

APPENDIX A - ACCEPTED QUALIFICATION METHODS

For all Qualification Methods, the acceptable Abnormal Operating Condition (AOC) module must be taken.

EWN Abnormal Operating Conditions (AOCs)

EWN-CBT-Abnormal Operating Conditions: Liquids EWN-CBT-13052

NCCER Abnormal Operation Conditions AOCs

Liquid Pipeline Abnormal Operating Condition (Field) - AOCFG-17

EWN Abnormal Operating Conditions Control Center - CRM AOC's (Liquid)

EWN-CBT-Abnormal Operating Conditions: Control Center - EWN-CBT-85952

TASK NUMBER	TASK NAME	EWN <i>Energy WorldNet Recognized Qualifications Methods</i>	NCCER National Center for Construction Education & Research Qualification Methods	OTHER <i>Recognized Qualification Methods</i>	RE-QUALIFICATION INTERVALS	SPAN OF CONTROL
1.1	Measure of Structure-to-Soil Potentials	EWN-CBT-86340 & EWN-PE-86341	CT1_1-17 Written & Performance	NA	5 Years	1:1
1.2	Conduct Close Interval Survey	EWN-CBT-86338 & EWN-PE-86339	CT1_2-17 Written & Performance	NA	3 Years	1:1
1.3	Test to Detect Interference	EWN-CBT-86254 & EWN-PE-86255	CT1_3-17 Written & Performance	NA	3 Years	1:1
1.4	Inspect and Perform Electrical Test of Bonds	EWN-CBT-86278 & EWN-PE-86279	CT1_4-17 Written & Performance	NA	5 Years	1:1
1.5	Inspect and Test Electrical Isolation	EWN-CBT-86321 & EWN-PE_86322	CT1_5-17 Written & Performance	NA	5 Years	1:1
2.1	Verify Test Lead Continuity	EWN-CBT-86274 & EWN-PE-86275	CT2_1-17 Written & Performance	NA	3 Years	1:3
2.2	Repair Damaged Test Leads	EWN-CBT-86299 & EWN-PE-86300	CT2_2-17 Written & Performance	NA	3 Years	1:3
2.3	Install Test Leads by Non- Exothermic Welding Methods	EWN-CBT-86261 & EWN-PE-86262	CT2_3-17 Written & Performance	NA	5 Years	1:1
2.4	Install Test Leads by Exothermic Welding Methods	EWN-CBT-86323 & EWN-PE-86324	CT2_4-17 Written & Performance	NA	3 Years	1:1

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3	Obtain a Voltage and Current Output Reading from a Rectifier to Verify Proper Performance	EWN-CBT-86708 & EWN-CBT-86709	CT3_0-17 Written & Performance	NA	5 Years	1:1
4.1	Troubleshoot Rectifier	EWN-CBT-85948 & EWN-PE-85949	CT4_1-17 Written & Performance	NA	3 Years	1:3
4.2	Replace or Repair Defective Rectifier Components	EWN-CBT-86050 & EWN-PE-86051	CT4_2-17 Written & Performance	NA	3 Years	1:1
4.3	Adjustment Rectifier	EWN-CBT-86085 & EWN-PE-86086	CT4_3-17 Written & Performance	NA	3 Years	1:1
5.1	Examine for Mechanical Damage on Buried or Submerged Pipe	EWN-CBT-85116 & EWN-PE-85117	CT5_1-17 Written & Performance	EWN OR NCCER AOC With the Following API 570 Inspector Certification	3 Years	1:1
5.2	Examine for External Corrosion on Buried or Submerged Pipe	EWN-CBT-85011 & EWN-PE-85012	CT5_2-17 Written & Performance	NA	3 Years	1:1
5.3	Inspect the Condition of External Coating on Buried or Submerged Pipe	EWN-CBT-85346 & EWN-PE-85347	CT5_3-17 Written & Performance	NA	3 Years	1:1
7.1	Visual Inspection of Atmospheric Coatings	EWN-CBT-79824 & EWN-PE-85697	CT7_1-17 Written & Performance	EWN OR NCCER AOC With the Following API 570 Inspector Certification	5 Years	1:1
7.2	Prepare Surface for Coating Using Hand and Power Tools	EWN-CBT-85729 & EWN-PE-85730	CT7_2-17 Written & Performance	NA	3 Years	1:3
7.3	Prepare Surface for Coating by Abrasive Water Blasting	EWN-CBT-85864 & EWN-PE-85865	CT7_3-17 Written & Performance	NA	3 Years	1:3

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7.4	Prepare surface for Coating by Abrasive Blasting Methods Other than Water	EWN-CBT-85866 & EWN-PE-85867	CT7_4-17 Written & Performance	NA	3 Years	1:3
7.5	Apply Coating Using Hand Application Methods	EWN-CBT-82819 & EWN-PE-2580	CT7_5-17 Written & Performance		3 Years	1:3
7.6	Apply Coating Using Spray Applications	EWN-CBT-85869 & EWN-PE-85871	CT7_6-17 Written & Performance	NA	3 Years	1:3
7.7	Perform Coating Inspection	EWN-CBT-84370 & EWN-PE-85887	CT7_7-17 Written & Performance	NA	3 Years	1:3
8.1	Measure Pit Depth with Pit Gauge	EWN-CBT-85731 & EWN-PE-85732	CT8_1-17 Written & Performance	EWN OR NCCER AOC With the Following API 570 OR 653 Inspector Certification	3 Years	1:1
8.2	Measure Wall Thickness with Ultrasonic Meter	EWN-CBT-85872 & EWN-PE-85873	CT8_2-17 Written & Performance	EWN OR NCCER AOC With the Following API 570 Inspector Certification	3 Years	1:1
8.3	Measure Corroded Area	EWN-CBT-85350 & EWN-PE-85351	CT8_3-17 Written & Performance	EWN OR NCCER AOC With the Following API 570 OR 653 Inspector Certification	3 Years	1:1
9.1	Install Bonds	EWN-CBT-86828 & EWN-PE-86829	CT9_1-17 Written & Performance	NA	3 Years	1:3
9.2	Install Galvanic Anodes	EWN-CBT-86145 & EWN-PE-86146	CT9_2-17 Written & Performance	NA	3 years	1:1
9.3	Install Rectifiers	EWN-CBT-86184 & EWN-PE-86185	CT9_3-17 Written & Performance	NA	3 Years	1:3
9.4	Install Impressed Current Groundbeds	EWN-CBT-86210 & EWN-PE-86211	CT9_4-17 Written & Performance	NA	3 Years	1:3

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9.5	Repair Shorted Casings	EWN-CBT-86219 & EWN-PE-86220	CT9_5-17 Written & Performance	NA	3 Years	1:3
9.6	Install Electrical Insulating Devices	EWN-CBT-86264 & EWN-PE-86265	CT9_6-17 Written & Performance	NA	3 years	1:1
10.1	Insert and Remove Coupons	EWN-CBT-86348 & EWN-PE-86349	CT10_1-17 Written & Performance	NA	3 Years	1:1
10.2	Monitor Probes (Online)	EWN-CBT-86119 & EWN-PE-86120	CT10_2-17 Written & Performance	NA	5 Years	1:1
11	Monitoring and Controlling the Injection Rate of the Corrosion Inhibitor	EWN-CBT-86143 & EWN-PE-86144	CT11_0-17 Written & Performance	NA	3 Years	1:1
12	Perform Visual Inspection of Internal Pipe Surface	EWN-CBT-86326 & EWN-PE-86327	CT12_0-17 Written & Performance	NA	3 Years	1:1
14.1	Locate Line	EWN-CBT-84807 & EWN-PE-86106	CT14_1-17 Written & Performance	NA	3 Years	1:1
14.2	Install, Inspect, and Maintain Permanent Marker	EWN-CBT-12488 & EWN-PE-2549	CT14_2-17 Written & Performance	NA	5 years	1:3
14.5	Install, Inspect, and Maintain Temporary Marker	EWN-PE-85890 & EWN-PE-85891	CT14_5-17 Written & Performance	NA	5 Years	1:3
15.1	Perform Visual Inspection of Surface Conditions of Right-of-Way	EWN-CBT-85898 & EWN-PE-85899	CT15_1-17 Written & Performance	NA	5 Years	1:1
16.1	Inspect Navigable Waterway Crossing	EWN-CBT-86690 & EWN-PE-86691	CT16_1-17 Written & Performance	NA	3 Years	1:3

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19.1	Perform Valve Body Winterization or Corrosion Inhibitor	EWN-CBT-85962 & EWN-PE85963	CT19_1-17 Written & Performance	NA	3 Years	1:2
19.2	Perform Valve Lubrication	EWN-CBT-84812 & EWN-PE-84813	CT19_2-17 Written & Performance	NA	3 Years	1:2
19.3	Perform Valve Seat Sealing	EWN-CBT-84997 & EWN-PE-85069	CT19_3-17 Written & Performance	NA	3 Years	1:2
19.4	Perform Valve Stem Packing Maintenance	EWN-CBT-85343 & EWN-PE-85344	CT19_4-17 Written & Performance	NA	3 Years	1:2
19.5	Adjust Actuator /Operator, Electrical	EWN-CBT-86039 & EWN-PE-86040	CT19_5-17 Written & Performance	NA	3 Years	1:2
19.6	Adjust Actuator/Operator, Pneumatic	EWN-CBT-86042 & EWN-PE-86043	CT19_6-17 Written & Performance	NA	3 Years	1:2
19.7	Adjust Actuator/Operator, Hydraulic	EWN-CBT-86123 & EWN-PE-86124	CT19_7-17 Written & Performance	NA	3 Years	1:2
20	Inspect Mainline Valves	EWN-CBT-85324 & EWN-PE-85325	CT20_0-17 Written & Performance	NA	3 Years	1:1
21.1	Repair Valve Actuator/Operator, Pneumatic	EWN-CBT-85904 & EWN-PE-85910	CT21_1-17 Written & Performance	NA	3 Years	1:2
21.2	Disassembly/Re-assemble Valves	EWN-CBT-86125 & EWN-PE-86126	CT21_2-17 Written & Performance	NA	3 Years	1:3
21.3	Perform Internal Inspection of Valve Components	EWN-CBT-85896 & EWN-PE-85957	CT21_3-17 Written & Performance	NA	3 Years	1:3
21.4	Repair Valve Actuator/Operator, Hydraulic	EWN-CBT-85894 & EWN-PE-86097	CT21_4-17 Written & Performance	NA	3 Years	1;3
21.5	Repair Valve Actuator/Operator, Electrical	EWN-CBT-85956 & EWN-PE-86098	CT21_5-17 Written & Performance	NA	3 Years	1:2

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22.1	Inspect Tank Pressure/Vacuum Breakers	EWN-CBT-86072 & EWN-PE-86100	CT22_1-17 Written & Performance	NA	3 Years	1:1
22.2	Inspect, Test, and Calibrate HVL Tank Pressure Relief Valves	EWN-CBT-86115 & EWN-PE-86116	CT22_2-17 Written & Performance	NA	3 Years	1:1
23.1	Maintain/Repair Relief Valves	EWN-CBT-80913 & EWN-PE-2627	CT23_1-17 Written & Performance	NA	3 Years	1:1
23.2	Inspect, Test, and Calibrate Relief Valves	EWN-CBT-80912 & EWN-PE-2628	CT23_2-17 Written & Performance	NA	3 Years	1:1
24.1	Maintain/Repair Pressure Limiting Devices	EWN-CBT-86150 & EWN-PE-86151	CT24_1-17 Written & Performance	NA	3 Years	1:1
24.2	Inspect, Test, and Calibrate Pressure Limiting Devices	EWN-CBT-86801 & EWN-PE-86802	CT24_2-17 Written & Performance	NA	3 Years	1:1
25.1	Inspect, Test and Calibrate Pressure Switches	EWN-CBT-86167 & EWN-PE-86168	CT25_1-17 Written & Performance	NA	3 Years	1:1
25.2	Inspect, Test, and Calibrate Pressure Transmitters	EWN-CBT-85905 & EWN-PE-85908	CT25_2-17 Written & Performance	NA	3 Years	1:1
26	Verify or Set Protection Parameters for Programmable Controllers and/or Other Instrumentation Control Loops	EWN-CBT-15769 & EWN-PE-79617	CT26_0-17 Written & Performance	NA	3 Years	1:1
27.1	Perform Routine Inspection of Breakout Tanks (API 653 Monthly or Dot Annual)	EWN-CBT-86821 & EWN-PE86822	CT27_1-17 Written & Performance	EWN OR NCCER AOC With the Following API 653 Inspector Certification	5 Years	1:2

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27.2	API 653 Inspection of In-Service Breakout Tanks	NA	NA	EWN OR NCCER AOC With the Following API 653 Inspector Certification	3 Years	None
29.1	Launching In-Line Inspection Devices	EWN-CBT-13113 & EWN-PE-2602	CT29_1-17 Written & Performance	NA	3 Years	1:3
29.2	Receiving In-Line Inspection Devices	EWN-CBT-13113 & EWN-PE-2569	CT29_2-17 Written & Performance	NA	3 Years	1:3
30	Test Overfill Protective Devices	EWN-CBT-85059 & EWN-PE-85060	CT30_0-17 Written & Performance	NA	3 Years	1:1
31	Inspect and Calibrate Overfill Protective Devices	EWN-CBT-85061 & EWN-PE-85062	CT31_1-17 Written & Performance	NA	3 Years	1:1
32	Observation of Excavation Activities	EWN-CBT-86682 & EWN-PE-86683	CT32_0-17 Written & Performance	NA	3 Years	1:1
35	Measuring Clearance from Existing Pipe to Underground Structures Installed by Excavation, Boring, or Directional Drilling	EWN-CBT-13963 & EWN-PE-10617	CT32_0-17 Written & Performance	NA	3 Years	1:3
36.1	Safe Disconnect of Pipeline Facilities	EWN-CBT-13933 & EWN-PE-2603	CT36_1-17 Written & Performance	NA	3 Years	1:3
36.2	Purging of Pipeline Facilities	EWN-CBT-18835 & EWN-PE-80721	CT36_2-17 Written & Performance	NA	3 Years	1:1
36.3	Sealing of a Disconnected Portion of Pipeline	EWN-CBT-13935 & EWN-PE-2604	CT36_3-17 Written & Performance	NA	3 Years	1:3

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37	Install or Repair Support Structures on Existing Aboveground Components	EWN-CBT-86688 & EWN-PE-80855	CT37_0-17 Written & Performance	NA	3 Years	1:3
38.1	Visually Inspect Pipe and Pipe Components Prior to Installation	EWN-CBT-18864 & EWN-PE-80797	CT38_1-17 Written & Performance	NA	5 Years	1:3
38.3	Visually Inspect that Welds Meet Dot Requirements	EWN-CBT-85959 & EWN-PE-86099	CT38_3-17 Written & Performance	NA	3 Years	1:2
38.4	Perform NDT - Radiographic Testing (Note: annual acuity test required)	NA	NA	EWN OR NCCER AOC With the Following NDT Certification	3 Years	None
38.5	Perform NDT- Liquid Penetrant Testing (Note: annual acuity test required)	NA	NA	EWN OR NCCER AOC With the Following NDT Certification	3 Years	None
38.6	Perform NDT - Magnetic Particle Testing (Note: annual acuity test required)	NA	NA	EWN OR NCCER AOC With the Following NDT Certification	3 Years	None
38.7	Perform NDT - Ultrasonic Testing (Note: annual acuity test required)	NA	NA	EWN OR NCCER AOC With the Following NDT Certification	3 Years	None
39	Perform Backfilling	EWN-CBT-12990 & EWN-PE-2609	CT39_0-17 Written & Performance	NA	3 Years	1:3
40.1	Fit Full Encirclement Welded Split Sleeve (Oversleeve, Tight Fitting Sleeve, etc.)	EWN-CBT-86204 & EWN-PE-86205	CT40_1-17 Written & Performance	NA	3 Years	1:1
40.3	Apply Composite Sleeve	NA	NA	EWN OR NCCER AOC With the Following Clock Spring C/CP Clock Spring T	1 Year Written & 3 Year Performance	1:2

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40.4	Install Mechanical Bolt-On Split Repair Sleeve	EWN-CBT-86230 & EWN-PE-86231	CT40_4-17 Written & Performance	NA	3 Years	1:2
40.5	Install Weldable Compression Coupling	EWN-CBT-86101 & EWN-PE-86102	CT40_5-17 Written & Performance	NA	3 Years	None
40.6	Install and Remove Plugging Machine	EWN-CBT-86456 & EWN-PE-86457	CT40_6-17 Written & Performance	EWN OR NCCER AOC With the Following T.D. Williamson 3501	3 Years	1:2
40.7	Install a Tap 2" and Under on a Pipeline System	EWN-CBT-86391 & EWN-PE-86392	CT40_7-17 Written & Performance	EWN OR NCCER AOC With the Following T.D. Williamson 1501	3 Years	1:2
40.8	Install a Tap Larger than 2" on a Pipeline System	EWN-CBT-86710 & EWN-PE-86811	CT40_8-17 Written & Performance	EWN OR NCCER AOC With the Following T.D. Williamson 1502	3 Years	1:2
40.9	Install and Remove Completion Plug on Pipeline Larger than 2"	EWN-CBT-86109 & EWN-PE-86110	CT40_9-17 Written & Performance	EWN OR NCCER AOC With the Following T.D. Williamson 2501	3 Years	1:2
41	Conduct Pressure Test	EWN-CBT-86135 & EWN-PE-86136	CT41_0-17 Written & Performance	NA	3 Years	1:2
42.7	Perform Welding	NA	NA	EWN OR NCCER AOC With The Following Qualifications per Motiva's welding Procedures	6 Months	None
43.1	Perform Star-up of a Liquid Pipeline (Control Center)	EWN-CBT-86458 & EWN-PE-86459	NA	NA	3 Years	1:1
43.2	Perform Shutdown of a Liquid Pipeline (Control Center)	EWN-CBT-86680 & EWN-PE-86681	NA	NA	3 Years	1:1
43.3	Monitor Pressures, Flows, Communications, and Line Integrity and Maintain them within Allowable Limits on a Liquid Pipeline System (Control Center)	EWN-CBT-86693 & EWN-PE-86694	NA	NA	3 Years	1:1
43.4	Operate Valves Remotely on a Liquid Pipeline System (Control Center)	EWN-CBT-86403 & EWN-PE-86404	NA	NA	3 Years	1:3

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44.3	Inspect, Test, and Maintain Flow Computer for Hazardous Liquid Leak Detection	EWN-CBT-86190 & EWN-PE-86191	CT44_3-17 Written & Performance	NA	3 Years	1:1
44.4	Inspect, Testing, and Corrective, and Preventative Maintenance of Tank Gauging for Hazardous Liquid Leak Detection	EWN-CBT-86830 & EWN-PE-86831	CT44_4-17 Written & Performance	NA	3 Years	1:1
44.5	Prove Flow Meters for Hazardous Liquid Leak Detection	EWN-CBT-86336 & EWN-PE-86337	CT44_5-17 Written & Performance	NA	3 Years	1:1
44.6	Maintain Flow Meters for Hazardous Liquid Leak Detection	EWN-CBT-86212 & EWN-PE-86213	CT44_6-17 Written & Performance	NA	3 Years	1:1
44.7	Inspect, Test, and Maintain Gravimeters/Densitometers for Hazardous Liquid Leak Detection	EWN-CBT-86840 & EWN-PE-86841	CT44_7-17 Written & Performance	NA	3 Years	1:1
44.8	Inspect, Test, and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection	EWN-CBT-86216 & EWN-PE-86217	CT44_8-17 Written & Performance	NA	3 Years	1:1
63.1	Perform Start-Up of Liquid Pipeline (Field)	EWN-CBT-84817 & EWN-PE-84815	CT63_1-17 Written & Performance	NA	3 Years	1:1
63.2	Perform Shut-Down of a Liquid Pipeline (Field)	EWN-CBT-84818 & EWN-PE-85068	CT63_2-17 Written & Performance	NA	3 Years	1:1
63.3	Monitor Pressure, Flows, Communications, and Line Integrity and Maintain them within Allowable Limits on a Liquid Pipeline System (Field)	EWN-CBT-85003 & EWN-PE-85004	CT63_3-17 Written & Performance	NA	3 Years	1:1
63.4	Locally Operate Valves on a Liquid Pipeline System	EWN-CBT-84797 & EWN-PE-84816	CT63_4-17 Written & Performance	NA	3 Years	1:3

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M1001	Joining of Pipe: Threaded Joints	EWN-CBT-86307 & EWN-PE-80840	CTTP-17 Written & Performance	NA	3 Years	1:2
M1002	Joining of Pipe: Flange Assembly	EWN-CBT-11989 & EWN-PE-80841	CTFB-17 Written & Performance	NA	3 Years	1:3
M1003	Tubing and Fitting Installation (Instrument, Control, & Sampling)	EWN-CBT-86346 & EWN-PE-80846	CTTB-17 Written & Performance	NA	3 Years	1:2
M1004	Repair of Steel Pipe by Grinding	EWN-CBT-85020 & EWN-PE-80866	NA	NA	3 Years	1:1