ENERGY TRANSFER

Aboveground Components / Overhead Crossings

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.25**	
49 CFR: 195.254	***Effective Date: 03/01/14***	**Page 1 of 3**

1.0 Purpose

This Standard Operating Procedure (SOP) establishes minimum requirements for the inspection of pipeline bridges and spans crossing identified waterways.

2.0 Scope

This SOP covers inspection and maintenance of pipeline bridge structures and spanned waterway crossings to verify safety and operational integrity

3.0 Applicability

This SOP applies to pipeline bridge structures as well as spanned waterway crossings or spans supported by structures not owned by the company.

4.0 Frequency

As required: Inspect each suspension bridge after adverse weather conditions such as hurricanes or strong wind events and update list of waterway crossings.

Annually, at intervals not to exceed 15 months: Inspect each pipeline bridge.

Every 10 years, not to exceed the tenth calendar year: Inspect all suspension bridges.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
All Operations	Operations Personnel	Operations Manager	Director of Operations

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms and definitions, refer to *SOP HLA.01 Glossary and Acronyms*.

Terms	Definitions
Suspension bridge	The structure specifically designed to support a pipeline span.

7.0 Pipeline Spans and Aerial Crossing Inspections

The following procedures are described in this section:

- Above Ground Components
- Company List of Waterways
- Span Inspections
- Bridge Inspections

7.1 Above Ground Components

The following regulations are taken form 49 CFR 195.254

(a) Any component may be installed above ground in the following situations, if the other applicable requirements of this part are complied with:
  (1) Overhead crossings of highways, railroads, or a body of water.
  (2) Spans over ditches and gullies.
  (3) Scraper traps or block valves.
  (4) Areas under the direct control of the operator.
  (5) In any area inaccessible to the public.

(b) Each component covered by this section must be protected from the forces exerted by the anticipated loads.

7.2 Company List of Waterways

Operations Personnel maintain the company list of waterways and update it periodically.

NOTE: When classifying waterways, consider risk factors that potentially impact safety and continuity of service, including:

- Pipe size
- Operating stress level
- Volume of liquid transported
- Proximity of people
- Navigable waterways

7.3 Bridge Inspections

Operations Personnel shall follow the procedure below for pipeline bridge inspection.

Step	Activity
1	**INSPECT** each pipeline bridge to verify proper support for the pipeline and to **CONFIRM** that no deterioration of the structure has taken place. **REFER** to *SOP HLD.44 Atmospheric Corrosion Inspections.* Complete the applicable form(s) for *Corrosion Control Remedial Action Report,* if appropriate.
2	**INSPECT** bridges, spans, or overhead crossings that may become submerged as a result of major rain events for damage to support structures, the pipe, and waterway banks. **REMOVE** accumulated debris on pipeline. **MONITOR** pipeline bridges frequently during such events.

Step	Activity
3	**COMPLETE** an unplanned work order in EAM.
4	**ARRANGE** for the condition of all major suspension bridges to be reviewed by a contractor or suspension bridge consultant.
5	**PLAN** and **IMPLEMENT** corrective measures for any deficiency found.

7.4 Span Inspections

Operations Personnel follows the procedure below for inspection of spans.

Step	Activity
1	**INSPECT** the surface conditions adjacent to pipeline span to detect bank erosion or other environmental change that might indicate damage or loss of cover to the pipeline. **INSPECT** pipeline marking signs for their condition and legibility. **REFERENCE** *SOP HLI.12 Pipeline Facilities Identification*. **MAKE** additional inspections if flooding has occurred or channel changes are detected during patrols or other opportunities for observation.
2	**COMPLETE** an unplanned work order in EAM.
3	**SCHEDULE** and **IMPLEMENT** maintenance, modifications, or corrective work to maintain adequate protection of facilities.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

Complete electronic maintenance system or a similar system for reporting requirements. Maintain for ten (10) years or one (1) inspection cycle, whichever is longer.
Results of all surveys and outside consultant investigations: Retain for the life of the facility involved.

9.0 References

HLD.44 Atmospheric Pipe Inspection
HLI.12 Pipeline Facilities Identification

Appendix A: OQ Task Requirements

The table below identifies the Operator Qualification (OQ) Task Requirements.

Task Description	OQ Task
Visual Inspection for Atmospheric Corrosion	PLOQ417
Right-of-Way Inspection	PLOQ701B

ENERGY TRANSFER

Mining Subsidence and Soil Slippage

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.:HLI.26**	
49 CFR 195.442	***Effective Date: 04/01/18***	**Page 1 of 13**

1.0 Purpose

This Standard Operating Procedure (SOP) establishes the requirements for identifying, investigating, and controlling mining operations, subsidence, and soil slippage.

2.0 Scope

The investigation of proposed mining activities or unstable soils can reduce the possibility of pipeline damage due to earth movement or vibrations by identifying potential problem areas and allowing sufficient time to take preventive measures.

Methods of investigation include, but are not limited to, geological studies, installation of monitoring instruments, re-evaluation of existing pipe integrity, establishment of limitations, on-site field observation, and profile surveys.

3.0 Applicability

This SOP applies to sections of regulated pipeline systems located in areas where mining operations and/or natural geological conditions can cause soil subsidence, landslides, sinkholes, increased stresses, or other problems.

4.0 Frequency

As required: When a mining operation, soil subsidence, landslide, sinkhole, or other condition is identified.

5.0 Governance

The following table describes the responsibility, accountability and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
All Operations	Operations Personnel	Operations Manager	Director of Operations

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to SOP *HLA.01 Glossary and Acronyms*.

Terms	Definitions
Natural Occurrences	Landslides, sinkholes, earthquakes, flooding or high water events, etc.

7.0 Mining Subsidence and Soil Slippage

This SOP contains the following sections:

- Communications
- Involvement of a Consultant
- Precautions for Room and Pillar Mining
- Preparations for Subsidence Caused by Longwall Mining
- Activities During Longwall Mining Subsidence
- Using Line Break Controls
- Protection of Pipeline from Soil Slippage
- Reporting

NOTE: Variations to these procedures may be approved by the Pipeline Integrity Group based upon project specific requirements.

7.1 Communications

Right-of-Way personnel perform the following steps to communicate with the entities involved.

CAUTION: In situations where coupled or acetylene pipelines are involved, make special considerations and consult Operations Personnel.

Step	Activity
1	**ESTABLISH** and **MAINTAIN** communications between Operations Personnel and the entities involved.

NOTE: This allows for keeping records of the areas where mining, subsidence, slippage, etc. is in progress and coordinating the company's monitoring and safety precautions with the entities involved.

Step	Activity
2	**MONITOR** pipeline conditions daily during the subsidence period or natural occurrences. **MAINTAIN** contact with the entities involved as required. **ADVISE** the Right-of-Way Representative of any conditions that appear to be abnormal.

NOTE: While most subsidence occurs during the first month after long-wall mining under the pipeline, additional subsidence can occur over the next 9-12 months.

Step	Activity
3	**REVIEW** each mining situation to determine the company's rights.

7.2 Involvement of a Consultant

Perform the following steps when involving a consultant.

Step	Activity
1	**EVALUATE** the potential for subsidence or other impacts from mining operations or natural occurrences based upon the site conditions and relative location of the pipeline.
2	**ENGAGE** a consultant, if necessary, to perform a geological study, to predict the effects and to provide the company with recommendations.

7.3 Precautions for Room and Pillar Mining

Take the following precautions for room and pillar mining.

Step	Activity
1	**OBTAIN** as much detailed information regarding the mining activities and the pillar and room sizes as possible when room and pillar mining is conducted beneath company pipelines.

CAUTION: Do not allow mining beneath Metering and Regulating (M&R) stations, pump stations, valve settings, or other similar facilities.

Step	Activity
2	**CONSIDER** the recommendations from the consultant.
3	**CHECK** the right-of-way above the mine as appropriate for the first month after the mining is complete and annually thereafter for any evidence of subsidence in the appearance of the ground surface.

NOTE: Use photographs, quadrangle maps, or consider establishing a benchmark for elevations on the pipeline that can be used to help in determining if subsidence is occurring.

7.4 Preparations for Subsidence Caused by Longwall Mining

If subsidence is predicted which may involve the pipeline, perform the following procedures prior to the subsidence period.

7.4.1 Reviewing Pipeline Operating Conditions

The Operations Personnel reviews the pipe operating conditions and Pipeline Integrity Group reviews information from ILI data, if available, for the affected area.

NOTE: For further investigation and possible replacement prior to the subsidence period, anomalies or other conditions which could cause problems as a result of the subsidence.

CAUTION: Where coupled and/or acetylene welded pipelines are involved, make special consideration and consult the Pipeline Integrity Group.

7.4.2 Reviewing Stresses in the Lowered Pipeline

Perform the following steps when reviewing stresses in the lowered pipeline.

Step	Activity
1	**PERFORM** a preliminary analysis of the anticipated pipeline subsidence in accordance with *SOP HLI.08 Lowering or Raising In-Service Pipelines.*
2	If the final stresses are predicted to be excessive, **CONSULT** with the Pipeline Integrity Group regarding potential replacement with heavier wall pipe, or other remedial actions.

7.4.3 Determining Allowable Strain Level

The Pipeline Integrity Group determines the maximum allowable strain level per *SOP HLI.08 Lowering or Raising In-Service Pipelines* for use in monitoring the subsidence in accordance with section 7.5.2 “Monitoring Strain Gauges” below. Perform this action item in conjunction with the above stress calculations in section 7.4.2 “Reviewing Stresses in the Lowered Pipeline.”

7.4.4 Removing Soil Overburden from the Pipeline

The Operations Personnel is responsible for the following steps during the removal of soil overburden from the pipeline.

Step	Activity
1	**UNCOVER** the entire length of pipeline to be affected by the subsidence.
2	**STRIP** both sides of the pipe to allow lateral movement during subsidence.
3	**SLOPE** or **SHORE** ditch banks properly in accordance with *SOP HLI.10*

Step	Activity
	Excavation and Backfill to protect personnel who will be working in the ditch during the monitoring operations.
4	**LEAVE** a minimum number of small plugs of earth where necessary for access across the pipeline.

CAUTION: Plugs left in the ditch during subsidence can concentrate stresses and result in stress levels much higher than predicted values.

NOTE: Road crossings may need to be open cut and bridged across the pipeline. Involve the Right-of-Way representative for possible permitting requirements of the authority responsible for the roadway.

Step	Activity
5	**DETERMINE** if any measures are necessary to protect the pipeline coating from the environment after it has been exposed. **CONSULT** with the Corrosion Specialist to determine if any measures need to be taken to protect the pipeline coating from environmental forces during the time frame the pipeline is exposed and during subsidence.
6	**PROVIDE** drainage for creeks to prevent water from ponding in the trench. **CONSIDER** profile survey of the affected pipeline segment to determine cover, location of bends, etc. **PERFORM** an aerial survey of the proposed area to determine location(s) of nearby water bodies such as creeks, waterways, ponds, lakes, and other structures that might pose a risk to the pipeline during subsidence or other land movement conditions.

7.4.5 Radiographic Inspection and Repairing Welds

At the direction of the Pipeline Integrity Group or Welding Group, Operations will be responsible for radiographic inspection and repairing welds.

Step	Activity
1	**VERIFY** that all circumferential welds in the subsidence area are radiographed prior to the subsidence, as directed by Operations Personnel.
2	**EVALUATE** the welds.
3	**REPAIR** or **REPLACE** welds per *SOP HLI.08 Lowering or Raising In-Service Pipelines*.

7.4.6 Installing Strain Gauges

Perform the following steps for installing strain gauges.

Step	Activity
1	**INSTALL** strain gauges on the pipeline as specified by the Engineering or the Liquid Technical Operations Group at approximately 100-ft. intervals and in other strategic locations where the highest stresses are anticipated, including panel edge and centerline, pipe bends, and road crossings. See Section 7.5.5 "Special Considerations for Cased Road Crossings."
2	**VERIFY** that each location has three strain gauges: one at the top dead center, one at the three o'clock position, and one at the nine o'clock position.

7.4.7 Installing Temperature Measurement Equipment

Connect a temperature recorder or other method of monitoring the pipeline operating temperature to the bottom of the pipe in an area sheltered from the sun and weather.

NOTE:

- This is done to adjust the allowable strain value during and following subsidence for the temperature changes which occur after the strain gauges have been installed.
- The allowable strain level established per "Reviewing Stresses in the Lowered Pipeline" above may vary with pipe temperature since lower temperatures cause additional stress from axial contraction of the steel pipe.

7.4.8 Evaluating Material Requirements

The Operations Personnel is responsible for evaluating material requirements.

Step	Activity
1	**OBTAIN** sand bags, air bags, skids, erosion control fabric, silt fencing, fencing, signage, and other required materials as appropriate for installation during the pipeline excavation and subsidence.
2	**INSTALL** erosion control measures per company standards.
3	**LOCAT**E pretested pipe as a precautionary measure in the event that problems arise. **CONSIDER** pre-positioning pipe at an approved bending contractor site in the event a bend must be replaced or modified.

7.4.9 Notification and Permits

Operations Personnel or Right-of-Way personnel perform the following tasks for notifications and permits.

Step	Activity
1	**CONTACT** landowners in the area to make them aware of the work that must be done.
2	**OBTAIN** permits where appropriate.

7.5 Activities during Longwall Mining Subsidence

Perform the following activities from the time that the mining operation first approaches the pipeline until the mining is complete in the area and no significant additional subsidence occurs as determined by the Pipeline Integrity Group.

7.5.1 Manning Mainline Block Valves

Operations Personnel performs the following steps during manning mainline block valves.

Step	Activity
1	During the subsidence period, **MAN** mainline block valves bracketing the section of pipeline affected 24 hours a day unless otherwise directed by Pipeline Integrity.

NOTE:	Manning the valves allows them to be closed immediately in the event of a pipe failure.

Step	Activity
2	**ESTABLISH** other means of isolation if a valve cannot be manned during the subsidence. Such as remotely operating from the control center and manning another valve nearby. **CONSULT** Liquid Technical Operations group to design a control scheme in the event a main line valve cannot be manned during the active subsidence

7.5.2 Monitoring Strain Gauges

Operations Personnel takes the following steps in monitoring strain gauges.

Step	Activity
1	**MONITOR** the gauges and **TAKE** daily readings.
2	If any gauge registers a change in strain of over 90% of the allowable strain level established in “Determining Allowable Strain Level” above and has been adjusted for temperature, **NOTIFY** Operations Management to determine appropriate actions per “Monitoring Pipe Elevations” below.

7.5.3 Monitoring Pipe Elevations

The Operations Personnel takes the following steps in monitoring pipe elevations.

Step	Activity
1	**SET UP** a benchmark outside of the subsidence area to ensure that the measurements are accurate.
2	**RECORD** daily elevations of the top of the pipe and the adjacent ground.
3	**CONTACT** the mine operator daily to obtain information on the location of the face.
4	**PLOT** the face location and strain gauge locations on a drawing along with pipe and ground elevations.
5	**CALCULATE** pipe strain based upon the change in pipe curvature to supplement the strain gauge readings, where necessary.
6	**USE** the elevation data to establish when the subsidence period begins and ends and in determining a plan of action in the event remedial measures are necessary.

7.5.4 Remedial Actions

The Operations Personnel performs the following tasks when taking remedial actions.

Step	Activity
1	If corrective measures must be taken to protect the pipeline when excessive strains or other unfavorable conditions occur during subsidence, **DETERMINE** the proper remedial action.
2	**PERFORM** the following if necessary: • **INSTALL** supports to maintain the pipeline at a constant elevation. • **USE** air bags to lift the pipe. • **EXCAVATE** additional pipeline to allow for lowering of the line. • **REDUCE** operating pressure. • In extreme cases, **REMOVE** the pipeline from service and cut the pipe to relieve the induced stresses.

CAUTION: Use of airbags induces extra stress into the pipeline. Consult with Pipeline Engineer prior to using airbags.

Step	Activity
3	**PLAN** any adjustments to the profile or alignment to reduce the amount of bending in the pipe in the area where the high stress is occurring while minimizing any increase in the bending of adjacent areas.

7.5.5 Special Considerations for Cased Road Crossings

The Operations Personnel performs the following steps when making special considerations for cased road crossings.

Step	Activity
1	**INSTALL** strain gauges on the pipeline at both ends of the casing to monitor for stress concentrations.

CAUTION: As a mining panel approaches a cased road crossing, the pipeline may begin subsiding at one end of the casing while the casing still remains at its original elevation. This could cause damage to the pipeline.

Step	Activity
2	**UTILIZE** temporary support methods to spread out excessive loads and to prevent the pipe from grounding to the casing end.

NOTE: Progression of the subsidence past the road should alleviate the differential settlement of the pipeline; however, if the road is at the final edge of the panel, the pipeline may need to be cut for the installation of bends.

7.5.6 Backfilling

The Operations Personnel performs the following steps during backfilling.

Step	Activity
1	**EVALUATE** the mining consultant's report and the reduction in the subsidence rate after the mining has passed to determine when the monitoring activities may be discontinued and when the pipelines may be backfilled.

NOTE: Once the mining process has passed beneath the pipeline, the subsidence period typically lasts for several more weeks.

Step	Activity
2	**PROVIDE** adequate support prior to backfilling per *SOP HLI.10 Excavation and Backfill.*

7.6 Protection of Pipeline from Soil Slippage

The Operations Personnel performs the following actions to protect the pipeline from soil slippage.

Step	Activity
1	**PERFORM** protective measures when excessive deformations or significant increases of pipe stress are detected which may include the following: • Relocation of the pipeline into a more stable area • Removal of sliding soil • Stabilization of the land slippage area by drying the area with surface or subsurface drains • Excavation of a trench parallel to and immediately uphill of the pipeline to relieve lateral soil pressure on the pipe (This usually applies to cases where earth movement is approximately perpendicular to the pipeline.) • Combinations of the above methods

NOTE:	In areas of unstable slopes where soil slippage is occurring, after an earthquake, or when a high potential for soil movement exists, monitor using visual observation, aerial patrol, and readings from instrumentation.

Step	Activity
2	**DETERMINE** the extent of the hazard and the appropriate remedial measures.
3	**DISCUSS** each case with Engineering Group and/or Liquid Technical Operations Group.

7.7 Reporting

The Pipeline Engineer performs the following actions when reporting.

Step	Activity
1	**MAINTAIN** a daily record of the survey and strain gauge data, and the reports from the mining company summarizing the progress of the mine.
2	Once each week, verbally **REPORT** to Engineering Group and/or Liquid Technical Operations Group on the status of mining and pipeline monitoring activities.
3	Upon completion of the mining operation, and after no significant additional subsidence occurs, **PREPARE** a formal report documenting the surveillance of the pipeline including all elevation and strain gauge data obtained during the mining period.
4	**INCLUDE** a copy of the report with the completion package.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable: Mitigation plan as developed by the Operations Personnel and Engineering.

The following table describes the EAM reporting requirements of this SOP.

Activity	Reporting
Acknowledge the requirements as outlined in the SOP have been completed. Record exceptions, if any, in the comments section.	EAM 7T000PLW Unplanned Pipeline Work Order; retain for the life of the facility.

9.0 References

HLI.08 Lowering or Raising In-Service Pipelines
HLI.10 Excavation and Backfill

Appendix A: OQ Task Requirements

The table below identifies the Operator Qualification (OQ) task requirements.

Function	OQ Task
Backfilling Pipe and Coating Protection	PLOQ404

ENERGY TRANSFER

Abnormal Loading Evaluation for Equipment, Highway & Railroad Crossing Type Loads

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.27**	
49 CFR: Part 195.256	***Effective Date: 04/01/18***	**Page 1 of 5**

1.0 Procedure Description

This Standard Operating Procedure (SOP) describes how to evaluate the effects of abnormal external loading on the pipeline, highway and railroad crossings.

2.0 Scope

This SOP:

- Identifies the characteristics of the pipeline(s) and crossings that are impacted by the loading condition.
- Identifies the specific parameters of the abnormal loading condition.
- Identifies the steps required to develop and document a mitigation plan for reducing stress on the pipeline and crossings to acceptable limits.
- Communicates the requirements of the mitigation plan.

3.0 Applicability

This SOP applies to all regulated company pipelines that are impacted by abnormal loading conditions.

4.0 Frequency

As required: Gather information, submit the appropriate abnormal loading form, and submit for evaluation.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
All Operations	Operations Personnel	Operations Manager	Director of Operations

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to *SOP* HL*A.01 Glossary and Acronyms*.

Terms	Definitions
Abnormal loading	Any condition either from third party entities, environmental conditions, or forces of nature that act upon the pipeline in such a manner as to increase the total combined hoop stresses beyond acceptable limits.

Terms	**Definitions**
Mitigation plan	A plan developed to address protecting the pipeline from all forces that act upon it and to reduce the effects of the outside forces to acceptable levels.
Technical tools	Any tool, computer program, or model that may be utilized to quantify and evaluate outside forces that may be acting on the pipeline.

7.0 Determination of Abnormal Loading

The following procedures are described in this section:

- Report Potential Abnormal Loading
- Develop a Mitigation Plan

7.1 Report Potential Abnormal Loading

Operations Personnel collects information related to potential abnormal loading.

Step	**Activity**
1	**INVESTIGATE** potential forces or activities that may pose an abnormal loading threat to the pipeline. These forces include but are not limited to: • Road, railroad, street, or equipment crossings • Pipe exposures in a stream • Unsupported Spans • Slippage of overburden on a slope • Build-up of debris on or near the pipeline in a stream • Flooding events • Other conditions that add load to the pipeline (dynamic compaction, impact loading, vibrations, stress risers, support points, etc.)
2	**DOCUMENT** the above information on the applicable form(s) or electronic database for *Weather Related and Outside Force Evaluation.* **REFER** to *SOP HLA.12 Safety-Related Condition Reporting* to **VERIFY** that the situation meets the criteria of a Safety Related Condition.

Step	Activity
3	**GATHER** information regarding the type and nature of the force acting on the pipeline, including but not limited to: • Location of the problem • Alignment sheet numbers • Pipeline stationing • Line(s) involved • Pipe diameter(s) • Wall thickness • Pipe grade • Depth of cover • Operating conditions • MOP of line(s) involved • Length of any unsupported pipe • Inherent anomalies & quality of weldments • Quality of coating • Static or dynamic loading
4	**COMPLETE** the applicable form(s) for *Weather Related and Outside Force Evaluation* and **SUBMIT** to the Liquid Technical Operations and Pipeline Integrity Groups for review.

7.2 Develop a Mitigation Plan

An Engineer performs the following steps to develop a mitigation plan.

Step	Activity
1	**ANALYZE** and **EVALUATE** the abnormal loading condition on the pipeline and **DETERMINE** whether the loading is within acceptable limits or if a mitigation plan should be developed. If information is inadequate, **NOTIFY** Operations Personnel to repeat steps 3 and 4 in *Section 7.1*.
2	**DEVELOP** a mitigation plan or **CONTRACT** for assistance from a third party to develop the plan. **COMMUNICATE** the requirements to involved parties.
3	**MONITOR** and **VERIFY** implementation of the mitigation plan.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

Weather Related and Outside Force Evaluation

9.0 References

HLA.12 Safety-Related Condition Reporting

Appendix A: OQ Task Requirements

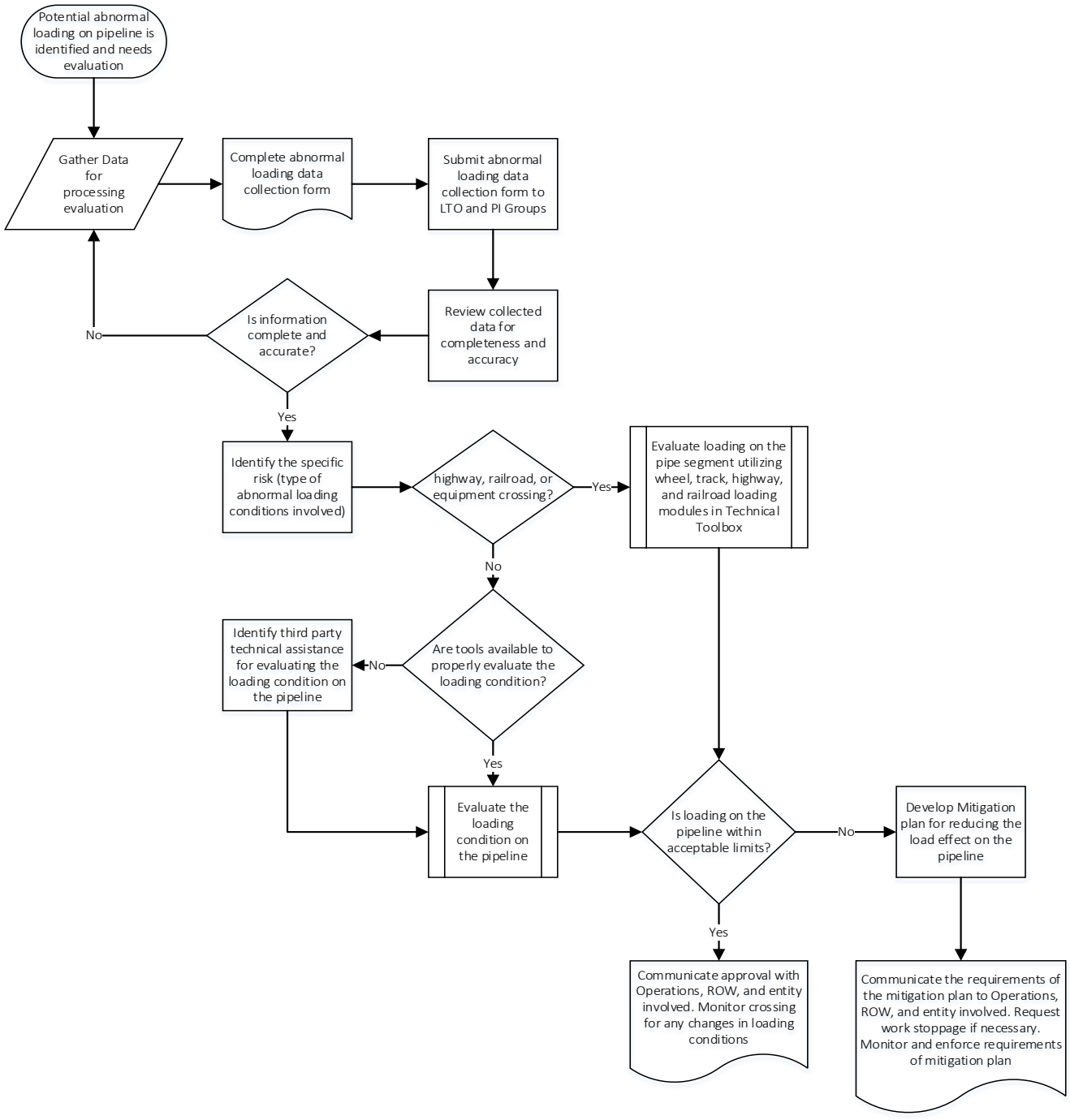
The table below identifies the Operator Qualification (OQ) task requirements.

Function	OQ Task
Backfilling - Pipe and Coating Protection	PLOQ404
Underground Pipeline - Locate and Temporarily Mark	PLOQ605
Damage prevention during Excavation / Encroachment Activities	PLOQ607

Appendix B: Abnormal Loading Process Flow

The following flow chart describes the process for evaluating the effects of abnormal loading.

Code Reference :	**Procedure No.: HLI.27**	
49 CFR: Part 195.256	***Effective Date: 04/01/18***	**Page 5 of 5**



ENERGY TRANSFER

Right-of-Way Encroachments

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference:	**Procedure No.: HLI.28**	
49 CFR 195.412, 195.442	***Effective Date: 05/01/15***	**Page 1 of 30**

1.0 Procedure Description

This Standard Operating Procedure (SOP) describes how to manage Right-of-Way (ROW) encroachments.

2.0 Scope

Use the guidelines in this SOP to control outside forces that could damage the pipelines or leave them vulnerable to future damage or an unsafe operating condition, including:

- Grading, excavation, ditching, drilling, ditch clean-out, blasting, or other construction or activities.
- Installation of certain trees, buildings, fixed mobile homes, utility lines, pipelines, roads, or other structures.
- Erosion or subsidence.

3.0 Applicability

This SOP applies to encroachments on regulated pipelines, including foreign facility crossings.

4.0 Frequency

As required: for all encroachment activity on or around company facilities.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
Locating and Exposing Company Pipelines	Operations Personnel	Operations Manager	Director of Operations
Required Offsets	Operations Personnel	Operations Manager	Manager Right-of-Way
Investigation of Encroachments	Operations Personnel	Operations Manager	Director of Operations
Site Investigation of Proposed Encroachments	Operations Personnel	Operations Manager	Director of Operations
Restrictions on Encroachments	Operations Personnel	Right-of-Way Representative	Right-of-Way Representative
Construction Near Company Pipelines	Operations Personnel	Operations Manager	Director of Operations

Function	Responsibility	Accountability	Authority
Directionally Drilled Crossings	Operations Personnel	Operations Manager	Director of Operations
Legal Action	Right-of-Way Representative	Right-of-Way Representative	Manager Right-of-Way

6.0 Terms and Definitions

Terms associated with this SOP are provided in *SOP* HL*A.01 Glossary and Acronyms*.

7.0 Right-of-Way Encroachments

This SOP contains the following sections:

- Locating and exposing company pipelines
- Required offsets
- Investigation of encroachments
- Site investigation of proposed encroachments
- Restrictions on encroachments
- Construction near company pipelines
- Directionally drilled crossings
- Legal action

7.1 Locating and Exposing Company Pipelines

Operations Personnel follows the procedures outlined in *SOP HLB.04 Pipe Location and Marking* for locating company facilities.

NOTE: Pipelines may be exposed by others only after proper notice to the company and only in the presence of a company representative.

Step	Activity
1	**PROVIDE** a company representative to field locate and stake the pipelines at given points prior to any work on or near the right-of-way by third-parties.
2	When other pipeline operators are in the shared ROW, **VERIFY** that the non-company pipeline is properly and accurately located and marked, on projects that they are performing on their own line. A Company representative will stand by the excavation until all digging has been completed, and a Company representative has verified that the other operator or contractor will not be doing any excavation near the Company lines.
3	**CONFIRM** excavation methods with *SOP HLI.10 Excavation and Backfill.*

NOTE: The width of the pipeline right-of-way is controlled by the existing easement.

Step	Activity
4	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report.*
5	**DOCUMENT** in the applicable electronic database, as required.

7.2 Required Offsets

In the case of undefined easements, Operations Personnel maintains the following offsets for proposed facilities.

Step	Activity
1	For foreign pipelines, **VERIFY** the offset distance is a minimum of 25 ft. on either side of the pipeline. If multiple pipelines exist, **VERIFY** the offset distance is 25 ft. to 33 ft. outside of the outermost pipeline (whether existing or proposed).

NOTE: The controlling easement may limit rights to less than 25 ft. or 33 ft.

Step	Activity
2	Prior to establishing offset distances of contractors, developers, landowners, and others, **EXAMINE** the terms of appropriate easements. Both construction requirements and easement restrictions may vary from location to location.
3	If additional line rights exist, **AVOID** allowing the new encroachments (e.g., buildings, trees, structures, or obstructions) to be within 25 ft. to 33 ft. of either side of the pipeline or proposed pipelines.
4	**OBTAIN** prior written approval of the Manager of Right-of-Way for any variance from the general footage requirements pertaining to encroachments.

7.3 Investigation of Encroachments

Operations Personnel follows the procedure below to monitor the pipeline system for encroachments.

Step	Activity
1	**INVESTIGATE** and **DOCUMENT** any encroachments in accordance with the following criteria.
2	**TAKE** the following immediate actions when Operations Personnel discovers or is notified of an encroachment which is currently in progress.
3	**IDENTIFY** the nature of the work and its potential to damage the pipeline or violate the company's rights.
4	**STOP** the unauthorized work, until appropriate notifications are made and the

Step	Activity
	required response time has elapsed.
5	**ADVISE** the encroaching party of the nature of the product in the pipeline and the potential hazards that damage to the pipeline could create.
6	**REMAIN** at the work site until all unauthorized work has ceased to prevent damage to the pipeline or company facilities.
7	**LEAVE** a written notice if equipment is found unattended on the right-of-way, and **FOLLOW UP** as soon as possible to identify the operator and/or landowner.
8	**EXCAVATE** the pipeline and inspect for damage if the pipeline may have been excavated without a company representative present.
9	**SEND** a letter to excavators who are discovered to be performing work on the company's easement and have not used the One-Call system or other method to contact the company prior to commencing the work. **REFER** to *HLI.40 Public Awareness Plan – Communication with API RP1162 – defined Stakeholders.* •
10	**SEND** copies of the letter to whoever hired the excavator and the appropriate state One-Call system operator. **KEEP** a written record in accordance with *SOP HLI.40 Public Awareness Plan – Communication with API RP1162 – defined Stakeholders.*
11	**NOTIFY** Operations Support for response to one-call violations.

NOTE: In the letter, advise the excavator of company crossing requirements and the dangers of working around buried utilities without notice to the utility owner.

Step	Activity
12	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report.*
13	**DOCUMENT** in the applicable electronic database.
14	If the company representative at the site reports that the parties performing the construction do not agree to stop immediately and discontinue work until a resolution is completed, **CONTACT** the Director of Operations.

NOTE: The on-site company representative has authority to contact local law enforcement to protect the company facilities.

7.4 Notification of Potential Encroachments

Operations Personnel follows the procedure below when potential encroachments are identified.

Step	Activity
1	**NOTIFY** Operations Personnel regarding encroachment activities which could affect the pipeline. In the event Operations Personnel is not available, **CONTACT** Liquid Control.
2	**RECORD** the details of the activity, the name of Operations Personnel member who was notified, and the time of the notification using the applicable form(s) for *Aerial Patrol Trouble Report or Encroachment, Foreign Line Crossing, and Class Location HCA Report.*
3	If previously reported activities (or occurrences) have changed in a manner that might affect the pipeline, such as road construction, pipeline construction, or erosion on the right-of-way, **NOTIFY** Area Management regarding the activities.

7.5 Site Investigation of Proposed Encroachments

The table below outlines the process to investigate sites with proposed encroachments.

Step	Task
1	**CONDUCT** a site encroachment investigation as far in advance of the start of work as practical and **VERIFY** the proper documentation of the investigation. **REVIEW** a copy of Appendix D: *Engineering and Construction Specifications*, with the third party.
2	If a proposed or potential encroachment is identified by a one-call or other means, **PERFORM** the investigation with the developer, landowner, or contractor, if possible.
3	**DETERMINE** if there is a conflict with company facilities or easement rights. **VERIFY** that construction activity does not commence until pertinent information is exchanged between the parties and the company gives proper authorization.

7.5.1 Conflicts with Company Facilities

If the proposed work will encroach upon the company's easement or if the investigation is unable to conclusively determine that there is no conflict with company facilities, follow the process below.

Step	Task
1	**REVIEW** the terms of the easement for the tract of land involved.

Step	Task
2	**DETERMINE** the appropriate action to take based upon the nature of the work being performed.
3	**REVIEW** *Appendix B: Pressurized Pipeline Excavation Procedure* with the third party. Reference *SOP HLI.10 Excavation and Backfill*.
4	**PROVIDE** an appropriate informational letter to residential landowners. **REVIEW** this document with the landowner. *Appendix C: Request for Right of Way Encroachment.*
5	**LOCATE** and **STAKE** or **FLAG** the company's facilities.
6	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report.*
7	**KEEP** a written record with all pertinent information concerning the sequence of events, dates, names, telephone numbers, action taken (locating and staking lines, etc.), and discussions with the parties involved.
8	**ADVISE** the encroaching party of the nature of the product in the pipeline and the potential hazards that damage to the pipeline could create.
9	If the work is conducted on the day of the visit, **REMAIN** on site until the work is completed.
10	If work is not completed on the day of the visit or is scheduled to begin at a later date, **MONITOR** the status of the project (by phone, site inspections, etc.) until the work begins.
11	**COMPLETE** the applicable form(s) or **ENTER** data in the applicable electronic database for *Encroachment Observation Report* to **DOCUMENT** that a company representative was present during the course of the project.

7.5.2 No Conflict with Company Facilities

If the investigation determines that there is no conflict with company facilities, the documentation required by 7.5.1 is sufficient.

7.6 Restrictions on Encroachments

Operations Personnel follows these procedures regarding encroachments in the vicinity of the pipeline.

7.6.1 Air Strips

For air strips, contact the company Right-of-Way Representative.

7.6.2 Blasting

Follow the procedure to monitor blasting that is outside the right-of-way but is within 300 ft. of the pipeline in accordance with *SOP HLI.23 Protection of Pipeline Facilities From Blasting Operations* to verify that it is not detrimental to the existing facilities.

WARNING:
- Do not allow blasting within the right-of-way easement without the permission of Director of Operations.
- Immediately stop blasting that endangers the pipeline.

7.6.3 Bushes

For bushes and other plants follow the procedure below.

Step	Activity
1	**DO NOT ALLOW** planting of bushes, shrubbery, decorative or dwarf trees, or other plants associated with landscaping, that will grow to more than 4 feet tall within the right-of-way confines.
2	**CONTACT** the Right-of-Way Representative for review of landscaping plans before permitting planting of landscaping plants.
3	**VERIFY** that any plants allowed do not hide or screen any pipeline marker.

NOTE: CONSIDER placing markers at **LINE-OF-SIGHT** intervals where practical.

Step	Activity
4	**DO NOT ALLOW** plantings, i.e. (trees, shrubs, etc) within the designated ROW that could interfere with the operation of the pipeline.

7.6.4 Campgrounds

Notify a Right-of-Way Representative when a campground is planned near a pipeline.

7.6.5 Cemeteries

Do not allow graves, markers, or structures on the easement.

7.6.6 Dams or Dikes

Do not construct dams or dikes on any part of the right-of-way confines. Do not permit removal of cover for the purpose of creating an impoundment of water.

7.6.7 Ditches (Open)

For open ditches, follow the procedure below.

Step	Activity
1	**REPORT** any proposals to place a ditch across or parallel to the pipeline to the Right-of-Way Representative.

CAUTION: Do not allow open parallel ditches on the right-of-way.

Step	Activity
2	If a ditch is to be placed across the pipeline, **VERIFY** it crosses at or near right angles and that there is at least 36 inches of cover remaining at the lowest point of the ditch.
3	If there is less than sufficient cover over the pipeline, **REFER** to Director of Operations

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7.6.8 Drain Tile

For drainage tile, follow the procedure below.

Step	Activity
1	**ALLOW** drainage tile crossings of pipelines for draining lands for agricultural purposes.
2	**VERIFY** that parallel drain headers are no closer than 20 ft. from the pipeline, unless previously approved by the Operations Manager.
3	**VERIFY** crossing is at or near right angles.

7.6.9 Dredging

For dredging operations, follow the procedure below.

WARNING: Stop any dredging operations near the pipelines immediately.

Step	Activity
1	**NOTIFY** the Right-Of-Way Representative and Operations Manager of dredging operations.
2	**PROFILE** waterways that cross pipeline where dredging is to be done.

CAUTION: Do not allow dredging to occur any closer than 6 ft. above and 10 ft. from each side of the pipeline.

Step	Activity
3	**VERIFY** a company representative is present during dredging operations.
4	**REFER** to *Section 7.6.2 Blasting* if blasting is to occur in conjunction with dredging.

7.6.10 Driveways (Residential)

For residential driveways follow the procedure below.

Step	Activity
1	**ALLOW** driveways to cross pipeline at or near right angles.

NOTE: Hard surfaced driveways may parallel the pipeline, but are not normally within the easement.

Step	Activity
2	If a driveway is constructed of material other than asphalt, **VERIFY** that breaks are installed.
3	**VERIFY** that there is adequate working space on one side of the pipeline.
4	**CONTACT** Operations Manager for required depth at driveway crossings. Actual cover requirements may be determined by performing load calculations.
5	**ADD** cover, if necessary.

NOTE:

- Depth of cover should not exceed 7 ft. from the top of the pipe to final grade.
- If cover is expected to exceed 7 ft., contact Operations Manager and refer to Section 7.6.12 Equipment.

7.6.11 Earthwork (Berms)

For earthwork or berms follow the procedure below.

Step	Activity
1	**DISCOURAGE** earthwork within the easement unless approved by Operations Manager.
2	**CONTACT** a company Right-Of-Way Representative while the earthwork is still in the planning stage.
3	If earthmoving equipment is used, **MAKE** load calculations by Pipeline Integrity Engineer on the line to determine the combined stresses on the pipeline.
4	**VERIFY** that the remaining cover is at least 36 inches. **ADD** cover, if necessary.

7.6.12 Equipment (Hauling, Logging Earthmoving, Dozing, etc.)

Follow *SOP HLI.27 Determination of Abnormal Loading*

7.6.13 Fences

For fences, follow the procedure below.

Step	Activity
1	**ALLOW** wire type fences, for agricultural purposes, to cross the right-of-way.
2	**VERIFY** that gates or walkovers are provided.
3	**ALLOW** stockade, decorative, or similar fences that can be easily removed and replaced to cross the pipeline at or near right angles.

CAUTION: Do not allow installation of stone, brick concrete, privacy, or similar fences or barriers. These may be placed parallel to the pipeline but not in the right-of-way confines.

NOTE: Fences should be no closer than 25 feet from the pipeline if they are parallel or nearly parallel to the pipeline.

7.6.14 Fiber Optics

For fiber optic cable, apply the following process as well as standard provisions for foreign line crossings.

Step	Task
1	**VERIFY** the fiber optic cable crosses the pipeline, when possible, at no less than 12 inches below the bottom of the existing pipeline. When the pipeline is unreasonably deep, fiber optic cable may cross over the pipeline.

CAUTION: Extra precautions are necessary when fiber optic communication lines cross the pipeline because of the potential liability of damaging one of these highly valuable lines.

Step	Activity
2	**VERIFY** the fiber optic cable is placed in a rigid non-metallic conduit with bags of concrete-mix placed directly above and below the conduit across the confines of the easement.
3	**VERIFY** that the contractor or owner of the cable has placed orange warning burial tape, the width of the right-of-way, at least 18 inches directly above the cable.
4	**VERIFY** that the contractor or owner of the cable has marked the crossing route clearly and permanently on each side of the easement.
5	**REQUEST** that the communication company mark both sides of the right-of-way with permanent identification.
6	**SEND** a letter to the communication company if it has refused to comply with the above guidelines, stating that due to their failure to comply with cable crossing standards, the company will not be responsible for damages due to

Step	Activity
	maintenance work performed on the company pipeline easements.

7.6.15 Guys and Anchors

For guys and anchors, follow the procedure below.

CAUTION: Do not allow a guy or anchor or portion thereof to be within the right-of-way confines.

Step	Activity
1	**VERIFY** that the encroaching third party place the guy wires across the pipeline only if there is a minimum overhead clearance of 25 feet at any point within the right-of-way.
2	**CONTACT** Corrosion Specialist for consideration of potential cathodic interference and all electrical crossings. **REFER** to *Section 7.6.39 Tower, Communication.*

7.6.16 Irrigation Lines

For irrigation lines, follow the procedure below.

Step	Activity
1	**ALLOW** irrigation line crossings of pipelines in subdivisions.
2	**VERIFY** that parallel irrigation lines are not within the easement.
3	**VERIFY** crossing is at or near right angles.

7.6.17 Landfills

Do not allow landfills, ash disposal, junk, garbage, or rubbish on the right-of-way.

7.6.18 Material and/or Equipment Storage

Do not allow any storage, temporary or permanent, on the right-of-way.

The Operations Manager approves proposed parking or temporary storage area plans.

7.6.19 Mines

For mining or quarrying, follow the procedure below.

CAUTION: Do not allow surface mining or quarrying on the right-of-way.

NOTE: Consult Right-of-Way Representative to determine mineral rights versus easement rights.

Step	Activity
1	**NOTIFY** the Right-of-Way Representative immediately with proposals to mine or quarry near a pipeline. .
2	**CONSULT** Right-of-Way Representative and Director Pipeline Integrity for subsurface mining.
3	**REFER** to *SOP HLI.26 Mining Subsidence and Soil Slippage.*

7.6.20 Parking Areas

For parking areas, follow the procedure below.

Step	Activity
1	**CONTACT** the Right-of-Way Representative immediately when learning of plans for parking areas.
2	**DISCOURAGE** and/or minimize parking areas on the right-of-way.
3	**CONSULT** with Engineering Department to determine what level of pipeline protection is needed.
4	**EXECUTE** a signed, written agreement before any parking shall be allowed within the pipeline easement.
5	**REPORT** increases or decreases in existing parking area size to Right-of-Way Representative.

7.6.21 Pipelines (Onshore)

For onshore pipelines, Operations Personnel follows the procedure below.

Step	Activity
1	**DETERMINE** how the excavation of a foreign line crossing shall be made and by whom.
2	**MARK** the pipeline location before the crossing activity starts.
3	**PERFORM** corrosion related requirements before and during crossings as required.

NOTE: Operations Personnel must consult the Company Corrosion Specialist when a cathodically protected line is installed across a company pipeline to determine the need for installation of test lead stations on both the foreign facility and the company line.

Step	Activity
4	**REMAIN** on-site, or **VERIFY** a company representative is present, during the installation of a foreign pipeline crossing and **EVALUATE** conditions to determine if cathodic protection test leads are to be installed.
5	**OBSERVE** the installation of a foreign pipeline crossing.

NOTE: It is the company's prerogative to uncover and dig around the company's pipelines, if necessary, before the foreign pipeline crossing begins.

Step	Activity
6	**VERIFY** that a proposed foreign pipeline that will cross the company's pipeline shall have a clearance equal to 12 inches, or greater. It should cross at or near right angles to and under the pipeline. **COMPLETE** and submit the applicable form(s) for *Foreign Line Crossing* or enter in the applicable electronic database.

CAUTION:

- Do not allow foreign structures, appurtenances, or related fittings in the right-of-way confines.
- Do not allow any foreign pipeline to be constructed parallel within the defined right-of-way.

Step	Activity
7	**VERIFY** that the third party approaches the Company's pipeline so that the pipeline is exposed a minimum length of time.
8	**VERIFY** that the third party uses bridging or matting when necessary to prevent damage to company pipelines by use of heavy construction equipment.

NOTE: The Operations Manager determines the type of bridging or matting to be used.

Step	Activity
9	**REINFORCE** couplings when exposed during crossings or other excavation activities.
10	If the normal crossing requirements present undue difficulties, **CONTACT** Operations Manager to consider the third party's proposal to cross over the pipeline with a minimum clearance of 12 inches.
11	**PLACE** a yellow warning tape a minimum of 18 inches above the foreign pipeline.
12	**REQUIRE** third party to install line markers on both sides of the right-of-way, when feasible.

7.6.22 Poles

Do not allow any poles within the right-of-way easement, including:

- Signboards
- Supports
- Brace poles
- Telephone poles
- Power line poles

Poles may be allowed for company purposes at the discretion of Director of Operations.

7.6.23 Power Lines (Aboveground)

For above ground power lines follow the procedure below.

Step	Activity
1	**ALLOW** power lines to cross over the pipelines. The power lines must have a minimum vertical overhead clearance to grade of 25 feet.

CAUTION:	Do not allow an overhead power line parallel within the right-of-way confines. Overhead power lines should cross as near to perpendicular as possible.

Step	Activity
2	**REPORT** to Operations Manager and Corrosion Specialist, the construction of any power line that substantially parallels the pipeline and is within 300 feet of the pipeline or the construction of a power line that crosses a pipeline at less than right angles.

CAUTION:

- Do not locate new power lines over existing blow-offs or relief valves.
- Do not allow towers to straddle the company pipeline right-of-way.
- Do not allow footing to encroach on the right-of-way.

7.6.24 Power Lines (Underground)

For underground power lines, follow the procedure below.

Step	Activity
1	**REFER** requests for the installation of buried electric cable crossings to Operations Manager, Right-of-Way Representative, and Corrosion Specialist, who will establish the requirements for each crossing location.
2	**DETERMINE** the crossing requirements for each location on a case by case basis.
3	**ESTABLISH** the requirements with consideration given to the number of cables, voltage, line loading, grounding system, spacing of cables, phase

Step	Activity
	relationship of cables, and geometric relationship and proximity of transmission cable and load facilities to the pipeline; as well as depth of the pipeline, location of cathodic protection facilities, type of soil, and status of pipeline coating.
4	If cables are over 600 volts, **VERIFY** that the buried depth of the cable is at an elevation that is at least 36 inches below the bottom of the pipeline and remains at that elevation for the entire width of the right-of-way.
5	**VERIFY** the cable neutrals are externally, spirally wound and grounded on each side of the right-of-way.
6	**VERIFY** that the requesting party places the power line cable in a non-metallic rigid conduit with bags of concrete-mix placed directly above and below the conduit across the confines of the easement (25 feet on either side of the pipeline on open easements).
7	**VERIFY** that the requesting party places red warning burial tape at least 18 inches directly above the cable.
8	**VERIFY** that the requesting party marks the crossing route clearly and permanently on each side of the easement.
9	**CONSULT** Corrosion Specialist regarding the installation of test leads on both the foreign line and the company line when a catholically protected cable is installed across a company pipeline.

7.6.25 Roads (Proposed and Existing) and Alleys

For proposed and existing roads and alleys, follow the procedure below.

Step	Activity
1	Upon notice of a proposed road crossing, **VERIFY** that Right-of-Way Representative and Operations Manager have reviewed the pipeline data to determine the physical status of the pipeline at the point that is affected.
2	Follow procedure **HLI.27 Determination of Abnormal Loading**

NOTE: Public road construction or modification plans must be approved by the Right of Way Representative and Director of Operations before construction to determine the possible need for pipeline alterations and to comply with Federal and State regulations.

Step	Activity
3	**ALLOW** roads to cross the pipeline at or near right angles.

NOTE: They may parallel the pipeline but cannot be on the right-of-way, except for special approved instances.

Step	Activity
4	**VERIFY** the remaining cover at the shallowest point will be at least 36 inches.
5	**BE PRESENT** during the construction to observe that the pipelines are not damaged.

7.6.26 Seismography

For seismography activity, follow the procedure below.

CAUTION: Do not allow any seismographic activity within 300 feet of the pipeline without the approval of the Engineering Department.

Step	Activity
1	**ADVISE** the company performing the seismographic activity that they are responsible for any damage to the pipeline.
2	**RECOMMEND** that the seismic company call the respective One-Call center at least 48 hours prior to the start of their project.

7.6.27 Septic Systems (Residential)

Verify that all sewer lines, septic lines, or "finger systems", crossing a pipeline are made of solid, impervious material extending the width of the right-of-way.

CAUTION:
- Do not allow septic tanks on the right-of-way.
- Do not place "finger systems" or leach beds in the right-of-way confines.

NOTE: A septic line or sewer line may be placed substantially parallel but not within the right-of-way limits.

7.6.28 Sidewalks

For sidewalks, follow the procedure below.

Step	Activity
1	**VERIFY** the sidewalks do not exceed 48 inches in width without approval from Operations Manager.
2	**PLACE** the sidewalks parallel but not within ten (10) feet of the pipeline.
3	**CONSTRUCT** all sidewalks within the confines of the right-of-way at the property owner's expense and risk.

CAUTION: Do not make payments for sidewalks damaged due to operation and maintenance of the pipeline without checking the easement obligations.

NOTE: Refer to the easement to determine if payment of the repair is at the company's expense.

7.6.29 Signboards (Public)

Do not allow signboards to be placed in the right-of-way confines.

7.6.30 Storm Drains (Sewers)

For storm drains and sewers, follow the procedure below.

Step	Activity
1	**DETERMINE** how the excavation of the crossing is made and by whom to assure the safety and integrity of the company facility.
2	**BE PRESENT** to **OBSERVE** the installation of a foreign storm drain pipeline crossing.
3	**EVALUATE** conditions and determine whether cathodic protection test leads should be installed. **CONSULT** Corrosion Specialist.
4	**HAVE** the third party construct the proposed system crossing the pipeline with a minimum clearance equal to 12 inches.
5	**HAVE** the crossing intersect at or near right angles to and under the pipelines.

CAUTION: Do not allow foreign structures, appurtenances, or related fittings in the right-of-way confines.

Step	Activity
6	**VERIFY** that approaches to the pipeline are made so that the pipeline is exposed a minimum length of time.
7	**VERIFY** that appropriate shoring or cribbing is used to prevent ditch cave-ins, if any company personnel must enter the ditch.
8	**VERIFY** that bridging or matting is used over the pipeline to prevent damage caused by the use of heavy construction equipment.

NOTE: Engineering Department specifies the type of bridging or matting to be used.

Step	Activity
9	If the normal crossing requirements present undue difficulties, **CONTACT** Operations Manager to consider the third party's proposal to cross over the pipeline with a minimum clearance of 12 inches.
10	**PLACE** green warning tape a minimum of 18 inches above the storm drain.

7.6.31 Structures

Do not allow a structure with underground supports, foundations, or anchors to be erected within, above, or below the pipeline easement

Small, easily moveable structures that could be moved by two men without the use of mechanical equipment may be allowed at the discretion of Area Management.

The following types of storage tanks are considered permanent structures and should not be placed within the right-of-way:

- Butane
- Propane
- Oil
- Liquids
- Petroleum products
- Agricultural
- Other chemical

Complete the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report.* For any inhabited structure within 660 feet of a pipeline

7.6.32 Swimming Pools

Do not allow installation of any above or below ground swimming pools on the right-of-way.

7.6.33 Subdivisions

Verify the developer supplies subdivision plats and submit to the Right-of Way department and Operations Manager for review and approval.

7.6.34 Telephone Lines (Overhead)

Allow telephone lines to cross the pipeline at or near right angles if overhead (vertical) clearance with the right-of-way boundaries is at least 25 feet.

CAUTION:

- Do not allow poles, H-frame structures, guy wires, or foundations within the right-of-way confines.
- Do not allow overhead telephone lines or communications lines, including TV cable lines, to be constructed parallel to the pipeline within the right-of-way confines.
- Do not allow overhead telephone lines to be installed over blow-off stacks or relief valves under any circumstances.

7.6.35 Telephone Lines (Underground)

For underground telephone lines, follow the procedure below.

Step	Activity
1	**BE PRESENT** to **OBSERVE** the installation of the crossing.
2	**EVALUATE** conditions and determine if cathodic protection test leads are to be installed. **CONSULT** Corrosion Specialist.
3	**MARK** the pipeline location before the crossing activity starts.
4	**VERIFY** that third parties install communication lines, including TV cable lines, under the pipeline with a minimum clearance of 12 inches.
5	If it is impractical to install the line under the pipeline or splicing the line would be required to cross under the pipeline, **ALLOW** the third party to install the line above the pipeline with a minimum 12 inches clearance.
6	If the line is installed above the pipeline, **REQUIRE** the third party to encase the line in a non-metallic rigid conduit across the confines of the easement (25 feet on either side of the pipeline on open easements).
7	**VERIFY** that third parties mark the above mentioned line with orange warning tape at least 18 inches above the telephone line.
8	**VERIFY** that lines and cables cross the pipeline at or near right angles.

CAUTION: Do not install line or cable substantially parallel and within the right-of-way confines.

7.6.36 Tennis Courts

Do not allow construction of tennis courts on the right-of-way.

7.6.37 Terraces

For terraces, follow the procedure below.

Step	Activity
1	**COOPERATE** with landowners who propose to terrace land as an effort to control erosion, as much as possible.
2	If it is necessary to remove cover within the right-of-way confines, **VERIFY** the remaining cover is a minimum of 36 inches.
3	**OBTAIN** plans for terracing or cover removal.

NOTE: Plans are often available through the Consolidated Farm Service Agency (CFSA) or Soil Conservation Service (SCS).

Step	Activity
4	**SEND** these plans to the Right-of-Way Representative and Operations

	Manager for review.
5	**PERMIT** cover to be removed only after the entire project is reviewed and found acceptable by the Right-of-Way Representative and Operations Manager.

7.6.38 Tower, Communication

For communication tower, follow the procedure below.

CAUTION: Do not allow microwave or communications towers within the right-of-way confines.

Step	Activity
1	**NOTIFY** the Right-of-Way Representative and Corrosion Specialist of any plans to locate a tower owned by others within one mile of company microwave towers.
2	**NOTIFY** Aerial Patrol Pilots of the location of any new tower.

7.6.39 Tower, Power Lines

Do not allow any power line towers, leg foundations, guy anchors, or any portion thereof within the right-of-way confines.

7.6.40 Trailers, Campgrounds

For trailers and campgrounds follow the procedure below.

CAUTION: Do not allow trailers on right-of-way confines.

Step	Activity
1	**REPORT** any area near the pipeline being used or prepared for a camping site or for parking camping trailers, mobile homes, motor homes or other vehicles to the company Right-of-Way Representative.
2	**REPORT** increases or decreases in trailers or population.
3	**MONITOR** these sites to ascertain if any mobile residences become permanent.
4	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report,* if any mobile residences become permanent.

7.6.41 Trailers, House

House trailers or Manufactured Housing structures are considered permanent structures. Refer to *Section 7.6.32 Structures*.

7.6.42 Trees

Verify there is a clear corridor of no less than 15 feet between the projected drip lines of mature crop trees along the right-of-way.

CAUTION: Do not allow planting of any trees on the right-of-way that are classified as "deep rooted" or are projected to exceed an eventual growth height of four (4) feet.

7.6.43 Utility Buildings

For utility buildings, refer to *Section 7.6.32 Structures*.

7.6.44 Water Impoundments

For water impoundments, follow the procedure below.

CAUTION:

- Do not allow water impoundments on the right-of-way. This excludes water impoundments for such things as rice, cranberry bogs, and crawfish farming.
- Do not allow any portion of any dike, berm, or dam to be constructed on the right-of-way.
- Do not remove cover or overburden from the right-of-way in the construction of the dike, berm, or dam.

Step	Activity
1	**PERMIT** excavation and/or earthmoving equipment to cross the right-of-way provided that load calculations (due to the weight of the equipment on the pipeline) are made and found acceptable by Engineering Department.
2	**USE** matting or bridging to protect the line when external loads are considered to be excessive as directed by Engineering Department.*

7.6.45 Waterways

For waterways, follow the procedure below.

Step	Activity
1	Immediately **REPORT** proposals to place waterways across the pipeline to the Right-of-Way Representative and Operations Manager.
2	**DISCOURAGE** waterways on the right-of-way.
3	If it is necessary to place a waterway across the pipeline, **VERIFY** that it crosses at or near right angles with at least 36 inches of cover remaining at the

	lowest point of the waterway.
4	**EVALUATE** the pipeline for buoyancy and the need for river weights.
5	**NOTIFY** Operations Manager if the cover is less than 36 inches at any point.

7.6.46 Wells

For wells, follow the procedure below.

Step	Activity
1	**REPORT** wells drilled within 100 feet of the pipeline or facility to Corrosion Specialist.

CAUTION: Do not allow any wells (water, oil, gas, storage, disposal or other) to be drilled on the right-of-way confines.

Step	Activity
2	**NOTIFY** property owners of the company's cathodic protection and possible problems with their well.

7.7 Construction Near Company Pipelines

Perform these procedures when a pipeline is excavated by a contractor or other party.

Operations Personnel witnessing third party excavation or entering third party excavation refer to *SOP HLI.10 Excavation and Backfill* for safe excavation practices.

7.7.1 Locating the Pipeline

For locating the pipeline, perform the procedures outlined in *SOP HLB.04 Pipe Location and Marking.*

7.7.2 Backhoe Excavation and Backfill

For backhoe excavation, Operations Personnel follows the procedure below.

Step	Activity
1	**REFER** to *SOP HLI.10 Excavation and Backfill*.

7.8 Directionally Drilled Crossings

For directionally drilled crossings, Operations Personnel follows the procedures below.

Step	Activity

Step	Activity
1	**MEET** with the boring contractor on site and review each party's responsibilities.
2	**DETERMINE** the depth of each pipeline within the work area at appropriate intervals. **VERIFY** the depth by probing.
3	**DETERMINE** if there are other buried facilities within the confines of the pipeline right-of-way.
4	**LOCATE** and **STAKE** the pipeline centerline(s) and the right-of-way boundaries.
5	**VERIFY** the boring contractor provides a sketch of the pipelines including the proposed location of the bored crossing.
6	**REQUIRE** a minimum 5-foot separation between company pipelines and the foreign line across the entire right-of-way if company pipelines can be exposed at the point of crossing to observe that the drilling and pulling process has not damaged it.

NOTE: These excavations are called potholes and must be deep enough to monitor the bottom of the pipe.

Step	Activity
7	If it is not practical to expose the company pipelines, **CONTACT** the Operations Manager. **DETERMINE** alternatives to assuring that the pipelines are not damaged by the drilling and pulling process.

NOTE: Alternatives include: Requiring a minimum 15-foot separation between company pipelines and the foreign line across the entire right-of-way Altering the point of crossing so that company pipelines can be exposed

Step	Activity
8	**DETERMINE** if the boring contractor maintains returns.

NOTE: Returns are the bentonite-containing drilling fluids that are usually brought back to the drilling machine and recycled. If fluids are not returned or recycled, it is possible that they could be lost into the earth, creating a cavity or other unstable foundation underneath the pipelines. This would be evident by a noticeable increase in the amount of drilling fluids being used.

Step	Activity
9	**EXCAVATE** the pipeline at the point of the proposed crossing on the side of the pipe that the drilling activity is coming from to determine that the drilling and installation process has not damaged the pipelines. **MAKE** several excavations, or potholes, if the boring is to be made parallel to the pipelines.
10	**VERIFY** that the boring machine anchorage and deadman locations do not interfere with the safe operation of the pipeline(s).
11	**MONITOR** that the boring equipment is calibrated and gives actual depth

	and pitch readings.

NOTE:
- On some machines, this can be accomplished beforehand by placing the drilling head on the ground and moving the locator a known distance away i.e., 10 ft.
- The measurements should be within a few inches.
- Perform a recalibration whenever batteries are replaced.
- If the locator cannot be calibrated within inches, then excavate the pipeline(s) at the point of crossing to verify no damage has occurred.

Step	Activity
12	**VERIFY** that the clearances between the bore and the pipeline(s) also account for the size of the back reamer and the straightening of the bore rods.
13	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report* and **ATTACH** a copy of the sketch of the crossing, if available.

NOTE: The contractor normally provides an as-built sketch of the crossing showing the bored pipeline and company facilities.

7.9 Legal Action

If the encroachment activities persist with the potential to damage the pipeline or to violate the rights of the company, follow the procedures in this section to take legal action, if necessary.

7.9.1 Contacting a Local Attorney

The Right-of-Way Representative follows the procedure below to contact a local attorney.

Step	Activity
1	**DISCUSS** the situation with Legal Department to determine if it is necessary to contact a local attorney to represent the company.
2	**CONTACT** a local attorney, if necessary.
3	**INSTRUCT** the attorney to contact the landowner's attorney or draft a letter to be sent to the landowner. **TELEPHONE** the parties involved concerning the company's position and the requirements for pipeline operation and maintenance.
4	**VERIFY** the local attorney verifies the same in writing and gives copies to the Director of Operations.

7.9.2 Verifying the Work Has Stopped

The Right of Way Representative performs the following procedure to verify the work has stopped.

Step	Activity
1	**CONTACT** the company representative as soon as the previous action is completed to determine if the work has stopped.
2	If the work has not stopped, **DETERMINE** the status of the project and future plans of the parties performing the work.
3	**RELAY** this information immediately to Director of Operations

7.9.3 Taking Legal Action

The Right-of-Way Representative performs the following procedure to take legal action.

Step	Activity
1	If it is decided to take legal action and the action is considered to be of a normal legal nature, **NOTIFY** the company's attorney in the area by telephone to file for an injunction to stop work on the project.
2	**DOCUMENT** this action in writing.
3	**MAIL** copies of the correspondence to all the parties involved.
4	**KEEP** correspondence, written records, field notes (on staking, marking, and flagging the pipelines), and photographs (identified with dates, etc.) for use as evidence if litigation is required.
5	**COMPLETE** the applicable form(s) for *Encroachment, Foreign Line Crossing, and Class Location HCA Report.*.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

- Pipeline Inspection Database
- B.13.A Encroachment, Foreign Line Crossing, and Class Location HCA Report.
- B.04.A Encroachment Observation Report

9.0 References

HLB.04 Pipe Location and Marking
HLI.10 Excavation and Backfill
HLI.23 Protection of Pipeline Facilities from Blasting Operations
HLI.26 Mining Subsidence and Soil Slippage
HLI.27 Determination of Abnormal Loading
HLI.36 Pipeline Road and Rail Crossings (Best Practice)
HLI.40 Public Awareness Plan – Communication with API RP1162-defined Stakeholders

Appendix A: OQ Task Requirements

The table below identifies Operator Qualification (OQ) task requirements.

Task Description	OQ Task
Visual Inspection of Buried Pipe and Components When Exposed	PLOQ401
Backfilling – Pipe and Coating Protection	PLOQ404
Underground Pipeline – Locate and Temporarily Mark	PLOQ605
Damage Prevention During Excavation/Encroachment Activities	PLOQ607

Appendix B: Request for Right-of-Way Encroachment

The Right-of-Way Representative presents the following when initiating contact for a right-of-way encroachment.

Dear property owner:

Re: Requests for right-of-way encroachment

Company owns and operates hazardous liquid pipelines. These pipelines are a vital link in the energy network. It is imperative that these lines be protected. Therefore, any encroachment onto the easement area is a serious matter that must be reviewed carefully by the company and permitted in writing. In order to facilitate this review, it is necessary for you to submit the following information:

1. A copy of the signed encroachment report form. The form must include your name, address, phone number and fax number.

2. A copy of the deed, contract for deed, representative's deed, etc. (dependent upon how title is held by the current landowner.) This is needed to verify the legal owners and correct description of the property.

3. The case number assigned to your project by the local building inspector or planning and zoning officials.

Additional requirements for land developers:

4. Development plans or plats clearly depicting company's easement across the property.

5. Drawing depicting the encroachment in relation to company's pipeline and easement boundaries. The drawing must be on legal size (8.5" x 14") paper.

If the encroachment is permitted by company, an agreement will be drafted by the Right-of-Way Department. No encroachment into the easement area is allowed until the agreement has been signed. No verbal approvals of early construction will be given. Requests will be processed as quickly as possible.

These procedures have been enacted for the safety and protection of all who live and work around the pipeline. Thank you for your cooperation.

"Safety in Every Decision: Believed, Practiced, Promoted…Uncompromised."

Sincerely,

Right-of-Way Department

Appendix C: Engineering and Construction Specifications

The following applies during Third Party Construction Activities:

1. Owner shall provide a minimum of forty-eight (48) hours notice to company, prior to any installation, construction, excavation, or demolition work on the easement area, and to ensure further safety owner shall also call appropriate ONE CALL for a locate. A company representative must be present when any work is done on the easement area. The onsite company representative will have the authority to shutdown work by the contractor if the contractor's activities are judged to be unsafe by the company representative. The company representative will be invited to participate in contractor's safety meetings. This provision applies each time the company's pipeline facilities are crossed.

2. Normal ground cover (a minimum of three feet [3'] of pipeline cover) is to be maintained over the subsurface pipeline facilities within the easement area. Three feet (3') of minimum cover will also be required over the pipeline facilities at all equipment crossings for standard FDOT maximum axle load vehicles (20,000 lbs. per axle).

3. For vehicles and/or construction equipment requesting approval to cross a company facility, each crossing location will be reviewed on a case-by-case, site specific basis, which will include the execution of a wheel load calculation to be completed and approved on every vehicle and/or construction equipment attempting to cross a company facility. On occasion, matting or other suitable material will be requested to be installed so to achieve the necessary support for such crossing. This too will be site specific and case-by-case only.

4. Where consent for roadway crossings has been granted, a minimum of forty-eight inches (48") of cover, including thirty-six (36") of undisturbed or compacted soil, shall be maintained within the easement area.

5. Where the encroachment includes for utilities, all such utilities crossing the easement area must have a minimum separation of eighteen inches (18") between the utility and company pipeline(s) at the point of crossing and must cross at a 90° angle. No utilities shall be constructed above the easement area or between the surface of the easement area and the top of the subsurface pipeline facilities. No parallel utilities are permitted within the easement area.

6. Where consent for utility lines has been granted, electric lines must be encased in steel throughout the easement area; fiber optic, telephone and cable television lines must be encased in PVC

throughout the easement area. Cables energized to 600 volts or more should cross a minimum of three feet (3') below the subsurface pipeline facilities, be encased in concrete, color coded red, across the entire right-of-way width, and have external, spiral wound, neutrals grounded on each side of the right-of-way. The cable crossing should be clearly and permanently marked on each side of the right-of-way where permissible.

7. Where consent for fencing has been granted, the owners must install and maintain a vehicle access gate at least twelve feet (12') in width at each point in the fence line(s) crossing the Easement area. Posthole excavations for fencing placed on the easement area shall not be greater than eighteen inches (18") below the ground surface elevation. No fence posts shall be placed over the pipeline facilities or closer than five feet (5') on either side of the pipeline facilities. Any such fence shall be constructed and maintained by owner in such a manner that does not prevent company personnel from viewing the easement area from the ground level through the fence(s) (i.e. no solid fences allowed). No fencing parallel to the company pipeline facilities will be allowed within the easement area. Company access to its pipeline facilities shall be maintained by owner. If the gate is locked with owner's lock, owner shall provide company with keys or allow a company lock to enable access.

8. No above or below ground utility appurtenances, junction boxes or retention ponds shall be allowed within the easement area.

9. No roto-mixing or vibrating machinery is allowed within the easement area.

10. All pile driving operations within 20' of a company pipeline and or facility or adjacent to a company easement will be required to pre-drill or auger all pilings to 3' below the bottom elevation of the pipeline(s).

11. Ditches shall be sloped or shoring will be used to allow entry into the excavation. Time will be allowed for company representative to inspect and make coating repairs as the subsurface pipeline facilities are exposed.

12. Twelve inches (12") of backfill around the subsurface pipeline facilities shall be sand or clean fill; free of rocks and debris. Rock Shield may be installed around pipeline facilities.

13. No more than twenty feet (20') of pipe shall be exposed at any given time; if more than twenty feet (20') of pipe is to be exposed, engineering stress calculations must be performed by company engineering and approved by company operations prior to allowing any more than the twenty feet (20') of exposed pipe.

14. Excavators shall be equipped with toothless buckets when digging or excavating within 3 feet of the pipeline facilities. All mechanical excavation performed within 3 feet of the pipeline will be performed parallel to the pipeline (i.e. track-hoe can not reach over the pipeline to dig on the opposite side of the pipeline).

15. All excavation within 18" from the top or 36" from the side or bottom of the pipeline shall be by manual means. After top exposure, excavation up to 12" from the side or bottom of the exposed

pipeline may proceed by mechanical means if company representative is satisfied it may be done safely with the equipment and operator available.

16. All metallic foreign line crossings shall have Micarta board placed between the company Pipeline facilities and the foreign crossing to prevent any interference with the cathodic protection system and equipment from the foreign crossing.

17. Barriers adequate to prevent vehicular damage to any exposed pipeline facilities shall be installed and maintained at all times.

18. Cathodic protection test lead wires shall be protected from damage by construction activity.

19. No installation, construction, excavation, or demolition work shall be performed within the easement area on weekends or holidays unless owner agrees to reimburse company for its cost, including overtime costs, associated with inspection during those periods.

20. The Developer or Contractor shall provide and install temporary construction fence along the easement boundaries for the entire length of the proposed work area to preserve and protect the pipeline(s). The fence must be maintained for the duration of the development or construction activity. Access across the company's easement will be granted at specific locations for vehicle and equipment traffic once a Wheel Load Calculation has been completed. Additional cover or matting may be required. Any changes to this requirement must be approved in writing by the Company prior to start of work.

21. Where consent for landscaping has been granted, owner shall not plant any trees and shrubs on the easement area which are classified as "deep rooted" or are projected to exceed an eventual growth height of four (4) feet. Trees and shrubs shall be planted so that no part, at its ultimate growth, shall be closer than ten feet (10') to the pipeline facilities.

22. These Engineering and Construction Specifications address activities on the easement area for which the company has not granted consent to owner to include as part of the encroachment. Notwithstanding anything to the contrary contained in these Engineering and Construction Specifications, the company consent is and shall be limited to the encroachment as described and limited by the Encroachment Agreement to which this Appendix is attached.

SIGNATURES:

OWNER (ENERGY TRANSFER) **OPERATOR REQUESTING CROSSING**

_____ _____

Owner Representative Authorized Operator Representative

Title	Title
Date	Date

ENERGY TRANSFER

Right-of-Way Maintenance

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference:	**Procedure No.: HLI.29**	
49 CFR: 195.412, 195.410	***Effective Date: 04/01/18***	**Page 1 of 6**

1.0 Procedure Description

This Standard Operating Procedure (SOP) establishes the requirements for maintenance of pipeline right-of-way as it pertains to clearing the Right-of-Way (ROW), providing erosion control remediation, maintenance of pipeline markers and test sites, restoring exposed or shallow pipelines, and maintaining access roads.

2.0 Scope

This SOP describes activities involved in ROW maintenance and establishing priorities for these activities.

3.0 Applicability

This SOP applies to regulated pipelines where ROW clearing or remediation is required.

4.0 Frequency

As required: When performing ROW clearing or remediation.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	**Responsibility**	**Accountability**	**Authority**
All Operations	Operations Personnel	Operations Personnel	Operations Manager

6.0 Terms and Definitions

For general terms, refer to *SOP HLA.01 Glossary and Acronyms*.

7.0 Right-of-Way Maintenance

The following procedures are described in this section:

- Clearing the Right-of-Way
- Erosion Control Measures
- Maintaining Pipeline Markers and Test Sites
- Restoring Exposed or Shallow Pipelines
- Working with Landowners
- Identifying Unsafe Conditions
- Identify Potential for Damage Caused by Flooding
- Inspect Pipeline Facilities After Flooding has Occurred

- Inspection and Protection of a Pipeline after a Railway Accident

7.1 Clearing the Right-of-Way

Operations Personnel perform the following steps to clear the right-of-way. Work with the Operations Manager to set up priority for ROW clearing activities.

Step	Activity
1	**REVIEW** the right-of-way periodically to verify sufficient visibility for proper inspection of the right-of-way by aerial and ground patrols. **CONSIDER** activities that will require someone to walk or transverse the pipeline, such as right-of-way inspections and construction. **CHECK** visibility at ditch line crossings along plowed fields to **VERIFY** that farmers can see line markers next to the field.
2	**CONSIDER** the soil stability, natural vegetation, and the adjacent area when deciding the clearing method to be used.
3	**CUT** the vegetation on the right-of-way using a bush-hog or other appropriate means.

NOTE: Other agencies or right-of-way agreements may stipulate time restrictions for maintenance activities.

Step	Activity
4	**CONSIDER** appropriate usage of ground-applied herbicide following mechanical cutting in those areas where woody brush exists.
5	**NOTIFY** landowners where applicable on clearing and mowing projects where herbicides are utilized.
6	**USE** the chemical MSDS and manufacturer's information brochure when making contact.

NOTE:

- Chemicals requiring a license shall be handled only by licensed applicator and must be on the company's approved chemicals list.
- Aerial spray is prohibited.

Step	Activity
7	**TRIM** the vegetation at fence and road crossings neatly to a uniform level, at minimum around the line marker so that the pipeline markers are visible from the edge of the road.
8	**PAINT** all fence posts within the right-of-way appropriately in accordance with *SOP HLI.12 Pipeline Facilities Identification*, at the discretion of company Area Management.
9	Before demobilizing from the area, properly **DISPOSE** of trees and other vegetation cleared from the right-of-way.

Step	Activity
10	**CUT** tree stumps which are adjacent to roads and other areas of public view to ground level or **REMOVE** them for disposal.

CAUTION: Do not burn brush debris directly over the pipelines.

7.2 Erosion Control Measures

Operations Personnel perform the following activities as appropriate to help control erosion on the pipeline right-of-way.

Step	Activity
1	**AVOID** clearing the right-of-way of surface vegetation and topsoil. If this does occur, **RESTORE** and **STABILIZE** the surface.
2	**CONSTRUCT** terraces and other erosion control devices where necessary to prevent soil erosion on sloped section of the right-of-way.
3	**REPAIR** existing erosion sites as soon as practical after discovery.
4	If right-of-way vegetation has been damaged by natural causes and a potential for erosion exists, **SEED** or **PERFORM** other measures.
5	**STABILIZE** stream banks as necessary to prevent erosion where rights-of-way cross streams and other bodies of water.
6	**CONDUCT** installation on the right-of-way in such a manner as to minimize damage to shorelines, recreational areas, and fish and wildlife habitats.
7	**PLACE** pipeline markers above each pipeline on both sides of any navigable body of water in accordance with *SOP HLI.12 Pipeline Facilities Identification.*

7.3 Maintaining Pipeline Markers and Test Sites

Operations Personnel perform the following procedure to maintain pipeline markers and test sites.

Step	Activity
1	**INSPECT** all pipeline identification markers for damage while performing right-of-way maintenance.
2	**REPAIR** markers if necessary.
3	**PLACE** or **RESTORE** pipeline markers in accordance with *SOP HLI.12 Pipeline Facilities Identification.*
4	**INSPECT** corrosion control test station for obvious damage.
5	**REPORT** damage to the Operations Personnel.
6	**DOCUMENT** conditions needing attention on Inspection Report or

Step	Activity
	Maintenance Record

7.4 Exposed or Shallow Pipelines

Operations Personnel report all shallow and exposed pipelines to Operations Manager for inclusion into the Shallow Cover Database. Refer to *SOP HLI.24 Management of Depth of Cover and Evaluation* for remediation/mitigation of shallow or exposed pipelines.

7.5 Working with Landowners

Operations Personnel follow these steps for working with landowners.

Step	Activity
1	**COORDINATE** contacts with owners/tenants with right-of-way personnel where access problems exist.
2	**DIRECT** questions about the company's rights and agreements with owners and tenants to the right-of-way representative.
3	**CONSULT** Area Management and the Right-of-Way representative for any special reasonable considerations requested by the landowner regarding clearing or restoration activities.
4	**COMPLETE** the applicable form(s) for *Right-of-Way Damage Report*, if necessary.

7.6 Identifying Unsafe Conditions

Operations Personnel follow these steps to identify unsafe conditions.

7.7 Identifying Unsafe Conditions

Operations Personnel follow these steps to identify unsafe conditions.

Step	Activity
1	**ADVISE** Area Management of any condition that could endanger the pipeline or the public, such as exposed pipe, leaks, evidence of heavy vehicular crossings, landslides, etc.
2	**ADVISE** company Area Management immediately if the pipeline or the public is considered to be in danger.
3	**EVALUATE** the problem and **DETERMINE** the appropriate corrective

	measures.
4	**REFER** to SOP *HLA.12 Safety Related Condition Reporting* and **COMPLETE** the applicable form(s) for *Discovery of Potential Safety Related Condition*, if necessary.

7.8 Identify Potential for Damage Caused by Flooding

Operations Personnel follow these steps to identify areas where potential damage to pipeline facilities could be caused by flooding.

Step	Activity
1	**EVALUATE** accessibility to valve settings
2	**EXTEND** regulator vents & relief stacks above flood level, as appropriate
3	**COORDINATE** with Emergency & Spill responders
4	**COORDINATE** with other pipeline operators and establish emergency response centers

7.9 Inspect Pipeline Facilities After Flooding has occurred

Operations Personnel follow these steps to inspect a pipeline facility once the area has experienced flooding

Step	Activity
1	**DEPLOY** personnel so that they will be in position to respond to an emergency
2	**DETERMINE** if normally above ground facilities that have been submerged need to be **MARKED** with temporary buoys, as appropriate
3	**PERFORM** more frequent and/or additional patrols to **EVALUATE** changing right-of-way conditions during flooding and after flood waters subside. This should include evaluating any newly exposed pipelines as a result of erosion.
4	**Depending on the severity of the flood, PERFORM** surveys to evaluate depth of cover and the condition of any exposed pipelines. Use divers where necessary to **EVALUATE** pipelines normally underwater.
5	**ENSURE** that line markers are still in place and adequate, **REPLACE** markers in a timely manner.

7.10 Inspection and Protection of a Pipeline after a Railway Accident

Following a railway accident, the potential exists for damage to adjacent pipeline facilities. In areas where pipeline facilities and the related right-of-ways are in the vicinity of a railway accident, Operations Personnel should work closely with rail operators, contractors and emergency response personnel during emergency response operations to protect pipelines from the movement of heavy equipment and inspect their facilities in a timely manner to ensure pipeline integrity. Operators should also reevaluate depth of cover and clearly mark location of pipeline facilities during remediation activities.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

- I.10.D Right-of-Way Damage Report
- A.12.B Discovery of Potential Safety Related Condition

The following table describes the documentation reporting requirements of this SOP.

Activity	Reporting
Acknowledge the requirements as outlined in the SOP have been completed. Record exceptions, if any, in the comments section.	Electronic Maintenance System Unplanned Pipeline Work Order or appropriate maintenance record; retain for the life of the facility.

9.0 References

HLA.12 Safety Related Condition Reporting
HLI.12 Pipeline Facilities Identification
HLI.24 Management of Depth of Cover and Evaluation

Appendix A: OQ Task Requirements

The table below identifies Operator Qualification (OQ) task requirements.

Task Description	OQ Task
Install and Maintain Pipeline Markers	PLOQ703

ENERGY TRANSFER

Mechanical Damage

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.30**	
49 CFR 195.442	***Effective Date: 04/01/18***	**Page 1 of 5**

1.0 Purpose

This Standard Operating Procedure (SOP) outlines the actions which need to be followed by company personnel to verify the integrity of the pipeline where mechanical damage is suspected. Mechanical Damage may be caused by First, Second, or Third Parties.

2.0 Scope

This SOP assists with the recognition, evaluation, and remediation of mechanical damage in order to protect the public and the serviceability of the pipeline. First party damage may occur when company employee(s) or equipment damage a company pipeline or facility. Second party damage may occur when the company's contractor or equipment causes damage to a company pipeline or facility. Third party damage may occur from the encroachment of construction or farm equipment, vehicular traffic, welding operations, nearby blasting, or other causes.

3.0 Applicability

This SOP applies but is not limited to pipelines where surveillance or other activities indicate the potential for mechanical damage. The damage may have been caused by First, Second or Third Parties.

4.0 Frequency

As required: As mechanical damage threats are identified.

5.0 Governance

The following table describes the responsibility, accountability, and authority for this SOP.

Function	Responsibility	Accountability	Authority
All Field Operations	Operations Personnel	Operations Manager	Director of Operations
Investigation of Mechanical Damage Event	Damage Prevention Group	Supervisor of Damage Prevention	Sr. Manager of Operations Services

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to *SOP HLA.01 Glossary and Acronyms*.

Terms	**Definitions**
First Party Damage	Damage to a pipeline facility inflicted by the company or equipment.
Mechanical Damage	A defect caused by impact of mechanical equipment such as a shovel, back hoe bucket, road grader blade, etc.
Second Party Damage	Damage to a pipeline facility inflicted by the company's contractor or equipment.
Third Party Damage	Damage to a pipeline facility inflicted by an external contractor or equipment.

7.0 Third Party Damage

This SOP contains the following sections:

- Pipeline Surveillance
- Field Investigation of Mechanical Damage
- Notification
- Evaluation of Pipeline Damage
- Remediation of Pipeline Damage
- Investigation of Mechanical Damage Event

7.1 Pipeline Surveillance

Operations Personnel perform the following steps to survey the pipeline for mechanical damage.

Step	**Activity**
1	**SURVEY** the pipeline according to *SOP HLI.21 Pipeline Surveillance*. **USE** additional information from *SOP* HL*I.24 Shallow Cover and Exposed Pipe Evaluation* to identify actual or potential Mechanical Damage.
2	If work is being performed by third parties within the right-of-way, **REFER** to *SOP HLI.28 Right-of-Way Encroachments* and **DETERMINE** the nature of the work and its potential to damage the pipeline.
3	**INSPECT** pipelines per *SOP HLI.28 Right-of-Way Encroachments* during excavation activities.
4	If nearby blasting has occurred that could reasonably affect the pipeline, **CONDUCT** and **DOCUMENT** a leak survey. **REFER** to *SOP HLI.23 Protection of Pipeline Facilities from Blasting Operations*

7.2 Field Investigation of Mechanical Damage

Operations Personnel investigate mechanical damage which is suspected from surveillance activities or where the mechanical equipment is still on site.

Step	Activity
1	If the mechanical equipment is still on site **EVALUATE** the need for immediate measures to protect the public and the equipment operator.
2	**DETERMINE** if One-Call notifications were made and if the pipeline was properly marked. If a One-Call Violation is suspected **IMMEDIATELY** complete and **SEND** the applicable form(s) for *One-Call Violation Report.* Report should be sent to the One Call and Damage Prevention Groups no later than 5 days after the event.
3	**OBTAIN** as much information as is known from the initial notification of damage so an assessment of the pipeline may begin.
4	**INVESTIGATE** suspected mechanical damage if evidence exists on the ROW such as disturbed earth that crosses the pipeline. Pictures are recommended.
5	**CONSIDER** in those cases either exposing the pipeline or conducting an above ground electrical survey which can detect coating damage. **CONTACT** the Corrosion Specialist for advice on the appropriate technique.

CAUTION:

- Impact damage caused by mechanical equipment can result in defect(s) which are unstable. Consider the need for an immediate pressure reduction prior to any other activity near the pipeline.
- Immediately notify the Area Management, Pipeline Integrity Group and Director of Regulatory Compliance for additional direction.

7.3 Notification

Operations Personnel use the following steps to notify agencies or other company departments about mechanical damage.

Step	Activity
1	If a safety-related condition or incident exists, **REFER** to *SOP HLA.04 Initial Reporting and Investigating Events, SOP HLA.12 Safety-Related Conditions and HLA.15 PHMSA / States Incident Reporting* to notify the applicable agencies.
2	**REPORT** to Area Management and the One Call Group instances of non-compliance with One-Call laws.
3	If an One-Call Violation occurred, the One Call Group will report the violation to the state agency, where applicable
4	If a failure has occurred, **FOLLOW** the requirements of *SOP HLA.04 Initial Reporting and Investigating Events* and *SOP HLA.11 Investigations of Failures*.

7.4 Evaluation of Pipeline Damage

Operations Personnel evaluate any discovered damage per *SOP HLI.06 Evaluating Pipeline Defects*.

7.5 Remediation of Pipeline Damage

Operations Personnel remediate any damage that may affect the serviceability of the pipeline per *SOP HLI.05 Pipeline Repair*.

7.6 Investigation of Mechanical Damage Event

Damage Prevention Group uses the following steps to investigate mechanical damage events or near hits.

Step	Activity
1	If an One-Call Violation occurred, **REVIEW** the *One-Call Violation Report* for the details of the event and violation. If initiating event is not related to One Call, **GATHER** details from Operations.
2	If an One-Call Violation occurred, **COMMUNICATE** with violator detailing federal, state and company requirements for excavating on Company ROW.
3	**PERFORM** a root cause investigation per SOP *HLA.04 Initial Reporting and Investigating Events*
4	**COMMUNICATE** results of root cause investigation to Operations Management including any causal factors, root cause(s), lessons learned, recommendations, and corrective actions.
5	**DOCUMENT** results on Damage Prevention Root Cause Summary Report

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

Pipe Inspection Database
I.30.A One-Call Violation Report
I.30.B Damage Prevention Root Cause Summary Report

9.0 References

HLA.04 Initial Reporting and Investigating Events
HLA.11 Investigations of Failures
HLA.12 Safety-Related Condition Reporting
HLA.15 PHMSA / States Incident Reporting
HLA.29 Damage Prevention Plan
HLI.05 Pipeline Repair
HLI.06 Evaluating Damage to Pipelines
HLI.21 Inspection of ROW & Crossings Under Navigable Waters
HLI.23 Protection of Pipeline Facilities from Blasting Operations
HLI.24 Management of Depth of Cover and Evaluation
HLI.28 Right-of-Way Encroachments

Appendix A: OQ Task Requirements

The table below identifies the Operator Qualification (OQ) task requirements for this SOP.

Task Description	OQ Task
Visual Inspection of Buried Pipe and Components	PLOQ401
Measure and evaluate pipeline defects	PLOQ418A
Damage Prevention During Excavation / Encroachment Activities	PLOQ607

ENERGY TRANSFER

One-Call System Response

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.31**	
49 CFR: 195.442	***Effective Date: 04/01/18***	**Page 1 of 7**

1.0 Procedure Description

This Standard Operating Procedure (SOP) describes the guidelines to prepare for, manage, and respond to One-Call notifications.

2.0 Scope

This SOP establishes the requirements for One-Call notification and response, as well as utilization of the One-Call Program system.

In order to prevent damage to company facilities, the company participates in One-Call Systems and reacts proactively to One-Call System notifications for their pipelines per state and federal requirements.

3.0 Applicability

This SOP applies to the One-Call systems and company pipeline facilities in each state in which the company operates.

4.0 Frequency

As required: Respond to One-Call notifications and locate company pipeline facilities per state and federal requirements.

5.0 Governance

The following table describes the responsibility, accountability, and authority for this SOP.

Function	Responsibility	Accountability	Authority
All Operations	Operations Personnel	Operations Manager	Director of Operations
Implement the One-Call Program	One Call Group	One-Call/Damage Prevention Manager	Sr. Manager of Operations Services

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to *SOP HLA.01 Glossary and Acronyms*.

Terms	**Definitions**
American Public Works Association (APWA) color coding	**WHITE -** Proposed Excavation **PINK -** Temporary Survey Markings **RED** - Electric Power Lines, Cables, Conduit and Lighting Cables **YELLOW** - Gas, Oil, Steam, Petroleum or Gaseous Materials **ORANGE** - Communication, Alarm or Signal Lines, Cables or Conduit **BLUE** - Potable Water **GREEN** - Sewers and Drain Lines **PURPLE** - Reclaimed Water, Irrigation and Slurry Lines
One-Call Program	An electronic database application utilized to receive, respond to, and document One-Call activities.
One-Call System	An organization that allows any person, homeowner, professional, public, or private entity planning to excavate to place one phone call to notify all of the organization's member companies and organizations that are recorded as having underground company pipeline facilities in the area of intended excavation work. One-Call systems are required by state and federal regulation, which include a minimum time required for notification.
Excavation Activities	Any activity being conducted in the vicinity of company pipeline facilities where it is required to provide markings and inspection to prevent damage and maintain the integrity of company pipeline facilities.

7.0 One-Call System Response

Operations Personnel and One Call Group follow these procedures for One-Call system response:

- One-Call Program or Equipment
- One-Call System
- One-Call Response
- Delays of Start of Work
- Reporting

7.1 One-Call Program or Equipment

Operations Personnel and One Call Group establish and maintain One-Call programs or equipment including (but not limited to):

- Telephones/smart phones or other types of communication equipment to receive and send information regarding the One-Call System.
- Electronic mapping programs or maps illustrating the pipeline location to assist in locating the proposed encroachment with respect to the pipeline
- Electronic locators and or probes used for detecting and accurately locating buried pipelines.
- Computers and software for electronic ticket management
- Appropriate database or filing system to maintain and follow up on One-Call notifications and documentation.

7.2 One-Call System

One Call Personnel are responsible for running and maintaining the One-Call program.

Step	Activity
1	**PROVIDE** required company pipeline facility information for the One-Call System.
2	**ESTABLISH** and **ASSIGN** unique Call Directing Code (CDC) to areas.
3	**VERIFY** One-Call tickets receive a positive response where required.
4	**IDENTIFY** failed responses and respond accordingly.

NOTE: Most states require excavators as well as private landowners to provide 48 hour prior notification before any kind of digging occurs with power equipment, **except for Pennsylvania, which requires a 72 hour (3 business days) notification.**

7.3 One-Call Response

Operations Personnel follow the steps below to respond to notifications in the One-Call Program.

Step	Activity
1	**REVIEW** a One-Call notification and **RESPOND** within the prescribed time limit per state requirements for the area by phone, electronic positive response, or other means of communication.

NOTE: The following are responsible for responding to One-Call Program notifications:

- During normal working hours - Operations Personnel
- After hours, weekends, and company holidays - Gas Control receives emergency One-Call notifications or phone calls.

WARNING: Emergency One-Call notifications shall be reviewed per state requirement using alignment sheets and appropriate maps or other methods available to locate lines.

Step	Activity
2	When responding to a One-Call system notification, **USE** the appropriate response. This includes, but is not limited to, the examples in Table 1 below.

NOTE: Table 1 only lists typical One-Call Program responses, additional responses are provided and used in states requiring a specific positive responses.

Table 1 Typical One-Call Systems

Response Type	Response Format
Under Investigation / Monitor	*Company name* is currently working on clearing this One-Call notice. Please wait for further instructions from a company representative. **Monitor** - *Company name* will require more information from the contractor in order to clarify. Please contact us.
Cleared No Conflict	Based on the information you provided the One-Call center, our *Company name* pipeline facility is cleared from the work area described on the One-Call center ticket.
Marked	Pipeline marked by two of three processes: painted , staked or flagged **Monitor** - Please contact us. A company representative must be present while work is being done.

7.3.1 Call Response – No Conflict

When the subject of the One-Call notification does not present a conflict with company pipeline facilities, Operations Personnel use the following procedure.

Step	Activity
1	**SELECT** *NO CONFLICT* in the response section of the One-Call Program and complete the ticket.
2	The One-Call Program will **RESPOND** to the entity placing the One-Call to confirm the company has received the One-Call notification and that there are no conflicts with company pipeline facilities.

7.3.2 Call Response – Conflict

When the subject of the One-Call notification does present a conflict with company pipeline facilities, Operations Personnel performs a site visit and locates the underground company pipeline facility following the steps below. .

Step	Activity
1	**PLACE** the ticket *IN PROGRESS / UNDER INVESTIGATION / MONITOR* in the One-Call program
2	**REFERENCE** the requirements per *HLI.28 Right-of-Way Encroachments*
3	**DOCUMENT** all contact with the One-Call initiator, including name, date, time, and a brief description of the conversation in the comment section of the One-Call ticket.
4	**MARK** the approximate location of underground company pipeline facilities per *HLB.04 Pipe Location and Marking* within the timeframes per state requirements.
5	**MARK** the approximate location of underground pipelines using American Public Works Association (APWA) color-coding by means of stakes, paint, flags, or a combination thereof.
6	**VERIFY** the viability of temporary pipeline markings for 14 days and refresh as required.
7	When required, **INDICATE** the nominal diameter of pipelines greater than 6 inches at every other mark.
8	**VERIFY** the distance between marks clearly define the route and changes in direction of underground pipeline and or comply with state requirements. Clearly **INDICATE** lateral connections at the point where the change in direction or connection occurs.

WARNING: If during the course of marking, a customer or non-marked foreign owned facility is discovered, make a reasonable effort to notify the One-Call initiator.

Step	Activity
9	If it is determined marking of the underground company pipeline facility is

	not possible, **CONTACT** the Operations Manager. **NOTIFY** the One-Call initiator within 48 hours, via e-mail, phone or other verifiable electronic method, no excavation is to take place until company on-site assistance is provided.
10	**CONTACT** the One-Call initiator to confirm the start time of the excavation in order to have a company representative present.
11	**DETERMINE** if underground company pipeline facilities may be damaged by excavation activities. **COMPLETE** inspections as frequently as necessary during and after the activities to verify the integrity of the company pipeline facilities.
12	**PROVIDE** information to the Damage Prevention department for reporting to appropriate Regulatory Agency(s), all damages to Company's pipeline facilities within 5 days of actual knowledge of the damage incident.

7.4 Delays of Start of Work

When the subject of the One-Call notification presents a conflict, but work will not begin as stipulated on the One-Call notification, responsible Operations Personnel follow the steps below.

Step	Activity
1	**SELECT** *UNDER INVESTIGATION / MONITOR* in the response section of the One-Call Program when there is a conflict but work is delayed beyond the start date on the One-Call ticket.
2	**MARK** the approximate location of underground company pipeline facilities per *HLB.04 Pipe Location and Marking* within the timeframes per state requirements.
3	**MAINTAIN** communication and contact with One-Call initiator to confirm the start time of the excavation activities.
4	**DOCUMENT** all contact with the One-Call initiator, including name, date, time, and a brief description of the conversation in the comment section of the One-Call ticket.
5	**DOCUMENT** monitoring the site until the work begins in the comment section of the One-Call ticket.

7.5 Reporting

Operations Personnel use the process below to fulfill reporting requirements during One-Call system response.

Step	Task	Done By
1	Maintains the One-Call ticket lifecycle.	One Call Group
2	Completes the applicable form(s) and document in comment section of One-Call Program	Operations Personnel

8.0 Documentation Requirements

Record data in the electronic One-Call Program database

9.0 References

HLB.04 Pipe Location and Marking
HLI.28 Right-of-Way Encroachments

Appendix A: OQ Task Requirements

The table below identifies the Operator Qualification (OQ) task requirements for this SOP.

Task Description	OQ Task
Damage Prevention During Excavation / Encroachment Activities	PLOQ607
Underground Pipeline – Locate and Temporarily Mark	PLOQ605

ENERGY TRANSFER

Use of Ultrasonic Thickness Equipment for Measurement of Wall Thickness

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.34**	
49 CFR: 195.585, 195.587	***Effective Date: 03/01/14***	**Page 1 of 4**

1.0 Purpose

This Standard Operating Procedure (SOP) describes the use of Ultrasonic Thickness (UT) Equipment to determine existing or remaining wall thickness measurements on pipeline facilities. The wall thickness measurement may be needed for but not limited to pipe wall thickness verification, lamination verification and dimensions, internal corrosion verification, and hot tap placement.

2.0 Scope

. This SOP details the use of ultrasonic thickness equipment for measurement of wall thickness of steel pipe, tanks, and structures.

3.0 Applicability

This SOP applies to all company facilities where a wall thickness measurement will be taken.

4.0 Frequency

As required: When wall thickness measurements are required.

5.0 Governance

The following table describes the responsibility, accountability, and authority of this SOP.

Function	Responsibility	Accountability	Authority
All Operations	Operations Personnel	Operations Personnel	Operations Manager

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to *SOP* HL*A.01 Glossary and Acronyms*.

7.0 Use of Ultrasonic Thickness Equipment for Measurement of Wall Thickness

The following procedures are covered in this SOP:

- Operation of Ultrasonic Thickness Equipment
- Use of Wall Thickness Measurement

7.1 Operation of Ultrasonic Thickness Equipment

Operations Personnel performing the function follow the instructional operating manual of the ultrasonic thickness equipment that they are using to perform the wall thickness measurement.

7.2 Use of Wall Thickness Measurement

Operations Personnel apply the wall thickness measurement to the uses as outlined below.

7.2.1 Pipe Wall Thickness Verification

Operations Personnel apply the following steps when the wall thickness measurement is used to verify pipe wall thickness.

Step	Activity
1	**VERIFY** calibration of the ultrasonic meter in accordance with manufacturer's procedures.
2	**PREPARE** pipeline for examination. Pipeline should be clear of coating and free of debris.
3	**PERFORM** and record thickness measurement readings to determine pipe wall thickness measurement verification.
4	**DOCUMENT** wall thickness measurements in the pipe inspection database.

7.2.2 Lamination Verification & Dimensions

Operations Personnel apply the following steps when the wall thickness measurement is used to verify and measure the dimensions of lamination in the pipe.

Step	Activity
1.	**VERIFY** calibration of the ultrasonic meter in accordance with

Step	Activity
	manufacturer's procedures.
2.	**PREPARE** pipeline for examination. Pipeline should be clear of coating and free of debris.
3.	**GRID** pipeline and **RECORD** thickness measurement readings to determine the potential for lamination.
4.	**EXPAND** grid and **CONTINUE** to record thickness measurement readings until lamination dimension is determined. **SEE** *SOP HLI.06 Evaluating Pipeline Defects*.
5.	**DOCUMENT** ultrasonic readings and dimensions of the lamination in the pipe inspection database.

7.2.3 Internal Corrosion Verification

Operations Personnel apply the following steps when the wall thickness measurement is used to verify internal corrosion.

Step	Activity
1	**VERIFY** calibration of the ultrasonic meter in accordance with manufacturer's procedures.
2	**PREPARE** pipeline for examination. Pipeline should be clear of coating and free of debris.
3	**GRID** pipeline and **RECORD** thickness measurement readings to verify the presence of internal corrosion. **REFER** to *SOP HLD.35 Buried Pipe Inspection*.
4	**DOCUMENT** ultrasonic readings and dimensions of the internal corrosion in the pipe inspection database.

7.2.4 Hot Tap Location

Operations Personnel apply the following steps when the wall thickness measurement is used for hot tap placement on the pipeline.

Step	Activity
1	**VERIFY** calibration of the ultrasonic meter in accordance with manufacturer's procedures.
2	**PREPARE** pipeline for examination. Pipeline should be clear of coating and free of debris.
3	**PERFORM** and **RECORD** thickness measurement readings to determine pipe wall thickness measurement verification and confirm no presence of lamination, internal corrosion, and longitudinal seam.

NOTE:	Amonium persulfate etching can be beneficial in conjunction with ultrasonic inspection to verify the location of ERW longitudinal seams.

4	**COMPLETE** documentation using the applicable form or electronic database in accordance with *SOPs HLD.35 Buried Pipe Inspection*

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

Refer to these SOPs for documentation requirements as needed
HLD.35 Buried Pipe Inspection
HLI.06 Evaluating Pipeline Defects.

9.0 References

HLD.35 Buried Pipe Inspection
HLI.06 Evaluating Pipeline Defects

Appendix A: OQ Task Requirements

The table below identifies the Operator Qualification (OQ) task requirements.

Task Description	OQ Task
Demonstrate Proper Use of Pipe Thickness Gauge (Ultrasonic)	PLOQ008

ENERGY TRANSFER

Public Awareness Plan— Communication with API RP1162- defined Stakeholders

Standard Operating Procedures

Applicable to Hazardous Liquids Pipelines and Related Facilities

Code Reference :	**Procedure No.: HLI.40**	
49 CFR: 195.440; RRC 8.235, 8.310, 8.315	***Effective Date: 04/01/18***	**Page 1 of 8**

1.0 Purpose

API RP 1162 requires pipeline operators to communicate with specific stakeholders. This Standard Operating Procedure (SOP) establishes the guidelines for the communication with the following four audience groups – Affected Public, Emergency Officials, Public Officials and Excavators – under the Public Awareness Plan.

2.0 Scope

This SOP describes the requirements of the Public Awareness Plan to communicate with the API RP1162 defined stakeholders on a regular frequency and records the results of these communications.

3.0 Applicability

This SOP applies to all pipelines under the requirements of the company's Public Awareness Plan.

4.0 Frequency

As specified in *SOP HLA.17 Public Awareness Plan*, the baseline frequency for communicating and documenting communication with each stakeholder audience is defined below.

- Affected Public are every 2 years
- Emergency Officials are annually
- Public Officials are every 3 years
- Excavators are annually

Supplemental frequency for a specified area, pipeline, or other designation, determined under the Public Awareness Plan and this SOP: Documented by the Public Awareness Manager.

5.0 Governance

The following table identifies the responsibility, accountability, and authority for communication with the API RP1162-defined stakeholder audiences.

Function	Responsibility	Accountability	Authority
Communicate messages about pipeline safety and interact with Affected Public, Emergency Officials, Public Officials and Excavators	Area Management / Operations Personnel	Public Awareness Manager	Senior Manager, Operations Services
Determine the Message	Public Awareness Manager	Public Awareness Manager	Senior Manager, Operations Services
Distribute communication messages via targeted mail	Public Awareness Manager	Public Awareness Manager	Senior Manager, Operations Services
Determine Supplemental Messages, Frequencies, and Activities	Public Awareness Manager	Public Awareness Manager	Senior Manager, Operations Services
Develop and Maintain the Public Awareness Database	Public Awareness Manager	Public Awareness Manager	Senior Manager, Operations Services

6.0 Terms and Definitions

Terms associated with this SOP and their definitions follow in the table below. For general terms, refer to *SOP HLA.01 Glossary and Terms.*

Terms	Definitions
Affected Public	The Affected Public includes people who occupy structures on land on which the pipeline is buried. A partial list includes homeowners, homeowners associations, farmers, tenants, landowners, businesses, and industrial facilities.
Emergency Officials	State and local law enforcement departments, emergency medical services, fire departments, 911 operators/emergency dispatch centers or others that can benefit from

	communication of pipeline safety, incident response and related public awareness messages, and interaction.
Public Officials	Mayors, city, town, or county managers, planning boards or committees that serve the public in a capacity that can benefit from communication of planning or pipeline safety and related public awareness messages.
Excavator	Anyone who may dig in the vicinity of pipelines with manual or mechanized equipment with the potential to cause damage or create an incident on the pipeline or related facilities. For the purpose of this SOP, residents are not considered excavators, since public awareness communications with residents occurs under *SOP HLA.17 Public Awareness Plan.*

7.0 Public Awareness Plan—Communication with API RP112-defined Stakeholders

This procedure contains the following sections:

- Communicate Message and Interact with Affected Public
- Communicate Message and Interact with Emergency Officials
- Communicate Message and Interact with Public Officials
- Communicate Message and Interact with Excavators
- Targeted Distribution of Print Materials to API RP-1162 defined Stakeholders
- Determine the Message for the Affected Public
- Develop and Maintain the Public Awareness Database
- Determine Supplemental Messages, Frequencies and Activities
- Documentation Requirements

NOTE: Persons occupying property within 660 feet of the centerline will be included.

7.1 Communicate Message and Interact with the Affected Public

Area Management is responsible for maintaining contact and communications with the Affected Public in their areas. Communications focused on pipeline safety with a particular stakeholder that occur during the normal course of business are considered per occurrence contact. Area Management is responsible for documenting the per occurrence contact within the public awareness database.

The Public Awareness Manager is responsible communicating with the Affected Public on a recurring basis via targeted distribution of print materials.

The Public Awareness Manager is responsible for documenting targeted distribution of print materials within the public awareness database.

7.2 Communicate Message and Interact with Emergency Officials

Area Management is responsible for maintaining contact and communications with Emergency Officials in their areas. Area Management may communicate and interact with emergency officials through formal and informal interactions. Communications focused on pipeline safety with a particular stakeholder that occur during the normal course of business are considered per occurrence contact. Area Management will also communicate and interact with emergency officials via a formalized group meeting hosted by an association/third party.

Area Management is responsible for documenting the per occurrence contact within the public awareness database. The Public Awareness Manager is responsible for documenting the group meetings with emergency officials within the public awareness database.

Area Management can perform the communication with company employees, with a contractor, a third party (such as an area damage prevention group), or a combination.
The use of a contractor or a third party should include the evaluation of the contractor's programs to verify that they meet the requirements of the first edition of American Petroleum Institute's Recommended Practice 1162 (RP-1162) and the company.
The general guideline for conducting Emergency Official meetings is listed below.

Step	Activity
1	**PREPARE** meeting materials.
2	**INCLUDE** an overview of normal operations and emergency procedures.
3	**FOCUS** discussions on mutual concerns related to emergency response and pipeline safety.
4	**EXCHANGE** emergency contact lists.
5	**ACQUAINT** the Emergency Officials with company facilities and ability to respond to emergency situations.
6	**REVIEW** local area emergency plan.
7	**DETERMINE** their ability to provide emergency assistance.
8	**DISCUSS** mutual assistance for leaks, ruptures, fires, or other emergency situations.
9	**SEND** meeting materials to those that cannot attend the meeting.
10	**FOLLOW-UP** on requests for additional information or training.
11	**PLAN** for and **CONDUCT** emergency simulations as required.
12	**DOCUMENT** attendees so they can be added to the Public Awareness Database.
13	**DOCUMENT** communication in public awareness database.

7.3 Communicate Message and Interact with Public Officials

Area Management is responsible for maintaining contact and communications with Public Officials in their areas and for documenting the contact and communication.

The Public Awareness Manager is responsible for maintaining a current schedule of mailings to Public Officials. The schedule makes efficient use of company resources while maintaining the frequency necessary for effective communication.

The following steps detail the process for the mass mailings to Public Officials.

Step	Task	Done By
1	**NOTIFY** Director, GIS / Engineering Records of readiness to mail to Public Officials.	Public Awareness Manager
2	**SEND** centerline shape files of pipeline assets and facilities to mail vendor.	GIS Analyst
3	**WORK** with vendor to **ACQUIRE** data to **IDENTIFY** addresses. **APPLY** mailing buffer, **CLASSIFY** addresses and **CONDUCT** mailing.	Public Awareness Manager
4	**RECEIVE** documentation and proof of mailing from USPS. **REVIEW** mail receipts.	Public Awareness Manager
5	**RECEIVE** returned mail, **DOCUMENT** and **SEND** addresses to vendor for further analysis to ascertain why an address was undeliverable.	Public Awareness Manager
6	**RETRIEVE** documentation from vendor and **LOAD** documentation of mailing into company's the Public Awareness Database.	Public Awareness Manager

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7.4 Communicate Message and Interact with Excavators

Area Management is responsible for maintaining contact and communications with Excavators in their areas. Area Management may communicate and interact with emergency officials through formal and informal interactions. Communications focused on pipeline safety with a particular stakeholder that occur during the normal course of business are considered per occurrence contact. Area Management will also communicate and interact with emergency officials via a formalized group meeting hosted by an association/third party.

Area Management is responsible for documenting the per occurrence contact within the public awareness database. The Public Awareness Manager is responsible for documenting the group meetings with emergency officials within the public awareness database.

Area Management can perform the communication with company employees, with a

contractor, a third party (such as an area damage prevention group or a state one call center) or a combination. The use of a contractor or a third party should include the evaluation of the contractor's programs to verify that they meet the requirements of RP-1162 and the company. The general guideline for conducting excavator meetings is listed below.

Step	Activity
1	**PREPARE** meeting materials.
2	**DESCRIBE** the company's Damage Prevention Program per *SOP HLI.30 Third Party Damage.*
3	**DISCUSS** the company's use of One-Call Notification System.
4	**EXPLAIN** the requirements for notification prior to any excavation regardless of the presence of established markers.
5	**EXPLAIN** the requirements for a company representative to locate the pipeline before any excavation begins.
6	**DESCRIBE** the potential consequences of damages and incidents.
7	**PROVIDE** information on reporting damages and incidents.
8	**SEND** meeting materials to those that don't attend the meeting.
9	**FOLLOW-UP** on requests for additional information.
10	**DOCUMENT** attendees so they can be added to the Public Awareness Database.
11	**DOCUMENT** communication in the Public Awareness Database.

7.5 Determine the Message for Targeted Distribution of Print Materials

The Public Awareness Manager is responsible for determining the message content of print materials. Baseline messages, by audience and type of pipeline system, should be determined using API RP 1162. Updates to the initial baseline message follow the process identified below and include supplemental content or contact frequencies as necessary.

7.6 Targeted Distribution of Print Materials to API RP-1162 defined Stakeholders

The Public Awareness Manager is responsible for maintaining a current schedule of mailings to API RP1162-defined stakeholders. The schedule makes efficient use of company resources while maintaining the frequency necessary for effective communication. The Public Awareness Manager can develop a sub-process for smaller mail outs. The following steps detail the process for the targeted distribution of print materials.

Step	Task	Done By
1	**NOTIFY** Director, GIS / Engineering Records of readiness to mail to Public Officials.	Public Awareness Manager

Step	Task	Done By
2	**SEND** centerline shape files of pipeline assets and facilities to mail vendor.	GIS Analyst
3	**WORK** with vendor to **ACQUIRE** data to **IDENTIFY** addresses. **APPLY** mailing buffer, classify addresses and **CONDUCT** mailing.	Public Awareness Manager
4	**RECEIVE** documentation and proof of mailing from USPS. **REVIEW** mail receipts.	Public Awareness Manager
5	**RECEIVE** returned mail, **DOCUMENT** and **SEND** addresses to vendor for further analysis to ascertain why an address was undeliverable.	Public Awareness Manager
6	**RETRIEVE** documentation from vendor and **LOAD** documentation of mailing into company's the Public Awareness Database.	Public Awareness Manager

7.7 Develop and Maintain the Public Awareness Database

The Public Awareness Plan master database resides within a web-based application. All information that is available in electronic format or that can reasonably be converted to electronic format is stored in the Public Awareness Database. In addition to the master database, the remaining Public Awareness materials are stored in a common area on the data servers.

These following steps are completed on a regular basis to maintain a current status in the Public Awareness Database.

Step	Task
1	**INCORPORATE** Field Data into the Public Awareness Database, per contact occurrence.
2	**VERIFY** contact information is in the Public Awareness Database
3	**COORDINATE** the correction of any discrepancies.
4	**VERIFY** that messages are attached to the database records following the mail out.

7.8 Determine Supplemental Messages, Frequencies, and Activities

Supplemental techniques such as increased message frequency, supplemental messages, or the deployment of different communication methods may be necessary for the development of effective public awareness communication with each stakeholder audience. Following the evaluation of the Public Awareness Plan effectiveness in *SOP HLA.17 Public Awareness Plan*, the resulting recommendations regarding supplemental messages, frequencies and activities should be incorporated into the methods used for communicating with stakeholders.

Code Reference :	Procedure No.: HLI.40	
49 CFR: 195.440; RRC 8.235, 8.310, 8.315	*Effective Date: 04/01/18*	Page 8 of 8

8.0 Documentation Requirements

Record data in electronic database, utilize the following form(s) as applicable:

- I.40.A – Public Awareness Contact Data Form

Records and other documentation that reflect communications to stakeholder audiences are retained for a minimum of five years within the Public Awareness Database and central storage location in electronic format. Records that cannot be readily converted to electronic format are kept by the Public Awareness Manager with copies existing in the source location as necessary for a minimum of five years.

Documentation of the following is required under this SOP:

- Document contact (per occurrence) with RP1162-defined stakeholders in public awareness database. Utilize the applicable form(s) for Public Awareness Contact Data Form or data can be entered directly into public awareness database.
- Contact data for the in the Public Awareness Database.
- Documentation related to targeted distribution of print materials – schedules, brochures, postal certificates, mail lists -- in the Public Awareness Database.
- Documentation related to formalized meetings with stakeholders -- meeting sign-in sheets, invitations, contact lists in the Public Awareness Database.
- Supplemental activities in the Public Awareness Database.

9.0 References

HLA.03 Management of Change

HLA.17 Public Awareness Plan

I.40.A Public Awareness Contact Data Form

Appendix A: OQ Task Requirements

There are no Operator Qualification (OQ) task requirements for this SOP.

ENERGY TRANSFER

Corrosion Control Supervisor Qualifications

Standard Operating Procedures

Applicable to Hazardous Liquid Pipelines and Related Facilities

Code Reference:	**Procedure No.: HLD.01**	
49 CFR: 195.555	***Effective Date: 04/01/18***	**Page 1 of 2**

1.0 Procedure Description

This Standard Operating Procedure (SOP) establishes that Supervisors will maintain thorough knowledge of the portion of corrosion control for which they are responsible for insuring compliance.

2.0 Scope

Knowledge of compliance issues is a vital role that Supervisors have in the Corrosion Control Program. Corrosion control qualifications for Supervisors (i.e. the persons who are responsible for data review & recommendations for remedial action) are outlined in our training and qualification program.

3.0 Applicability

This SOP applies to all aspects of the Company's Corrosion Control Program.

4.0 Frequency

As required: Update and review the applicable Corrosion Control procedures in accordance with the Management of Change (MOC) procedures.

5.0 Governance

The following table describes the responsibility, accountability, and authority of the operations described in this SOP.

Function	Responsibility	Accountability	Authority
Corrosion Control	Corrosion Supervisor Corrosion Specialist Corrosion Manager	Sr Corrosion Control Manager	VP of Pipeline Integrity

6.0 Terms and Definitions

For general terms, refer to *SOP HLA.01 Glossary and Acronyms*.

Terms	Definitions
Supervisor	the responsible person(s) who review actual field data for compliance and make decisions concerning implementation of remedial action. Includes the corrosion supervisor and corrosion specialist

Code Reference :	**Procedure No.: HLD.01**	
49 CFR: 195.555	***Effective Date: 04/01/18***	**Page 2 of 2**

7.0 Corrosion Control Supervisor Qualifications

Corrosion supervisory personnel, those with direct or indirect responsibility of implementation of corrosion SOPs, corrosion data review and implementation of any remedial actions, will be qualified with qualifications documented in the Operator Qualification database. Corrosion supervisory personnel include corrosion supervisors and corrosion specialists.

8.0 Documentation Requirements

Record data in electronic database or utilize the following form(s) as applicable:

- Operator Qualification and CDMS Databases

9.0 References

There are no references in this SOP.

Appendix A: OQ Task Requirements

There are no Operator Qualification (OQ) tasks required for this SOP.