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: Cascade Natural Gas Corporation

Op ID: 31522-Wenatchee/MosesLake

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

Gas IMP Field Verification Inspection Form

Name of Operator: Cascade Natural Gas Corporation

Headquarters Address: 222 Fairview Ave. N., Seattle, WA 98109-5312

Company Official: Eldon Book, COO

Phone Number: 206.624.3900 Fax Number: 206.654.4069

Operator ID: 31522

Persons Interviewed	Title	Phone No.	E-Mail
Tina Beach	Pipeline Safety Spec. Primary Contact	206.445.4121	Tina.beech@cngc.c
Keith Meissner	Mgr. Stds and Compliance	206.381.6734	Keith.meissner@cn gc.com
Sam Grant	Gen. Mgr. Wenatchee Dist.	509.750.4269	sgrant@cngc.com

OPS/State Representative(s): Stephanie Zuehlke	Date(s) of Inspection: July 8, 2010
	_
Inspector Signature:	Date:
Pipeline Segment Descriptions: [note: Description of the Pipinformation is available, include the pipe size, wall thickness, MAOP, %SMYS, HCA locations, class locations, and Pipeline	grade, seam type, coating type, length, normal operating pressure,

Othello. Only 1 section w/2 HCAs. 4" and 6" WSC, wall thickness: .188 both; pipe grade 4=A25, 6-x-42; unknown seam type; Segment 2 total is 1359' length; coating=glass wrap craft paper and semi plasticized enamel (coat tar wrap); normal operating pressure=480psi; MAOP=500psig; %SMYS=23.94; HCA location is called Segment 2 or Othello Town Gate; Class location=2 due to HO structures in the zone; Pipline Segment boundaries on HCA maps color coded red and begin at 290304-02A and end at 290304-02Z.

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.]

Station at beginning = 628+16 and end station at 641+45. No operational valves this location. Did check an operational valve outside the HCA to shut HCA line 1 # V-28.

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Work reviewed identifies commitment to safe operation of system. IM plan appears to be thorough.

Findings:

Initial IM review identified zero HCA in this district. Through reevaluation, CNG has since identified two new HCA's in this district. No IM anomaly digs this location – this inspection did not detail how this district fits in with IM levels company-wide.

Key Documents Reviewed:

Document Title	Document No.	Rev. No	Date
Othello HP shutdown map			05.23.01
IM Program Plan			06.07
Aerial maps of Wenatchee District Transmission			06.06.03
Reevaluation of Company HCAs			12.07.09
Reevaluation of Company HCAs			02.04.08

Part 1 - Performance of Integrity Assessments

	Tarra	I	2110				
1A. In-Line Inspection	Satisfactory	Unsatisfactory	N/C	Notes:			
Verify that Operator's O&M and IMP procedural				No inline inspection on 4 & 6"			
requirements (e.g. launching/receiving tools) for	X			No procedures for ILI			
performance of ILI were followed.	11			No ILI done within CNG ergo no vendor, tools, or other pertinent info.			
Verify Operator's ILI procedural requirements were fo	vendor, tools, or other pertinent into.						
for launching and receiving of pig, operational control							
Verify ILI tool systems and calibration checks before r							
tool was operating correctly prior to assessment being							
	Verify ILI complied with Operator's procedural requirements for performance of a						
successful assessment (e.g. speed of travel within limits	s, adequate i	ransducer					
coverage), as appropriate.	2-6	D =					
Document ILI Tool Vendor and Tool type (e.g. MFL, I). Document					
other pertinent information about Vendor and Tool, as							
Verify that Operator's personnel have access to applica							
running and monitoring the pipeline for ILI tools include			nts				
(e.g.: tool speeds, pipe cleanliness, operation of tool se	ensors, and I	Li field					
calibration requirements), as appropriate.							
Other:				[Note: Add location specific			
•				information, as appropriate.]			
				injointation, as appropriately			
1B. Hydrostatic Pressure Testing	Satisfactory	Unsatisfactory	N/C	Notes: Base line assessment does not			
Verify that hydrostatic pressure tests complied with				include hydro test: utilizing DA due to			
Part 192 Subpart J requirements.	Х			age of install and operational continuity			
Review documentation of Hydrostatic Pressure Test pa	rameters an	d results. Ver	ify	of service concerns (cutting off service			
test was performed without leakage and in compliance	with Part 19	2 Subpart J		to City of Othello)			
requirements.							
Review test procedures and records and verify test acce	eptability an	d validity.					
Review determination of the cause of hydrostatic test fa	ailures, as ar	propriate.					
Document Hydrostatic Pressure Test Vendor and equip							
Verify that the baseline assessment is conducted in a m			•				
environmental and safety risks (reference §192.919(e)							
Other:	and ADB-04	1-01)					
Other.							
1C Direct Assessment Technologies	Satisfactory	Unsatisfactory	N/C	Notes:			
1C. Direct Assessment Technologies	Satisfactory	Offsatisfactory	IV/C	Reviewed Threat Eval and Assessment			
Verify that application of "Direct Assessment Technology" complied with Part 192.923	x			methods which include the operators			
	inant Assass			application of DA.			
Review documentation of Operator's application of "D Technology", if available. Verify compliance with Par				Reviewed IM Plan ECDA and ICDA			
	1 174.743 ar	id Operator's		O&M Plan and appears to meet			
	procedural requirements, as applicable. Verify that appropriate tests and/or inspections are being performed and appropriate						
	ig periormed	ı anu appropri	ale	192.931.			
data is being collected, as appropriate.							
Other. (a) General. An operator may use direct assessment either as a prim	ary goopeement	method or as a s	ınnlam	ent to the other assessment methods allowed under			
this subpart. An operator may only use direct assessment as the prima							
internal corrosion (ICDA), and stress corrosion cracking (SCCDA).							
(b) Primary method. An operator using direct assessment as a prima	ary assessment	method must have	e a plar	that complies with the requirements in			
(1) ASME/ANSI B31.8S (incorporated by reference, see § 192.7), so	ection 6.4 NA	TE R PASA2-2AA2	(inco r	porated by reference, see § 102.7); and § 102.025 if			
addressing external corrosion (ECDA).	couon 0.4, INA	KI U3UZ=ZUUZ	(HICOI)	borated by reference, see § 172.7), and § 172.923 II			
(2) ASME/ANSI B31.8S, section 6.4 and appendix B2, and § 192.92				A).			
(3) ASME/ANSI B31.8S, appendix A3, and § 192.929 if addressing							
(a) Supplemental method. An appearant prince direct assessment as a	cunniamental a	ccacemant matha	l for c	annlinghle threat must have a plan that follows			
(c) Supplemental method. An operator using direct assessment as a the requirements for confirmatory direct assessment in § 192.931.	supplemental a	ээсээнгий шейо	a tot gi	iy appricable unear must have a plan mar tollows			

1D. Other Assessment Technologies	Satisfactory	Unsatisfactory	N/C	Notes:
Verify that application of "Other Assessment				None
Technology" complied with Operator's requirements,	x			
that appropriate notifications had been submitted to	^			
PHMSA, and that appropriate data was collected.				
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.				
Other	··········			<u> </u>

Part 2 - Remediation of Anomalies

2A. Remedial Actions – Process	Satisfactory	Unsatisfactory	N/C	Notes:
Verify that remedial actions complied with the				
Operator's procedural requirements.	x			
Witness anomaly remediation and verify documentation	L			
Exposed Pipe Reports, Maintenance Report, any Data A				
compliance with Operator's O&M Manual and Part 192			. 9	
1				
Verify that Operator's procedures were followed in loca	ting and ex	nosing the		
anomaly (e.g. any required pressure reductions, line local				
approximate location of anomaly for excavation, excava				
11	mon, cours	.g		
Verify that procedures were followed in measuring the a	anomaly de	termining the		
severity of the anomaly, and determining remaining stre	noth of the	nine Review	the	
class location factor and failure pressure ratio used by C	ngm or me Inerator in c	letermining re	nair	Cathodic Protection readings of pipe to
of anomaly.	perator in c	icici i i i i i i i i i i i i i i i i i	Pan	soil at dig site (if available):
				On Potential: mV
Verify that Operator's personnel have access to and kno	wledge of s	nnlicable		Off Potential: mV
procedures.	wicage of a	гррисавие		
procedures.				[Note: Add location specific information
Other:				and note whether CP readings were from
outer.				the surface or from the pipe following
				exposure, as appropriate.]
				I the second
2B. Remediation - Implementation	Satisfactory	Unsatisfactory	N/C	Notes:
Verify that the operator has adequately implemented	Satisfactory	Olisatisfactory	14/0	Notes.
its remediation process and procedures to effectively				None
remediate conditions identified through integrity	X			None
assessments or information analysis.				
If documentation is available, verify that repairs were co	mnleted in	accordance w	ith	
the operator's prioritized schedule and within the time fi			1011	
§192.933(d).	anies anow	cu iii		
31721700(d).				
Review any documentation for this inspection site for ar	immediate	renair condit	ion	
(§192.933(d)(1)) where operating pressure was reduced			1011	
shutdown. Verify for an immediate repair condition that			ł	
pressure was determined in accordance with the requirer			if	
not applicable, the operator should provide an engineering			'	
amount of pressure reduction.	ng ouble jus	in juig the		
F				
Verify that repairs were performed in accordance with §	192.103 81	92.111		
§192.713, §192.717, §192.719, §192.933 and the Operation				
appropriate. If welding is performed, verify a qualified				
qualified welders are used to perform repairs. If compos			ed	
verify that a method approved by the Operator is used, p	Cathodic Protection readings of pipe to			
qualified personnel perform the repair.	soil at dig site (if available):			
1 1 1			ł	On Potential:mV
Review CP readings at anomaly dig site, if possible. (See	ee Part 4 of	this form –		Off Potential: mV
"Field Inspection to Verify adequacy of the Cathodic Pro				
appropriate.	[Note: Add location specific information			
11 F				and note whether CP readings were from
Other:	•			the surface or from the pipe following
··				exposure, as appropriate.]

Part 3 - Preventive and Mitigative Actions

	0 10			
3A. P&M Measures for Third Party Damage	Satisfactory	Unsatisfactory	N/C	Notes:
Identify additional measures evaluated for the HCA	· X			
section of the pipeline and facilities.	<u> </u>			
Verify that P & M measures regarding threats due to thir	a party dar	nage are bein	g	
implemented: [§192.915(c),				
§192.915 What knowledge and training must personnel have to carry of	out an integrity	management		
program?				
(c) Persons responsible for preventive and mitigative measures. The ir				
provide criteria for the qualification of any person—Patrols in accommanuals, locate request, incidents, monitoring excav. Ac		II CNO O&IVI		
Conditional: excav. Evidenct will dig or monitor as requ		or trands		
Conditional. exeav. Evidence will dig of monitor as requ	iica. Moiiii	or trends.		
(1) Who implements preventive and mitigative measures to carry out		ncluding the mar	king	
and locating of buried structures; or Wenatchee GM/Office and Engine				
(2) Who directly supervises excavation work carried out in conjunction	n with an inte	grity assessment	•	
Wenatchee district Field employees.				
192.935(b)(1)(iv)]: §192.935 What additional preventive and mitigative measures must an operation	ator take ⁹			
(b) Third party damage and outside force damage-	ator take.			
				[Note: Add location specific information,
(1) Third party damage. An operator must enhance its damage preve				as appropriate.]
§192.614 of this part, with respect to a covered segment to preve of a release due to third party damage. Enhanced measures to an			ices	
program include, at a minimum- Monitoring digs and surv				
(iv) Monitoring of excavations conducted on covered pipeline se	egments by pi	peline personnel.	If an	
operator finds physical evidence of encroachment involving exca	vation that th	e operator did no	t	
monitor near a covered segment, an operator must either excavat				
conduct an above ground survey using methods defined in NACl reference, see §192.7). An operator must excavate, and remediat				
B31.8S and §192.933 any indication of coating holidays or disco			J.1112	
examination.				
Confirm the use of qualified personnel for marking, loca	iting, and d	irect supervis	ion	
of known excavation work, as appropriate.				
Reviewed OQ list and conducted marking & locating. R				
documentation for missed located (not transmission line) and super	visory monito	oring	
of employees.	<u> </u>			4
Confirm the use of qualified personnel for monitoring or		ns conducted	on	
covered pipeline segments by pipeline personnel, as app				
Reviewed OQ list entitled "Inspecting excavations near	ilnes.			
Other:				
GM is Director of Local Utility Coordinating Council.				
3B. Installed Automatic Shut-off Valves (Protocol	I	1	T 1	Notes:
H.07)	Satisfactory	Unsatisfactory	N/C	Notes.
Verify additional preventive and mitigative actions		-	1	
implemented by Operator.				
Document that additional measures evaluated by the ope	erator cove	r alternatives		
such as, installing Automatic Shut-off Valves or Remot			ing	
computerized monitoring and leak detection systems, re				
pipe of heavier wall thickness, providing additional train				
response procedures, conducting drills with local emerg				
implementing additional inspection and maintenance pr				

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)]	
Process from IM Program Plan 5.2.4 Prevention Responses. Copy in file.	
Verify operation of installed remote control valve by reviewing operator inspection/remote control records for partially opening and closing the valve, as appropriate.	
None in this area since does not meet Evaluation requirements. There is an existing manual valve for operation.	
Other:	
	[Note: Add location specific information, as appropriate.]

Part 4 - Field Investigations (Additional Activities as appropriate)

	<u> </u>	<u> </u>	· · · · · ·	
4A. Field Inspection for Verification of HCA Locations	Satisfactory	Unsatisfactory	N/C	Notes:
Review HCAs locations as identified by the Operator.	x			
Utilize NPMS and Operator maps, as appropriate.	1	<u> </u>	l	
Verify that the operator's integrity management program				
updated system maps or other suitably detailed means d				
segment locations that are located in high consequence	areas, as ap	propriate.		
[§192.905(a)] Reviewed HCA maps dated 01.04.05.				
Review the operator's applicable procedures and forms			1.1.	
information from one-calls, surveys, aerial & ground pa			<u>l by</u>	
field personnel to communicate new developments that			,	
consequence areas or that may create new high consequence areas or the consequence are areas or the consequence areas or the consequence areas or the consequence are areas or the consequence are areas or the consequence are			<u>eı,</u>	
as appropriate. [§192.905(c)] CNG completes an annua				
completes the survey and forwards form to CNG engine			١٥.	
Reevaluation of Company HCA's dated 02.04.08 for lin		15 and 12.07.0)9	
for lines 3., 9, & 15. (Wenatchee District has 3 lines total	aı)			[Note: Add location specific information
D : d		.1	<u> </u>	1 .
Review the operator's applicable procedures and forms				as appropriate.] Reviewed O&M IM Manual 4.1.4.
and class location changes are being identified through	it's continu	ing surveillan	<u>ce</u>	Reevaluation of HCAs which contain the
program as required by				
§192.613(a) Each operator shall have a procedure for continuing s				procedures. Manual states, "Newlly identified HCAs will be added to the
determine and take appropriate action concerning changes in class loc corrosion, substantial changes in cathodic protection requirements, ar				
maintenance conditions.	id office unusua	ar operating and		existing assessment schedule and will be
(b) If a segment of pipeline is determined to be in unsatisfactory con-	dition but no it	nmediate hazard		assessed within 10 years of the date of
exists, the operator shall initiate a program to recondition or phase ou				addition to the plan."
segment cannot be reconditioned or phased out, reduce the maximum allowable operating pressure in				
accordance with §192.619 (a) and (b). Objective in IM Plan references other CNG procedures: CNG O&M Manual under CP 714.10 discusses				
the Reconditioning and phase out of pipeline and reducing the MAOP.				
and §192.905. How does an operator identify a high co	nsaguanca	araa?		
(a) General. To determine which segments of an operator's transmiss	sion nineline s	ai ca : vstem are covere	d by	
this subpart, an operator must identify the high consequence areas. A				
from the definition in § 192.903 to identify a high consequence area.	An operator m	ay apply one met	hod	
to its entire pipeline system, or an operator may apply one method to	individual por	tions of the pipel	ine	
system. An operator must describe in its integrity management progra each portion of the operator's pipeline system. The description must i				
when utilized to establish a high consequence area. (See appendix E.)				
consequence areas.)	-	, -	_	
(b)(1) Identified sites. An operator must identify an identified site, for	or purposes of	this subpart, from		·
information the operator has obtained from routine operation and mai	intenance activ	ities and from pu	blic	
officials with safety or emergency response or planning responsibiliti				
they know of locations that meet the identified site criteria. These pul on a local emergency planning commission or relevant Native Ameri			ials	
Method 1 is used and reviewed under 4.1.2 HCA Identification Proce		iais.		
(2) If a public official with safety or emergency response or planning	z responsibiliti	es informs an one	erator	
that it does not have the information to identify an identified site, the				
following sources, as appropriate, to identify these sites.	-			
(i) Visible marking (e.g., a sign); or				
(ii) The site is licensed or registered by a Federal, State, or local gov				
(iii) The site is on a list (including a list on an internet web site) or m Federal, State, or local government agency and available to the gener		by or available f	rom a	
(c) Newly identified areas. When an operator has information that the				
previously identified as a high consequence area could satisfy any of				
operator must complete the evaluation using method (1) or (2). If the definition as a high consequence area, it must be incorporated into the				
as a high consequence area within one year from the date the area is i		455655111611	. p.u.ı	

as a high consequence area within one year from the date the area is identified.

engineering to reevaluate.

The same Form mentioned above "reevaluation of Company HCAs" is completed by GM and sent to

4B. Field Inspection for Verification of Anomaly Digs	Satisfactory	Unsatisfactory	N/C	Notes:
Verify repair areas, ILI verification sites, etc.	X	Chisatistactory	14/0	ivotes.
Document the anomaly dig sites observed and reviewed	[Note: Add location specific information,			
and the actions taken by the operator.	as appropriate.]			
NONE	as appropriate.			
NONE				
4C. Field Inspection to Verify adequacy of the			NVC	Notes:
Cathodic Protection System	Satisfactory	Unsatisfactory	N/C	
In case of hydrostatic pressure testing, Cathodic				
Protection (CP) systems must be evaluated for general	x			
adequacy.				
The operator should review the CP system performance	in conjunct	ion with a		
hydrostatic pressure test to ensure the integrity assessment				
threats to the integrity of the pipeline. Has the operator				
performance in conjunction with the hydrostatic pressur				
Review records of CP readings from CIS and/or annual	survey to e	nsure minimu	m	Cathodic Protection readings of pipe to
code requirements are being met, if available.	<u>-</u> _			soil at dig site (if available):
CP bi-monthly records reviewed.				On Potential: mV
				Off Potential:mV
Review results of random field CP readings performed of	during this a	activity to ens	ure	
minimum code requirements are being met, if possible.	Perform ra	ndom rectifie	<u>r</u>	[Note: Add location specific information
checks during this activity and ensure rectifiers are oper	and note whether CP readings were from			
No anomaly.	the surface or from the pipe following			
				exposure, as appropriate.]
4D. Field inspection for general system characteristics	Satisfactory	Unsatisfactory	N/C	Notes:
Through field inspection determine overall condition of	Satisfactory	Olisacistaciony	14/0	Notes.
pipeline and associated facilities for a general				
estimation of the effectiveness of the operator's IMP	x			
implementation.				
Evaluate condition of the ROW of inspection site to ens				
requirements are being met, as appropriate.				
Comment on Operator's apparent commitment to the int				
their system, as appropriate.				
GM work reviewed identifies commitment to safe opera	tion of syst	em. IM plan		
appears to be thorough.	•	•		
Check ROW for pipeline markers in line-of-sight and E	mergency c	all-in number	on	
marker posts.	-		_	
Other:				

Anomaly Evaluation Report (to be completed as appropriate)

Pipeline System and Lin	ne Pipe Information
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:
ILI Reported I	
ILI Technology (e.g., Vendor, Tools):	mor mation
Anomaly Type (e.g., Mechanical, Metal Loss):	
Is anomaly in a segment that can affect an HCA? (Yes / N	Jo)
	Inspection Report (MM/DD/YY):
Date of "Discovery of Anomaly" (MM/DD/YY):	Thispection report (MINI DD/ 11).
Type of "Condition" (e.g.; Immediate; 60-day; 180-day):	
	on (O'clock position):
Anomaly Details: Length (in): Width (in	
	from Upstream weld (ft):
Length of joint(s) of pipe in which anomaly is identified (
	<u> </u>
Anomaly Dig Site Info	rmation Summary
Date of Anomaly Dig (MM/DD/YY):	
Location Information (describe or attach map):	C A/C D C (C)
	from A/G Reference (ft):
Distance from Upstream weld (ft):	
GPS Readings (if available) Longitude:	Latitude:
Anomaly Feature (Int/Ext): Orientation	on:
Length of joint of pipe in which anomaly is found (ft):	
For Mechanical Da	
Damage Type (e.g., original construction, plain dent, gou	
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	e of cracks in dent? (Yes / No):
Cracks associated with dent? (Yes / No):	
For Corrosion Meta	al Loss Anomaly
Anomaly Type (e.g., pitting, general):	
Length (in): Width (in):	Max. Depth (in):
	kimum % Wall Loss measurement(%):
Safe pressure calculation (psi), as appropriate:	
For "Other Types	
Describe anomaly (e.g., dent with metal loss, crack, seam	defect, SCC):
Length (in): Width (in):	Max. Depth (in):
Other Information, as appropriate:	
	C 1 0 (X/ / X/)
Did operator perform additional NDE to evaluate present Cracks present? (Yes / No):	e of cracks? (Yes/No):

Anomaly Repair Report (to be completed as appropriate)

Repair Information
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):
If Repair made, complete the following:
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):
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 CP readings taken, Record: On Potential: mV; Off Potential: mV
[Note: Note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]
[Note: Note whether CP readings were from the surface or from the pipe following exposure, as appropriate.]
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[Note: Note whether CP readings were from the surface or from the pipe following exposure, as appropriate.] Describe method used by Operator to locate anomaly (as appropriate):
[Note: Note whether CP readings were from the surface or from the pipe following exposure, as appropriate.] Describe method used by Operator to locate anomaly (as appropriate): Comments regarding procedures followed during excavation, repair of anomaly, and backfill (as appropriate):
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