

## PIPELINES

LAST UPDATE December 2010

- Note:**
1. The PINC's L-102 through L-143 address DOI regulated offshore pipelines, only.
  2. During pipeline inspections, the API RP 14C SAC reference must be verified when a safety device is SACed out on a pipeline component. When a SAC alternate device is acceptable, the device(s) on the upstream or downstream component must be tested to ensure adequate protection.

### OPERATIONAL PIPELINES

#### L-102 IS EACH PIPELINE PUMP EQUIPPED WITH AN OPERABLE PSV?

**DEFINITION:**

**Pipeline pump** - Primary pump which transfers produced liquid hydrocarbon from the process system to sales or to pipelines commingled for sales.

**Non-pipeline pumps** - Transfer produced liquid hydrocarbons and chemicals within the production process system or from containment systems to the process system.

**INSPECTION PROCEDURE:**

1. Inspect each pump to verify that it is equipped with a PSV and is:
  - A. Located on the pump discharge piping upstream of any block valve and installed to sense pressure throughout the pump discharge piping.
  - B. Located so that the PSV cannot be isolated except while testing.
2. Verify operation of the PSV by testing in accordance with Appendix 4.

**Note:** API test tolerance does apply.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Pump is not equipped with a PSV.
2. PSV is not operable.
3. PSV is not located as required.
4. PSV is isolated.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline pump inspected.

#### L-103 IS EACH PIPELINE PUMP EQUIPPED WITH AN OPERABLE SDV?

**DEFINITION:**

**Pipeline pump** - Primary pump which transfers produced liquid hydrocarbon from the process system to sales or to pipelines commingled for sales.

**Non-pipeline pumps** - Transfer produced liquid hydrocarbons and chemicals within the production process system or from containment systems to the process system.

**INSPECTION PROCEDURE:**

1. Inspect each pump to verify that it is equipped with an SDV located in the pump suction line as near the storage component or surge as possible.
2. Verify operation of the SDV by testing in accordance with Appendix 7.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Pump is not equipped with a SDV.
2. SDV is not operable.
3. SDV is not located as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline pump inspected.

#### L-104 IS EACH PIPELINE PUMP EQUIPPED WITH A FSV?

Authority: 1004(b)(9) Enforcement Action: C

**DEFINITION:**

**Pipeline pump** - Primary pump which transfers produced liquid hydrocarbon from the process system to sales or to pipelines commingled for sales.

**Non-pipeline pumps** - Transfer produced liquid hydrocarbons and chemicals within the production process system or from containment systems to the process system.

**INSPECTION PROCEDURE:**

Inspect each pump discharge to verify that it is equipped with a FSV.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when the pump is not equipped with a FSV.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline pump inspected.

L-106

**IS THE PSH ON EACH PIPELINE PUMP SET NO HIGHER THAN 15 PERCENT ABOVE THE HIGHEST PRESSURE IN THE OPERATING RANGE AND NOT ABOVE THE PIPELINE'S MAOP?**

**Authority: 1004(b)(9)**

**Enforcement Action: C**

**INSPECTION PROCEDURE:**

1. Inspect each pipeline pump to verify that it is equipped with a PSH sensor.
2. Conduct actuation test on the PSH sensor in accordance with Appendix 1 and document activation pressure.
3. Verify that PSH is set no higher than 15 percent above the highest pressure in the operating range and below the pipeline's MAOP.
4. Verify that the PSH sensor activates the SDV located on the storage component outlet in accordance with API RP 14C, paragraph A.7.3.3.

**Note:** API test tolerance does apply.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Pipeline pump is not equipped with a PSH sensor.
2. PSH sensor does not activate as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each PSH inspected.

L-107

**IS THE PSL ON EACH PIPELINE PUMP SET NO LOWER THAN 15 PERCENT BELOW THE LOWEST PRESSURE IN THE OPERATING RANGE?**

**Authority: 1004(b)(9) Enforcement Action: C**

**INSPECTION PROCEDURE:**

1. Inspect each pipeline pump to verify that it is equipped with a PSL sensor.
2. Conduct actuation test on the PSL sensor in accordance with Appendix 1 and document activation pressure.
3. Verify that PSL is set no lower than 15 percent below the lowest pressure in the operating range.
4. Verify that the PSL sensor activates the SDV located on storage component outlet in accordance with API RP 14C, paragraph A.7.3.3.

**Note:** API test tolerance does apply.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Pipeline pump is not equipped with a PSL sensor.
2. PSL sensor does not activate as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each PSL inspected.

L-108

**ARE INCOMING PIPELINES TO A PLATFORM EQUIPPED WITH AN FSV?**

**Authority: 1004(b)(1)**

**Enforcement Action: C**

**INSPECTION PROCEDURE:**

Inspect each incoming pipeline to verify that it is equipped with an FSV installed in the incoming pipeline immediately upstream from the process station so that the entire line is protected from backflow.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Incoming pipeline is not equipped with an FSV.
2. FSV is not located in the incoming pipeline so that the entire line is protected from backflow.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline inspected.

L-109

**IS EACH INCOMING, CROSSING, AND BIDIRECTIONAL PIPELINE EQUIPPED WITH AN SDV IMMEDIATELY UPON BOARDING THE PLATFORM?**

**Authority:** 1004(b)(2)

**Enforcement Action:** C

1004(b)(4)

1004(b)(8)

**INSPECTION PROCEDURE:**

Inspect each incoming, crossing, and bidirectional pipeline to verify that it is equipped with an SDV:

1. Immediately upon boarding the platform.
2. Connected to the automatic, and remote emergency shut-in systems.
3. Actuated by the PSH and PSL sensors located on the departing portion of the pipeline.
4. Verify that the SDV is operable. Bleed the pressure off the actuator and allow the SDV to reach 3/4 closed position.

**Note:**

1. Unmanned non-production facilities do not require an SDV on a crossing pipeline.
2. Exclude gas-lift or water injection pipelines on unmanned platforms.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC when:

1. Pipeline is not equipped with SDV.
2. SDV is not located as required.
3. SDV is not connected as required.
4. SDV is not operable.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline inspected.

L-112

**IS THERE A PSH LOCATED ON EACH DEPARTING, CROSSING, OR BIDIRECTIONAL PIPELINE AND SET NO HIGHER THAN 15 PERCENT ABOVE THE HIGHEST PRESSURE IN THE OPERATING RANGE AND NOT ABOVE THE PIPELINE'S MAOP?**

**Authority:** 1004(b)(3)

**Enforcement Action:** C

1004(b)(4)

1004(b)(8)

**INSPECTION PROCEDURE:**

1. Inspect each departing pipeline to verify that it is protected by a PSH sensor located downstream of any platform input source and upstream of a departing pipeline FSV.
2. Inspect each crossing pipeline to verify that it is protected by a PSH sensor on the departing portion of the pipeline.
3. Inspect each bi-directional pipeline to verify that it is protected by a PSH sensor immediately upon boarding the platform.
4. Conduct actuation test on the PSH sensor in accordance with Appendix 1 and document activation pressure.
5. Verify that PSH is set no higher than 15 percent above the highest pressure in the operating range and below the pipeline's MAOP.

**Note:** The API test tolerance does apply.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC if:

1. The pipeline is not protected by a PSH sensor.
2. The pipeline PSH sensor does not activate as required.
3. The pipeline PSH sensor is not located as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each PSH inspected.

L-113

**IS THERE A PSL LOCATED ON EACH DEPARTING, CROSSING, OR BIDIRECTIONAL PIPELINE AND SET NO LOWER THAN 15 PERCENT BELOW THE LOWEST PRESSURE IN THE OPERATING RANGE?**

**Authority: 1004(b)(3)  
1004(b)(4)  
1004(b)(8)**

**Enforcement Action: C**

**INSPECTION PROCEDURE:**

1. Inspect each departing pipeline to verify that it is protected by a PSL sensor located downstream of any input source and upstream of a departing pipeline FSV.
2. Inspect each crossing pipeline to verify that it is protected by a PSL sensor on the departing portion of the pipeline.
3. Inspect each bi-directional pipeline to verify that it is protected by a PSL sensor immediately upon boarding the platform.
4. Conduct actuation test on the PSL sensor in accordance with Appendix 1 and document activation pressure.
5. Verify that PSL is set no lower than 15 percent below the lowest pressure in the operating range.

**Note:** The API test tolerance does apply.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC if :

1. The pipeline is not protected by a PSL sensor.
2. The pipeline PSL sensor does not activate as required.
3. The pipeline PSL sensor is not located as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each PSL inspected.

L-114

**DOES THE SETTING AT WHICH THE PSV ACTUATES NOT EXCEED THE PIPELINE'S MAOP?**

**Authority: 1002(d)**

**Enforcement Action: C**

**INSPECTION PROCEDURE:**

1. Inspect all pipelines to verify the MAOP.
2. Verify operation of the PSV by testing in accordance with Appendix 4.
3. Verify that the PSV actuation pressure does not exceed the MAOP.

**IF NONCOMPLIANCE EXISTS:**

Issue a component shut-in (C) INC for the pipeline when the PSV does not actuate as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each PSV inspected.

L-121

**ARE PIPELINE RISERS INSTALLED AFTER APRIL 1, 1988, PROTECTED FROM PHYSICAL DAMAGE THAT COULD RESULT FROM CONTACT WITH FLOATING VESSELS?**

**Authority: 1003(a)(4)**

**Enforcement Action: W/C**

**INSPECTION PROCEDURE:**

Inspect each pipeline riser installed after April 1, 1988, to verify that it is protected from physical damage that could result from contact with floating vessels.

**Note:** Pipelines may be protected by guards or positioned inside the structure.

**IF NONCOMPLIANCE EXISTS:**

Issue a warning (W) INC when the pipeline riser is not protected from physical damage and is not located near a boat landing.

Issue a component shut-in (C) INC for each pipeline riser that is not protected from physical damage and is located near a boat landing.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each pipeline riser inspected.

- L-124**      **HAVE PIPELINES THAT HAVE BEEN INSTALLED, RELOCATED, UP RATED, OR REACTIVATED AFTER BEING OUT OF SERVICE FOR MORE THAN 1 YEAR, BEEN HYDROSTATICALLY TESTED WITH WATER TO A STABILIZED PRESSURE OF AT LEAST 1.25 TIMES THE MAOP FOR AT LEAST 8 HOURS?**  
**Authority: 1003(b)(1)**      **Enforcement Action: W**  
**INSPECTION PROCEDURE:**  
Verify from facility records that pipelines that have been installed, relocated, up rated, or reactivated after being out of service for more than 1 year have been pressure tested as required.  
**IF NONCOMPLIANCE EXISTS:**  
Issue a warning (W) INC if pipeline has not been pressure tested as required.  
Discuss further enforcement action with supervisor.  
**INSPECTION COUNT/ INC COUNT:**  
Enter one item checked/ issue one INC for each pipeline inspected.
- L-125**      **PRIOR TO RETURNING A PIPELINE TO SERVICE AFTER A REPAIR, HAS THE PIPELINE BEEN PRESSURE TESTED WITH WATER OR PROCESSED NATURAL GAS TO A MINIMUM STABILIZED PRESSURE OF AT LEAST 1.25 TIMES THE MAOP FOR AT LEAST 2 HOURS?**  
**Authority: 1003(b)(2)** **Enforcement Action: W**  
**INSPECTION PROCEDURE:**  
Verify from facility records that pipelines taken out of service for repair have been pressure tested as required prior to returning the pipelines to service.  
**IF NONCOMPLIANCE EXISTS:**  
Issue a warning (W) INC if pipeline has not been pressure tested as required.  
Discuss further enforcement action with supervisor.  
**INSPECTION COUNT/ INC COUNT:**  
Enter one item checked/ issue one INC for each pipeline inspected.
- L-126**      **ARE PIPELINES AND ASSOCIATED VALVES, FLANGES, AND FITTINGS DESIGNED, INSTALLED, OPERATED, AND MAINTAINED TO PROVIDE SAFE AND POLLUTION-FREE OPERATIONS.**  
**Authority: 1000(a)**      **Enforcement Action: W**  
**Note:** Use this PINC where no other PINC for pipelines applies.  
**INSPECTION PROCEDURE:**  
Verify that pipeline and associated valves, flanges, and fittings are designed, installed, operated, and maintained to provide safe and pollution-free operations.  
**IF NONCOMPLIANCE EXISTS:**  
Issue a warning (W) INC as required.  
Discuss further enforcement action with supervisor.  
**INSPECTION COUNT/ INC COUNT:**  
Enter one item checked/ issue one INC for each pipeline inspected.
- L-127**      **IS EACH OIL PIPELINE EQUIPPED WITH A METERING SYSTEM TO PROVIDE A CONTINUOUS VOLUMETRIC COMPARISON OR A SYSTEM CAPABLE OF DETECTING LEAKS IN A PIPELINE WHEN IT IS REQUIRED BY THE REGIONAL SUPERVISOR?**  
**Authority:1004(b)(5)**      **Enforcement Action: W**  
**INSPECTION PROCEDURE:**  
1. Verify that each pipeline has a metering system that provides volumetric comparison or a system capable of detecting leaks in a pipeline when required by the Regional Supervisor.  
2. Verify that the metering system has an alarm system.  
3. Verify that either system is installed and is operational.  
**IF NONCOMPLIANCE EXISTS:**  
Issue a warning (W) INC when each pipeline does not meet the above requirements or as otherwise required by the District Manager.  
**INSPECTION COUNT/ INC COUNT:**  
Enter one item checked/ issue one INC for each oil pipeline inspected.

## OUT-OF-SERVICE PIPELINES

### DEFINITION:

**Out-of-service pipelines** - Pipelines that have not been used to transport oil, natural gas, sulfur, or produced water for more than 30 consecutive days.

L-140

**ARE PIPELINES OUT OF SERVICE FOR 1 YEAR (365 CALENDAR DAYS), OR LESS, ISOLATED AT EACH END OF THE PIPELINE?**

**Authority: 1006(b)(1) Enforcement Action: W**

### DEFINITION:

**Closed block valve** - A block valve that is locked in the closed position.

### INSPECTION PROCEDURE:

Verify that pipelines out of service for 1 year, or less, are isolated at each end with a blind flange or a closed block valve.

### IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC for each out-of-service pipeline that is not isolated as required.

### INSPECTION COUNT/ INC COUNT:

Enter one item checked/ issue one INC for each out of service pipeline inspected.

L-141

**ARE PIPELINES OUT OF SERVICE FOR MORE THAN 1 YEAR (365 CALENDAR DAYS), FLUSHED AND FILLED WITH INHIBITED SEAWATER?**

**Authority: 1006(b)(2) Enforcement Action: W**

### INSPECTION PROCEDURE:

Verify that each pipeline out of service for more than 1 year, but less than 5 years, has been flushed and filled with inhibited seawater.

### IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC for each out-of-service pipeline that has not been flushed and filled as required.

### INSPECTION COUNT/ INC COUNT:

Enter one item checked/ issue one INC for each out of service pipeline inspected.

L-142

**ARE PIPELINES OUT OF SERVICE FOR MORE THAN 5 YEARS (1,825 CALENDAR DAYS), REMOVED OR DECOMMISSIONED IN PLACE WHEN AUTHORIZED BY THE REGIONAL SUPERVISOR?**

**Authority: 1006(b)(3)**

**Enforcement Action: W**

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1751

1752

### INSPECTION PROCEDURE:

1. Verify that pipelines out of service for 5 years, or more, which the Regional Supervisor determines do not constitute hazards (obstructions) to navigation and commercial fishing operations, unduly interfere with other uses of the OCS, or have other adverse environmental effects, are either removed or decommissioned in place.
2. Verify that out-of-service pipelines that are decommissioned in place:
  - A. Are pigged unless the Regional Supervisor determines that pigging is not practical.
  - B. Are flushed.
  - C. Are filled with seawater.
  - D. Are cut and plugged at each end.
  - E. Have each end of the pipeline buried at least 3 feet below the seafloor or have each end of the pipeline covered with protective concrete mats, if required by the Regional Supervisor.
  - F. Have all pipeline valves and other fittings removed that could unduly interfere with other uses of the OCS.
  - G. Are decommissioned in place in accordance with the decommissioning procedures approved by the Regional Supervisor.
3. Verify that out-of-service pipelines that are removed:
  - A. Are pigged, unless the Regional Supervisor determines that pigging is not practical.
  - B. Are flushed.
  - C. Are removed in accordance with the removal procedures and schedule approved by the Regional Supervisor.

### IF NONCOMPLIANCE EXISTS:

Issue a warning (W) INC for out-of-service pipelines that are not removed or decommissioned in place as required.

### INSPECTION COUNT/ INC COUNT:

Enter one item checked/ issue one INC for each out of service pipeline inspected.

L-143

**ARE PIPELINES OUT OF SERVICE FOR 5 YEARS (1,825 CALENDAR DAYS), OR MORE, REMOVED IF THE PIPELINES ARE DETERMINED BY THE REGIONAL SUPERVISOR TO BE OBSTRUCTIONS?**

**Authority: 1006(b)(3) Enforcement Action: W**

**1752**

**1754**

**INSPECTION PROCEDURE:**

1. Verify that pipelines out of service for 5 years, or more, and that the Regional Supervisor determines constitute obstructions, are removed.
2. Verify that out-of-service pipelines that are removed:
  - A. Are pigged, unless the Regional Supervisor determines that pigging is not practical.
  - B. Are flushed.
  - C. Are removed in accordance with the removal procedures and schedule approved by the Regional Supervisor.

**IF NONCOMPLIANCE EXISTS:**

Issue a warning (W) INC for out-of-service pipelines that are not removed as required.

**INSPECTION COUNT/ INC COUNT:**

Enter one item checked/ issue one INC for each out of service pipeline inspected.