**Legend**
Black strikethrough = Deleted text
Black underlined text = Added text

# Quality Control Inspector (QCI) Redline Changes

The purpose of this document is to illustrate changes between the 2018 QCI Job Task Analysis (JTA) and the 2023 QCI JTA. The target audience for this resource includes training organizations seeking to update their training curricula or active Energy Auditor/QCI certification holders interested in viewing recent changes. No immediate changes to certification exams or training requirements are prompted by the JTA or certification scheme updates at this time. However, exams will be updated to align with the new JTAs as part of the national rollout of the updated schemes in late 2024 or early 2025. Use the legend above to identify additions and deletions.

# 5 QCI JTA

## 5.1 DOMAIN I: In-Process Evaluation

### *5.1.1 D1-Task 1: Verify worker compliance with safety regulations~~.~~*

Ability to:

- Evaluate that the work practices ~~for compliance with~~ protect the health and safety ~~regulations~~of workers and building occupants (e.g., appropriate personal protective equipment being worn, monitoring air quality in workspaces, dust control, etc.)
- Evaluate the job site for compliance with safety regulations (e.g., proper lighting, safety and control in enclosed spaces, Safety Data Sheet, installation specifications)
- Document ~~observations.~~ compliant, innovative, or deficient work practices
- Verify that crew members are using equipment to manufacturer's specifications and recommendations (e.g., safety switches are functional, ladder specifications, etc.).

Knowledge of:

- ~~Basic construction~~Energy retrofit techniques ~~and practices~~, terminology, materials
- Interpretation of manufacturer's specifications and recommendations
- Applicable codes and standards ~~adopted by the authority having jurisdiction~~
- Safety regulations (e.g., ~~OSHA, EPA~~Occupational Safety and Health Administration, U.S. Environmental Protection Agency)
- Information contained in a Safety Data Sheet ~~(SDS).~~

### *5.1.2 D1-Task 2: Evaluate in-process work quality~~.~~*

Ability to:

- Compare the work performed to the work ~~plan~~scope (e.g., appropriate R-value, square footage)
- Determine if correct materials and equipment are being installed (e.g., fire-rated used where needed, correct insulation type)
- Verify the condition and capacity of the tools and equipment (e.g., calibration dates, blowing machine pressure)
- Document compliant, innovative, or deficient installation practices (e.g., improper materials, good workmanship, poorly functioning tools and equipment)
- Determine ~~needed~~if appropriate diagnostic ~~tests~~testing is being performed, based on dwelling

- Document potential missed opportunities
- Evaluate job site management and scheduling (e.g., sequencing, material and equipment staging).

Knowledge of:

- ~~Basic~~ Building science:
- ~~Codes and standards adopted by the authority having jurisdiction~~
- ~~Building materials~~
- ~~Construction work practices~~
- ~~Installation methods~~
- ~~Standards and specifications~~
    - ~~Test~~Heat transfer mechanisms (e.g., convection, conduction, radiation)
    - Moisture transfer mechanisms (e.g., water vapor, bulk moisture)
    - Air transfer mechanisms (e.g., stack effect, pressure differences, etc.).
- Applicable codes, standards, and program requirements (e.g., International Codes Council [ICC], National Fire Protection Association [NFPA], ASHRAE 62.2, Standard Work Specifications [SWS], etc.)
- Energy retrofit in-process best practices (e.g., dense packing sidewalls, duct sealing, fan installation, etc.)
- Appropriate testing protocols~~.~~ for the situation
- Documentation requirements for the in-progress work (e.g., QCI documentation [sampling], worker documentation [confined space, lead containment], etc.)

### ~~*6.1.2 D1-Task 3. Verify on-site documentation.*~~

~~Ability to:~~

- ~~Determine if required [sampling], worker documentation is present on the job site (e.g., work order, permits, Safety Data Sheet [SDS], installation specifications)[confined space, lead containment], etc.)~~
- ~~Determine which job site worker credentials are necessary (e.g., licenses, certifications).~~

~~Knowledge of:~~

- ~~Documentation procedures~~
- Credentialing requirements for workers
- ~~Program and agency guidelines~~
- ~~Required job site documents~~.

## 5.2 DOMAIN II: Postwork Evaluation

### *5.2.1 D2-Task 1: ~~Verify installed measures and~~ Compare work completed in relation to the initial assessment ~~details.~~and work scope (Evaluate the work of the EA)*

Ability to:

- Determine ~~which~~if appropriate diagnostic ~~tests are needed~~testing was performed (e.g., health~~,~~ and safety, air leakage)
- ~~Visually inspect installed measures~~
- Confirm housing characteristics used for initial assessment (e.g., insulation levels, heating equipment, square footage~~)~~, etc.)
- Identify potential missed opportunities~~.~~
- Compare inspection results to work plan projections.

Knowledge of:

- Building science:
- ~~Codes and standards adopted by the authority having jurisdiction~~
- ~~Standards and specifications~~
    - Heat transfer mechanisms (e.g., convection, conduction, radiation)
    - Moisture transfer mechanisms (e.g., water vapor, bulk moisture)
    - Air transfer mechanisms (e.g., stack effect, pressure differentials, etc.).
- Applicable codes, standards, and program requirements (e.g., ICC, NFPA, ASHRAE 62.2, SWS, etc.)
- Typically installed measures and missed opportunities
- Appropriate/required measures for each situation
- Appropriate testing protocols for the situation.

### 5.2.2 D2-Task 2: Evaluate installed measures for compliance with standards~~.~~ and targets (Evaluate the work of the contractor[s] and/or crew[s])

Ability to:

- ~~Compare results of~~ Identify additional investigation needed based on sensory inspection ~~to expected outcomes~~results (e.g., unusual sounds, smells, humidity, etc.)
- Visually inspect and document installed measures
- Determine code or program compliance of installed measures (e.g., insulation certificate, installation standards)
- Determine if installed measures meet job specifications
- Determine if a problem is a material problem or a work problem
- Compare inspection results to previous test data
- ~~Compare inspection results to work plan projections~~
- List actions necessary to bring installed measures up to compliance (~~i.~~e.g., punch list)
- Interpret diagnostic test results
- Verify pressure and thermal boundary alignment.

Knowledge of:

- Building science
    - ~~Codes and~~ Heat transfer mechanisms (e.g., convection, conduction, radiation)
    - Moisture transfer mechanisms (e.g., water vapor, bulk moisture)
    - Air transfer mechanisms (e.g., stack effect, pressure differentials, etc.).
- Applicable codes, standards ~~adopted by the authority having jurisdiction~~
- ~~Industry standards~~
- , and program requirements~~.~~ (e.g., ICC, NFPA, ASHRAE 62.2, SWS, etc.)
- Energy retrofit best practices (e.g., dense packing sidewalls, duct sealing, fan installation, etc.)
- Interpreting/comparing test results.

## 5.3 DOMAIN III: Project Compliance and Completion

### 5.3.1 D3-Task 1: Confirm whether policy requirements have been satisfied~~.~~

Ability to:

- Identify questionable costs (e.g., missing items, double billing, large variance between estimated costs and final costs, etc.)
- Determine accuracy and appropriateness of initial building evaluation (e.g., missing information, software modeling inputs, existing equipment~~)~~, square footage matches documentation, etc.)
- Identify ~~omissions or~~ inappropriate measures in the work scope (e.g., not obtaining permits, measure skipping, misaligned thermal and pressure boundaries, etc.)
- Ensure that all ~~punch list items~~measures have been completed to the applicable standards
- ~~Prepare completion reports~~Complete inspection documentation (e.g., checklists, required reports, recommended training~~).~~ , etc.)

- Ensure needed client education was conducted (e.g., teaching client how to use digital thermostat, how to change filter, ASHRAE fan control, etc.).

Knowledge of:

- Policy/program requirements (e.g., Grantee's guidelines, contracted scope of work, etc.)
- ~~Basic heat load principles~~
- ~~How~~Applicable codes and standards (e.g., ICC, NFPA, ASHRAE 62.2, SWS, etc.)
- Energy modeling and expected inputs ~~affect installed measures.~~and outputs
- Client education best practices
- Required inspection documentation
- Basic accounting (e.g., work orders, invoicing, etc.)
- Financial rules and regulations (e.g., DOE allowable costs, leveraged funds, etc.)
- Building science:
    - Heat transfer mechanisms (e.g., convection, conduction, radiation)
    - Moisture transfer mechanisms (e.g., water vapor, bulk moisture)
    - Air transfer mechanisms (e.g., stack effect, pressure differentials, etc.).