192 Gas Catalog

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192-Abnormal Operating Conditions

MEA Certificate Numbers **TNG – MEA1462**
KNT – MEA1291

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides basic information on how to recognize and react to Abnormal Operating Conditions (AOCs) both on the job and during the evaluation process.

Objectives

- Relate the OQ Rule to Abnormal Operating Conditions (AOCs).
- Apply the OQ Rule on the job.
- Provide examples of AOCs.
- Classify AOCs within categories.
- Take appropriate action when reacting to AOCs.
- Describe your role in the evaluation for qualification procedure.
- Identify responsibilities of qualified individuals.

192-0101 Characteristics and Hazards of Natural Gas

MEA Certificate Numbers **TNG - MEA1459**
KNT – MEA1292

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information which facilitates recognition of potential ignition sources, both indoor and outdoor. It also provides an introduction to the subject of natural gas, and it's most important by-product, carbon monoxide.

Objectives

- List the by-products of burning.
- Identify potential sources of open flame ignition and electrical spark ignition.

192-0201 Gas Detection and Alarm System Maintenance

MEA Certificate Numbers **TNG - MEA1356**
KNT - MEA1128
PEF - MEA11

Continuing Education Unit (CEU) **0.1**

Course Description

A large pipeline network is normally required to transport natural gas from its point of origin to the point of demand. Compressor stations, positioned at various points along the pipeline network, provide the compression required to ensure continued and efficient gas flow. Personnel working at these compressor stations must be able to perform the maintenance required to keep this equipment functioning properly. In the event of an abnormal operating condition, personnel must know how to respond.

Objectives

- Identify gas detection devices and describe their functions.
- Describe calibration and testing procedures for gas detection systems.
- Identify abnormal operating conditions and describe required responses.

192-0202 Isolation of a Gas Compressor Unit

MEA Certificate Numbers **TNG - MEA1357**
KNT – MEA1129
PEF – MEA12

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers isolation of a gas compressor, preparation of the isolated unit for start-up and correctly recognizing and reacting to abnormal operating conditions.

Objectives

- Explain how to isolate a gas compressor unit.
- Describe how to prepare an isolated compressor unit for start-up.
- Recognize and react to abnormal operating conditions when isolating a gas compressor unit.

192-0205 Compressor Station Inspection and Testing

MEA Certificate Numbers **TNG - MEA1407**
KNT - MEA1130
PEF - MEA13

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers identification, inspection and testing of remote control shutdown devices.

Objectives

- Identify and describe remote control shutdown devices and associated terms.
- Explain how to test remote control shutdown devices.
- Recognize and react to abnormal operating conditions when inspecting a compressor station and testing remote control shutdown devices.

192-0301 Operating a Gas Compressor Unit

MEA Certificate Numbers **TNG - MEA1408**
KNT - MEA1131
PEF - MEA14, MEA15

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers activities required for the start-up, shutdown, and operation of an engine driven gas compressor unit.

Objectives

- Understand the operation of a gas compressor unit.
- Describe how to operate a gas compressor unit.
- Recognize and react to abnormal operating conditions when operating a gas compressor unit.

192-0302 Shutting Down a Gas Compressor

MEA Certificate Numbers **TNG -MEA1409**
KNT - MEA1132
PEF - MEA16, MEA17

Continuing Education Unit (CEU) **0.1**

Course Description

This course describes key steps for the operation of a gas compressor unit, specifically focusing on shutting down a compressor unit, and abnormal operating conditions.

Objectives

- Identify and describe the operation of a gas compressor unit.
- Describe how to shut down a gas compressor unit.
- Recognize abnormal operating conditions and how to respond to them.

192-0303 Starting a Turbine Driven Gas Compressor Units

MEA Certificate Numbers **TNG - MEA1410**
KNT - MEA1133
PEF - MEA18, MEA19

Continuing Education Unit (CEU) **0.1**

Course Description

This course describes key steps for the operation of a gas compressor unit, specifically focusing on procedures for proper start-up of a compressor unit, and abnormal operating conditions.

Objectives

- Identify and describe the operation of a gas compressor unit.
- Describe the start-up of a gas compressor unit.
- Recognize abnormal operating conditions and how to respond to them.

192-0401 Corrosion Monitoring – Atmospheric, External, and Internal

MEA Certificate Numbers **TNG - MEA1411**
KNT - MEA1134
PEF- MEA110, MEA113

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information identifying the requirements for inspecting external & internal pipe for corrosion.

Objectives

- Identify methods of inspection.
- Identify requirements for pipe inspection.
- Understand the cause of corrosion.

192-0402 Coating Maintenance

MEA Certificate Numbers **TNG - MEA1412**
KNT - MEA1135
PEF - MEA114, MEA11976, MEA11977, MEA11978, MEA11979, MEA11980, MEA11981

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides a basic overview of coatings, coating inspection, and coating maintenance.

Objectives

- Identify deteriorated, damaged, or disbonded pipeline coating.
- Identify requirements for removing deteriorated, damaged, or disbonded coating without damaging the pipe.
- Identify methods for repairing, replacing, or altering pipe coating.
- Recognize and react to Abnormal Operating Conditions (AOC).

192-0501 Cathodic Protection System Maintenance

MEA Certificate Numbers **TNG - MEA1413**
KNT - MEA1136
PEF – MEA117, MEA118, MEA119, MEA120, MEA121

Continuing Education Unit (CEU) **0.1**

Course Description

In general, ALL buried steel pipelines and pipeline facilities require cathodic protection to protect the structure from corrosion. Cathodic protection systems must provide specific levels of protection that comply with the applicable criteria.

Objectives

- List the facilities that require cathodic protection.
- Identify cathodic protection requirements.
- Identify electrical isolation requirements.
- Describe corrosion monitoring requirements.
- Describe procedures for testing and evaluating adequacy of a cathodic protection system.
- Recognize and react to abnormal operating conditions.

192-0503 Cathodic Protection Systems Electrical Connections

MEA Certificate Numbers **TNG - MEA1414**
KNT - MEA1137
PEF - MEA123

Continuing Education Unit (CEU) **0.1**

Course Description

Before making cathodic protection system electrical connections, it is important to evaluate the pipe integrity, mechanical strength and electrical continuity. Proper preparation by testing, wearing protective clothing and examining the connection location is critical.

Objectives

- Identify electrical connection wiring requirements.
- Determine if electrical connection requirements are met.
- Describe the requirements for making and maintaining a welded test lead connection.
- List the steps for making a thermite or solder weld.
- Describe safety precautions for welding test leads and for working in confined spaces and trenches.
- List requirements for removing and replacing pipe coating.
- Recognize and react to abnormal operating conditions.

192-0505 Cathodic Protection System Testing

MEA Certificate Numbers **TNG - MEA1415**
KNT - MEA1138
PEF - MEA124

Continuing Education Unit (CEU) **0.1**

Course Description

Testing of cathodic protection systems ensure that they are working properly. Corrosion may be an indicator of a cathodic protection system malfunction or other problem. Federal regulations outline cathodic protection requirements for buried, submerged and aboveground pipelines.

Objectives

- List the facilities that require cathodic protection.
- Identify cathodic protection requirements.
- Identify corrosion inspection requirements.
- Identify methods for inspecting pipe and coating.
- Describe procedures for performing test equipment operation checks.
- Describe steps for evaluating a cathodic protection system.
- Explain how to maintain cathodic protection.
- Recognize Abnormal Operating Conditions (AOCs) and take corrective action.

192-0511 Soil Resistivity Testing

MEA Certificate Numbers **TNG - MEA1416**
KNT – MEA1139
PEF - MEA131

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements and methods for soil resistivity testing.

Objectives

- Identify the requirements related to conducting a soil resistivity test.
- Describe how to perform a test equipment operations check.
- Describe the methods for performing a soil resistivity test.
- Identify Abnormal Operating Conditions (AOC) related to performing a soil resistivity check.

192-0512 Pipe-to-Soil Testing

MEA Certificate Numbers **TNG - MEA1417**
KNT – MEA1140
PEF – MEA132

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers testing requirements, pipeline locating, performing an equipment check, and test step procedures.

Objectives

- Identify the requirements for pipe-to-soil testing.
- Describe the procedure for a pipe-to-soil test equipment check.
- List steps for performing pipe locating equipment checks.
- Identify and describe the three general methods of locating a pipeline.
- List the required steps for conducting a pipe-to-soil test.
- Identify the Abnormal Operating Conditions (AOC) related to conducting a pipe-to-soil test.

192-0701 Locating, Installing, and Protecting Customer Meters and Regulators

MEA Certificate Numbers **TNG - MEA1418**
KNT - MEA1141
PEF – MEA133, MEA134

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements for design and selection of meters, regulators, and pressure relief and limiting devices; location requirements, protection from damage, installation and system uprating procedures.

Objectives

- Identify the components that comprise a meter set, including meters, regulators, and relief valves.
- List location considerations for proper installation and protection from damage of meter sets.
- Identify general meter set installation requirements.
- Identify correct procedures for the installation of customer meters, regulators, and where required, relief valves.
- Identify Abnormal Operating Conditions.
- Identify correct procedures for the testing of installed customer meters, regulators, and where relief valves.

192-0702 Customer Pressure Regulating, Limiting, and Relief Devices – O&M

MEA Certificate Numbers **TNG - MEA1419**
KNT – MEA1142
PEF – MEA135, MEA136

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements for customer pressure regulating, limiting, and relief devices, including: location and installation, inspection, testing, maintenance, and pressure adjustment requirements.

Objectives

- Identify general location and installation requirements.
- Explain inspecting and testing.
- Describe maintenance.
- Describe adjustment.
- Recognize and react to Abnormal Operating Conditions (AOC).

192-0801 Locating Pipelines

MEA Certificate Numbers **TNG - MEA1420**
KNT - MEA1143
PEF - MEA137

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers preliminary activities required for successful locates, and how to properly locate and mark facilities.

Objectives

- Identify the preliminary activities required for successful locates.
- Describe proper locate and marking procedures.
- Explain how locating pipelines before excavating can stop damage from occurring.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-0802 Protection During Disturbance of Segment Support

MEA Certificate Numbers **TNG - MEA1421**
KNT - MEA1144
PEF - MEA138

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements and methods for protection during disturbance of segment support and installation of suitable support.

Objectives

- Identify when to support pipeline segments.
- Identify different types of support.
- Identify what fittings and segments to support.

192-0803 Inspection for Damage

MEA Certificate Numbers **TNG - MEA1422**
KNT - MEA1145
PEF - MEA139

Continuing Education Unit (CEU) **0.1**

Course Description

When performing an inspection for damage, it is important to know how to properly inspect excavation sites, perform leak surveys, and verify system integrity. This course provides information on inspection requirements

during excavation activities, segment support during disturbance of pipeline, and leak surveys after excavating or blasting.

Objectives

- Recognize when contact with the excavator is needed during excavation.
- Describe how to perform inspection.
- Explain how to monitor for settlement during and after excavation.
- Explain how to monitor for and verify system integrity.

192-0804 Damage Prevention During Excavation Activities

MEA Certificate Numbers **TNG - MEA1423**
KNT - MEA1295
PEF - MEA1296

Continuing Education Unit (CEU) **0.1**

Course Description

This course discusses damage prevention during excavations activities, such as auguring, backfilling, blasting, boring, drilling, grading, jack hammering, plowing, trenching, and tunneling.

Objectives

- Describe preparation requirements.
- Identify potential hazards describe appropriate safety measures.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-0901 System Patrolling

MEA Certificate Numbers **TNG - MEA1424**
KNT - MEA1146
PEF - MEA140

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers patrolling methods, requirements, record keeping, and identification of soil disturbance.

Objectives

- Identify patrol method.
- Identify scope and requirements.
- Perform system patrols.
- Identify soil subsidence.

192-1001 Cast Iron Joints - Sealing

MEA Certificate Numbers **TNG - MEA1425**
KNT - MEA1147
PEF - MEA141

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information identifying the requirements for, inspecting, and maintaining properly sealed cast iron bell and spigot joints.

Objectives

- Identify when and where a bell and spigot joint is used.
- Identify how cast iron segments are joined using bell and spigot joints.
- Identify sealing requirements for bell and spigot joints.
- Evaluate if cast iron sealing requirements are met.
- Identify types of mechanical leak clamps and sealing methods appropriate for cast iron.
- Describe the process for installing and/or maintaining leak clamps designed for cast iron.

192-1002 Plastic Pipe - Electrofusion

MEA Certificate Numbers **TNG - MEA1426**
KNT - MEA1148
PEF - MEA143, MEA144

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers electrofusion preparation steps, the electrofusion process, and electrofusion inspection procedures.

Objectives

- List requirements for plastic pipe electrofusion.
- Explain preparation of joints and fittings for fusion operations.
- Verify pipe preparation.
- Describe how to perform general electrofusing for couplings and sidewall fittings.
- Observe safety precautions.
- Explain how to inspect electrofused joints.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1003 Plastic Pipe – Butt Heat Fusion

MEA Certificate Numbers **TNG - MEA1427**
KNT - MEA1149
PEF - MEA145

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information on conventional butt heat fusion requirements, and preparation of pipe ends prior to fusing, the fusion procedure, and inspection requirements.

Objectives

- List requirements for plastic pipe butt heat fusion.
- Explain how to prepare pipe for fusion operation.
- Verify pipe preparation.
- Describe general butt heat fusion of pipe and fittings.
- Observe safety precautions.
- Explain how to inspect butt fused joints.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1004 Plastic Pipe – Sidewall Heat Fusion

MEA Certificate Numbers **TNG - MEA1428**
KNT - MEA1150
PEF - MEA146

Continuing Education Unit (CEU) **0.1**

Course Description

This module provides information on conventional sidewall heat fusion requirements and preparation of pipe and fittings prior to fusing, the fusion procedure, and inspection requirements.

Objectives

- List requirements for plastic pipe sidewall heat fusion.
- Explain how to prepare pipe and fittings for fusion operation.
- Verify pipe preparation.
- Describe general sidewall heat fusion of pipe and fittings.
- Observe safety precautions.
- Explain how to inspect sidewall fused joints.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1005 Mechanical Joints

MEA Certificate Numbers **TNG - MEA1429**
KNT - MEA1151
PEF – MEA1123, MEA1124, MEA1125, MEA11320, MEA1753, MEA1754, MEA11699, MEA11700

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers: identification of mechanical joint requirements; general design requirements, coupling/fitting selection, pipe preparation, protection of joining procedure from adverse weather, installation, inspection, and removal.

Objectives

- Identify the general design requirements.
- Describe how to protect the mechanical joint installation from adverse weather.
- Select the appropriate coupling or fitting.
- Identify mechanical joint couplings preparation and installation requirements.
- Describe how to prepare pipe for a mechanical joint installation.
- Explain how to install the coupling or fitting on the pipe.
- Explain how to inspect for proper installation.
- Describe how to remove and replace defective joints.

192-1006 Plastic Pipe – Socket Heat Fusion

MEA Certificate Numbers **TNG - MEA1430**
KNT - MEA1152
PEF - MEA148

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information on conventional socket heat fusion requirements and preparation of pipe and fittings prior to fusing, the fusion procedure, and inspection requirements.

Objectives

- List requirements for plastic pipe socket heat fusion.
- Explain how to prepare pipe and fittings for fusion operations.
- Verify pipe preparation.
- Describe fuse socket fitting to pipe.
- Observe safety precautions.
- Explain how to inspect socket fused joints
- Recognize and react to AOC's.

192-1201 Leakage Survey: Distribution and Transmission

MEA Certificate Numbers **TNG - MEA1431**
KNT - MEA1153
PEF – MEA149, MEA150

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers how to prepare for and perform leak surveys.

Objectives

- Identify the types of facilities and leakage surveys required.
- List and describe the methods of leakage survey.
- Describe how to perform specified leakage survey equipment checks.
- Identify and describe general procedures for performing leakage surveys on gas systems.
- Explain how to operate leakage detection equipment.
- Explain how to perform leakage survey methods.
- Describe how to properly perform outside leakage investigation, pinpointing, & grading.
- Describe how to properly perform system patrolling in conjunction with leakage survey.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1202 Outside Gas Leakage Investigation, Pinpointing, and Grading

MEA Certificate Numbers **TNG - MEA1432**
KNT - MEA1154
PEF - MEA151

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers responding to and investigating a reported gas leak, precautionary actions in hazardous situations, outside leak investigation procedure, visual inspection and identification of buried service locations, and how to pinpoint and classify leaks.

Objectives

- Describe how to respond to and investigate a reported gas leakage.
- Explain how to investigate suspected gas leakage found during surveys, patrols, or by other means.
- Identify equipment operation checks in accordance with manufacturer's instructions.
- Take precautionary actions in hazardous leakage situations.
- Initiate prevention of accidental ignition.
- Explain how to perform inside leakage investigation.
- Visually inspect area of leakage.
- Identify location of buried pipelines in area of leakage Identify location of foreign facilities in area of leakage.

- Describe how to pinpoint leaks.
- Explain how to grade leaks.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1203 Inside Gas Leakage Investigation

MEA Certificate Number **TNG - MEA1433**
KNT - MEA1155
PEF - MEA152

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers performing inside gas leakage investigations, checking for migration of gas at entry points, initiating precautionary actions, and verifying inside service line and fuel line integrity.

Objectives

- Describe how to perform inside gas leakage investigation until the leakage is found or no leakage is confirmed.
- Explain how to check for migration of gas at entry points.
- Describe service line penetration.
- Explain how to initiate precautionary actions at any time that hazardous gas leakage is found.
- Describe how to perform an inside leakage survey.
- Identify how to verify inside service line and fuel line integrity.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1301 Leak & Strength Test- Service Lines, Mains, and Transmission Lines

MEA Certificate Numbers **TNG - MEA1434**
KNT - MEA1156
PEF - MEA153, MEA154, MEA155, MEA1126

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers leak and strength testing of service lines, mains, and transmission lines.

Objectives

- Identify leak and strength test requirements and methods for service lines, mains, and transmission lines.
- Describe how to isolate a segment of pipeline to be tested.
- Explain how to test a pipeline segment using a gaseous medium.
- Describe how to hydrostatically test a pipeline segment using water as a test medium.
- Explain how to remove a segment of pipeline from isolation after testing.
- Describe how to place a pipeline segment in service.

- Identify how to test final connections.

192-1401 Abandonment or Inactivation of Facilities

MEA Certificate Numbers **TNG - MEA1435**
KNT - MEA1157
PEF - MEA156

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers some of the basic requirements for deactivating and abandoning pipelines, including cast iron and steel. Disconnecting piping from a gas system, purging gas and liquids, sealing open outlets in an abandoned pipe, removal of above ground facilities, and monitoring for corrosion will be covered.

Objectives

- Describe how to abandon pipelines, service lines, and pipeline facilities.
- Identify how to make pipelines and service lines inactive.

192-1402 Backfilling

MEA Certificate Numbers **TNG - MEA1436**
KNT - MEA1158
PEF - MEA157

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers backfilling steps and requirements, compaction basics, and support and protection of facilities during backfilling.

Objectives

- State the requirements for backfilling.
- Evaluate backfill material.
- Describe how to support and brace pipe during backfilling.
- Identify cleanup and restoration tasks.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1403 Installation of Steel Pipe – Field Bends

MEA Certificate Numbers **TNG - MEA1437**
KNT - MEA1159
PEF - MEA158

Continuing Education Unit (CEU) **0.1**

Course Description

In addition to DOT requirements, this course covers how to prepare for and inspect field bends.

Objectives

- Identify bending requirements for steel pipe.
- Describe how to prepare pipe for field bends.
- Explain how to inspect field bends in steel pipe.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1404 Casing Vents and Seals

MEA Certificate Number **TNG - MEA1438**
KNT - MEA1160
PEF - MEA159

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the installation, repair, and maintenance of vents and seals on casing pipe.

Objectives

- Determine the requirements for seals and vent installation.
- Evaluate casing to determine if requirements for vents and seals have been met.
- Identify damage or leaks.
- Explain how to preserve existing casing vents and seals.
- Describe how to install, repair, or maintain casing vents.

192-1405 Underground Clearances

MEA Certificate Numbers **TNG - MEA1439**
KNT - MEA1161
PEF - MEA160

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers minimum requirements for underground clearances.

Objectives

- Know and identify minimum underground clearances for transmission lines, mains, pipe-type or bottle holders, and plastic mains.
- Describe how to evaluate clearances and how to take necessary steps to maintain them.
- Recognize Abnormal Operating Conditions (AOC) and how to take appropriate action.

192-1408 Installation of Plastic Pipe

MEA Certificate Numbers **TNG - MEA1440**
KNT - MEA1162
PEF - MEA161, MEA162, MEA163, MEA164, MEA165, MEA166

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information on plastic pipe storage and handling, site preparation and inspection requirements, and installation and joining methods and procedures.

Objectives

- List site considerations and preparation necessary before installing plastic pipe.
- Describe pre-installation inspection criteria for plastic pipe.
- Describe pipe handling precautions (to avoid damage to plastic pipe).
- Describe the process of joining plastic pipe.
- Describe the process of installing plastic pipe.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1409 Installation of Steel Pipe

MEA Certificate Numbers **TNG - MEA1441**
KNT - MEA1163
PEF - MEA167, MEA168, MEA169, MEA170, MEA171, MEA172

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers installation methods, requirements, and proper handling procedures for steel pipe.

Objectives

- Recognize the methods for steel pipe installation.
- Recognize the requirements for steel pipe installation.
- Describe how to inspect steel pipe for damage.
- Explain how to properly handle steel pipe during installation.
- Describe how to install steel pipe using typical methods: direct burial, driving, boring, and aboveground.
- Identify potential Abnormal Operating Conditions (AOCs).

- Identify methods for reducing stress on pipe: installing and backfilling.

192-1410 Cover – Service Lines, Mains, and Transmission Lines

MEA Certificate Numbers **TNG - MEA1442**
KNT - MEA1164
PEF - MEA173, MEA1127

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers identification of minimum cover requirements, evaluation of cover in the field, preservation and maintenance of minimum cover, restoration of minimum cover, and protection of minimum cover requirements cannot be met or maintained.

Objectives

- Identify minimum cover requirements.
- Evaluate cover if minimum cover requirements are being met.
- Describe how to preserve or maintain minimum cover.
- Describe how to restore, as necessary, minimum cover.
- Describe how to provide, as necessary, for protection where minimum cover requirements cannot be met.

192-1411 Inspection

MEA Certificate Numbers **TNG - MEA1443**
KNT - MEA1165
PEF - MEA174, MEA175

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the criteria for both general and material inspection, and the inspection process for mains and transmission lines.

Objectives

- Identify visual inspection criteria for steel and plastic pipe.
- Describe how to perform an inspection according to inspection criteria.
- Identify abnormal operating conditions.

192-1413 Line Markers

MEA Certificate Numbers **TNG - MEA1444**
KNT - MEA1166
PEF - MEA176

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers line marker requirements, maintaining and preserving line marker, and pipeline right-of-way.

Objectives

- Identify sign specifications.
- Identify line marker requirements.
- Understand exceptions to the rule.
- Identify steps to maintain line markers.
- Identify requirements for above ground pipelines.

192-1414 Pipeline Shutdown, Startup or Pressure Change

MEA Certificate Numbers **TNG - MEA1445**
KNT - MEA1167
PEF - MEA177, MEA178, MEA179, MEA180, MEA181

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers: recognition of safety considerations involved in a pipeline shutdown, startup, or pressure change; how to determine when pipeline shutdown or pressure reduction are required; and operation of pipeline components as required to perform shutdown or pressure change on a pipeline segment.

Objectives

- Determine if a pipeline shutdown or pressure reduction is required.
- Identify methods for pipeline shutdown, startup, and increase or decrease of pressure.
- Describe general procedure requirements and safety considerations.
- Explain preparation requirements for pipeline for shutdown, startup, and pressure change.
- Describe procedures for stopping gas flow and changing pressure.

192-1415 Protection from Hazards

MEA Certificate Numbers **TNG - MEA1446**
KNT - MEA1168
PEF - MEA182

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers how to prepare for hazards, and how to implement the process of preparing for hazards.

Objectives

- List site preparation steps.
- Describe site safety requirements.
- Provide visual inspection tips.
- List the hazards associated with the fusion of plastic pipe.
- List precautions you can take to control static electricity on plastic pipe.
- Explain what can be done to avoid burns and electrical hazards.

192-1417 Protection when Minimum Cover Not Met

MEA Certificate Numbers **TNG - MEA1447**
KNT - MEA1169
PEF - MEA183

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information on protection methods, and trench cover.

Objectives

- Identify minimum cover requirements.
- Identify additional protection methods when minimum cover cannot be met.
- Describe installation of additional protection methods.
- Identify Abnormal Operating Conditions.

192-1418 Purging

MEA Certificate Numbers **TNG - MEA1448**
KNT - MEA1170
PEF - MEA184, MEA185

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information on purging of natural gas facilities, into and out of service.

Objectives

- Safely perform all fundamentals associated with purging.
- Purge with natural gas, air, and inert gas.
- Properly vent discharge.
- Test for a complete purge**.**

192-1419 Uprating: Reinforce or Anchor Offsets, Bends, and Dead-ends

MEA Certificate Numbers **TNG - MEA1449**
KNT - MEA1171
PEF - MEA186, MEA187

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the methods and process of reinforcing or anchoring pipe offsets, bends, and dead ends. Uprating a natural gas system increases the internal pressure in the piping system. This has the effect of adding increased forces where piping changes direction, or where it dead ends at a cap or tee. If the system is joined using compression couplings, it is critical these fittings are restrained in a manner that will allow them to pull apart.

Objectives

- Identify methods for reinforcing or anchoring offsets, bends, and dead ends.
- Identify Abnormal Operating Conditions.

192-1421 Installation of Steel Pipe – Repair of Imperfections or Damage

MEA Certificate Numbers **TNG - MEA1450**
KNT - MEA1172
PEF - MEA188, MEA189

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the repair of steel pipe imperfections or damage.

Objectives

- Identify factors that determine required repair.
- Identify methods and requirements of repair.
- Describe methods of repair.

192-1422 Segment Repair, Replacement, Etc.

MEA Certificate Numbers **TNG - MEA1451**

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers segment repair and replacement of service lines, mains, and transmission lines.

Objectives

- Describe procedures for inspecting pipeline segments for damage.
- Describe signs of external corrosion.
- Describe pipeline shutdown, purging and replacement activities.
- Line inspection requirements for repairs.
- Explain how to perform leak and strength tests.
- Explain how to monitor internal corrosion on pipeline segments.
- List key elements necessary to safely place a pipeline segment back in service.

192-1424 Support and Anchor Maintenance – Exposed Pipeline

MEA Certificate Numbers **TNG - MEA1452**
KNT - MEA1174
PEF - MEA191

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements and maintenance of supports, expansion joints, and anchors on exposed pipelines.

Objectives

- Identify supports, expansion joints, and anchor requirements for exposed pipelines.
- Describe proper procedures for installation of supports, expansion joints, and anchors.
- Evaluate existing supports, expansion joints, and anchors and identify AOCs.
- Describe repair procedures for supports, expansion joints, and anchors.

192-1425 Tapping Cast and Ductile Iron Pipe

MEA Certificate Numbers **TNG - MEA1453**
KNT - MEA1175
PEF - MEA192

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers: - Preparation necessary in tapping and stopping cast and ductile iron pipe - Process of stopping and tapping cast and ductile iron pipe - Testing and reacting to Abnormal Operating Conditions (AOCs)

Objectives

- Identify conditions and requirements that must be observed before tapping and stopping cast and ductile iron pipe.
- State process and equipment used when tapping and stopping cast and ductile iron pipe.
- Explain how to perform a leak test and recognize Abnormal Operating Conditions (AOCs).

192-1426 Tapping Steel and Plastic Pipe

MEA Certificate Numbers **TNG - MEA1454**
KNT - MEA1176
PEF - MEA193, MEA194

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers preparation steps for tapping steel and plastic pipe, safety procedures, equipment inspection, evaluating operating conditions, requirements for connecting equipment to main, and general installation of mechanical and bag stoppers.

Objectives

- Describe how to evaluate and identify tap location.
- Describe how to verify pressure of pipeline segment.
- Describe how to select appropriate fittings.
- Explain how to safely perform tapping and stopping procedures.
- Identify Abnormal Operating Conditions.

192-1427 Valve Maintenance

MEA Certificate Numbers **TNG - MEA1455**
KNT - MEA1177
PEF - MEA195, MEA196

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers inspection and maintenance of transmission line and distribution line valves.

Objectives

- Identify valves to be maintained.
- Identify requirements and steps to perform: valve inspection, partial operation, maintenance and documentation.
- Remove/return a valve from/to service as required.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1430 Internal Sealing – Cast Iron and Ductile Iron Segments

MEA Certificate Numbers **TNG - MEA1456**
KNT - MEA1178
PEF - MEA197

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements and procedure for internal sealing.

Objectives

- Identify internal sealing requirements.
- Describe proper procedures for internal sealing of pipe and joints.

192-1431 Segment Removal

MEA Certificate Numbers **TNG - MEA1457**
KNT - MEA1179
PEF - MEA198

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements for disconnecting pipeline segments, and removal of segments without damaging facilities.

Objectives

- Identify requirements for disconnection of a pipeline segment.
- Remove the segment without damaging facilities that are to remain in service.
- Recognize Abnormal Operating Conditions (AOCs).

192-1432 Leak Clamps and Sleeves

MEA Certificate Numbers **TNG - MEA1458**
KNT - MEA1180
PEF - MEA199, MEA1118

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers preparation and installation of leak clamps and sleeves.

Objectives

- Identify situations where leak clamp or sleeve repairs may be required.
- Describe proper procedures for installation of leak clamps and sleeves.

192-1434 Bypassing Regulator Stations & Meter Sets

MEA Certificate Numbers **TNG - MEA1464**
KNT – MEA1463

Continuing Education Unit (CEU) **0.1**

Course Description

This course describes when and how to perform a bypass of pipelines and regulator stations.

Objectives

- Describe bypassing procedures for pipelines, district regulator stations and town border stations.

192-1435 Bypassing Gas Mains and Services

MEA Certificate Number **TNG - MEA1466**
KNT – MEA1465

Continuing Education Unit (CEU) **0.1**

Course Description

This course discusses when and how to perform a bypass on a natural gas main or service.

Objectives

- Evaluate the need to perform a bypass.
- Identify the necessary tools and material required to perform a bypass.
- Describe the proper procedure for performing a bypass.
- List required action steps to avoid potential problems.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1436 Working with Blowing Gas

MEA Certificate Numbers **TNG - MEA1468**
KNT – MEA1467

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides an overview of the dangers of blowing gas, information on protection methods to protect rescuers and repairmen from damage, discusses correct response to a blowing gas situation, and required documentation.

Objectives

- Identify ignition sources.
- Identify proper response procedures.
- Identify notification requirements.
- Develop and/or recognize an emergency response plan.
- Describe methods for controlling the flow of gas.
- Recognize appropriate protective equipment, including FR clothing and respirators.
- Describe solutions for necessary excavation and repairs.
- Recognize the follow-up steps resulting from blowing gas situations.

192-1437 Launching-Receiving Pigs for Lines In-Service

MEA Certificate Numbers **TNG – MEA11989**
KNT – MEA11988

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers pipeline pigging operations, practices, and equipment used in launching and receiving pigs for lines in-service in order to clean, inspect, batch and plug pipelines for effective and efficient operation.

Objectives

- Perform pipeline pigging components.
- Recognize operator responsibilities.

- Implement certain pigging activities.
- Recognize and react to abnormal operating procedures.

192-1501 Odorization – Mains and Transmission Lines

MEA Certificate Numbers **TNG – MEA1471**
KNT – MEA1181
PEF – MEA1101, MEA1102

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the basics of odorization, including how to evaluate, preserve and maintain the correct concentration of odorant within a gas delivery system.

Objectives

- Perform periodic gas sampling for proper concentration of odorant.
- Perform a sniff test.
- Evaluate odorizer.
- Maintain odorizer.
- Complete documentation as required.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-1802 Vault Maintenance

MEA Certificate Numbers **TNG - MEA1472**
KNT - MEA1182
PEF – MEA1103

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers vault maintenance requirements, inspection procedures, entry/exit procedures, and potential hazards.

Objectives

- Describe vault entry and exit procedure.
- Describe vault inspection and maintenance requirements.
- Identify of Abnormal Operating Conditions**.**

192-1803 Pressure Regulating – Limiting, Relief, Relief Device – Operation - Maintenance

MEA Certificate Numbers **TNG - MEA1473**
KNT - MEA1183
PEF - MEA1104

Continuing Education Unit (CEU) **0.1**

Course Description

This course will cover installations commonly referred to as "station" or "regulator station" installations. (Customer installations are covered in course 192-0702.)

Objectives

- Identify installation requirements for pressure regulating, limiting, and relief devices.
- Identify capacity requirements.
- Inspect and test devices.
- Maintain associated valves.
- Perform required adjustments.
- Recognize and react to Abnormal Operating Conditions (AOCs).

192-2010 Service Line Replacement

MEA Certificate Numbers **TNG - MEA1475**
KNT - MEA1184
PEF - MEA1105, MEA1106

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the requirements for installing service lines, including: installation into buildings, under buildings, service line connections to a main, and locating service line valves.

Objectives

- Describe safe installation and maintenance procedures.
- Define minimum clearance requirements.
- Describe methods that may be used to protect from corrosion and gas leaks.
- Identify Abnormal Operating Conditions.

192-2011 Prevention of Accidental Ignition

MEA Certificate Numbers **TNG - MEA1474**
KNT - MEA1185
PEF - MEA1107

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers the recognition and prevention of accidental ignition of gas in any structure or area where the presence of gas constitutes a fire or explosion hazard.

Objectives

- List the requirements to prevent accidental ignition.
- Recognize hazardous amounts of gas.
- Identify potential sources of ignition.
- Identify considerations before venting, blowing down, or purging.
- Recognize accidental ignition potentials.

192-2014 Service Lines Not In Use and Service Discontinuance

MEA Certificate Numbers **TNG - MEA1476**
KNT - MEA1186
PEF - MEA1108

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers abandonment or deactivation of facilities, including: requirements for service lines not in use, requirements for service discontinuance to a customer, isolation of service lines not placed in service, and disconnection of gas piping.

Objectives

- Describe how to isolate and/or discontinue service to customer.
- List Abnormal Operating Conditions (AOC) that may be encountered.
- Describe how to close and lock valves, and install mechanical devices, to prevent gas flow.

192-2301 Uprate Steel Pipeline to Pressure Producing Hoop Stress > = 30% SMYS

MEA Certificate Numbers **TNG - MEA1477**
KNT - MEA1187
PEF - MEA1109

Continuing Education Unit (CEU) **0.1**

Course Description

This course discusses activities to measure and characterize mechanical damage (e.g. dents, gouges, cracks) on installed pipe and components, including investigation to determine the extent of damage and recording data.

Objectives

- Define key uprating terms.
- Describe basic uprating concepts.
- Identify determining factors.
- List required preliminary activities.
- Identify uprating requirements.
- Describe precautions that should be taken to protect employees and the public during uprating.

192-2302 Uprating Pipeline to Pressure Producing Hoop Stress < 30% SMYS

MEA Certificate Numbers **TNG - MEA1478**
KNT - MEA1188
PEF - MEA1110

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers basic uprating terms and concepts, general uprating processes and procedures, and factors to consider in determining the feasibility of uprating a system that will produce a hoop stress of less than 30% of SMYS.

Objectives

- List reasons to uprate a system.
- Describe factors to consider in determining the feasibility of uprating a system.
- Describe the field procedure which must be followed to allow a system to be uprated is system will operate at a Hoop Stress less than 30.

192-2401 Welding

MEA Certificate Numbers **TNG - MEA1479**
KNT - MEA1189
PEF - MEA1111

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers requirements for performing welds, safety precautions, weld area preparation, general repair and removal requirements, and nondestructive testing requirements.

Objectives

- Describe methods to prevent ignition in the welding area.
- Select a qualified welding procedure.
- List steps for preparation of the welding area.
- Describe nondestructive testing.
- Explain repair and removal of defects.

192-2402 Visual Inspection of Welds

MEA Certificate Numbers **TNG - MEA1480**
KNT - MEA1190
PEF - MEA1112

Continuing Education Unit (CEU) **0.1**

Course Description

This course provides information about the preparation required to perform visual inspection of welds.

Objectives

- Describe the visual inspection requirements of welds.
- Identify weld defects.
- Explain required preparation for visual inspection.
- Describe process of visual inspection.

192-2403 Nondestructive Testing of Welds

MEA Certificate Numbers **TNG - MEA1481**
KNT - MEA1191
PEF - MEA1113

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers inspection requirements; identification of welds requiring nondestructive tests; performance of nondestructive test; and repair/removal requirements for defective welds.

Objectives

- Describe visual inspection.
- Explain nondestructive testing.
- Describe weld removal and defect repair.
- Describe visual inspection
- Explain nondestructive testing

192-2405 Miter Joints

MEA Certificate Numbers **TNG - MEA1482**
KNT - MEA1192
PEF - MEA1115

Continuing Education Unit (CEU) **0.1**

Course Description

This course covers preparation requirements for miter joints, and the process of welding miter joints.

Objectives

- Identify miter joint requirements.
- Prepare for miter joint weld

NOTE: The actual performance of welding the joint is covered in a separate course: 192-2401 Welding.

192-2705 Gas Controls

MEA Certificate Numbers	**TNG - MEA1483** **KNT - MEA1193** **PEF - MEA1119**
Continuing Education Unit (CEU)	**0.1**

Course Description

This course will cover the basic function of the Controller, pipeline startup, shutdown, monitoring of pressure flows and manual and remote operation of equipment on the pipeline. The course will also cover potential abnormal operating conditions.

Objectives

- Understand the basic functions of a Gas Controller.
- Describe a pipeline startup.
- Describe a pipeline shutdown.
- Recognize pressures, flows, communications and line integrity, and how to maintain them within allowable limits.
- Identify manual or remote opening and closing of valves or other equipment.
- Explain how to recognize and respond to abnormal conditions.