

Quality Work Plan for Quality Control Inspector – Arkansas Weatherization Assistance Program

Content: A Job Task Analysis for a <u>Quality Control Inspection</u>		Name						
Years of Experience in this Capacity		Education Level		Credentials				
Definition	Quality Control Inspectors (QCI) is an evaluator who verifies the work performed against the work plan, specifications and standards, performs building diagnostics, records/reports findings and concerns, and specifies corrective actions; by conducting a methodological audit/inspection of the building, performing safety and diagnostic tests, and by observing the retrofit work; in order to ensure the completion, appropriateness and quality of the work providing for the safety, comfort, and energy savings of the building occupants.							
Maturity Model Levels								
Domain 1:	Conducting Quality Checks – In Progress Visual/Sensory Inspections							
Task	Knowledge (K)	Skills (S)	Abilities (A)	Training Provided			Rating	Recommended Training
				K	S	A		
TASK 1: Verify worker compliance with safety rules.	<ul style="list-style-type: none"> ✓ Basic construction ✓ Local codes & standards ✓ Federal Regulations (OSHA, EPA, etc.) ✓ First aid ✓ Interview techniques 	<ul style="list-style-type: none"> ✓ Communication ✓ Observation 	<ul style="list-style-type: none"> ✓ Walk job site ✓ Observes workers ✓ Observe site conditions ✓ Interview crew chief ✓ Work in confined spaces 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
TASK 2: Assure worker professionalism	<ul style="list-style-type: none"> ✓ Awareness of employee rights ✓ Know positive reinforcement techniques 	<ul style="list-style-type: none"> ✓ Communication ✓ Observation ✓ Tactfulness 	<ul style="list-style-type: none"> ✓ Interview clients ✓ Evaluate job site (cleanliness) ✓ Workers follow code of conduct ✓ Observe worker behavior 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	

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<p>TASK 3: Address work problems</p>	<ul style="list-style-type: none"> ✓ Basic building science ✓ Local codes & standards ✓ Building materials ✓ Tools & use ✓ Construction work practices ✓ Documentation procedures ✓ Installation methods ✓ SWSs ✓ Test protocols ✓ Various diagnostic tests 	<ul style="list-style-type: none"> ✓ Communication ✓ Being diplomatic ✓ Observation Training 	<ul style="list-style-type: none"> ✓ Review work against work plan ✓ Observe worker skills ✓ Check installed materials ✓ Observe installation sequencing ✓ Verify equipment condition ✓ Determine if diagnostic testing is needed ✓ Conduct diagnostic testing ✓ Revise work orders ✓ Redirect retrofit work ✓ Document in-progress issues and missed opportunities for change orders ✓ Discuss issues with crew chiefs ✓ Demonstrate proper methods to installers ✓ Discussed missed opportunities with the Auditor 		<p><u>Knowledge</u></p> <p><u>Skills</u></p> <p><u>Abilities</u></p>	
<p>TASK 4: Evaluate client satisfaction regarding the in-progress work.</p>	<ul style="list-style-type: none"> ✓ Interview techniques 	<ul style="list-style-type: none"> ✓ Communication ✓ Observation 	<ul style="list-style-type: none"> ✓ Interview clients ✓ Observe client behavior (do they appear uncomfortable) ✓ Document findings ✓ Communicate findings to crew chief and contractors 		<p><u>Knowledge</u></p> <p><u>Skills</u></p> <p><u>Abilities</u></p>	

Domain 2: Conducting Quality Checks – Post-Work Visual/Sensory Inspections						
Task	Knowledge (K)	Skills (S)	Abilities (A)	Training Provided	Rating	Recommended Training
TASK 1: Review Client File and the Scope of Work	<ul style="list-style-type: none"> ✓ Program requirements ✓ Diagnostic procedures ✓ The audit process ✓ Job costing 	<ul style="list-style-type: none"> ✓ Communication ✓ Observation 	<ul style="list-style-type: none"> ✓ Review the audit ✓ Review the work order ✓ Review the invoices or job completion report ✓ Review diagnostic test results ✓ Interpret test results ✓ Interpret invoices ✓ Interpret work orders ✓ Reconcile audit work order to invoice 		<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
TASK 2: Perform an exterior and interior visual/sensory inspection	<ul style="list-style-type: none"> ✓ Audit processes ✓ Basic building science ✓ Building material ✓ Local codes & standards ✓ Construction work practices ✓ Installation methods ✓ SWSs ✓ Tests protocols ✓ Various diagnostic tests 	<ul style="list-style-type: none"> ✓ Analytical thinking ✓ Basic math ✓ Basic tool use ✓ Observation ✓ Organization 	<ul style="list-style-type: none"> ✓ Perform interior & exterior walk around ✓ Compare observation on interior and exterior walk around to client file (work order, audit, invoices) ✓ Verify installed measures ✓ Note anomalies or missed opportunities or audit discrepancies ✓ Identify damage done by contractors ✓ Document non-conformance or exceptional work with camera ✓ Identify additional building diagnostic tests 		<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
TASK 3: Evaluate client satisfaction	<ul style="list-style-type: none"> ✓ Client Education ✓ Installed measures 	<ul style="list-style-type: none"> ✓ Communication ✓ Listening ✓ Mediation ✓ Observation ✓ Tactfulness 	<ul style="list-style-type: none"> ✓ Conduct client specific interviews (behavior change, client ed., comfort) ✓ Conduct program specific interviews (worker performance, process, scheduling, value, opportunities for improvement) ✓ Observe client behavior (thermostat setting, attire, windows open, manual weather-stripping) ✓ Document client behavior ✓ Take corrective actions 		<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	

TASK 4: Determine Pass/Fail of the work	<ul style="list-style-type: none"> ✓ Basic building science ✓ Diagnostic thresholds ✓ Local codes & standards ✓ SWSs 	<ul style="list-style-type: none"> ✓ Making decisions ✓ Being accurate ✓ Analytical thinking ✓ Attention to details ✓ Tactfulness 	<ul style="list-style-type: none"> ✓ Review results of inspection ✓ Review diagnostic testing results ✓ Make a pass/fail determination ✓ Obtain client sign-off (if passed) ✓ Report inspection approval ✓ Identify work problems (if failed) ✓ Generate a punch list (if failed) 		<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
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Domain 3: Conducting Quality Checks – Post-Work Diagnostic Inspections								
Task	Knowledge (K)	Skills (S)	Abilities (A)	Received Training			Rating	Recommended Training
				K	S	A		
TASK 1: Conduct Health & Safety Tests	<ul style="list-style-type: none"> ✓ Local codes & standards ✓ Combustion safety protocols ✓ First aid ✓ Heating systems ✓ Moisture issues ✓ Safety issues 	<ul style="list-style-type: none"> ✓ Analytical thinking 	<ul style="list-style-type: none"> ✓ Perform combustion tests (heating systems, domestic water heater, ovens, stoves, fireplaces, etc.) ✓ Perform ventilation system tests ✓ Conduct moisture evaluations ✓ Conduct electrical safety tests 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
TASK 2: Conduct Diagnostic Tests	<ul style="list-style-type: none"> ✓ Basic building science ✓ Diagnostic testing protocols ✓ Manufacturer's specifications ✓ Program requirements 	<ul style="list-style-type: none"> ✓ Attention to details 	<ul style="list-style-type: none"> ✓ Perform blower door test ✓ Perform pressure pan test ✓ Conduct zone tests ✓ Perform fan flow tests ✓ Perform infrared scans ✓ Perform duct leakage tests ✓ Perform electric circuit tests ✓ Perform refrigerant tests ✓ Conduct appliance tests ✓ Conduct domestic water temperature tests ✓ Record the results of all tests 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
TASK 3: Identify Work Problems	<ul style="list-style-type: none"> ✓ Basic building science ✓ SWS field guide ✓ Local codes & standards ✓ SWSs ✓ Testing protocols 	<ul style="list-style-type: none"> ✓ Analytical thinking ✓ Communication 	<ul style="list-style-type: none"> ✓ Review test results ✓ Compare results against SWS ✓ Compare results against pre-test data ✓ Compare results against work plan projections ✓ Identify missed opportunities ✓ Determine deficiencies ✓ Target deficiencies for corrective actions ✓ Generate punch list ✓ Interpret data ✓ Make decisions ✓ Read a flowchart 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	

Domain 4: Ensuring Worker Professionalism								
Task	Knowledge (K)	Skills (S)	Abilities (A)	Received Training			Rating	Recommended Training
				K	S	A		
Task 1: Perform Spot Checks	<ul style="list-style-type: none"> ✓ Credentialing requirements of workers ✓ Professional behavior and code on conduct ✓ Program and agency guidelines ✓ Required documentation 	<ul style="list-style-type: none"> ✓ Attention to details ✓ Communication ✓ Listening ✓ Observation ✓ Tactfulness 	<ul style="list-style-type: none"> ✓ Visit in-progress units ✓ Conduct random sampling of job site documents ✓ Conduct random sampling of work credentials ✓ Observe the work ✓ Interview the client ✓ Interview trade workers on the job ✓ Interview others at the job site ✓ Ability to observe with interfering 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
Task 2: Provide feedback regarding professionalism	<ul style="list-style-type: none"> ✓ Professional behavior and code of conduct ✓ Required documentation 	<ul style="list-style-type: none"> ✓ Remaining impartial ✓ Communication 	<ul style="list-style-type: none"> ✓ document incidences of lack of professionalism ✓ document positive incidences of professionalism ✓ communication with crew chief or appropriateness party regarding professionalism ✓ assure client of corrective measures ✓ Assist in training workers 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	

Domain 5: Ensuring Program and Project Compliance								
Task	Knowledge (K)	Skills (S)	Abilities (A)	Received Training			Rating	Recommended Training
				K	S	A		
Task 1: Maintain Professional credentials	<ul style="list-style-type: none"> ✓ Licensure and certification requirements 	<ul style="list-style-type: none"> ✓ 	<ul style="list-style-type: none"> ✓ Continue education and training ✓ Maintain professional license and/or certifications ✓ Maintain membership in professional organizations (REPA, ACI, NARI, Energy Outwest) ✓ Participate in industry activities (JTAs, etc.) 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
Task 2: Confirm the allocation of private/public funds	<ul style="list-style-type: none"> ✓ Scope of work ✓ Allowable activities under funding sources ✓ Maximum allowable caps on funding sources 	<ul style="list-style-type: none"> ✓ Analytical thinking ✓ Attention to details 	<ul style="list-style-type: none"> ✓ Review work orders ✓ Flag instances where work completed doesn't match funding requirements ✓ Guard against cost overruns ✓ Report disallowed costs 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
Task 3: Evaluate installed measures against the field guide, SWS and state/local codes	<ul style="list-style-type: none"> ✓ Basic building science ✓ Local codes & standards ✓ Industry standards ✓ Program requirements ✓ Training curriculum 	<ul style="list-style-type: none"> ✓ Analytical thinking ✓ Tactfulness 	<ul style="list-style-type: none"> ✓ Compare work completed with the accepted practices ✓ Identify work that does not meet accepted practices ✓ Determine if problem is a material problem or a work problem ✓ Suggest program change recommendations ✓ Recommend education for auditors and installers ✓ Ability to aggregate information ✓ Ability to identify gaps in training ✓ Ability to write a report 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
Task 4: Close out the project	<ul style="list-style-type: none"> ✓ Agency/company processes ✓ Program requirements ✓ Required paperwork ✓ Required signatures 	<ul style="list-style-type: none"> ✓ Organization ✓ Report writing 	<ul style="list-style-type: none"> ✓ Ensure all punch-list items have been completed ✓ Assemble all required documentation paperwork (certificates, photos, etc.) ✓ Confirm all required signatures ✓ Prepare completion reports ✓ Submit authorization for payment/reimbursements/invoices 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	
Task 5: Maintain files and records	<ul style="list-style-type: none"> ✓ Legal responsibilities ✓ Program requirements ✓ Recordkeeping best practices 	<ul style="list-style-type: none"> ✓ Attention to details ✓ Organization 	<ul style="list-style-type: none"> ✓ Maintain job logs and notes in the file ✓ Maintain photos in the file ✓ Maintain information on any anomalies on the job 				<u>Knowledge</u> <u>Skills</u> <u>Abilities</u>	

			<ul style="list-style-type: none">✓ Maintain information on any ongoing complaints✓ Maintain documentation from program monitoring (federal, utility, etc.)			
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QUALITY CONTROL INSPECTOR JTA	Names if Relevant																	
<p>How to Use This Form: Have workers rate their level of expertise in each of the task areas listed below.</p> <p>Use a scale of 1 – 10 where 10 indicates full proficiency and confidence they could pass a written and field exam on the topic and 1 equals no knowledge whatsoever.</p> <p>Average the self-evaluation scores to tailor trainings to prepare trainees for the HEP QCI exam.</p>	Potential Trainee A	Potential Trainee B	Potential Trainee C	Potential Trainee D	Potential Trainee E													AVERAGE
Domain 1: Conducting Quality Checks – In-Process Visual/Sensory Inspections																		
Task 1: Verify worker compliance with safety rules																		
Task 2: Assure worker professionalism																		
Task 3: Address work problems																		
Task 4: Evaluate client satisfaction regarding the in-process work																		
Domain II: Conducting Quality Checks – Post-Work Visual/Sensory Inspection																		
Task 1: Review client file and the work scope																		
Task 2: Perform an exterior and interior visual/sensory inspection																		
Task 3: Evaluate client satisfaction																		
Task 4: Determine pass/fail of the work																		
Domain III: Conducting Quality Checks – Post-Work Diagnostic Inspections																		
Task 1: Conduct health and safety tests																		
Task 2: Conduct diagnostic tests																		
Task 3: Identify work problems																		
Domain IV: Ensuring Worker Professionalism																		
Task 1: Perform spot checks																		
Task 2: Provide feedback regarding professionalism																		
Domain V: Ensuring Program or Project Compliance																		
Task 1: Maintain professional credentials (N/A)																		
Task 2: Confirm the allocation of public/private funds																		
Task 3: Evaluate installed measures against the field guide, SWS and state/local codes																		
Task 4: Close out the project																		
Task 5: Maintain files and records																		