



March 17, 2017

Environmental Protection Agency
Climate Change Division (6207A)
1200 Pennsylvania Ave. NW
Washington, DC 20460

Re: Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015; 82 Fed. Reg. 10767 (February 15, 2017)

Dear Sir or Madam:

The Halon Alternatives Research Corporation, Inc. (HARC) appreciates the opportunity to provide comments on the draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2015. HARC is a non-profit trade association formed to promote the development and approval of halon alternatives that serves as an information clearinghouse and focal point for cooperation between government and industry on issues of importance to special hazard fire protection. HARC members encompass all levels of the fire protection industry including agent manufacturers, equipment manufacturers, distributors/installers, recyclers, and end-users.

The fire protection industry fully supports the goal of minimizing non-fire emissions of fire protection agents, and is committed to continuing to contribute to both ozone layer and climate change protection. The overriding concern of the fire protection industry, however, is the reduction of risk to people and property from the threat of fire through the use of products and systems proven to be effective. With the aim of ensuring that both of these goals are achieved, the fire protection industry has developed a voluntary code of practice focused on minimizing emissions of HFC fire protection agents and a recycling code of practice aimed at ensuring that halogenated clean agents are recycled in a safe and environmentally sound manner.

VCOP

The Voluntary Code of Practice for the Reduction of Emissions of HFC & PFC Fire Protection Agents (VCOP) was developed by HARC in partnership with EPA, the Fire Suppression Systems Association (FSSA), the Fire Equipment Manufacturers Association (FEMA), and the National Association of Fire Equipment Distributors (NAFED). Since it was launched in March 2003 this program has included partner companies representing fire equipment manufacturers and distributors throughout the U.S. that are working to meet the goals of the VCOP through training, education, and reporting on HFC and PFC uses. This innovative partnership serves as an important model for national and international voluntary industry efforts in other sectors committed to achieving responsible use of HFC alternatives for ozone-depleting substances.

RCOP

The Code of Practice for the Use of Recycled Halogenated Clean Agents (RCOP), developed by HARC, is intended to provide basic guidelines for companies engaged in the recovery and recycling of halogenated clean agents in order to promote safe handling, prevent contamination, and minimize emissions. The RCOP, launched in 2014, was developed to provide assurance to the public that companies subscribing to the code are committed to recovering and recycling halogenated clean agents in a safe and environmentally sound manner that meets the required quality standards.

HEEP

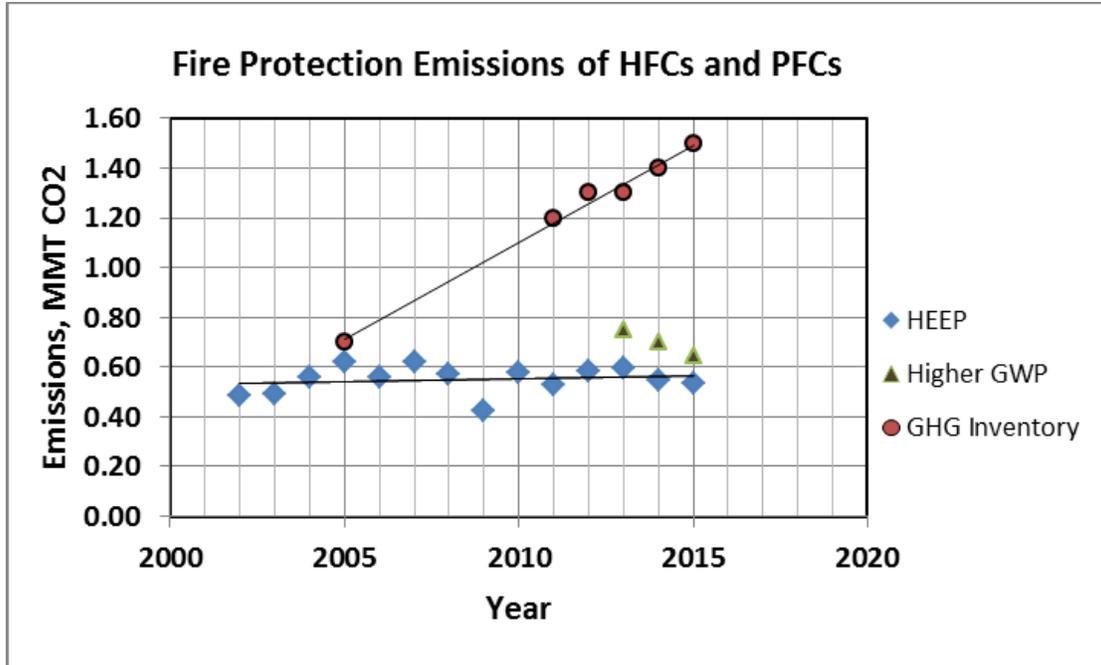
The HFC Emissions Estimating Program (HEEP), conducted by HARC, is a companion to the VCOP that provides a format to help industry minimize emissions by setting benchmarks, by providing the incentives to make improvements to current standards and practices, by documenting the industry's commitment to safety and responsible use, and by providing data to support the goals of the VCOP. HEEP collects data on sales of HFCs and PFCs used for recharge of fire protection systems and extinguishers as a surrogate for emissions. Compiled data of estimated emissions is submitted to EPA and published each year.

Comparison of HEEP data and U.S. GHG inventory data on fire protection

Enclosed is the most recent HEEP report, which shows that between 2002 and 2015 annual emissions of HFC and PFC fire protection agents averaged 0.550 MMTCO₂. HARC acknowledges that there is some potential leakage in the program from recharge agents that are directly recycled by users and systems that discharge and are never recharged, however, we believe the data reflects close to 90% of the U.S. fire protection industry's actual emissions.

Since 2002 the HEEP data has been calculated using GWPs from the 2nd IPCC Assessment Report. The draft U.S. GHG inventory uses GWPs from the 4th IPCC Assessment Report that are higher for all of agents measured under HEEP. We recalculated the HEEP data for 2013-2015 using the 4th Assessment Report GWPs and the values increased by between 21-28%. For the most recent year, 2015, the adjusted HEEP value was 0.643 MMTCO₂ while the draft U.S. GHG inventory value for fire protection was 1.5 MMTCO₂.

Overall the fourteen-year HEEP trend line suggests that the reported emissions have been stable over the measurement period. When the HEEP program began in 2002, the expectation was that emissions of HFCs from fire protection would continue to increase each year as the size of the installed base grew. This expectation is reflected in the draft U.S. GHG inventory, which shows a 114% increase in HFC emissions from fire protection between 2005 and 2015. Instead what the HEEP data show are essentially invariant emissions of GHGs over the 2002 through 2015 period. Below is a graph of the HEEP and draft U.S. GHG inventory data that illustrates these differences.



HARC attributes the invariance of fire industry emissions to steadily improved stewardship of installed systems by owners and the high level of recycling of halogenated clean agents. When the HEEP program began in 2002 about 13% of the reported HFCs sold for recharge came from recyclers. In recent years this number has ranged from 70-80% and in 2015 it reached a high of 84%. At a time when EPA is promulgating regulations to increase recycling of HFCs in other sectors, the fire protection industry has achieved this high level of recycling without a regulatory mandate.

HARC has provided input to EPA in recent years on the vintaging model that provides the basis for the data on emissions of fire protection agents presented in the draft GHG inventory. Based on our previous review of the model's assumptions, we believe that the vintaging model may not accurately account for the return of recycled agent to the market for recharge, and that this may contribute to the model's predictions of steadily increasing emissions. HARC has been invited by ICF to participate in a peer review of the EPA vintaging model and hopes to contribute to making improvements in the model's accuracy that might be reflected in future inventories.

Respectfully submitted,

Thomas Cortina
Executive Director

Enclosure