

EVALUATION REPORT OF LIQUID PIPELINE CONSTRUCTION

A completed **Standard Inspection Report** is to be submitted to the Director within 60 days from completion of the inspection. A **Post Inspection Memorandum (PIM)** is to be completed and submitted to the Director within 30 days from the completion of the inspection, or series of inspections, and is to be filed as part of the **Standard Inspection Report**. Refer to the last page of this form for **PIM** example entries.

Inspection Report	Post Inspection Memorandum
Inspector/Submit Date: _____	Inspector/Submit Date: _____
	Peer Review/Date: _____
	Director Approval/Date: _____

POST INSPECTION MEMORANDUM (PIM)		
Name of Operator:	OPID #:	
Name of Unit(s):	Unit # (s):	
Records Location:		
Unit Type & Commodity:		
Inspection Type:	Inspection Date(s):	
OPS Representative(s):	AFO Days:	
Summary:		
Findings:		

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Name of Operator:		
H.Q. Address:	Unit Address:	
Co. Official:	Activity Record ID#:	
Phone No.:	Phone No.:	
Fax No.:	Fax No.:	
Emergency Phone No.:	Emergency Phone No.:	
Persons Interviewed	Titles	Phone No.
Company's Construction Maps (copies for Region Files):		
Description of Construction <i>(not required if covered in the PIM):</i>		

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All code references are to Part 195.

S - Satisfactory U - Unsatisfactory N/A - Not Applicable N/C - Not Checked

For any item marked U, N/A, or N/C, there must be a note indicating why.

		S	U	N/A	N/C
.100	DESIGN REQUIREMENTS (Cont.)				
	.118(a) Marking, end preparation, and bursting requirements of ANSI B16.9 or MSS SP-75 .				
	.118(b) Fittings free of any buckles, dents, cracks, gouges, or other defects that might reduce strength.				
	.118(c) Butt welded fittings rated at or above same pressure and temperature of the pipe.				
	.120 New and replaced line pipe, valve, fitting, or other line component designed and constructed to accommodate the passage of instrumented internal inspection devices.				
.200	CONSTRUCTION SPECIFICATION				
	.202 Comprehensive written construction specifications.				
	.204 Qualified inspector performing inspections.				
	.280 Supports and braces not welded to the pipe.				
	.210(a) Pipeline ROW selected to avoid areas containing private dwellings, industrial buildings, and places of public assembly.				
	.210(b) Pipeline located within 50 feet of any private dwelling, industrial building, or place of public assembly provide with at least an additional 12 inches of cover .				
	.212(b) Field bends made in compliance: (1) Not impair serviceability. (2) Smooth, free from buckles, cracks, or mechanical damage. (3) Longitudinal weld near neutral axis unless - an internal bending mandrel is used; or pipe is # 12 inches or D/t ratio is less than 70% .				
	WELDING PROCEDURES				
	.214(a) Welding must be performed by qualified welders using qualified welding procedures. Welding procedures must be qualified by destructive testing.				
	.214(b) Each welding procedure must be recorded in detail, including results of qualifying tests. Are welding procedures qualified in accordance with a standard that is accepted by the industry? (API 1104, ASME Boiler & Pressure Code - Section IX, or other)				
	.222(a) Welders must be qualified in accordance with Section 3 of the API Standard 1104 (18th Ed., 1994) or Section IX of the ASME Boiler and Pressure Vessel Code (1995) , except that a welder qualified under an earlier edition than listed in §195.3 may weld, but may not requalify under that earlier edition.				
	.222(b) Welders may not weld with a particular welding process unless, within the preceding 6 calendar months, the welder has--(1) Engaged in welding with that process; and (2) Had one weld tested and found acceptable under Section 6 of API 1104.				
	.224 Welding operations protected from weather conditions.				
	.226(a) Arc burns require repair.				
	.226(b) Do arc burn repair procedures require verification of the removal of the metallurgical notch by nondestructive testing? (Ammonium Persulfate). Pipe must be removed for non-repairable notches.				
	.226(c) Ground not welded to pipe.				
	.228 Inspectors performing visual inspections supplemented by nondestructive testing, acceptability of welds per Section 6, API 1104 , except for Subsection 6.9 .				
	.230(a) Remove or repair cracks # 8% , remove cracks longer than 8% .				
	.230(b) Welds repaired, remove defect down to clean metal, preheat pipe, and assure acceptability.				
.230(c) Repairs done in accordance with qualified written welding procedures, and mechanical properties of the repaired weld equal to those specified for the original weld.					

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.200	NONDESTRUCTIVE TESTING OF WELDS	S	U	N/A	N/C
.228/.234	Detailed written procedure established and qualified for nondestructive testing.				
.234(b)	Nondestructive testing of welds must be performed: (1) In accordance with written procedures for NDT . (2) Radiographer trained and qualified. (Level II or better). (3) By a process that will indicate any defects that may affect the integrity of the weld.				
.234(c)	Procedures established for proper interpretation.				
.234(d)	Nondestructively test 10% of each welder's welds per day.				
.234(e)	Test 100% or 90% , if impractical. (1) Stream, river, lake, reservoir, or other body of water. (2) Within railroad or public road ROW's. (3) Overhead road crossings and within tunnels. (4) Within the limits of any incorporated subdivision. (5) Within populated areas such as residential subdivisions.				
.234(f)	100% of all girth welds nondestructively tested on used pipe.				
.234(g)	Test 100% of girth welds at tie-ins.				
EXTERNAL CORROSION					
.557	Protection against external corrosion for each component.				
EXTERNAL COATING					
.557	Protection against external corrosion for each component.				
CATHODIC PROTECTION					
.563(a)	Adequate cathodic protection of the system.				
	Cathodic protection system installed 1 year . (refer. ADB note below)				
.567	Sufficient number of test leads properly installed.				
INSTALLATION OF PIPE					
.246(a)	Pipe installed to minimize stresses and protect the pipe coating from damage.				
.248(a)	Installed below the level of cultivation. (refer to table below)				

Location	Cover (inches)	
	For Normal Excavation	For Rock Excavation
Industrial, commercial, and residential areas	36	30
Crossings of inland bodies of water with a width of at least 100 ft from high water mark to high water mark	48	18
Drainage ditches at public roads and railroads	36	36
Deepwater port safety zone	48	24
Gulf of Mexico and its inlets and other offshore areas under water less than 12 ft deep as measured from the mean low tide.	36	18
Any other area	30	18

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		S	U	N/A	N/C	
.200	INSTALLATION OF PIPE (Cont)					
	.248(b) If minimum cover prescribed above cannot be attained because it is impracticable to do otherwise additional protection being provided as required?					
	.250 12 inches of clearance between the pipeline and any other underground structure.					
	.252 Backfilling performed in a manner that provides firm support for the pipe and does no damage to the coating					
	.256 Pipe at each railroad or highway crossing installed so as to adequately withstand the dynamic forces exerted by anticipated traffic loads.					
	VALVES: GENERAL					
	.258(a) Install valve in a location, accessible to authorized employees and protected from damage or tampering.					
	.258(b) Each submerged valve located offshore or in inland navigable waters marked, or located by conventional survey techniques, to facilitate quick location when operation of the valve is required.					
	VALVES: LOCATION					
	.260 Are valves being installed at each of the following locations: (a) On the suction end and discharge end of a pump station in a manner that permits isolation of the pump station equipment in the event of an emergency. (b) On each line entering or leaving a breakout storage tank area in a manner that permits isolation of the tank area from other facilities. (c) On each mainline at locations along the pipeline system that minimizes damage or pollution from accidental hazardous liquid discharge, as appropriate for the terrain in open country, for offshore areas, or for populated areas. (d) On each lateral takeoff from a trunk line in a manner that permits shutting off the lateral without interrupting the flow in the trunk line. (e) On each side of a water crossing that is more than 100 feet wide from high-water mark to high-water mark unless a waiver has been granted for a particular case where valves not are justified. (f) On each side of a reservoir holding water for human consumption.					
	CONSTRUCTION RECORDS					
	.266 Are there complete records showing the following: (a) Number of girth welds and number of nondestructively tested welds, including number? (b) The amount, location, and cover of each size of pipe installed? (c) The location of each crossing of another pipeline? (d) The location of each buried utility crossing? (e) The location of each overhead crossing? (f) The location of each valve and corrosion test station?					
	.300	PRESSURE TESTING				
		.302(a) Has the pipeline been hydrostatically tested or is a hydrostatic test planned?				
		.302(c) If the pipeline was hydrostatically tested: 1. Was the entire buried portion tested without leakage for 8 hours ? 2. Was the above ground portion tested for at least 4 hours ?				

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.300	PRESSURE TESTING (Cont.)	S	U	N/A	N/C
.304	<p>Does the operator hydrostatically test all pipe and attached fittings, including components, unless - if a component is the only item being replaced or added and the manufacturer certifies that it was hydrostatically tested at the factory or it was manufactured under a quality control system that ensures that the component is at least equal inn strength to a prototype that was hydrostatically tested at the factory?</p> <p>Test pressure must be maintained for at least 4 continuous hours at a pressure equal to 125 percent, or more, of the MOP. If not visually inspected during the test, at least an additional 4 hours at 110 percent of MOP is required.</p>				
.306	Appropriate test medium				
.308	Was pipe associated with tie-ins either pretested or hydrostatically tested in place?				
.310(a)	Are hydrostatic test records retained for the life of the facility tested?				
.310(b)	<p>Do the hydrostatic test records include the following:</p> <ol style="list-style-type: none"> (1) The pressure recording charts? (2) The test instrument calibration data? (3) The operator's name, the name of the person responsible for making the test, and the name of the test company used, if any? (4) The date and time of the test? (5) The minimum test pressure? (6) The test medium? (7) A description of the facility tested and the test apparatus? (8) An explanation of any pressure discontinuities, including test failures, that appear on the pressure recording charts? (9) Where elevation differences in the test section exceed 100 feet, a profile of the pipeline showing the elevation and test sites over the entire length of the test section? (10) Temperature of the test medium or pipe during the test period? 				

Discuss with operator:

Pipeline Safety Advisory Bulletin ADB-03-06, November 12, 2003
Corrosion Threat to Newly Constructed Gas Transmission and Hazardous Liquid Pipelines

(reference <http://www.gpoaccess.gov/fr/advanced.html>; fr12no03N Pipeline Safety: Corrosion Threat to Newly Constructed Gas and Hazardous Liquid Pipelines).

PIM Entry Examples

POST INSPECTION MEMORANDUM (PIM)			
Name of Operator:	NoFail Pipeline Company	OPID #:	2314
Name of Unit(s):	Boardwalk and Parkplace	Unit # (s):	234, 278
Records Location:	Pipelineville, NC		
Unit Type & Commodity:	Interstate Hazardous Liquid (A1) HVL		
Inspection Type:	Standard	Inspection Date(s):	12/24-27/03
OPS Representative(s):	John Brown	AFO Days:	4
Summary:			
<p>On December 24-27, I performed a standard inspection of the NoFail Pipeline facilities contained in units 234 and 278. The evaluation report contains a component description of the two units. The inspection included a records and facilities review. A Joint O&M inspection was conducted in 2003 and no procedures were evaluated during this inspection. Pre-inspection preparation identified previous valve inspection violations. I reviewed all of the company's valve inspection records and five above ground valve settings, and did not identify any potential non-compliances. Right-of-way inspection and periodic cathodic protection checks were conducted between Chance, NC to Community Chest, NC and from Reading, SC to Ventnor, SC. The Mighty Big'n Wet River Crossing was evaluated for atmospheric corrosion.</p>			
Findings:			
<p>The pipeline facilities appeared to be well maintained and serious concerns were noted: surface rusting was observed at the Pipelineville pump station. No pitting was observed. NoFail is in the process of repainting all of the above ground piping at this facility.</p>			
<p>The following concerns were noted from the records review:</p>			
<ol style="list-style-type: none"> 1. The rectifiers in unit 234 were inspected 3 times in 2001, twice in 2002, and five times in 2003. Copies of subject records were obtained. 2. The right-of-way in unit 234 was densely overgrown such that aerial patrols would be ineffective. Pictures were taken of representative areas. 			