



# RAD Annual Reporting 2014 Training Webinar

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# Agenda

- Introduction
- Overview of Reporting Form
- 2014 Updates
- Demo
- Reminders for Proper Reporting
- Questions & Answers



# Introduction

- Importance of Reporting
  - Partner and Program benefits
  - Annual RAD Report available at <http://www2.epa.gov/rad/rad-annual-report>
- How to report
  - Electronic reporting forms available at <http://www2.epa.gov/rad/rad-reporting-form>
  - Forms due to EPA by January 31



# Overview of Annual Reporting Form

## □ 7 Steps:

- Step 1: Contact and Program Information
- Step 2: Third-Party Information
- Step 3: Activity Data on Processed Units
  - Refrigerators
  - Stand-Alone Freezers
  - Air-Conditioning Units
  - Dehumidifiers



# Overview of Annual Reporting Form

- Step 4: Units Jointly Processed
- Step 5: Quality Assurance and Results
  - QA: Input Data Summary
  - Results: Environmental Benefits
  - Results: Energy Impacts
- Step 6: Partner Feedback
- Step 7: Confirmation



# 2014 Updates

- ❑ Updated values for quantities of materials recovered per unit for purpose of QA/QC
- ❑ Added error alert
- ❑ Added comments to provide further guidance
- ❑ Added option for refrigerant/foam BA stockpiling



# Reporting Form Demo



Recover. Recycle. Reclaim.

# Reminders for Proper Reporting

- Instructions and definitions can help guide you through the form

## INSTRUCTIONS

Please complete all worksheets that are applicable to your program. Within each worksheet, please provide information for all fields requested. The purpose of each worksheet and the type of information requested in each is outlined below. Please ensure that all of the following steps have been completed before submitting the reporting form.

### Step 1: Contact and Program Information

Provide your contact and program information.

### Step 2: Third-Party Information

Enter contact information for and details of any third parties.

### Step 3: Activity Data on Processed Units

Complete a Step 3 worksheet for each appliance processed by your program. There are separate worksheets for Refrigerator, Freezer, and A/C units. There are also worksheets for materials/components recovered from those units.

### Step 4: Units Handled Jointly by Your Organization and Other Parties

Complete this worksheet if any appliances were handled jointly by your organization and other parties.

### Step 5: Summary of Input Data for Quality Assurance

- Review Step 5 Summary of Input Data for Quality Assurance worksheet to ensure data is accurate. This worksheet is used for all units.
- Review Step 5 Summary of Program's Removal of Old Units worksheets to ensure data is accurate.

### Step 6: Partner Feedback

Provide qualitative information on your program.

### Step 7: Confirmation

Check and sign a statement confirming the accuracy of the data.

## DEFINITIONS

**Recover:** To remove a material (in any condition) from an appliance and then store it externally without necessarily testing or processing it in any way.

**Reclaim:** To reprocess ODS and ODS substitutes using specialized machinery to at least the requirements specified in the ARI Standard 700, Specifications for Fluorocarbon Refrigerants, and to verify using the analytical methodology prescribed in the Standard.

**Stockpiling with Intent to Reclaim:** To store refrigerant or foam-blowing agent on-site at the recycling facility where the unit was processed with the intent of later reclaiming the substance(s).

**Recycle:** To extract material from an appliance and process it for reuse. Recycling durable components, such as metals, rubber, plastic, and glass, entails reprocessing them for future use in other manufactured products, and not reuse of the appliance itself. When recycling used oil, refrigerants must be recovered from the used oil to the fullest extent possible, and the used oil cannot be mixed with used oil from sources other than refrigeration units.

**Destroy:** To cause the expiration of a controlled substance. Destruction does not result in a commercially useful end product. For refrigerant or foam-blowing agent, destruction must be performed in accordance with the guidelines in 40 CFR §82.3. For PCBs, which are found in capacitors manufactured before 1980, destruction must be in accordance with 40 CFR §761.

**Stockpiling with Intent to Destroy:** To store refrigerant or foam-blowing agent on-site at the recycling facility where the unit was processed with the intent of later destroying the substance(s).

**Dispose:** Mercury waste, such as switches and relays, must be recovered from appliances prior to disposal or shredding, sent to a qualified recovery facility that has appropriate hazardous waste management permits, and managed in accordance with applicable federal, state, and local hazardous waste regulations (e.g., waste must be properly packaged prior to transport). The federal hazardous waste regulations under the Resource Conservation and Recovery Act (RCRA) can be found in 40 CFR §260 - 279. Used oil must be disposed in accordance with 40 CFR §279.81.

**Energy Cost for Residential Consumers (\$/kWh):** the energy cost paid by consumers, which may include a customer charge, distribution charge, transmission charge, transition charge, generation service charge, or other charges based on the electricity pricing scheme in your region.



# Reminders for Proper Reporting

- Step 2 (third-party info)
  - For third-parties that process materials (e.g., demanufacturers), provide address of facilities where processing occurs, not head offices

## Step 2: Third-Party Information

**Instructions:** In Tables A-E below, please indicate the contact information for all companies used by your program to collect/treat appliances and recovered materials in order to fulfill the requirements of the RAD Program. Indicate an "x" for the role fulfilled by each company. Note that you may need to contact third-party providers in order to obtain the names and addresses of the companies that provide the services specified. Please add additional rows if needed.

### A. Haul-Away and Demanufacturing Companies

| Company Name | Contact Name | Phone Number | Address | Company Role        |                      |                             |                  |                   |               |
|--------------|--------------|--------------|---------|---------------------|----------------------|-----------------------------|------------------|-------------------|---------------|
|              |              |              |         | Appliance Haul-Away | Refrigerant Recovery | Foam/Blowing Agent Recovery | Mercury Recovery | Used Oil Recovery | PCBs Recovery |
| Company A    |              |              |         | x                   | x                    |                             | x                | x                 | x             |
| Company B    |              |              |         |                     | x                    | x                           |                  |                   |               |
|              |              |              |         |                     |                      |                             |                  |                   |               |
|              |              |              |         |                     |                      |                             |                  |                   |               |
|              |              |              |         |                     |                      |                             |                  |                   |               |

### B. Refrigerant Reclamation and Destruction Facilities

| Company Name | Contact Name | Phone Number | Address | Facility Role |             | Type of Destruction Technology (if applicable) |
|--------------|--------------|--------------|---------|---------------|-------------|--|
|              |              |              |         | Reclamation   | Destruction |  |
| Company C    |              |              |         |               | x           | WTE boiler                                     |
|              |              |              |         |               |             |  |
|              |              |              |         |               |             |  |
|              |              |              |         |               |             |  |

# Reminders for Proper Reporting

## □ Step 3 (processed units):

- If recovered refrigerant and/or blowing agent is kept in storage by the end of the reporting period, report as *stockpiling with intent to reclaim or destroy*
- Make sure the total number of units processed with refrigerant/blowing agent type specified matches the total number of units processed
- If foam was not recovered from all units, please explain this in a comment
- Use the comments section to provide additional information or clarifications

| Total Number of Units Processed           |                                 |   |                                    |           |
|---|---------------------------------|---|------------------------------------|-----------|
| Average Age of Appliances Collected (yrs) |                                 |   |                                    |           |
| Refrigerant Type                          | Total Number of Units Processed | Number of Units Processed with Refrigerant Recovery | Refrigerant Type Based On:         | Comments: |
| CFC-12                                    |                                 |   |                                    |           |
| HFC-134a                                  |                                 |   |                                    |           |
| Other                                     |                                 |   |                                    |           |
| Total                                     | 0                               | 0   |                                    |           |
|   |                                 |   |                                    |           |
| Insulating Material Type                  | Total Number of Units Processed | Number of Units Processed with Foam Recovery        | Insulating Material Type Based On: | Comments: |
| CFC-11 Blowing Agent                      |                                 |   |                                    |           |
| HCFC-141b Blowing Agent                   |                                 |   |                                    |           |
| HFC-134a Blowing Agent                    |                                 |   |                                    |           |
| HFC-245fa Blowing Agent                   |                                 |   |                                    |           |
| Cyclopentane Blowing Agent                |                                 |   |                                    |           |
| Fiberglass                                |                                 |   |                                    |           |
| Other                                     |                                 |   |                                    |           |
| Total                                     | 0                               | 0   |                                    |           |
|   |                                 |   |                                    |           |

Recover. Recycle. Reclaim.

# Reminders for Proper Reporting

- Step 4 (units jointly processed):
  - To avoid double-counting of program benefits, track and report data on units handled jointly by you and other RAD partners

| <b>Refrigerators</b>   | Partner #1 | Partner #2 | Partner #3 | Partner #4 | Partner #5 |                                |
|--|------------|------------|------------|------------|------------|--------------------------------|
| Name of RAD Partner that Jointly Processes Your Units              |            |            |            |            |            | Total Number Jointly Processed |
| Total Number of Units Jointly Processed                            |            |            |            |            |            | 0                              |
| <b>Number of Units Jointly Processed with Refrigerant Recovery</b> |            |            |            |            |            |                                |
| CFC-12   |            |            |            |            |            | 0                              |
| HFC-134a   |            |            |            |            |            | 0                              |
| Other  |            |            |            |            |            | 0                              |
| <b>Total</b>   | 0          | 0          | 0          | 0          | 0          | 0                              |
| <b>Number of Units Jointly Processed with Foam Recovery</b>        |            |            |            |            |            |                                |
| CFC-11 Blowing Agent   |            |            |            |            |            | 0                              |
| HCFC-141b Blowing Agent  |            |            |            |            |            | 0                              |
| HFC-134a Blowing Agent   |            |            |            |            |            | 0                              |
| HFC-245fa Blowing Agent  |            |            |            |            |            | 0                              |
| Cyclopentane Blowing Agent   |            |            |            |            |            | 0                              |
| Fiberglass   |            |            |            |            |            | 0                              |
| Other  |            |            |            |            |            | 0                              |
| <b>Total</b>   | 0          | 0          | 0          | 0          | 0          | 0                              |



# Reminders for Proper Reporting

- Step 5 (input data summary):
  - Review your program averages and compare to the typical range in comments as quality assurance

**Average Amounts Typically Reported by Partners**

| Amount Per Unit        | Refrigerators | Freezers | AC Units | Dehumidifiers |
|------------------------|---------------|----------|----------|---------------|
| Refrigerant (lb)       | 0.2-0.5       | 0.1-0.6  | 0.5-1    | 0.3-0.6       |
| Blowing Agent (lb)     | 0.6-1.2       | 0.6-1    | NA       | NA            |
| Ferrous Metal (lb)     | 120-140       | 125-140  | 65-75    | 18-28         |
| Non-Ferrous Metal (lb) | 5-7           | 5-7      | 10-15    | 4-7           |
| PCB Capacitors (#)     | <1            | <1       | <1       | <1            |
| Mercury Components (#) | NA            | <1       | NA       | NA            |
| Used Oil (gal)         | ≤0.1          | ≤0.1     | ≤0.4     | ≤0.4          |
| Plastic (lb)           | 11-50         | 11-30    | 2-5      | 4-8           |
| Glass (lb)             | 3-6           | NA       | NA       | NA            |

## Step 5: Summary of Input Data for Quality Assurance

**Instructions:** Review the input data summarized in the table below to ensure that the data entered in the Step 3 worksheets are error-free. The table below presents the calculated average quantities of refrigerant, foam-blowing agent, and durable materials recovered per appliance and is self-populated based on the activity data reported in the Step 3 worksheet(s). The typical range reported by partners in previous years can be displayed in comments by holding your cursor over each cell, and should be used as guidance to identify potential reporting errors in the Step 3 worksheet(s).




**Average Quantity Recovered Per Unit, Calculated Based on Reported Total Quantity and Number of Units Processed**

|   | Appliance Type |                      |                        |               |
|---|----------------|----------------------|------------------------|---------------|
|   | Refrigerators  | Stand-Alone Freezers | Air-Conditioning Units | Dehumidifiers |
| Number of Units                         | 0              | 0                    | 0                      | 0             |
| <b>Refrigerant (lb)*</b>                |                |                      |                        |               |
| CFC-12                                  |                |                      | NA                     |               |
| HCFC-22                                 | NA             |                      |                        |               |
| HFC-134a                                |                |                      | NA                     |               |
| R-500A                                  | NA             | NA                   | NA                     |               |
| R-407C                                  | NA             | NA                   |                        | NA            |
| R-410A                                  | NA             | NA                   |                        |               |
| Average across all units                |                |                      |                        |               |
| <b>Foam-Blowing Agent (lb)**</b>        |                |                      |                        |               |
| CFC-11                                  |                |                      | NA                     | NA            |
| HCFC-141b                               |                |                      | NA                     | NA            |
| HFC-134a                                |                |                      | NA                     | NA            |
| HFC-245fa                               |                |                      | NA                     | NA            |
| Average across all units                |                |                      | NA                     | NA            |
| <b>Durable Materials</b>                |                |                      |                        |               |
| Used oil (gal)                          |                |                      |                        |               |
| Ferrous metals (lb)                     |                |                      |                        |               |
| Non-ferrous metals (lb)                 |                |                      |                        |               |
| Plastic (lb)                            |                |                      |                        |               |
| Glass (lb)                              |                | NA                   | NA                     | NA            |
| Number of PCB-containing capacitors     |                |                      |                        |               |
| Number of Mercury-containing components | NA             |                      | NA                     | NA            |

\*Average calculated based on reported number of units processed with refrigerant recovery.  
 \*\*Average calculated based on reported number of units processed with foam recovery.

# Reminders for Proper Reporting

- Step 6 (partner feedback):
  - Don't forget to tell us about your program and how we can improve RAD!
  - Include high-resolution 2014 event/campaign photos in your email response for consideration in the Annual Report

|  |  |
|--|--|
| <p><b>Question #1</b><br/>As part of your appliance recycling program, have you undertaken any innovative activities during the year to promote the safe disposal of appliances and/or raise consumer awareness? Please describe. You may also send any photos along with this reporting form at the time of submission.</p> |    |
| <p><b>Question #2</b><br/>As a RAD Partner, what are the greatest benefits that you've realized through the Program?</p>   |   |
| <p><b>Question #3</b><br/>Do you have any suggestions for how the RAD Program can be improved?</p>   |  |

# Questions & Answers



# Contact Information

## **Sally Hamlin**

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## **For technical reporting support:**

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