**Annex A**

**TITLE 52. PUBLIC UTILITIES**

**PART I. PUBLIC UTILITY COMMISSION**

**Subpart C. FIXED SERVICE UTILITIES**

**CHAPTER 59. GAS SERVICE AND HAZARDOUS LIQUID SERVICE**

**GAS SERVICE AND FACILITIES**

**§ 59.33. [Safety.] MINIMUM SAFETY STANDARDS.**

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(b) *Safety code.* The minimum safety standards for all natural gas **[and hazardous liquid]** public utilities in this Commonwealth shall be those issued under the pipeline safety laws found in 49 **[~~U.S.C.A.~~]** **U.S.C.** §§ 60101—60503 and as implemented at 49 CFR Parts 191—193**[~~,~~** **195]** and 199, including all subsequent amendments thereto. Future Federal amendments to 49 CFR Parts 191—193[**~~,~~** **195]** and 199, as amended or modified by the Federal government, shall have the effect of amending or modifying the Commission’s regulations with regard to the minimum safety standards for all natural gas **[and hazardous liquid]** public utilities. The amendment or modification shall take effect 60 days after the effective date of the Federal amendment or modification, unless the Commission publishes a notice in the *Pennsylvania Bulletin* stating that the amendment or modification may not take effect.

(c) **[*Definition.* For the purposes of this section, ‘‘hazardous liquid public utility’’ means a person or corporation now or hereafter owning or operating in this Commonwealth equipment or facilities for transporting or conveying crude oil, gasoline, petroleum or petroleum products, by pipeline or conduit, for the public for compensation.]** **(Reserved).**

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(*Editor's Note*: The following sections were proposed in the NOPR to be added and were printed in the *Pennsylvania Bulletin* in regular type to enhance readability.)

**HAZARDOUS LIQUID PUBLIC UTILITY SAFETY STANDARDS**

**§ 59.131. Purpose.**

**[For hazardous liquid public utilities in the Commonwealth, under the HLPSA, as implemented at 49 CFR Parts 195 and 199 (relating to transportation of hazardous liquids by pipeline; and to drug and alcohol testing), the Commonwealth, as a certified State participating in PHMSA’s Federal hazardous liquid pipeline safety program, must adopt and enforce, as a minimum, all Federal pipeline safety standards at 49 CFR Parts 195 and 199. As a certified State, the Commonwealth may also promulgate additional regulations for hazardous liquid pipeline safety that are more stringent than the PHMSA Federal regulations so long as the state regulations are compatible with the HLPSA and the minimum safety standards in PHMSA’s regulations.]**

The purpose of §§ 59.131—59.143 (relating to hazardous liquid public utility safety standards) is to set forth safety standards for all hazardous liquid public utilities **regarding their intrastate operations** in the Commonwealth. These sections establish **[design and]** construction **and HDD or TT** standards for hazardous **[liquids] liquid** public utilities constructing new pipelines and converting, relocating**[,] or** replacing**[, or otherwise changing]** existing pipelines **with certain exceptions**, as well asaccident reporting, other reporting, **[HDD and TT, pressure testing, operations and maintenance]** **O&M**, qualification of pipeline personnel, land agent, and corrosion control standards for all hazardous **[liquids] liquid** public utilities.

**§ 59.132 Definitions.**

The following words and terms, when used in §§ 59.131—59.143 (relating to hazardous liquid public utility safety standards), have the following meanings, unless the context clearly indicates otherwise:

*Affected public—*Residents **(occupants, tenants, farmers, homeowners’ associations or groups, neighborhood organizations, and the like)** and places of congregation (businesses, schools, **places of worship, hospitals and other medical facilities, prisons, parks and recreational areas, day-care facilities, playgrounds,** and the like**) within 1,000 feet of the center of the pipeline [along the pipeline]** **or pipeline facility** **[and the associated right-of-way within 1,000 feet,]** or within the LFL, of a pipeline or pipeline facility, whichever is greater.

*API RP 1130—****American Petroleum Institute [API]*** *Recommended Practice 1130—*The term as defined in 49 CFR 195.3 (relating to document incorporated by reference partly or wholly).

*API RP 1162*—***American Petroleum Institute [API]*** *Recommended Practice 1162*—The term as defined in 49 CFR 195.3.

*As-called anomaly—*In-line inspection predicted anomaly.

*As-found anomaly—*Field measured anomaly.

*CPM—Computation pipeline monitoring—*The term as defined in 49 CFR 195.2 (relating to definitions).

***Commodity change*—A switching of products in a pipe.**

***Construction task—*An activity, identified by a hazardous liquid public utility, performed under 49 CFR 195 Subpart D (relating to construction) or § 59.137 (relating to construction).**

***Conversion to service—*A pipeline brought back into service from abandonment or suspension of prior service or a pipeline repurposed for transporting hazardous liquids versus non-hazardous liquids*.***

*Covered task—*The term as defined in 49 CFR 195.501 (relating to scope) **[but modifying that term to also include a construction task identified by a hazardous liquid public utility]**.

***[EFRDs] EFRD****—Emergency flow restricting device—*The term as defined in 49 CFR 195.450 (relating to definitions).

*Emergency responder****[s]****—*Local fire, local police and local emergency medical services; county hazmat teams, **county [Department] departments** of **[Emergency Services]** **emergency services** and **county** 911 centers; and other **[emergency]** local, city, county or state **emergency** officials or representatives **with emergency response or public safety jurisdiction, or both, within 1,000 feet of the center of the pipeline or pipeline facility.**

***Flow reversal—*When gas flow is reduced in a pipe at a point at which liquid begins to creep below the injection point.**

[***Geotechnical hazard—***A **geological and environmental feature which may be caused by natural or human-induced conditions, involve long-term or short-term geological processes, and lead to widespread damage or risk**.]

*Ground patrol—*A method of **[non-aerial]** patrol that includes walking, driving, using a low-flying drone with sufficient optical resolution operated by a qualified drone operator with an altitude limit of 25 feet or other like non-aerial means of traversing a pipeline right-of-way.

*HCA—High consequence area—*The term as defined in 49 CFR 195.450.

*HDD—Horizontal directional drilling—*A trenchless construction methodology for installing pipelines, conduits or cable utilizing drilling fluid, often pressurized, and consisting of a directionally controlled (e.g., steerable) pilot hole drilled along a predetermined path extending from grade at one end of drilled segment to grade at the opposite end; enlarging the pilot hole to a size which will accommodate a pipeline; pulling a pipeline/conduit into the enlarged hole; and a method accomplished using horizontal drilling rig.

***[HLPSA—Hazardous Liquid Pipeline Safety Act of 1979—*Federal safety legislation governing the transportation of hazardous liquids by pipeline at 49 U.S.C.A. §§ 60101—60143, and as implemented at 49 CFR Part 195 (relating to transportation of hazardous liquids by pipeline).]**

*HVL—Highly volatile liquid—*The term as defined in 49 CFR 195.2.

*Hazardous liquid—*Crude oil, gasoline, petroleum or petroleum products.

*Hazardous liquid public utility—*A person or corporation now or hereafter owning or operating in this Commonwealth equipment or facilities for transporting or conveying crude oil, gasoline, petroleum or petroleum products, by pipeline or conduit, for the public for compensation.

*LFL—Lower flammability limit—*Usually expressed in volume percent, the lower end of the concentration range over which flammable mixture of gas or vapor in air can be ignited at a given temperature and pressure; and the flammability range is delineated by the upper and lower flammability limits.

*Land agent—*A person who negotiates easements on behalf of a hazardous liquid public utility for use in connection with a pipeline.

***O&M—Operations and maintenance.***

***OQ—Operator qualification*—A process where an individual is determined to be qualified by a hazardous liquid public utility through training and evaluation of that individual’s knowledge, skills and abilities to perform the duties required of an operator.**

*PHMSA—Pipeline and Hazardous Materials Safety Administration—*The administration within the U.S. Department of Transportation responsible for the safe transportation of energy and other hazardous materials.

*Pipe* ***[or line pipe]*** *—*A tube that **[may be used or]** is used for the transportation of a hazardous liquid.

*Pipeline—*Parts of a pipeline facility through which a hazardous liquid moves in transportation, including, pipe, valves and other appurtenances connected to pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks.

*Pipeline facility—*New and existing pipe, rights-of-way, and any equipment, facility, or building used in the transportation of hazardous liquids.

*Pipeline Safety Section—*The section of the Safety Division within the Commission’s Bureau of Investigation and Enforcement responsible for pipeline safety.

*Public* ***[officials]******official****—***[Elected] An elected** **or appointed** local, city, county or state **[officials, and their staff, ] official** having land use and street or road jurisdiction **[along the pipeline route]** **within 1,000 feet of the center of the pipeline or pipeline facility.**

***Response drill*—Interactive pipeline coordinated exercise training between pipeline operators, public officials and emergency responders to pre-plan for pipeline emergency response, using a local pipeline incident scenario to exchange resources and capabilities of all included.**

***School—*An institution with physical buildings and grounds, wherein children between the grades of nursery school through twelfth grade are educated within 1,000 feet of the center of a pipeline or pipeline facility. A school may be private or public. This term includes nursery schools but does not include virtual cyber schools.**

***Table-top drill—*Discussion-based simulated exercise whereby utility personnel meet with county, city and municipality-level officials and local emergency responders in a classroom setting or in breakout groups to discuss and practice their respective roles during an emergency involving the hazardous liquid public utility’s facilities and the recommended responses to an emergency situation.**

*TT—Trenchless technology—*A type of subsurface construction work that requires few trenches or no trenches which includes any trenchless construction methodology, including without limitation, horizontal direction drilling, guided auger bore, cradle bore, conventional auger bore, jack bore/hammer bore, guided bores, and proprietary trenchless technology.

**§ 59.133. General.**

(a) *Minimum safety standards.* The minimum safety standards for all hazardous liquid public utilities in this Commonwealth shall be those issued under the pipeline safety laws as found in 49 **[U.S.C.A.] U.S.C.** §§ 60101—60503 and as implemented at 49 CFR Parts 195 and 199 (relating to transportation of hazardous liquids by pipeline; and to drug and alcohol testing), including all subsequent amendments thereto, unless otherwise specified herein. Future Federal amendments to 49 CFR Parts 195 and 199, as amended or modified by the Federal government, shall have the effect of amending or modifying the Commission’s regulations with regard to the minimum safety standards for hazardous liquid public utilities**[. The amendment or modification] and** shall take effect 60 days after the effective date of the Federal amendment or modification, unless the Commission publishes a notice in the *Pennsylvania Bulletin* stating that the amendment or modification may not take effect. **[If future Federal amendments to 49 CFR Parts 195 and 199 have the effect of making a Federal PHMSA safety requirement more stringent than a like requirement under §§ 59.131—59.143 (relating to hazardous liquid public utility safety standards), the more stringent Federal safety standard shall control.]**

(b) *Enforcement.* A hazardous liquid public utility shall be subject to inspections by the Pipeline Safety Section as may be necessary to **[assure] review for** compliance with the minimum safety standards in subsection (a) and the safety standards in §§ 59.134—59.143. The facilities, **maps,** books and records of a hazardous liquid public utility must be made accessible to the Pipeline Safety Section for the inspections upon request. A hazardous liquid public utility shall provide to the Pipeline Safety Section the reports, supplemental data and information as the Pipeline Safety Section may request in the administration and enforcement of §§ 59.134—59.143.

(c) *Records.* A hazardous liquid public utility shall keep adequate records to demonstrate compliance with the minimum safety standards in subsection (a) and the safety standards in §§ 59.134—59.143. The records, **including maps,** must be made accessible to the Pipeline Safety Section upon request.

(d) *Pipeline conversion.*

(1) A hazardous liquid public utility converting **[a pipeline from service not previously covered by this part must]** **its service or product shall** notify the Pipeline Safety Section no later than 60 days before the conversion occurs. **[This paragraph shall apply to pipelines already designed for bi-directional flow.]**

(2) In addition to the requirements set forth in 49 CFR 195.5 (relating to conversion to service subject to this part), a hazardous liquid public utility engaged in conversion, flow reversal or commodity change of pipelines subject to 49 CFR 195.5, shall adhere to Pipeline Safety: Guidance for Pipeline Flow Reversals, Product Changes and Conversion to Service, PHMSA Advisory Bulletin ADB-2014-04, Docket No. 2014-0040; 79 FR 56121-56122**[, and any updates thereto]**.

**§ 59.134. Accident reporting.**

(a) *Scope.* This section establishes requirements for a hazardous liquid public utility reporting an accident.

(b) *Failure analysis reports.* Following an accident that causes any of the results identified in 49 CFR 195.50 (relating to reporting accidents), a hazardous liquid public utility shall provide to the Pipeline Safety Section an unredacted failure analysis report based on laboratory testing within 120 days of an accident or within 10 days of the report completion, whichever comes first. The failure analysis must be conducted by a Pipeline Safety Section-approved independent third-party laboratory. **[If the report cannot be completed in the allotted time, the hazardous liquid public utility shall provide a status update to the Pipeline Safety Section every 14 days.] The Pipeline Safety Section has authority to grant or deny requests upon a showing of good cause for 30-day extensions of the deadline.**

**(1) If the failure analysis report cannot be completed within 120 days, a hazardous liquid public utility may request, in writing to the Pipeline Safety Section, a 30-day extension to submit this report.** **Additional 30-day extensions may be requested for good cause thereafter.**

**(2) The hazardous liquid public utility shall provide the Pipeline Safety Section with a status report every 14 days during an extension period until the unredacted failure analysis report is submitted to the Pipeline Safety Section.**

(c) *Root cause analysis reports.* Following an accident that causes any of the results identified in 49 CFR 195.50, a hazardous liquid public utility shall provide to the Pipeline Safety Section **[a] an unredacted** root cause analysis report **identifying the contributing factors to an accident** within 120 days of the accident or within 10 days of report completion, whichever comes first. The root cause analysis must be conducted by a Pipeline Safety Section-approved independent third-party consultant. **[If the report cannot be completed in the allotted time, the hazardous liquid public utility shall provide a status update to the Pipeline Safety Section every 14 days.] The Pipeline Safety Section has authority to grant or deny requests upon a showing of good cause for 30-day extensions of the deadline.**

**(1) If the root cause analysis report cannot be completed within 120 days, the hazardous liquid public utility may request, in writing to the Pipeline Safety Section, a 30-day extension to submit this report. Additional 30-day extensions may be requested for good cause thereafter.**

**(2) The hazardous liquid public utility shall provide the Pipeline Safety Section with a status report every 14 days during an extension period until the unredacted root cause analysis report is submitted to the Pipeline Safety Section.**

(d) *Process for obtaining approval of a third-party laboratory and* ***a third-party*** *consultant.* This subsection establishes the process through which a hazardous liquid public utility obtains approval of a third-party laboratory and a third-party consultant to conduct the analyses required by subsections (b) and (c), respectively.

(1) Upon receipt of an accident notification from the Pipeline Safety Section, a hazardous liquid public utility shall submit a recommendation to the Pipeline Safety Section regarding the third-party laboratory that will conduct the failure analysis and the third-party consultant that will conduct the root cause analysis **[with] within** 20 days.

(2) The Pipeline Safety Section will review the hazardous liquid public utility’s recommendation and make a determination as to whether the third-party laboratory or **the** third-party consultant:

(i) Are not affiliated with the hazardous liquid public utility.

(ii) Have not conducted work on behalf of the hazardous liquid public utility in the past 5 years that would potentially create a conflict of interest.

(iii) Are capable of performing the failure analysis and root cause analysis, respectively, using required equipment and industry best practices.

(3) The Pipeline Safety Section will approve or disapprove the recommendation within 14 days of a hazardous liquid public utility’s submission. If the recommendation is not approved or disapproved within 14 days, the hazardous liquid public utility’s recommendation is presumed approved. If disapproved, the Pipeline Safety Section will describe in detail the reasons for disapproval. The Pipeline Safety Section will serve its determination on the hazardous liquid public utility.

(4) The hazardous liquid public utility may respond to the disapproval within 5 days. The Pipeline Safety Section will approve or disapprove the recommendation within 14 days of the hazardous liquid public utility’s response to the disapproval. The Pipeline Safety Section will serve its determination on the hazardous liquid public utility.

(5) The hazardous liquid public utility may appeal the determination of the Pipeline Safety Section in accordance with § 5.44 (relating to petitions for reconsideration from actions of the staff). An appeal will not stay the requirements of subsection (d).

**(6) Once a third‑party laboratory or third‑party consultant is approved, a hazardous liquid public utility need not seek reapproval for its third-party laboratory or third‑party consultant.**

**(7) An exception to subsection 6 is that approval of a third‑party laboratory or third‑party consultant may be revoked by the Pipeline Safety Section for violations of the approval standards in subsection 2, and the hazardous liquid public utility may then recommend another third-party laboratory or third‑party consultant for approval.**

(e) *Immediate notice of certain accidents.* In addition to the requirement that a hazardous liquid public utility report accident information to the National Response Center under 49 CFR 195.52 (relating to immediate notice of certain accidents), at the earliest practicable moment following discovery of a release of the hazardous liquid transported resulting in an event described in 49 CFR 195.50, but no later than one hour after confirmed discovery, the hazardous liquid public utility shall report the accident to the Pipeline Safety Section and to emergency responders, providing the information listed in 49 CFR 195.52(b). **The notifications must be made via telephone call and electronic mail.**

**§ 59.135. Construction, operation and maintenance, and other reports to the Commission.**

(a) *Scope.* This section establishes requirements for a hazardous liquid public utility reporting construction, **[operation and maintenance]** **O&M**, and other activities.

(b) *Timeframe for notice.* A hazardous liquid public utility shall notify the Pipeline Safety Section of the following:

(1) Proposed major construction**[, major reconstruction,]** or **proposed** major maintenance involving an expenditure in excess of $300,000 or 10% of the cost of the pipe in service, whichever is less, **[45] 30** days prior to commencement.

(2) Maintenance, verification digs, and assessments involving an expenditure in excess of $50,000, and the unearthing of suspected leaks, dents, pipe ovality features, cracks, gouges or corrosion anomalies, or other suspected metal losses 10 days prior to commencement.

(3) Excavation damages, washouts, or unplanned replacements of any pipeline section or cut out **[immediately] within one hour of discovery**.

(4) **[A variation to the hazardous liquid public utility’s established construction methodologies 30 days prior to commencement.] A change in excavation technique (e.g., from open cut to TT or vice versa, as well as a change from one TT to another TT) to the hazardous liquid public utility’s established construction methodologies at least 48 hours prior to commencement.**

(5) The introduction of a hazardous liquid 30 days prior to the introduction. This notice **[shall] must** also be given to public officials **in writing at least via electronic mail**.

(c) *Content of notice generally.* Notice provided to the Pipeline Safety Section under subsection (b)(1)—**[(3)] (5)** must include the following information:

(1) The hazardous liquid public utility’s name.

(2) Pipeline route.

(3) Length of the pipeline.

(4) The counties and municipalities traversed.

(5) Estimated start and completion dates.

(6) Pipeline identification information.

(7) Any change in flow direction.

(8) Commodity or product.

(d) *Information to be provided upon request generally.* Upon request, a hazardous liquid public utility shall provide the following information to the Pipeline Safety Section with its notice under subsection (b)(1)—**[(3)] (5)**:

(1) *Project information.*

(i) A description of the work to be completed.

(ii) The location of the project, including counties, municipalities and cross streets.

(iii) Contact information.

(2) *Pipe Specifications.*

(i) Nominal outside diameter, D (inches).

(ii) Nominal wall thickness, t (inches).

(iii) Type and grade of pipe.

(iv) Manufacturers of steel and pipe.

(v) Longitudinal joint type.

(vi) Specified minimum yield strength, **or** SMYS**,** (psi).

(vii) Nominal ultimate strength (psi).

(viii) Fracture toughness **[(minimum Charpy Energy in ft. lbs. at 20° F for buried pipe and -20° F for exposed pipe)] via applicable material testing**.

(ix) Mill test pressure (psi).

(x) A statement indicating whether pipe is new or used.

(xi) If used pipe is employed, a description of the inspection and reconditioning procedures **[utilized] used**.

(xii) The physical and chemical specifications of pipe verified by outside laboratories.

(3) *Operating Pressure and Stress.*

(i) Maximum operating pressure, P (psi).

(ii) Calculated pipe stress (hoop stress) = PD/2t (psi).

(iii) Ratio of pipe stress to SMYS (percent).

(4) *Welding.*

(i) Percentage of welds to be radiographed, by location.

(ii) The method for certifying the radiographic technician.

(5) *Railroad, Road, and Water Crossings.*

(i) The location of each pipe at a lake, river, stream, or creek crossing, and a description of special construction precautions to be followed.

(ii) Encroachments to railroads or roads, by location, and a description of special construction precautions to be followed.

(iii) The location of each pipe at a railroad and road crossing and a statement indicating whether each pipe is cased or uncased and whether heavier wall carrier pipe is used. If a pipe is uncased, the notification must provide the reason.

(6) *Valves.*

(i) Number and spacing of manual sectionalizing valves.

(ii) The type, make and location of any automatic valves.

(7) *Minimum Cover and Clearance.*

(i) The location, nature of the problem, cover, and clearance, if the minimum prescribed cover and clearance cannot be maintained.

(ii) Special precautions to be observed.

(8) *Piping.*

(i) The type of field coating.

(ii) The type of coating test.

(iii) The type of cathodic protection system.

(9) *Pressure and leakage tests.*

(i) Test pressure.

(ii) Test medium.

(iii) Test duration.

(iv) The **[Length]** **length** of the test section(s).

(10) *Pipeline rights-of-way.*

(i) A statement indicating whether the necessary right-of-way has been **[maintained] obtained** from each party having an interest in the right-of-way.

(ii) A statement indicating whether formal approval and all necessary permits have been obtained from appropriate agencies.

(e) *Information to be provided upon request for assessments and verification digs involving an expenditure in excess of $50,000 and the unearthing of suspected anomalies.* Upon request, a hazardous liquid public utility shall provide the following information to the Pipeline Safety Section with **[their] its** notice under **[subsection] paragraph** (b)(2) **[only as it pertains to assessments and verification digs involving an expenditure in excess of $50,000, and the unearthing of the suspected anomalies identified in subsection (b)(2)]**:

(1) Identification information for the pipeline to be assessed.

(2) The location range of the area to be assessed.

(3) A description of the assessment.

(4) Discovery method.

(5) The type **[and specification], size, pipe location and designated repair condition** of any as-called **anomalies** and **any** as-found **[anomaly] anomalies**, and the location of the **[anomaly]** **anomalies** with latitude and longitude coordinates.

(6) The estimated assessment start and completion dates and dig dates.

**[§ 59.136. Design requirements.**

**(a) *Scope.* This section establishes requirements for hazardous liquid public utilities constructing new pipelines, and converting, relocating, replacing or otherwise changing existing pipelines.**

**(b) *External loads.* In addition to the external loads named in 49 CFR 195.110(a) (relating to external loads), a hazardous liquid public utility designing a pipeline shall account for anticipated external loads from landslides, sinkholes, subsidence and other geotechnical hazards.]**

**§ 59.136. Annual Reports.**

**(a) *Annual report to PHMSA.* Under 66 Pa.C.S. § 504 (relating to reports by public utilities), each hazardous liquid public utility shall provide annually to the Pipeline Safety Section a copy of its annual report under 49 CFR 195.49 (relating to annual report) for each type of hazardous liquid pipeline facility operated at the end of the previous year at the time it makes the federal submission.**

**(b) *Annual report to Pipeline Safety Section*. On or before June 15 each year, each hazardous liquids public utility shall provide to the Pipeline Safety Section a report that details its jurisdictional tariffed assets in the Commonwealth as reflected in its annual report to PHMSA.**

**§ 59.137. Construction.**

(a) *Scope.* This section establishes requirements for **a** hazardous liquid public **[utilities] utility** constructing **a** new **[pipelines] pipeline**, **[and] or** converting, relocating**[,] or** replacing **[or otherwise changing]** **an** existing **[pipelines] pipeline**.

(b) *Pipeline location.* **[In addition to the requirements of 49 CFR 195.210 (relating to pipeline location), no pipeline may be located under private dwellings, industrial buildings, and places of public assembly, including as follows and like locations: a location of assembly for civic, educational, religious, social or recreational purposes; a location provided by a common carrier for passengers awaiting transportation, or a location where persons are housed for medical or charitable care, or held for public, civic or correctional purposes.] In addition to the requirements of 49 CFR 195.210 (relating to pipeline location), a hazardous liquid public utility may not construct a new pipeline, convert, or relocate an existing pipeline in a location under any building or dwelling including private dwellings, industrial buildings, and buildings intended for human congregation. This requirement does not apply to the repair or replacement of existing pipelines.**

**[(c) *Welding: Miter joints.* Miter joints of any deflection are not permitted.]**

**[(d)] (c)** *Welds: Nondestructive testing.* A hazardous liquid public utility shall nondestructively test all girth welds. Nondestructive testing must be performed under 49 CFR 195.234(b) (relating to welds: nondestructive testing). **Exceptions to non-destructive testing are adopted by reference from 49 CFR 195.248(d)-(e) (relating to cover over buried pipeline) and incorporated herein.**

**[(e)] (d)** *Cover over buried pipeline.* In addition to the requirements of 49 CFR 195.248 **[(relating to cover over buried pipeline):], a hazardous liquid public utility shall specify** **in their O&M procedures the intervals at which it verifies depth of cover and shall maintain the depth of cover required by Federal law for all pipe actively in use for transporting hazardous liquids.**

**[(1) Pipe under active commercial farms that have been cultivated 2 or more of the past 5 years, as identified by the farmland owner or farmland operator, must be buried so that it is below the level of cultivation with at least 40 inches of cover. A hazardous liquid public utility shall verify and maintain the depth of cover for active commercial farms at least every 3 years.]**

**[(2) A hazardous liquid public utility shall specify the intervals at which to verify and maintain the depth over cover for all pipe.]**

**[(f)] (e)** *Clearance between pipe and underground structures.* A hazardous liquid public utility shall **construct and subsequently** maintain a minimum of 12 inches of clearance between the outside of the pipe and the extremity of any other underground structure, including structures owned by the hazardous liquid public utility and foreign structures. **Pre-existing pipelines on the effective date of this subsection are exempt from this requirement.**

**[(g) *Valves for pipelines transporting HVLs.***

**(1) A hazardous liquid public utility shall install EFRDs on a main line with lateral spacing not to exceed five miles.**

**(2) In addition to the requirements of 49 CFR 195.260 (relating to valves: location), a hazardous liquid public utility shall install valves based on a pipeline’s proximity to schools, churches, hospitals, daycares, nursing facilities, commercial facilities, industrial facilities, sport complexes and public parks within the outer most area of the LFL.**

**(3) A hazardous liquid public utility shall develop and maintain a risk-based plan to address valve spacing.]**

**[(h)] (f)** *Vehicle barriers.* A hazardous liquid public utility shall install vehicle barriers at an above-ground valve station adjacent to a roadway. The vehicle barriers must be designed and constructed to protect the above-ground valve station from **[the largest types of]** vehicles. **An exception is when the physical characteristics of a valve station render vehicle barriers unnecessary, i.e., the valve has a natural berm or barriers that would render an additional vehicle barrier unnecessary. This requirement applies to valve stations constructed after the effective date of this subsection and adjacent to roadways.**

**§ 59.138. Horizontal directional drilling and trenchless technology, or direct buried methodologies.**

(a) *Scope.* This section establishes requirements for hazardous liquid public utilities using HDD, TT, or direct buried methodologies for constructing new pipelines, and converting, relocating, **or** replacing**[, or otherwise changing]** existing pipelines (the foregoing terms individually or in the aggregate shall constitute the term ‘‘construction’’ for purposes of this section), or in the **[operation and maintenance]** O&M of pipelines **as referenced in 49 CFR 195 Subpart F (relating to operations and maintenance)**.

(b) **[*Notification.* A hazardous liquid public utility shall notify the Pipeline Safety Section and the affected public at least 30 days prior to commencement of drilling, and again 24 hours prior to the commencement of HDD, TT, or direct buried construction or O&M activities.] *Notifications.***

**(1) At least 30 days prior to commencement of HDD, TT, or direct buried construction, a hazardous liquid public utility shall provide notice of the date that HDD, TT, or direct buried construction will commence to:**

**(i) The Pipeline Safety Section via electronic mail.**

**(ii) Local government officials, and county emergency management through electronic mail.**

**(iii) The affected public, via door cards, regular mail and local newspaper notices.**

**(2) If the date of commencement of HDD, TT, or direct buried construction is extended or delayed, the hazardous liquid public utility shall renotify the Pipeline Safety Section, local government officials, and county emergency management by electronic mail of the date the HDD, TT, or direct buried construction will commence.**

**[(2)](3) The hazardous liquid public utility shall hold at least one public meeting with local government, residents and emergency responders at least thirty days before the commencement of HDD, TT, or direct buried construction within the boundaries of the jurisdictions of the local governments where the HDD, TT, or direct buried construction is planned to occur.**

**(4) Notice must be given to the Pipeline Safety Section supervisor and manager on duty by electronic mail and telephone call at least 24 hours prior to the commencement of HDD, TT, or direct buried construction and must include the names of all municipalities affected, GPS coordinates of the entry point of the drilling operation, and date when drilling will begin.**

(c) *Geological and environmental impacts.* For a pipeline with a bore diameter 8 inches or greater, a bore depth greater than 10 feet, or pipeline length greater than 250 feet, a hazardous liquid public utility using HDD or TT methodology shall:

(1) **[Consider geological and environmental impacts and comply with Department of Environmental Protection Trenchless Technology Technical Guidance and subsequent updates thereto.] Conduct an analysis of geological and environmental impacts of using HDD or TT methodology. An analysis similar in format to the Department of Environmental Protection’s Trenchless Technology Guidance, Document No. 310-2100-003, as amended and updated, or in a manner at least as protective of public health, public safety and the environment meeting all applicable statutory and regulatory requirements, shall satisfy this requirement.** **The analysis shall be made available to the Pipeline Safety Section upon request.**

(2) **[Conduct a geotechnical evaluation of subsurface conditions along a pipeline facility at a minimum of every 250 feet using seismic, gravitational and electrical resistivity techniques with results of high resolution.] Develop a written preparedness, prevention and contingency plan that addresses:**

**(i) Potential environmental impacts from drilling fluid discharges.**

**(ii) Potential impacts to public and private water supplies.**

**(iii) Underground mining and karst terrain.**

**The developed plan must be made available to the Pipeline Safety Section upon request.**

(3) **[Conduct geological sampling at the locations where suspected anomalous conditions are identified through geophysics and conduct post-construction geophysics within 30 days of pipeline installation using the techniques in paragraph (2).] Conduct a geotechnical evaluation of subsurface conditions before and after construction along a pipeline or pipeline facility using appropriate geophysical techniques as recommended by a licensed professional geophysicist, professional geologist or professional geotechnical engineer.** **The evaluations shall be made available to the Pipeline Safety Section upon request.**

(4) **Conduct geotechnical sampling at the locations where suspected anomalous conditions are identified through geophysics analysis and conduct post-construction geophysics analysis within 30 days of pipeline installation using the techniques as recommended by the licensed professional geophysicist, professional geologist or professional geotechnical engineer. The analyses shall be made available to the Pipeline Safety Section upon request.**

**[(4)] (5)** Maintain the integrity of affected pipeline facilities and take actions to mitigate risk including:

(i) Beginning mitigation of all adverse environmental impacts as soon as practicable**[, but no later than 30 days after the identification] and notifying the Pipeline Safety Section within two hours of determination with a follow-up action plan within 24-hours of determination** of the impact if anomalous conditions are found.

(ii) Performing pipeline shut in or pressure reductions.

(iii) Following 49 CFR 195.55 (relating to reporting safety-related conditions) and applicable state laws and regulations.

**[(5)] (6)** Provide the Pipeline Safety Section with the following upon request:

(i) HDD design plans reviewed and sealed by a licensed Pennsylvania professional engineer and **a** professional geologist, including:

(A) The exact location and a general area map.

(B) A description of the project, including the pipeline identification information, size and grade.

(C) The total project cost.

(D) The estimated start and completion date.

(ii) Proof of required notifications.

(iii) Geotechnical sampling, at a minimum, every **[500] 250** feet.

(iv) Geotechnical report.

(d) *Protection of water wells and supplies.* For HDD or TT construction **[or O&M activities]** near a private water supply source, a public water supply source, or both, such as a well or a reservoir, a hazardous liquid public utility shall:

**[(1) Comply with relevant regulations of the Department of Environmental Protection, including but not limited to 25 Pa. Code § 78a.68a (relating to horizontal directional drilling for oil and gas pipelines), 25 Pa. Code Chapter 102 (relating to erosion and sediment control), 25 Pa. Code Chapter 105 (relating to dam safety and waterway management), and 25 Pa. Code Chapter 109 (relating to safe drinking water), and comply with Department of Environmental Protection Trenchless Technology Technical Guidance and subsequent updates thereto.]**

**[(2)]** **(1)** Identify public and private water supply wells within **[1/2 mile] 1,000 feet** of HDD or TT construction**[ or O&M activities]**, surface water intakes within one mile downstream, and water supplies deemed at potential risk due to geological structures.

**[(3)] (2)** Identify **[public and private water supply] the** owners **and users of water supplies** within 1,000 feet of HDD or TT construction**[ or O&M activities]**.

**[(4)] (3)** Notify owners **and users** of a water supply identified in paragraph **[(3)] (d)(2)** prior to **the commencement of** HDD or TT construction **[or O&M activities]** and provide them with an opportunity to have their water supplies tested before, during and after HDD or TT construction**[ or O&M activities]**.

**[(e)** ***Adverse impacts to water wells and supplies.* In the event that a hazardous liquid public utility’s HDD, TT, or direct buried construction or O&M activities cause adverse impacts to a private water supply source, a public water supply source, or both, the hazardous liquid public utility shall:**

**(1) Comply with all relevant regulations of the Department of Environmental Protection, including but not limited to 25 Pa. Code § 78a.68a, 25 Pa. Code Chapter 102, 25 Pa. Code Chapter 105, and 25 Pa. Code Chapter 109, and comply with Department of Environmental Protection Trenchless Technology Technical Guidance and subsequent updates thereto.**

**(2) Notify the Pipeline Safety Section, Department of Environmental Protection and affected water supply owners immediately, but not to exceed 24 hours.**

**(3) Supply affected private or public water supply owners with alternative clean water sources immediately, but not to exceed 24 hours.**

**(4) Implement corrective action under Department of Environmental Protection regulations that addresses the impacts caused by the HDD, TT, or direct buried construction or O&M activities, including restoration or water supply replacement.]**

**[(f)] (e)** *Records.* A hazardous liquid public utility shall maintain records documenting compliance with the requirement of this section. The records must be made accessible to the Pipeline Safety Section upon request. A hazardous liquid public utility shall retain the records for the life of the pipeline.

**§ 59.139. [Pressure testing.**

**(a) *Scope.* This section establishes requirements for a hazardous liquid public utility conducting pressure testing.**

**(b) *Hydrostatic testing and reassessment generally.***

**(1) Pipelines installed before 1970, must be hydrostatically tested under 49 CFR 195.304 (relating to test pressure) every 10 years and must be assessed using appropriate in-line inspection tools at least every 2 years. In-line inspection tools must be chosen to detect system-specific threats. A hazardous liquid public utility shall use alternating in-line inspection technologies meeting industry best practices, such as deformation, magnetic-flux leakage, ultrasonic testing and electromagnetic acoustic transducer, to monitor pipeline-specific threats.**

**(2) Pipelines installed after 1970, must be hydrostatically tested under 49 CFR 195.304 at least every 3 years.**

**(3) A pipeline that has been placed back in service after a leak has been repaired must be reassessed using in-line inspection at least every year until 6 years pass without another leak.**

**(c) *Hydrostatic testing in HCAs.* A new pipeline, a converted, relocated, replaced, or otherwise changed existing pipeline, or a reactivated segment of pipeline must be hydrostatically tested and reassessed using in-line inspection under subsection (b) to substantiate the current or proposed maximum operating pressure. A pipeline, or segment thereof, for which the maximum operating pressure is to be increased must be hydrostatically tested under subsection (b).**

**(d) *Notification.* At least 5 business days prior to starting a test, a hazardous liquid public utility shall notify the Pipeline Safety Section of the scheduled testing. To maintain continuity of service during emergencies, shorter notice is permissible. A hazardous liquid public utility shall notify the public officials wherein the test is to be conducted.**

**(e) *Records.* A hazardous liquid public utility shall maintain records documenting compliance with the requirement of this section. The records must be made accessible to the Pipeline Safety Section upon request. A hazardous liquid public utility shall retain the records for the life of the pipeline.] (Reserved).**

**§ 59.140. [Operation] Operations and maintenance.**

(a) *Scope.* This section establishes requirements for a hazardous liquid public utility operating and maintaining a pipeline.

(b) *Emergency procedures manual and activities.* A hazardous liquid public utility shall establish and maintain liaison with emergency responders and shall consult with them in developing and updating an emergency procedures manual**, which must be made available upon request to the Pipeline Safety Section,** addressing **emergency procedures and activities including** the following:

(1) Reasonable and practicable steps to inform emergency responders of the practices and procedures to be followed to provide them with relevant information, including information regarding the product in the pipeline and the associated risk**[, consistent with the hazardous liquid public utility’s emergency procedures manual]**.

(2) The development of a continuing education program for emergency responders and the affected public to inform them of the location of the pipeline, potential emergency situations involving the pipeline and the safety procedures to be followed in the event of an emergency.

(3) Tabletop drillstobe conducted twice a year **[and a response drill conducted annually]** by the hazardous liquid public utility to simulate a pipeline emergency. The table-top drills **[and response drills]** must be conducted on different pipelines and products and in **[each geographic area] the counties** where the hazardous liquid public utility’s pipelines are located.

**(4) Response drills to be conducted at least once a year by the hazardous liquid public utility to simulate a pipeline emergency. The response drills must be conducted on different pipelines and products and in the counties where the hazardous liquid public utility’s pipelines are located.**

(c) *Liaison activities with emergency responders.* A hazardous liquid public utility shall communicate and conduct liaison activities at least twice a year with emergency responders. The liaison activities are those required by 49 CFR 195.402(c)(12) (relating to procedural manual for operations, maintenance, and emergencies). Liaison activities must be conducted in person, except as provided by paragraph **(c)**(2).

(1) *Meetings in person.* When a hazardous liquid public utility makes contact with the emergency responders and schedules a meeting in person, no further attempts to make contact under this paragraph are required. If a scheduled meeting does not take place, the hazardous liquid public utility shall make an effort to reschedule the meeting in person using at least one of the methods in this paragraph before arranging liaison activities under paragraph **(c)**(2).

(i) Mailing a written request for a meeting in person to the emergency responders by certified mail, return receipt requested.

(ii) Making at least one telephone call, facsimile transmission or **[e-mail] electronic mail** message transmission to the emergency responders to request a meeting in person.

(2) *Alternative methods.* A hazardous liquid public utility may conduct required liaison activities by the following alternative methods only if the hazardous liquid public utility has completed at least one of the steps in paragraph **(c)**(1) to conduct a community liaison meeting in person with the emergency responders. If a hazardous liquid public utility cannot arrange a meeting in person after complying with paragraph **(c)**(1), the hazardous liquid public utility shall conduct liaison activities by:

(i) Holding a **videoconference or a** telephone conference with the emergency responders.

(ii) Delivering the liaison information required to be conveyed by certified mail, return receipt requested.

(3) *Hazard assessment zone analysis.* A hazardous liquid public utility shall conduct an annual hazard assessment zone analysis and present its findings**, within 60 days of completion of the analysis,** to emergency responders that have executed a nondisclosure agreement **[within 60 days of completion of the analysis]**.

(4) *Records of liaison activities with emergency responders.* A hazardous liquid public utility shall maintain records documenting compliance with this subsection. Records must be retained for 7 years from the date of the event commemorated by the record.

(d) *Liaison activities with school administrators when a school building or facility is located within 1,000 feet, or within the LFL, of a pipeline or pipeline facility, whichever is greater.* A hazardous liquid public utility shall comply with this section when a school building containing classrooms or any other school facility where students congregate is located within 1,000 feet, or within the LFL, of a pipeline or pipeline facility.

(1) *Maintaining records.* For a school building containing classrooms or school facility where students congregate located within 1,000 feet, or within the LFL, of a pipeline or pipeline facility, whichever is greater, a hazardous liquid public utility shall maintain and, upon request, provide the Pipeline Safety Section, with the following information:

(i) The name of the school and the contact information for the school administrators.

(ii) The street address of the school building or facility.

(iii) Pipeline identification information.

(2) *Furnishing records.* A hazardous liquid public utility shall, upon written request from a school administrator with a school building or facility where students congregate within 1,000 feet, or within the LFL, of a pipeline or pipeline facility, whichever is greater, provide in writing the following parts of a pipeline emergency response plan that are relevant to the school:

**[(i) A description of the pipeline or pipeline facilities.]**

**[(ii)]** **(i)** A list of any product transported in the segment of the pipeline.

**[(iii)] (ii)** Emergency contact information.

**[(iv)] (iii)** Information regarding the Commonwealth’s One Call system.

**[(v)] (iv)** Information regarding how to recognize, report and respond to a product release.

(3) *School administrator meetings.* A hazardous liquid public utility subject to paragraph **(d)**(2) shall appear at a regularly scheduled meeting of school administrators, upon request by the school administration, to explain the items listed in paragraph **(d)[(1)](2)**.

(4) *Records.* A hazardous liquid public utility shall retain records documenting compliance with this subsection for 7 years from the date of the event that is commemorated by the record.

(e) *Public awareness communication requirements beyond API RP 1162.* The requirements of this subsection apply to the affected public, emergency responders and public officials within the LFL of a pipeline.

(1) *Baseline messages.* A hazardous liquid public utility shall provide baseline messages**[, as prescribed in Table 2-1 of API RP 1162]**:

(i) To the affected public at least twice a year, with additional frequency and supplemental efforts as determined by specifics of the pipeline segment or environment under Section 6 of API RP 1162. **The message must include a warning that a leak from the hazardous liquid pipeline can cause property damage, personal injury, burns, asphyxiation, or death, or any combination of these damages and injuries.**

(ii) To emergency responders at least twice a year, with additional frequency and supplemental efforts as determined by specifics of the pipeline segment or environment under Section 6 of API RP 1162.

(iii) To public officials annually with additional frequency and supplemental efforts as determined by specifics of the pipeline segment or environment under Section 6 of API RP 1162.

(2) *Meetings.* A hazardous liquid public utility shall:

(i) Hold at least one open house or group meeting annually whereby the affected public can receive information or an overview as part of the hazardous liquid public utility’s Supplemental Activities for the Affected Public, as prescribed in Table 2-1 of API RP 1162.

(ii) Meet with emergency responders once per quarter to discuss emergency response as part of the hazardous liquid public utility’s Baseline Activities for Emergency Officials, as prescribed in Table 2-1 of API RP 1162.

(iii) Meet with public officials annually, upon request.

(3) *Updates.* A hazardous liquid public utility shall evaluate its written continuing public education program annually. An update to a program must be provided to the Pipeline Safety Section for review for compliance with 49 CFR 195.440 (relating to public education).

(f) *Line markers.* In addition to the requirements set forth in 49 CFR 195.410 (relating to line markers) a hazardous liquid public utility shall place line markers for buried and above-ground pipelines as follows:

(1) Along a pipeline’s right-of-way in such a manner that two line markers, one in each direction, are visible at any point while standing at ground level at the pipeline, except in a heavily developed urban areas where the placement of the markers is impractical. In a heavily developed urban environment, the hazardous liquid public utility shall use low-profile markers.

(2) At either side of a water crossing.

(3) At all above-ground pipeline appurtenances.

(g) *Inspection of pipeline rights-of-way.* In addition to the requirements of 49 CFR 195.412 (relating to inspection of rights-of-way and crossings under navigable waters), a hazardous liquid public utility shall inspect pipeline facilities in non-HCAs using ground patrol at least twice a year, not to exceed every 6 1/2 months, and in HCAs using ground patrol at least four times a year, not to exceed every 3 1/2 months. The ground patrol shall include inspection along the right-of-way to ascertain surface conditions on or adjacent to the right-of-way. The ground patrol path must not exceed lateral distance of 25 feet from the center of the right-of-way.

**[(h) *Leak detection and odorization.* In addition to the requirements of 49 CFR 195.444 (relating to leak detection), a leak detection system must be designed as a robust, Real Time Transient Model, under API RP 1130, capable of identifying small leaks. A CPM system must be designed with high sensitivity to commodity releases. Implementation must be prioritized as set forth in subparagraphs (1)—(4). If these requirements cannot be met within 5 years, a hazardous liquid public utility shall odorize all HVL pipelines.**

**(1) Pre-1970 HVL pipelines.**

**(2) Post-1970 HVL pipelines**

**(3) Pre-1970 pipelines.**

**(4) Post-1970 pipelines.]**

**[(i)] (h) [*EFRDs in HCAs*]*****Emergency flow restricting devices in high consequence areas****.* In addition to the requirements of 49 CFR 195.452 (relating to pipeline integrity management in high consequence areas), a hazardous liquid public utility shall determine the need for remote controlled EFRDs in consultation with public officials in all HCAs. The need for emergency flow restriction devices in HCAs must be based on limiting the LFL to 660 feet on either side of a pipeline.

**§ 59.141. Qualification of pipeline personnel.**

(a) *Scope.* This section establishes requirements for a hazardous liquid public utility to qualify an individual that performs covered tasks **and [, as defined in § 59.132 (relating to definitions), to include]** construction tasks**[,]** on a pipeline facility.

(b) *Qualification program.* In addition to the provisions of a written qualification program as required in 49 CFR 195.505 (relating to qualification program), a qualification program must include:

(1) The adoption of the provisions for a written qualification program, as required in 49 CFR 195.505, for construction tasks.

(2) A process that trains an individual qualified, as defined in 49 CFR 195.503 (relating to definitions), to identify and react to facility specific abnormal operating conditions.

(3) Requalification intervals for each covered task **and each construction task**. A hazardous liquid public utility shall requalify an individual for each covered task **and each construction task** at intervals not exceeding those required by the hazardous liquid public utility’s qualification program. Requalification must include training and evaluation for a hazardous liquid public utility employee or contractor using the **[same company]** procedures and equipment required **[for] by the hazardous liquid public utility for an** initial qualification.

**(4) A list of the minimum required standards for OQ certification for each covered task and construction task generated in consultation with industry and advocacy groups.**

**(5) OQ certification.**

**(6) Local and project-specific information.**

(c) *Records.* In addition to the provisions of recordkeeping as required by 49 CFR 195.507 (relating to recordkeeping), a hazardous liquid public utility shall maintain qualification records as required in 49 CFR 195.507 for construction tasks. A hazardous liquid public utility shall provide qualification records of an individual performing covered tasks, as described in 49 CFR 195.507, **and construction tasks** to the Pipeline Safety Section upon request.

**§ 59.142. Land agents.**

**(a)** A land agent employed or contracted by a hazardous liquid public utility must hold a valid Pennsylvania professional license in one of the following fields: attorney, real estate salesperson, real estate broker, professional engineer, professional land surveyor or professional geologist.

**(b)** A land agent’s Pennsylvania professional license must be in good standing during the performance of the land agent work or services on behalf of **[the] a** hazardous liquid public utility.

**(c) For violations of subsections (a) or (b), a hazardous liquid public utility may be assessed a civil penalty pursuant to 66 Pa.C.S. § 3301—3316.**

**§ 59.143. Corrosion control.**

(a) *Scope.* This section establishes requirements for hazardous liquid public utilities protecting pipelines against corrosion.

(b) *Procedures.* A hazardous liquid public utility shall have written procedures for the design, installation, operation and maintenance of cathodic protection systems. The procedures must be specific and written for each cathodic protection test, survey, and inspection and must be carried out by, or under the direction of, a person qualified in pipeline corrosion control methods. **[A hazardous liquid public utility shall determine and document the average and the worst-case corrosion rate experienced for each pipeline segment.]**

**[(c) *Criteria for cathodic protection.* Each cathodic protection system must provide a level of cathodic protection over the entire pipeline that complies with at least one of the following:**

**(1) A negative (cathodic) potential of at least 850mV with voltage drops removed from all current sources in the pipe to soil measurement. This potential is measured with respect to a saturated copper/copper sulfate reference electrode contacting the electrolyte.**

**(2) A negative polarized potential of at least 850mV relative to a saturated copper/copper sulfate reference electrode.**

**(3) A minimum of 100mV of cathodic polarization between the structure surface and a stable reference electrode contacting the electrolyte. The formation or decay of polarization to satisfy this criterion and the length of time with current sources off must be based upon measured soil resistivities. The length of time must not allow exposure of an area of the pipeline and other foreign pipelines to the detrimental effects of corrosion.]**

**[(d)] (c)** *Adequacy of cathodic protection.* A hazardous liquid public utility shall test a cathodically-protected pipeline at the corrosion test station to determine the adequacy of cathodic protection as follows:

(1) Each pipeline must be tested at least once each calendar year, with intervals not exceeding 15 months **[, to determine whether the cathodic protection meets the requirements of subsection (c)]**. Each impressed current ground bed must be tested as part of this monitoring.

**[(**2) **Each pipeline transporting HVLs must be tested at least twice each calendar year, but with intervals not exceeding 7½ months, to determine whether the cathodic protection meets the requirements of subsection (c). Each impressed current ground bed must be tested as part of this monitoring.]**

**[(3)] (2)** Each **non-remote** cathodic protection rectifier must be inspected once each calendar month **[but]** with intervals not exceeding 37 days**[,]** to ensure that it is operating properly. Remote monitoring devices are permissible to accomplish monitoring; however, **[physical inspection of the facilities must occur at least six times per calendar year, in alternating calendar months, to verify the integrity of the impressed current system]** **if the remote device stops reporting or reports operations outside the expected parameters, then the remote device must be inspected within a reasonable time period not to exceed 7 days from date of discovery**.

**[(4)] (3)** Each reverse current switch, each diode, and each interference bond whose failure could jeopardize structure protection on a pipeline transporting HVLs must be electrically checked for proper performance 12 times each calendar year, with intervals not exceeding 37 days.

**[(5)] (4)** A hazardous liquid public utility shall initiate actions to start remedial measures within **[14] 30** days upon discovery to correct any deficiencies indicated by the monitoring. At no point shall the completion of the remedial measures exceed the next scheduled inspection.

**[(e) *Close Interval Surveys.* A hazardous liquid public utility shall conduct close internal surveys, including paved surfaces, every 3 years not to exceed 39 months. A hazardous liquid public utility shall use close interval potential surveys or close interval depolarization surveys. The method used shall determine the adequacy of cathodic protection over the entire pipeline. A hazardous liquid public utility shall comply with NACE International Standard Practice 0207-2007, Performing Close-Interval Potential Surveys and DC Surface Potential Gradient Surveys on Buried or Submerged Metallic Pipelines (March 10, 2007).]**

**[(f)]** **(d)** *Interference currents.*

(1) A hazardous liquid public utility shall have a written continuing program to minimize the detrimental effects of stray currents from foreign pipelines, railways, mining operations or other **[direct]** current sources **such as stray current**. The program must include provisions for adequately documenting actions and activities for mitigating interference currents.

(2) Each impressed current system shall be designed and installed to minimize detrimental effects to foreign pipelines and other underground metallic structures.