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Delivering Pipeline Operator Qualification Technical Skills and Safety Training for the Energy Industry

Targeting DOT Training Requirements

The Pipeline Operator Qualification courses are designed to assist pipeline operators in meeting the requirements of the DOT Operator Qualification Rule (including Subpart N 49 CFR Part 192 and Subpart G 49 CFR Part 195). The DOT Rule requires pipeline operators to develop and maintain a written qualification program for individuals performing covered tasks on pipeline facilities. The DOT also requires that pipeline operators qualify their workforce on covered tasks.

The ASME- and API-Based Covered Tasks courses align with the ASME B31Q and API RP 1161 standards, and the courses follow the task numbering structure. In addition to the ASME- and API-Based courses, you will find general pipeline operator qualification courses listed by category that are based on comprehensive topics. These courses may touch on one or more covered tasks. A link to a Performance Evaluation form is included with applicable courses to assist in documenting the field evaluation.

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ASME-Based Covered Tasks

These courses provide an overview of the knowledge, skills, and competencies required to perform specific tasks as required under DOT pipeline operator qualification regulations and are based on the ASME B31Q Covered Tasks.

ASME-0001 Measure Structure-to-Electrolyte Potential explains the knowledge required to perform cathodic protection tests, including an overview of cathodic protection systems and test equipment, and the procedure for measuring structure-to-electrolyte potential. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0011 Conduct Close Interval Survey explains the purpose of a close interval survey, the preparation work for the survey, the steps to perform the close interval survey, including how to take structure-to-soil potentials and log data. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-0021 Measure Soil Resistivity covers soil resisitivity measurement methods, the appropriate measuring equipment and tools, proper testing locations, how to measure soil resisitivity and record data, and abnormal operating conditions (AOCs) that may be encountered during this task. (25 min)

ASME-0031 Inspect and Monitor Galvanic Ground Beds/Anodes explains how to inspect and monitor galvanic ground beds and anodes by verifying their test location, taking structure-to-electrolyte potentials, analyzing the remaining life of the anodes, and documenting the results. Possible abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-0041 Installation and Maintenance of Mechanical Electrical Connections explains how to install mechanical electrical connections, verify the test equipment, perform maintenance on damaged test leads, and verify mechanical integrity and electrical continuity. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (10 min)

ASME-0051 Installation of Exothermic Electrical Connections explains the purpose of installing electrical connections, discusses the knowledge required prior to performing the exothermic welds, describes the steps and equipment for performing exothermic welds, and lists possible abnormal operating conditions (AOCs) that may be encountered during the installation. (20 min)

ASME-0061 Inspect or Test Cathodic Protection Bonds explains the purpose of cathodic protection bonds, types of bonds, the use of shunts, the procedure for inspecting and testing, and how to recognize and react to any abnormal operating conditions (AOCs) that may occur during the inspection or testing. (15 min)

ASME-0071 Inspect or Test Cathodic Protection Electrical Isolation Devices explains the purpose of electrical isolation devices, the locations and types of isolating devices, the procedures for inspecting and testing isolation devices, and discusses abnormal operating conditions (AOCs) that may be encountered while inspecting or testing cathodic protection electrical isolation devices. (20 min)

ASME-0081 Install Cathodic Protection Electrical Isolation Devices explains the purpose of installing electrical isolating devices, the knowledge and skills required, the procedures for installing various electrical isolating devices, and potential abnormal operating conditions (AOCs) that may be encountered during the process. (25 min)

ASME-0091 Troubleshoot Active Cathodic Protection System explains the purpose of troubleshooting cathodic protection systems and describes the equipment needed for troubleshooting, the troubleshooting procedures, and the abnormal operating conditions (AOCs) that may be encountered. (20 min)

ASME-0101 Inspect Rectifier and Obtain Readings reviews the role of a rectifier in cathodic protection, explains the procedures for inspecting a rectifier and obtaining electrical output readings to verify the proper performance of the rectifier, and describes possible abnormal operating conditions (AOCs). (15 min)

ASME-0111 Maintain Rectifier reviews the role of a rectifier in cathodic protection, identifies the knowledge and skills required for performing maintenance on a rectifier, explains the procedure for performing rectifier maintenance, and describes abnormal operating conditions (AOCs) that may be encountered. (35 min)

ASME-0141 Visual Inspection for Atmospheric Corrosion explains the purpose of visual inspections for atmospheric corrosion, illustrates the types of coating failures, explains the procedure for visual inspections, and lists abnormal operating conditions (AOCs) that may be encountered while performing an inspection. (15 min)

ASME-0151 Visual Inspection of Buried Pipe and Components When Exposed explains the purpose of the inspection; defines the terms related to external corrosion, coatings, coating anomalies, and coating methods; explains the procedure for the inspection; and discusses abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)

ASME-0161 Visual Inspection for Internal Corrosion describes the types of corrosion that may be discovered while visually inspecting the internal surfaces of a pipe or component, explains the inspection procedure, and describes possible abnormal operating conditions (AOCs) that may be encountered. (15 min)

ASME-0171 Measure External Corrosion describes various types of corrosion that may be encountered while measuring external corrosion on steel pipe, explains how to measure external corrosion, and describes abnormal operating conditions (AOCs) that may be encountered. (25 min)

ASME-0181 Measure Internal Corrosion describes various types of corrosion that may be encountered while measuring internal corrosion on steel pipe, explains the measuring and mapping procedure, and describes abnormal operating conditions (AOCs) that may be encountered. (30 min)

ASME-0191 Measure Atmospheric Corrosion examines types and characteristics of atmospheric corrosion on aboveground pipelines, surface preparations, equipment checks, measurement methods, and abnormal operations conditions (AOCs) that may be encountered when measuring atmospheric corrosion. (30 min)

ASME-0201 Visual Inspection of Installed Pipe and Components for Mechanical Damage explains the purpose of visually inspecting for mechanical damage, terms related to mechanical damage, the procedure for visually inspecting for mechanical damage, and any abnormal operating conditions (AOCs) that may occur while doing the inspection. (15 min)

ASME-0211 Measure and Characterize Mechanical Damage on Installed Pipe and Components explains the purpose and procedure for measuring and characterizing mechanical damage, defines terms regarding mechanical damage, and describes abnormal operating conditions (AOCs) that may be encountered while doing the inspection. (15 min)

ASME-0221 Inspect, Test, and Maintain Sensing Devices explains the purpose and different types of sensing devices; the procedure for inspecting, testing, and maintaining a sensing device; and potential abnormal operating conditions (AOCs) that may be encountered. (15 min)

ASME-0231 Inspect, Test, and Maintain Programmable Logic Controllers (PLC) explains how to check the test equipment, visually inspect PLCs for damage, isolate and test them for proper operation, maintain them as needed, and return them to service. Abnormal operating conditions (AOCs) that may be encountered while performing this task are included. (15 min)

ASME-0241 Inspect, Test, and Maintain Liquid Leak Detection Flow Computers explores how to inspect, test, and maintain flow computers to detect liquid leaks and prevent potential damage to pipelines. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0271 Prove Flowmeters for Hazardous Liquid Leak Detection examines the use of master meters and conventional displacement provers for proving flowmeters for hazardous liquid leak detection. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

ASME-0281 Maintain Flowmeters for Hazardous Liquid Leak Detection lists types of flowmeters and how they work. The course also examines the procedure for maintenance of flowmeters, including removal and repair. Abnormal operating conditions (AOCs) are also discussed. (25 min)

ASME-0291 Inspect, Test, and Maintain Gravitometers/Densitometers For Hazardous Liquid Leak Detection explains qualifications and knowledge required, initial inspection, maintenance, and returning the instruments to service. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-0301 Manually Opening and Closing Valves explores the manual operation of valves by using tools and also by manually operating actuators. The course includes preparations for the task, impact of pressure changes as a result of manual operation, and abnormal operating conditions (AOCs) that could be encountered during the task. (20 min)

ASME-0311 Adjust and Monitor Flow or Pressure — Manual Valve Operation describes how to prepare for manual operation of valves, explains the processes for adjusting or monitoring flow or pressure, describes the types of valves, and discusses possible abnormal operating conditions (AOCs) that may be encountered. (25 min)

ASME-0321 Valve Corrective Maintenance describes how to prepare for valve corrective maintenance, discusses the types of valve corrective maintenance that may need to be performed, and identifies possible abnormal operating conditions (AOCs) that may be encountered. (20 min)

ASME-0331 Valve – Visual Inspection and Partial Operation describes the purpose of a visual inspection and partial operation of pipeline valves, explains how to visually inspect and partially operate valves, discusses how to perform routine lubrication of valves, and lists abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-0351 Pneumatic Actuator/Operator Inspection and Testing, Preventive and Corrective Maintenance explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

ASME-0361 Electric Actuator/Operator Inspection and Testing, Preventive and Corrective Maintenance explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

ASME-0371 Hydraulic Actuator/Operator Inspection and Testing, Preventive and Corrective Maintenance explains how to perform a visual inspection, conduct preventive and corrective actions, adjust setpoints, and conduct a performance test on actuators/operators. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

ASME-0381 Spring-Loaded, Pressure-Regulating Device — Inspection and Testing, Preventive and Corrective Maintenance explains the purpose of inspecting and maintaining regulators; describes how to inspect, test, and maintain them; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

ASME-0391 Pilot-Operated, Pressure-Regulating Device — Inspection, Testing, Preventive and Corrective Maintenance explains the purpose of regulator inspection and maintenance; describes how to inspect, test, and maintain pilot-operated, pressure-regulating devices; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-0401 Controller-Type, Pressure-Regulating Device — Inspection, Testing, Preventive and Corrective Maintenance explains the purpose of inspections and maintenance; describes how to inspect, test, and maintain controller-type, pressure-regulating devices; and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-0411 Spring-Loaded, Pressure-Limiting, and -Relief Device — Inspection, Testing, Preventive and Corrective Maintenance explains the purpose and steps for inspecting a relief device, describes preventive and corrective maintenance, and discusses how to recognize and react to abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-0421 Pilot-Operated, Pressure-Limiting, and -Relief Device — Inspection, Testing, Preventive and Corrective Maintenance explains the purpose and steps for inspecting a relief device, describes preventive and corrective maintenance, and discusses abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-0551 Explosive Atmosphere Detection and Alarm System Performance Test and Corrective Maintenance explains the purpose of the detection and alarm system and discusses system inspections, performance tests, corrective maintenance, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

ASME-0561 Pressure Test: Nonliquid Medium — MAOP Less Than 100 psi explains how to prepare for and conduct a pressure test on a pipeline with an MAOP less than 100 psi using a nonliquid medium, such as air or an inert gas. You will also learn about abnormal operating conditions (AOCs) that you may encounter while conducting the test. (15 min)

ASME-0591 Leak Test at Operating Pressure examines leak testing of pipelines at operating pressure, including the importance of tight pipeline connections and leak-free components; calibration, certification, and testing of equipment or media; and using leak-detection equipment. Recognizing and reacting to abnormal operating conditions (AOCs) is also discussed. (15 min)

ASME-0641 Visually Inspect Pipe and Components Prior to Installation explains the importance of inspection of pipe and pipe components, possible defect terms, the procedure for the inspection, and possible abnormal operating conditions (AOCs) that could be encountered while performing the inspection. (15 min)

ASME-0671 Joining of Plastic Pipe: Solvent Cement explains the purpose of joining plastic pipe with solvent cement, lists the materials needed, describes how to prepare and make the connection, discusses how to inspect the connection, and lists abnormal operating conditions (AOCs) that may be encountered. (10 min)

ASME-0681 Joining of Plastic Pipe: Stab Fittings explains the purpose of joining plastic pipe with stab fittings, materials needed, preparing for the connection, making the connection, and inspecting the connection. It also discusses abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)

ASME-0691 Joining of Pipe: Nonbottom-Out Compression Couplings examines the procedure for joining pipe 2 inches or less in outside diameter with nonbottom-out compression couplings. Inspection of the joined pipe as well as abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0701 Joining of Pipe: Bottom-Out Compression Couplings examines the procedure for joining pipe 2 inches or less in outside diameter with bottom-out compression couplings, including proper preparation and tightening. Inspection of the joined pipe and abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0711 Joining of Pipe: Compression Couplings examines the selection, preparation, installation, and inspection of compression couplings for joining pipe greater than 2 inches in diameter. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0721 Joining of Pipe: Threaded Joints explores how to join pipe with a threaded fitting and inspect the completed joint. The course examines key concepts such as pipe wall thickness and grade, diameter, thread type, pressure rating, and material. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-0731 Joining of Pipe: Flange Assembly examines the steps necessary to assemble flanges, bolt them in sequence, and apply the proper torquing. Types of flanges and gaskets are discussed as are preparations for flange assembly and inspection of the completed assembly. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-0751 Joining of Plastic Pipe — Butt Heat Fusion: Manual discusses how to join plastic pipe using the butt fusion manual method. It also describes how to achieve an acceptable butt fusion joint. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-0761 Joining of Plastic Pipe — Butt Heat Fusion: Hydraulic Machine discusses how to join plastic pipe using the butt fusion manual method using a hydraulic machine. It also describes how to prepare the pipe for joining, how to place the pipe in the hydraulic machine, and how to achieve a properly fused joint. Abnormal operating conditions (AOCs) are also discussed. (25 min)

ASME-0771 Joining of Plastic Pipe: Sidewall Heat Fusion discusses the sidewall heat fusion method for joining plastic pipe and the associated steps of the task, including the required preparation and the heating and fusion process. It also describes a proper and improper heat fusion joint and lists common problems and causes of failed joints. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

ASME-0781 Joining of Plastic Pipe: Electrofusion discusses the electrofusion method of joining plastic pipe and the associated steps of the task, including the required preparation and the clamping and fusion process. It also describes proper and improper heat fusion and lists common problems and causes of failed joints or connections. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (30 min)

ASME-0791 Joining of Plastic Pipe: Socket Heat Fusion discusses the purpose of the socket heat fusion method and the associated steps of the task, including preparation of the equipment, pipe, and fitting, as well as the heating and fusion process. It also describes a proper and improper socket heat fusion joint and lists common causes of failed joints. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-0821 Tubing and Fitting Installation: Instrument, Control, and Sampling examines the service requirements for tubing installation, the adequacy of tubing and fittings for the intended service, and installation of tubing and fittings, including tube cutting and bending, and joining of tubing and fittings. Abnormal operating conditions (AOCs) are also discussed. (25 min)

ASME-0861 Installation of Steel Pipe in a Ditch discusses how to properly install steel pipe in a ditch. Discussion points include proper pipe handling procedures, ditch and pipe inspection, pipe installation, backfill preparations, and abnormal operating conditions (AOCs). (20 min)

ASME-0871 Installation of Steel Pipe in a Bore discusses the purpose for installing a steel pipe in a bore, as well as proper pipe handling, inspection of pipe and coating, and the pull-in method into the bore. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-0881 Installation of Steel Pipe Plowing/Pull-In explains the plowing/pull-in method for installing steel pipe, including preparing the pipe and equipment, inspecting exposed pipe and its coating, placing and attaching the pipe, and plowing the pipe into the ground. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0891 Field Bending of Steel Pipe explains how to perform field bending of steel pipe, including proper pipe preparation and equipment setup, the procedure for field bending steel pipe, and post-procedure inspection. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-0901 Installation of Plastic Pipe in a Ditch explains how to properly handle the plastic pipe, visually inspect the ditch and the pipe, install the pipe and tracer wire, visually inspect the installed pipe, document the task, and react to any abnormal operating conditions (AOCs) that may be encountered. (15 min)

ASME-0911 Installation of Plastic Pipe in a Bore explains how to handle plastic pipe, install the pipe in a bore, visually inspect the pipe after installation, and react to abnormal operating conditions (AOCs) that may be encountered. (10 min)

ASME-0921 Installation of Plastic Pipe Plowing/Pull-In explains how to properly handle the plastic pipe, install the pipe using the plowing/pull-in method, visually inspect the pipe after installation, and document the task. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (10 min)

ASME-0931 Installation of Plastic Pipe by Plowing/Planting explains how to handle plastic pipe, how to install the pipe using the plowing/planting method, how to visually inspect the pipe after installation, and how to react to abnormal operating conditions (AOCs) that may be encountered. (10 min)

ASME-0935 Relocation of a Pipeline explains reasons you would move a pipeline, describes the preparation work and the process of moving a pipeline, and discusses post inspection and related abnormal operating conditions (AOCs). (15 min)

ASME-0941 Install Tracer Wire explains the purpose of tracer wire for plastic pipe, how to install tracer wire, how to test the mechanical integrity and continuity after the wire is installed, and how to recognize and react to abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)

ASME-0951 Installation of Pipe Aboveground explains requirements for installing pipe aboveground, including the proper handling of pipe, anchor and support requirements, and inspections points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-0961 Above-Ground Supports and Anchors: Inspection, Preventive, and Corrective Maintenance explains the purpose of inspecting and maintaining above-ground pipe supports and anchors, and the procedure for inspecting and maintaining above-ground pipe supports and anchors. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-0971 Installation and Maintenance of Casing Spacers, Vents, and Seals describes the basic components of casing systems; explains the procedures for installing and maintaining casing spacers, vents, and seals; and discusses possible abnormal operating conditions (AOCs) that may be encountered. (25 min)

ASME-0981 Backfilling describes how to prevent damage to a pipeline while backfilling a trench after maintenance, explains the procedure for backfilling a trench, and describes abnormal operating conditions (AOCs) that may be encountered. (20 min)

ASME-0991 Coating Application and Repair: Brushed or Rolled explains how to prepare and apply protective coating to pipes, tanks, and other industrial surfaces using the brushed and rolled application techniques. It also discusses surface preparation, application techniques, and inspection points. Abnormal operating conditions (AOCs) are also discussed. (30 min)

ASME-1001 Coating Application and Repair: Sprayed explains how to apply protective coating to pipes, tanks, and other industrial surfaces using the sprayed application technique. The course also covers surface preparation, proper application technique, and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

ASME-1011 External Coating Application and Repair: Wrapped explains how to apply protective coating to pipes, tanks, and other industrial surfaces using the wrapped application technique. The course also covers surface preparation, proper application technique, and visual inspection points. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (25 min)

ASME-1051 Fit-Up of Weld-Type Repair Sleeve explains the purpose for weld-type repair sleeves, the preparations required for fitting up weld-type sleeves, how to properly fit up weld-type sleeves, and abnormal operating conditions (AOCs) that may be encountered during the task. (10 min)

ASME-1071 Repair of Steel Pipe by Grinding explains the purpose of grinding steel pipe for repairs, the importance of measuring pipe wall thickness, the steps for removing defects by grinding, and abnormal operating conditions (AOCs) that may be encountered during grinding. (10 min)

ASME-1081 Tapping a Pipeline (Tap Diameter 2 in. and Less) explains the purpose of performing a pipeline tap, states the difference between a hot tap and a tap, lists the preparation work needed, describes how to perform a hot tap, and lists abnormal operating conditions (AOCs) that may be encountered while performing a tap. (15 min)

ASME-1101 Tapping a Pipeline With Built-In Cutter explains the purpose of performing a pipeline tap, states the difference between a hot tap and a tap, describes how to perform a tap using a fitting with a built-in cutter, and lists abnormal operating conditions (AOCs) that may be encountered while performing a tap. (15 min)

ASME-1111 Tapping Cast and Ductile Iron Pipe and Low-Pressure Steel Pipe explains the purpose of hot taps; how to prepare for a hot tap; the steps for performing a hot tap, including preparations and pressure testing; and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

ASME-1121 Bagging and Stopping Low-Pressure Pipe explains how to perform bagging and stopping of low-pressure pipe, including inserting and removing the gas bag and monitoring pressure during the task. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (30 min)

ASME-1131 Stopper (Stopple) Pipe explains the purpose of stopper line stopping, preparations for line stopping, installing and operating line stopping equipment, installing completion plugs, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

ASME-1141 Squeeze Off Plastic Pipe explains why squeezing off plastic pipe is necessary, how to make preparations to squeeze off plastic pipe, how to install the squeeze-off tool, how to perform a squeeze-off of plastic pipe, and potential abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

ASME-1151 Squeeze Off Steel Pipe examines what to watch for when installing a squeeze-off tool on steel pipe, the required equipment, the general squeeze-off procedure, pressure monitoring during squeeze-off, and abnormal operating conditions (AOCs) that you may encounter during the procedure. (20 min)

ASME-1161 Installation of Customer Meters and Regulators: Residential and Small Commercial explains how to install customer meters and regulators for homes and small businesses. Regulator and meter operation, overpressure protection, gas testing, and abnormal operating conditions (AOCs) are also examined. (25 min)

ASME-1181 Installing/Maintaining Customer Pressure-Regulating/Limiting, and Relief Devices: Large Commercial and Industrial explains the purpose of and procedure for installing and maintaining pressure-regulating, pressure-limiting, and pressure-relief devices. It also discusses visual inspections, testing, and abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

ASME-1191 Maintenance of Service Valves Upstream of Customer Meter explains the purpose of the maintenance, visual inspections, maintenance and operation of the valve, and abnormal operating conditions (AOCs) that may be encountered during the task. (10 mins)

ASME-1201 Temporary Isolation of Service Lines and Service Discontinuance discusses how to temporarily disconnect a service line, including how to identify the appropriate meter, close the gas riser valve, install a standard service lock, and cut and cap the line when required. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

ASME-1211 Odorization: Periodic Sampling teaches the user the steps to conduct periodic samples of the odorant concentration in a natural gas. The user will learn how to locate the testing site, how to perform a sniff test, and how to recognize conditions that may interfere with odorant testing. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-1221 Odorization: Odorizer Inspection, Testing, Preventive and Corrective Maintenance explores the task of inspecting, testing, and maintaining odorization systems. Odorization technologies, detection instruments, and abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-1231 Inside Gas Leak Investigation explains the purpose of an inside gas leak investigation, test equipment verification, how to conduct the investigation, and the precautions that should be taken. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (10 min)

ASME-1241 Outside Gas Leak Investigation explains the purpose of an outside gas leak investigation, test equipment verification, how to conduct the investigation, and precautions that should be taken. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (10 min)

ASME-1251 Hazardous Liquid Leak Investigation explains the purpose of the investigation and the initial information required. It also discusses how to assess the suspected leak area, what to do if a leak is discovered, how to make the area safe, and whom to notify. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

ASME-1261 Walking Gas Leakage Survey explains the purpose of the survey, inspection of the test equipment, conduction of the survey, documentation for the survey, and abnormal operating conditions (AOCs) that may be encountered. (10 min)

ASME-1291 Locate Underground Pipelines examines the procedure for locating underground pipelines, including placement of temporary markers. The One-Call System, locating methods, the APWA Universal Color Code, and abnormal operating conditions (AOCs) are also described. (25 min)

ASME-1301 Install and Maintain Pipeline Markers discusses the location, placement, and maintenance of permanent pipeline markers. Abnormal operating conditions (AOCs) are also discussed. (25 min)

ASME-1311 Inspect Pipeline Surface Conditions: Patrol Right-of-Way or Easement explores preparations, procedures, and follow-up actions for inspection of pipeline right-of-ways. Abnormal operating conditions (AOCs) are also addressed. (20 min)

ASME-1321 Damage Prevention During Excavation Activities by or on Behalf of the Operator examines damage prevention activities before and during excavation. Abnormal operating conditions (AOCs) are also discussed. (20 min)

ASME-1331 Damage Prevention Inspection During Third-Party Excavation or Encroachment Activities as Determined Necessary by Operator explores how to conduct damage prevention inspections, including how to recognize and react to abnormal operating conditions (AOCs). (20 min)

ASME-1341 Provide or Ensure Adequate Pipeline Support During Operator-Initiated Excavation Activities discusses supports for existing pipelines being excavated for maintenance or repair. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-1351 Vault Inspection and Maintenance discusses the requirements for inspecting and maintaining vaults that house pipeline system valves and other pressure-regulating or pressure-limiting equipment. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-1361 Station Emergency Shutdown System: Inspection, Testing, and Corrective Maintenance addresses inspection, testing, and corrective maintenance of emergency shutdown systems for compressor and pumping stations. Abnormal operating conditions (AOCs) are also addressed. (20 min)

ASME-1411 Indirect Inspection Techniques examines four methods of indirect inspection for pipeline, including alternating and direct current voltage gradient surveys, close interval surveys, and soil resistivity tests. Abnormal operating conditions (AOCs) are also discussed. (15 min)

ASME-1421 Direct Examination Techniques addresses techniques used to assess damage in pipelines, including mechanical, coating, and corrosion damage. The course also discusses abnormal operating conditions (AOCs) that may be encountered. (15 min)

ASME-1651 Purge — Flammable or Inert Gas explains the purpose of purging pipelines with natural gas, air, and inert gas; lists preparations for purging a pipeline; describes how to perform the purge; and discusses abnormal operating conditions (AOCs) that may be encountered. (15 min)

API-Based Covered Tasks

These courses provide an overview of the knowledge, skills, and competencies required to perform specific tasks as required under DOT pipeline operator qualification regulations and are based on the API RP 1161 Covered Tasks.

CT-1.1 Measurement of Structure-to-Soil Potentials explains the knowledge required to perform cathodic protection tests, including cathodic protection systems, test equipment, and the procedure for measuring structure-to-soil potentials. Abnormal operating conditions (AOCs) are also discussed. (15 min)

CT-1.2 Conduct Close Interval Survey explains the knowledge required prior to conducting a close interval survey, the preparation required before the survey, and the steps to perform the close interval survey. Abnormal operating conditions (AOCs) are also discussed. (20 min)

CT-1.4 Inspect and Perform Electrical Test of Bonds explains the purpose and types of electrical bonds, knowledge required prior to inspecting and testing bonds, visual inspections, and electrical testing bonds. Abnormal operating conditions (AOCs) are also discussed. (15 min)

CT-1.5 Inspect and Test Electrical Isolation explains the use of insulating devices to electrically isolate two metal structures, the equipment needed and steps taken for inspecting and testing electrical isolation, and any possible abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-2.1 Verify Test Lead Continuity explains the purpose of test leads, indications of a damaged test lead, the steps for verifying test lead continuity, and abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-2.4 Install Test Leads by Exothermic Welding Methods explains the purpose of installing test leads, the knowledge required to perform exothermic welds, the steps for performing exothermic welds, and abnormal operating conditions (AOCs) that may be encountered while installing test leads. (20 min)

CT-3.0 Obtain a Voltage and Current Output Reading From a Rectifier to Verify Proper Performance reviews the role of a rectifier in cathodic protection, explains the procedure for verifying the proper performance of the rectifier, and describes possible abnormal operating conditions (AOCs). (15 min)

CT-4.1 Troubleshoot Rectifier explains the purpose of a rectifier and its components in a cathodic protection system, the knowledge required prior to troubleshooting a rectifier, the steps of troubleshooting, and possible abnormal operating conditions (AOCs). (15 min)

CT-4.2 Repair or Replace Defective Rectifier Components reviews the role of a rectifier in cathodic protection, identifies the knowledge and skills required for repairing a rectifier, explains the procedure for repairing a rectifier by replacing defective components, and describes possible abnormal operating conditions (AOCs). (20 min)

CT-4.3 Adjustment of Rectifier reviews the role of a rectifier in cathodic protection, identifies the knowledge and skills required for making adjustments to a rectifier, explains the procedure for making adjustments to a rectifier based on cathodic protection system requirements, and describes possible abnormal operating conditions (AOCs). (20 min)

CT-5.1 Examine for Mechanical Damage on Buried or Submerged Pipe explains the purpose for damage inspection, the skills and knowledge required, the procedure for examining the pipe for mechanical damage on buried or submerged pipelines, and abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

CT-5.2 Examine for External Corrosion on Buried or Submerged Pipe explains the purpose for inspection, the required knowledge, the procedure for examining the pipe for external corrosion on buried or submerged pipelines, and abnormal operating conditions (AOCs) that may be encountered may occur while performing the task. (15 min)

CT-5.3 Inspect the Condition of External Coating on Buried or Submerged Pipe explains the purpose of external coatings and the procedure for inspecting external coatings. Abnormal operating conditions (AOCs) are also discussed. (15 min)

CT-7.1 Visual Inspection of Atmospheric Coatings explains the purpose of the atmospheric coatings inspections, the knowledge and skills required, the procedure for the inspection, and any abnormal operating conditions (AOCs) that may be encountered during the process. (15 min)

CT-8.3 Measure Corroded Area identifies the knowledge and skills required for measuring a corroded area on steel pipe, explains the measuring procedure, and describes possible abnormal operating conditions (AOCs). (20 min)

CT-9.5 Repair Shorted Casings describes the basic components of casing systems and the types of shorts that may be encountered, explains the repair procedure, and describes possible abnormal operating conditions (AOCs) that may be encountered. (20 min)

CT-9.6 Install Electrical Insulating Device explains the purpose of installing insulating devices, the knowledge and skills required, the procedures for installing various insulating devices, and abnormal operating conditions (AOCs) that may be encountered during the process. (40 min)

CT-12.0 Visually Inspect Internal Pipe Surface describes the types of corrosion and/or damage that may be discovered while visually inspecting an internal pipe surface, explains the inspection procedure, and describes possible abnormal operating conditions (AOCs). (20 min)

CT-14.1 Locate Line examines the procedure for locating pipelines, including the use of the One-Call Notification System, maps and drawings, visual assessments, location methods, equipment, and verification techniques. Abnormal operating conditions (AOCs) are also discussed. (35 min)

CT-14.2 Install, Inspect, and Maintain Permanent Marker discusses the knowledge and skills necessary to install, inspect, and maintain permanent markers for underground pipelines. Abnormal operating conditions (AOCs) are also discussed. (25 min)

CT-14.5 Install, Inspect, and Maintain Temporary Marker discusses the knowledge and skills necessary to install, inspect, and maintain temporary markers for underground pipelines. Abnormal operating conditions (AOCs) are also discussed. (25 min)

CT-15.1 Visually Inspect Surface Conditions of Right-of-Way discusses the steps necessary to visually inspect surface conditions of pipeline rights-of-way. Abnormal operating conditions (AOCs) are also discussed. (25 min)

CT-19.5 Adjust Actuator/Operator, Electric explains why we need to adjust the actuators/operators; describes the type of adjustments needed such as limit switches, torque switches, and function tests, discusses the procedure for making the adjustments, and lists any abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

CT-19.6 Adjust Actuator/Operator, Pneumatic explains why we need to adjust the actuators/operators; discusses the type of adjustments needed such as limit switches, torque switches, mechanical stops, and function tests, describes the procedure for making the adjustments, and lists abnormal operating conditions (AOCs) that may be encountered while performing the task. (15 min)

CT-19.7 Adjust Actuator/Operator, Hydraulic explains why we need to adjust actuators or operators, the type of adjustments that are needed, the procedure for the adjustments, and any abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-21.1 Repair Valve Actuator/Operator, Pneumatic explains the general steps for repairing a pneumatic actuator/operator including disassembly, including the inspection of parts, replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

CT-21.4 Repair Valve Actuator/Operator, Hydraulic explains the general steps for repairing a hydraulic actuator or operator including disassembly, including the inspection of parts, replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

CT-21.5 Repair Valve Actuator/Operator, Electric explains the general steps for repairing an electric actuator or operator, including disassembly, the inspection of parts, the replacement of parts, and reassembly. Abnormal operating conditions (AOCs) that may be encountered while performing the task are also discussed. (15 min)

CT-22.2 Inspect, Test, and Calibrate HVL Tank Pressure Relief Valves explains why relief valve inspection, testing, and calibration is needed; how to perform a visual inspection; and how to test and calibrate a relief valve. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (15 min)

CT-23.1 Maintain/Repair Relief Valves explains why relief valve maintenance is needed, how to maintain/repair relief valves, and how to make adjustments. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (15 min)

CT-23.2 Inspect, Test, and Calibrate Relief Valves explains why relief valve inspection, testing, and calibration is needed; how to perform a visual inspection; testing a relief valve for functionality and repeatability; and calibration of a relief valve before returning it to service. Abnormal operating conditions (AOCs) that may be encountered during the task are also discussed. (15 min)

CT-24.1 Maintain/Repair Pressure Limiting Devices explains the purpose of maintaining and repairing pressure-limiting devices, describes the types of pressure-limiting devices, explains the procedure for maintenance/repair, and discusses abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

CT-24.2 Inspect, Test, and Calibrate Pressure Limiting Devices explains the purpose of inspecting, testing, and calibrating pressure limiting devices; describes the types of pressure limiting devices; explains the procedures for inspecting, testing, and calibrating; and discusses abnormal operating conditions (AOCs) that may be encountered during the task. (20 min)

CT-25.1 Inspect, Test, and Calibrate Pressure Switches explains the purpose and different functions of pressure switches; the procedure for inspecting, testing, and calibrating a pressure switch; and abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-25.2 Inspect, Test, and Calibrate Pressure Transmitters explains the purpose and different types of pressure transmitters, the procedure for inspecting, testing, and calibrating a pressure transmitter, and abnormal operating conditions (AOCs) that may be encountered. (20 min)

CT-32.0 Observation of Excavation Activities examines the responsibilities of a qualified observer, excavation complexity, observation procedure, potential hazards, and abnormal operating conditions (AOCs) that may be encountered. (30 min)

CT-38.1 Visually Inspect Pipe and Pipe Components Prior to Installation explains the importance of the inspection, possible defects on pipe and components, the procedure for the inspection, and abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-38.3 Visually Inspect That Welds Meet DOT Requirements explains why welds should receive a visual inspection, the defects that may be found during a visual inspection, and abnormal operating conditions (AOCs) that may be encountered. (10 min)

CT-39.0 Backfilling a Trench Following Maintenance describes how to prevent damage to a pipeline while backfilling a trench, explains the procedure for backfilling a trench, and describes abnormal operating conditions (AOCs) that may be encountered. (20 min)

CT-40.6 Install and Remove Plugging Machine explains the purpose of plugging machines, describes how to install and remove a plugging machine, and lists abnormal operating conditions (AOCs) that may be encountered during the task. (15 min)

CT-43.4 Remotely Operate Valves on a Liquid Pipeline System discusses the purpose of operating valves remotely, explains how to operate valves remotely, and lists possible abnormal operating conditions (AOCs) that may be encountered. (15 min)

CT-44.3 Inspect, Test, and Calibrate Computational Pipeline Monitoring (CPM) Leak Detection System explores how to inspect, test, and calibrate CPM systems to detect leaks and prevent potential damage to pipelines. Abnormal operating conditions (AOCs) are also discussed. (20 min)

CT-44.5 Prove Flow Meters for Hazardous Liquid Leak Detection examines the use of master meters and conventional displacement provers for proving flow meters for hazardous liquid leak detection. Abnormal operating conditions (AOCs) that may be encountered when proving flow meters for hazardous liquid leak detection are also discussed. (20 min)

CT-44.6 Maintain Flow Meters for Hazardous Liquid Leak Detection lists types of flow meters and how they work. The course also examines the procedure for removal and repair of flow meters. Abnormal operating conditions (AOCs) are also discussed. (20 min)

CT-44.7 Inspect, Test, and Maintain Gravitometers/Densitometers for Hazardous Liquid Leak Detection explains qualifications and knowledge required, initial inspection, maintenance, and returning the instruments to service. Abnormal operating conditions (AOCs) that may be encountered are also discussed. (20 min)

CT-44.8 Inspect, Test, and Maintain Temperature Transmitters for Hazardous Liquid Leak Detection examines what is involved with inspection, testing, and maintenance of temperature transmitters, and lists abnormal operating conditions (AOCs) that may be encountered. (25 min)

CT-63.4 Operate Valves Locally on a Liquid Pipeline System discusses the local opening and closing of valves by physical use of tools and local operation of actuators. Preparations, conditions, and steps for local operation of valves as well as abnormal operating conditions (AOCs) are also discussed. (20 min)

OQ General

The Pipeline Operator Qualification courses are designed to assist pipeline operators in meeting the requirements of the DOT Operator Qualification Rule (including Subpart N 49 CFR Part 192 and Subpart G 49 CFR Part 195). The DOT Rule requires pipeline operators to develop and maintain a written qualification program for individuals performing covered tasks on pipeline facilities. The DOT also requires that pipeline operators qualify their workforce on covered tasks.

001 Operator Qualification Summary discusses the development of an operator qualification program that is required of each pipeline company and summarizes the process for qualifying an individual to perform covered tasks. (15 min)

002 Introduction to the Natural Gas Industry explains what natural gas is, why it is useful, and what it is used for. A brief description of the path of natural gas from the well to the customer is given along with a list of agencies responsible for pipeline regulations and the responsibilities of each pipeline employee to maintain safety and good environmental practices. (25 min)

003 Guidelines for Proctoring Tests and Evaluations discusses the importance of and offers recommended guidelines for quality control during operator qualification examinations. This course also states the responsibilities of the mentor, proctor, and evaluator, as well as ways to validate testing using ExxTend Learning™. (10 min)

004 Documenting a Field Evaluation in ExxTend Learning™ is a brief "how-to" course for administrators and field evaluators who must credit personnel with completion of a field evaluation, include documentation, and access user history and reports. (10 min)

***0361 Electric Valve Actuators** explains the basic design, design features, operation, and maintenance of electric valve actuators. Abnormal operating conditions (AOCs) associated with electric valve actuators are included. (40 min)

***0981 Backfilling** discusses the basic requirements for backfilling pipeline evacuations, including inspection, filling standards, soil conditions, environment considerations, and abnormal operating conditions. (20 min)

100 Prevention of Accidental Ignition & Potential Ignition Sources examines the DOT rules governing accidental ignition sources of natural gas. Other topics include the fire triangle, common ignition sources for escaping natural gas, buildup and/or discharge of static electricity, hot and cold cutting and welding, and isolation of pipeline segments. (60 min)

1010 Abnormal Operating Conditions: Recognize and React covers the definition of abnormal operating conditions (AOCs), identifying AOCs, operator qualification, identification of covered tasks, recognition and reaction to AOCs, and rating hazards. This course assists in compliance with DOT regulations and references the B31Q standard. (40 min)

1011 Abnormal Operations and Safety-Related Conditions explains the difference between abnormal operations and abnormal operating conditions, describes safety-related conditions, and explains how to recognize possible causes of abnormal operations including appropriate responsive actions. Reporting requirements for safety-related conditions are also stated. References to DOT standards that apply to abnormal operations and safety-related conditions are listed. (15 min)

1012 Abnormal Operations explores the difference between abnormal operations and abnormal operating conditions (AOCs). The course also examines how to respond to, report, and record abnormal operations. (15 min)

103 Characteristics and Properties of Natural Gas explores the composition, properties, and flammable characteristics of natural gas; the history of natural gas use; gas leak and carbon monoxide monitoring; and natural gas safety. (55 min)

***105 CGIs and Flame Ionization Units** examines categories of combustible gas instruments; characteristics and properties of natural gas; the fire triangle; LELs; UELs; OSHA safe working levels; carbon monoxide hazards and detection; and the use, operation, and inspection of combustible gas indicators and flame ionization units. (60 min)

***106 OSHA/DOT – Excavation Safety** explains basic excavation safety, excavation requirements, soil classification and testing, causes of cave-ins, excavation protection, and related abnormal operating conditions (AOCs). (60 min)

***107 Pipeline Pigging** explores the reasons for pigging, pig types and use, common pigging techniques, safe launching and receiving practices, and smart pigging techniques. (90 min)

108 Work Zone Safety covers the types and usage of traffic control devices, the setup of safe work zones, and proper flagging procedures. (20 min)

***200 Leak Survey & Leak Classification** examines house counts, class locations, use of a "sliding mile," leak surveys and classification, pipeline patrols, pipeline marker installation, natural gas detection instruments, bar hole testing, natural gas migration patterns, leak survey records, and more. (100 min)

*Includes Performance Checklist(s)

***201 Population Density Change & Pipeline Patrol** examines surveys for transmission, jurisdictional gathering, and distribution facilities; leak surveys and pipeline patrols; pipeline marker installation; house counts; natural gas detection instruments; marking exposed pipe; and more. (75 min)

205 Pipeline Crossings addresses considerations involving natural gas pipelines at bridges, stream crossings, ravines, levees, highways and railroad crossings. External corrosion, control of buried or submerged pipelines, protective measures, and use of electrical surveys, corrosion history reviews, and records of exposed pipe examinations are also discussed. (65 min)

***206 Leak & Pipeline Failure Investigation** addresses the importance of the control of pipeline leakage and proper steps of leak investigation necessary for the safe operation of any natural gas pipeline system. Applicable regulations, leaks in progress, special leak precautions, leak detection, and leak surveys are also examined. (65 min)

***207 Investigating Pipeline Failure** explores the control of natural gas pipeline leakage and necessary leak investigation steps. DOT regulations for Continuing Surveillance and Investigation of Failure are also reviewed. (15 min)

***244 Current Interrupters** defines current interrupters and their basic uses, configurations, features, and installation instructions for close interval surveys. Abnormal operating conditions (AOCs) associated with current interrupters are included. (20 min)

***3000 Damage Prevention** explains the requirements for locating and marking underground facilities before excavation work can take place. Some of the main topics include the one-call system, locating underground facilities, marking methods, public and contractor education, and abnormal operating conditions (AOCs). (35 min)

***3001 Locating and Marking Buried Pipelines** explains the requirements for locating and marking underground facilities before excavation work may take place. Common abnormal operating conditions (AOCs) that may be encountered while performing excavation work are identified, including possible responses. (30 min)

***301 Vault Inspection and Confined Space Entry** addresses key regulations about vault maintenance and inspection. Topics include vault inspection; hazardous atmospheres; vault entry; OSHA requirements for permit-required confined space entry; confined space hazards, entry planning, and pre-entry training; and prevention of accidental ignition. (75 min)

305 Dehydration of Natural Gas addresses why water is controlled or removed from natural gas and extraction methods utilizing hydrate inhibition, glycol dehydration, and solid desiccants. (45 min)

306 Dehydration* With Triethylene Glycol addresses glycol dehydration fundamentals, process equipment maintenance, startup and shutdown steps, common operating problems, and analysis of the glycol solution. (65 min)

***400 Valve Actuators** explains the various styles and design features of actuators/operators and how they operate. Proper maintenance techniques and reconditioning of hydraulic actuators/operators are discussed in this course. (45 min)

***4010 General Valve Maintenance** explains the function of valves in a pipeline system and the importance of visual inspections and maintenance to ensure that they work properly. It also discusses the qualities of a proper lubricant/sealant, how and when they should be used, and the equipment used to apply them. (25 min)

***4011 Plug Valve Maintenance** explains how a plug valve operates, along with many of the different design features and their purpose. It also discusses proper cleaning, lubricating, and maintenance techniques that are unique to plug valve maintenance. (20 min)

***4012 Ball Valve Maintenance** explains how a ball valve operates, along with different design features and their purposes. It also discusses proper cleaning, lubricating, and maintenance techniques that are unique to ball valve maintenance. (25 min)

***4013 Gate Valve Maintenance** explains how a gate valve operates, along with many of the different design features and their purpose. It also discusses proper cleaning, lubricating, and maintenance techniques that are unique to gate valve maintenance. (20 min)

***4020 Inspecting and Testing Pressure Limiting Devices** explains how a relief valve operates, along with different design features and their purpose. It also discusses the procedure for testing relief valves. (25 min)

***4021 Inspecting and Testing Regulators** explains how a regulator operates, along with different design features and their purpose. The differences between a pilot-operated and a spring-operated regulator are explained. The procedure for testing regulators is also discussed. (30 min)

***4022 Inspecting and Testing Control Valves** explains the purpose of control valves in a pipeline system. The different parts that make up a control valve assembly and their functions are discussed. The process for inspecting a control valve is also explained. (15 min)

***4030 Pressure Testing Steel Pipelines – Gas** explains the requirements for pressure testing steel pipelines. Some topics covered are water handling, pipe design, class locations, MAOP, SMYS, strength testing, test preparation, and the pressure testing procedure. (40 min)

***4031 Pressure Testing Plastic Pipelines** explains the requirements for pressure testing steel pipelines. Some topics covered are water handling, pipe design, class locations, MAOP, SMYS, strength testing, test preparation, and the pressure testing procedure. (35 min)

***407 Joining Steel Pipe Other Than by Welding** discusses procedures and precautions for joining steel pipe other than by welding, nut and bolt selection, proper flange connections, reuse of a threaded fastener, calibration frequency and records, torque wrench use, and abnormal operating conditions (AOCs) that may be encountered. (35 min)

408 Maintaining and Repairing Pressure Limiting Devices explains the basic steps for maintaining pressure limiting devices, including relief valves, pressure switches, pressure transducers/transmitters, and monitor regulators. (30 min)

***4090 Pipeline Repair: Grinding, Welding, and Sleeving** explains the various types of pipeline leaks and the methods to repair them. The definitions and procedures for "hot" and "cold" cutting and welding are included. (35 min)

***4091 Pipeline Repair: Composites** explains the use of composites to repair imperfections and damage on pipelines. (25 min)

***4095 Pipeline Repair: Sleeving Including Helical Pipe** discusses various methods for pipeline repair with an emphasis on weld-type sleeves. Abnormal operating conditions (AOCs) are included. (40 min)

***410 Cast Iron Joints** discusses the common problems associated with cast iron pipe, such as graphitization, and explains the methods for cast iron pipe joint repair, including joint clamps and encapsulation. Abnormal operating conditions (AOCs) are also discussed. (15 min)

***411 Pipeline Purging With Air and Gas** explains the mechanical nature of purging, isolation methods, and the processes of purging with either air or gas. (40 min)

***4120 Hot Tapping** addresses the mechanical procedures, safety precautions, and limitations of pressurized pipeline tapping; procedures and precautions for preparing a pipeline for a hot tap operation; and mechanical procedures and precautions for pressurized pipeline stopping. (35 min)

***Includes Performance Checklist(s)**

***4121 Line Stopping** defines line stopping and the regulatory requirements for performing a line stop. Other key topics include methods of locating and identifying the proper line, preparation considerations, and the steps of the line stopping process. (50 min)

414 Abandonment of Facilities examines deactivation and abandonment of steel and plastic pipeline facilities including mains, services, regulators, meters, and odorizers; and the importance of documenting deactivated and abandoned facilities. (45 min)

***415 Installation of Anodes** explains the anode theory, the different types of anodes, a general outline for installing anodes, and a procedure for exothermic welding. (25 min)

416 Pipeline Shutdown and Startup Planning addresses steps to be taken during a planned shutdown, steps for returning a shut-down section to operation and starting up a new line, basic procedures for emergency shutdown, and how to prevent accidental ignition during shutdown and startup. (45 min)

***501 Cathodic Protection Troubleshooting** explains cathodic protection systems; equipment needed for troubleshooting; safety precautions; and troubleshooting procedures for locating rectifier faults, cable breaks, insulators, and contacts. Abnormal operating conditions (AOCs) that may be encountered are included. (50 min)

***502 Cathodic Protection – Rectifier Inspections** explains cathodic protection systems, rectifier types, rectifier inspections, and calculating rectifier efficiency. Abnormal operating conditions (AOCs) that may be encountered while inspecting and testing rectifiers are included. (35 min)

***503 Protective Coatings** explains basic corrosion, protective measures, corrosion regulations, surface preparation, and coating application. Abnormal operating conditions (AOCs) that may be encountered while inspecting and during the application of protective coatings are included. (45 min)

***504 Installation of Test Stations** addresses exothermic welding procedures; test station function; test stations used for pipe-to-soil surveys; test station installation methods; cable bonding techniques; soldering methods; and materials, spacing, and location. (50 min)

505 Cathodic Protection Criteria addresses cathodic protection criteria and piping applications, cathodic protection surveys, and survey data evaluation and reporting. (50 min)

***506 Electrical Insulator Inspections and Testing Casings** explains the purpose and requirements for pipeline casings, types of casing, coatings, testing casing, electrical insulating devices, and testing insulating devices. (40 min)

***507 Internal Corrosion** explains the requirements and acceptable methods for pipe inspections. The different causes of internal pipe corrosion, monitoring, and corrosion control methods are also described. Industry standards for acceptable gas quality are included. (45 min)

***508 Interference: AC and DC** discusses foreign interference concepts, cathodic protection, gradient areas, DC transit systems, AC induced current, interference testing, corrective actions, and related AOCs. (45 min)

***5090 Structure-to-Electrolyte Surveys** discusses structure-to-electrolyte survey equipment, readings, and meters as well as close interval surveys, logging data, and related abnormal operating conditions (AOCs). (40 min)

5091 Basic Corrosion explains basic corrosion, the causes and types of corrosion, bacterial corrosion, and factors such as pH and temperature that affect corrosion rates. (25 min)

***5093 Close Interval Surveys** discusses the purpose and requirements of a close interval survey, required equipment, steps of a survey, survey impediments and solutions, data loggers, and documentation. Abnormal operating conditions (AOCs) that may occur during a close interval survey are included. (35 min)

***510 Atmospheric Corrosion – Pipeline Operations** addresses requirements for atmospheric corrosion control, the corrosion process, attributes of and risk factors for atmospheric corrosion, and protective measures for atmosphere corrosion control. (30 min)

5110 Rigging: Planning and Inspections explains the planning of a rigging operation, basic math needed for weight calculations, equipment used in rigging, and inspections for rigging equipment. (55 min)

5111 Safe Rigging Practices explains the proper use of rigging equipment, hoists, and standard hand signals for rigging operations. (35 min)

***600 Electric Arc Welding** examines types of electric arc welding, types and uses of joints, weld defects and prevention, preheating a weld area, electrode selection and storage, welding sequence, pipe beveling and lineup, arc welding techniques, striking the arc, hot and cold welding and cutting, weld positions, field inspections of welds, and safety precautions during electric arc welding. (95 min)

***601 Welder Qualification** addresses butt, fillet, and 90-degree branch welds; safety precautions for welders; essential variables; single and multiple qualification tests; macro-section tests and face bend tests on branch and sleeve welds; and typical welder qualification tests. (130 min)

***602 Weld Repairs and Welding Procedures** examines the functions of a welding inspector; percentages of each day's butt welds to be tested, depending upon class location; when nondestructive testing is required; common welding defects and how to cure them; information needed on welding inspection reports; and essential variables. (60 min)

***604 Oxygen/Acetylene Welding & Cutting** addresses types of gas welding; identifying joints; equipment needed for oxy/acetylene and gas welding and cutting; neutral, carburizing, and oxidizing flames; purging hoses; field inspection of welds; weld positions; hot and cold welding and cutting; and safety precautions. (90 min)

***606 NDT: Magnetic Particle Inspection** explains the use of magnetic particle inspection (MPI) to detect cracks, anomalies, and stress corrosion cracking (SCC). It also explains the procedure for performing a wet or dry magnetic particle inspection. Common abnormal operating conditions (AOCs) that may be encountered are identified, including possible reactions. (35 min)

***607 NDT: Liquid Dye Penetrant Inspection** examines the liquid dye penetrant inspection process, including weld preparation, application of liquid penetrant cleaner and developer, weld post-cleaning, documentation requirements, and abnormal operating conditions (AOCs). (35 min)

608 Pipeline Integrity: High Consequence Area Field Surveys discusses the description of class location units, class locations, DOT requirements, high consequence areas, and abnormal operating conditions (AOCs) that may be encountered. (30 min)

***609 Dresser Coupled Pipelines** explains how Dresser couplings work, bonding couplings, locating unbonded couplings, types of repairs, repair procedures, and related abnormal operating conditions (AOCs). (25 min)

***610 Ultrasonic Thickness Testing** examines the purpose and applicability of ultrasonic thickness testing. The steps for conducting an ultrasonic thickness test are explained, as are pipe or metal surface preparation, and use of couplant gel. (35 min)

7000 Compressor Station Operations and Safety explores procedures and safety precautions of Compressor Station Operation, including compressor station components, written emergency plan, compressor station systems, emergency shutdown procedures, and electrical hazards. (35 min)

***7001 Compressor Stations: Design and Emergency Planning** discusses the design and safety features that are required in a compressor station. The safety factors include boundaries, building design, ventilation, flammable materials storage, pressure limiting devices, gas detectors, fire sensors, emergency shutdown systems, and emergency planning. (45 min)

***701 Reciprocating Compressor Units** addresses operation of an internal combustion-reciprocating compressor, including start-up, loading, unloading, and shutdown procedures; parts of a compressor; and compressor troubleshooting and maintenance. (85 min)

***703 Compressor Operation: Turbine Units** examines the operational process of a turbine compressor unit; addresses theory of operation; major components; purposes of fuel gas, lubrication, and air systems; key components of wet and dry seal systems; startup, loading, unloading, and shutdown procedures; and maintenance disadvantages. (95 min)

***704 Compressor Operation: Compressor Cylinders** examines the major components of a compressor cylinder, compressor valve operation and classification of cylinders, troubleshooting and safely changing compressor cylinders, maximizing available horsepower for compressor efficiency, and piston rings and packing materials. (60 min)

***705 Compressor Operation: Gas Path Integrity** addresses gas path integrity and maintenance, horizontal and vertical rod runout, critical compressor clearances, leak testing methods and repair, run-time verification tests, and proper torquing of threaded fasteners. (70 min)

***706 Compressor Operation: Power Cylinder Balancing** addresses the importance of balanced engine power cylinders, correct procedures and methods for balancing power cylinders, and how engine performance-monitoring tools are used to balance power cylinders. (45 min)

***800 Gas Control** examines major gas control terminology, flow rate and pressure, SCADA systems, compressor operation basics, emergency response, and overpressure protection for pipelines carrying high-pressure gas. (60 min)

900 Fundamentals of Electricity addresses basic properties of electricity, circuits, and safety device components; Ohm's law; measuring voltage, current, and resistance; types of switches and relays; common electrical symbols and their use in wiring and line diagrams; inductance and capacitance; waveform properties and phase relationships; and transformers. (95 min)

***901 Basic Electronics: PLC** addresses basic information and hardware components concerning PLCs; principles of operation; applications; installation, calibration and checkout, documentation, and troubleshooting; peripheral devices; waveform properties and phase relationships; and ladder logic and other skills associated with programming PLCs. (70 min)

902 Basic Electronics: SCADA addresses SCADA system history, office and field hardware components, communication protocols, installation, calibration, and troubleshooting. (105 min)

1200 Underground Storage of Natural Gas and Liquids addresses underground storage in the energy industry, similarities and differences of gas and liquids products, basic storage functions and terms, different types of underground storage, and the purpose and function of underground storage equipment. (95 min)

***1312 Aerial Patrol** discusses aerial pipeline patrol, reportable conditions, patrol frequency, required documentation, emergency observations, and abnormal operating conditions (AOCs). (30 min)

DISTRIBUTION

***202 Odorization: Concentration Testing** addresses natural gas odorization and its regulation, distribution systems, class determination, testing, recordkeeping, odorometer operation and maintenance, and safe handling and storage. (70 min)

***404 Plastic Pipe Fusion** examines types of plastic pipe used in the heat fusion process, principles of heat fusion, the heat fusion process, inspection and testing of fused joints, safety precautions when handling polyethylene pipe, hazards of static electricity, and spark prevention. (100 min)

***404S Fusion de Tubo de Plastico**, the Spanish version of Plastic Pipe Fusion, examines types of plastic pipe used in the heat fusion process, principles of heat fusion, the heat fusion process, inspection and testing of fused joints, safety precautions when handling polyethylene pipe, hazards of static electricity, and spark prevention. (100 min)

***405 Electrofusion** examines types of plastic pipe used in the electrofusion process, basic principles of electrofusion, the electrofusion process, inspection and testing of fused joints, safety precautions when handling polyethylene pipe, hazards of static electricity, and spark prevention. (70 min)

***406 Mechanical Fittings** examines Lycofit® fittings, joining plastic pipe with mechanical fittings, and installation of various kinds of couplings. (65 min)

413 Up-Rating Pipeline Systems teaches the learner how to determine present system and facilities conditions, review proposed up-rate pressures, understand and write an up-rate plan, determine system conditions prior to pressure increases, and maintain required up-rate records. (65 min)

***417 Installation of Plastic Mains and Services – Part 1** addresses precautions and practices for handling and storing plastic pipe, installation of plastic pipe for natural gas main and service lines, installation of transition fittings, installation of excess flow valves, abandonment and reinstatement of mains and services, and installation of tracer wire. (45 min)

***418 Installation of Plastic Mains and Services – Part 2** addresses direct burial of plastic pipe; tie-ins and tapping service punch tees; squeezing plastic pipe, including the squeeze-off procedure; inserting plastic pipe in an existing line; pressure testing mains and services; purging mains; and repairing PVC pipe. (55 min)

419 Natural Gas Operations & Maintenance Safety examines general safety precautions for natural gas operations and maintenance, including atmosphere testing, lock-out/tag-out, trenching and excavation, directional boring, traffic management, static electricity, and the Hazard Decision Tree Analysis. (70 min)

***420 Installation of Steel Mains and Services** addresses proper handling, storage, and inspection of steel pipe; typical right-of-way and easement requirements; pipe installation requirements for overhead and underground crossings; pipeline installation; and steel distribution service line installation and connection. (65 min)

***421 Pipeline Tie-in Methods** is geared to gas transmission, addresses tie-in considerations; tie-in procedures; tie-in configuration connections; and installation of one- and two-piece control fittings, steel-to-plastic transition fittings, curb and service valve tees, three-way tees, tapping and drilling, and stopping procedures for steel pipe. (35 min)

***500 Atmospheric Corrosion – Distribution Operations** examines the requirements for atmospheric corrosion control. This course addresses the corrosion process, surface preparation, attributes of and risk factors for atmospheric corrosion, and protective methods used to control atmospheric corrosion. (40 min)

***1221 Install Meters and Regulators – Residential** examines the basic parts of a residential gas distribution system, installation of meters and regulators, protecting a residential gas system from pressure damage, meter and regulator selection, installation of a meter set and adjusting a meter's set point, testing for gas system leaks, and service wrap-up procedures. (50 min)

***1231 Install Meters and Regulators – Commercial** addresses the basic parts of a commercial gas distribution system, installation of meters and regulators, protecting a commercial gas system from pressure damage, meter and regulator selection, installation of a meter set and adjusting a meter's set point, testing for gas system leaks, and service wrap-up procedures. (60 min)

LIQUIDS PIPELINE

LQ100 LQ: Subpart H – Corrosion Control examines corrosion control regulations; pipeline patrols; population changes and encroachments; underwater inspection and reburial of pipelines; and inspection of exposed pipelines, right-of-way markers, in-service breakout tanks, and rectifiers. (30 min)

***LQ201 LQ: Pipeline Patrol** explains the methods of pipeline patrols, required inspections and intervals, visual inspections, electrical inspections, and right-of-way maintenance. (50 min)

***LQ202 LQ: Pressure Testing Steel Pipelines** explains the requirements for pressure testing steel pipelines, pipe design, MOP and pressure testing, pre-test considerations, pressure test procedures, and abnormal operating conditions during pressure testing. (35 min)

***LQ300 LQ: Marking Pipelines – Temporary and Permanent** addresses corrosion inspection for uncovered pipelines, continuing education, damage prevention programs, one-call systems, facility locations, temporary pipeline marking, symbols, required qualifications, excavation near pressurized pipelines, safety buffer zones, and abnormal operating conditions (AOCs). (65 min)

***LQ400 LQ: Below Ground Pipe Coatings & Exposed Pipe** addresses remedial actions when exposed pipeline is located, pipe coating removal, pipeline operator responsibilities, marking exposed pipeline, pipe surface preparation, coating material preparation and application, jeeping, and abnormal operating conditions. (85 min)

***LQ415 LQ: Installation of Anodes** addresses cathodic protection and test lead installation on liquid pipeline systems, the galvanic anode theory, types of anodes and their uses, calculations for sacrificial anode output and expected life, anode installation, cable bonding and exothermic welding techniques, and abnormal operating conditions (AOCs). (50 min)

***LQ416 LQ: Conduct Annual Surveys** examines the testing frequency of cathodically protected pipelines; measurement of tank bottom-to-soil, pipe-to-soil, and casing-to-soil potentials; electrical criteria; placement and maintenance of an electrode (half-cell); use of a multimeter; interference and interference testing; and handling abnormal operating conditions (AOCs). (110 min)

***LQ501 LQ: Cathodic Protection Troubleshooting** examines cathodic protection rectifiers, including instruments used to troubleshoot rectifiers and cathodic protection systems; common operational problems; rectifier repair; basic troubleshooting techniques; and abnormal operating conditions (AOCs). (70 min)

***LQ502 LQ: Rectifier Inspections** examines conditions for corrosion cell function, types of corrosion cells, requirements for liquid pipeline systems, controlling corrosion, cathodic protection testing, installation of test leads, cathodic protection rectifier inspections, and recognizing and reacting to abnormal operating conditions (AOCs). (80 min)

***LQ504 LQ: Installation of Test Stations** addresses terms associated with exothermic welding procedures; test stations and cathodic protection regulations; test stations used for pipe-to-soil surveys; test station installation methods; performing pull tests; test station materials, spacing, and location; and recognizing and reacting to abnormal operating conditions (AOCs). (50 min)

***LQ508 LQ: Interference (AC and DC)** addresses foreign interference; static, dynamic, and AC-induced stray currents; calculating circuit resistance of a bond; and eliminating stray current interference. (60 min)

***LQ707 LQ: Introduction to Compressor and Pump Operations** explores the purpose, types, and basic functions of natural gas compressors and pipeline pumps; pump starting and stopping procedures; and the functions of the devices used to prevent pipeline overpressure, including relief valves, monitor regulators, regulators, pressure switches, and pressure transmitters. (85 min)

***LQ800 LQ: Pipeline System Control** explores the basic definitions of a liquid pipeline system, duties and responsibilities of a pipeline controller, types of pipeline control and their regulations, calculations on safe and timely product delivery, SCADA and SCADA monitoring systems, and procedure and follow-up actions for emergency response. (65 min)

***LQ901 LQ: Programmable Logic Controllers** addresses equipment the PLC replaces; the application; hardware functions; operation modes; memory function; installation; calibration and check-out of analog loops; operation of discrete I/O; troubleshooting; timers and counters; documentation, and regulatory requirements. (125 min)

***LQ902 LQ: Pressure Switches** examines the functions of a pressure switch; absolute and gauge pressure; primary and secondary calibration standards; pressure switch inspection, operational testing, and calibration; federal regulations; and abnormal operating conditions (AOCs). (50 min)

***LQ903 LQ: Pressure Transmitters** examines pressure transmitter functions; absolute and gauge pressure; primary and secondary calibration standards; pressure transmitter inspection, operational testing, and calibration; documenting calibration results; applicable federal regulations; and abnormal operating conditions (AOCs). (60 min)

***LQ0271 LQ: Meter Maintenance and Proving** discusses meter proving, maintenance, and methods used in leak detection. Abnormal operating conditions (AOCs) relevant to meter proving are included. (35 min)

***LQ0293 LQ: Flushing and Purging Pipeline Systems** explains general guidelines for flushing and purging pipeline systems using several methods, including low-point drains and pig displacement. Safety precautions and abnormal operating conditions (AOCs) for flushing and purging are also discussed. (40 min)

***LQ0401 LQ: Inspecting and Testing Control Valves** explains the operation and design of control valves, the process for inspecting a control valve, and abnormal operating conditions (AOCs) that may be encountered during inspection and testing. (25 min)

LQ1012 LQ: Abnormal Operations explores the difference between abnormal operations and abnormal operating conditions (AOCs) for liquids pipelines. This course also examines how to respond to, report, and record abnormal operations. (15 min)

***LQ1100 LQ: Cathodic Protection – Aboveground Storage Tanks** addresses corrosion on metal structures, anodic and cathodic area functions and roles, stray (interference) currents and direct current (DC), types of corrosion cells, galvanic anodes and impressed current systems, testing intervals, protective coatings, anode operation, tank potential readings, and abnormal operating conditions (AOCs) pertaining to rectifier inspections. (70 min)

***LQ1102 LQ: Inspection – Aboveground Storage Tanks** addresses tank shell inspections, corrosion cell function, anodic and cathodic area functions and roles, stray currents and direct current (DC), general and pitting corrosion, types of corrosion cells, cathodic protection, galvanic anodes and impressed current systems, testing intervals, and abnormal operating conditions (AOCs) pertaining to rectifier inspections. (60 min)

***LQ1641 LQ: Pigging: Launching and Receiving** introduces pipeline pigging and pigging safety. This course also explores operational considerations when pigging, launching and receiving a pig, and abnormal operating conditions (AOCs) associated with pigging. (55 min)

***LQ2350 LQ: Aboveground Storage Tank Overfill Protection** addresses the aboveground storage tank overfill protection program, requirements, and procedures; covers state regulatory agency impact; Class I liquids; product transfer written procedures; tank alarm levels and equipment; and abnormal operating conditions (AOCs). (70 min)

DOT COMPLIANCE

850 Public Awareness addresses public awareness program requirements for the natural gas and hazardous liquids pipeline industries, including types of stakeholder audiences, message content, message delivery frequency, and program evaluation. (35 min)

851 DOT Drug Awareness addresses workplace substance abuse, DOT-regulated drug abuse policies, job performance, crisis situations, drug testing requirements, and the roles and responsibilities of supervisors. (75 min)

852 DOT Alcohol Awareness addresses workplace substance abuse, DOT-regulated alcohol abuse policies, job performance, crisis situations, alcohol testing requirements, and the roles and responsibilities of supervisors. (60 min)

853 Contractor Safety examines basic safety principles for natural gas and hazardous liquids pipeline workers. Course topics include guidelines, emergency procedures, communication, recordkeeping, and equipment and operations. (20 min)

854 Accident/Incident Investigation Overview discusses the general steps necessary to conduct an investigation of an accident or incident involving natural gas and hazardous liquids pipeline systems. (30 min)

858 System Control: Fatigue Management for Supervisors examines how control room supervisors can recognize and manage fatigue in controllers who work with SCADA systems. The fatigue mitigation strategies are also useful for supervisors of shift workers at compressor and pump stations and those involved in around-the-clock operations. (30 min)

859 System Control: Fatigue Management for Controllers examines countermeasures that natural gas hazardous liquids pipeline controllers and other shift workers can take to prevent fatigue. Strategies that these workers can take both at home and at work are discussed. (30 min)

860 System Control: Control Room Management Regulations is an overview of control room management. Major provisions addressed include written CRM procedures, roles and responsibilities, adequate information, point-to-point verification, fatigue, alarm, change management, operator experience, training, and compliance validation and deviation. (30 min)

EMERGENCY RESPONSE AND PLANNING

102 Emergency Plans & Public Contractor Education addresses emergency action plans and reviews damage prevention programs including one-call systems, public and contractor education about gas pipelines, and response procedures for pipeline damage from an outside force. (100 min)

ER1300 Facility Response Plan for Hazardous Liquids Pipelines is an overview course about the type of facility response plan utilized in the hazardous liquids pipeline industry. (25 min)

ER1301 Emergency Response Plan for Natural Gas Pipelines explores the components of respective emergency response plans utilized by the natural gas and liquefied natural gas pipeline industries. (25 min)

ER1302 Working With the Media During an Emergency addresses appropriate interview protocols with the news media and emergency response officials at the scene of a pipeline emergency. (35 min)

ER1304 Pandemic Preparedness: What Every Employee Should Know describes how pipeline employees and their workplaces can prepare for a pandemic, including how to protect themselves and adjust working arrangements to deal with a reduced workforce. (30 min)

ER1305 Pipeline Security Planning discusses the development of a pipeline security plan using the references and guidelines set forth by governmental agencies. It also covers roles and responsibilities of employees, types of security threats and incidents, reporting, facility assessments, security measures, and plan implementation. (50 min)

ER1306 Corporate Emergency Management Plan explains how planning will help management provide key corporate resources to assist operational assets responding to an emergency. (20 min)

ER1308 SPCC Plans for Non-Production/Bulk Storage Facilities examines the general regulatory requirements of an SPCC Plan as well as specific regulatory requirements for non-production onshore facilities. (35 min)

ER1309 SPCC Plans for Onshore Production Facilities examines the general regulatory requirements of an SPCC Plan as well as specific regulatory requirements for onshore oil production facilities and onshore drilling and workover facilities. (35 min)

ENVIROMENTAL

855 Introduction to Waste Management and Minimization provides general information about the management of solid waste, specifically hazardous waste as defined in RCRA Subtitle C, and an overview of the waste minimization hierarchy. (50 min)

856 Air Permitting for Supervisors is a general overview course that discusses the purpose of air permitting, federal and state operating permits, stack and fugitive emissions, emissions issues, agency inspections, inspection preparation, and responding to Notices of Violation. (25 min)

8561 Air Permitting Awareness is a general overview course that examines the purpose of air permitting, Title V operating permits, stack and fugitive emissions, emissions issues, agency inspections, inspection preparation, and responding to a citation. (20 min)

857 Environmental Awareness is designed to make all employees aware of the types of environmental concerns that pipeline operators must address, including regulatory requirements. (30 min)

INSTRUMENT USE AND CARE

***903 Using the DTEX® Odorant Detection Instrument** teaches the learner about the DTEX DX1000G/L odorant detection instrument system and how to conduct an odor concentration test. (30 min)

***904 Using the Heath ODORATOR®** explores how this odorant detection instrument works, explains how to operate and troubleshoot the instrument, and provides additional information that will help the user skillfully operate the instrument. (15 min)

905 Using the Heath Gasurveyor® 3-500 examines the components, range of operation, and key functions of this combustible gas indicator, and also explains how to operate the instrument. (30 min)

906 Using the T82 Single Gas Monitor introduces operators to the T82 Single Gas Monitor and teaches how to operate this sensitive instrument. Calibration, maintenance, and smart sensor modes are also addressed. (20 min)

***907 Using the Radiodetection Pipe Locator** teaches techniques for locating buried pipeline and cables using the radiodetection pipe locator. The course also explains how to operate the radiodetection receiver and transmitter. Tips for using the radiodetection locator are also provided. (75 min)

***908 Using the Metrotech Pipe Locator** explains how to use this pipe locating instrument, including the three primary locating methods: direct connection, inductive coupling, and the inductive method. Also examined are instrument checkout procedures, tracing techniques, and maintenance requirements. (60 min)

***909 Ditch Witch® Pipe Locators** discusses the control features and functions of the Ditch Witch® Pipe Locator receiver and transmitter, the specific operation and line locating methods, and the abnormal operating conditions (AOCs) that may be encountered while performing a line location. (40 min)

910 Using a Digital Multimeter is an introduction to the metric system, the concepts of electricity, and how to use a multimeter to measure resistance, voltage, and amperage. (45 min)

HUMAN RESOURCES

HR1000 Human Performance Systems addresses trends and economic forces driving change in the pipeline industry; competence, performance, and productivity; the human performance model; the human performance system; and human performance improvement. (40 min)

HR1001 The Mentoring Process examines mentoring and counseling basics, an effective mentoring system, mentor roles and responsibilities, ethical behavior rapport building, communication techniques, and conflict resolution. (65 min)

HR1002 Job Performance Evaluations examines differences between mentoring and job performance evaluations; the evaluator's role; employee evaluation plan; competency profiles; assessing knowledge, skills, attributes, and common barriers to accurate observation; teaching job task knowledge and job skills; and giving and receiving feedback. (35 min)

HR1003 Effective Media Relations addresses participating in a media interview during an emergency, the five "Ws" and the "nine points", what emergency response officials and news media should know, providing proper contact information, a spokesperson's role during pipeline emergencies, and use of pipeline maps and drawings. (35 min)

HR1004 Incident Command System and Natural Gas Emergencies addresses the Incident Command System (ICS) and Natural Gas Emergencies training program, Incident Commander responsibilities and staff, kinds of emergencies and response, implementing a successful ICS, the role of NIMS, and maintaining relations with emergency response officials. (35 min)

HR1005 Ethics and Compliance examines ethics and compliance as they apply to a Code of Conduct and company policy for all employees of a pipeline company, including senior management and the board of directors. (50 min)

HR1006 Management of Change examines the concept of management of change (MOC), the types of changes, the application and importance of an MOC program, and the importance of understanding MOC processes used within a specific organization. (35 min)

HR1007 Right-of-Way Agent Training: Landowner Communications examines best practices for communicating with landowners whose properties may be affected by pipeline construction, including the operator's commitments to the landowners. (30 min)

**Includes Performance Checklist(s)*