Greenhouse Gas Inventory Qualitative Reporting Requirements

Fiscal Year 2008 & Fiscal Year 2010

United States Nuclear Regulatory Commission

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January 24, 2011

Enclosure 1

1. Agency Reporting Points of Contact

The U.S. Nuclear Regulatory Commission's (NRC) point of contact is:

Senior Sustainability Officer – Kathryn O. Greene

2. Reporting Periods

2.1 Fiscal Year 2008

NRC's Fiscal Year (FY) 2008 employee headcount[1] is as follows:

- Federal Employees – 4,080

FY 2008 building area is as follows:

- Goal Subject – 987,000 sq ft

2.2 Fiscal Year 2010

NRC's FY 2010 employee headcount[2] is as follows:

- Federal Employees – 4,211

FY 2010 building area is as follows:

- Goal Subject – 987,000 sq ft

3. Allowable Exclusions from the Targets

No other exclusions have been authorized.

4. Inventory Calculations

4.1 Emission Categories and Calculation Methodologies

NRC is reporting Greenhouse gas (GHG) emissions in the following required scopes and categories:

- Scope 1 – Fossil and transportation fuels consumption, process and fugitive sources

[1] Per www.fedscope.opm.gov
[2] Per www.fedscope.opm.gov

- Scope 2 – Purchased electricity and Renewable Energy purchases and Renewable Energy Certificate purchases

- Scope 3 – Business air and ground travel, employee commuting, transmission and distribution losses and off-site sanitary wastewater treatment and solid waste disposal NRC uses calculation methodologies and associated data as specified in the Federal Guidance[3] and the Federal Energy Management Program (FEMP) GHG Reporting Tool. Details concerning inventory development and data sources are provided in NRC's GHG Inventory Management Plan (IMP). Exceptions are discussed below in Section 4.2.

4.2 Data Uncertainty

There are circumstances where alternate data or methodologies are used for assumptions made to develop certain GHG estimates. Exceptions and assumptions that apply to both FY 2008 and FY 2010 reporting years are summarized as follows:

- FAST Mobile Energy data is consistently available for FY 2008 and FY 2010. The assumption is made in both years that the per unit of cost of all fuels is equal to the total cost divided by the total gallons of all fuels reported.

- Natural gas usage shows a dramatic drop from FY 2008 to FY 2010. This can be explained by a leak that was detected and repaired in FY 2009.

- Although mixed refrigerant usage seems to be eliminated, NRC is still using R-22, a refrigerant not calculated in the GHG inventory. R-22 is being phased out of use and will be replaced by another refrigerant that will most likely be calculated in the GHG Inventory.

- Air business travel data is assumed to be "unknown haul" as the distance of individual trips is not known.

- Commuter travel mode data is provided from a survey completed on-site at NRC. The mileage for each mode is assumed as follows: an average of 50 miles daily roundtrip for cars, trucks/SUVs, motorcycles, carpools, and vanpools; an average of 14 miles daily roundtrip for metro riders; and, an average of 60 miles daily roundtrip for rail riders. This data has been extrapolated directly to cover employees based at NRC's satellite sites.

- FY 2010 data have been used on an as-needed basis to estimate NRC's FY 2008 baseline GHG inventory for commuter travel and contracted waste disposal calculations. Both of these 2008 estimates were generated by

[3] Federal Greenhouse Gas Accounting and Reporting Guidance, October 6, 2010.

subtracting 10 percent from the 2010 reported figure, based on estimates of change in NRC employee numbers.

NRC does not consider that there is the potential for any significant sources of double counting.

5. Changes in GHG Inventory

The methods used to develop the GHG inventories and fill data gaps are harmonized between FY 2008 and FY 2010, wherever possible. Data uncertainties within and between the FY 2008 and FY 2010 inventories are discussed above in Section 4.2.

Future improvements in NRC's GHG inventory are anticipated, as follows:

- The inventory will reflect any changes in assets due to decommissioning of facilities and commissioning of new facilities.
- Additional GHG categories are expected to be added by Council on Environmental Quality/Office of Management and Budget to those presently required (e.g., scope 3 emissions).
- Efforts will be made to more accurately capture employee commuting emissions.
- Efforts will be made to work with contractors to provide net values for mixed refrigerant usage for more accurate reporting.
- Efforts will be made to more accurately report employee ground business travel and include personal vehicle mileage reimbursements in their reporting.
- NRC is implementing a new energy management system at one of their sites. The cost of this system has roughly a 3-year payback period in savings from emission reductions.

6. Verification and Validation

NRC has implemented a hybrid approach to GHG inventory verification, consisting of the following elements:

1. Inventory Management Plan (IMP) – NRC's IMP provides the corporate perspective for development and management of the GHG inventory, including procedures, roles and responsibilities.
2. Data and GHG Inventory Verification – Conducted by a team of independent, PRIZIM staff with no role in the development, management or reporting of GHG

inventory data. This review will confirm the efficacy of the data and will identify and correct significant discrepancies before the GHG inventory is submitted.

PRIZIM's Verification Team was responsible for conducting the second party verification of data supporting NRC's baseline FY 2008 and FY 2010 scope 1, 2 and 3 GHG inventory.

PRIZIM's Verification Team walked through each line item on the FEMP GHG Tool (see Attachments 1 and 2) to ensure all data entered reflects actual NRC data and to ensure all data is entered using correct units, significant figures and is realistic for an operation NRC's size. A few notes of importance that came from the verification process are as follows:

- From FY 2008 to FY 2010, there is almost a 5,000 gallon drop in gasoline use in vehicles. This data was verified against the FAST Mobile Energy data reported from NRC.

- The current ground business travel data only accounts for car rentals. This data collection process should be adjusted in future years to include personal vehicle reimbursements.

Attachments:
1. FY 2008 FEMP and GHG Reporting Tool Results Summary
2. FY 2010 FEMP and GHG Reporting Tool Results Summary