



Article 5 Ozone Depleting Substances Project Protocol Version 1.0 ERRATA AND CLARIFICATIONS

The Climate Action Reserve (Reserve) published its Article 5 Ozone Depleting Substances Project Protocol Version 1.0 (A5 ODS V1.0) in February 2010. While the Reserve intends for the A5 ODS V1.0 to be a complete, transparent document, it recognizes that correction of errors and clarifications will be necessary as the protocol is implemented and issues are identified. This document is an official record of all errata and clarifications applicable to the A5 ODS V1.0.¹

Both errata and clarifications are considered effective on the date they are first posted on the Reserve website. The effective date of each erratum or clarification is clearly designated below. All listed and registered A5 ODS projects must incorporate and adhere to these errata and clarifications when they undergo verification. The Reserve will incorporate both errata and clarifications into future versions of the protocol.

All project developers and verification bodies must refer to this document to ensure that the most current guidance is adhered to in project design and verification. Verification bodies shall refer to this document immediately prior to uploading any Verification Statement to assure all issues are properly addressed and incorporated into verification activities.

If you have any questions about the updates or clarifications in this document, please contact Policy at policy@climateactionreserve.org or (213) 891-1444 x3.

¹ See Section 4.3.4 of the Climate Action Reserve Program Manual for an explanation of the Reserve's policies on protocol errata and clarifications. "Errata" are issued to correct typographical errors. "Clarifications" are issued to ensure consistent interpretation and application of the protocol. For document management and program implementation purposes, both errata and clarifications are contained in this single document.

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Section 2

1. Eligibility of Solvents and Other ODS Applications (CLARIFICATION – May 7, 2010)

Section: 2.3 (Eligible ODS)

Context: The A5 ODS V1.0 identifies a single class of ODS that is eligible for crediting: refrigerants. However, the protocol does not explicitly address foam blowing agents, solvents, medical aerosols, or other applications for ODS. The protocol does, however, explicitly provide eligibility to refrigerants. The intention of the protocol is to exclude all sources not explicitly included.

Clarification: ODS that were produced for, used as, or intended for use as foam blowing agents, solvents, medical aerosols, or other ODS applications are not eligible under the A5 ODS V1.0.

2. Attestation of Title and Commencement of Verification Activities (CLARIFICATION – December 15, 2011)

Section: 2.5 (The Project Developer)

Context: Section 2.5 specifies that the project developer must attest to clear ownership of the project's GHG reductions prior to commencement of verification activities by signing the Reserve's Attestation of Title form. It is unclear if this language means that all verification activities must wait until after the Attestation of Title is signed, or if only verification activities related to confirming the Attestation of Title must wait.

Clarification: Verification activities related to confirming the Attestation of Title must wait until the project developer has signed and uploaded the form to the Reserve.

Other verification activities (such as site visits or project material eligibility confirmation) may commence at any time after the project is listed if the verification body has appropriately submitted the NOVA/COI form and received approval from the Reserve that the verification can move forward.

Section 3

3. Attestation of Voluntary Implementation and Commencement of Verification Activities (CLARIFICATION – December 15, 2011)

Section: 3.4.1 (The Legal Requirement Test)

Context: Section 3.4.1 specifies that the project developer must attest that the project is not legally required by submitting a signed Attestation of Voluntary Implementation form prior to commencement of verification activities. It is unclear if this language means that all verification activities must wait until after the Attestation of Voluntary Implementation is signed, or if only verification activities related to confirming the Attestation of Voluntary Implementation must wait.

Clarification: Verification activities related to confirming the Attestation of Voluntary Implementation must wait until the project developer has signed and uploaded the form to the Reserve.

Other verification activities (such as site visits or project material eligibility confirmation) may commence at any time after the project is listed if the verification body has appropriately submitted the NOVA/COI form and received approval from the Reserve that the verification can move forward.

4. Attestation of Regulatory Compliance and Commencement of Verification Activities (CLARIFICATION – December 15, 2011)

Section: 3.5 (Regulatory Compliance)

Context: Section 3.5 specifies that the project developer must attest that the project is in material compliance with all applicable laws by submitting a signed Attestation of Regulatory Compliance form prior to commencement of verification activities. It is unclear if this language means that all verification activities must wait until after the Attestation of Regulatory Compliance is signed, or if only verification activities related to confirming the Attestation of Regulatory Compliance must wait.

Clarification: Verification activities related to confirming the Attestation of Regulatory Compliance must wait until the project developer has signed and uploaded the form to the Reserve.

Other verification activities (such as site visits or project material eligibility confirmation) may commence at any time after the project is listed if the verification body has appropriately submitted the NOVA/COI form and received approval from the Reserve that the verification can move forward.

Section 5

5. Accounting for ODS Purity (CLARIFICATION – November 28, 2011)

Section: 5.1 (Quantifying Baseline Emissions)

Context: The term “ Q_i ” in Equation 5.3 on page 15 is defined as “Total quantity of refrigerant ODS i destroyed.” The intent is that this term shall only include the weight of pure ODS for each species. This intent may not be clear in regards to projects that are destroying concentrated, non-mixed ODS (defined as greater than 90% composition of a single ODS species).

Clarification: The definition of the term “ Q_i ” in Equation 5.3 on page 15 shall read “Total quantity of pure refrigerant ODS i destroyed.” In any case where the composition of the single ODS species is less than 100%, the value of this term must be reduced to reflect only the weight of pure ODS.

6. Accounting for Non-ODS Material (CLARIFICATION – January 29, 2013)

Section: 5.1 (Quantifying Baseline Emissions)

Context: Clarification 5 above (issued on November 28, 2011) states that projects shall only include the weight of pure ODS when calculating emission reductions. There are additional specific adjustments that were not mentioned in the previous clarification and it may not be clear how these adjustments should be made. Specifically, project developers shall exclude the weight of high boiling residue (HBR) in their calculation of emission reductions.

Clarification: The definition of the term “ Q_i ” in Equation 5.3 on page 15 shall read “Total quantity of pure refrigerant ODS i sent for destruction by the project.” The total weight of material destroyed by the project shall be adjusted to exclude the weight of ineligible material, including high boiling residue, as determined by the laboratory analysis required in Section 6.4 (in the case of multiple laboratory analyses, the highest reported value for HBR shall be used). In any case where the composition of the single ODS species is less than 100%, the value of this term must be adjusted to reflect the weight of pure ODS for each eligible chemical.

For example, if a project destroys 1,000 lbs. of material that contains 5% high boiling residue and 95% eligible ODS i , the value of Q_i would be 902.5 lbs.

While water is also considered ineligible material, the moisture content requirement in Section 6.6 of the protocol (i.e. that the moisture content must be less than 75% of the saturation point for the ODS) already ensures that the weight of any moisture present will not have a material impact on the quantification of emission reductions. Thus the weight does not need to be adjusted to reflect the weight of moisture present in the sample.

7. Accounting for Ineligible ODS After Destruction (CLARIFICATION – November 28, 2011)

Section: 5.1 (Quantifying Baseline Emissions)

Context: Verification of a reporting period often begins after the destruction of the ODS is completed. If, during verification, the verification body cannot confirm that a portion of the ODS that was sent for destruction was eligible (e.g. insufficient documentation of the point of origin), this portion of the material shall be considered ineligible for crediting. The protocol is not clear, however, about whether the project developer may still claim emission reductions for any remaining ODS whose eligibility was able to be confirmed. Clarification is needed to indicate that the project developer may perform a back-out calculation to exclude the ineligible ODS from the calculation of baseline emissions for the project.

Clarification: Ineligible ODS shall be excluded from baseline emission calculations. The following subtraction shall be made to the value of “ Q_i ” to be used in Equation 5.3. The adjustment is not to be applied to project emission calculations (i.e. any variables in Section 5.2). The weight of ODS to be subtracted from quantification of baseline emissions shall be determined by:

Option A: Confirmed weight and composition

If the project developer can produce data that, based on the verifier's professional judgment, confirm the weight and composition for the specific ODS that is deemed to be ineligible (or whose eligibility cannot be confirmed), these data shall be used to adjust the appropriate equation value. Specifically, the project developer shall subtract the weight of the ineligible ODS species from "Q_i," prior to calculating the baseline emissions in order to account only for the destroyed ODS that was confirmed to be eligible by the verification body.

Option B: Default values

If sufficient data are not available to satisfy the Option A requirements, then the most conservative estimate of the weight and composition of ineligible ODS shall be used. Specifically, the composition shall be assumed to be 100% of the ODS species with the highest GWP based on the composition analysis, and the relevant container shall be assumed to have been full. If the project developer has only some of the data required for Option A (i.e. weight or composition, but not both), this may be used in place of the conservative assumptions above, as long as the data can be confirmed by the verification body.

8. Calculation of Transportation Emissions (CLARIFICATION – November 28, 2011)

Section: 5.2 (Quantifying Project Emissions)

Context: The term "TMT_i" in Equation 12 on page 19 specifies that transportation emissions should include the weight of not only the eligible ODS, but also "any accompanying material and containers from point of aggregation to destruction." The term "Q_i" in Equation 5.6 on page 17, however, does not include a similar specification. The intent is that this term shall include the weight of all ODS included in the shipment, and should not be limited only to the weight of eligible ODS.

Clarification: The term "Q_i" in Equation 5.6 shall be defined as "Total quantity of ODS *i* sent for destruction in the project, including eligible and ineligible material."

Section 6

9. ODS Tracking System Requirements and Commencement of Verification Activities (CLARIFICATION – December 15, 2011)

Section: 6.1 (Reserve ODS Tracking System)

Context: Section 6.1 specifies that information from the project's Certificate(s) of Destruction must be entered into the Reserve ODS Tracking System "prior to the beginning of verification activities to confirm that reductions have not been claimed by other parties for the destruction activity in question." It is unclear if this language means that all verification activities must wait until after the required information is entered into the ODS Tracking System, or if only verification activities related to confirming that reductions have not been claimed by other parties must wait.

Clarification: Verification activities related to confirming that project reductions have not been claimed by other parties must wait until the project developer has entered the required information into the ODS Tracking System.

Other verification activities (such as site visits) may commence at any time after the project is listed if the verification body has appropriately submitted the NOVA/COI form and received approval from the Reserve that the verification can move forward.

10. Point of Origin Documentation Requirements (CLARIFICATION – November 28, 2011)

Section: 6.2 (Point of Origin Documentation Requirements)

Context: Table 6.1 in Section 6.2 provides guidance for determining the point of origin for quantities of ODS. Footnote (a) describes how the point of origin is defined for ODS that was collected in quantities smaller than 500 lbs and then combined to a volume greater than 500 lbs. It is unclear what level of detail the verification body must achieve when evaluating the eligibility of ODS in containers greater than 500 lbs.

Clarification: The following text shall be inserted below Table 6.1 on page 21 as a new paragraph:

“Project developers must be able to document the point of origin for all ODS that will be included in the project as defined above. For containers of ODS greater than 500 lbs (determined as the weight of eligible ODS within a single container), the project developer must provide documentation as to the origin of the ODS within that container. If it is shown that, prior to aggregation in the project container, the ODS was contained as a quantity greater than 500 lbs, then the documentation must extend back to this previous container and its point of origin. The project developer must provide documentation tracking the ODS back to a point where it was either a) contained as a quantity of less than 500 lbs, or b) collected by a service technician as a quantity of greater than 500 lbs.”

11. Ownership of CRTs (CLARIFICATION – May 7, 2010)

Section: 6.3 (Custody and Ownership Documentation Requirements)

Context: In discussing custody and ownership of ODS, Section 6.3 states that “The verifier will review these records and will perform other tests necessary to authenticate the previous owners of the material, the physical transfer of the product, and the **title transfer of ownership** to the project developer” (emphasis added). While the ownership and physical transfer of the ODS material must be fully documented, it was not the Reserve’s intention to require that the project developer own the ODS material in full. Rather, the project developer must possess beneficial ownership rights to the GHG attributes and emission reductions associated with the destruction of that ODS.

Clarification: The project developer must own the beneficial ownership rights, as defined in the Attestation of Title, to all emissions and emission reductions associated with destroyed ODS, as documented by a contract, agreement, or other legal document.

12. Scale Calibration (CLARIFICATION – May 7, 2010)

Section: 6.4 (ODS Composition and Quantity Analysis Requirements)

Context: Bullet (2.) in Section 6.4 states that “The scale used must be properly calibrated per the facility’s RCRA permit, or for non-RCRA facilities calibrated at least quarterly to an accuracy of within 5% of reading.” RCRA facilities may not have a calibration requirement contained in their RCRA permits. If this is the case, these facilities must calibrate quarterly.

Clarification: RCRA facilities that do not have calibration requirements defined in their RCRA permits shall calibrate scales quarterly to an accuracy of within 5% of reading.

13. Determining the Mass of ODS Destroyed (CLARIFICATION – April 11, 2013)

Section: 6.4 (ODS Composition and Quantity Analysis Requirements)

Context: The protocol requires that the mass of ODS destroyed by the project be determined using (1) the difference between the measured weight of each container when it is full prior to destruction and the measured weight after it has been emptied and (2) the composition and concentration of material destroyed as determined by laboratory analyses of samples from each container.

Clarification: The mass of ODS and any contaminants destroyed shall be considered equal to the difference between the full and empty weights of the containers, as measured by the scale at the destruction facility and recorded by the destruction facility on the weight tickets and the Certificate of Destruction. No adjustments shall be made by the project developer to the weights as measured and recorded by the destruction facility in calculating the mass of ODS and contaminants.

Verifiers shall confirm that the weights recorded on the weight tickets and the Certificate of Destruction by the destruction facility are used without adjustment to calculate emission reductions. The mass of eligible ODS shall then be determined using these weights and the results of the laboratory analyses.

14. Calculation of Moisture Content (CLARIFICATION – November 28, 2011)

Section: 6.4 (ODS Composition and Quantity Analysis Requirements)

Context: The third numbered list in Section 6.4 (page 23) stipulates that the “moisture content of each sample must be less than 75% of the saturation point for the ODS...” This requirement is also referenced in Section 6.4.1 regarding mixed ODS, but it is not clear how this requirement is to be interpreted and applied for the analysis of mixed ODS.

Clarification: The following text shall be added to the end of item 3 in the third numbered list: “For containers that hold mixed ODS (as defined below), the sample’s saturation point shall be assumed to be that of the ODS species in the mixture with the lowest saturation point that is at least 10% of the mixture by mass. If the sample is tested to have a moisture content greater than 75%, the project developer shall de-water the ODS mixture before repeating the sampling and analysis procedures.”

It should be noted that project developers have the option of measuring moisture content and carrying out any necessary de-watering prior to the required sampling and laboratory analysis.

15. ODS Mixing Rate (CLARIFICATION – November 28, 2011)

Section: 6.4.1 (Analysis of Mixed ODS)

Context: This section requires that ODS mixing must result in circulating a “volume of the mixture equal to two times the volume in the container” and that the “[c]irculation must occur at a rate of at least 30 gallons/minute.” In practice, this requirement limits the choice of equipment used for mixing. The intent of this section is to provide minimum requirements to ensure that enough mixing has occurred for the ODS mixture to reach an equilibrium state within the container, not to specify a particular size or type of mixing equipment.

Clarification: To allow flexibility in the equipment used for mixing, the following text shall be added to the end of item 3 in the list at the bottom of page 24: “Alternatively, circulation may occur at a rate that is less than 30 gallons/minute, as long as the ODS is circulated continuously for a minimum of 8 hours.”

Section 7

16. Required Project Documentation (CLARIFICATION – November 28, 2011)

Section: 7.1 (Project Documentation)

Context: While project developers must upload information from the project’s certificate(s) of destruction (COD) into the Reserve’s ODS Tracking System (Section 6.1), they have not been required to submit or upload the COD itself to the Reserve. Additionally, while Section 6.4 requires that the project developer obtain an analysis of the composition of the ODS by an AHRI certified laboratory, the results of such analysis have not been submitted to the Reserve.

Clarification: For record keeping purposes, project developers shall upload project CODs and ODS composition analyses through the Reserve software for each reporting period. The following items shall be included in both bulleted lists found in Section 7.1 on page 29:

- Certificate(s) of Destruction
- Laboratory analysis of ODS composition

17. Joint Verification (CLARIFICATION – May 7, 2010)

Section: 7.2 (Joint Verification); 8.1 (Joint Project Verification)

Context: U.S. ODS V1.0 allows for the joint verification of concurrent projects in instances where the project developer and the verification body are the same. However, the language is not explicit as to whether the projects must have identical reporting periods, or what the conditions are that allow joint verification to take place. The intent of the joint verification

provision is to lessen administrative costs and verification redundancy where common facilities or documentation are used for separate projects.

Clarification: Two or more projects may be jointly verified only if:

- the project developer has contracted with a single verification body for all projects involved
- all projects involved have an approved NOVA/COI form with designated site visit dates prior to the commencement of joint verification activities
- a comprehensive verification plan covering all aspects of the individual projects involved has been prepared prior to any shared site visits or shared verification activities
- project activities associated with all involved projects have commenced prior to the shared site visit or verification activity. In some instances, this may be prior the project start date (e.g., the collection activities have begun but destruction has not commenced)

Provided these elements are met, the verifier may, at his or her discretion, conduct a joint verification of two or more projects.

Section 8

18. Confirmation of ODS Identity (CLARIFICATION – November 28, 2011)

Section: 8.7.2 (Conformance with Operational Requirements and ODS Eligibility)

Context: During verification, the verification body examines point of origin records for the ODS to be destroyed, as well as the lab analysis of the ODS that was sampled at the destruction facility. It is implied, but not explicitly stated, that the verification body is to compare these data sources to confirm that the ODS documented at the point of origin is the same ODS that was destroyed.

Clarification: The verification body shall compare the point of origin documentation with the weight and composition documentation of the ODS that is received at the destruction facility. Professional judgment and risk analysis are to be employed in determining whether a small variation between these data sources constitutes a significant difference. The following row shall be added to Table 8.4 on page 36:

Protocol Section	Operational Requirement and ODS Eligibility Items	Apply Professional Judgment?
6.2, 6.6	For all ODS, verify that the point of origin documentation agrees with the data reported at the destruction facility (weight and composition) with no significant discrepancies	Yes

19. Mixing Facility Site Visit Requirement (ERRATUM – April 3, 2012)

Section: 8.6 (Verification Site Visit)

Context: Verification bodies are required to conduct site visits per the protocol. Different project types have different site visit requirements. For mixed ODS projects (as defined in Section 6.4 of the protocol), verification bodies are required to visit the facility where the ODS was mixed, per Section 6.4.1, in addition to visiting the destruction facility. The mixing facility requirement was erroneously omitted from Table 8.2.

Correction: For mixed ODS projects, the verification body shall conduct a site visit to the facility where the project ODS was mixed and sampled. The following bullet points shall be added to Table 8.2 on page 34:

Table 8.2. Verification Site Visit Requirements

ODS Source	Site Visit(s) Required
ODS obtained from private stockpiles or government stockpiles that can legally be sold to the refrigerant market	<ul style="list-style-type: none">▪ Site of stockpile▪ Destruction facility▪ ODS mixing & sampling facility (if applicable)
ODS refrigerants obtained from government stockpiles that cannot legally be sold into the refrigerant market	<ul style="list-style-type: none">▪ Site of stockpile▪ Destruction facility▪ ODS mixing & sampling facility (if applicable)
Used ODS refrigerant recovered from end-of-life equipment within the past 12 months	<ul style="list-style-type: none">▪ Destruction facility▪ ODS mixing & sampling facility (if applicable)