

# QUALITY CONTROL INSPECTOR Field Guide

v.9.27.2013

#### Standards of Reference

## SWS - Standard Work Specification

#### **Technical Standards for the Building Analyst Professional**

## Clarifications to Technical Standards for the Building Analyst Professional

#### **ASHRAE 62.2-2010**

#### Verify worker compliance with safety rules

Candidate identified measures that would have required fall protection
Candidate identified appropriate respirator requirements in the scope of work
Candidate identified appropriate PPE in relation to work in confined spaces
Candidate identified appropriate PPE in relation to the general work requirements of the work scope Candidate identified potential jobsite hazards

#### Address work problems

Candidate reviewed the work in relation to the work plan Candidate identified the need to run diagnostic tests Candidate checked for missed opportunities

## Evaluate client satisfaction regarding the in-process work

Candidate asked the homeowner about the work when it was in-process
Candidate made note of homeowner's answers
Candidate accurately determined the satisfaction level of the homeowner based on the conversation

## Review client file and the work scope

Candidate reviewed the audit
Candidate reviewed the work order
Candidate interpreted diagnostic test results in relation to the work scope

#### Perform an exterior and interior visual/sensory inspection

Candidate performed exterior walk around
Candidate performed interior walk around
Candidate verified installed components listed on the work order
Candidate noted any audit discrepancies
Candidate noted any damage potentially caused by workers
Candidate documented any non-conformances

#### **Evaluate client satisfaction**

Candidate interviewed the homeowner regarding level of comfort and satisfaction with the work

# Conduct health and safety tests

**Combustion Safety and Efficiency Tests** Candidate properly conducted combustion gas leakage testing

Candidate properly recommended soapy solution to verify positives
Candidate completed visual inspection of flue system for problems
Candidate indentified existing heating / cooling system components safety concerns
Candidate measured the temperature of the domestic hot water at the tap

## **CAZ Testing**

Candidate set up home for natural conditions
Proper manometer setup (GATED ITEM)
Candidate correctly measured baseline pressure differential
Set up home in worst case condition (NOT SCOREABLE)

All exhaust appliances running

Correct door closures - measured quantitatively or qualitatively

Air handler operation impact checked

Candidate correctly measured worst-case CAZ depressurization

Candidate calculated minimum draft pressure based on existing weather conditions (GATED ITEM)

Candidate checked for worst case spillage in DHW

Candidate correctly identified time limits for spillage based on BPI Standards

Candidate correctly determined if the appliance passes the spillage test

Candidate identified what steps should be taken if it does not pass (ask candidate)

Candidate correctly performed worst case draft test on DHW

Candidate made appropriate recommendations according to BPI standards (using correct table)

Candidate compared diagnostic results to appropriate table in the BPI standards

#### **CO Testing**

Candidate tested ambient CO outdoors

Candidate tested ambient CO indoors

Properly interpreted measurements

Candidate measured heating system flue gas CO during combustion safety testing

Candidate conducted Steady State Efficiency test on heating plant

Candidate accurately measured heat rise delta T

Candidate measured DHW flue gas CO during combustion safety testing

Candidate appropriately applied BPI action levels based on test results for CO in the flue

Candidate monitored ambient CO levels in the CAZ during entire combustion safety tests

Candidate checked for items, excessive debris inside oven

Candidate's sampling location appropriate for the oven test

Candidate appropriately applied BPI action levels based on test results for CO in oven

#### Conduct diagnostic tests

#### **Duct Pressurization Test**

Candidate properly set-up the manometer

Pressure tap appropriate

Accurate measurement

#### **Blower Door Test**

Candidate set combustion appliances to pilot or disabled them

Candidate properly set-up the blower door frame/shroud/fan

Candidate properly set-up the manometer

Candidate properly set-up house for testing

Candidate correctly measured baseline pressure differential

Candidate accurately took CFM50 measurement

#### **Pressure Pan Test**

Candidate properly set-up the manometer

Accurate measurements taken

Candidate properly interpreted the results of the pressure pan testing

#### **Pressure Diagnostics**

Candidate measured zonal pressure differential to one appropriate zone

Candidate properly interpreted the results

#### Fan Flow

Candidate accurately compared existing exhaust flow ventilation with rated capacity

#### Determine pass/fail of the work - Identify work problems

Candidate reviewed the results of the visual/sensory inspection

Candidate reviewed the results of diagnostic tests

Candidate compared diagnostic results with the post-test data

Candidate made a determination of pass or fail of the work based on the results

Candidate noted the work problems if the result was a fail

## Perform spot checks

Candidate mentioned the need to perform spot checks on in-process work

Candidate mentioned performing random sampling of job site documents

# Evaluate installed measures against the field guide, SWS and state/local codes

Candidate compared work completed with acceptable practices

Candidate made appropriate conclusion based on the findings

Candidate identified work that does not meet acceptable practices

Candidate determined if the problem was material problem or a work problem

# Close out the project

Candidate ensured all punch-list items were completed Candidate ensured all relevant signatures were obtained

# Maintain files and records

Candidate discussed how they maintain job logs and notes
Candidate discussed how they maintain information on active complaints
Candidate discussed how they maintain information on any job anomalies