# US Department of Transportation
# Pipeline and Hazardous Materials Safety Administration
# Office of Pipeline Safety

# Hazardous Liquid IMP Field Verification Inspection
# 49 CFR Parts 195.450 and 195.452

General Notes:

1. This Field Verification Inspection is performed on field activities being performed by an Operator in support of their Integrity Management Program (IMP).
2. This is a two part inspection form:
   i. A review of applicable Operations and Maintenance (O&M) and IMP processes and procedures applicable to the field activity being inspected to ensure the operator is implementing their O&M and IMP Manuals in a consistent manner.
   ii. A Field Verification Inspection to determine that activities on the pipeline and facilities are being performed in accordance with written procedures or guidance.
3. Not all parts of this form may be applicable to a specific Field Verification Inspection, and only those applicable portions of this form need to be completed. The applicable portions are identified in the Table below by a check mark. Only those sections of the form marked immediately below need to be documented as either "Satisfactory"; "Unsatisfactory"; or Not Checked ("N/C"). Those sections not marked below may be left blank.

Operator Inspected: ___Chevron Pipe Line Company_____
Op ID: ____5145_____

| Perform Activity *(denoted by mark)* | Activity Number | Activity Description |
|---|---|---|
| x | 1A | In-Line Inspection |
| | 1B | Hydrostatic Pressure Testing |
| | 1C | Other Assessment Technologies |
| x | 2A | Remedial Actions |
| x | 2B | Remediation – Implementation |
| | 3A | Installed Leak Detection System Information |
| | 3B | Installed Emergency Flow Restrictive Device |
| | 4A | Field Inspection for Verification of HCA Locations |
| | 4B | Field Inspection for Verification of Anomaly Digs |
| x | 4C | Field Inspection to Verify adequacy of the Cathodic Protection System |
| x | 4D | Field inspection for general system characteristics |

## Hazardous Liquid IMP Field Verification Inspection Form

**Name of Operator:** ___Chevron Pipeline Company_____

| | |
|---|---|
| **Headquarters Address:** | **Chevron Pipe Line Company**<br>**4800 Fournace Place**<br>**Bellaire, TX 77401-2324** |
| **Company Official:** | **M.G. Bowin, VP Operations** |
| **Phone Number:** | **(281) 596-3509** |
| **Fax Number:** | **(281) 596-3626** |
| **Operator ID:** | **5145** |

| Persons Interviewed | Title | Phone No. | E-Mail |
|---|---|---|---|
| **Gary Saenz** | **Health, Environment & Safety** | 713-432-3332 | garysaenz@chevron.com |
| | | | |
| | | | |
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| | | | |

**OPS/State Representative(s):** ___Joe Subsits, WA_____ **Dates of Inspection:** _____

Inspector Signature: _____

**Pipeline Segment Descriptions:** *[note: Description of the Pipeline Segment Inspected. (Include the pipe size, wall thickness, grade, seam type, coating type, length, pressure, commodities, HCA locations, and Pipeline Segment boundaries.)]*

ILI was run on the line South of Tri-cities last year, The segment above Tri-Cities was run this year. Rosen ran a geometry and Hi-res tool. The pipe is X-42, X-46 8-inch .219, .250 w.t seamless American Steel pipe. The coating is Asbestos tar wrap. No immediate digs were required. Three sixty day anomalies were detected in Spokane. All anomalies were minor topside dents with no gouges.

**Site Location of field activities:** *[note: Describe the portion of the pipeline segment reviewed during the field verification, i.e. milepost/stations/valves/pipe-to-soil readings/river crossings/etc. In addition, a brief description and case number of the follow up items in any PHMSA compliance action or consent agreement that required field verification. Note: Complete pages 8 & 9 as appropriate.]*

Pipe to soil readings collected throughout right of way, valve stations and the pump station in Washington State.

**Summary:**

**Findings:**

**Key Documents Reviewed:**

| Document Title | Document No. | Rev. No | Date |
|---|---|---|---|
| **HCA maps on-line** | | | |
| **Field Maintenance data reports (3)** | | | **(2)7/12/09, 7/10/09** |
| **Magnetic particle report** | | | **3 digs** |
| | | | |
| | | | |
| | | | |
| | | | |

## *Part 1 - Performance of Integrity Assessments*

| 1A. In-Line Inspection (Protocol 3.04 & 3.05) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify that Operator's O&M and IMP procedural requirements (e.g. launching/receiving tools) for performance of ILI were followed.** | X | | | South line run last year, North line (above pump station) was done this year, Hi res and geometry tools were run, vendor was rosen. |
| Verify Operator's ILI procedural requirements were followed (e.g. operation of trap for launching and receiving of pig, operational control of flow), as appropriate. | | | | |
| Verify ILI tool systems and calibration checks before run were performed to ensure tool was operating correctly prior to assessment being performed, as appropriate. | | | | Reviewed QA/QC report |
| Verify ILI complied with Operator's procedural requirements for performance of a successful assessment (e.g. speed of travel within limits, adequate transducer coverage), as appropriate. | | | | |
| Document ILI Tool Vendor and Tool type (e.g. MFL, Deformation). Document other pertinent information about Vendor and Tool, as appropriate | | | | |
| Verify that Operator's personnel have access to applicable procedures | | | | |
| Other: | | | | *[Note: Add location specific information, as appropriate.]* |

| 1B. Hydrostatic Pressure Testing (Protocol 3.06) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify that hydrostatic pressure tests complied with Part 195 Subpart E requirements.** | | | x | |
| Review documentation of Hydrostatic Pressure Test parameters and results. Verify test was performed without leakage and in compliance with Part 195 Subpart E requirements. | | | | |
| Review test procedures and records and verify test acceptability and validity. | | | | |
| Review determination of the cause of hydrostatic test failures, as appropriate. | | | | |
| Document Hydrostatic Pressure Test Vendor and equipment used, as appropriate. | | | | |
| Other: | | | | |

| 1C. Other Assessment Technologies (Protocol 3.07) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify that application of "Other Assessment Technology" complied with Operator's requirements, that appropriate notifications had been submitted to OPS, and that appropriate data was collected.** | | | x | |
| Review documentation of notification to OPS of Operator's application of "Other Assessment Technology", if available. Verify compliance with Operator's procedural requirements. If documentation of notification to OPS of Operator's application of "Other Assessment Technology" is available, verify performance of assessment within parameters originally submitted to OPS. | | | | |
| Verify that appropriate tests are being performed and appropriate data is being collected, as appropriate. | | | | |
| Other. | | | | |

## *Part 2 - Remediation of Anomalies*

| 2A. Remedial Actions – Process (Protocol 4.1) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify that remedial actions complied with the Operator's procedural requirements.** | X | | | 3-60 day anomalies found in North section. 0 found in south section. 3 dents repaired with full encirclement sleeve |
| Witness anomaly remediation and verify documentation of remediation (e.g. Exposed Pipe Reports, Maintenance Report, any Data Acquisition Forms). Verify compliance with Operator's O&M Manual and Part 195 requirements. | | | | |
| Verify that Operator's procedures were followed in locating and exposing the anomaly (e.g. any required pressure reductions, line location, identifying approximate location of anomaly for excavation, excavation, coating removal). | | | | |
| Verify that procedures were followed in measuring the anomaly, determining the severity of the anomaly, and determining remaining strength of the pipe. | | | | |
| Verify that Operator's personnel have access to applicable procedures. | | | | |
| Other: | | | | |

| 2B. Remediation - Implementation (Protocol 4.02) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify that the operator has adequately implemented its remediation process and procedures to effectively remediate conditions identified through integrity assessments or information analysis.** | x | | | 3-60 day anomalies found in North section. 0 found in south section. 3 dents repaired with full encirclement sleeve |
| If documentation is available, verify that repairs were completed in accordance with the operator's prioritized schedule and within the time frames allowed in §195.452(h). | | | | |
| Review any documentation for this inspection site for an immediate repair condition (§195.452(h)(4)(i) where operating pressure was reduced or the pipeline was shutdown. Verify for an immediate repair condition that temporary operating pressure was determined in accordance with the formula in Section 451.7 of ASME/ANSI B31.4 or, if not applicable, the operator should provide an engineering basis justifying the amount of pressure reduction. | | | | |
| Verify that repairs were performed in accordance with §195.422 and the Operator's O&M Manual, as appropriate. | | | | |
| Review CP readings at anomaly dig site, if possible. (See Part 4 of this form – "Field Inspection to Verify adequacy of the Cathodic Protection System" , as appropriate. | | | | |
| Other: | | | | Cathodic Protection readings of pipe to soil at dig site (if available):<br>On Potential: _____mV<br>Off Potential: _____mV<br>*[Note: Add location specific information, as appropriate.]* |

## *Part 3 - Preventive and Mitigative Actions*

| 3A. Installed Leak Detection System Information (Protocol 6.05) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Identify installed leak detection systems on pipelines and facilities that can affect an HCA.** | | | x | Leak detection system functional prior to IMP rule |
| Document leak detection system components installed on system to enhance capabilities, as appropriate. | | | | |
| Document the frequency of monitoring of installed leak detection systems and verify connection of installed components to leak detection monitoring system, as appropriate, | | | | |
| Other: | | | | *[Note: Add location specific information, as appropriate.]* |

| 3B. Installed Emergency Flow Restrictive Device (Protocol 6.06) | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify additional preventive and mitigative actions implemented by Operator.** | | | x | No modifications were done based on valve placement study that was done by Chevron. |
| Document Emergency Flow Restrictive Device (EFRD) component(s) installed on system.<br><br>Note that EFRD per §195.450 means a check valve or remote control valve as follows:<br>(1) Check valve means a valve that permits fluid to flow freely in one direction and contains a mechanism to automatically prevent flow in the other direction.<br>(2) Remote control valve or RCV means any valve that is operated from a location remote from where the valve is installed. The RCV is usually operated by the supervisory control and data acquisition (SCADA) system. The linkage between the pipeline control center and the RCV may be by fiber optics, microwave, telephone lines, or satellite. | | | | |
| Document the frequency of monitoring of installed EFRDs and verify connection of installed components to monitoring/operating system, as appropriate. | | | | |
| Verify operation of remote control valve by having operator send remote command to partially open or close the valve, as appropriate. | | | | |
| Comment on the perceived effectiveness of the EFRD in mitigating the consequences of a release on the HCA that it is designed to protect. | | | | |
| Other: | | | | *[Note: Add location specific information, as appropriate.]* |

## *Part 4 - Field Investigations (Additional Activities as appropriate)*

| 4A. Field Inspection for Verification of HCA Locations | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Review HCAs locations as identified by the Operator. Utilize NPMS, as appropriate.** | x | | | HCA determination and modifications managed in Houston with input from field personnel. |
| Verify population derived HCAs in the field are as they appear on Operator's maps and NPMS, as appropriate. Document newly constructed (within last 2-3 years) population and/or commercial areas that could be affected by a pipeline release, as appropriate.<br>Note that population derived HCAs are defined in §195.450 | | | | |
| Verify drinking water and ecological HCAs in the field are as they appear on Operator's maps and NPMS, as appropriate. Document newly established drinking water sources and/or ecological resources areas (within last 2-3 years) that could be affected by a pipeline release, as appropriate.<br>Note that unusually sensitive areas (USAs) are defined in §195.6 | | | | |
| Verify commercially navigable waterway HCAs in the field are as they appear on Operator's maps and NPMS, as appropriate. Document any activity (commercial in nature) that could affect the waterways status as a commercially navigable waterway, as appropriate.<br>Note that commercially navigable waterway HCAs are defined in §195.450 | | | | *[Note: Add location specific information, as appropriate.]* |

| 4B. Field Inspection for Verification of Anomaly Digs | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Verify repair areas, ILI verification sites, etc.** | x | | | |
| Document the anomaly dig sites reviewed as part of this field activity and actions taken by the operator. | | | | *[Note: Add location specific information, as appropriate.]* |

| 4C. Field Inspection to Verify adequacy of the Cathodic Protection System | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **In case of hydrostatic pressure testing, Cathodic Protection (CP) systems must be evaluated for general adequacy.** | | | x | No hydrostatic testing done |
| The operator should review the CP system performance in conjunction with a hydrostatic pressure test to ensure the integrity assessment addressed applicable threats to the integrity of the pipeline. Has the operator reviewed the CP system performance in conjunction with the hydrostatic pressure test? | | | | |
| Review records of CP readings from CIS and/or annual survey to ensure minimum code requirements are being met, if available. | | | | Cathodic Protection readings of pipe to soil at dig site (if available):<br>On Potential: _____mV<br>Off Potential: _____mV |
| Review results of random field CP readings performed during this activity to ensure minimum code requirements are being met, if possible. Perform random rectifier checks during this activity and ensure rectifiers are operating correctly, if possible. | | | | *[Note: Add location specific information, as appropriate.]* |

| 4D. Field inspection for general system characteristics | Satisfactory | Unsatisfactory | N/C | Notes: |
|---|---|---|---|---|
| **Through field inspection determine overall condition of pipeline and associated facilities for a general estimation of the effectiveness of the operator's IMP implementation.** | X | | | |
| Evaluate condition of the ROW of inspection site to ensure minimum code requirements are being met, as appropriate. | | | | |
| Comment on Operator's apparent commitment to the integrity and safe operation of their system, as appropriate. | | | | |
| Other | | | | |

## Anomaly Evaluation Report *(to be completed as appropriate)*

| Pipeline System and Line Pipe Information | |
|---|---|
| Operator (OpID and System Name):Chevrontexaco Pipeline Co 02731 | |
| Unit ID (Pipeline Name) Pasco system 5145 | |
| Pipe Manufacturer and Year: American Steel | Seam Type and Orientation:seamless |
| Pipe Nominal OD (inch): 8-inch | Seam Orientation: NA |
| Pipe Nominal Wall thickness (inch):.219 in, .250 in | Coating Type:Somastic, Asbestos Tar wrap |
| Grade of Pipe:X-42, X-46 | MOP: 1216 psig |
| **ILI Reported Information** | |
| ILI Technology (e.g., Vendor, Tools):Rosen, Hi res, geometry | |
| Anomaly Type (e.g., Mechanical, Metal Loss):dents | |
| Is anomaly in a segment that can affect an HCA? yes | |
| Date of Tool Run 12/7/08: Date of Inspection Report 4/29/09: | |
| Date of "Discovery of Anomaly" 7/10/09, (2) 7/12/2009: | |
| Type of "Condition" (e.g.; Immediate; 60-day; 180-day):60 day | |
| Anomaly Feature (Int/Ext): ext Orientation: 11:09, 10:39, 11:15 | |
| Anomaly Details: Length (in): 5 in, 2.2 in, 2.6 in Width (in): 1.5 in, 2.6 in, 3 in Depth (in): .08 in, .04 in, .04 in | |
| Anomaly Log Distance (ft): 273152.41 ft, 205949.35 ft, 206355.08ft Distance from Upstream weld (ft): 6.4 ft, 17.49 ft, 31.18 ft | |
| • Length of joint of pipe in which anomaly is identified (ft):48.43 ft, 49.31ft, 48.12 ft | |
| • **Anomaly Dig Site Information Summary** | |
| Date of Anomaly Dig (MM/DD/YY) | |
| Location Information: 8" Piz to Spokane | |
| Mile Post Number: 681.53, 668.81, 668.88 Distance from A/G Reference (ft):2,409.64 ft,11,417.17 ft11,809.22 ft | |
| Distance from Upstream weld (ft):6.4 ft,17.49 ft, 31.18 ft | |
| GPS Readings (if available) Longitude: Latitude: | |
| Anomaly Feature (Int/Ext): ext Orientation: 11:09, 10.39, 11:15 | |
| Length of joint of pipe in which anomaly is found (ft): 48.43 ft, 49.31ft, 48.12 ft | |
| **For Mechanical Damage Anomaly** | |
| Damage Type (e.g., original construction, plain dent, gouge):dent | |
| Length (in): 4.49 in, 2.21 in, 2.6 in Width (in): 1.58 in, 2.6 in, 3.11 in Depth (in): .08in, .04in, .04 in | |
| Near a weld? (Yes / No):No | |
| Gouge or metal loss associated with dent? (Yes / No): | |
| Did operator perform additional NDE to evaluate presence of cracks in dent? (Yes / No): | |
| Cracks associated with dent? (Yes / No): | |
| **For Corrosion Metal Loss Anomaly** | |
| Anomaly Type (e.g., pitting, general):NA | |
| Length (in): Width (in): Max. Depth (in): | |
| Remaining minimum wall thickness (in): Maximum % Wall Loss measurement(%): | |
| Safe pressure calculation (psi), as appropriate: | |
| **For "Other Types" of Anomalies** | |
| Describe anomaly (e.g., dent with metal loss, crack, seam defect, SCC):NA | |
| Length (in): Width (in): Max. Depth (in): | |
| Other Information, as appropriate: | |

| |
|---|
| Did operator perform additional NDE to evaluate presence of cracks? (Yes / No): |
| Cracks present? (Yes / No): |

## Anomaly Repair Report *(to be completed as appropriate)*

| Repair Information |
|---|
| Was a repair of the anomaly made? (Yes / No):yes |
| Was defect ground out to eliminate need for repair? (Yes / No): |
| If grinding used, complete the following for affected area:<br>Length (in): Width (in): Depth (in): |
| If NO repair of an anomaly for which RSTRENG is applicable, were the Operator's RSTRENG calculations reviewed? (Yes / No):NA |
| If Repair made, complete the following: |
| Repair Type (e.g., Type B-sleeve, composite wrap)full enciclement sleeve |
| Length of Repair: NA |
| Comments on Repair material, as appropriate (e.g., grade of steel): NA |
| Pipe re-coating material used following excavation: Tape Coat M50RC |
| **General Observations and Comments** |
| Was a diagram (e.g., corrosion map) of the anomaly made? (Yes / No): (Include in report if available) |
| Were pipe-to-soil cathodic protection readings taken? (Yes / No): |
| If readings taken, Record: On Potential: _____ mV; Off Potential: _____ mV |
| Describe method used to Operator to locate anomaly (as appropriate): |
| |
| Comments regarding procedures followed during excavation, repair of anomaly, and backfill (as appropriate): |
| |
| |
| General Observations and Comments *(Note: attach photographs, sketches, etc., as appropriate)*: |
| |
| |