

## ACR 903: Tradewater Thailand 4

### Supplemental Project Documentation

Project Type: Destruction of Ozone Depleting Substances (ODS) from International Sources.

Registry: American Carbon Registry (ACR)

#### Project Description

In Thailand, ODS material was stockpiled by the Government, through the Customs Department, over many years, since 2007. These stockpiles of virgin CFC-12 require an end-of-life solution, one of which is destruction. However, there is currently no law, rule or regulation requiring the destruction of ODS when it is in Customs' custody, and no financial or logistical infrastructure to ensure the material is destroyed safely and consistent with the requirements of the Montreal Protocol. As a result, the ODS material in Thailand is released into the atmosphere slowly because it simply remains in stockpiles with no future use.

This project achieves emission reductions through the destruction of ODS refrigerant, instead of holding it in containers at risk of eventual leakage or release. This Project measures the amount of assumed emissions if the ODS were vented under business-as-usual scenario against the emissions prevented by the destruction of the same material. Plainly, destruction yields significantly lower net emissions than the business-as-usual scenario.

#### Additionality and Permanence

The material for this project was seized by Customs Department on or before 2007, and therefore it cannot be used in the commercial sphere. The material is secured in a stockpile because there is no mandate for its destruction in Thailand, nor does the government possess the necessary financing to destroy the material. Without this project, the material would have eventually vented to the atmosphere.

ODS projects results in permanent destruction of greenhouse gases. The key components that establish the quantifiable impact of these projects include:

1. documentation that establishes that the ODS materials were collected and moved through a traceable chain of custody to a qualified destruction facility,
2. a Certificate of Destruction for the ODS material contained in the project, and
3. calculations of the climate impact based on factors and requirements of the offset protocol.

#### Chain of Custody and Ownership

Chain of custody and ownership documentation is collected and maintained beginning at the point of origin through destruction. The included flow diagram outlines the parties involved throughout the custody and material movement process. Material from the point of origin is aggregated into an ISO tank, a sample is taken and analyzed, and the material is moved to final destruction at a qualified destruction facility (Waste Management Siam, Samut Prakarn, Thailand).



### **Certificate of Destruction**

The Certificate of Destruction is provided by the qualified destruction facility (Waste Management Siam) certifying the dates, mass and species of materials contained in the ISO tank and destroyed.

### **GHG Emissions Reduction Assertions**

Project data and greenhouse gas emissions reductions are quantified by comparing actual project emissions to calculated baseline emissions in the absence of the Project (the destruction of materials contained in the ISO tank and destroyed at WMS). Calculation methods, factors, and constants are applied per the provisions and equations in this Methodology.

### **Sustainable Development Goals (SDG)**

- Direct positive impact: The Project has direct positive impact to United Nations sustainable development goals (SDG) 9 (Industry innovation and infrastructure), 12 (Responsible Consumption and Production), and 13 (Climate Action).
  - SDG 9: As ODS refrigerants are either destroyed or utilized, innovation is required to replace the refrigerants with less harmful, yet equally as effective, alternative to meet the needs of cooling, refrigeration, and climate-controlled transport throughout the world.
  - SDG 12: The Project supports the collection and destruction of one of the most powerful greenhouse gases in the world, paving the way to the development and use of safer and more environmentally friendly alternatives.
  - SDG 13: The phase-out to date of most ODS has not only led to the regeneration of the ozone layer but also to significant reductions in greenhouse gas emissions (GHG), as most ODS are also powerful GHGs. Tradewater has the objective to prevent the release of ODS gases into the atmosphere. By identifying, collecting, managing, and destroying refrigerant gases in an appropriate manner, Tradewater aims to prevent ozone depletion, negative environmental impacts, and climate change.
- Indirect Positive Impact: The Project has indirect positive impact to United Nations sustainable development goals (SDG) 3 (Good health), 14 (Life Below Water), and 15 (Life on land).
  - SDG 3: Ozone layer depletion allows more UV radiation to reach the earth's surface, a contributing factor to melanoma skin cancer. Increases in UV radiation also cause other health concerns, including eye damage (e.g., cataracts), suppression of the immune system and premature skin aging. The destruction of ODS before it leaks contributes to reducing the number of deaths and illnesses from a thinning ozone layer.
  - SDG 14: The destruction of ODS protects the bodies of water and its species as the thinning of the ozone layer increases the UVB radiation, which can have negative in survival rate, early developmental stages, and population numbers in different marine species.
  - SDG 15: As Ozone Depleting Substances are potent greenhouse gases, their destruction contributes to climate change mitigation efforts as it avoids these gases to leak to the atmosphere, and as they prevents the thinning of the ozone layer it also protects the terrestrial biosphere and its capacity as carbon sink