

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

**Gas IMP Field Verification Inspection  
49 CFR Subparts 192.911, 192.921, 192.933, & 192.935**

**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:** TransCanada Gas Transmission Northwest Corporation

**Op ID:** 15014

Perform Activity (denoted by mark)	Activity Number	Activity Description
	1A	In-Line Inspection
	1B	Hydrostatic Pressure Testing
	1C	Direct Assessment Technologies
	1D	Other Assessment Technologies
<b>X</b>	2A	Remedial Actions
	2B	Remediation – Implementation
	3A	Preventive & Mitigative – additional measures evaluated for HCAs
	3B	Preventive & Mitigative – automatic shut-off valves
	4A	Field Inspection for Verification of HCA Locations
	4B	Field Inspection for Verification of Anomaly Digs
<b>X</b>	4C	Field Inspection to Verify adequacy of the Cathodic Protection System
	4D	Field inspection for general system characteristics
	attachment	Anomaly Evaluation Report
	attachment	Anomaly Repair Report

**Gas IMP Field Verification Inspection Form**

Name of Operator: **TransCanada Gas Transmission Northwest Corporation**

<b>Headquarters Address:</b>	
	1400 SW 5 <sup>th</sup> Ave Suite 900 Portland, OR. 97201
<b>Company Official:</b>	Jeff Rush
<b>Phone Number:</b>	503-833-4100
<b>Fax Number:</b>	503-833-4927
<b>Operator ID:</b>	15014

Persons Interviewed	Title	Phone No.	E-Mail
Kurt Smith	Compliance Specialist, GTN Systems (Primary Contact)	509-546-8865	kurt_smith@transcanada.com
Brett Huntley	CPTechnician	509-547-8161	Brett_huntley@transcanada.com

OPS/State Representative(s): **Al Jones / UTC**

Date(s) of Inspection: **March 14-16, 2011**

Inspector Signature: **Al Jones**

Date: **March 21, 2011**

**Pipeline Segment Descriptions:** *[note: Description of the Pipeline Segment Inspected as part of this field verification. (If information is available, include the pipe size, wall thickness, grade, seam type, coating type, length, normal operating pressure, MAOP, %SMYS, HCA locations, class locations, and Pipeline Segment boundaries.)]*

**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.]*

See summary note for portion of pipeline segment reviewed.

**Summary:**

A follow-up to the August 23-27, 2010 inspection for the Wallula District was completed on March 14-16, 2011. The inspection included a review of records and maps at the Wallula Compressor Station and field inspect new rectifiers, and collect CP data along the pipeline where the anode-flex was abandoned. During the August field inspection anode-flex for circuits #75, #76, and #78 were open circuits with no current flow. In October 2010, TransCanada installed two rectifiers (MP 220.9 and MP 224.2) connected to existing ground beds anodes (installed in 1977 and 1982). The ground beds were used prior to the installation of anode-flex along the pipeline ROW. Two non-contiguous pipe segments (MPs 227.32 – 227.60 and MPs 228.17 – 228.45) of the looped 36-inch and 42-inch diameter pipelines are now connected to the new rectifiers that include the failed anode-flex circuits #75, #76, and #78. The two segments are approximately three and four miles to the nearest rectifier and each segment is approximately, 0.3 miles in length. Cathodic Protection reading at or near the pipe segments were greater than -850 mv (on) and in compliance with requirement of CFR 192. 463. See attached Field Data Form, Exhibit – A: photos of rectifiers, and Exhibit – B: TransCanada CP Data.

**Findings/Comments:**

Maintain regular inspection schedule and UTC to continue to inspect for adequacy of CP for the two pipe segments where the anode flex adjacent to the pipeline has been abandoned.

**Key Documents Reviewed:**

Document Title	Document No.	Rev. No	Date
TransCanada, Wallula 2010 Annual CP Survey			Oct. 10, 2010
Wallula OQ Task Status Report March 2011			Current
Rectifier Ground Bed Design at Welch Road (MP 220.9) and Babcock Road (MP 224.2)	Original Design		1977 & 1982

**Part 1 - Performance of Integrity Assessments**

<b>1A. In-Line Inspection</b>	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that Operator's O&amp;M and IMP procedural requirements (e.g. launching/receiving tools) for performance of ILI were followed.</b>			<b>X</b>	<p>[Note: Add location specific information, as appropriate.]</p>
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.				
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 for preparing, running and monitoring the pipeline for ILI tools include performance requirements (e.g.: tool speeds, pipe cleanliness, operation of tool sensors, and ILI field calibration requirements), as appropriate.				
Other:				
<b>1B. Hydrostatic Pressure Testing</b>	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that hydrostatic pressure tests complied with Part 192 Subpart J requirements.</b>			<b>X</b>	
Review documentation of Hydrostatic Pressure Test parameters and results. Verify test was performed without leakage and in compliance with Part 192 Subpart J 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.				
Verify that the baseline assessment is conducted in a manner that minimizes environmental and safety risks (reference §192.919(e) and ADB-04-01)				
Other:				
<b>1C. Direct Assessment Technologies</b>	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that application of "Direct Assessment Technology" complied with Part 192.923</b>			<b>X</b>	
Review documentation of Operator's application of "Direct Assessment Technology", if available. Verify compliance with Part 192.923 and Operator's procedural requirements, as applicable.				
Verify that appropriate tests and/or inspections are being performed and appropriate data is being collected, as appropriate.				
Other:				
<b>1D. Other Assessment Technologies</b>	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that application of "Other Assessment Technology" complied with Operator's requirements, that appropriate notifications had been submitted to PHMSA, and that appropriate data was collected.</b>			<b>X</b>	
Review documentation of notification to PHMSA of Operator's application of "Other Assessment Technology", if available. Verify compliance with Operator's procedural requirements. If documentation of notification to PHMSA of Operator's application of "Other Assessment Technology" is available, verify performance of assessment within parameters originally submitted to PHMSA.				
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	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that remedial actions complied with the Operator's procedural requirements.</b>	<b>X</b>			<p>On Site inspected the mitigation measures of installed rectifiers at MP 220.0 and PM 224.2. See attached photos Exhibit -A</p> <p>Cathodic Protection readings of pipe to soil at various locations along the pipeline. See attached Field Data Form</p> <p>(if available):            On Potential: _____ mV            Off Potential: _____ mV</p> <p><i>[Note: Add location specific information and note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]</i></p>
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 192 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. Review the class location factor and failure pressure ratio used by Operator in determining repair of anomaly.				
Verify that Operator's personnel have access to and knowledge of applicable procedures.				
Other:				
2B. Remediation - Implementation	Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify that the operator has adequately implemented its remediation process and procedures to effectively remediate conditions identified through integrity assessments or information analysis.</b>			<b>X</b>	<p>Cathodic Protection readings of pipe to soil at dig site (if available):            On Potential: _____ mV            Off Potential: _____ mV</p> <p><i>[Note: Add location specific information and note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]</i></p>
If documentation is available, verify that repairs were completed in accordance with the operator's prioritized schedule and within the time frames allowed in §192.933(d).				
Review any documentation for this inspection site for an immediate repair condition (§192.933(d)(1)) 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 requirements in §192.933(a) 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 §192.103, §192.111, §192.713, §192.717, §192.719, §192.933 and the Operator's O&M Manual, as appropriate. If welding is performed, verify a qualified welding procedure and qualified welders are used to perform repairs. If composite repair methods are used, verify that a method approved by the Operator is used, procedures are followed, and qualified personnel perform the repair.				
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:				

**Part 3 - Preventive and Mitigative Actions**

<b>3A. P&amp;M Measures for Third Party Damage</b>	Satisfactory	Unsatisfactory	N/C	Notes:	
<b>Identify additional measures evaluated for the HCA section of the pipeline and facilities.</b>			<b>X</b>		
Verify that P & M measures regarding threats due to third party damage are being implemented: [§192.915(c), §192.935(b)(1)(iv)]:					
Confirm the use of qualified personnel for marking, locating, and direct supervision of known excavation work, as appropriate.					
Confirm the use of qualified personnel for monitoring of excavations conducted on covered pipeline segments by pipeline personnel, as appropriate.					
Other:				<i>[Note: Add location specific information, as appropriate.]</i>	
<b>3B. Installed Automatic Shut-off Valves (Protocol H.07)</b>	Satisfactory	Unsatisfactory	N/C		Notes:
<b>Verify additional preventive and mitigative actions implemented by Operator.</b>			<b>X</b>		
Document that additional measures evaluated by the operator cover alternatives such as, installing Automatic Shut-off Valves or Remote Control Valves, installing computerized monitoring and leak detection systems, replacing pipe segments with pipe of heavier wall thickness, providing additional training to personnel on response procedures, conducting drills with local emergency responders and implementing additional inspection and maintenance programs, as appropriate					
Verify that the operator has a process to decide if automatic shut-off valves or remote control valves represent an efficient means of adding protection to potentially affected high consequence areas. [§192.935(c)]					
Verify operation of installed remote control valve by reviewing operator inspection/remote control records for partially opening and closing the valve, as appropriate.					
Other:				<i>[Note: Add location specific information, as appropriate.]</i>	

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

<b>4A. Field Inspection for Verification of HCA Locations</b>				Satisfactory	Unsatisfactory	N/C	Notes:
<b>Review HCAs locations as identified by the Operator. Utilize NPMS and Operator maps, as appropriate.</b>						<b>X</b>	
Verify that the operator's integrity management program includes accurate and updated system maps or other suitably detailed means documenting the pipeline segment locations that are located in high consequence areas, as appropriate. [§192.905(a)]							
Review the operator's applicable procedures and forms used to document new information from one-calls, surveys, aerial & ground patrols are being completed by field personnel to communicate new developments that may impact high consequence areas or that may create new high consequence areas to IM personnel, as appropriate. [§192.905(c)]							
Review the operator's applicable procedures and forms to confirm that new HCAs and class location changes are being identified through it's continuing surveillance program as required by §192.613 and §192.905.							[Note: Add location specific information, as appropriate.]
<b>4B. Field Inspection for Verification of Anomaly Digs</b>				Satisfactory	Unsatisfactory	N/C	Notes:
<b>Verify repair areas, ILI verification sites, etc.</b>						<b>X</b>	
Document the anomaly dig sites observed and reviewed as part of this field activity and the actions taken by the operator.							[Note: Add location specific information, as appropriate.]
<b>4C. Field Inspection to Verify adequacy of the Cathodic Protection System</b>				Satisfactory	Unsatisfactory	N/C	Notes:
<b>In case of hydrostatic pressure testing, Cathodic Protection (CP) systems must be evaluated for general adequacy.</b>				<b>X</b>			
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.							
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.							On Site inspected the mitigation measures of installed rectifiers at MP 220.0 and PM 224.2. See attached photos Exhibit -A  Cathodic Protection readings of pipe to soil at various locations along the pipeline. See attached Field Data Form  Cathodic Protection readings of pipe to soil at dig site (if available): On Potential: _____ Off Potential: _____ mV  [Note: Add location specific information and note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]
<b>4D. Field inspection for general system characteristics</b>				Satisfactory	Unsatisfactory	N/C	Notes:
<b>Through field inspection determine overall condition of pipeline and associated facilities for a general estimation of the effectiveness of the operator's IMP implementation.</b>						<b>X</b>	
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.							
Check ROW for pipeline markers in line-of-sight and Emergency call-in number on marker posts.							
Other:							

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

<b>Pipeline System and Line Pipe Information</b>		
Operator (OpID and System Name):		
Unit ID (Pipeline Name)		
Pipe Manufacturer and Year:	Seam Type and Orientation:	
Pipe Nominal OD (inch):	Depth of Cover:	
Pipe Nominal Wall thickness (inch):	Coating Type and Condition:	
Grade of Pipe:	MAOP:	
<b>ILI Reported Information</b>		
ILI Technology (e.g., Vendor, Tools):		
Anomaly Type (e.g., Mechanical, Metal Loss):		
Is anomaly in a segment that can affect an HCA? (Yes / No)		
Date of Tool Run (MM/DD/YY):	Date of Inspection Report (MM/DD/YY):	
Date of "Discovery of Anomaly" (MM/DD/YY):		
Type of "Condition" (e.g.; Immediate; 60-day; 180-day):		
Anomaly Feature (Int/Ext):	Orientation (O'clock position):	
Anomaly Details: Length (in):	Width (in):	Depth (in):
Anomaly Log Distance (ft):	Distance from Upstream weld (ft):	
Length of joint(s) of pipe in which anomaly is identified (ft):		
<b>Anomaly Dig Site Information Summary</b>		
Date of Anomaly Dig (MM/DD/YY):		
Location Information (describe or attach map):		
Mile Post Number:	Distance from A/G Reference (ft):	
Distance from Upstream weld (ft):		
GPS Readings (if available) Longitude:	Latitude:	
Anomaly Feature (Int/Ext):	Orientation:	
Length of joint of pipe in which anomaly is found (ft):		
<b>For Mechanical Damage Anomaly</b>		
Damage Type (e.g., original construction, plain dent, gouge):		
Length (in):	Width (in):	Depth (in):
Near a weld? (Yes / No):		
Gouge or metal loss associated with dent? (Yes / No):	Are multiple dents present? (Yes / No):	
Did operator perform additional NDE to evaluate presence of cracks in dent? (Yes / No):		
Cracks associated with dent? (Yes / No):		
<b>For Corrosion Metal Loss Anomaly</b>		
Anomaly Type (e.g., pitting, general):		
Length (in):	Width (in):	Max. Depth (in):
Remaining minimum wall thickness (in):	Maximum % Wall Loss measurement(%):	
Safe pressure calculation (psi), as appropriate:		
<b>For "Other Types" of Anomalies</b>		
Describe anomaly (e.g., dent with metal loss, crack, seam defect, SCC):		
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)*

<b>Repair Information</b>		
Was a repair of the anomaly made? (Yes / No):		
Was Operating Pressure Reduced per 192.933(a) requirements?		
Was defect ground out to eliminate need for repair? (Yes / No):		
If grinding used, complete the following for affected area:		
Length (in):	Width (in):	Depth (in):
If NO repair of an anomaly for which RSTRENG/B31.G is applicable, were the Operator's RSTRENG/B31.G calculations reviewed? (Yes / No):		
<b>If Repair made, complete the following:</b>		
Repair Type (e.g., Type B-sleeve, composite wrap)		
Was defect ground out prior to making repair? (Yes / No):		
Operating Pressure at the time of repair:		
Length of Repair:	Pipe re-coating material used:	
Comments on Repair material, as appropriate (e.g., grade of steel, wall thickness):		
Comments on Repair procedure, as appropriate (e.g., welded sleeve, composite wrap):		
<b>General Observations and Comments</b>		
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 CP readings taken, Record: On Potential: _____ mV; Off Potential: _____ mV		
<i>[Note: Note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]</i>		
Describe method used by Operator to locate anomaly (as appropriate):		
Comments regarding procedures followed during excavation, repair of anomaly, and backfill (as appropriate):		
General Observations and Comments <i>(Note: attach photographs, sketches, etc., as appropriate):</i>		