South Dakota Public Utilities Commission
Pipeline Safety Construction Inspection

Operator's Information		
Operator's Headquarters:		IOCS ID#
Address:		
City:		State/Zip:
Executive Officer:		Title:
Phone:		Fax:
Emergency Telephone:		E-Mail:

Inspection Unit Information		
Unit Name:		
Address:		
City:		State/Zip:
Audit Contact:		Title:
Phone:		Fax:
Emergency Telephone :	Unit Record ID#:	Inspection Record ID#:

Inspection		
OPS Representative:	Start Date:	End Date:
Project#:	Report: ☐ Initial ☐ Mid ☐ Final	
Description of system:		

Persons Interviewed	Title	Phone Number

Summary:

Findings:

Plastic N/A ☐

S= Satisfactory U=Unsatisfactory N/A= Not Applicable N/O = Not observed

Code Section	Description	S	U	N/A	N/O
§192.59	Plastic Pipe	S	U	N/A	N/O
(a)(1)	Manufactured in accordance with a listed specification				
§192.63		S	U	N/A	N/O
(a)	Are pipe, valves, and fittings Properly marked for identification in accordance with ASTM D 2513?	☐	☐	☐	☐
(c)	Are items marked by die stamping blunt or rounded edges?	☐	☐	☐	☐
(c)	Were Pipe valves and fittings marked with other than field die stamping?	☐	☐	☐	☐
§192.121	Was the pipeline designed in accordance with this formula $P = \frac{2S}{(SDR-1)}0.32$	☐	☐	☐	☐
§192.123	**Design limitations for plastic pipe.**	S	U	N/A	N/O
(a)	Does the design pressure exceed 100 psig?	☐	☐	☐	☐
(e)(1)	If design pressure does exceed 100 psig is the pressure within 125 psig?	☐	☐	☐	☐
(e)(2)	If the design pressure is 125 psig is the material of pipe PE 2406 or a PE 3408?	☐	☐	☐	☐
(e)(3)	If the design pressure is 125 psig is the pipe size 12 inches or less?	☐	☐	☐	☐
§192.181	**Distribution line valves**	S	U	N/A	N/O
(c)(1)	Are valves placed in a readily accessible location so as to facilitate its operation in an emergency?	☐	☐	☐	☐
(c)(3)	If valve is installed in a buried box or enclosure, is the box installed as to avoid transmitting loads to the main?	☐	☐	☐	☐
§192.193	Are valves that are installed designed to protect the plastic from excessive torsional or shearing loads, as well as other secondary stress when the valve is being operated?	☐	☐	☐	☐
§192.273	**Valve installation in plastic pipe.**	S	U	N/A	N/O
(b)	General: Are joints made in accordance with written procedures that have been proven by test or experience?	☐	☐	☐	☐
(c)	Is each joint visually inspected?	☐	☐	☐	☐
	Heater temperature maintained? (see operators O&M manual)				
§192.281	**Plastic Pipe**	S	U	N/A	N/O
	What joining methods are being used? Solvent Cement ☐ Adhesive ☐ Heat Fusion ☐			☐	☐
(a)	Are joints given required amount of time to properly set?	☐	☐	☐	☐
(b)(1)	Are mating surfaces cleaned and dried?	☐	☐	☐	☐
(c)(1)	Is the operator using the proper equipment when making a butt fusion?	☐	☐	☐	☐
	Does the equipment compress the heated ends together and hold the pipe in proper alignment while the plastic hardens?	☐	☐	☐	☐
(c)(2)	Socket fusion jints being joined by a device that heats the surfaces of the joint uniformly and simultaneously to the same temperature?	☐	☐	☐	☐
(c)(3)	Electro fusion joints being joined using the equipment of the fittings manufacturer	☐	☐	☐	☐
	If pipe is jointed by other equipment or techniques are the joints tested to the requirements of 192.283(a)(1)(iii)?	☐	☐	☐	☐
	Are these tests equivalent to the equipment and techniques of the fittings manufacturer?	☐	☐	☐	☐
(d)(1)	Adhesive joints conform to ASTM/ANSI Designation: D2517?	☐	☐	☐	☐
(d)(2)	Are the materials and adhesive compatible with each other?	☐	☐	☐	☐
(e)(1)	Mechanical joints; are the gasket material in the coupling compatible with plastic?	☐	☐	☐	☐
(e)(2)	Is the rigid internal tubular stiffener used in conjunction with the coupling?	☐	☐	☐	☐

§192.285	**Qualifying persons to make joints**	S	U	N/A	N/O
(a)	Are joints made in accordance with written procedures that have been proven by test or experience?	☐	☐	☐	☐
(a)(1)	Had training or experience in use of procedure?	☐	☐	☐	☐
(b)(1)	Made specimen joints that were visually inspected?	☐	☐	☐	☐
(b)2)(i)	Made specimen joints that were destructively tested?	☐	☐	☐	☐
(c)	Is the person making the joints re-qualified under an applicable procedure, if during any 12 months period that person does not make any joints under that procedure?	☐	☐	☐	☐
	Has 3 joints or 3 percent of the joints made, whichever is greater, found to be unacceptable by testing/	☐	☐	☐	☐
(d)	Has the operator established a method to determine that each person making plastic joints in their system is qualified under the requirements of 192.285?	☐	☐	☐	☐
	Heat Fusion jointer Name: Cert. No.: Expiration Date: Certified by: Date:				
§192.321	**Installation of Plastic Pipe**	S	U	N/A	N/O
(a)	Is pipe being installed below ground level?	☐	☐	☐	☐
(c)	If buried below ground is the pipe being installed so as to minimize shear or tensile stresses?	☐	☐	☐	☐
(d)	Is thermoplastic pipe that is not encased have a minimum wall thickness of 0.090 inch?	☐	☐	☐	☐
(e)	Is the pipe that is not encased has an electrically conducting wire or other means of locating?	☐	☐	☐	☐
	Is the tracer wire wrapped around the pipe?				
(f)	If pipe is encased is it inserted into the casing in a manner that will protect the plastic?	☐	☐	☐	☐
(g)(1)	If not; is the uncased pipe temporally installed and does not exceed the manufacturer's recommended maximum periods of exposure or 2 years, whichever is less?	☐	☐	☐	☐
(h)	Is the pipe being installed on bridges?	☐	☐	☐	☐
(h)(1)	If yes, is the pipe installed with protection from mechanical damage, such as installation in a metallic casing?	☐	☐	☐	☐
(h) (2)	Protected from ultraviolet radiation?	☐	☐	☐	☐
(h) (3)	Has not exceeded the pipe temperature limits specified in 192.123.	☐	☐	☐	☐
§192.325	**Underground clearance**	S	U	N/A	N/O
(a)	Is each transmission line being installed with at least 12 inches of clearance from any other underground structure?	☐	☐	☐	☐
(b)	Is each main being installed with enough clearance from any other underground structure?	☐	☐	☐	☐
§192.327	**Cover**	S	U	N/A	N/O
(a)	Is each transmission line being installed with proper minimum cover?	☐	☐	☐	☐
(b)	Is each main being installed with at least 24 inches of cover?	☐	☐	☐	☐
§192.361	Service Line: Installation	☐	☐	☐	☐
(a)	Depth: Each buried service line installed with at least 12 inches of cover?	☐	☐	☐	☐
(b)	Supported and backfilled?	☐	☐	☐	☐
§192.513	**Test Requirements for plastic pipelines**	S	U	N/A	N/O
(a)	Each segment of pipe is tested in accordance with this section?	☐	☐	☐	☐
(b)	Test procedures insure discovery of all potentially hazardous leaks?	☐	☐	☐	☐
(c)	Test pressure is at least 150 percent of the maximum operating pressure or 50 psig, whichever is greater.	☐	☐	☐	☐
(d)	The temperature of the thermoplastic material, at time of testing, was not more than 100 degree F?	☐	☐	☐	☐
§192.515	**Environmental protection and safety requirements**	S	U	N/A	N/O
(a)	Does the operator take every reasonable precaution to protect the general public and all personnel during testing?	☐	☐	☐	☐

§192.515	**Environmental protection and safety requirements**	S	U	N/A	N/O
(a)	Does the operator take every reasonable precaution to protect the general public and all personnel during testing?	☐	☐	☐	☐
(b)	Does the operator insure that the test medium is disposed of in a manner that will minimize damage to the environment?	☐	☐	☐	☐
§192.517	**Test Records**	S	U	N/A	N/O
(a)(1)	Operator's name, name of operator's employee responsible for making the test and the name of any test company used.	☐	☐	☐	☐
(a)(2),(a)(3) & (a)(4)	Test Medium, test pressure and test duration?	☐	☐	☐	☐
(a)(5)	Pressure recording charts or other records of pressure readings?	☐	☐	☐	☐
(a)(6)	Elevation variation, whenever significant for the particular test.	☐	☐	☐	☐
(a)(7)	Leaks and failures noted and their disposition?	☐	☐	☐	☐
§192.805	**Qualification Program**	S	U	N/A	N/O
	Refer to record's form for OQ for replacement jobs	☐	☐	☐	☐

S = Satisfactory U = Unsatisfactory N/A = Not Applicable N/O = Not Observed

Steel					N/A ☐
Code Section	Description				
	MATERIALS SPECIFICATIONS				
§192.55(a)	(a) Qualification of Pipe:				
	(b) Manufacturing Standard & Grade:				
	(c) OD:				
	(d) Wall thickness:				
	(e) Wt. #/fc:				
	(f) type Longitudinal Weld:				
	(g) SMYS:				
	(h) Joint Design Bevel:				
	(i) Internal Coating:				
	(j) Min. joint length:				
	(k) total footage or miles:				
		S	**U**	**N/A**	**N/O**
§192.55	**Steel Pipe**				
(b)	Does the steel pipe meet one of the API or ASTM Listed Specifications?	☐	☐	☐	☐
§192.63	**Marking of materials**				
(a)	Are pipe, valves, and fittings properly marked for identification?	☐	☐	☐	☐
(c)	Were pipe valves and fittings marked with other than field die stamping?	☐	☐	☐	☐

	PIPE DESIGN	**S**	**U**	**N/A**	**N/O**
§192.105	**Design formula for steel pipe.**	**S**	**U**	**N/A**	**N/O**
(a)	Was the pipeline designed in accordance with this formula: $P = \frac{2St}{D} FET$	☐	☐	☐	☐
§192.113	**Longitudinal joint factor (E) for steel pipe**	**S**	**U**	**N/A**	**N/O**
	Is the longitudinal joint factor (E) for steel pipe equal to 1 (See table)?	☐	☐	☐	☐
§192.115	Temperature derating factor (T) for steel pipe.	**S**	**U**	**N/A**	**N/O**
	Is the temperature derating factor (T) for steel pipe equal to 1 (See table)?	☐	☐	☐	☐
§192.145	**Valves**	**S**	**U**	**N/A**	**N/O**
(a)	Does each valve meet the minimum requirements, or the equivalent, of API 6D or national or international standard?	☐	☐	☐	☐
§192.147	**Flanges and flange accessories**	**S**	**U**	**N/A**	**N/O**
(a)	Does each flange or flange accessory meet the minimum requirements of ASME/ANSI B16.5, MSS SP44, or ASME/ANSI B16.24, or equivalent?	☐	☐	☐	☐
§192.149	**Standard Fittings**	**S**	**U**	**N/A**	**N/O**
(b)	Are steel butt welded fittings rated at or above the pressure and temperature as the pipe?	☐	☐	☐	☐
§192.159	**Flexibility**	**S**	**U**	**N/A**	**N/O**
	Is the pipeline designed with enough flexibility to prevent thermal expansion or contraction from causing excessive stresses in the pipe or component?	☐	☐	☐	☐
§192.161	Supports and anchors	**S**	**U**	**N/A**	**N/O**
(d)	For a pipeline to operate at 50% SMYS, are structural supports not welded directly to the pipe, but to a member that completely encircles the pipe?	☐	☐	☐	☐
(e)	Is each underground pipeline that is connected to a relatively unyielding line or fixed object provided with enough flexibility to allow for possible movement, or is it anchored?	☐	☐	☐	☐

	WELDING AND WELD DEFECT REPAIR/REMOVAL REQUIREMENTS				
§192.225	**Welding Procedures**	S	U	N/A	N/O
(a)	Are welding procedures qualified under **Section 5 of API 1104** (19th ed. 1999, 10/31/01 errata) or **Section IX of ASME Boiler and Pressure Code** (2001 ed.) by destructive test?	☐	☐	☐	☐
(b)	Are welding procedures recorded in detail, including results of the qualifying tests?	☐	☐	☐	☐
§192.227	**Qualification of welders**	S	U	N/A	N/O
(a)	Are welders qualified according to **Section 6, API Std. 1104** or **Section IX, ASME Boiler and Pressure Vessel Code**? (Welders qualified under an earlier edition may weld but may not requalify under earlier edition)	☐	☐	☐	☐
(b)	Welders may be qualified under section I of Appendix C to weld on lines that operate at < 20% SMYS.	☐	☐	☐	☐
§192.231	**Protection from Weather**	S	U	N/A	N/O
	Is the welding operation protected from the weather conditions that could impair the quality of the completed weld?	☐	☐	☐	☐
§192.233	**Miter Joints**	S	U	N/A	N/O
	Miter joints **(consider pipe alignment)**	☐	☐	☐	☐
§192.235	**Preparation for welding**	S	U	N/A	N/O
	Are welding surfaces clean, free of foreign material, and aligned in accordance with the qualified welding procedure?	☐	☐	☐	☐
§192.245	**Repair and Removal of Weld Defects**	S	U	N/A	N/O
(a)	Are cracks longer than 8% of the weld length removed? For each weld that is repaired, is the defect removed down to clean metal and is the pipe preheated if conditions demand it?	☐	☐	☐	☐
(b)	Are the repairs inspected to insure acceptability? If additional repairs are required, are they done in accordance with qualified written welding procedures to assure minimum mechanical properties are met?	☐	☐	☐	☐
(c)	Repair of a crack or any other defect in a previously repaired area must be in accordance with a written weld repair procedure, qualified under **§192.225**	☐	☐	☐	☐

	WELD INSPECTIONS and NONDESTRUCTIVE TESTING REQUIREMENTS				
§192.241	**Inspection and test of welds**	S	U	N/A	N/O
	Are inspectors performing visual inspection to check for adherence to the welding procedure and the acceptability of welds as per Section 9, API Std. 1104, except for Subsection 9.7 for depth of undercutting adjacent to the root bead?	☐	☐	☐	☐
§192.243	**Nondestructive testing**	S	U	N/A	N/O
(a)	Is a detailed written **NDT** procedure established and qualified?	☐	☐	☐	☐
(b)	Are there records to qualify procedures?	☐	☐	☐	☐
©	Is the radiographer trained and qualified? (Level II or better)	☐	☐	☐	☐
(d)	Are the following percentages of each days field butt welds nondestructively tested:	☐	☐	☐	☐
(d)(1)	**10%** in Class **1** locations.	☐	☐	☐	☐
(d) (2)	**15%** in Class **2** locations	☐	☐	☐	☐
(d) (3)	**100%** in **Class 3** and **4** locations, river crossings, within railroad or public highway ROW's, tunnels, bridges, overhead road crossings: however, if impracticable may test not less than 90%.	☐	☐	☐	☐
(d) (4)	**100% at pipeline tie-ins.**	☐	☐	☐	☐
(e)	Is a sample of each welder's work for each day nondestructively tested? (see code for exceptions)	☐	☐	☐	☐
(f)	Do the radiograph records and daily reports show:	☐	☐	☐	☐
	Number of welds made.	☐	☐	☐	☐
	Number of welds tested.	☐	☐	☐	☐
	Number of welds rejected	☐	☐	☐	☐
	Disposition of rejected welds	☐	☐	☐	☐
	Is there a correlation of welds and radiographs to a bench mark? (Engineering station or survey marker)	☐	☐	☐	☐

	CONSTRUCTION REQUIREMENTS				
§192.303	**Compliance with specifications or standards**	S	U	N/A	N/O
	Are comprehensive written construction specifications available and adhered to?	☐	☐	☐	☐
§192.305	**Inspection: General**	S	U	N/A	N/O
	Are inspections performed to check adherence to the construction specifications?	☐	☐	☐	☐
§192.307	**Inspection of materials**	S	U	N/A	N/O
	Is material being visually inspected at the site of installation to ensure against damage that could impair its serviceability?	☐	☐	☐	☐
§192.309	**Repair of steel pipe**	S	U	N/A	N/O
(a)	Are any defects or damage that impairs the serviceability of a length of steel pipe such as a gouge, dent, groove, or are burn repaired or removed?	☐	☐	☐	☐
(c)	If repairs are made by grinding, is the remaining wall thickness in conformance with the tolerances in the pipe manufacturing specifications or the nominal wall thickness required for the design pressure of the pipe?	☐	☐	☐	☐
§192.313	**Bends and elbows**	S	U	N/A	N/O
(b)	If a circumferential weld is permanently deformed during bending, is the weld nondestructively tested?	☐	☐	☐	☐
§192.319	**Installation of pipe in a ditch**				
(a)	When pipe is placed in the ditch, is it installed so as to fit the ditch, minimize stresses, and protect the pipe coating from damage?	☐	☐	☐	☐
(b)	Does backfill provide firm support under the pipe and is the ditch backfilled in a manner that prevents damage to the pipe and coating from equipment or the backfill material?	☐	☐	☐	☐
§192.461	**External corrosion control: Protective coating**	S	U	N/A	N/O
(c)	Is the external protection coating inspected (by jeeping, etc.) prior to lowering the pipe into the ditch?	☐	☐	☐	☐
§192.325	**Underground clearance**	S	U	N/A	N/O
(a)	Is there **12 inches** clearance between the pipeline and any other underground structure? If **12 inches** cannot be attained, are adquaate provisions made to protect the pipeline from damage that could result from the proximity of the other structure?	☐	☐	☐	☐
§192.327	**Cover**	S	U	N/A	N/O
(a)	Is pipe in a **Class 1** location installed with **30 inches** of cover in **normal soil**, or **24 inches** of cover in **consolidated rock**?	☐	☐	☐	☐
	Is pipe in **Class 2, 3,** and **4** locations, drainage ditches or public roads and railroad crossings, installed with **36 inches** of cover in **normal soil** or **24 inches** of cover in **consolidated rock**?	☐	☐	☐	☐
	Does pipe installed in a river or harbor have **48 inches** of cover in **soil** or **24 inches** of cover in **consolidated rock**?	☐	☐	☐	☐
	If the above cover cannot be attained, is additional protection provided to withstand anticipated external loads?	☐	☐	☐	☐

	CORROSION REQUIREMENTS				
§192.455	**External corrosion control: buried or submerged pipelines installed after July 31, 1971.**	S	U	N/A	N/O
(a)(1)	Does the pipeline have an effective external coating and does it meet the coating specifications?	☐	☐	☐	☐
(a)(2)	Is a cathodic protection system installed or being provided for? (refer, ADB note below)	☐	☐	☐	☐
§192.471	**External corrosion control: Test stations**	S	U	N/A	N/O
(a)	Are test leads mechanically secure and electrically conductive?	☐	☐	☐	☐
(b)	Are test leads attached to the pipe by cadwelding or other process so as to minimize stress concentration on the pipe?	☐	☐	☐	☐
©	Are bare test lead and the connection to the pipe coated?	☐	☐	☐	☐

	TESTING REQUIREMENTS				
§192.503	**General requirements**	S	U	N/A	N/O
(a)(1)	Is a hydrostatic pressure test planned to substantiate the MAOP?	☐	☐	☐	☐
(a)(2)	If the pipeline has been hydrostatically tested, have all potentially hazardous leaks been located and eliminated?	☐	☐	☐	☐
§192.505	Strength test requirements for steel pipeline to operate at a hoop stress of 30 percent or more of SMYS	☐	☐	☐	☐
(a)	Is there a specified hydrostatic pressure testing procedure?	☐	☐	☐	☐
	Is the **specified test pressure equal to 1.25 x MAOP for Class 1 and 2 locations**?	☐	☐	☐	☐
(c)	For pipelines which operate at **30% or more of SMYS**, is the minimum test duration for the pipeline at least **8 hours**? (Strength Test)	☐	☐	☐	☐
(e)	Is the minimum test duration for pretested fabricated units and **short sections of pipe** at least **4 hours**?	☐	☐	☐	☐
§192.515	**Environmental protection and safety requirements**	S	U	N/A	N/O
(a)	Does the operator take every reasonable precaution to protect the general public and all personnel during the test?	☐	☐	☐	☐
(b)	Does the operator insure that the test medium is disposed of in a manner that will minimize damage to the environment?	☐	☐	☐	☐
§192.517	**Records**	S	U	N/A	N/O
(a)	Do the test records include the following:	☐	☐	☐	☐
(a)(1)	Operator's name, name of operator's employee responsible for making the test, and the name of the test company used.	☐	☐	☐	☐
(a)(2)	Test Medium used:			☐	☐
(a)(3)	Test pressure:			☐	☐
(a)(4)	Test duration:			☐	☐
(a)(5)	Pressure recording charts, or other record of pressure readings	☐	☐	☐	☐
(a)(6)	Elevation variations, whenever significant for the particular test.	☐	☐	☐	☐
(a)(7)	Leaks and failures noted and their disposition.	☐	☐	☐	☐

§192.801 - §192.809	**OPERATOR QUALIFICATION FIELD VERIFICATION**				
	Operator Qualification – Use PHMSA Form 15 Operator Qualification Field Inspection Protocol Form if applicable to the project.	☐	☐	☐	☐

	DESIGN OF COMPRESSOR STATION	S	U	N/A	N/O
§192.163	Compressor stations: Design and Construction	☐	☐	☐	☐
(a)	Is each compressor building located on property under the control of the operator?	☐	☐	☐	☐
	Is the distance to adjacent property far enough to prevent the spread of fire?	☐	☐	☐	☐
	Is there enough space around compressor buildings to allow free movement of fire fighting equipment?	☐	☐	☐	☐
(b)	Are buildings constructed with non-combustible material?	☐	☐	☐	☐
(c)	Are there two separate and unobstructed exits on each operating floor of each compressor building?	☐	☐	☐	☐
(d)	Does each fence around a compressor station have at least two gates?	☐	☐	☐	☐
(e)	Is electrical equipment and wiring installed per ANSI/NFPA 70?	☐	☐	☐	☐
§192.165	**Compressor stations: Liquid removal**	S	U	N/A	N/O
(a)	Are compressors protected from liquids?	☐	☐	☐	☐
(b)	Do liquid separators have a manual drain and if slugs of liquid could be carried into the compressor, automatic liquid removal, compressor shutdown, or high liquid level alarm?	☐	☐	☐	☐
	Are liquid separators manufactured in accordance with Section VIII of the ASME Boiler and Pressure Vessel Code ro a design factor less than or equal to 0.4 if constructed of pipe and fittings with no internal welding?	☐	☐	☐	☐

§192.167	**Compressor stations: Emergency shutdown**	S	U	N/A	N/O
(a)	Does the compressor station have an emergency shutdown system?	☐	☐	☐	☐
(a)(1)	Is the ESD able to isolate station and blowdown station piping?	☐	☐	☐	☐
(a)(2)	Is discharge of gas from the blowdown piping at a location where the gas will not create a hazard?	☐	☐	☐	☐
(a)(3)	Will ESD shutdown compressor, gas fired equipment and electrical facilities (except emergency lighting and circuits needed to protect equipment)?	☐	☐	☐	☐
(a)(4)	Are there at least two ESD stations outside gas area near exits gates or emergency exits?	☐	☐	☐	☐
§192.169	**Compressor stations: Pressure limiting devices**	S	U	N/A	N/O
(a)	Does compressor station have overpressure protection devices of sufficient capacity to prevent pressure greater than 110% MAOP?	☐	☐	☐	☐
(b)	Do relief valves vent in safe location?	☐	☐	☐	☐
§192.171	Compressor stations: Additional safety equipment	☐	☐	☐	☐
(e)	Are there slots or holes in baffles of gas engine mufflers?	☐	☐	☐	☐
§192.173	**Compressor stations: Ventilation**				
	Are buildings ventilated to prevent the accumulation of gas?	☐	☐	☐	☐
§192.735	**Compressor stations: Storage of combustible materials**	S	U	N/A	N/O
(b)	Are aboveground oil or gasoline storage tanks protected per NFPA No. 30" (Dikes)	☐	☐	☐	☐
§192.736	**Compressor stations: Gas detection**	S	U	N/A	N/O
(a)	Does the compressor building have a fixed gas detection and alarm system?	☐	☐	☐	☐

STANDARDS OF ACCEPTABILITY PER SEC. 6, API STD. 1104		
Type	Individual Length	Length Cumulative in 12 inches
Inadequate Penetration (weld root)	1"	1"
Inadequate Penetration (due to high low)	2"	3"
Incomplete Fusion (root or top of joint)	1"	1"
Incomplete Fusion (due to cold lap)	2"	2"
BurnThrough	¼"	½"
Elongated Slag Inclusions (wagon tracks)	1/16" Width 2" Length	2"
Isolated Slag Inclusions	1/8" Width ½" Length	4 or less 1/8" Wide
Porosity (spherical)	1/8"	25% of w.t.
Porosity (cluster)	½" diameter area 1/16" (Individual)	½"
Porosity (worn hole)	1/18"	25% of w.t.
Porosity (hollow bead)	½"	2"
Cracks	5/32" or less	5/32" or less
Under cutting (internal)	2" Length unless depth is visually determined by use of a depth measuring device on all under cutting along the entire circumference of the weld.	2"

Public Utilities Commission
Pipeline Safety Construction Inspection

Weather Conditions: Temperature: _____ Wind Speed _____ Precipitation _____

Operator Qualification Page

NAME OF INDIVIDUAL	COVERED TASK DESCRIPTION	DATE QUALIFIED	If not qualified, provide name of person providing direct supervision.

Comments:
_____

Sketch of Work Area Location: