



# **Current Rating Quality Assurance Oversight – Bare Minimums and Best Practices**

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# Overview

- Review QA checklist documentation
- File QA review process
- Field QA review process
- Share best practices
- Q&A

# QA Resource Page

[Home](#) [Rater/Auditor Information](#) [Contractor Information](#) [Builder Information](#) [Provider Information](#) [Quality Assurance](#) [RESNET Standards](#) [Co](#)

## RESNET QUALITY ASSURANCE

[2014 Quality Assurance Submittal](#)

[Quality Assurance Process Document](#)

[RESNET Quality Assurance Standard \(Chapter 9\)](#)

### QA TEMPLATES

[RESNET Rater, RFI, QA Designee, QA Delegate Registry Template](#)

[RESNET Equipment Calibration Log Template](#)

### QUALITY ASSURANCE CHECKLIST

[RESNET QA File and Field Checklist](#)

[2015 ENERGY STAR QA Checklist](#)

### CONTACT RESNET

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### HELPFUL LINKS

[Quality Assurance Designee Professional Development Requirements](#)

[Application to Renew/Update Listing on RESNET Directory of National Quality Assurance Designees](#)

[RESNET Process For Enhancing The National Consistency of HERS Index Scores](#)

[QA Designee/Trainer Test](#)

[How to Become a Qualified RESNET Quality Assurance Designee](#)

[RESNET Buildings Registry Guide](#)

### ANNOUNCEMENTS

11-13-14 [RESNET Board Adopts Policies to Enhance the National Consistency of HERS Index Scores](#)

1-27-14 [2015 QA Checklist for ENERGY STAR Homes](#)

### QUALITY ASSURANCE WEBINARS

1-13-15 [Annual QA Submission Update Webinar Recording](#)

09-02-14 [RESNET Quality Assurance Designee Roundtable](#)

<http://www.resnet.us/blog/qa/>



Setting the Standards for  
Home Energy Efficiency

# Annual “Paper Reviews”

- 100% of Providers
- Online submittal
- Required supporting documentation

The screenshot displays the RESNET website interface. At the top, there is a navigation bar with links for SEARCH, ABOUT US, CONTACT US, PRIVACY POLICY, USER AGREEMENT, and LOGIN. The RESNET logo is prominently displayed, along with the text "CERTIFIED ENERGY AUDITORS/RATERS AND QUALIFIED CONTRACTORS/BUILDERS" and "Residential Energy Services Network". A red banner on the right side asks "ARE YOU A HOMEOWNER?" and provides a link to visit the Homeowner site.

The main content area is titled "Provider Information - Accredited Rating Providers - QAD Checklist". Below this, the "RESNET QUALITY ASSURANCE CHECKLIST" is introduced. The text explains that in accordance with RESNET Standards 904.3, RESNET will develop a Quality Assurance Checklist for use by QA Designees to verify a Provider's compliance with individual requirements. It states that every item on the checklist should be checked annually for compliance, accuracy, and completeness. The Primary QA Designee for the Provider must review each item to confirm compliance and note any actions taken to achieve compliance for items not in compliance. Supporting documentation must be uploaded for each item.

Instructions for the checklist are provided:

1. Download the **Quality Assurance Report Submittal Checklist** to complete offline (comment is required if any item is out of compliance);
2. Collect and/or complete the requested information for each of the items on the Checklist;
3. Return to this page to upload the 2014 Quality Assurance Online Submittal package (below).

A section for "Required Fields" includes a form for "Quality Assurance Online Submittal" with the following fields:

Provider Name:	<input type="text" value="Any Provider"/>
Primary QA Designee:	<input type="text" value="Any QA Designee"/>
Date Completed:	2/10/2015

On the right side of the page, there are three promotional boxes:

- STAY CONNECTED:** Includes links to Join Us on Facebook, Follow Us on Twitter, and Connect With Us on LinkedIn.
- AUDITOR/RATER?:** Promotes becoming a Rater/Auditor, listing Certification Requirements and Business Opportunities, with a "READ MORE" button.
- CONTRACTOR/BUILDER?:** Promotes becoming an EnergySmart Contractor/Builder, listing How to Qualify and Get More Business, with a "READ MORE" button.



Setting the Standards for  
Home Energy Efficiency

# Annual Reviews

Quality Assurance Online Submittal	
<b>Provider Name: *</b>	Any Provider
<b>Primary QA Designee: *</b>	Any QA Designee
<b>Date Completed:</b>	2/10/2015

2014 Quality Assurance Online Submittal	
<b>Upload 2014 Quality Assurance Report Submittal Checklist *</b>	
<input type="button" value="Choose File"/>	no file selected
<b>Upload Policies and Procedures Manual *</b>	
<input type="button" value="Choose File"/>	no file selected
<b>Upload Quality Assurance Process</b>	
If it is not included in Policies and Procedures Manual	
<input type="button" value="Choose File"/>	no file selected
<b>Upload Complaint Response System and how you communicate this to rating clients</b>	
If it is not included in Policies and Procedures Manual	
<input type="button" value="Choose File"/>	no file selected
<b>Upload Sample Rater Agreement *</b>	
<input type="button" value="Choose File"/>	no file selected



Setting the Standards for  
Home Energy Efficiency

# Annual Reviews, Cont.

## Upload Rater & RFI Registries \*

Recommend using [RESNET Rater, RFI, QA Designee, QA Delegate Registry Template](#)

no file selected

## Upload Equipment Calibration Log \*

Recommend using [RESNET Equipment Calibration Log Template](#)

no file selected

## Upload One Signed Disclosure Form for Each Active Rater \*

Please zip all disclosure forms into a single file for upload

no file selected

## Upload List of All QA Designees and QA Delegates that Performed QA for this Submittal \*

Recommend using [RESNET Rater, RFI, QA Designee, QA Delegate Registry Template](#)

no file selected

## Upload Documentation of Annual QA File Review including date File Review was Completed and Findings of the File Review \*

Recommend using [QA Template export from Registry](#)

no file selected

## Upload Documentation of Annual Onsite QA Field Review including the Address of the Home Used for Field QA and the Findings of the Field Review \*

Recommend using [QA Template export from Registry](#)

no file selected

## Upload Sample of a Completed ENERGY STAR QA Checklist \*

no file selected



# QA Process

- **Written QA Process**
  - **102.1.1** A written Quality Assurance (QA) Process that conforms to Chapter 9 of these Standards and any specific QA requirements for other Provider categories that may apply to a particular organization.

# QA Process

- Bare Minimum- copy standard
- Best Practice
  - Requirements from Standards rewritten in “lay person” language.
  - Higher QA rates
  - Additional required documentation



# Rater Agreement

- Rater agreement must include
  - **102.1.2.5.1** Must follow RESNET Standards
  - **102.1.2.5.2** Comply with RESNET Code of Ethics
  - **102.1.2.5.3** Provide specific statistical info about number and type of ratings conducted



# Rater Agreement

- Bare Minimum- copy standard
- Best Practice
  - Additional requirements for QA, insurance, complaints, etc.
  - This is your contract with your rater so it needs to be as detailed as possible.



# Policies and Procedures Manual

- **102.1.4** Must include the following:
  - **102.1.4.1** Projected Ratings
  - **102.1.4.2** Field verification of rated features
  - **102.1.4.3** Blower Door testing
  - **102.1.4.4** Duct testing
- **102.1.4.5** Improvement analysis
- **102.1.4.6** Conflict of interest provisions

# Policies and Procedures Manual

- Bare Minimum – copy Standard
- Best Practice
  - Collect additional documentation with each Rating, such as financial disclosure, plans, photo-documentation, etc.
  - Additional guidance on performance testing
  - More stringent requirements for conflict of interest



# Policies and Procedures

- **102.1.4.7** Written Rater discipline procedures that include provisions for Probation, Suspension, and Revocation of Rater certification.
- Bare Minimum – copy Standard
- Best Practice
  - Document the reason for disciplinary action in the RESNET Registry and give Raters clear terms of probation and deadlines.



# Policies and Procedures

- **102.1.4.7** Written Rater discipline procedures that include provisions for Probation, Suspension, and Revocation of Rater certification.
- Bare Minimum
  - Copy Standard, update status in Registry within 10 business days
- Best Practice
  - Provide Raters clear terms of probation and deadlines



# Policies & Procedures

- **102.1.4.11** Complaint Response System.
- Best Practice
  - Require raters to provide the complaint response system to client with the disclosure form and post complaint response system online.
  - Require raters to include complaint response system in standard contract.

# Policies and Procedures Manual

- **102.1.4.13** Site data collection manual.
- **102.1.4.15** Rater training and certification
- **102.1.4.14** Written QA Process
- **102.1.4.16** Rater Professional Development and recertification



# PD, Certification and Calibration Tracking

- Very inconsistent ways of tracking this information and submitting it to RESNET.
- Best practice
  - Templates are now available to help you track this information!



# Equipment Calibration Log

- Q: How often does equipment need to be calibrated?
- A: “Blower doors, duct testers, and associated pressure testing instruments shall be field-tested annually for calibration. Provider shall maintain a written log of the annual calibration check for a period of three (3) years” (Section 803.9).

# Combustion Testing Equipment

- Q: How often does combustion safety testing equipment need to be calibrated?
- A: Equipment shall be “calibrated in accordance with the manufacturers recommendations or annually whichever is the greater frequency and evidence of the calibration shall be submitted to the Rating Provider QAD” (Section 807.2).

# Online Reviews

- Review Rater Registry
  - Confirm all Ratings are in the National Registry
- QAD explains Building File & Field Review Process
  - Opens Building File(s)
  - Shows supporting documentation (photos, plans, etc.)
  - Shows field notes from Field Review
- EEP QA Review



# Building File Reviews

- Q: What supporting documentation is required to perform a Building File Review?
- A:

*904.4.1.3.4 For of each Confirmed Rating, confirm that the values entered into the Rating Software for all Minimum Rated Features are either RESNET-defined defaults or are supported by on-site field-confirmed test data using threshold diagnostic values or actual diagnostic values.*



# Sample File Review: Checking “Internal Logic”

The screenshot displays the REM/Rate v14.5.1 software interface for a project titled "Greystone Unit 202 Corner Post renovation - 13 SEER.blg". The interface is divided into several sections:

- General Building Information:** Contains input fields for "Area of Conditioned Space (sq ft)" (607), "Volume of Conditioned Space (cu ft)" (7587), and "Year Built" (1920). Below this are dropdown menus for "Housing Type" (Apartment, end unit), "Level Type [Apartments Only]" (Mid-level), "Number of Units" (1), "Floors on or Above Grade" (3+), and "Number of Bedrooms" (1). At the bottom of this section are dropdowns for "Foundation Type" (Apartment above conditioned space), "Enclosed Crawl Space Type" (N/A), and "Thermal Boundary Location" (N/A).
- Analysis:** A table showing various area and ratio metrics. Blue arrows point to the "Floors" and "Ceilings" rows, both of which have a value of 607. The table also includes "Total Area (sq ft)", "Ratios", and "Window Area By Orientation (sq ft)".
- Errors/Warnings:** A section at the bottom indicating "No errors or warnings exist."

Category	Value
<b>Total Area (sq ft)</b>	
Conditioned Space	607
Shell Area	2547
AG Shell Area	2547
Foundation Walls	0.0
Slab Floors	0
Floors	607
Rim and Band Joist	0.0
Above-Grade Walls	1332.5
Windows	81.0
Doors	20.0
Ceilings	607
Skylights	0.0
Ducts	145.7
<b>Ratios</b>	
Window-To-Wall	0.136
Window-To-Floor	0.133
<b>Window Area By Orientation (sq ft)</b>	
North	0.0
Northeast	54.0
East	0.0

# Sample File Review: Duct Leakage Testing

**Duct System Selector**

#	Name
1	Duct system

New Delete Copy

Name: Duct system

Sq. Feet Served: 607.0 # Return Grilles: 1

Htg Equip: 1: 18k 13seer 7.7hspf

Clg Equip: 1: 18k 13seer 7.7hspf

Duct Surface Area (sqft):

Supply: 122.9 Estimate Surface Area

Return: 22.8

**Duct Leakage**

Use Default Leakage: N/A

Use Measured Leakage: CFM @ 25 Pascals

Leakage to Outside

Exemption - No Test Required

Total: 100.00 CFM @ 25 Pascals

Supply: 40.00

Return: 60.00

Total Duct Leakage

Duct Test Conditions: Postconstruction Test

Total: 140.00 CFM @ 25 Pascals

**Ducts**

Location	Supply		Return	
	% Area	R-Value	% Area	R-Value
1 Conditioned space	100	8.0	100	8.0
2 None	0	0.0	0	0.0

Hand icons: [Hand pointing left] [Hand pointing right]

# Sample File Review: Envelope Leakage Testing

Whole House Infiltration

Measurement Type: Blower door test

Heating Season Infiltration Value: 700

Cooling Season Infiltration Value: 700

Shelter Class: 4

2009 IECC Verification: Tested

CFM @ 50 Pascals

Mechanical Ventilation System for IAQ

Type: None

Sensible Recovery Efficiency (%): 0.0

Total Recovery Efficiency (%): 0.0

Rate (cfm): 0

Hours/Day: 24.0

Fan watts: 0.0

Usage of Operable Windows

Cooling Season Strategy: Natural Ventilation



# Building File Reviews

- Q: How many files must you review annually?
- A: The greater of one (1) home or ten percent (10%) of each Rater's annual total of homes for which Confirmed or Sampled Ratings were provided.

# Field Reviews

- Q: How many homes must you review annually?
- A: Onsite field evaluation of the greater of one (1) home or one percent (1%) of the Rater's annual total of homes for which confirmed or sampled ratings (904.4.2.1).

# Field Reviews

- 904.4.2.6 Confirm HERS Index is no more than three percent (3%) (+/-) variation in the HERS Index from the HERS Index result as determined by the QA Designee.
- When calculating the HERS Index point variance allowed for a given Index, round down to the nearest whole Index point, with the allowable variance never less than two (2) HERS Index points.

# “Low-Volume” Raters?

- Q: How many Field Reviews are required on a Rater who performs 3 Ratings in a given year?
- A: 1 Field Review.
  
- Q: What about a Rater doing zero ratings in a given year?
- A: 0 Field Reviews.

# Field Reviews

- Q: Can the Rater be present for the Field Review?
- A: Intent of the Standards is for Field QA to be independent and unbiased, but that's not always possible. Some QADs view Field Reviews as opportunities for mentoring or training.

# What about RFIs?

- 904.4.2.2 For Raters utilizing Rating Field Inspectors (RFI's), the QA Designee shall ensure that an annual onsite field evaluation of the greater of one (1) home or one percent (1%) of the RFI's annual total of homes for which data was collected are subject to evaluation.

# RFI Scenario

- For example, a Rater performs 95 Ratings in a year. A RFI performs 40 final inspections with performance testing. The Rater performs 55 final inspections with performance testing. How many Field Reviews are required to be performed on the Rater and the RFI?
- Answer
  - Rater Field Reviews: 1
  - RFI Field Reviews: 1



# Registry Review

- RESNET Registry Guide
  - <http://buildingsregistry.resnet.us/help/>
- Frequently asked questions, common error messages and best practices for uploading ratings



# Registry Review

- Rater Status
  - Active, Inactive, Probation, Suspension, and Termination.
  - Notify RESNET (via National Registry) of any changes to Rater status within 10 business days of action.
  - [http://buildingsregistry.resnet.us/help/rater\\_registry\\_guide.aspx](http://buildingsregistry.resnet.us/help/rater_registry_guide.aspx)



# Thank You!

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