

PHMSA Form 19 Question Set (IA Equivalent)
HAZARDOUS LIQUID INTEGRITY MANAGEMENT IMPLEMENTATION INSPECTION

Name of Operator: BP Pipelines North America		Insp. ID: 6755	
OPID No. 31189		Unit ID No. BP Cherry Point	
HQ Address: M.C. 9S 30S Wacker Drive Chicago, IL 60606		System/Unit Name & Address: 14789 Ovenell Road, Mount Vernon, WA 98273	
Operator Official: Gerald Maret	Title: President	Address: M.C. 9S, 30 S Wacker Drive	City: Chicago
Phone: 6307302866	Emergency Phone/Cell: 800-548-6482 (Tulsa Control Room)	State: IL	Zip Code: 60606
Persons Interviewed	Title	Phone No.	
John Newhouse	DOT Compliance Advisor	3317023023	
Jim Bruen	DOT Team Leader	3317023367	
Joe Fraley	North Area O&M Team Lead		
State Representative(s): Dennis Ritter, Derek Norwood		Inspection Date(s): August 24, 2016	
Records Location:		Records were reviewed at BP Bayview Terminal via electronic media	

Unit Description:
<p>Overview: Crude Oil Line: 24" diameter, 0.281" wt, API 5L grade X-52, 698 psig MOP limited by surge pressure constraint at Kinder Morgan (formally, Terasen Pipeline Ins. formally Trans Mountain Pipeline) with flange rating at Class 600. Pipeline was built in 1970. 1.8 miles of the 5 mile length are in HCAs (other population, drinking water).</p> <p>Butane line: 6" diameter, 0.188" wt, API 5L Grade B, 285 psig MOP with normal operating pressure ranging from 100 to 179 psig, limited by Class 150 flange rating. Pipeline was built in 1986. 1.5 miles of the 5 mile length are in HCAs (drinking water or Ecological resource).</p> <p>The 5-mile, 24inch crude oil line starts at Lake Terrell Rd at the Kinder Morgan delivery and runs to BP Cherry Point Refinery. ANSI 600 series fittings are on the 24 inch line. The 5-mile, butane line operates from Cherry Point Refinery to the Ferndale Terminal with the two breakout tanks operated currently by AltaGas (formally Chevron).</p>
Portion of Unit Inspected:
<p>Checked HCA locations, rectifiers, took PSP reads, checked for AC interference, above ground pipe (camel humps), valves (note all valves are at the beginning and end of the lines as lines are 5 miles long), launcher/receivers, ROWs. Looked at previous repair locations all in HCAs.</p>

Sat+ - Exceeds requirements/exemplary performance
Sat - Meets requirements
Con - "Concern" meets requirements, but is an area of recommendation and/or area that if not addressed may lead to non-compliance
Unsat - Does not meet requirements
N/A - Not Applicable
N/C - Not Checked

Assessment and Repair - Repair Criteria (HCA)

2. Timely Discovery *From the review of the results of selected ILI and remediation projects, did discovery of all anomalies occur promptly, but no later than 180 days of completion of the assessment?* (AR.RCHCA.DISCOVERY.R) (detail) 195.452(h)(2)

Notes
SAT

Crude initial 6 Aug 14, final 18 Sept 14

Butane 18 May 15, final 30 June, 15

7. Pressure Reduction *From the review of the results of ILI and remediation projects, was an acceptable pressure reduction promptly taken for each Immediate Repair condition or when a repair schedule could not be met?* (AR.RCHCA.PRESSREDUCE.R) (detail) 195.452(l)(1)(ii) (95.404(a); 195.404 (b); 195.452(h)(1)(ii); 195.452(h)(4)(i); 195.55(a))

Notes
N/A

No pressure reduction

8. Categorization of Defects *From the review of the results of integrity assessments and remediation projects, were there any defects that were not properly categorized?* (AR.RCHCA.DEFECTCAT.R) (detail) 195.452(l)(1)(ii) (195.452(h)(4))

Notes
N/A

No improperly categorized defects

10. IM Schedule *Do records demonstrate that the operator has met the schedule for remediating a condition in accordance with 195.452(h)(3)?* (AR.RCHCA.IMSCHEDULE.R) (detail) 195.452(l)(1)(ii) (195.452.(h)(3))

Notes
SAT

11. Timely Remediation *From the review of the results of selected ILI and remediation projects, were defects in segments that could affect an HCA remediated or dispositioned within the applicable mandatory time limits of 195.452(h)(4)?* (AR.RCHCA.SCHEDULEIMPL.R) (detail) 195.452(l)(1)(ii) (195.452(h)(4))

Notes
SAT

Assessment and Repair - Repair Criteria (O and M)

3. Remedial Actions (OM) *Do the performance and documentation of remediation meet procedural requirements for repairs in both HCA and non-HCA?* (AR.COM.REMEDIATIONOM.O) (detail) 195.422(a) (195.422(b); 195.402(a); 195.402(c)(14); 195.569; 195.579(c))

Notes

SAT
Checked the following digs. All within allotted timeframes for remediation.
2015 ILI Run 6-inch Cherry Point to Ferndale Butane line Rosen ILI run: 4 repairs all clocksprings:
2015-001-Started 8/11/15 and completed 8/13/15-dent with metal loss, 5:15 clock position, 12% metal loss, 1.10% dent, actual 28.33% with 1.36% dent; clockspring
2015-002-Started 8/17/15 and completed 8/19/15-dent with metal loss, 4:50 clock position, 23% metal loss, 1% dent; 32.78% actual, 0.91% dent clockspring
2015-003-Started 8/17/15 and completed 8/19/15-corrosion at 5:45 clock position, 48% wall loss, 50.29% actual, clockspring
2015-004-Started 8/19/15 and completed 8/21/15-2 anomalies: 1)corrosion with metal loss 4:29 clock position, 59% wall loss, actual 57.45%; clockspring; 2) corrosion with metal loss 4:44 clock position, 12% wall loss, actual 23.94%; clockspring (note-one clockspring for both anomalies as within a foot of each other).

2014 24-inch Terasen (lake Terrell) to Cherry Point Rosen ILI run:
2014-002 Started 10/29/14 and completed 10/30/14 dent with metal loss, 60-d repair, 5:04 clock position, 9% metal loss, 2% dent; 2.5% actual metal loss, 0.7% dent. No repair, recoated.
2014-003 Started 11/5/14 and completed 11/6/14-dent with metal loss, 60-d repair, 6:15 clock position, 9% metal loss, 1.4% dent; 16.4% metal loss, 0.33% dent actual; repair clockspring.

Assessment and Repair - External Corrosion Direct Assessment (ECDA)

4. ECDA Indirect Examination *Was the indirect examination performed in accordance with the operator's procedures and 195.588(b)(3)?* (AR.EC.ECDAINDIRECT.O) (detail) 195.588(c) (195.452(j)(5)(iii))

Notes

N/A-do not use ECDA

6. ECDA Direct Examination *Was the direct examination performed in accordance with requirements?* (AR.EC.ECDADIRECT.O) (detail) 195.588(b)(4) (195.452(j)(5)(iii))

Notes

N/A-do not use ECDA

7. Post Assessment *Do records indicate that requirements were met for post assessment?* (AR.EC.ECDAPOSTASSESS.R) (detail) 195.589(c) (195.588(b)(5); 195.452(j)(3); 195.452(j)(4))

Notes

N/A-do not use ECDA

Assessment and Repair - In-Line Inspection (Smart Pigs)

9. IMP Baseline and/or Continual Assessments Prioritized Assessment Schedule *Does a review of records indicate that continual assessments are implemented as specified in the plan?* (AR.IL.ASSESSSCHEDULE.R) (detail) 195.452(l)(1)(ii) (195.452(b)(5); 195.452(c); 195.452(d); 195.452(f)(2); 195.452(f)(5))

Notes

SAT

Butane line-baseline 2005, reassessment interval 5 years, 2010, 2015 , last 18 May 15
Crude line-baseline 2004, reassessment interval 5 years, 2009, 2014 last 7 Aug 14

13. Integration of ILI Results with Other Information *Did the operator integrate other data/information when evaluating tool data/results in the records reviewed?* (AR.IL.ILIINTEGRATION.R) (detail) 195.452(l)(1)(ii) (195.452(g))

Notes

SAT

looked at Rosen ILI runs for both 2014 Crude line and 2015 Butane runs. Correlation of previous ILI runs, repairs made, and CIS.

20. Compliance with ILI Procedures *Have the ILI procedures been followed?* (AR.IL.ILIIMPLEMENT.O) (detail) 195.452(b)(5)

Notes

SAT

looked at Rosen ILI runs for both 2014 Crude line and 2015 Butane runs. Correlation of previous ILI runs, repairs made, and CIS.

Assessment and Repair - Other Technology

2. Other Technology Process *From the review of the results of selected integrity assessments, do records show that the assessment was performed in accordance with procedures and vendor recommendations?* (AR.OT.OTPLAN.R) (detail) 195.452(l)(1)(ii) (195.452(j)(5)(iv); 195.452(f)(5))

Notes

No other technology employed

3. Other Technology Process *Has the process for the use of "Other Technology" been followed?* (AR.OT.OTPLAN.O) (detail) 195.452(j)(5)(iv)

Notes

No other technology employed

4. Categorization of Defects *From the review of the results of selected integrity assessments, were defects identified and categorized within 180 days or other applicable timeframe?* (AR.OT.OTDEFECTCAT.R) (detail) 195.452(l)(1)(ii) (195.452(f)(4); 195.452(h)(2))

Notes

SAT

Crude initial 6 Aug 14, final 18 Sept 14

Butane 18 May 15, final 30 June, 15

Assessment and Repair - Integrity Assessment Via Pressure Test

4. Conduct of Pressure Tests *From the review of the results of pressure tests, do the test records validate the pressure test?* (AR.PTI.PRESSTESTRESULT.R) (detail) 195.452(l)(1)(ii) (195.452(f)(2); 195.452(c))

Notes

N/A

All ILI

5. Conduct of Pressure Tests *Was the pressure test conducted in accordance with procedures?* (AR.PTI.PRESSTESTRESULT.O) (detail) 195.452(j)(5)(ii) (195.452(c)(1)(i)(b))

Notes

N/A

All ILI

Assessment and Repair - Repair Criteria

3. Remedial Actions (IM) *Are anomaly remediation and documentation of remediation adequate?* (AR.RC.REMEDIATION.O) (detail) 195.452(h) (195.402(a); 195.402(c)(14); 195.422(a); 195.569; 195.589(c))

Notes

SAT

Repairs were all clocksprings (or recoating) per Applus/RTD determination and Engineering

2015 ILI Run 6-inch Cherry Point to Ferndale Butane line Rosen ILI run: 4 repairs all clocksprings:

2015-001-dent with metal loss, 5:15 clock position, 12% metal loss, 1.10% dent, actual 28.33% with 1.36% dent; clockspring

2015-002-dent with metal loss, 4:50 clock position, 23% metal loss, 1% dent; 32.78% actual, 0.91% dent clockspring

2015-003-corrosion at 5:45 clock position, 48% wall loss, 50.29% actual, clockspring

2015-004-2 anomalies: 1)corrosion with metal loss 4:29 clock position, 59% wall loss, actual 57.45%; clockspring; 2) corrosion with metal loss 4:44 clock position, 12% wall loss, actual 23.94%; clockspring (note-one clockspring for both anomalies as within a foot of each other).

2014 24-inch Terasen (lake Terrell) to Cherry Point Rosen ILI run:

2014-002 dent with metal loss, 60-d repair, 5:04 clock position, 9% metal loss, 2% dent; 2.5% actual metal loss, 0.7% dent. No repair, recoated.

2014-003 dent with metal loss, 60-d repair, 6:15 clock position, 9% metal loss, 1.4% dent; 16.4% metal loss, 0.33% dent actual; repair clockspring.

Assessment and Repair - Repair Methods and Practices

2. Safety While Making Repair *Are repairs made in a safe manner and to prevent injury to persons and/or property damage?* (AR.RMP.SAFETY.O) (detail) 195.422(a) (195.402(c)(14))

Notes

N/A

Did not witness repairs

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4. Permissible Repair Methods *From the review of the results of integrity assessment and remediation projects, were all repairs performed in accordance with procedures and applicable sections of 49 CFR Part 195? (AR.RMP.METHOD.R) (detail) 195.404(c)(1) (195.422(a); 195.422(b); 195.452(h)(1))*

Notes

SAT

Repairs were all clocksprings (or recoating) per Applus/RTD determination and Engineering and OMER 422 and Exhibit RR-1

2015 ILI Run 6-inch Cherry Point to Ferndale Butane line Rosen ILI run: 4 repairs all clocksprings:

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2014-003 dent with metal loss, 60-d repair, 6:15 clock position, 9% metal loss, 1.4% dent; 16.4% metal loss, 0.33% dent actual; repair clockspring.

5. Qualification of Personnel Performing Pipeline Repair *From the review of the results of integrity assessment and remediation projects, were personnel performing repairs, other than welding, qualified for the task they performed? (AR.RMP.REPAIRQUAL.R) (detail) 195.505(b) (195.507(a); 195.505(c); 195.452(h)(1))*

Notes

SAT

Snelson crews performed OQ covered tasks and were qualified

6" Butane repairs from 2015 ILI run-clocksprings (7):

Snelson employees: Thomas Daniels, Jay Grayston, Harley Mauck, Mike Whaley, OK

24" Crude repairs from 2014 ILI run-clocksprings (4) and recoat (2):

TIR-Mike Skodje OK

Snelson: Dave Walker, Bernard Yost, Justin Johnson, Joseph Sanford-OK

6. Repair Records *From the review of the results of integrity assessment and remediation projects and/or field observation, do repair records document all information needed to understand the conditions of the pipe and its environment and provide the information needed to support the Integrity Management risk model? (AR.RMP.PIPECONDITION.R) (detail) 195.404(c)(1) (195.404(c)(2))*

Notes

SAT

No field inspection

2015 ILI Run 6-inch Cherry Point to Ferndale Butane line Rosen ILI run: 4 repairs all clocksprings:

2015-001-dent with metal loss, 5:15 clock position, 12% metal loss, 1.10% dent, actual 28.33% with 1.36% dent; clockspring

2015-002-dent with metal loss, 4:50 clock position, 23% metal loss, 1% dent; 32.78% actual, 0.91% dent clockspring

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2014-003 dent with metal loss, 60-d repair, 6:15 clock position, 9% metal loss, 1.4% dent; 16.4% metal loss, 0.33% dent actual; repair clockspring.

7. Replacement Components *From the review of the results of integrity assessment and remediation projects and/or field observation, were components that were replaced constructed to the same or higher standards as the original component? (AR.RMP.REPLACESTD.R) (detail) 195.422(b)*

Notes

N/A

none

9. Welder Qualification *From the review of the results of integrity assessment and remediation projects, were repairs requiring welding performed by qualified welders using qualified welding procedures? (AR.RMP.WELDERQUAL.R) (detail) 195.214(a) (195.214(b); 195.222(a); 195.222(b); 195.452(h)(1))*

Notes

N/A

No welding

10. Repair of Weld Defects *From the review of the results of integrity assessment and remediation projects, were weld defects repaired in accordance with §195.226 or §195.230? (AR.RMP.WELDQUAL.R) (detail) 195.226(a) (195.226(b); 195.226(c); 195.230(a); 195.230(b); 195.230(c); 195.452(h)(1))*

Notes

N/A

No welding

11. Inspection of Welds *From the review of the results of integrity assessment and remediation projects, were welds inspected and examined in accordance with 195.228 or 195.234? (AR.RMP.WELDINSPECT.R) (detail) 195.228(a) (195.228(b); 195.234(a); 195.234(b); 195.234(c); 195.234(d); 195.234(e); 195.452(h)(1))*

Notes

N/A

No welding

13. Crack Repair Criteria *If the IM risk assessment and integrity assessments found cracks, SCC, or crack like features cracking to be a threat on pipeline segments, have remedial actions been taken to address integrity issues when assessment criteria have been exceeded? (AR.RMP.CRACKREMIATION.R) (detail) 195.452(l)(1)(ii) (195.452(f)(3))*

Notes

N/A

No crack repairs from SCC assessment

Integrity Management - High Consequence Areas

3. IMP High Consequence Areas HCA Identification *Do records show that locations and boundaries of HCA-affecting segments are correctly identified and maintained up-to-date? (IM.HC.HCALOCATION.R) (detail) 195.452(l)(1)(ii) (195.452(f)(1); 195.452(a); 195.452(b)(2); 195.452(d)(3))*

Notes

SAT

Reviewed HCA maps and field confirmation

4. IMP High Consequence Areas HCA Identification *Are locations and boundaries of segments that can affect HCAs correctly identified and maintained up-to-date?* (IM.HC.HCALOCATION.O) (detail) 195.452(b)(5) (195.452(a); 195.452(b)(2); 195.453(f)(1))

Notes

SAT

Reviewed HCA maps and field confirmation

Integrity Management - Preventive and Mitigative Measures

2. P&M Measures Actions Considered *Is there documentation of preventive and mitigative actions that have been considered and implemented?* (IM.PM.PMMGENERAL.R) (detail) 195.452(l)(1)(ii) (195.452(f)(6); 195.452(i)(1); 195.452(i)(2))

Notes

SAT

No navigable crossings (or other water ways)

Crude line

- ER probe monitoring for internal corrosion
- Line repairs for both HCA and non HCA
- Post earthquake procedures developed
- Internal cleaning pigs
- Drill with emergency responders
- Fly the line weekly
- Leak detection system is more sensitive than minimum required in WAC 80-75-300

Butane line

- Line repairs for both HCA and non HCA
- Post earthquake procedures developed
- Drill with emergency responders
- Fly the line weekly
- Leak detection system is more sensitive than minimum required in WAC 80-75-300

3. P&M Measures Actions Implemented *Have preventive and mitigative actions been implemented as described in the records?* (IM.PM.PMMIMPLEMENT.O) (detail) 195.452(f)(6) (195.452(i)(1); 195.452(i)(2); 195.452(i)(3); 195.452(i)(4))

Notes

SAT

See 2 above

10. P&M Measures Leak Detection Capability Evaluation *Do records indicate that all required and other relevant leak detection evaluation factors have been adequately evaluated?* (IM.PM.IMLEAKDETEVAL.R) (detail) 195.452(l)(1)(ii) (195.452(f)(6); 195.452(i)(3))

Notes

SAT

Leak detection system is more sensitive than minimum required in WAC 80-75-300

15. P&M Measures EFRD Need Evaluation *Have identified EFRD projects been implemented as planned?* (IM.PM.PMMEFRD.O) (detail) 195.452(i)(4)

Notes

N/A

None identified for these lines.

Integrity Management - Quality Assurance

2. Performance Measures *Does the operator's evaluation of the selected performance measures provide meaningful insight into integrity management program performance?* (IM.QA.IMPERFMEAS.R) (detail) 195.452(l)(1)(ii) (195.452(f)(7); 195.452(k))

Notes

N/C

Not checked for this inspection.

Integrity Management - Risk Analysis

7. Risk Analysis Input Information *Are conditions on the pipeline segments accurately reflected in the appropriate risk assessment data and information?* (IM.RA.RADATA.O) (detail) 195.452(f)(3) (195.452(g))

Notes

N/C

Not checked for this inspection.

Maintenance and Operations - Low-Stress Rural Pipelines

3. Categorizing Rural Low Stress Pipelines *Are locations and boundaries of segments that can affect a USA correctly identified?* (MO.LS.CATEGORIZATION.O) (detail) 195.12(b) (195.12(b)(1); 195.12(b)(2); 195.12(b)(3); 195.452(a))

Notes

N/A

No low stress lines

Reporting - Notices and Reporting

5. Notifications *Has notification been made if Other Technology is used, technology is unavailable, the 5 year reassessment interval cannot be met, remediation schedule cannot be met and pressure cannot be reduced, or a pressure reduction exceeds 365 days?* (RPT.NR.NOTIFICATIONS.R) (detail) 195.452(l)(1)(ii) (195.452(m))

Notes

N/A

No Other Technology

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