LOW-CARBON PATHWAYS FOR MULTIFAMILY BUILDINGS Standards and Quality Assurance Checklist Specifications — March 2022



For informational use by: Participating Providers and their installation contractors, as a reference guide to understanding the quality assurance scoring criteria, and specific requirements when installing measures in the Low Carbon Pathways Program.

NYSERDA maintains the integrity of the Low Carbon Pathways Program through an independent standards and quality assurance team, which manages the quality assurance (QA) system. The QA system includes verifying compliance with program and installation standards using comprehensive field inspections and photo desk reviews. QA field inspections and desk reviews of installations are conducted by a qualified independent third-party competitively selected by NYSERDA and will use these checklists as their guide. Participating Providers are required to submit proof of all corrective action taken when a specific installation requirement has not been met and is deemed to be a major or critical system failure. The checklist specifications contained in this document are for reference purposes only.

Field Definitions

Measure – Represents a specific component that the inspector is reviewing.

Task – The Task field falls under a Measure and represents the specific inspection checkpoints that an inspector would rate as Pass or Fail for a given component.

Task Description – A detailed description of the task for the inspector to reference in determining if a task should be marked as failed.

Reference – The basis for each task requirement is linked to the project workscope, a program guideline, manufacturer instructions, or code.

Non-Conformance Category – Each task is assigned a non-conformance rating of either incidental, minor, major or critical. Refer to the Non-Conformance Rating Descriptions below for additional detail.

Non-Conformance Category Description	Energy Impact	Non-Energy Impact
Incidental	May result in a savings shortfall, but the impact will be small and may not be measurable.	Not expected, on its own, to pose a substantial risk of system failure or hazard.
Minor	Will result in a savings shortfall, but the impact will be small and may not be measurable.	Requires modifications to address but not expected to pose a substantial risk of system failure or hazard.
Major	Will result in a measurable shortfall in energy savings.	Presents an increased risk of system failure or hazard but not determined to be in imminent danger of failure or hazard.
Critical	N/A	Presents an imminent hazard

Quality Assurance Scoring Matrix

(Scores are determined by counting the number of non-conformances with the highest severity rating. Applies to the whole project, not each individual measure)

Score	Incidental	Minor	Major	Critical
5	Up to 3	Up to 2	0	0
4	More than 3	Up to 3	0	0
3	N/A	More than 3	0	0
2	N/A	N/A	Up to 1	0
1	N/A	N/A	More than 1	More than 0

Quality Assurance Score Descriptions

5: System Meets All Program Criteria – An inspection receiving a score of 5 is generally well-installed, with no noticeable defects in workmanship or expected energy output. These projects are examples of best practices.

3: System Meets Key Program Requirements – An inspection achieving a score of 3 meets basic Program requirements, but the project may require some modification to be considered fully compliant.

1: System Does Not Meet Program Requirements – An inspection receiving a score of 1 indicates a project that has failed to meet key Program requirements and is not expected to meet the expected energy savings. These projects may require urgent attention to address safety concerns.

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Instructions:

1. Follow and submit all requirements per the Standards and Quality Assurance Checklist Specifications and the Inspection Request Workbook.

- For all requirements in the Program Guidelines where Providers are asked to record information, a photograph verifying that information should be submitted.
 (e.g. Guidelines say "Hot Water Heating Systems: Measure and report supply water temperature, return water temperature, and outdoor air temperature in the shade.
 Record control set points." Photos should be submitted showing supply water temp, return water temp, outdoor air temp in the shade, control setpoints. Some of those, like the control setpoints, may require multiple photos to show all required information.)
- 3. In ADDITION to the above, submit a photo of every item sampled (e.g. Under these rules, Providers should submit a photo of each appliance inspected and a photo of each appliance's label. 10% of appliances must be sampled for the Provider sampling. Photographs of appliances should include an overall photo of the appliance, a photo of its nameplate, and a photo of its ENERGY STAR[®] label, if visible, of each appliance inspected.)
- 4. If photos are not available for in-unit measures, it is acceptable to submit a log from the contractor listing the items installed, where installed, and quantity, or an invoice showing a description of the items and how many items were purchased.
- 5. For measures not included on this checklist, please provide checklist information in a similar format on a separate sheet. Include, at a minimum, photographs of the installation and nameplates, as well as cutsheets to show successful installation in compliance with project requirements. Non-Conformance Category is Major if less than less than 75% of the work is complete, and Minor if more than 75%, but less than 100% is complete.

	Envelope Package					
Measure	Task	Task Description	Reference	Non- Conformance Category		
Insulation	Whole-building U-factor target is met, confirmed with as-built workscope tool; Final envelope R-values and U-factors checked	Verify that actual/installed project U-factor target is met per envelope workscope tool	Attachment A - Envelope - Required Measure Installation	Minor if U 100-105% of target; major if U = 105- 110% of target; Critical if U > 110% of target		
General	Envelope: Comply with manufacturer's requirements and codes; Requirements and codes have been reviewed	System and system components must be installed in accordance with manufacturer requirements and relevant permit/code requirements	Attachment A - Envelope - Minimum Installation Standards	Minor		
Thermal bridging	Thermal bridging must be mitigated; Photo documentation has been submitted	Thermal bridging mitigated at slab edges, bulkhead, rim joists, and roof-to-wall connections	Attachment A - Envelope - Minimum Installation Standards	Minor		
Continuous insulation	Exterior insulation must be continuous; Photo documentation has been submitted	Exterior insulation is continuous, metal Z-girts are not allowed	Attachment A - Envelope - Minimum Installation Standards	Minor		

Standards and Quality Assurance Checklist

	Envelo	pe Package (continued)		
Measure	Task	Task Description	Reference	Non- Conformance Category
Air barrier, continuous	Continuous air barrier must be provided; Photo documentation has been submitted	Continuous air barrier	Attachment A - Envelope - Minimum Installation Standards	Minor
Cavity insulation	Cerify that cavity insulation does not compress or slump; Photo documentation has been submitted	Cavity insulation does not compress or slump, refer to grade 1 condition according latest RESNET standards	Attachment A - Envelope - Minimum Installation Standards	Minor
Windows	Windows - Sealing; Photo documentation has been submitted	If new windows are installed, seal windows to the opening with 2x backer rod and caulk sealant joints or applicable tape	Attachment A - Envelope - Minimum Installation Standards	Major if not sealed or sealing is clearly inadequate or was not done at all; minor if sealing is minorly deficient
Central Exhaust	Demonstrate operation of existing ventilation system - exhaust; Test results have been submitted	25 CFM continuous or 100 CFM intermittent for each kitchen; 20 CFM continuous or 50 CFM intermittent for each bathroom	Attachment A - Envelope - Required Measure Installation	Major if ventilation is < 80% of target; minor if ventilation is 80-100% of target
	Ductwork must be cleaned; Photos have been submitted to show clean ductwork	Verify that ductwork was cleaned	Attachment A - Envelope - Required Measure Installation	Incidental
	Ductwork must be sealed to program requirements; Test-out results have been submitted	Verify that ductwork was sealed; Review test-out results	Attachment A - Envelope - Required Measure Installation	Major if no evidence of sealing or sealing is highly inadequate; minor if minor sealing was not completed
	System must exhaust airflow per program requirements - central exhaust; Testing and balancing results have been submitted	Verify that delivered airflow meets program requirements	Attachment A - Envelope - Required Measure Installation	Minor

	Envelo	pe Package (continued)		
Measure	Task	Task Description	Reference	Non- Conformance Category
Unitized Exhaust	System must exhaust airflow per program requirements - unitized exhaust; Testing and balancing results have been submitted	Verify that delivered airflow meets program requirements	Attachment A - Envelope - Required Measure Installation	Minor
	If replacing windows in a building without exhaust, install exhaust in each bathroom and kitchen; Contractor's log of installed exhaust fans by apartment number has been submitted	Verify that an exhaust system was installed	Attachment A - Envelope - Required Measure Installation	Minor
Central or Unitized	Ventilation testing and balancing (Option 1); TAB contractor's contract has been submitted	Testing and Balancing (TAB) contractor must be independent, hired by owner, not by energy contractor	Attachment A - Envelope - Minimum Installation Standards	Incidental
	Ventilation - Follow Residential Energy Services Network (RESNET) sampling protocols; Test results with sampling protocol has been submitted	Follow RESNET sampling protocols; for central systems, include at minimum top and bottom floors served by a riser	Attachment A - Envelope - Operational Test Out Specifications	Minor
	Ventilation testing and balancing (Option 2); Equipment accuracy has been submitted	Equipment meets program accuracy requirements	Attachment A - Envelope - Operational Test Out Specifications	Incidental
	Ventilation (as part of envelope) - Program notification of testing; Notification has been submitted	Notify program staff at least two weeks prior to testing	Attachment A - Envelope - Operational Test Out Specifications	Incidental
Exhaust penetrations	Ventilation - exhaust penetrations: Sealing; Photo documentation has been submitted	Exhaust penetrations must be air sealed	Attachment A - Envelope - Minimum Installation Standards	Minor
Exhaust	Vent to outside; Photo documentation has been submitted	Exhaust must vent to outside	Attachment A - Envelope - Minimum Installation Standards	Minor

	Ve	ntilation Package		
Measure	Task	Task Description	Reference	Non- Conformance Category
Energy Recovery Ventilator (ERV) or Heat Recovery Ventilator	Ventilation supply/exhaust balance; Log of installation of CAR dampers submitted, by apartment; Photo documentation submitted	Overall balancing of supply and exhaust must be within 10%; Constant Airflow Regulator (CAR) dampers must be installed to allow automatic balancing of individual airflows	Attachment A - Ventilation - Required Measure Installation	Minor if 75- 99% of CAR dampers installed; major if < 75% of CAR dampers installed
	Program ventilation efficiency requirements; Test results submitted	Verify that ERV/HRV sensible efficiency is 77% minimum	Attachment A - Ventilation - Minimum Installation Standards	Major
	Fan power program requirements; Test results submitted	Verify that ERV/HRV less than 1 Watt per CFM	Attachment A - Ventilation - Minimum Installation Standards	Minor
	Kitchen and bathroom ventilation; Test results and photo documentation submitted	Kitchens exhausted to minimum 25 CFM continuously, bathrooms 20 CFM continuously	Attachment A - Ventilation - Minimum Installation Standards	Major
Constant airflow regulator (CAR) dampers	Set airflow on CAR dampers; Documentation submitted	Verify airflow settings match workscope, either from balancing report or by examining CARs	Attachment A - Ventilation - Minimum Installation Standards	Minor
Central Ductwork	Ductwork must be sealed to program requirements; Test-out results submitted	Verify that ductwork was sealed; review test-out results; Seal duct to sheetrock connection prior to installing grilles	Attachment A - Ventilation - Minimum Installation Standards	Major
Airflows	System must deliver airflow per program requirements; Test results submitted	Verify that delivered airflow meets program and design requirements	Attachment A - Ventilation - Minimum Installation Standards	Major
	Testing and balancing: Independent contractor; Contract for TAB contractor submitted	Testing and Balancing (TAB) contractor must be independent, hired by owner, not by energy contractor	Attachment A - Ventilation - Minimum Installation Standards	Minor
Testing equipment	Testing and balancing: Accuracy; Equipment accuracy has been submitted	Equipment meets program accuracy requirements	Program requirements	Incidental
Health and Safety	Location of intake air; Photo documentation submitted	Intake air must be clear of possible contaminant sources	Attachment A - Ventilation - Minimum Installation Standards	Minor

	Ventilation Package (continued)					
Measure	Task	Task Description	Reference	Non- Conformance Category		
Duct insulation	Insulate ductwork; Photo documentation submitted	Duct insulation must meet program requirements	Attachment A - Ventilation - Minimum Installation Standards	Minor		
Frost protection	Frost protection must be installed in Energy Recovery Ventilator (ERV) or Heat Recovery Ventilator (HRV)	Heat exchanger core must be protected from frost	Attachment A - Ventilation - Minimum Installation Standards	Minor		
Filter	Install MERV 8 filter (MERV 13 recommended but not required); Photo documentation submitted	ERV/HRV must be protected by mininum MERV 8 filter on both intake and exhaust airstreams (MERV 13 recommended but not required)	Attachment A - Ventilation - Minimum Installation Standards	Minor		
Heater	Electric heater temperature rise limitation	Electric heater temperature rise must be 5 F or less (supply air temperature 62 F or higher recommended but not required)	Attachment A - Ventilation - Minimum Installation Standards	Minor		

	Heatin	ng & Cooling Package		
Measure	Task	Task Description	Reference	Non- Conformance Category
Space Electrification	New envelope penetrations sealed to prevent infiltration and rodents/insects or water penetration; Photo documentation submitted	Split system pipe penetrations are well-sealed both on the outside and inside of the penetration, including between pipes; Penetrations for packaged through- wall systems (PTHP, VTHP) are well sealed	Attachment A - Heating and Cooling - Minimum Installation Standards	Minor
	Piping insulation is installed per the manufacturer's specifications, meets the correct thickness, and is code compliant ¹ ; Photo documentation submitted	Pipes are insulated (no exposed copper); Insulation is installed correctly, of the correct thickness, and meets code and manufacturer requirements	Energy Conservation Construction Code ² , Sections R403.4 and C403.11.3	Minor
	Exterior pipe insulation is ultraviolet (UV) resistant and/or has a UV resistant covering ¹ ; Photo documentation submitted	The exterior pipe insulation is UV resistant or has a UV resistant covering or coating, where applicable (for example, may not apply to ground source heat pumps)	Energy Conservation Construction Code ² , Sections R403.4.1 and C403.11.3.1	Minor
	Seal hole in chimney, if fossil fuel equipment is removed; Photo documentation submitted	Seal abandoned boiler exhaust connection to chimney, if fossil fuel equipment is removed	Energy Conservation Construction Code ² , Sections R402.4 and C402.5.1	Minor
	Units installed under a roof line/edge must have a rain/snow/ ice shield'; Photo documentation submitted	If the unit is set under the roof line/edge, rain/snow/ice shield or drain cap is provided; Outdoor units must be installed such that melting defrost condensate does not drip onto other outdoor units	Manufacturer's instructions	Incidental
	The owner was delivered a copy of the Operational and Maintenance Handbook, including start-up and test reports	The owner was given a copy of the manufacturer Operation and Maintenance manual and provided with contact information for emergency service needs	Energy Conservation Construction Code ² , Sections R303.3 and C408.1.1	Incidental
	Owner understands basic system operation, adjustment of dampers (if applicable), and controls	The owner has been given training by installer, and understands basic system operation, especially heating operation; The owner understands how to program controls and thermostats (as needed); The owner understands basic safety and maintenance	Energy Conservation Construction Code ² , Figure C408.2.4	Incidental
	Outdoor unit location ¹ ; Photo documentation submitted	Outdoor units are located with correct spacing from walls, from other outdoor units, and are not located in spaces such as outdoor stairwells that will prevent adequate air circulation, where applicable (for example, does not apply to ground source heat pumps)	Manufacturer's instructions	Minor
	Refrigerant leak prevention ¹ ; Final system charge in system is marked clearly on unit	Units were charged with refrigerant and the system sealed to prevent leaks; No leaks were detected with a leak detector and/or soap bubble test	Manufacturer's instructions	Critical

	Heating & 0	Cooling Package (continued)		
Measure	Task	Task Description	Reference	Non- Conformance Category
Space Electrification (continued)	Required regular maintenance actions are clearly stated and incorporated on a readily accessible label; Photo documentation submitted	The label shall include the title or publication number for the operation and maintenance manual for that particular model and type of product	Energy Conservation Construction Code ² , Sections R303.3 and C408.1.1	Incidental
	Receptacle for each heat pump outdoor unit ¹ ; Photo documentation submitted	Each heat pump outdoor unit has a 110 volt receptacle within 25' horizontally, where applicable (for example, does not apply to ground source heat pumps installed indoors)	National Electrical Code, Section 210.63	Incidental
	Data Release Authorization Form (DRAF) with new heating electric account(s) shall be provided, if any; DRAF(s) submitted	Verify that a signed DRAF that includes the electric account has been provided.	Attachment A - Heating and Cooling - Required Deliverables: Pre-Construction	Minor
	Electrification completed per workscope (heat pumps installed); Photo documentation submitted	Verify that electrification is complete (heat pumps installed)	Project workscope	Critical
	If fossil fuel equipment is removed, fuel source is safely removed or terminated; Photo documentation submitted	Verify that old connections have been removed or capped off, if fossil fuel equipment has been removed	Project workscope	Major
	New equipment must meet energy efficiency of project workscope; Photo documentation submitted	Verify that new equipment meets efficiency requirement of project workscope; Minor defect if new equipment is at least 90% of the energy efficiency in the workscope; Major defect if new equipment is less than 90% of the energy efficiency in the workscope	Project workscope	Minor if efficiency is 90%-99% of efficiency in workscope; major if efficiency is < 90% of efficiency in workscope

NOTES:

1. Not applicable to packaged heat pumps or water-to-water heat pumps or single-package water-to-air ground source heat pumps.

2. Projects will be expected to meet the version of the energy code in place when they obtained construction permit. R codes apply to buildings 3 stories and lower, C codes apply to buildings 4 stories and higher. "Energy Conservation Construction Code" refers to the 2020 Energy Conservation Code for buildings in New York City, and the 2020 Energy Conservation Code of New York State for buildings outside of New York City. The two energy codes are not identical, but the section numbers referenced in this document are consistent between the two codes.

	Domes	tic Hot Water Package		
Measure	Task	Task Description	Reference	Non- Conformance Category
Health and Safety	Ensure that water is delivered at less than 130 degrees, to prevent scalding; Photo documentation submitted	Verify that water is delivered at less than 130 degrees	U.S. Consumer Product Safety Commission, <u>https://</u> <u>www.cpsc.gov/s3fs-</u> <u>public/5098.pdf</u>	Minor
DHW Controls	DHW temperature meets project workscope target; Test results submitted	Verify DHW water temperature	Project workscope	Minor
	Recirculation control installed; Photo documentation submitted	Verify recirculation control has been installed	Project workscope	Minor
	Recirculation control installed meets energy code requirements; Test results submitted	Verify that pump only operates on flow and is set at 104 F maximum	Energy Conservation Construction Code ¹ , Sections R403.5.2 and C404.7	Minor
DHW Water Heater	Cutsheets submitted	Verify that cutsheets have been provided	Project Workscope	Incidental
	Replacement domestic hot water heating plant(s) shall meet program efficiency requirements; Documentation provided	Verify that hot water heater meets program efficiency requirements; If no high-efficiency requirements (e.g. ENERGY STAR) are applicable for the particular application, verify that the rated efficiency is no less than required by the energy code	Attachment A - Domestic Hot Water - Required Measure Installation	Minor if efficiency is 90%-99% of efficiency in workscope; major if efficiency is < 90% of efficiency in workscope
	Installed capacity meets program requirements; Documentation provided	Verify that the installed capacity meets program minimum requirements (in units of 1000 Btu/hr/bedroom, or in units of 1000 Btu/hr/unit, as applicable)	Attachment A - Domestic Hot Water - Required Measure Installation	Minor
	Pipe insulation is installed ² ; Photo documentation submitted	All hot water piping in mechanical room and accessible piping in unconditioned spaces shall be insulated to the energy conservation code; Minor defect if at least 50% of the piping insulation was installed	Energy Conservation Construction Code ¹ , Sections R403.4 and C403.11.3	Minor
	Penetrations sealed to prevent infiltration and rodents/insects or water penetration ² ; Photo documentation submitted	Split system heat pump water heater refrigerant pipe penetrations are well-sealed both on the outside and inside of the penetration, including between pipes	Attachment A - Domestic Hot Water - Minimum Installation Standards	Minor

	Domestic Hot Water Package (continued)					
Measure	Task	Task Description	Reference	Non- Conformance Category		
DHW Water Heater (continued)	Seal penetrations no longer needed for fossil fuel equipment; Photo documentation submitted	Seal outdoor air intake, breaching connection to chimney at bottom, and top of chimney if chimney is abandoned	Energy Conservation Construction Code ¹ , Sections R402.4 and C402.5.1	Minor		
	The owner was provided a copy of the Operational and Maintenance Handbook, including start-up and any test reports and preventive maintenance	The owner was given a copy of the manufacturer operation and maintenance manual and provided with contact information for emergency service needs	Energy Conservation Construction Code ¹ , Sections R303.3 and C408.1.1	Incidental		
	Required regular maintenance actions are clearly stated and incorporated on a readily accessible label	The label shall include the title or publication number for the operation and maintenance manual for that particular model and type of product	Energy Conservation Construction Code ¹ , Sections R303.3 and C408.1.1	Incidental		

NOTES:

1. Projects will be expected to meet the version of the energy code in place when they obtained construction permit. R codes apply to buildings 3 stories and lower, C codes apply to buildings 4 stories and higher. "Energy Conservation Construction Code" refers to the 2020 Energy Conservation Code for buildings in New York City, and the 2020 Energy Conservation Code of New York State for buildings outside of New York City. The two energy codes are not identical, but the section numbers referenced in this document are consistent between the two codes.

2. If applicable. For example, not applicable to single-package heat pump water heaters.

	Optional Recommended Measures							
Measure	Task	Task Description	Reference	Non- Conformance Category				
Air Sealing	Air sealing: fixed openings; Photo documentation submitted	 Verify that all required air sealing is complete: Tops of shafts/bulkheads, existing exterior doors, AC sleeves, existing windows, floor of attic or ceiling of top floor penetrations (including but not limited to attic door, hatch, electrical piping, ventilation, duct penetrations, uncapped wall cavities, etc.), plumbing and electrical penetrations in apartments, penetrations and openings between mechanical rooms and the conditioned space, basement perimeter, fire sprinkler penetrations, makeup air opening in mechanical room if fossil fuel equipment is removed, top of chimney if fossil fuel equipment is removed, and any other areas identified in the workscope; Minor defect if at least 75% of the air sealing is complete in all required locations; Major defect if less than 75% of the air sealing is complete in all required locations; Critical defect if no air sealing was done 	Attachment A - Optional Measures: Air Sealing - Required Measure Installation, and project workscope	Minor if air sealing is 75%-99% complete; major if air sealing is less than 75% complete; critical if no air sealing was done				
	Air sealing: movable surfaces; Photo documentation submitted	Movable surfaces that have been weatherstripped move freely (windows, doors, hatches, etc.)	Attachment A - Optional Measures: Air Sealing - Minimum Installation Standards	Minor				
	Weatherstripping: mechanical fastening; Photo documentation submitted	Weatherstripping is mechanically fastened. Submit photos of a sample of weatherstripping. Self-adhesive weatherstripping is not acceptable.	Attachment A - Optional Measures: Air Sealing - Minimum Installation Standards	Minor				
Steam components	Components installed; Photo documentation submitted	Verify that steam components have been installed: Energy Management System, radiant heat barriers, thermostatic radiator valves (TRVs), inlet orifice plates, master venting, steam traps; Submit photos	Attachment A - Optional Measures: Steam Upgrades - Required Measure Installation	Major				

	Optional Recommended Measures (continued)							
Measure	Task	Task Description	Reference	Non- Conformance Category				
Energy Management System (EMS)	EMS controls are set properly; EMS settings submitted	Review the plan for the new controls, including a careful examination of sensor locations, set points, and zones; Review the EMS settings; Make sure they have been adjusted to reflect the needs of the building and the settings in the workscope; Ensure that the installed EMS provides a significantly different control strategy than the old control system–otherwise, savings will not be achieved; Minor defect if at least 50% of the energy savings will be achieved; major defect if less than 50% of energy savings will be achieved	Attachment A - Optional Measures: Steam Upgrades - Required Measure Installation	Minor if savings are anticipated to be 50%- 99%; major if savings are anticipated to be < 50% of expected savings				
	EMS sensors are installed; Installation log submitted	In 2-pipe and hot water systems, sensors should be installed in no fewer than 10% of apartments and on a variety of floors and in a variety of apartment lines; In 1-pipe steam systems, sensors should be installed in no fewer than 25% of apartments and on a variety of floors, and there must be a sensor in the apartment at the end of each steam line	Attachment A - Optional Measures: Steam Upgrades - Minimum Installation Standards	Minor				
Orifice plates	Orifice plates are correctly sized; Documentation submitted	Review heat loss calculation and target radiator outputs; If orifice plates are sized to reduce the output of the terminal unit, the output of the unit must not be less than 100% of the heat load of the room it serves	Attachment A - Optional Measures: Steam Upgrades - Minimum Installation Standards	Minor				
Air vents	Air vent orientation and location; Photo documentation submitted	Air vents must be installed in the vertical direction and at least 15" away from any elbows	Attachment A - Optional Measures: Steam Upgrades - Minimum Installation Standards	Minor				
	Air vents on mains and risers; Photo documentation submitted	Air vents must be installed on 100% of mains and risers	Attachment A - Optional Measures: Steam Upgrades - Minimum Installation Standards	Major				

Optional Recommended Measures (continued)							
Measure	Task	Task Description	Reference	Non- Conformance Category			
Induction Stoves	Gas pipe to the stove removed or disconnected and capped; Photo documentation submitted	Verify that gas pipe is secure and out of the way (no remaining flex pipe), gas valve is shut off, and gas pipe has been securely capped; Submit photos of a sample of installations		Minor			
	Installed in all inspected apartments; Installation log submitted	Verify that all induction stoves were installed per workscope; Major defect if fewer than 75% of the stoves were installed; Submit contractor's log of installations by apartment	Project workscope	Major			