# Pipeline Safety Inspection Form
# First and Second Half CY - 2008
# S.D.P.U.C.

| | |
|---|---|
| OPERATOR: | INSPECTION UNIT: |
| INSPECTOR(S): | DATE: |
| OPERATOR PERSONNEL: | |
| TYPE OF OPERATOR | |
| OPID | |

## PART 191

**S – Satisfactory N/I – Not Inspected U – Unsatisfactory N/A – Not applicable**

| | REPORTING REQUIREMENTS | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(b)(4) | Are there procedures for gathering data related to incidents in a timely and effective manner? | ☐ | ☐ | ☐ | ☐ |
| §191.5 | Are certain incidents telephonically reported to **NRC**? **(1-800-424-8802)** | ☐ | ☐ | ☐ | ☐ |
| §191.9 and §191.15 | Are incidents reported by telephone followed up with a **30-day** written report? **(RSPA Form 7100.1) – Distribution or (RSPA Form 7100.2) – Transmission and Gathering** | ☐ | ☐ | ☐ | ☐ |
| | Procedure? | | | | |
| §191.11 and §191.17 | Are annual reports submitted to Washington? **(RSPA Form 7100.1-1) – Distribution Systems or (RSPA Form 7100.2-1) – Transmission and Gathering Systems** Give date of last report. | ☐ | ☐ | ☐ | ☐ |
| §191.23 | Is there a procedure for reporting safety related conditions? | | | | |
| | (a) If the operator has reported any safety-related conditions, did he use the proper criteria? | ☐ | ☐ | ☐ | ☐ |
| | (b) Was the report filed within five (**5**) working days of determination and within ten (**10**) working days of discovery? | ☐ | ☐ | ☐ | ☐ |

## PART 192

| | OPERATION & MAINTENANCE PLANS | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(a) | Has the operator prepared a written operating and maintenance plan? | ☐ | ☐ | ☐ | ☐ |
| §192.603(b) | Does the operator keep records necessary to administer the plan? | ☐ | ☐ | ☐ | ☐ |
| §192.603(c) | Are the plans and procedures adequate to provide a reasonable level of safety? | ☐ | ☐ | ☐ | ☐ |
| §192.605(a) | Is the plan reviewed and updated at intervals not exceeding 15 months but at least once each calendar year? **(See records check list)** | ☐ | ☐ | ☐ | ☐ |
| §192.605(a) | Are appropriate parts of the manual kept at locations where operations and maintenance activities are conducted? | ☐ | ☐ | ☐ | ☐ |
| §192.605(b)(3) | Making construction records, maps, & operating history available to appropriate operating personnel? **(See records check list)** | ☐ | ☐ | ☐ | ☐ |
| §192.605(b)(5) | Procedures for starting up and shutting down any part of the pipeline to assure operations within the MAOP plus allowable buildup. | ☐ | ☐ | ☐ | ☐ |
| §192.605(b)(8) | Periodically reviewing the work done by operator personnel to determine the effectiveness, and adequacy of procedures used in normal operations and maintenance and modifying the procedures when deficiencies are found? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.605(b)(9) | Taking adequate precautions in excavated trenches to protect personnel from hazards of unsafe accumulations of vapor or gas, and making available when needed at the excavation, emergency rescue equipment, including breathing apparatus and a rescue harness and line. | ☐ | ☐ | ☐ | ☐ |
| §192.605(b)(10) | Procedures for systematic, routine inspection and pipe-type or bottle-type holders including: | ☐ | ☐ | ☐ | ☐ |
| | (i) Provision for detecting external corrosion before the strength of the container has been impaired. | ☐ | ☐ | ☐ | ☐ |
| | (ii) Periodic sampling and testing of gas in storage must be made to determine the dew point of vapors contained in the stored gas, that if condensed, might cause internal corrosion or interfere with the safe operation of the storage plant; and | ☐ | ☐ | ☐ | ☐ |
| | (iii) Periodic inspection and testing of pressure limiting equipment to determine that it is in a safe operating condition and has adequate capacity. | ☐ | ☐ | ☐ | ☐ |
| §192.605(b)(11) | Procedures for responding promptly to a gas odor inside or near a building, unless covered specifically in the operator's emergency procedures. | ☐ | ☐ | ☐ | ☐ |

| | **EMERGENCY PLANS** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.615<br>§192.605(e) | Does the operator have a written emergency plan? Date Issued: | ☐ | ☐ | ☐ | ☐ |
| §192.615 | Does the plan include the following? | | | | |
| §192.615(a)(1) | (a) Instructions for handling of notices of the events, which require immediate response by the operator? | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(2) | (b) Means of communicating with appropriate public officials regarding possible emergency? | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(3) | (c) Prompt response to each of the following emergencies: | | | | |
| §192.615(a)(3)(I) | (1) Gas detected inside a building | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(3)(ii) | (2) Fire located near a pipeline. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(3)(iii) | (3) Explosion near a pipeline. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(3)(iv) | (4) Natural disaster. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a) Guidance | (5) Damage to buried facilities during excavation activities near buildings. *(Guidance states response plans should outline how these types of emergencies should be assessed for potential hidden and multiple leak locations and underground migration of gas into nearby buildings).* | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(4) | (d) Description of types of personnel, equipment, tools, & material requirements at scene of an emergency. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(5) | (e) Provisions directed towards protecting people first, then property. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(6) | (f) How & where to perform emergency shut-downs or pressure reductions. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(7) | (g) Making safe any actual or potential hazard to life or property. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(8) | (h) Directions for notifying additional public officials required at the emergency scene & coordinating activities with these officials. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(9) | (i) Instructions for restoring service outages after the emergency has been rendered safe. | ☐ | ☐ | ☐ | ☐ |
| §192.615(a)(10) | (j) Provisions for investigating accidents and failures as soon after the emergency as possible. | ☐ | ☐ | ☐ | ☐ |
| | Has the operator made provisions for: | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.615(b)(1) | (a) Furnishing applicable portions of the emergency plan to supervisory personnel who are responsible for emergency action? | ☐ | ☐ | ☐ | ☐ |
| §192.615(b)(2) | (b) Training appropriate employees as to the requirements of the emergency plan. | ☐ | ☐ | ☐ | ☐ |
| §192.615(b)(3) | (c) Review activities following actual or simulated emergencies to determine if they are effective. | ☐ | ☐ | ☐ | ☐ |
| §192.615(c) | Establish mutual liaison with fire, police, and other public officials, such that each is aware of the others resources and capabilities in dealing with gas emergencies. | ☐ | ☐ | ☐ | ☐ |

| | **TEST REQUIREMENTS FOR PIPELINES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.503(d) | Is each non-welded joint used to tie in a test segment leak tested at not less than its operating pressure? | ☐ | ☐ | ☐ | ☐ |
| | **For steel pipelines to be operated at a hoop stress of 30 percent or more of SMYS:** | | | | |
| §192.505(a) | Is each segment strength tested in accordance with this subpart and §192.619? | ☐ | ☐ | ☐ | ☐ |
| §192.505(b) | In Class 1 and Class 2 locations, is each compressor station, regulator station, and measuring station tested to at least Class 3 location test requirements? | ☐ | ☐ | ☐ | ☐ |
| §192.505(c) | Is the pressure at or above test pressure for at least eight hours? | ☐ | ☐ | ☐ | ☐ |
| §192.505(d) | Are components not pressure tested: | | | | |
| §192.505(d)(1) | Certified by the manufacturer that it was tested to the pressure required for the pipeline to which it is being added? | ☐ | ☐ | ☐ | ☐ |
| §192.505(d)(2) | Manufactured under a quality control system that ensures that each item manufactured is at least equal in strength to a prototype and that the prototype was tested to a test pressure required for the pipeline to which it is being added? | ☐ | ☐ | ☐ | ☐ |
| §192.505(d)(3) | The component carries a pressure rating established through applicable ASME/ANSI, MSS specifications, or by unit strength calculations as described in §192.143? | ☐ | ☐ | ☐ | ☐ |
| §192.505(e) | Are fabricated or short sections pressure tested for at least four hours before they are installed, if it is impractical to pressure test after installation? | ☐ | ☐ | ☐ | ☐ |
| | **For pipelines to be operate at a hoop stress less than 30 percent SMYS and at or above 100 p.s.i. gauge.** | | | | |
| §192.507(a) | Does the operator use a test procedure that will ensure discovery of all potentially hazardous leaks in the segment? | ☐ | ☐ | ☐ | ☐ |
| | If the segment is stressed to 20 percent or more of SMYS using natural gas, inert gas, or air; | | | | |
| §192.507(b)(1) | Is a leak test made at a pressure between 100 p.s.i. gauge and the pressure required to produce a hoop stress of 20 percent of SMYS? or | ☐ | ☐ | ☐ | ☐ |
| §192.507(b)(2) | Is the line walked to check for leaks while the hoop stress is held at approximately 20 percent of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.507(c) | Is the pressure maintained at or above the test pressure for at least one hour? | ☐ | ☐ | ☐ | ☐ |
| | **For pipelines (except plastic and service) to operate below 100 p.s.i. gauge.** | | | | |
| §192.509(a) | Does the operator use a test procedure that will ensure discovery of all potentially hazardous leaks in the segment? | ☐ | ☐ | ☐ | ☐ |
| §192.509(b) | Is each main that is to be operated at less than 1 p.s.i. gauge tested to at least 10 p.s.i. gauge? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.509(b) | Is each main that is to be operated at or above 1 p.s.i. gauge tested to at least 90 p.s.i. gauge? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| | **For non-plastic service lines.** | | | | |
| §192.511(a) | If feasible, is the connection to the main included in the test? | ☐ | ☐ | ☐ | ☐ |
| §192.511(b) | Are service lines expected to operate at a pressure of at least 1 p.s.i. gauge but not more than 40 p.s.i. gauge tested at a pressure of not less than 50 p.s.i. gauge? | ☐ | ☐ | ☐ | ☐ |
| §192.511(c) | Are service lines expected to operate at a pressure of more than 40 p.s.i. gauge tested at a pressure of not less than 90 p.s.i. gauge? | ☐ | ☐ | ☐ | ☐ |
| §192.511(c) | Are steel service lines stressed to 20 percent or more of SMYS tested in accordance with §192.507? | ☐ | ☐ | ☐ | ☐ |
| | **For plastic pipelines.** | | | | |
| §192.513(a) | Is each segment of a plastic pipeline tested in accordance with this section? | ☐ | ☐ | ☐ | ☐ |
| §192.513(b) | Does the operator use a test procedure that will ensure discovery of all potentially hazardous leaks in the segment? | ☐ | ☐ | ☐ | ☐ |
| §192.513(c) | Does the operator test to at least **150 percent** of the maximum operating pressure or **50 p.s.i.g.** whichever is greater? | ☐ | ☐ | ☐ | ☐ |
| §192.513(d) | During the test, is the temperature of the pipe not more than 100ºF, or the temperature at which the long term hydrostatic strength has been determined, whichever is greater? | ☐ | ☐ | ☐ | ☐ |
| §192.515(a) | When conducting pressure test is every reasonable precaution taken to protect employees and the general public during the testing whenever the hoop stress of the segment will exceed 50 percent of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.515(b) | Does the operator ensure that the test medium is disposed of in a manner that will minimize damage to the environment? | ☐ | ☐ | ☐ | ☐ |
| §192.517(a) | Is a record with the following information of each test performed under §§192.505 and 192.507 kept for the useful life of the pipeline; | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(1) | (1) The operator's name, the name of the operator's employee responsible for making the test, and the name of any test company. | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(2) | (2) Test medium used. | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(3) | (3) Test pressure | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(4) | (4) Test duration | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(5) | (5) Pressure recording charts, or other record of pressure readings | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(6) | (6) Elevation variations, whenever significant to the test | ☐ | ☐ | ☐ | ☐ |
| §192.517(a)(7) | (7) Leaks and failures noted and there disposition. | ☐ | ☐ | ☐ | ☐ |
| §192.517(b) | Does the operator keep a record of each test required by §§192.509, 192.511, and 192.513 for at least 5 years? | ☐ | ☐ | ☐ | ☐ |

| | **FIELD REPAIRS - TRANSMISSION LINES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b)(1) | Procedures for field repair of transmission pipelines. | ☐ | ☐ | ☐ | ☐ |
| | **Record keeping** | | | | |
| §192.709(a) | Are records of the date, location, and description of each repair made to pipe retained for as long as the pipe remains in service? | ☐ | ☐ | ☐ | ☐ |
| | **General requirements for repair procedures** | | | | |
| §192.711(a) | Are immediate temporary measures taken to protect the public whenever a leak, imperfection, or damage is found that impairs the serviceability is found on a segment of steel transmission line **operating at or over 40 percent of SMYS** and it is not feasible to make a permanent repair at the time of discovery? | ☐ | ☐ | ☐ | ☐ |
| §192.711(a)(2) | Are permanent repairs made as soon as feasible? | ☐ | ☐ | ☐ | ☐ |
| §192.711(b) | Are weld patches used as a means of repair only as provided in §192.717(b)(3)? | ☐ | ☐ | ☐ | ☐ |

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| | **Are permanent field repair of imperfections and damages for pipelines operating above 40% SMYS by one of the following method?** | | | | |
| §192.713(a)(1) | (a) Cut out a cylindrical piece of pipe and replace with a pipe of equal or greater design strength. | ☐ | ☐ | ☐ | ☐ |
| §192.713(a)(2) | (b) Repaired by a method that reliable engineering tests and analysis show can permanently restore the serviceability of the pipe. | ☐ | ☐ | ☐ | ☐ |
| §192.713(b) | Are operating pressures kept to a safe level during repair operations? | ☐ | ☐ | ☐ | ☐ |
| | **Permanent field repair of welds.** | | | | |
| §192.715 | If a weld is found to be unacceptable under **§192.241(c),** the weld must be repaired by: | ☐ | ☐ | ☐ | ☐ |
| §192.715(a) | (a) Take the line out of service and repair in accordance with **§192.245.** | ☐ | ☐ | ☐ | ☐ |
| | (1) Are cracks longer than 8% of the weld length removed? | ☐ | ☐ | ☐ | ☐ |
| | (2) For each weld that is repaired, is the defect removed down to clean metal and is the pipe preheated if conditions demand it? | ☐ | ☐ | ☐ | ☐ |
| | (3) Are the repairs inspected to ensure acceptability? | ☐ | ☐ | ☐ | ☐ |
| | (4) If additional repairs are required, are they done in accordance with qualified written welding procedures to assure minimum mechanical properties are met? | ☐ | ☐ | ☐ | ☐ |
| §192.715(b) | (b) If the line remains in service, is the weld repaired in accordance with **§192.245** if: | | | | |
| | (1) The weld is not leaking. | ☐ | ☐ | ☐ | ☐ |
| | (2) The pressure is reduced to produce a stress that is **20%** of **SMYS** or less; and | ☐ | ☐ | ☐ | ☐ |
| | (3) Grinding of the defective area can be limited so that at least 1/8-inch thickness in the pipe weld remains. | ☐ | ☐ | ☐ | ☐ |
| §192.715(b) | (c) If the weld cannot be repaired in accordance with **(a)** or **(b)** above, is a full encirclement welded split sleeve of appropriate design must be installed? | ☐ | ☐ | ☐ | ☐ |
| | **Permanent field repair of leaks.** | | | | |
| | Are permanent field repair of leaks made by - | | | | |
| §192.717(a) | (a) Replace by cutting out a cylinder and replace with pipe similar or of greater design strength; or | ☐ | ☐ | ☐ | ☐ |
| §192.717(b)(1) | (b) Install a full encirclement welded split sleeve of appropriate design unless the pipe is joined by mechanical couplings or operates at less than **40% of SMYS.** | ☐ | ☐ | ☐ | ☐ |
| §192.717(b)(2) | (c) A leak due to a corrosion pit may be repaired by installing a bolt on leak clamp, or. | ☐ | ☐ | ☐ | ☐ |
| §192.717(b)(3) | (d) If pipe is not more than 40,000 p.s.i. SMYS, the pits may be repaired by fillet welding a steel plate (The plate must have rounded corners and the same thickness or greater than the pipe, and not more than one-half of the diameter of the pipe in size). | ☐ | ☐ | ☐ | ☐ |
| §192.717(b)(4) | (e) Mechanically apply a full encirclement split sleeve of appropriate design, if the pipeline is submerged in inland navigable waters. | ☐ | ☐ | ☐ | ☐ |
| §192.717(b)(5) | (f) Apply a method that reliable engineer tests and analyses show can permanently restore the serviceability of the pipe. | ☐ | ☐ | ☐ | ☐ |

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| | **Testing of repairs** | | | | |

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| §192.719(a) | Is the replacement pipe tested to the requirement of a new line installed in the same location? **(The pipe may be tested before it is installed).** | ☐ | ☐ | ☐ | ☐ |
| §192.719(b) | Is each repair made by welding in accordance with §§192.713, 192.715, and 192.717 examined in accordance with §192.241? | ☐ | ☐ | ☐ | ☐ |

| | **TEST REQUIREMENTS FOR REINSTATING SERVICE LINES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.725? | ☐ | ☐ | ☐ | ☐ |
| §192.725(a) | (a) Does the operator test reinstated service lines in the same manner as new lines? | ☐ | ☐ | ☐ | ☐ |
| §192.725(b) | (b) Is each service line that is temporarily disconnected tested from the point of disconnection? | ☐ | ☐ | ☐ | ☐ |

| | **WELDING** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| | **General** | | | | |
| §192.225(a) | Is welding performed by a qualified welder? | ☐ | ☐ | ☐ | ☐ |
| §192.225(a) | Are the quality of test welds used to qualify a procedure determined by destructive testing? | ☐ | ☐ | ☐ | ☐ |
| §192.225(b) | Are welding procedure(s), including results of qualifying test, recorded in detail? | ☐ | ☐ | ☐ | ☐ |
| | **Qualification of welders** | | | | |
| §192.227 | (a) Welders must be qualified by: | | | | |
| §192.227(a) | (1) Section 6 of API 1104 **(19th ed., 1999, including its October 31, 2001 errata)** | ☐ | ☐ | ☐ | ☐ |
| | (2) Section IX of ASME Boiler and Pressure Code **(2001)** | ☐ | ☐ | ☐ | ☐ |
| §192.227(b) | Welders may qualify under Section I of Appendix C for pipe to be operated at a hoop stress of less than 20% of SMYS. | ☐ | ☐ | ☐ | ☐ |
| | **Limitations on welders** | | | | |
| §192.229(a) | To weld on compressor station piping and components, a welder must successfully complete a destructive test. | ☐ | ☐ | ☐ | ☐ |
| §192.229(b) | Welder must have used the welding process within the preceding **six** months. | ☐ | ☐ | ☐ | ☐ |
| | Welders qualified under §192.227(a); | | | | |
| §192.229(c)(1) | May not weld on pipe operated at a pressure that produces a hoop stress of 20 percent or more of SMYS unless within the preceding 6 months the welder has had one weld tested and found acceptable under section 6 or 9 of API Standard 1104, *Exception: A welder qualified under an earlier addition may weld but not requalify under that earlier addition.* | ☐ | ☐ | ☐ | ☐ |
| §192.229(c)(1) | Alternatively, do welders maintain an ongoing qualification status by performing welds tested and found acceptable under section 6 or 9 of API 1104 at least twice each calendar year, but at intervals not exceeding 7-1/2 months? | ☐ | ☐ | ☐ | ☐ |
| §192.229(c)(2) | May not weld on pipe to be operated at a pressure less than 20 percent of SMYS unless the welder is tested in accordance with §192.229(c)(1) or requalifies under §192.229(d)(1) or (d)(2). | ☐ | ☐ | ☐ | ☐ |
| | Welders qualified under §192.227(b); | | | | |
| §192.229(d)(1) | May not weld unless within the preceding 15 calendar months, but at least once each calendar year, has requalified under §192.227(b), or | ☐ | ☐ | ☐ | ☐ |
| §192.229(d)(2)(i) | Within 7-1/2 months but at least twice per year had a production weld pass a qualifying test. | ☐ | ☐ | ☐ | ☐ |
| §192.229(d)(2)(ii) | For welders who work only on service lines 2 inches or smaller in diameter, two sample welds tested and found acceptable in accordance with the test in section III of Appendix C. | ☐ | ☐ | ☐ | ☐ |

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| | **Other considerations** | | | | |
| §192.231 | Does the operator require that welding operations be protected from weather conditions that would impair the quality of the weld? | ☐ | ☐ | ☐ | ☐ |
| §192.233(a) | Are miter joints on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent or more of SMYS restricted to no more than 3 degrees of deflection? | ☐ | ☐ | ☐ | ☐ |
| §192.233(b) | Are miter joints on steel pipe to be operated at a pressure that produces a hoop stress of less than 30 but more than 10 percent of SMYS restricted to no more than 12-1/2 degrees of deflection and must be a distance of one pipe diameter away or more from any other miter joint, as measured from the crotch of each joint? | ☐ | ☐ | ☐ | ☐ |
| §192.233(a) | Are miter joints on steel pipe to be operated at a pressure that produces a hoop stress of 10 percent or less of SMYS restricted to less than 90 degrees of deflection? | ☐ | ☐ | ☐ | ☐ |
| §192.235 | Are weld surfaces aligned, clean, and free of any material that may be detrimental to the weld? | ☐ | ☐ | ☐ | ☐ |
| | **Inspection and test of welds** | | | | |
| | Each weld must be visually inspected by an individual qualified by appropriate training and experience to ensure: | | | | |
| §192.241(a)(1) | (a) Compliance with the welding procedure. | ☐ | ☐ | ☐ | ☐ |
| §192.241(a)(2) | (b) Acceptability of weld is in accordance with Section 9 of API 1104. | ☐ | ☐ | ☐ | ☐ |
| | Are welds on pipelines to be operated at a pressure that produces a hoop stress of more than 20 percent of SMYS nondestructively tested in accordance with §192.243, except welds that are visually inspected and approved by a qualified welding inspector? if: | | | | |
| §192.241(b)(1) | (1) The pipe has a nominal diameter of less than 6 inches; or | ☐ | ☐ | ☐ | ☐ |
| §192.241(b)(2) | (2) The pipeline is operated at less than 40 percent of SMYS and the welds are so limited in number that nondestructive testing is impractical. | ☐ | ☐ | ☐ | ☐ |
| | Nondestructive testing | | | | |
| §192.243(a) | Is nondestructive testing performed by a process other than trepanning that clearly indicates defects that may affect the integrity of the weld? | ☐ | ☐ | ☐ | ☐ |
| §192.243(b)(1) | Is nondestructive testing of welds performed in accordance with written procedures? | ☐ | ☐ | ☐ | ☐ |
| §192.243(b)(2) | Is nondestructive testing performed by persons trained and qualified in the qualified procedures and with the equipment employed in testing? | ☐ | ☐ | ☐ | ☐ |
| §192.243(c) | Are procedures established for the proper interpretation of each nondestructively tested weld to ensure acceptability under §192.241(c)? | ☐ | ☐ | ☐ | ☐ |
| | When nondestructive testing is required under §192.241(b), are the following percentages of butt welds tested: | | | | |
| §192.243(d)(1) | (1) In Class 1 locations, at least 10 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(d)(2) | (2) In Class 2 locations, at least 15 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(d)(3) | (3) In Class 3 and 4 locations ,100 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(d)(3) | (4) Crossings of major or navigable rivers, 100 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(d)(3) | (5) Within railroad or public rights-of-way, including tunnels, bridges, and overhead road crossings, 100 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(d)(4) | (6) At pipeline tie-ins, including replacement sections, 100 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.243(e) | Is a sample of each welders work for each day nondestructively tested when nondestructive testing is required under §192.241(b)? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.243(f) | Are records showing by milepost, engineering station, or geographic feature, the number of girth welds made, the number tested, the number rejected, and the disposition of the rejects retained for the life of the pipeline? | ☐ | ☐ | ☐ | ☐ |

| | **REPAIR OR REMOVAL OF WELD DEFECTS** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.245(a) | Is each weld that is unacceptable under §192.241(c) removed or repaired? | ☐ | ☐ | ☐ | ☐ |
| §192.245(b) | Is each weld that is repaired have the defect removed down to sound metal, and is the segment to be repaired preheated if conditions exist which would adversely affect the quality of the weld repair? After repair, is the weld inspected and found acceptable? | ☐ | ☐ | ☐ | ☐ |
| §192.245(c) | Is the repair of a crack or any defect in a previously repaired area done in accordance with a written weld repair procedure, qualified under **§192.225?** | ☐ | ☐ | ☐ | ☐ |
| §192.245(c) | Does the repair procedure provide that the minimum mechanical property specified in the original weld procedure be met upon completion of the final weld repair? | ☐ | ☐ | ☐ | ☐ |

| | **JOINING OF PIPELINE MATERIALS OTHER THAN BY WELDING** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| | **General** | | | | |
| §192.273(b) | Is each joint made in accordance with written procedures that have been proved by test or experience to produce strong gas-tight joints? | ☐ | ☐ | ☐ | ☐ |
| §192.273(c) | Is each joint inspected to ensure compliance? | ☐ | ☐ | ☐ | ☐ |
| | **Plastic Pipelines** | | | | |
| §192.281(a) | Is each plastic pipe joint left undisturbed until it has set? | ☐ | ☐ | ☐ | ☐ |
| §192.281(b) | *Solvent cement joints.* | | | | |
| §192.281(b)(1) | Are the mating surfaces of the joint clean, dry, and free of material that may be detrimental to the joint? | ☐ | ☐ | ☐ | ☐ |
| §192.281(b)(2) | Does the solvent cement conform to ASTM Designation: D 2513? | ☐ | ☐ | ☐ | ☐ |
| §192.281(b)(3) | Does the procedure prohibit the use of heat to accelerate the setting of the cement? | ☐ | ☐ | ☐ | ☐ |
| §192.281(c) | *Heat-fusion joints.* | | | | |
| §192.281(c)(1) | Are butt-fusion joints joined by a device that holds the heater element square to the ends of the piping, compresses the heated ends together, and holds the pipe in proper alignment while the plastic hardens? | ☐ | ☐ | ☐ | ☐ |
| §192.281(c)(2) | Are socket heat-fusion joints joined by a device that heats the mating surfaces of the joint uniformly and simultaneously to essentially the same temperature? | ☐ | ☐ | ☐ | ☐ |
| §192.281(c)(3) | Are electrofusion joints joined utilizing the equipment and techniques of the fitting manufacturer or equipment and techniques shown, by testing joints to the requirements of §192.283(a)(1)(iii), to be at least equivalent to those of the fittings manufacturer? | ☐ | ☐ | ☐ | ☐ |
| §192.281(c)(4) | Does the procedure prohibit the application of heat with a torch or other open flame? | ☐ | ☐ | ☐ | ☐ |
| §192.281(d) | *Adhesive joints.* | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.281(d)(1) | Does the adhesive conform to ASTM Designation: D 2517? | ☐ | ☐ | ☐ | ☐ |
| §192.281(d)(2) | Are the materials and adhesive compatible with each other? | ☐ | ☐ | ☐ | ☐ |
| §192.281(e) | *Mechanical joints.* | | | | |
| §192.281(e)(1) | Is the gasket material in the coupling compatible with the plastic? | ☐ | ☐ | ☐ | ☐ |
| §192.281(e)(2) | Is a rigid tubular stiffener, other than a split tubular stiffener, used in conjunction with the coupling? | ☐ | ☐ | ☐ | ☐ |
| §192.283 | *Qualifying joining procedures.* | | | | |
| §192.283(a) | Are heat fusion, solvent cement, and adhesive joints qualified by subjecting specimen joints to the following tests: | | | | |
| §192.283(a)(1)(i) | (a) For thermoplastic pipe, the burst test requirements of paragraph 6.6 (Sustained Pressure Test) or paragraph 6.7 (Minimum Hydrostatic Burst Pressure (Quick Burst)) of ASTM D 2513. | ☐ | ☐ | ☐ | ☐ |
| §192.283(a)(1)(ii) | (b) For thermosetting plastic pipe, the burst test requirements of paragraph 8.9 (Sustained Static Pressure Test) or paragraph 8.8 (Minimum Hydrostatic Burst Pressure) of ASTM D 2517. | ☐ | ☐ | ☐ | ☐ |
| §192.283(a)(1)(iii) | (c) For electrofusion fittings for PE pipe and tubing, the burst test requirements of paragraph 9.2 (Sustained Pressure Test), paragraph 9.1 (Minimum Hydraulic Burst Pressure Test), paragraph 9.3 (Tensile Strength Test), or paragraph 9.4 (Joint Integrity Tests) of ASTM F1055. | ☐ | ☐ | ☐ | ☐ |
| §192.283(a)(2) | For lateral pipe connections made at right angles, does the failure initiate outside the joint area when force is applied the lateral pipe until failure occurs? | ☐ | ☐ | ☐ | ☐ |
| §192.283(a)(3) | For nonlateral pipe connections, does the operator follow the tensile test requirements of ASTM D 638, except the test may be conducted at ambient temperature and humidity, and does the specimen elongate no less than 25 percent or failures initiate outside the joint area? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b) | Are mechanical joints qualified by subjecting five mechanical plastic pipe joints to the following tests: | | | | |
| §192.283(b)(1) | Is an apparatus used for the test as specified in ASTM D 638? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(2) | Is the specimen of such length that the distance between the grips of the apparatus and the end of stiffener does not affect the joint strength? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(3) | Is the speed of the test 0.20 in. per minute, plus or minus 25 percent? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(4) | For pipe specimens less than 4 inches in diameter, does the pipe yield to an elongation of no less than 25 percent or failure initiates outside the joint area? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(5) | For pipe specimens 4 inches in diameter and larger, is the pipe subjected to a tensile stress equal to or greater than the maximum thermal stress that would be produced by a temperature change of 100ºF or until the pipe is pulled from the fitting? (If the pipe pulls from the fitting, the lowest value of the five test results or the manufacturer's rating, whichever is lower must be used in the design calculations for stress). | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(6) | Is each specimen that fails at the grips retested using new pipe? | ☐ | ☐ | ☐ | ☐ |
| §192.283(b)(7) | Do results obtained pertain only to the specified outside diameter, and the material of the pipe tested, except that testing of a heavier wall pipe may be used to qualify pipe of the same material but with a lesser wall thickness? | ☐ | ☐ | ☐ | ☐ |
| §192.283(c) | Is a copy of each written procedure being used for joining plastic pipe available to the persons making and inspecting joints? | ☐ | ☐ | ☐ | ☐ |
| | *Qualifying persons to make joints.* | | | | |
| §192.285(a) | Persons must be qualified to make joints under the applicable joining procedure by: | | | | |
| §192.285(a)(1) | (a) Appropriate training or experience in the use of the procedure | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.285(a)(2) | (b) Making specimen joint from pipe sections joined according to the procedure that passes inspection and test as follows: | | | | |
| §192.285(a)(2) | (1) Is the specimen joint visually examined during and after assembly or joining and found to have the same appearance as a joint or photographs of a joint that is acceptable under the procedure? And | ☐ | ☐ | ☐ | ☐ |
| | *For Heat Fusion, Solvent Cement, or Adhesive Joints* | | | | |
| §192.285(a)(2)(i) | (2) Is the specimen tested under any of the test methods listed under §192.283(a)? | ☐ | ☐ | ☐ | ☐ |
| §192.285(a)(2)(ii) | (A) Examined by ultrasonic inspection and found not to contain flaws that would cause failure; or | ☐ | ☐ | ☐ | ☐ |
| §192.285(a)(2)(iii) | (B) Cut into at least three longitudinal straps, each of which is: | | | | |
| §192.285(a)(2)(iii)(A) | (i) Visually examined and found not to contain voids or discontinuities on the cut surfaces of the joint area; and | ☐ | ☐ | ☐ | ☐ |
| §192.285(a)(2)(iii)(B) | (ii) Deformed by bending, torque, or impact, and failure does not initiate in the joint area. | ☐ | ☐ | ☐ | ☐ |
| | *Inspection of joints* | | | | |
| §192.287 | Is each person that inspects joints in plastic pipe qualified by appropriate training or experience in evaluating the acceptability of plastic pipe joints? | ☐ | ☐ | ☐ | ☐ |
| | **Cast Iron Pipe** | | | | |
| §192.275(a) | Is each caulked bell and spigot joint sealed with mechanical leak clamps? | ☐ | ☐ | ☐ | ☐ |
| §192.275(b) | Does each mechanical joint have a gasket made of resilient material as the sealing medium and is the gasket suitably confined and retained under compression by a separate gland or follower ring? | ☐ | ☐ | ☐ | ☐ |
| §192.275(c) | Is joining cast iron pipe by threaded joints prohibited? | ☐ | ☐ | ☐ | ☐ |
| §192.275(d) | Is joining cast iron pipe by brazing prohibited? | ☐ | ☐ | ☐ | ☐ |
| | **Ductile Iron Pipe** | | | | |
| §192.277(a) | Is joining ductile iron pipe by threaded joints prohibited? | ☐ | ☐ | ☐ | ☐ |
| §192.277(b) | Is joining ductile iron pipe by brazing prohibited? | ☐ | ☐ | ☐ | ☐ |
| | **Copper Pipe** | | | | |
| §192.279 | Is joining copper pipe by threaded joint prohibited except for joining screw fittings or valves if the wall thickness is equivalent to the comparable size of Schedule 40 or heavier wall pipe listed in Table C1 of ASME/ANSI B16.5? | ☐ | ☐ | ☐ | ☐ |

| | **INSPECTION & REPAIR OF MATERIALS** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.307 | Is each length of pipe and other components visually inspected at the site of installation to ensure that it has not sustained any visually determinable damage? | ☐ | ☐ | ☐ | ☐ |
| §192.309(a) | Is each imperfection or damage to steel pipe that impairs the serviceability repaired or removed? | | | | |
| §192.309(a)(1) | (1) If the repair is made by grinding, is the remaining wall thickness equal to the minimum thickness required by the tolerances in the specification to which the pipe was manufactured? Or | ☐ | ☐ | ☐ | ☐ |
| §192.309(a)(2) | (2) If the repair is made by grinding, is the remaining wall thickness equal to the nominal wall thickness required for the design pressure of the pipeline? | ☐ | ☐ | ☐ | ☐ |
| §192.309(b) | Are each of the following dents removed from steel pipe to be operated at a pressure that produces a hoop stress of 20 percent, or more of SMYS, unless the dent is repaired by a method that reliable engineering tests and analyses show can permanently restore the serviceability of the pipe? | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.309(b)(1) | (1) A dent that contains a stress concentrator such as a scratch, gouge, groove, or arc burn. | ☐ | ☐ | ☐ | ☐ |
| §192.309(b)(2) | (2) A dent that affects the longitudinal weld or a circumferential weld? | ☐ | ☐ | ☐ | ☐ |
| | (3) For pipe to be operated at a hoop stress of 40 percent or more of SMYS; | | | | |
| §192.309(b)(1)(a) | (a) A dent that has a depth of more than ¼ inch in pipe 12¾ inches or less in outer diameter, or | ☐ | ☐ | ☐ | ☐ |
| §192.309(b)(1)(b) | (b) More than 2 percent of the nominal pipe diameter in pipe over 12¾ inches in outer diameter. | ☐ | ☐ | ☐ | ☐ |
| §192.309(c) | Is each arc burn repaired or removed from steel pipe to be operated at a pressure that produces a hoop stress of 40 percent, or more of SMYS? | ☐ | ☐ | ☐ | ☐ |
| | If a repair is made, by grinding, is the arc burn completely removed and the remaining wall thickness at least equal to; | | | | |
| §192.309(c)(1) | (1) The minimum thickness required by the tolerances in the specification to which the pipe was manufactured? Or | ☐ | ☐ | ☐ | ☐ |
| §192.309(c)(2) | (2) The wall thickness equal to the nominal wall thickness required for the design pressure of the pipeline? | ☐ | ☐ | ☐ | ☐ |
| §192.309(d) | Does the operator prohibit the repair of a gouge, groove, arc burn, or dent by insert patching or by pounding out? | ☐ | ☐ | ☐ | ☐ |
| §192.309(e) | Is each gouge, groove, arc burn, or dent removed from a length of pipe removed by cutting out the damaged portion as a cylinder? | ☐ | ☐ | ☐ | ☐ |
| §192.311 | Is each imperfection or damage that would impair the serviceability of plastic pipe repaired or removed? | ☐ | ☐ | ☐ | ☐ |

| | **ABNORMAL OPERATIONS – TRANSMISSION LINES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(c) | Written procedures must be **followed** to provide safety when operating design limits have been exceeded.<br>Does the operator have procedures for:<br>(1) Responding to, investigating and correcting the cause of: | | | | |
| §192.605(c)(1)(i) | Unintended closure of valves or shutdowns? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(ii) | An increase or decrease in pressure or flow rate outside of normal operating limits? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(iii) | Loss of communications? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(iv) | The operation of any safety device? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any other malfunction of a component? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any deviation from normal operation? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(2) | Checking variations from the normal operation after abnormal operations have ended at sufficient critical locations in the system to determine continued integrity and safe operation? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(3) | Notifying the responsible operating personnel when notice of an abnormal operation is received? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(4) | Periodically reviewing the response of operating personnel to determine the effectiveness of the procedures and taking corrective action where deficiencies are found? | ☐ | ☐ | ☐ | ☐ |

| | **SAFETY-RELATED CONDITIONS** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(d) | Does the O&M Manual include instructions enabling personnel to recognize conditions that potentially may be safety-related conditions subject to the reporting requirements of §191.23? | ☐ | ☐ | ☐ | ☐ |
| §191.25(b)(8) | Was proper corrective action taken? | ☐ | ☐ | ☐ | ☐ |

| | SURVEILLANCE | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(e) | Procedures for §192.613? | | | | |
| §192.613(a) | Does the operator have appropriate procedures for continuing surveillance to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, cathodic protection, and other unusual conditions? | ☐ | ☐ | ☐ | ☐ |
| §192.613(b) | Has the operator initiated a program to correct problems discovered? | ☐ | ☐ | ☐ | ☐ |

| | DAMAGE PREVENTION | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.614? | | | | |
| §192.614 | (a) Does the operator have a written damage prevention program for onshore locations? | ☐ | ☐ | ☐ | ☐ |
| | (1) A company program? | ☐ | ☐ | ☐ | ☐ |
| | (2) Member of a one-call system? | ☐ | ☐ | ☐ | ☐ |
| | (b) Does (#**1**) & (#**2**) above comply with the following requirements? | ☐ | ☐ | ☐ | ☐ |
| | (1) Identify persons who engage in excavating? | ☐ | ☐ | ☐ | ☐ |
| | (2) Provide for notification of the public and actual notification of persons who normally engage in excavation activities in the One Call area? | ☐ | ☐ | ☐ | ☐ |
| | (3) Provide means for receiving and recording notifications of pending excavations? | ☐ | ☐ | ☐ | ☐ |
| | (4) Provide for notification of pending excavations to the members? | ☐ | ☐ | ☐ | ☐ |
| | (5) Provide for a means of temporary marking of the pipeline in the vicinity of the excavations? | ☐ | ☐ | ☐ | ☐ |
| | (6) Provides for follow up inspection of the pipeline where there is reason to believe the pipeline could be damaged? | ☐ | ☐ | ☐ | ☐ |
| | (i) Inspection must be done to verify integrity of the pipeline. | ☐ | ☐ | ☐ | ☐ |
| | (ii) After blasting, a leak survey **must** be conducted as part of the inspection by the operator. | ☐ | ☐ | ☐ | ☐ |

| | PUBLIC EDUCATION | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.616? | | | | |
| API RP 1162 Section 7.1 | Does the operator's O&MP manual include: | | | | |
| | an overall statement of management commitment | | | | |
| | roles and responsibilities (by group or title) | ☐ | ☐ | ☐ | ☐ |
| | a requirement for a written program and evaluation process | ☐ | ☐ | ☐ | ☐ |
| | summary of the operator's Public Awareness Program | ☐ | ☐ | ☐ | ☐ |

| | FAILURE INVESTIGATION | S | N/I | U | N/A |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| §192.605(e) | Procedures for §192.617? | | | | |
| §192.617 | Is a procedure established for analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence? | ☐ | ☐ | ☐ | ☐ |

| | MAXIMUM ALLOWABLE OPERATING PRESSURE | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.619/.621/.623? | ☐ | ☐ | ☐ | ☐ |
| §192.619/.621<br>§192.623 | Is the MAOP commensurate with the class location?<br>**(Spot check calculations)** | ☐ | ☐ | ☐ | ☐ |
| | How was the MAOP determined?<br>(a) By design and test? | ☐ | ☐ | ☐ | ☐ |
| | (b) By highest operating pressure to which the segment of line was subjected between July 1, 1965 and July 1, 1970. | ☐ | ☐ | ☐ | ☐ |
| | Were MAOP's determined correctly? | ☐ | ☐ | ☐ | ☐ |

| SYSTEM | Initial Operation Month/yr. | Highest Pressure Test | Highest Operating Pressure | MAOP | Limiting Basis |
|---|---|---|---|---|---|
| | | | | | |

**NOTES:**

| | |
|---|---|
| **§192.505** | Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS. |
| **§192.507** | Test requirements for steel pipeline to operate at a hoop stress less than 30 percent or more of SMYS and at or above 100 p.s.i. (689 kPa) gage. |
| **§192.509** | Test requirements for pipelines to operate below 1000 p.s.i. (689 kPa) gage. |

| | PRESSURE LIMITING AND REGULATING STATIONS | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.739? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a) | Does the operator perform inspections on pressure limiting relief devices and pressure regulators not to exceed 15 months, but at least annually to determine the following: **(See records check list)** | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(1) | In good mechanical condition? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(2) | Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(3) | Set to control or relieve at the correct pressures consistent with the pressure limits of §192.201(a)? (See exception in §192.739(b)) | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(4) | (d) Properly installed and protected from dirt, liquids or other conditions that might prevent proper operation? | ☐ | ☐ | ☐ | ☐ |
| §192.739(b) | For steel pipelines whose MAOP is determined under §192.619(c), if the MAOP is 60 PSI gage or more, the control or relief pressure limit is as follows:<br>if the MAOP produces a hoopstress of: | | | | |
| | 1) 72 percent or greater then the pressure limit is MAOP plus 4 percent. | ☐ | ☐ | ☐ | ☐ |
| | 2) Unknown as a percentage of SMYS, then the pressure limit is a pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP. | ☐ | ☐ | ☐ | ☐ |
| §192.743 | Does the operator perform inspections on relief devices not to exceed 15 months but at least once each calendar year to determine the following? **(See records check list)** | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.743(a) | (a) Has sufficient capacity been determined by testing in place or by review and calculations? | ☐ | ☐ | ☐ | ☐ |
| §192.743(b) | (b) Are calculations used to determine capacity available? | ☐ | ☐ | ☐ | ☐ |
| §192.743(c) | (c) Required that unsatisfactory conditions be corrected in an appropriate time frame? | ☐ | ☐ | ☐ | ☐ |

| | **TELEMETERING OR RECORDING GAUGES - DISTRIBUTION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.741? | ☐ | ☐ | ☐ | ☐ |
| §192.741(a) | Does the operator have telemetering or pressure recording gauges to indicate gas pressure in the district that is supplied by more than one district pressure regulating station? | ☐ | ☐ | ☐ | ☐ |
| §192.741(b) | Has the operator determined if telemetering or pressure recording gauges are needed for a distribution system supplied by only one district pressure regulating station? | ☐ | ☐ | ☐ | ☐ |
| §192.741(c) | Does the operator inspect equipment and take corrective measures when there are indications of abnormally high or low pressure? | ☐ | ☐ | ☐ | ☐ |

| | **PREVENTION OF ACCIDENTAL IGNITION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Do procedures provide for: | | | | |
| §192.751(a) | (a) Removal of ignition sources in presence of gas. | ☐ | ☐ | ☐ | ☐ |
| §192.751(a) | (b) Provide for fire extinguisher? | ☐ | ☐ | ☐ | ☐ |
| §192.751(b) | (c) Preventing, welding or cutting on pipeline containing combustible mixture. | ☐ | ☐ | ☐ | ☐ |
| §192.751(c) | (d) Posting warning signs, where appropriate? | ☐ | ☐ | ☐ | ☐ |

| | **CONSTRUCTION PRACTICES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.313 | **Bends and Elbows** | | | | |
| §192.313(a) | Does each field bend in steel pipe, other than a wrinkle bend made in accordance with §192.315, comply with the following: | | | | |
| §192.313(1) | a) The bend does not impair the serviceability of the pipe. | ☐ | ☐ | ☐ | ☐ |
| §192.313(2) | b) The bend must have a smooth contour and be free from buckling, cracks, or any other mechanical damage. | ☐ | ☐ | ☐ | ☐ |
| §192.313(3) | 3) Is the longitudinal weld as near as practicable to the neutral access of the bend unless; | ☐ | ☐ | ☐ | ☐ |
| | a) The bend is made with an internal bending mandrel; or | ☐ | ☐ | ☐ | ☐ |
| | b) The pipe is 12 inches or less in outside diameter or has a diameter to wall thickness ratio less than 70. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b) | Each circumferential weld of steel pipe which is located where the stress during bending causes a permanent deformation in the pipe must be nondestructively tested either before or after the bending process. | ☐ | ☐ | ☐ | ☐ |
| §192.313(c) | Wrought-steel welding elbows and transverse segments of these elbows may not be used for changes in direction on steel pipe that is 2 inches or more in diameter unless the arc length, as measured along the crotch, is at least 1 inch. | ☐ | ☐ | ☐ | ☐ |
| §192.315 | **Wrinkle Bends in Steel Pipe** | | | | |
| §192.315(a) | Are wrinkle bends prohibited on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent or more, of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.313(b) | Does each wrinkle bend on steel pipe comply with the following: | | | | |
| §192.313(b)(1) | a) The bend must not have any sharp kinks. | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.313(b)(2) | b) When measured along the crotch of the bend, the wrinkles must be a distance of at least one pipe diameter. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b)(3) | c) On pipe 16 inches or larger in diameter, the bend may not have a deflection of more than 1½° for each wrinkle. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b)(4) | d) On pipe containing a longitudinal weld the longitudinal seam must be near as practicable to the neutral axis of the bend. | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.317 | **Protection from Hazards** | | | | |
| §192.317(a) | Does the operator take all practicable steps to protect each transmission line or main from washouts, floods, unstable soil, land slides, or other hazards that may cause the pipeline to move or sustain abnormal loads? | ☐ | ☐ | ☐ | ☐ |
| §192.317(b) | Is each aboveground transmission line or main protected from accidental damage by vehicular traffic or other similar causes, either by being placed at a safe distance from the traffic or by installing barricades? | ☐ | ☐ | ☐ | ☐ |
| §192.319 | **Installation of Pipe in Ditch** | | | | |
| §192.319(a) | When installed in a ditch, is each transmission line that is to be operated at a pressure producing a hoop stress of 20 percent or more of SMYS installed so that the pipe fits the ditch so as to minimize stresses and protect the pipe coating from damage? | ☐ | ☐ | ☐ | ☐ |
| §192.319(b) | When a ditch for a transmission line or main is backfilled, is it backfilled in a manner that: | | | | |
| §192.319(b)(1) | a) Provides firm support under the pipe? | ☐ | ☐ | ☐ | ☐ |
| §192.319(b)(2) | b) Prevents damage to the pipe and pipe coating from equipment or from the backfill material? | ☐ | ☐ | ☐ | ☐ |
| §192.321 | **Installation of Plastic Pipe** | | | | |
| §192.321(a) | Is plastic pipe installed below ground level except as provided by §192.321(g) and (h)? | ☐ | ☐ | ☐ | ☐ |
| §192.321(b) | Is plastic pipe installed in a vault or below grade enclosure completely encased in gas-tight metal pipe and fittings that are adequately protected from corrosion? | ☐ | ☐ | ☐ | ☐ |
| §192.321(c) | Is plastic pipe installed so as to minimize shear or tensile stresses? | ☐ | ☐ | ☐ | ☐ |
| §192.321(d) | Is thermoplastic pipe that is not encased have a minimum wall thickness of 0.090 inches except that pipe with an outside diameter of 0.875 inches or less may have a minimum wall thickness of 0.062 inches? | ☐ | ☐ | ☐ | ☐ |
| §192.321(e) | Does plastic pipe that is not encased have an electrically conducting wire or other means of locating the pipe while it is underground? (NOTE: Tracer wire may not be wrapped around the pipe and contact with the pipe must be minimized but is not prohibited. Tracer wire or other metallic elements installed for locating purposes must be resistant to corrosion damage, either by means of coated copper wire or by other means.) | ☐ | ☐ | ☐ | ☐ |
| §192.321(f) | Is plastic pipe inserted into a casing pipe in a manner that will protect the plastic? | ☐ | ☐ | ☐ | ☐ |
| §192.321(g) | Are the following conditions met, when uncased plastic pipe is temporarily installed above ground: | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.321(g)(1) | a) Can the operator demonstrate that the cumulative aboveground exposure of the pipe does not exceed the manufacture's recommended maximum period of exposure or 2 years, whichever is less? | ☐ | ☐ | ☐ | ☐ |
| §192.321(g)(2) | b) Is the pipe either located where damage by external forces is unlikely or is otherwise protected against such damage/ | ☐ | ☐ | ☐ | ☐ |
| §192.321(g)(3) | c) Does the pipe adequately resist exposure to ultraviolet light and high and low temperatures? | ☐ | ☐ | ☐ | ☐ |
| §192.321(h) | Is plastic pipe installed on bridges only when: | | | | |
| §192.321(h)(1) | a) It is installed with protection from mechanical damage, such as installation in a metallic casing. | ☐ | ☐ | ☐ | ☐ |
| §192.321(h)(2) | b) It is protected from ultraviolet radiation. | ☐ | ☐ | ☐ | ☐ |
| §192.321(h)(3) | c) Not allowed to exceed the pipe temperature limits specified in §192.123. | ☐ | ☐ | ☐ | ☐ |
| §192.323 | **Casing** | | | | |
| §192.323 | Does each casing used on a transmission line or main under a railroad or highway comply with the following: | | | | |
| §192.323(a) | a) Is the casing designed to withstand the superimposed loads? | ☐ | ☐ | ☐ | ☐ |
| §192.323(b) | b) Are the ends sealed to prevent the possibility of water entering the casing? | ☐ | ☐ | ☐ | ☐ |
| §192.323(c) | c) If the ends of an unvented casing are sealed and the sealing is strong enough to retain the maximum allowable operating pressure of the pipe, is the casing designed to hold the pressure at a stress level of not more than 72 percent of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.323(d) | d) If vents are installed on a casing, are the vents protected from weather to prevent water from entering the casing? | ☐ | ☐ | ☐ | ☐ |
| §192.325 | **Underground Clearance** | | | | |
| §192.325(a) | Is each transmission line installed with at least 12 inches of clearance from any other underground structure not associated with the transmission line? | ☐ | ☐ | ☐ | ☐ |
| §192.325(a) | If the 12 inch clearance cannot be attained, is the transmission line protected from damage that might result from the proximity of the other structure? | ☐ | ☐ | ☐ | ☐ |
| §192.325(b) | Is each main installed with enough clearance from any other underground structure to allow proper maintenance and to protect against damage that might result from proximity to other structures? | ☐ | ☐ | ☐ | ☐ |
| §192.325(c) | In addition, is each plastic transmission line or main installed with sufficient clearance or insulated, from any source of heat so as to prevent the heat from impairing the serviceability of the pipe? | ☐ | ☐ | ☐ | ☐ |
| §192.325(d) | Is each pipe-type or bottle-type holder installed with a minimum clearance from any other holder as prescribed in §192.175(b)? | ☐ | ☐ | ☐ | ☐ |
| §192.327 | **Cover** | | | | |
| §192.327(a) | Except as provided in §192.327(c), (e), (f) and (g), is each buried transmission line installed with a minimum cover as follows | ☐ | ☐ | ☐ | ☐ |

| Location | Normal soil | Consolidated rock |
|---|---|---|
| | Inches | |
| Class 1 locations | 30 | 18 |
| Class 2, 3, and 4 locations | 36 | 24 |
| Drainage ditches of public roads and railroad crossings | 36 | 24 |

| | | | | | |
|---|---|---|---|---|---|
| §192.327(b) | Except as provided in §192.327(c) and (d), is each main installed with at least 24 inches of cover? | ☐ | ☐ | ☐ | ☐ |
| §192.327(c) | Where an underground structure prevents the installation of a transmission line or main with the minimum cover, is additional protection provided to withstand anticipated external loads? | ☐ | ☐ | ☐ | ☐ |
| §192.327(d) | A main may be installed with less than 24 inches of cover if the law of the State or municipality if - | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(1) | a) A minimum cover of less than 24 inches has been established. | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(2) | b) There is a requirement that mains must be installed in a common trench with other utility lines. | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(3) | c) There is a provision for adequate prevention of damages to the pipe by external forces. | ☐ | ☐ | ☐ | ☐ |

# Pipeline Safety Inspection Form
# First and Second Half CY - 2008
# S.D.P.U.C.

| | |
|---|---|
| OPERATOR: | INSPECTION UNIT: |
| INSPECTOR(S): | DATE: |
| OPERATOR PERSONNEL: | |
| TYPE OF OPERATOR | |
| OPID | |

**S – Satisfactory N/I – Not Inspected U – Unsatisfactory N/A – Not applicable**

| | ABNORMAL OPERATIONS – TRANSMISSION LINES | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(c) | Written procedures must be **followed** to provide safety when operating design limits have been exceeded.<br>Does the operator have procedures for:<br>(1) Responding to, investigating and correcting the cause of: | | | | |
| §192.605(c)(1)(i) | Unintended closure of valves or shutdowns? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(ii) | An increase or decrease in pressure or flow rate outside of normal operating limits? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(iii) | Loss of communications? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(iv) | The operation of any safety device? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any other malfunction of a component? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any deviation from normal operation? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(1)(v) | Any other foreseeable malfunction of a component, deviation from normal operation, or personnel error? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(2) | Checking variations from the normal operation after abnormal operations have ended at sufficient critical locations in the system to determine continued integrity and safe operation? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(3) | Notifying the responsible operating personnel when notice of an abnormal operation is received? | ☐ | ☐ | ☐ | ☐ |
| §192.605(c)(4) | Periodically reviewing the response of operating personnel to determine the effectiveness of the procedures and taking corrective action where deficiencies are found? | ☐ | ☐ | ☐ | ☐ |

| | SAFETY-RELATED CONDITIONS | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(d) | Does the O&M Manual include instructions enabling personnel to recognize conditions that potentially may be safety-related conditions subject to the reporting requirements of §191.23? | ☐ | ☐ | ☐ | ☐ |
| §191.25(b)(8) | Was proper corrective action taken? | ☐ | ☐ | ☐ | ☐ |

| | SURVEILLANCE | S | N/I | U | N/A |
|---|---|---|---|---|---|
| §192.605(e) | Procedures for §192.613? | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.613(a) | Does the operator have appropriate procedures for continuing surveillance to determine and take appropriate action concerning changes in class location, failures, leakage history, corrosion, cathodic protection, and other unusual conditions? | ☐ | ☐ | ☐ | ☐ |
| §192.613(b) | Has the operator initiated a program to correct problems discovered? | ☐ | ☐ | ☐ | ☐ |

| | **DAMAGE PREVENTION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.614? | | | | |
| §192.614 | (a) Does the operator have a written damage prevention program for onshore locations? | ☐ | ☐ | ☐ | ☐ |
| | (1) A company program? | ☐ | ☐ | ☐ | ☐ |
| | (2) Member of a one-call system? | ☐ | ☐ | ☐ | ☐ |
| | (b) Does (#**1**) & (#**2**) above comply with the following requirements? | ☐ | ☐ | ☐ | ☐ |
| | (1) Identify persons who engage in excavating? | ☐ | ☐ | ☐ | ☐ |
| | (2) Provide for notification of the public and actual notification of persons who normally engage in excavation activities in the One Call area? | ☐ | ☐ | ☐ | ☐ |
| | (3) Provide means for receiving and recording notifications of pending excavations? | ☐ | ☐ | ☐ | ☐ |
| | (4) Provide for notification of pending excavations to the members? | ☐ | ☐ | ☐ | ☐ |
| | (5) Provide for a means of temporary marking of the pipeline in the vicinity of the excavations? | ☐ | ☐ | ☐ | ☐ |
| | (6) Provides for follow up inspection of the pipeline where there is reason to believe the pipeline could be damaged? | ☐ | ☐ | ☐ | ☐ |
| | (i) Inspection must be done to verify integrity of the pipeline. | ☐ | ☐ | ☐ | ☐ |
| | (ii) After blasting, a leak survey **must** be conducted as part of the inspection by the operator. | ☐ | ☐ | ☐ | ☐ |

| | **PUBLIC EDUCATION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.616? | | | | |
| API RP 1162 Section 7.1 | Does the operator's O&MP manual include: | | | | |
| | an overall statement of management commitment | | | | |
| | roles and responsibilities (by group or title) | ☐ | ☐ | ☐ | ☐ |
| | a requirement for a written program and evaluation process | ☐ | ☐ | ☐ | ☐ |
| | summary of the operator's Public Awareness Program | ☐ | ☐ | ☐ | ☐ |

| | **FAILURE INVESTIGATION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(e) | Procedures for §192.617? | | | | |
| §192.617 | Is a procedure established for analyzing accidents and failures including laboratory analysis where appropriate to determine cause and prevention of recurrence? | ☐ | ☐ | ☐ | ☐ |

| | **MAXIMUM ALLOWABLE OPERATING PRESSURE** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.619/.621/.623? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.619/.621<br>§192.623 | Is the MAOP commensurate with the class location?<br>**(Spot check calculations)** | ☐ | ☐ | ☐ | ☐ |
| | How was the MAOP determined?<br>(a) By design and test? | ☐ | ☐ | ☐ | ☐ |
| | (b) By highest operating pressure to which the segment of line was subjected between July 1, 1965 and July 1, 1970. | ☐ | ☐ | ☐ | ☐ |
| | Were MAOP's determined correctly? | ☐ | ☐ | ☐ | ☐ |

| SYSTEM | Initial Operation Month/yr. | Highest Pressure Test | Highest Operating Pressure | MAOP | Limiting Basis |
|---|---|---|---|---|---|
| | | | | | |

**NOTES:**

| | |
|---|---|
| **§192.505** | Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS. |
| **§192.507** | Test requirements for steel pipeline to operate at a hoop stress less than 30 percent or more of SMYS and at or above 100 p.s.i. (689 kPa) gage. |
| **§192.509** | Test requirements for pipelines to operate below 1000 p.s.i. (689 kPa) gage. |

| | **PRESSURE LIMITING AND REGULATING STATIONS** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.739? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a) | Does the operator perform inspections on pressure limiting relief devices and pressure regulators not to exceed 15 months, but at least annually to determine the following: **(See records check list)** | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(1) | In good mechanical condition? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(2) | Adequate from the standpoint of capacity and reliability of operation for the service in which it is employed? | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(3) | Set to control or relieve at the correct pressures consistent with the pressure limits of §192.201(a)? (See exception in §192.739(b)) | ☐ | ☐ | ☐ | ☐ |
| §192.739(a)(4) | (d) Properly installed and protected from dirt, liquids or other conditions that might prevent proper operation? | ☐ | ☐ | ☐ | ☐ |
| §192.739(b) | For steel pipelines whose MAOP is determined under §192.619(c), if the MAOP is 60 PSI gage or more, the control or relief pressure limit is as follows:<br>if the MAOP produces a hoopstress of: | | | | |
| | 1) 72 percent or greater then the pressure limit is MAOP plus 4 percent. | ☐ | ☐ | ☐ | ☐ |
| | 2) Unknown as a percentage of SMYS, then the pressure limit is a pressure that will prevent unsafe operation of the pipeline considering its operating and maintenance history and MAOP. | ☐ | ☐ | ☐ | ☐ |
| §192.743 | Does the operator perform inspections on relief devices not to exceed 15 months but at least once each calendar year to determine the following? **(See records check list)** | ☐ | ☐ | ☐ | ☐ |
| §192.743(a) | (a) Has sufficient capacity been determined by testing in place or by review and calculations? | ☐ | ☐ | ☐ | ☐ |
| §192.743(b) | (b) Are calculations used to determine capacity available? | ☐ | ☐ | ☐ | ☐ |
| §192.743(c) | (c) Required that unsatisfactory conditions be corrected in an appropriate time frame? | ☐ | ☐ | ☐ | ☐ |

| | **TELEMETERING OR RECORDING GAUGES - DISTRIBUTION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Procedures for §192.741? | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.741(a) | Does the operator have telemetering or pressure recording gauges to indicate gas pressure in the district that is supplied by more than one district pressure regulating station? | ☐ | ☐ | ☐ | ☐ |
| §192.741(b) | Has the operator determined if telemetering or pressure recording gauges are needed for a distribution system supplied by only one district pressure regulating station? | ☐ | ☐ | ☐ | ☐ |
| §192.741(c) | Does the operator inspect equipment and take corrective measures when there are indications of abnormally high or low pressure? | ☐ | ☐ | ☐ | ☐ |

| | **PREVENTION OF ACCIDENTAL IGNITION** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.605(b) | Do procedures provide for: | | | | |
| §192.751(a) | (a) Removal of ignition sources in presence of gas. | ☐ | ☐ | ☐ | ☐ |
| §192.751(a) | (b) Provide for fire extinguisher? | ☐ | ☐ | ☐ | ☐ |
| §192.751(b) | (c) Preventing, welding or cutting on pipeline containing combustible mixture. | ☐ | ☐ | ☐ | ☐ |
| §192.751(c) | (d) Posting warning signs, where appropriate? | ☐ | ☐ | ☐ | ☐ |

| | **CONSTRUCTION PRACTICES** | **S** | **N/I** | **U** | **N/A** |
|---|---|---|---|---|---|
| §192.313 | **Bends and Elbows** | | | | |
| §192.313(a) | Does each field bend in steel pipe, other than a wrinkle bend made in accordance with §192.315, comply with the following: | | | | |
| §192.313(1) | a) The bend does not impair the serviceability of the pipe. | ☐ | ☐ | ☐ | ☐ |
| §192.313(2) | b) The bend must have a smooth contour and be free from buckling, cracks, or any other mechanical damage. | ☐ | ☐ | ☐ | ☐ |
| §192.313(3) | 3) Is the longitudinal weld as near as practicable to the neutral access of the bend unless; | ☐ | ☐ | ☐ | ☐ |
| | a) The bend is made with an internal bending mandrel; or | ☐ | ☐ | ☐ | ☐ |
| | b) The pipe is 12 inches or less in outside diameter or has a diameter to wall thickness ratio less than 70. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b) | Each circumferential weld of steel pipe which is located where the stress during bending causes a permanent deformation in the pipe must be nondestructively tested either before or after the bending process. | ☐ | ☐ | ☐ | ☐ |
| §192.313(c) | Wrought-steel welding elbows and transverse segments of these elbows may not be used for changes in direction on steel pipe that is 2 inches or more in diameter unless the arc length, as measured along the crotch, is at least 1 inch. | ☐ | ☐ | ☐ | ☐ |
| §192.315 | **Wrinkle Bends in Steel Pipe** | | | | |
| §192.315(a) | Are wrinkle bends prohibited on steel pipe to be operated at a pressure that produces a hoop stress of 30 percent or more, of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.313(b) | Does each wrinkle bend on steel pipe comply with the following: | | | | |
| §192.313(b)(1) | a) The bend must not have any sharp kinks. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b)(2) | b) When measured along the crotch of the bend, the wrinkles must be a distance of at least one pipe diameter. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b)(3) | c) On pipe 16 inches or larger in diameter, the bend may not have a deflection of more than 1½° for each wrinkle. | ☐ | ☐ | ☐ | ☐ |
| §192.313(b)(4) | d) On pipe containing a longitudinal weld the longitudinal seam must be near as practicable to the neutral axis of the bend. | ☐ | ☐ | ☐ | ☐ |

| | | | | | |
|---|---|---|---|---|---|
| §192.317 | **Protection from Hazards** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.317(a) | Does the operator take all practicable steps to protect each transmission line or main from washouts, floods, unstable soil, land slides, or other hazards that may cause the pipeline to move or sustain abnormal loads? | ☐ | ☐ | ☐ | ☐ |
| §192.317(b) | Is each aboveground transmission line or main protected from accidental damage by vehicular traffic or other similar causes, either by being placed at a safe distance from the traffic or by installing barricades? | ☐ | ☐ | ☐ | ☐ |
| §192.319 | **Installation of Pipe in Ditch** | | | | |
| §192.319(a) | When installed in a ditch, is each transmission line that is to be operated at a pressure producing a hoop stress of 20 percent or more of SMYS installed so that the pipe fits the ditch so as to minimize stresses and protect the pipe coating from damage? | ☐ | ☐ | ☐ | ☐ |
| §192.319(b) | When a ditch for a transmission line or main is backfilled, is it backfilled in a manner that: | | | | |
| §192.319(b)(1) | a) Provides firm support under the pipe? | ☐ | ☐ | ☐ | ☐ |
| §192.319(b)(2) | b) Prevents damage to the pipe and pipe coating from equipment or from the backfill material? | ☐ | ☐ | ☐ | ☐ |
| §192.321 | **Installation of Plastic Pipe** | | | | |
| §192.321(a) | Is plastic pipe installed below ground level except as provided by §192.321(g) and (h)? | ☐ | ☐ | ☐ | ☐ |
| §192.321(b) | Is plastic pipe installed in a vault or below grade enclosure completely encased in gas-tight metal pipe and fittings that are adequately protected from corrosion? | ☐ | ☐ | ☐ | ☐ |
| §192.321(c) | Is plastic pipe installed so as to minimize shear or tensile stresses? | ☐ | ☐ | ☐ | ☐ |
| §192.321(d) | Is thermoplastic pipe that is not encased have a minimum wall thickness of 0.090 inches except that pipe with an outside diameter of 0.875 inches or less may have a minimum wall thickness of 0.062 inches? | ☐ | ☐ | ☐ | ☐ |
| §192.321(e) | Does plastic pipe that is not encased have an electrically conducting wire or other means of locating the pipe while it is underground? (NOTE: Tracer wire may not be wrapped around the pipe and contact with the pipe must be minimized but is not prohibited. Tracer wire or other metallic elements installed for locating purposes must be resistant to corrosion damage, either by means of coated copper wire or by other means.) | ☐ | ☐ | ☐ | ☐ |
| §192.321(f) | Is plastic pipe inserted into a casing pipe in a manner that will protect the plastic? | ☐ | ☐ | ☐ | ☐ |
| §192.321(g) | Are the following conditions met, when uncased plastic pipe is temporarily installed above ground: | | | | |
| §192.321(g)(1) | a) Can the operator demonstrate that the cumulative aboveground exposure of the pipe does not exceed the manufacture's recommended maximum period of exposure or 2 years, whichever is less? | ☐ | ☐ | ☐ | ☐ |
| §192.321(g)(2) | b) Is the pipe either located where damage by external forces is unlikely or is otherwise protected against such damage/ | ☐ | ☐ | ☐ | ☐ |
| §192.321(g)(3) | c) Does the pipe adequately resist exposure to ultraviolet light and high and low temperatures? | ☐ | ☐ | ☐ | ☐ |
| §192.321(h) | Is plastic pipe installed on bridges only when: | | | | |
| §192.321(h)(1) | a) It is installed with protection from mechanical damage, such as installation in a metallic casing. | ☐ | ☐ | ☐ | ☐ |
| §192.321(h)(2) | b) It is protected from ultraviolet radiation. | ☐ | ☐ | ☐ | ☐ |
| §192.321(h)(3) | c) Not allowed to exceed the pipe temperature limits specified in §192.123. | ☐ | ☐ | ☐ | ☐ |
| §192.323 | **Casing** | | | | |

| | | | | | |
|---|---|---|---|---|---|
| §192.323 | Does each casing used on a transmission line or main under a railroad or highway comply with the following: | | | | |
| §192.323(a) | a) Is the casing designed to withstand the superimposed loads? | ☐ | ☐ | ☐ | ☐ |
| §192.323(b) | b) Are the ends sealed to prevent the possibility of water entering the casing? | ☐ | ☐ | ☐ | ☐ |
| §192.323(c) | c) If the ends of an unvented casing are sealed and the sealing is strong enough to retain the maximum allowable operating pressure of the pipe, is the casing designed to hold the pressure at a stress level of not more than 72 percent of SMYS? | ☐ | ☐ | ☐ | ☐ |
| §192.323(d) | d) If vents are installed on a casing, are the vents protected from weather to prevent water from entering the casing? | ☐ | ☐ | ☐ | ☐ |
| §192.325 | **Underground Clearance** | | | | |
| §192.325(a) | Is each transmission line installed with at least 12 inches of clearance from any other underground structure not associated with the transmission line? | ☐ | ☐ | ☐ | ☐ |
| §192.325(a) | If the 12 inch clearance cannot be attained, is the transmission line protected from damage that might result from the proximity of the other structure? | ☐ | ☐ | ☐ | ☐ |
| §192.325(b) | Is each main installed with enough clearance from any other underground structure to allow proper maintenance and to protect against damage that might result from proximity to other structures? | ☐ | ☐ | ☐ | ☐ |
| §192.325(c) | In addition, is each plastic transmission line or main installed with sufficient clearance or insulated, from any source of heat so as to prevent the heat from impairing the serviceability of the pipe? | ☐ | ☐ | ☐ | ☐ |
| §192.325(d) | Is each pipe-type or bottle-type holder installed with a minimum clearance from any other holder as prescribed in §192.175(b)? | ☐ | ☐ | ☐ | ☐ |
| §192.327 | **Cover** | | | | |
| §192.327(a) | Except as provided in §192.327(c), (e), (f) and (g), is each buried transmission line installed with a minimum cover as follows | ☐ | ☐ | ☐ | ☐ |

| Location | Normal soil | Consolidated rock |
|---|---|---|
| | Inches | |
| Class 1 locations | 30 | 18 |
| Class 2, 3, and 4 locations | 36 | 24 |
| Drainage ditches of public roads and railroad crossings | 36 | 24 |

| | | | | | |
|---|---|---|---|---|---|
| §192.327(b) | Except as provided in §192.327(c) and (d), is each main installed with at least 24 inches of cover? | ☐ | ☐ | ☐ | ☐ |
| §192.327(c) | Where an underground structure prevents the installation of a transmission line or main with the minimum cover, is additional protection provided to withstand anticipated external loads? | ☐ | ☐ | ☐ | ☐ |
| §192.327(d) | A main may be installed with less than 24 inches of cover if the law of the State or municipality if - | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(1) | a) A minimum cover of less than 24 inches has been established. | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(2) | b) There is a requirement that mains must be installed in a common trench with other utility lines. | ☐ | ☐ | ☐ | ☐ |
| §192.327(d)(3) | c) There is a provision for adequate prevention of damages to the pipe by external forces. | ☐ | ☐ | ☐ | ☐ |