would all have leaked	Thank you for your input. Please see responses to each sub-comment below: 1a. The methodology recommends using project-specific values where available. The default values are provided in case project-specific values are not available. 1b. The VCS Standard allows for immediate crediting of future avoided emissions provided the intervention has occurred and the GHG emission reductions have been verified; the physical processes that would generate GHG emissions in the absence of an intervention are well-understood, stable, and quantifiable; and the crediting is limited to ten-year period, even if such GHG emissions are likely to have continued over a longer	



Q7: I	Q7: Do you have any other comment or suggestion to include?			
#	Organization	Comment	Developer's Response	
		by now). It is relatively simple to observe the leak rate for a specific stockpile, and project-specific leak rates should be used wherever possible. b. Where the baseline scenario is a slow leaking of refrigerant from a stockpile, it is inappropriate to issue credits for the entire project period at the beginning, since the counterfactual emissions will be spread out over the entire crediting period according to a simple formula. 2. Recovery of refrigerants for destruction can happen in situations other than device end of life. For example, venting during scheduled maintenance when the gas is deemed too contaminated to be reused and would otherwise be vented. The definition of "Recovery" at the beginning of the methodology is broad enough to include this, but in Section 9.1, the definition of VRrefr,i (the proportion of destroyed refrigerant that would be vented into the atmosphere at baseline) does not provide a default value for recovered refrigerant from non-end-of-life. 3. Where a legal prohibition on venting exists but is demonstrably unenforced under business-as-usual, the default venting rate (VRrefr,i) for refrigerant recovered from end-of-life products should be conservatively set to 90%. This value reflects prevailing EoL practices in low-enforcement contexts (lack of recovery infrastructure, inaccessible equipment, weak incentives) and is conservative	period of time under the baseline scenario. 2. Verra clarified that the default value applies to any refrigerant recovered from equipment. 3. Your point is noted. Verra believes the current assumptions will ensure the continued high quality of credits but may revisit these in future revisions if they are clearly hindering projects. 4. Section 8.3 was updated to clarify that leakage emissions (emissions of a substitute refrigerant or fire suppression agent) occur when the baseline scenario is reuse, not venting. 5. Verra notes that supplemental guidance for meeting these requirements may be useful but is outside the scope of this methodology revision. Verra may include further guidance in a clarification or subsequent revision. 6a. Use of a TEAP-approved destruction technology meeting all applicable national and local standards is sufficient. 6b. HFC destruction technologies can be used once they are approved by TEAP. 6c. See response to 6a above. Additionally, Verra added a clarification regarding use of cement kilns even if CO emissions exceed the TEAP limit of 100 mg/Nm3. 6d. The full code is included to ensure continued compliance with best practices.	



07: Do you have any other comment or suggestion to include? Organization **Developer's Response** Comment relative to observed recovery rates. Project proponents may justify deviations within a 80-95% range using objective evidence (e.g., documented take-back programs with verified recovery volumes, enforcement records, or market surveys). In the absence of such evidence, the 90% default applies. This approach aligns with ICVCM's treatment of nominally regulated activities in low-income countries while avoiding an unrealistic assumption of 0% venting. 4. Leakage emissions (equation 33) are not relevant where the counterfactual is venting, but as written applies to that situation. 5. In section 9.1, several variables require point of origin documentation. Please add clarity to these documentation requirements: what constitutes sufficient point of origin documentation? 6. Destruction: Please add clarity on screening criteria for destruction technology used (Condition 6, Section 4): a. The methodology requires that "Destruction technologies meet screening criteria set by the UNEP Technology and Economic Assessment Panel (TEAP) Task Force on Destruction Technologies (TFDT)." The TEAP report lists screening criteria, and then on that basis marks certain technologies as approved. For additional clarity, please specify whether using a type of technology marked as "approved" in the TEAP report is sufficient,



07: Do you have any other comment or suggestion to include? Organization **Developer's Response** Comment or whether a specific facility must be demonstrated on a per-project level to meet the screening criteria. b. The latest TEAP report on destruction technology (2018) marks some technology as "Approved" for CFCs and HCFCs, but does not list any technologies as "Approved" for HFCs - only "Recommend for Approval" or "High Potential". As written, it is unclear whether any destruction technology would meet the methodology criteria for HFC destruction. Please clarify the status of various technologies under the current TEAP report. c. CO emission performant requirement: TEAP TFDT includes a screening criterion requiring CO emissions below 100 mg/Nm³. This limit is unrealistic for cement kiln co-processing, which TEAP lists as an approved destruction technology, since CO emissions from kiln operations alone typically exceed that level. Applying this threshold would render the technology noncompliant without additional controls unrelated to the destruction process. The requirement should therefore align with the applicable national standard for CO emissions in the host country, rather than the <100 mg/Nm³ benchmark. d. Code of Good Housekeeping: The methodology requires that "Operating parameters of the destruction unit while destroying the ODS and/or HFC material

must be monitored and recorded as



Q7: D	Q7: Do you have any other comment or suggestion to include?			
#	Organization	Comment	Developer's Response	
		described in the [TEAP] Code of Good Housekeeping". Reproducing the TEAP "Code of Good Housekeeping" in its entirety (Appendix 2), while limiting its relevance, can lead to the mistaken impression that project validation and verification requires verifying compliance of the destruction facility with the entire CoGH. The methodology would be improved if it more clearly outlined the relevant portion of the COGH requirements and refrained from reproducing it in its entirety.		
36	Carbon Containment Lab	We are extremely supportive of updating the methodology and expanding eligibility to HFCs. However, we believe the methodology has a miss in excluding Article 5 countries until a 70% phasedown threshold is achieved. This cutoff is arbitrary and risks delaying critical nearterm emissions reductions in regions where financial incentives and infrastructure for proper refrigerant management are currently lacking. Equation 28 currently excludes destruction facility energy use; this might be an oversight. We suggest that methodology should include energy-related project emissions in the calculation (directly measured or using conservative default energy/emission intensity values where measurement is infeasible).	Thank you for your input. Please see responses to each sub-comment below: The 70% value was determined as a reasonable indicator of intent to phasedown, and showing a downward trajectory over time that reflects actual replacement strategies for HFC use. That being said, Verra clarified that the 70% phasedown threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries. Verra incorporated destruction facility emissions for plasma arc units. Emissions from other destruction facility energy use are considered de minimus, though, as only a relatively small proportion of ODS or HFC material would be fed into the incinerator along with other material with significant fuel value. Use of a TEAP-approved destruction technology, including cement kilns, meeting all applicable national and local standards is sufficient. Verra added a clarification regarding use of cement kilns even if CO	



Q7: D	Q7: Do you have any other comment or suggestion to include?			
#	Organization	Comment	Developer's Response	
		To lower the barrier to entry for project developers in low-data contexts, provide conservative default values for inputs such as typical energy use per kg destroyed, representative leakage factors when reuse is the counterfactual (see leakage point below). On destruction facility requirements: TEAP approves cement kilns for ODS destruction. However, most cement kilns emit carbon monoxide (CO) higher than TEAP limit of 100 mg/NM3. These higher CO emissions happen before ODS destruction, hence shouldn't affect the eligibility of the destruction facility as long as CO emissions are within the permitting requirements of the host government and the additional CO emissions resulting from ODS destruction does not exceed the TEAP limit of 100 mg/NM3. Releasing this requirement will mean more capacity for destruction which is desperately needed. CC Lab estimates that today over 150 countries have no destruction capacity; and only 11 countries allow for importing of these waste gases for destruction. In the text for section 8.3, it mentions that leakage for substitute refrigerants only applies when the counterfactual is reuse. It would be more clear if this was reflected in equation 33 itself, by multiplying the existing equation by the reclamation rate (RRrefr,i,y).	emissions exceed the TEAP limit of 100 mg/Nm3. Verra updated Equation 33 (now 31) and Equation 35 (now 33) to incorporate the refrigerant reclamation rate (RRrefr,i,y) and the fire suppressant reuse rate (RRfire,i,y), respectively. Regarding venting prohibitions and associated enforcement, Verra understands these concerns but believes the current assumptions will ensure the continued high quality of credits; however, Verra may revisit these in future revisions if they are clearly hindering climate action.	



Q7: Do you have any other comment or suggestion to include?

Organization	Comment	Developer's Response
	Venting rate clarification: In the definition for venting rate for Article 5 countries, Verra states that this is assumed to be 100% for "refrigerant recovered from products at end-of-life in the absence of any regulatory prohibition on venting," and 0% for stockpiles of "virgin, recycled or reclaimed refrigerants." It is not specified what value should be applied for refrigerant recovered from end-of-life products when a regulatory prohibition on venting exists, but is unenforced. The ICVCM states that additionality exists for nominally regulated project activities, if those activities occur in low-income countries where there is evidence that regulations are unenforced under business-as-usual. We believe that venting is the business-as-usual practice for Article 5 countries even when regulatory prohibitions exist due to the difficulty of regulatory enforcement, the inaccessibility of recovery equipment, and the absence of incentives for recovery. We therefore recommend that Verra adopt a conservative default venting rate of 90% for all recovery from end-of-life equipment in Article 5 countries. If baseline recovery rates increase due to increased enforcement (or for any other reason), this assumption should be revised accordingly.	



GENERAL FEEDBACK

Section 1 - Summary Description

Section	Section 1 - Summary Description			
#	Organization	Comment	Developer's Response	
37	Tradewater	Section 1, 3, 4, 5, and throughout: Use of "Recover" and "Recovery" We recommend revising the definition of project activities to "collect and destroy" ODS or HFC, not "recover and destroy ODS or HFC from products". The methodology includes stockpiles and virgin cylinders which are not recovered from products. The definition of "recover" in Section 3 also does not include collection of material, only material removed from a system and stored in external containers. Therefore, adjusting the definition of project activities and adding a defined term for "collect" would better represent the eligible activities and material in this methodology. We also note that the definition for "recovery facility" includes where collected material is aggregated in preparation for destruction, but we believe that this could be made clearer by revising this facility term to remove aggregation and adding a new term for "aggregation site". Section 5 should then be revised to include aggregation site along with recovery facility as starting points within the project boundary.	Thank you for your input. Verra updated and clarified the language accordingly.	



Section 4 - Applicability Conditions

Section	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
38	Tradewater	Section 4.1: Start Date We believe it will be very difficult to document the requirements in this section; more specifically: a. "For countries with essential use or critical use exemptions that wish to destroy ODS, the project proponent must demonstrate (e.g. with formal communications to the MP) that the relevant ODS is not needed now or in the future for such uses." b. How would producing countries show that any "intended recipient countries no longer require the import of the relevant ODS or HFC from the source country"? Does the producing country only produce for a specific set of countries? Does that set change according to demand? We also recommend that Section 4.1.2(2)(b) clearly excludes importers and producers of HFC, rather than only stating "in the possession of a third party" Additionally, we would like Verra to clarify whether waste handlers are excluded from "stream of commerce", particularly in reference to the HFC criteria in Section 4.1.2	Thank you for your input. Please see responses to each sub-comment below: a/b. Country-level use and import data can be used to demonstrate the relevant ODS is not needed now or in the future. c. Section 4.1.2(2)(b) was updated to clearly exclude importers and producers. d. Waste handlers can be part of the stream of commerce.	
39	Anonymous 1	•The baseline scenario setting allows	Thank you for your input. Please see responses to each	



Sec	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
		limiting of applicable geographic area to a specific geographic area within a host country. Given that ODS/HFC baselines are intrinsically tied to Montreal Protocol phase-out/phase-down schedules, it is unclear why the baseline should not apply to the entire host country. •Page 29 should specify which IPCC Assessment Report must be used. •Baseline emissions for end-of-life refrigerants in Article 5 countries assume 100% venting. However, reclamation rates are expected to increase and should be accounted for through an appropriate deduction. •Parameter CRi on page 41 has incorrect units. •Leak rates in the CAR protocols are only given for certain gases. For the remaining ones, the Inventory of US Greenhouse Gas Emissions and Sinks, Annex 3.9 is cited. However, further guidance should be given on which leak rates to use (first fill, servicing and leaks, disposal, etc.) and whether the upper range should be used. It would be much more preferable if the methodology would include leak rates, especially since the US GHG inventory may not be continued/updated in coming years (may even be taken offline). •Project emissions from destruction facilities (e.g., the energy required to destroy gases) have not been accounted for and should be included. •To avoid ambiguity regarding eligibility,	•Project start date must align with Montreal Protocol phase-out/phase-down schedules. Project proponents may limit the applicable geographic area for baseline emissions with justification of the distinctions between the applicable geographic area and the rest of the country, such as regulations around management of material or infrastructure accessibility or mandatory ODS or HFC capture or destruction requirements. Projects must still meet the start date criteria. Any subnational eligibility considerations should be taken into account by the project developer. •Page 29 indicates "As per the most recent version of the VCS Standard," which requires AR4 or AR5 depending on the date the emission reduction occurs. •Verra will consider updating baseline reclamation/EOL rates for Article 5 countries in a future revision if reclamation practices improve. •The units for parameter CRi on page 41 were corrected to the molecular weight C/molecular weight ODS or HFC. •The methodology specifies that the most recent version of the US Greenhouse Gas Inventory should be used. Total leakage emissions should utilize an annual emission rate from Annex 3.9 of the US Greenhouse Gas Inventory, which would include both operational and servicing leaks are provided for guidance purposes. The project proponent should select the emission rates that are most appropriate for the project. •Energy consumption emissions from most destruction facilities are considered de minimis, as only a relatively small proportion of ODS or HFC material would be fed into the incinerator along with other material with significant fuel value. For plasma arc facilities, however, emissions from energy consumption are included in project emissions. Verra updated the methodology	



Secti	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
		the methodology should clarify whether multiple countries of gas origin are permitted, as well as whether multiple countries of destruction are acceptable.	accordingly. •Material can be aggregated from multiple countries, but all source countries must be individually eligible. Verra updated the methodology accordingly.	
40	A-Gas	1. Section 4: Applicability Conditions, 3 (b), page 8 Eligibility of blowing agents is currently limited to end-of-life domestic refrigeration appliances. This should be expanded to include other insulation foam applications like buildings, commercial and industrial refrigeration, refrigerated transport, etc. 2. Section 4.1: Start Date, page 9 First paragraph of this section states that the subsections 4.1.1 (HCFCs) and 4.1.2 (HFCs) provide exceptions to the start date requirements. However, the titles of subsections 4.1.1 and 4.1.2 imply that these are additional requirements. Can you please clarify that the HCFC refrigerants that meet requirements in sub-section 4.1.1 do not have to meet the other requirements in section 4.1? Particularly the requirements in the three bullets of section 4.1 do not make projects eligible until the completion of the final stepdown of production or consumption phaseout for a particular ODS. These requirements contradict subsection 4.1.1 that allows ODS to be sourced from countries that have not fully phased out production or consumption if certain conditions are met. Please clarify which requirements apply for	Thank you for your input. Please see responses to each sub-comment below: 1. Verra may consider these additional foam sources in future revisions. 2. As noted in the response to a similar comment in the Key Questions section, Verra revised the titles of these sections for clarity. 3. No, this is not still required for Section 4.1.1. Similar to above, Section 4.1.1 provides exceptions to the HCFC project start date eligibility requirements. 4. The final stepdown of production/consumption phaseout for ODS and final phasedown for HFCs refer to the phaseout and phasedown schedules established by the Montreal Protocol. 5. Verra added the definition of "government stockpile." 6. This should be demonstrated based on the Kigali schedule. 7. Verra clarified that the 70% threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries.	



Secti	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
		HCFC refrigerants?		
		3. Section 4.1: Start Date, pages 9-10 The three bullets in this section require demonstration of demand for ODS in the recipient country before being eligible for destruction. Is this still required for HCFCs under sub-section 4.1.1?		
		4. Section 4.1: Start Date, pages 9-10 In the three bullets in this section, what does completion of final stepdown of production/consumption phaseout for ODS mean? What does completion of final phasedown of HFC mean?		
		5. Section 4.1.2: Additional HFC Project Start Date Eligibility, (1), page 10 The Methodology should define "government stockpile" for HFCs?		
		6. Section 4.1.2: Additional HFC Project Start Date Eligibility, (2), page 10 Can you please clarify how the phasedown of at least 70% of baseline for HFCs should be demonstrated? Should this be based on the Kigali schedule? For e.g. 2029 for all non-Article 5 countries? Or should additional country specific data on HFC production and consumption be provided to demonstrate this? If so, the methodology should provide additional guidance.		
		7. Section 4.1.2: Additional HFC Project Start Date Eligibility, (2), page 10		



Sectio	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
		Article 5 countries do not have a 70% phasedown step in the Kigali schedule. Even the 50% phasedown step/deadline for Group 1 is 2040, which is 15 years from now. Depriving Article 5 countries from carbon finance (which they need more than non-Article 5 countries) for 15 years will slow down transition and can become a major barrier to meeting the phasedown targets. Article 5 countries should be allowed to use this methodology as soon as possible to allow carbon finance to help expedite transition such as improving HFC recovery networks, building local reclamation capabilities and incentivize switch to alternatives. Currently in most Article 5 countries, virgin HFCs are very cheap. Cost of recovering and reclaiming used HFCs is higher than the price of virgin HFCs. This is resulting in lack of recovery of used HFCs during servicing and end-of-life. Carbon credits can play an urgent and immediate role in preventing venting of HFCs in these countries by incentivizing recovery, reuse and destruction.		
41	A-Gas	Section 4.1.1 and 4.1.2: Additional HCFC and HFC Project Start Date Eligibility, pages 10-11. The language "Prior to acquisition by the project proponent" should be replaced with "Prior to the project start date". These sections state the language "prior to acquisition by the project proponent" in bullets (2) and (3) of section	Thank you for your input. Verra revised the language "prior to acquisition by the project proponent" to clarify that waste handlers can be project proponents. The language "(and not recycled and reclaimed)" included within Sections 4.1.1 and 4.1.2 is intended to prevent material that has been purified with the intent of reuse from being destroyed. The subsequent bullet refers to material that has been held in stockpiles and is no longer intended for use, including recycled or	



Section	Section 4 - Applicability Conditions			
#	Organization	Comment	Developer's Response	
		4.1.1 and bullets (2a), (2b) and (2c) in section 4.1.2. This language makes waste handlers ineligible to be project proponents for these projects. Since the purpose of this language is to specify a time when HCFC or HFC is eligible, an alternative and appropriate language would be "prior to the project start date". This alternative language avoids confusion and ensures that waste handlers are eligible as project developers. The language "(and not recycled and reclaimed)" from bullet (3a) of section 4.1.1 and bullet (2c,i) of section 4.1.2 should be removed. This language is unnecessary and creates confusion. There is no valid reason why recycled and reclaimed HCFCs and HFCs should be excluded when recovered HCFCs and HFCs are eligible. Recovery of used HCFCs and HFCs always occur prior to them being recycled or reclaimed. This language also contradicts the subsequent bullets that make recycled and reclaimed HCFCs and HFCs eligible.	reclaimed material, making it eligible for destruction.	



Section 7 - Additionality

Section	Section 7 - Additionality			
#	Organization	Comment	Developer's Response	
42	A-Gas	8. Section 7.1: Destruction of CFC and HCFC Refrigerant, Step 2: Positive List, page 15 Currently Step 2: Positive list is only applicable to the ODS refrigerants in determining additionality. This step should also be applicable for ODS fire suppressants, blowing agents and propellants as well as mixed HFC gases (i.e. when HFCs are mixed with other gases like CFCs and HCFCs and cannot be technologically or economically separated for reuse).	Thank you for your input. The scope of VMD0048 revision is limited to HCFCs. Verra may consider including HFCs in a subsequent revision.	

Section 8 - Quantification of Reductions and Removals

Se	Section 8 - Quantification of Reductions and Removals		
#	Organization	Comment	Developer's Response
43	A-Gas	9. Section 8.2: Project Emissions, page 22 The Methodology should allow use of default total project transportation and destruction emissions values of 7.5 mtCO2e per mt of ODS/HFC destroyed and	Thank you for your input. Please see responses to each sub-comment below: 9. Verra revised the methodology to allow use of specified default values for project transportation and destruction, including those available from other standards, as appropriate.



Organization	Comment	Developer's Response
	75 mtCO2e per mt of ODS/HFC destroyed from intact foam similar to the ARB, ACR and CAR ODS destruction methodologies. 10. Section 8.3: Leakage, pages 26-27 Substitute emissions should not be treated as leakage emissions for all ODS/HFC destruction. ACR's ODS destruction methodology v 2.0 removed substitute emissions because although ODS refrigerants in most cases do get replaced with non-ODS refrigerants (through either retrofits or replacements), destruction of recovered ODS is not mandated by law almost universally. The recovered ODS would either be reused or stored both of which would eventually lead to gradual leaks and emissions. Since without legal mandate to destroy recovered ODS or HFC, in the baseline scenario, both recovered ODS/HFC and replaced alternative non-ODS refrigerant would continue to coexist. ACR argues that since replaced non-ODS refrigerant exists in both baseline and project scenarios, emissions from replaced (substitute) refrigerants are not just project emissions but also baseline emissions and would essentially cancel out. Treating substitute emissions as leakage or project emissions only is hence incorrect and should not be deducted in quantifying emission reductions. The CAR Article 5 ODS destruction	10. Verra clarified that leakage emissions do not apply scenarios in which venting is the baseline. Verra update the default substitutes for scenarios in which leakage emissions do need to be calculated.



Section	Section 8 - Quantification of Reductions and Removals			
#	Organization	Comment	Developer's Response	
		methodology v2.0 (which is ICVCM approved) in section 5.2.1 (page 19) states the following "Projects that destroy used refrigerant recovered from end-of-life equipment do not need to account for substitutes, as the destruction of this ODS does not increase the demand for substitute refrigerants. Similarly, projects that destroy government stockpiles that cannot legally be sold to the refrigerant market do not need to account for substitutes, as the destruction is not expected to increase use of substitute refrigerants."		
44	Tradewater	Section 8.3: Leakage This section mentions leakage in relation to refrigerants that would have been reused in the baseline scenario. Earlier in Section 8.1.1, the methodology specifies that the leak rate applies to destroyed refrigerant that would have remained in storage in the baseline scenario. Are there situations in which project developers can show that no reuse would have occurred and therefore no need to account for substitute emissions? Some examples of this scenario could include: a. A virgin CFC container in a stockpile. b. HCFCs where the owner demands they be destroyed. c. HFCs from a country that has no reclamation technology or market.	Thank you for your input. Leakage emissions refer to emissions of a substitute refrigerant or fire suppression agent that occur when the baseline scenario is reuse. Determination of the baseline scenario is separate and, if determined that the baseline does not involve reuse, leakage emissions do not apply.	



Section 9 - Monitoring

Section	Section 9 - Monitoring		
#	Organization	Comment	Developer's Response
45	A-Gas	11. Section 9.1: Data and Parameters Available at Validation, page 29 CompRy (Rate of regulatory compliance when destruction is mandatory). This data can be challenging to obtain in Article 5 countries. This could also be subjective, so the Methodology should provide additional guidance on a standardized approach/method to estimate this. 12. Section 9.1: Data and Parameters Available at Validation, page 32 ER, foam, i: Emission rate for blowing agents in insulation foam The Methodology relies on emission rates from old data (2003-2007). According to the latest U.S. GHG Inventory, currently the recovery of blowing agents from disposed foam is almost non-existent in the U.S. The inventory publishes a 100% emission rate for blowing agents for all insulation foam over the manufacturing, use and disposal (post disposal) stages. Insulation foam is almost entirely disposed of in landfills and eventually emit into the atmosphere. ACR's ODS destruction methodology v2.0 updated the emission rates for all insulation foam to 100% based on the more recent and accurate U.S. GHG Inventory data. This Methodology should also allow use of the more recent data from the U.S. GHG Inventory than rely on old	Thank you for your input. Please see responses to each sub-comment below: 11. Guidance on calculating CompRy is outside the scope of this revision. Verra takes note of the suggestion and may include further guidance in a clarification or subsequent revision. 12. To be conservative, Verra kept the existing intact foam emission factors for ODS and revised the emission factors for HFCs to only reflect emissions from disposal and post-disposal. 13. It was not the intent of the methodology to exclude material with a saturation point above 75% from eligibility. Verra updated the methodology to explicitly include materials with a saturation point above 75% as long as the entire moisture content is deducted. 14. Verra removed Section 9.3.3 as it was no longer necessary due to the inclusion of foam monitoring requirements in Section 9.3.2 and the requirement to determine blowing agent content and quantity through sampling. 15. Cement kilns are approved for select ODS destruction by TEAP and may be used for ODS destruction. Verra added a clarification regarding use of cement kilns even if CO emissions exceed the TEAP limit of 100 mg/Nm3.



Sect	Section 9 - Monitoring			
#	Organization	Comment	Developer's Response	
		data from the CAR methodology.		
		13. Section 9.3.1.3: Analysis Requirements, page 57 The Methodology should allow deduction of entire mass of moisture to calculate net ODS destroyed when the moisture content is higher than 75% of saturation point. Most ODS and HFC refrigerants recovered or stored in Article 5 countries can contain higher moisture content due to poor quality containers and collection and storage practices. Many of these countries do not have in-country destruction facilities requiring multi-day transport to a different country with vastly different ambient temperatures (for e.g. Middle East to Europe or US). This can also result in moisture fluctuations within the same container. Lastly, many destruction facilities do not have on-site dewatering capabilities. The Quebec ODS destruction protocol and ACR ODS Destruction methodology allow for deduction of entire mass of moisture from the total mass of ODS sent for destruction to calculate net ODS destroyed when the moisture content exceeds 75%. 14. Section 9.3.3: Recovery efficiency of blowing agents, pages 60-61 The current procedures required by the Methodology to calculate the foam		
		recovery efficiency are cumbersome and can be prohibitive for most projects. This is		



Sect	Section 9 - Monitoring			
#	Organization	Comment	Developer's Response	
		also unnecessary for projects that extract blowing agents from foam before destruction because only the mass of the recovered blowing agent contained in a sealed container is eligible for quantification. For projects that destroy intact foam, a simplified baseline emissions quantification method similar to ACR's ODS destruction methodology v2.0 should be used where a default discount factor of 10% is used to account for losses that occur during removal/recovery of intact foam from buildings and appliances. 15. Section 9.3.4: Destruction facility requirements, pages 61-62 Cement kilns are TEAP approved ODS destruction facilities. However, most cement kilns have carbon monoxide (CO) emissions that are higher than the TEAP limit of 100mg/NM3. Since higher CO emissions occur in the baseline (that is before destruction of ODS), cement kilns with higher CO emissions in the baseline should be allowed to be used as a destruction facility as long as (i) the CO emissions are within the permitting requirements of the host government, and (ii) the incremental CO emissions resulting from ODS destruction does not exceed the TEAP limit of 100mg/NM3. Allowing cement kilns to be used as destruction facilities can greatly help improve availability of destruction facilities		



Sectio	Section 9 - Monitoring		
#	Organization	Comment	Developer's Response
		particularly in Article 5 countries and hence expedite destruction of these super pollutants.	

General Feedback

Gener	General Feedback			
#	Organization	Comment	Developer's Response	
46	Environmental Investigation Agency	Carbon offsetting is inherently flawed as an approach to the climate emergency. It shifts responsibility rather than delivering absolute reductions, creates a dangerous illusion of progress while delaying structural change, and too often results in credits which fail to represent genuine mitigation. As such, the proposal to expand the crediting of activities for the recovery and destruction of HCFCs and HFCs raises profound systemic concerns. Proposals to include HCFCs and HFCs in Verra's crediting methodology, before full phase-out, even subject to conditions such as minimum storage periods or partial phase-down thresholds, leave open serious loopholes in national accounting and stockpile provenance. This risks the issuance of credits with little or no	Thank you for your input. Please see response to comment #1. Halons are excluded from this methodology due to the critical nature of its use.	



Gene	General Feedback		
#	Organization	Comment	Developer's Response
		environmental value, while funnelling resources into private rent-seeking at the expense of genuine climate action. The social consequences are equally troubling, with Article 5 Parties and local communities often excluded from the benefits, despite these gases originating within their jurisdictions.	
		The risks of relying on a carbon crediting approach to ODS and HFC management are not theoretical. The well-documented HFC-23 scandal under the Clean Development Mechanism demonstrated how crediting schemes for high-GWP gases can create perverse incentives for additional production, purely to generate destruction revenues. Furthermore, in May 2025 the Montreal Protocol's Technology and Economic Assessment Panel (TEAP) raised concerns in its update report that, "the deliberate destruction of halon 1301 for carbon credits has the potential to significantly reduce the quantity of the available halon 1301" and that "destroying halon only to have to subsequently produce more seems to be a perverse incentive."	
		EIA's view is clear; the management and destruction of ODS and HFCs must not be left to voluntary carbon markets. These substances should be addressed through robust regulatory measures at the national level, in accordance with the Montreal	



Gene	General Feedback			
#	Organization	Comment	Developer's Response	
		Protocol, and supported by the proven and cost-effective Multilateral Fund (MLF). The MLF has already delivered unparalleled results at a fraction of the cost of offsetting. In addition to previous pilot projects, the MLF has recently provided a funding window to support Article 5 Parties in drawing up inventories of their ODS banks, as well as plans for their collection and disposal. So far, more than 100 countries have engaged with this opportunity, significantly progressing the issue of ODS bank management under the MLF. When the inventories funding window closes in December 2025, members of the Executive Committee to the MLF will begin discussing funding for implementation of the collection and disposal plans developed. Meanwhile, a draft decision on "strategies to find medium- and long-term solutions to the significant accumulation of inventories of refrigerant gases" is due for continued discussion at the 37th Meeting of Parties (MOP) in November. Together with previous consensus decisions on life-cycle refrigerant management, these developments demonstrate a clear will on the part of Parties to the Montreal Protocol to find an effective solution to ODS and HFC management within the framework of the		



Gener	General Feedback		
#	Organization	Comment	Developer's Response
		treaty. In fact, it is worth noting that during initial discussions of the draft decision at the Open-Ended Working Group (OEWG) meeting in July 2025, several Parties expressed serious concerns about the proposed use of carbon credits as a means to fund HFC destruction. In light of these developments, it is misleading to claim, as is the case on page 10 of VMD0048, that the "UNEP Multilateral Fund is not focused on financing the destruction of ODS". In fact, any ODS or HFC crediting methodology seeking to ensure it is not in violation of the additionality principle would be well-placed not to proceed until discussions on the funding of ODS disposal plans under the MLF, and the draft decision appearing before the MOP, are concluded. To protect the integrity of the climate system and preserve the Montreal Protocol's hard-won reputation as the world's most successful environmental treaty, EIA urges Verra not to proceed with the proposed expansion of its ODS	
		recovery and destruction methodology.	
47	Anonymous 3	HFCs: Applicability conditions In addition to the comments below, we seek clarification on the reasoning behind the new start date eligibility inclusion criteria. Special exemptions are noted for the applicability of project start dates occurring	Thank you for your input. Please see responses to each sub-comment below: 1. Stockpiles are defined in Section 3, including government stockpiles. Verra added a definition specific to "government stockpile" to clarify that they do not include stockpiles where material is legally transferable



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		before HFC phasedown reached the final stepdown in the host country. The following are our observations regarding these special conditions: 1. For government stockpiles, eligibility is allowed before HFC phasedown has been completed. We believe that the methodology applicability should specify this exemption only for government stockpiles that demonstrate that the material is not legally transferable for sale or use in the commercial market. We note that the methodology already requires projects to document the portion of substances that meet this requirement for the purpose of emissions quantification, as specified in Section 9.1 for RRrefr,i,y / RRfire,i,y / RRprop,i,y, and LRrefr,i/LRfire,i/LRprop,i. 2. At ≥70% phasedown, stream-of-commerce HFCs can qualify. But to guard against replacement production/imports, project would want to provide ex-ante evidence (per Comment 3) that destruction will not materially be backfilled. This requirement would provide assurance against production-side backfill risk, since removing HFCs from the stream of commerce may otherwise result in new production/imports if demand is high.	for sale or use in the commercial market. Documentation must be provided to verify that HFCs obtained from government stockpiles meet this criteria. 2. The 70% threshold was determined as a reasonable indicator of intent to phasedown, and showing a downward trajectory over time that reflects actual replacement strategies for HFC use. That being said, Verra clarified that the 70% phasedown threshold applies to non-Article 5 countries and added a 50% phasedown threshold for Article 5 countries.
48	Anonymous 3	HCFC: Applicability conditions The methodology applicability includes HCFCs sourced from a country that has not yet completed phaseout under any of the	Thank you for your input. Please see response to comment #49 below.



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		following source conditions: (1) virgin HCFC sourced in the host country, (2) HCFC stockpiled/stored by government/waste handler for 1+ yrs., (3) recovered from end of life equipment, or (4) owned by an individual/company for 1+ years. Similar to the HFC concerns described above, the destruction of species that have not been phased out may lead to new import or production, resulting in replacement production (supply-side backfill) risk. HCFCs that have been held for a long period (1+ yrs) are less likely to be in demand, but demand can sometimes shift significantly when large systems need refrigerant replacement. Demonstrating significant barriers to the reclaimability of the project's HCFCs can mitigate the risk of the project incentivizing new production. Comment 3 tests A & B (see below) are options to mitigate replacement production risk; for HCFCs, placing particular emphasis on batch-level non-reclaimability evidence before destruction can also reduce risk.	
49	Anonymous 3	Production-side backfill risk This comment addresses replacement production risk, i.e., when the destruction of HFCs or HCFCs could tighten supply and lead to new virgin production or imports within national allowances or quotas. This is a supply-side market	Thank you for your input. Verra included provisions in the start date exceptions for demonstrating lack of reclamation infrastructure capacity.



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		response that is distinct from the methodology's Section 8.3 leakage provisions, which only cover substitute-use emissions (i.e., emissions from alternative refrigerants used instead of reused stock). Although the examples below reference HFCs/Kigali allowances, the same framework applies to HCFCs, substituting phase-out quotas/consumption caps in place of Kigali provisions. While the methodology parameterizes the baseline reuse/storage share and includes substitute-use leakage emissions, it does not currently include a requirement or mechanism to address supply-side backfill, even in cases where baseline reuse is material. This gap risks over-crediting when the project displaces reuse that would otherwise meet demand, and that demand is instead met with newly produced virgin gas. Safeguards that could mitigate such risks include (presented here in three parts): A. Ex-ante tests (to avoid deduction): Projects could demonstrate that destroyed HFC/HCFC stock is unlikely to be replaced by new production. For example, the following options could be considered: Demand/supply comparison: Show that project destruction occurs in a context where demand does not exceed allowance/quota limits (e.g., via national consumption or production data). Non-reclaimability evidence: Provide batch-level composition analysis, cost or		



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		barrier-based feasibility assessment, or documentation of inadequate reclaim infrastructure. A cost-based analysis may compare, for example, the costs of reclamation compared to the potential sale price of reclaimed HFCs under project-specific circumstances. A barrier-based assessment may include analysis of the extent of regional HCFC banks, including how much HCFC has been emitted versus reclaimed from sources similar to the project sources, a market overview that demonstrates that HCFC substitutes are more readily available and cost-effective than continued production of HCFCs for existing equipment needs, and/or logistical availability of reclamation facilities, personnel and technologies. ■ Attestation from government officials, industry experts or Ozone Secretariat indicating that regulations against venting are not enforced. B. Emission reduction deduction (default where baseline reuse >5%) Where baseline reuse is significant (>5%), projects could apply a conservative deduction equal to the proportion of destroyed stock that would likely have been reclaimed or reused, with tCO 2 e deductions matching the tCO 2 e of that proportion of destroyed HFC. Country- or sector-level reclaim rate data could be used to estimate this share. If baseline reuse is ≤5%, the deduction may be waived		



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		as immaterial to avoid penalizing the destruction of low-value stock. C. National production allowance risk (Kigali loophole) There is an additional policy-level risk that HFC destruction may indirectly enable increased production allowances under the Kigali Amendment by creating headroom within national production caps. This is distinct from project-level supply-side backfill and should be addressed at the country level. The following mitigation options could be considered: Require a country-level analysis of production and consumption trends to confirm that destruction activities are not enabling additional production under the Kigali phase-down rules. Adopt the screening approach proposed by the Carbon Containment Lab (CCL) (CCL Recovery and Destruction white paper, Appendix 3). CCL outlines conditions under which destruction could justify production increases. If a host country matches the exclusion criteria defined by CCL, the methodology could either: Exclude the country from eligibility for HFC destruction projects, or Apply a discount to total credits issued to account for this risk. Even though the Ozone Secretariat considers this scenario unlikely, it has acknowledged that mechanisms may be needed to mitigate		



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		the risk where it does exist.		
50	Anonymous 3	Substitute emission data (Section 9.1, p 42-43). The allowable sources for substitute emission calculations in Article 5 countries include official published data, research, or industry studies (e.g., UNEP Fire Suppression Technical Options Committee), or default values provided in the most recent CAR Article 5 Protocol. In many cases, there is limited published data to inform substitute emission factors at a local scale. In practice, where local data are absent, projects may default to CAR A5 values. However, under the CAR Article 5 Protocol, a simplified approach to substitute emissions assumes that all ODS would be replaced by HFC-134a. Because this simplification was developed for CFC projects, the methodology might clarify that it should not be applied to HFC/HCFC destruction unless evidence shows HFC-134a remains a reasonable substitute in the host market. For non-Article 5 countries, substitute emissions may be established using official published data, research studies, industry data, CAR US Protocol defaults, or the US EPA's Inventory of US Greenhouse Gas Emissions and Sinks, Annex 3.9. Since the method requires deriving ten-year leak rates across relevant substitutes, adding a short worked example to guide developers in converting Annex 3.9 data into project-	Thank you for your input. Verra included updated default substitutes and provided examples of other possible substitutes.	



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		specific substitute emission factors could be useful.		
51	Anonymous 3	Substitute emission baseline (Section 8.3, p26-28). The methodology calculates substitute-use emissions (termed "leakage") based on 100% of the destroyed ODS/HFC quantity. While this is a conservative approach, it does not always reflect actual emissions in scenarios where the destroyed refrigerant would not have been reused in the baseline. Introducing conditions under which substitute-use emissions can be excluded can improve alignment between methodology logic and project realities. Furthermore, project proponents could be permitted to exclude substitute-use emissions where they can credibly demonstrate that baseline reuse was not feasible. This could include: Non-reusability / non-reclaimability tests, such as: Batch-level composition analysis showing contamination or low purity from point of origin. Financial or technical barriers to reclamation, documented with cost comparisons or infrastructure assessments. Local or regional evidence of negligible reclamation activity for the same chemical and source type. Empirical reclaim/reuse data: Local, national, or sectoral data to establish a baseline reuse/reclamation rate	Thank you for your input. Verra updated Equation 33 (now 31) and Equation 35 (now 33) in the Leakage section to incorporate the refrigerant reclamation rate (RRefr,i,y) and the fire suppressant reuse rate (RRfire,i,y), respectively. Otherwise, this section clearly indicates when leakage emissions must be calculated, i.e., when the baseline scenario is reuse.	



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		for the relevant chemical and source (e.g., end-of-life equipment, government stockpile). Applying the (above) reuse rate to the destroyed quantity to determine the share of emissions that should be attributed to substitute refrigerants. Project scenarios where leakage may be zero In some cases, project types do not introduce substitute-use emissions. For example: Projects that destroy refrigerants from end-of-life equipment in Article 5 countries, where the methodology assumes 100% venting in the baseline (VR = 1), and therefore no reuse. Projects involving stockpiled refrigerants that are legally restricted from resale or reuse, such as hazardous waste confiscated by authorities. In these cases, substitute-use emissions should not be applied, as there is no displaced use to be replaced by a substitute chemical. These exemptions are implicitly applied for CFC species according to VM0016; the methodology currently recommends the use of CAR protocol defaults, which include exemptions for calculating substitute emissions under the above circumstances for Article 5 countries. However, as the CAR protocol was developed exclusively for CFC destruction the VCS methodology could clarify that the above exemptions are relevant for all		



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		eligible ODS/HFC species.		
52	Anonymous 3	Intact foam destruction The methodology opens applicability to intact foam sources. Regarding the establishment of foam baseline emissions under this methodology (Section 9.3.2.2, p 59): 1. The composition of the ODS substance contained in intact foam is sampled according to the methodology requirements. The proportion of ODS contained in intact foam is established from a single foam sample, of dimension 5.08 cm × 5.08 cm × 5.08 cm. This sample size should be generally representative when taken from a large foam piece. However, in some cases, the proportion of ODS contained in foam pieces may be lower than the sampled proportion, especially when the average foam piece is smaller than this sample size. In cases where the majority of destroyed foam was in pieces smaller than the required sample size, we suggest that multiple samples be analysed, of a comparable size to the average destroyed foam piece. Regarding project emissions (Section 9.1, p 33): 1. Default factors for emissions from manual removal are established for intact foam of size larger than 100cm 3 and smaller than 100 cm³. The approach is commendable, as it accounts for	Thank you for your input. Please see responses to each sub-comment below: Verra revised the methodology to clarify that, in cases where foam removed results in sections smaller than or equal to 5.08 cm × 5.08 cm, a comparable number of samples that add up to greater than 100 cm3 should be analysed. If the project proponent can demonstrate the proportion of foam pieces greater than 100cm3 and less than 100 cm3, then the calculations may use a summation method to calculate emissions, otherwise the most conservative value should be used.	



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		differences in emissions based on the removal process. However, we wish to clarify: what approach should be taken when foam pieces vary, with some larger than 100 cm ³ and some smaller than 100cm 3? We suggest that projects either quantify the proportion of foam in each size category or assume the most conservative case for all destroyed foam (i.e., applying the emission rate for pieces smaller than 100cm3).		
53	Anonymous 3	Regulatory enforcement of ODS destruction the methodology allows projects to be developed in countries with regulatory enforcement of ODS destruction, so long as enforcement is less than 50%, and ER claims are deducted based on the expected level of regulatory enforcement. This requirement does not fully protect projects from over-crediting, as enforcement of existing regulations may tighten over time, leading to ODS destruction not represented by the original baseline scenario assessment. Due to uncertainty in the progression of regulatory enforcement over time, an alternative approach to crediting should be taken in cases where regulatory enforcement is active. For example, to prevent over-crediting in this temporal uncertainty, the methodology could require projects in enforcement regions to either (1) issue credits on a yearly basis rather	Thank you for your input. Crediting and the status of enforcement is based on the year in which destruction occurs.	



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		than upfront and review compliance rates each year, or (2) include a buffer pool to account for potential regulatory uncertainties (if there were a large enough pool of projects located in different countries/regions). The approach may also be appropriate for projects where the baseline involves some level of voluntary removal and destruction of ODS/HFCs, e.g., under a non-compliance responsible management program.	
54	Anonymous 3	Composition analysis & point of origin documentation. Because crediting occurs on per-container mass and composition, projects could publish standardized batch summaries including composition analysis, to enable independent review of the quantification inputs. Furthermore, projects could include point of origin descriptions for the destroyed HFCs and ODS, because source origin determines baseline vent/reuse/storage parameters.	Thank you for your input. Verra confirms that documentation of point of origin should be provided, as discussed in Section 9.3 (Description of the Monitoring Plan). Separately, laboratories performing the composition analysis must document chain of custody, identify the ODS/HFC, and document purity, moisture level, mass of high boiling residue, and analysis of other ODS or HFC in the cases of mixtures, as described in Section 9.3.1.