

U.S. and Article 5 ODS Project Protocols Version 2.0 Protocol Update



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Why Version 2.0?



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- Expand ODS refrigerant eligibility – U.S. only
- Change definition of start date
- Update default emission factors based on new data
- Update point of origin definitions
- Respond to user feedback
- Incorporate errata and clarifications
- Incorporate policy memos issued since 2010

Continued Registration under Version 1.0



- Policy memo dated June 29, 2012 allows for submittal and registration of new projects under U.S. ODS Protocol, Version 1.0 until January 1, 2014
- If a project is submitted under Version 1.0 after September 25, 2012:
 - All CRTs issued to the project must be converted to ARB Offset Credits
 - If all CRTs have not been converted to ARB Offset Credits by February 28, 2015, then all CRTs issued to the project will be canceled
 - Projects will have the option to either terminate or be re-verified against the requirements of the most recent Reserve version of the protocol

3

U.S. Only Eligible Refrigerant ODS (Section 2.3.1)



- Added refrigerants CFC-13 and CFC-113
- Added refrigerant sourced from the federal government through DLA auction (see Section 6.1)

4

Project Start Date (Section 3.2)



- Now defined according to commencement of project activities
 - US non-mixed ODS projects (not aggregated at destruction facility): day project ODS departs for transport to destruction facility
 - US non-mixed ODS projects (aggregated at destruction facility): day destruction commences
 - US mixed ODS projects: day mixing procedures begin
 - A5 projects: day project ODS departs from its point of entry into US
- Projects must be submitted no more than six months after the project start date

5

Regulatory Compliance (Section 3.5)



- Clarified scope of regulatory compliance to include:
 - Destruction facility
 - Mixing facility
 - Transportation to destruction facility
- Must meet regulatory compliance during implementation of project activities

6

Quantification (Section 5)



- Adjusted methodology to use pounds as the unit of mass until final step of quantification
- Added deduction for vapor composition risk (5.3)
 - For containers that hold a mixture of ODS, vapor composition may be different from liquid composition due to thermodynamic properties
 - Determine vapor risk deduction factor (VR) based on risk category

Table 5.7. Determining the Deduction for Vapor Composition Risk

If the value of Fill _{liquid} is:	AND the concentration of eligible low pressure ODS is:	AND the concentration of ineligible high pressure chemical is:	Then the vapor risk deduction factor (VR) for that container shall be:
> 0.70	N/A	N/A	0
0.50 – 0.70	> 1%	> 10%	0.02
< 0.50	> 1%	> 5%	0.05

7

U.S. Only Quantification (Section 5)



- Updated methodology to include CFC-113 and CFC-113
- Updated emission rate for CFC-115 to be conservative per ARB Compliance Offset Protocol (Table 5.2)
- Updated refrigerant substitute emission factors based on new data from EPA Vintaging Model and ARB Compliance Offset Protocol GWPs (Table 5.5 and Appendix D)

8

A5 Only Quantification (Section 5)



- Clarified baseline scenarios and definition of refrigerant recovered from equipment at end-of-life (5.1)

Table 5.1. Refrigerant Baseline Scenarios

Refrigerant Origin	Baseline Scenario	Applicable Annual Emission Rate	10-year Cumulative Emissions (%) (ER_{refr})
1. Privately held stockpiles of used ODS refrigerant that can legally be sold to the market	Use for recharge of existing refrigeration equipment	25%	94%
2. Article 5 government stockpiles of ODS refrigerant that can legally be sold into the refrigerant market	Use for recharge of existing refrigeration equipment	25%	94%
3. Article 5 government stockpiles of ODS refrigerants that cannot legally be sold into the refrigerant market	Continued storage	Site specific emission rate as documented (see Equation 5.2)	$1-(1-ER_{stock})^{10}$
4. Used ODS refrigerant recovered from end-of-life equipment	End-of-life release to the atmosphere	100%	100%

Project Monitoring and Operation (Section 6)



- Added project diagram requirement
- Increased accuracy requirement for scale calibration
- Clarified re-sampling policy
- Clarified sampling requirements for mixed ODS
- Clarified requirements for non-RCRA facilities to demonstrate compliance with TEAP

Certificate of Destruction (U.S. Section 6.7, A5 Section 6.5)



- Updated and clarified information to be including on COD:
 - Project developer (project account holder)
 - Destruction facility
 - Generator name *(added definition of generator to Glossary)*
 - Certificate of Destruction ID number
 - Serial, tracking or ID Number of all containers for which ODS destruction occurred
 - Weight of material destroyed from each container (including eligible and ineligible material)
 - Type of material destroyed from each container (including all materials listed on laboratory analysis of ODS composition from sampling at the destruction facility)
 - Start destruction date
 - End destruction date

11

U.S. Only Project Monitoring and Operation



ODS	Defined Point of Origin
1. Refrigerant ODS stockpiled prior to February 3, 2010	Location of stockpile
2. Refrigerant ODS quantities less than 500 lbs	Location where ODS is first aggregated with other ODS to greater than 500 lbs
3. Refrigerant ODS quantities greater than 500 lbs	Site of installation where ODS is recovered
4. Refrigerant ODS purchased from U.S. Defense Logistics Agency (DLA) Disposition Services auction	Location at the time of sale through a DLA Disposition Services auction
5. ODS blowing agent extracted from foam	Facility where ODS blowing agent is extracted
6. ODS blowing agent in building foam	Location of building from which foam was taken

12

A5 Only Project Monitoring and Operation



ODS	Point of Origin	10-year Cumulative Emissions (%)
1. Virgin ODS stockpiles	Location of stockpile	94% or site-specific emission rate (see Section 5.1)
2. Used ODS stockpiled prior to February 3, 2010	Location of stockpile	94% or site specific emission rate (see Section 5.1)
3. Used ODS in quantities less than 500 lbs.	Location where ODS is first aggregated to greater than 500 lbs.	94%
4. Used ODS in quantities greater than 500 lbs.	Site of installation from which ODS is removed	94%
5. Used ODS of any quantity recovered from end-of-life equipment	Location where ODS is recovered from end-of-life equipment	100%

13

Reporting Parameters (Section 7)



- Added new project documentation requirements:
 - Certificates of Destruction (not public)
 - Lab analysis of ODS composition from sampling at destruction facility (not public)
 - Lab analysis of ODS composition from sampling at mixing facility, if applicable (not public)
 - Project diagram (not public)

14

Verification (Section 8)



- Streamlined site visits requirements to individual facilities
 - Each required site shall be visited by a verification body (VB) at least once every 12 months
 - To meet requirement, site visit must have occurred no more than 12 months prior to the end date of the reporting period being verified
 - VB has discretion to visit any site more frequently
- Added additional site visit requirement
 - One additional project facility visit per verification chosen by VB (e.g., reclamation or aggregation facility, project developer's offices, point of origin, etc.)

15

Policy Memos



Use of eGRID Electricity Emission Factors (May 3, 2011)

- Removed eGRID emission factor table from appendices
- Use version of eGRID from EPA website that most closely corresponds to time period electricity was consumed

Project Diagram Required at Verification (February 13, 2012)

- New requirements for a project diagram
- Part of Monitoring Plan and includes all parties involved

16



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Q&A

17



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Thank you

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18

