

## **Notes from September 8, 2011 DOE Fugitive Emissions Working Group Meeting**

### **Updates (Josh Silverman, FEWG Chair)**

Congratulations on the FEWG's one year anniversary! The FEWG was created one year ago, at the same time that the SSP was created. The Fugitive Emissions Working Group's first meeting was on September 9, 2010. It has been a busy and eventful year—many thanks to all those who have participated on the calls. Over the past year we have had a total of 8 FEWG meetings, focusing on topics including identifying environmentally preferable alternatives, procedure modifications, fugitive gas reductions and substitutes, and data collection and inventory practices. DOE sites have done a terrific job in achieving substantial reductions thusfar, with even further reductions possible. The FEWG should revisit fugitive emissions reduction goals as we move forward. The path forward for 2012 should not only consist of improving estimates for achievable reduction levels but also sharing best practices and lessons learned and acting on recommendations from other FEWG members.

#### *The Science Daily: Under-Reported Greenhouse Gas Statistics? Sketchy Emission Reports Revealed by Swiss Measurements*

This article discussed the under-reporting of HFC-23 emissions from several countries. This article is interesting because it provides examples of which other countries and institutions are monitoring GHG emissions and describes a technique being used to quantify global emissions and the source of those emissions. This information is a good example for DOE of the necessity to ensure that we have a good understanding of the sampling process and put forth a good faith effort to conduct accurate reporting—after all, you never know who is sampling downwind.

#### **2011 Fugitive Emissions Reporting Update: *Integrating Fugitive Emissions into Scope 1 & 2 of the GHG Reduction Section of SSP* (Soudeh Motamedi, Sustainability Performance Office)**

The SSP and SSPP (due in June) are getting a lot of attention so please take advantage of them and contribute your stories. This is our time to shine! The SSP is mainly driven by energy managers, so please be in discussions with your energy manager so that they can collect your success stories. The SSP will also collect Best Practices, so if you have any to share please submit them with your SSP submission. All the information submitted is very valuable data that is used to generate the Annual Energy Report (due January 31<sup>st</sup>), the GHG Report (due January 15<sup>th</sup>), and the OMB Scorecard.

A few changes have been made to the narrative section of the SSP. Some of the changes are that the “Fugitive and Environmental Section” now includes lessons learned and current status updates and the “Projections Section” includes the steps that have been taken and estimated goals.

No changes have been made to the SSP files for fugitive data collection. There is one change in the data collection process which involves the data (Scope 1, 2, and 3) being reported in the CEDR instead of by the PPTRS. The SPO has created workbooks to provide data and for use in site planning. This data call will be due to the SPO by December 9, 2011. A help line will be set up for people to call into if they need help or have questions.

Questions from the field (Tom B. –Hanford): What advantages are we looking to gain from using the CEDR for the collection of data?

Answer (Soudeh): The CEDR will be a comprehensive inventory for GHG information instead of piecemeal.

(Josh): The CEDR will provide sites with greater visibility into their GHG inventory by making the total calculations more transparent.

### **Los Alamos National Laboratory SF<sub>6</sub> Reduction Strategies (Hank Alvestad, Los Alamos National Laboratory, LANSCE)**

**(See PowerPoint attachment previously sent to FEWG members.)**

Hank Alvestad from LANSCE discussed the history of the 800-million-electron-volt DC accelerator column and its two high-voltage ion source injectors, both of which use SF<sub>6</sub> as an insulating gas (~40lbs of SF<sub>6</sub> in each). Three to four times per year the electronic components within the SF<sub>6</sub> jacket would become tarnished and frosted and require replacement. This seemingly inevitable replacement was costly (due to lost time and SF<sub>6</sub>), difficult, and wasteful since all (approximately 80 lbs) of the SF<sub>6</sub> was lost each time. The equipment needed to be replaced 2-3 times per year.

LANSCE identified the problem as the presence of contaminants (HF and phosgene) that form when water vapor or oxygen is mixed with the SF<sub>6</sub>. In 2008, LANSCE flushed the SF<sub>6</sub> jackets of the two high-voltage injectors with ultrapure nitrogen and filled the jackets with ultrapure SF<sub>6</sub> provided by DILO (cost approximately \$4/lb). Since this operation in 2008, the electronic components have not required any maintenance, making this modification a success. Over the last 3 years, 480-720 lbs of SF<sub>6</sub> (5,200-7,800 MTCO<sub>2</sub>e) emissions have been avoided.

In case of future electronics failure, the ultrapure SF<sub>6</sub> may need to be replaced. In preparation for this potential gas replacement, LANSCE is planning to buy equipment to capture and re-purify the SF<sub>6</sub> for reuse instead of releasing to the atmosphere.

Question 1 (Jeff): What are your future plans in regards to replacement potential?

Answer (Hank): There are all types of equipment sold for this process, mainly to the Power Companies. We are working with DIL0 to find an existing replacement or to create our own.

### **Closing Remarks (Josh Silverman, FEWG Chair)**

The FEWG Working Group is still looking for site presentations for the next FEWG meeting. Please contact Josh or Jeff if you are interested.

The next FEWG meeting is tentatively scheduled for Thursday, October 13, 2011 from 11am until Noon ET.

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