

May 1, 2012

To: Climate Action Reserve

From: Stephen P. Mandracchia  
VP Legal & Regulatory, Hudson TechnologiesRe: DRAFT Protocol – September 2009  
Destruction of Domestic High GWP Ozone Depleting Substances

We have reviewed the April 2, 2012 Version 2.0 for Public Comment of the “U.S. Ozone Depleting Substances Project Protocol, Destruction of U.S. Ozone Depleting Substances Banks” and our comments appear below. Page and section numbers refer to the page and section numbers in the Version 2.0, April 2, 2012 marked draft.

**Section 2.3.1 (page 6):** We agree that it is appropriate to include CFC 113 and CFC 13 as eligible ODS refrigerants.

**Section 3.5 (page 10):** The first paragraph under 3.5 provides:

“Projects must be in material compliance with all applicable laws (e.g. air, water quality, and safety) at all times during the implementation of project activities. The regulatory compliance requirement extends to the operation of destruction facilities where the ODS is destroyed, as well as the facilities where mixed ODS projects are mixed and sampled, and the transportation of the ODS to the destruction facility. These facilities and transportation events must meet applicable regulatory requirements during implementation of project activities. Any upsets or exceedance of permitted emission limits at a facility must be managed in keeping with an authorized startup, shutdown, and malfunction plan.<sup>21</sup>”

The last sentence refers to footnote 21, which is a reference to 40 CFR 63.1206. That CFR section deals with a standard that is applicable to destruction facilities. However, not all “facilities where mixed ODS projects are mixed and sampled” are destruction facilities and, therefore, such facilities cannot be held to that standard. We believe that this language should be clarified to limit the applicability of the last sentence to destruction facilities.

**Section 5.1 (page 19):** Option B “Default Values” is unclear and, as written, appears to require that an entire shipment would be ineligible. We request that this section be clarified.

**Section 5.3 (page 31):** The second paragraph under the heading of Section 5.3, on its face, applies to any “project container that holds an eligible low pressure ODS and an ineligible high pressure chemical” regardless of the relative concentrations. As drafted, this paragraph would require a 5% reduction of the emissions deductions in any case where an eligible low pressure

ODS is mixed with any quantity of an ineligible high pressure chemical. For example, as written, even if the container contained only 0.5% ineligible high pressure chemical (which would comply with AHRI 700), it would technically hold “an ineligible high pressure chemical” and that small percentage would require a 5% deduction. There needs to be some minimum threshold percentage of the ineligible product before the 5% reduction should apply. In this regard, we would recommend that at threshold percentage for the low pressure eligible ODS be 20% of the total quantity before the 5% reduction would apply.

In addition, we have several comments applicable to the third paragraph under the heading of Section 5.3:

- The paragraph refers to “an ineligible chemical with a higher pressure than the eligible ODS”. We believe that that sentence should read “...an ineligible chemical with a higher pressure than the eligible high pressure ODS”.
- Also, this provision does not address a situation where there are two or more “species” of high pressure eligible ODS mixed with a low pressure eligible ODS. In such a case, the section does not specify which high pressure eligible ODS would be used for determining whether the 5% reduction should apply. We recommend that additional language be added to provide that, where there are 2 or more eligible high pressure ODS components, the 5% reduction would apply only if the non-eligible chemical is higher in pressure than the eligible high pressure ODS present in the highest concentration.
- The 1% standard for low pressure eligible ODS, we submit is too low. As written, if there is no quantity of low pressure eligible ODS present, then there is no 5% reduction (penalty), but if there is only 1% of the low pressure, then the 5% reduction will apply. We submit that tying the reduction to a 1% level is not appropriate. We submit that a minimum concentration should be no less than 10%.

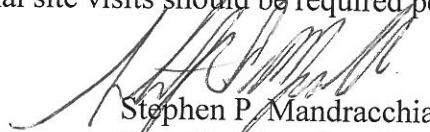
**Section 6.1 (page 33):** The second paragraph under the chart refers to “the holding facility where **“several small quantities”** were combined and exceeded 500 pounds in aggregate”. We suggest simply substituting the words “2 or more containers”.

**Section 6.6.1 (pages 38-39):** The description of the requirements for the mixing tank is unclear and inaccurate. All refrigerant tanks have a liquid port and a vapor port. The vapor port draws from the top portion of the tank (the vapor space) and the liquid port draws from the bottom of the tank. The proximity of the two ports is irrelevant. Many tanks use dip tubes such that a liquid port located on the top of a tank will have a tube going to the bottom of the tank to draw liquid. Conversely, a vapor port can have a reverse dip tube and be located on the bottom of the tank. The procedure needs to simply require that the liquid and vapor ports be located in the center third of the tank and that the ODS be pumped from the liquid port to the vapor port. Therefore, we suggest that this procedure should read as follows:

1. The container has no solid interior obstructions.
2. The container was fully evacuated prior to filling
3. The container must have sampling ports to sample liquid and gas (**vapor**) phase ODS
4. The sampling ports must be located in the middle third of the container’
5. The container and associated equipment **should** circulate the mixture via a closed loop system from the **liquid port to the vapor port**.

**Section 6.6.1 (page 39):** We do not agree that simply requiring, at a minimum, 8 hours of mixing will ensure that the container will be fully mixed at the time of sampling. For example, if only a 1 gallon per minute pump were used to mix an ISO container holding 30,000 pounds, after 8 hours of mixing less than 5,000 pounds would be circulated. Some requirement for pump size/capacity and or quantity circulated (e.g. twice the contents of the container) should be adopted. A minimum pump size to ensure proper circulation over 8 hours would be approx. 15 gallons per minute.

**Section 8.6 (page 51):** We agree with the proposed draft that the additional site visit requirement is per project. However, at the NACW Conference held from April 10-April 14, 2012, statements made by CAR representatives suggested that this provision is being changed to make the additional site visit requirement per "Reporting Period". We object to that change and submit that adopting that requirement and additional site visits should be required per project.

  
Stephen P. Mandracchia  
Vice President Legal & Regulatory