Audit Event - QCI Diagnostic Tests

- The MN Weatherization Field Guide - SWS Aligned Edition can be found in Appendix B.
- CAZ Depressurization tests are not required in dwellings where all space and water heating plants are electric.

- **General Tests**
  - Blower Door @ 50 Pa – A pressurized blower test will be performed if a home contains vermiculite (12.2 MN Weatherization Field Guide)
  - Attic Zonal Pressures (with respect to outside)
  - Test Existing Smoke & CO Detectors (1.3 MN Weatherization Field Guide)
  - Pressure Pan Test (ducts outside thermal envelope) (8.13 MN Weatherization Field Guide)
  - Gas Range CO Tests and Fuel Leak Test (if clean and tune was called for, oven only) (1.4 MN Weatherization Field Guide)
  - Exhaust Fan Flow Test (on units that have been repaired or replaced) (9.2 MN Weatherization Field Guide)
  - Ambient CO Test - Mechanical Room(s) & Living Space (8.1 MN Weatherization Field Guide)
  - ASHRAE Fan Room balancing Test (on homes with non-forced air homes) (9.2 MN Weatherization Field Guide)
  - Verify dense packed insulation (Insulation will be verified to prevent visible air movement using chemical smoke at 25 PA of pressure difference at a distance of 1 inch, or by infrared camera used in conjunction with a blower door when weather conditions allow for a greater than 10 degree difference between inside and outside temperatures)

- **Water Heater**
  - Test for Fuel Leaks (8.1 MN Weatherization Field Guide)
  - Water Heater Combustion Analysis/CO in Flue (8.1 MN Weatherization Field Guide)
    - PVC test holes must be plugged with threaded, knurled screws to create a tight seal
  - CAZ Depressurization Test (BPI 1200 Testing Standard, 8.1 MN Weatherization Field Guide)
  - Combustion Spillage Test (BPI 1200 Testing Standard, 8.1 MN Weatherization Field Guide)
  - Hot Water Temperature (if replaced or repaired) (10.4 MN Weatherization Field Guide)

- **Heating Plant**
  - Test for Fuel Leaks (8.1 MN Weatherization Field Guide)
  - Heating Plant Combustion Analysis/CO in Flue (8.3 MN Weatherization Field Guide)
    - PVC test holes must be plugged with threaded, knurled screws to create a tight seal
    - When a heating system manufacturer does not allow drilling of a metal flue, use a combustion analyzer to test ambient CO at the front of the heating system cabinet and in the closest supply register.
  - CAZ Depressurization Test (BPI 1200 Testing Standard, 8.1 MN Weatherization Field Guide)
  - Combustion Spillage Test (BPI 1200 Testing Standard, 8.1 MN Weatherization Field Guide)
  - Test Furnace Shutoff Switch (8.5 MN Weatherization Field Guide)
  - Heat Rise Test on Furnace (8.3.1 MN Weatherization Field Guide)
  - Ambient CO Test in Mechanical Room and Living Space (8.1 MN Weatherization Field Guide)
  - Heat Exchanger Integrity - Oxygen Concentration (8.7 #4 MN Weatherization Field Guide)
  - Smoke Test on Oil Furnace/Oil Water Heater (on units that have been repaired or replaced) (8.6 MN Weatherization Field Guide)
  - Room Balancing (on forced air heating plant) (9.2 MN Weatherization Field Guide)

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- **Space Heater (including gas fireplaces)**
  - Test for Fuel Leaks (*8.1 MN Weatherization Field Guide*)
  - Combustion Analysis/CO in Flue (as feasible) (*8.4 MN Weatherization Field Guide*)
  - CAZ Depressurization Test (*BPI 1200 Testing Standard, 8.4 MN Weatherization Field Guide*)
  - Combustion Spillage Test (as feasible) (*BPI 1200 Testing Standard, 8.4 MN Weatherization Field Guide*)