

## Operations and Maintenance Procedures

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O&M Section # 7.3, 12.1, 12.2	SCUD Task # 310
Section: Maintenance	Revision Date: 09/06/16

### Inspect Pipeline Surface Conditions – Patrol Right-of-Way or Easement

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#### **SCOPE AND PURPOSE**

This procedure includes performing patrolling for the right-of-way (ROW), bridge crossings and creek/river crossings to visually identify signs of leaks, encroachments, conditions of the right-of-way, crossings and markers, or any other signs of potential impact to pipeline safety or integrity. It describes the practices required by §192.721.

#### **RESPONSIBILITY**

The System Maintenance Supervisor, or other designee, is responsible to ensure that the patrolling of pipelines is performed as described in this procedure.

#### **PERSONNEL SAFETY (Where Applicable)**

Every reasonable precaution shall be taken to protect employees and the general public.

#### **EQUIPMENT AND MATERIALS**

Maps/Records, if available  
 Binoculars if needed  
 Method(s) of communication, if available  
 Other equipment and materials as needed

#### **OPERATOR QUALIFICATION**

This activity is a covered task under the Operator Qualification Plan and may only be performed by or directed and observed by an individual who is currently qualified to perform this task. Refer to the OQ Plan for specific qualification requirements.

#### **INSTRUCTIONS**

##### **General**

- At a minimum, the frequency of patrols for distribution lines may not be less than the prescribed intervals found in §192.721. The frequency of patrolling shall be determined by the severity of the condition which could cause failure or leakage and the consequent hazards to public safety. Mains subject to anticipated movement or external loading which may result in failure or leakage will be patrolled at quarterly intervals not exceeding 4 ½ months.

##### **Patrolling – Distribution Lines**

- Distribution lines should be patrolled, either by walking or driving along pipeline rights-of-ways and easements, to observe factors that may affect safe operation and to enable the correction of potentially hazardous conditions.
- Patrol considerations should include observation and reporting of potential hazards such as, but not limited to
  - Visual evidence of leakage
  - Excavation, grading, demolition, or other construction activity which could result in:
    - Damage to the pipe
    - Loss of support due to shifting of soil around the pipe
    - Undermining or damage to pipe supports

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- Loss of cover
- Excessive fill
- Evidence that excavation, grading, demolition or other construction activity may take place or has taken place, such as power equipment staged in the vicinity of distribution facilities or a freshly backfilled excavation over or near distribution facilities.
- Physical deterioration of exposed piping, pipeline spans, and pipe supports such as bridges, hangers, pilings, headwalls, casing, and foundations.
- Land subsidence, earth slippage, soil erosion, extensive tree root growth, flooding, and other natural causes that can result impressed secondary loading.
- The need for additional pipeline identification markers or replacement/repair of missing or damaged markers. Line markers should be installed at the following locations as required:
  - All public road & railroad crossings
  - Mains on public ROW in Class I and II locations.
  - At any location where identification may reduce the possibility of damage or interference, i.e., regulator station, bridge & river crossing
- Pipeline markers must have the following information printed on them:
  - “Warning” or “Caution” or “Danger”
  - Tn. 1-call # (811)
  - Telephone #
  - “Gas Pipeline”
  - Operators name (SCUD)
- Damage to casing vents and leakage from encased pipe.
- Locations or areas that are found to be potentially hazardous during patrolling may be patrolled more frequently based on the probable severity, timing, and duration of the hazard.
- Where practical, the patrol map or other documentation used by personnel performing the patrol should identify areas near the distribution line that may require special attention such as locations where earthmoving activities are regularly performed
  - In those areas where excavation activities are performed on a regular basis, consideration should also be given to providing those excavators with more frequent damage prevention and public awareness education materials
- Places or structures where physical movement or external loading may cause leakage or failure should be identified based on the knowledge of the system characteristics and problem areas. Areas of consideration for distribution patrolling include, but are not limited to, the following:
  - Bridge crossings
  - Aerial crossings
  - Unstable river banks
  - Exposed water crossings
  - Areas susceptible to washout
  - Landslide areas
  - Areas susceptible to earth subsidence
  - Tunnels
  - Railroad crossings
  - Attachments to buildings or other structures
  - Facilities or support structures which require maintenance, until repaired
- Crossing reports should:
  - Indicate the nature and location of any deficiencies discovered

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- Indicate any hazardous or potentially hazardous condition found
- Document any corrective action taken
- If corrective action has not been taken, note any recommended action items
- If available, compare the current patrol conditions against conditions observed during previous patrols.

#### **REPORTING/NOTIFICATION**

Complete documentation in accordance with Operation and Maintenance Manual.

#### **ABNORMAL OPERATING CONDITIONS**

<b>AOC Main Category</b> (Examples of Specific AOCs)	<b>Reactions to AOC, as appropriate</b>	
<b><i>Unplanned escape of product from a pipeline</i></b> <ul style="list-style-type: none"> <li>● Blowing/Escaping gas/Grade I leak</li> </ul>	<ul style="list-style-type: none"> <li>➤ Protect life &amp; Property</li> <li>➤ Prevent accidental ignition</li> <li>➤ Notify appropriate personnel</li> <li>➤ Notify Fire/Emergency Responders</li> <li>➤ Initiate Emergency Plan</li> </ul>	<ul style="list-style-type: none"> <li>➤ Locate source/cause of AOC</li> <li>➤ Use appropriate PPE</li> <li>➤ Stop gas flow</li> <li>➤ Make repairs/eliminate AOC</li> </ul>
<b><i>Fire or Explosion</i></b> <ul style="list-style-type: none"> <li>● Fire on a pipeline</li> <li>● Explosion</li> </ul>	<ul style="list-style-type: none"> <li>➤ Protect life &amp; Property</li> <li>➤ Prevent accidental ignition</li> <li>➤ Notify appropriate personnel</li> <li>➤ Notify Fire/Emergency Responders</li> <li>➤ Initiate Emergency Plan</li> </ul>	<ul style="list-style-type: none"> <li>➤ Locate source/cause of AOC</li> <li>➤ Use appropriate PPE</li> <li>➤ Stop gas flow</li> <li>➤ Make repairs/eliminate AOC</li> </ul>
<b><i>Pipeline Damage</i></b> <ul style="list-style-type: none"> <li>● Coating Damage</li> <li>● Corrosion Damage</li> <li>● Dents, Gouges, Scrapes, etc.</li> </ul>	<ul style="list-style-type: none"> <li>➤ Protect life &amp; Property</li> <li>➤ Prevent accidental ignition</li> <li>➤ Notify appropriate personnel</li> </ul>	<ul style="list-style-type: none"> <li>➤ Locate source/cause of AOC</li> <li>➤ Make repairs/eliminate AOC</li> </ul>
<b><i>Unplanned Status Change</i></b> <ul style="list-style-type: none"> <li>● Inoperable/Failure of a Pipeline Component</li> <li>● Stray Current on a Pipeline – Electric Shock</li> </ul>	<ul style="list-style-type: none"> <li>➤ Protect life &amp; property</li> <li>➤ Notify appropriate personnel</li> <li>➤ Initiate Emergency Plan as Needed</li> </ul>	<ul style="list-style-type: none"> <li>➤ Locate source/cause of AOC</li> <li>➤ Make repairs/eliminate AOC</li> </ul>
<b><i>Inadequate Odorization or Reports of Gas Odor</i></b> <ul style="list-style-type: none"> <li>● Low odorization</li> </ul>	<ul style="list-style-type: none"> <li>➤ Protect life &amp; property</li> <li>➤ Prevent accidental ignition</li> </ul>	<ul style="list-style-type: none"> <li>➤ Locate source/cause of AOC</li> <li>➤ Make repairs/eliminate AOC</li> </ul>



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| <ul style="list-style-type: none"><li>• Over odorization &amp; or Odor complaint</li></ul> | <ul style="list-style-type: none"><li>➤ Notify appropriate personnel</li></ul> |
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#### **RELATED PROCEDURES**

EMER003 – Outside Gas Leak Investigation

MAINT015 – Leak Grading Criteria