BRIDGER
MOVING AMERICA'S OIL

OTIS J. RANDLE
VICE PRESIDENT OF ENVIRONMENTAL SAFETY AND
REGULATORY COMPLIANCE
MOBILE: (318)564-8963
EMAIL: ORANDLE@BRIDGERGROUP.COM

March 10, 2017

Mr. Chris Hoidal
Director, Western Region
U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration
12300 W. Dakota Avenue, Suite 110
Lakewood, CO 80228

03-13-17P12:03 RCVD

Sent VIA FedEx Tracking # 778623020933

RE: CPF No. 5-2017-6005M
Response to Bridger Swan Ranch Notice of Amendment

Dear Mr. Hoidal,

Bridger Swan Ranch, LLC (Bridger) received a Notice of Amendment on February 16, 2017, resulting from an inspection conducted by a representative from your office on August 29 through September 2, 2016. The amendment described 6 (six) apparent inadequacies within the Bridger plans or procedures. Please accept this letter as our response to the amendment and review the attached documentation to address the described inadequacies noted.

Please contact Mr. Randle by phone at (318)564-8963 or email at orandle@bridgergroup.com if you have any questions.

Thank you in advance for your attention in this matter we look forward to your response.

Very truly yours,

Otis J Randle
Vice President of Environmental Safety and Regulatory Compliance

Attachments

Reporting

Reference:	49 CFR Part 195 Subpart B

Scope

This procedure prescribes the federal and state reporting requirements of the Company.

Procedures

1. Accident Report Requirements (§§ 195.50; 195.52; 195.54)

   An accident report is required for each failure in a pipeline system subject to Part 195 in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:

1	ACCIDENTS THAT MUST BE REPORTED (§ 195.50):
A	Explosion or fire not intentionally set by the Company;
B	Release of 5 gallons (19 liters) or more of hazardous liquid or carbon dioxide;
C	Death of any person;
D	Personal injury necessitating hospitalization; or
E	Estimated property damage, including cost of cleanup and recovery, value of lost product and damage to the property of the Company or others, or both, exceeding $50,000.

2	REQUIRED DOT PHMSA REPORTS FOR ACCIDENTS SHOWN ABOVE (§ 195.54)
A	An accident report (DOT Form 7000-1) must be filed *as soon as practicable* (but not later than 30 days after discovery of the accident).
B	Whenever a Company receives any changes in the information reported or additions to the original report on DOT Form 7000-1, it shall file a supplemental report within 30 days.

3	IMMEDIATE TELEPHONIC OR EMAIL NOTICE REQUIRED (§195.52)
At the *earliest practicable moment* following discovery of a release of the hazardous liquid or carbon dioxide transported resulting in an event described above; the Company of the system must give notice as shown below.	
A	Caused a death or a personal injury requiring hospitalization;
B	Resulted in either a fire or explosion not intentionally set by the Company;
C	Caused estimated property damage, including cost of cleanup and recovery, value of lost product and damage to the property of the Company or others, or both, exceeding $50,000;
D	Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that: (1) violated applicable water quality standards, (2) caused a discoloration of the surface of the water or adjoining shoreline, or (3) deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or
E	In the judgment of the Company was significant even though it did not meet the criteria of any other paragraph of §195.52 (see #3 above).

(ACCIDENT REPORTING CONTINUED)

4	GATHER REQUIRED ACCIDENT REPORT INFORMATION (§195.52)
A	Name, address and identification number of the Company
B	Name and telephone number of the person making the report
C	Location of the failure
D	Time of the failure
E	Fatalities and personal injuries (if any)
F	Initial estimate of amount of product released (calculation method shown below)[1]
G	All other significant facts known by the Company that are relevant to the cause of the failure or extent of the damages

CALL NATIONAL RESPONSE CENTER:	800 424 8802	OR EMAIL:	http://nrc.uscg.mil

[1]CALCULATION METHODS TO ESTIMATE PRODUCT RELEASED (USE ONE):	
1	Calculate the volume of hazardous liquid released based on the operating pressure, the size of the defect through which the product escaped and the amount of time the product was flowing through the defect.
2	If metering facilities are available upstream and downstream of the location of the release, compare meter readings.
3	Estimate amount of hazardous liquid released based on amount recovered or amount to be recovered.

5	ACCIDENTS THAT DO NOT NEED TO BE REPORTED
No report is required for a release of less than 5 barrels (.8 cubic meters) resulting from a pipeline *maintenance activity* if the release is:	
A	Not otherwise reportable under § 195.50 (detailed above);
B	Not one described in § 195.52(a)(4) – (same as Section 3D above);
C	Confined to company property or pipeline right-of-way; and
D	Cleaned up promptly.

6	REPORT NEW INFORMATION
An Company must provide an additional telephonic report to the NRC if significant new information becomes available during the emergency response phase of a reported event at the earliest practicable moment after such additional information becomes known.	

B. Call the Area Supervisor. Emergency contact information is detailed in the Company's Emergency Response Plan.

C. Operating personnel will, as soon as practical, contact and relay to the Manager of Compliance all necessary information. The Manager of Compliance will, in conjunction with the Operations Manager or designee, determine if the occurrence qualifies as an accident requiring telephonic notification.

D. In the event a telephonic or electronic notice of a pipeline accident is made, the operating personnel shall be advised of the occurrence for a consensus as to appropriate drug and alcohol testing of operating employees. This advisement shall be made as soon as possible after telephonic notice to the National Response Center (NRC) is made.

E. If it is determined the event does not meet the criteria defined for a reportable accident, action should be taken to rescind the telephonic report within thirty (30) days of the detection of the accident. Notice should be given to the Manager of Compliance stating why the event does not meet the reporting criteria for an accident.

F. Rescission of the telephonic report shall be made by providing written notification to the address below:

Information Resources Manager
Pipeline and Hazardous Materials Safety Administration
United States Department of Transportation, PHP-20
1200 New Jersey Avenue, SE
Washington, DC 20590

F. The written notification shall include appropriate information including: (1) the National Response Center assigned report number; (2) the date of the occurrence; and (3) a brief statement describing the circumstances surrounding the event. Distribution of such a rescission letter shall be the same as if a written report was submitted.

2. Written Accident Reports

A. A written report utilizing Form PHMSA F7000-1, "Accident Report – Hazardous Liquid Pipeline Systems," Rev. 01-2010 to the address in 1E shall be submitted as soon as practical, but not more than thirty (30) days after detection of an accident described above. Information necessary for completion of Form PHMSA F7000-1 shall be gathered and supplied to the Manager of Compliance who is responsible for drafting the written report. The Manager of Compliance will obtain necessary reviews, approvals, and signatures, and shall submit Form PHMSA F7000-1 before the thirty (30) day time period expires. The Manager of Compliance will distribute the report within the company as necessary.

(1) A written report shall also be submitted for a release of 5 gallons or more of hazardous liquid.

(2) Exception: No report is required for a release of less than 5 barrels resulting from pipeline maintenance activity if the release is: (a) not otherwise reportable, (b) not described in §195.52(a)(4), (c) confined to company property or pipeline right-of-way, and (d) is cleaned up promptly.

B. When warranted, a supplemental report will be developed in a similar manner to provide PHMSA information which was not available at the time of initial filing.

3. Annual Report:

A. Each Company must annually complete and submit DOT Form PHMSA F7000-1.1 "Hazardous Liquids or Carbon Dioxide Systems" for each type of hazardous liquids pipeline facility operated at the end of the previous year. An Company must submit the annual report by June 15 each year (exception: in 2010 reporting year the report must be submitted by August 15, 2011). For each state a pipeline traverses, an Company must separately complete those sections on the form requiring information to be reported for each state.

B. Carbon dioxide pipelines: A separate report is required for crude oil, HVL (including anhydrous ammonia), petroleum products, carbon dioxide pipelines, and fuel grade ethanol pipelines.

Responsibilities

1. The telephonic report or online report, and any supplemental telephonic or online reports, will be made by the Manager of Compliance. In a situation where the Area Supervisor or designee cannot make contact with the Manager of Compliance to allow for reporting within a one-hour period, the reporting should proceed with the Operations Manager or designee being notified as soon as possible. The field representative will draft the initial accident report and promptly submit it to the Manager of Compliance responsible for filing the thirty (30) day written accident report.

2. In the event of a rescission of a telephonic report, the Manager of Compliance shall ensure that the rescission is provided by written notification to the Office of Pipeline Safety's Information Resource Manager.

3. The Manager of Compliance shall prepare and submit Form PHMSA F7000-1, "Accident Report – Hazardous Liquid Pipeline Systems," Rev. 01-2010 as soon as practicable, but not later than thirty (30) days following the detection of the incident. The Manager of Compliance shall prepare and submit any necessary supplemental reports.

4. The Manager of Compliance shall prepare and submit Form PHMSA F7000-1.1, "Annual Report for Calendar Year 20__, Hazardous Liquid and Carbon Dioxide Systems."

Records

1. Originals of Form PHMSA F7000-1 "Accident Report – Hazardous Liquid Pipeline Systems" and all supplemental reports shall be maintained at the Office of Record for five (5) years.

2. Rescission letters of telephonic notices shall be maintained at the Office of Record for five (5) years.

3. Originals of Form PHMSA F7000-1.1, "Annual Report for Calendar Year 20__, Hazardous Liquid and Carbon Dioxide Systems" shall be maintained at the Office of Record for five (5) years.

Post Accident Review

1. All accidents/incidents requiring a review will be reviewed by an investigation team consisting of the Terminal Manager, the Vice President of Environmental Safety and Regulatory Compliance and all involved parties.
2. Findings of the investigation team will be forwarded to the Senior Vice President of Terminals and Pipelines for review.
3. Appropriate disciplinary and corrective actions resulting from the accident/incident investigation will be determined and initiated by the Terminal Manger and Vice President of Environmental Safety and Regulatory Compliance.

Overpressure Safety Devices and Overfill Protection Systems

Reference: 49 CFR § 195.428

Scope

These procedures provide instruction for the installation, pressure set point, operation, and maintenance of pressure regulators, pressure controllers, and pressure relief valves at company facilities.

Procedures

1. Testing and inspection requirements and frequencies are conditional to the following guidelines:

A. Each pressure limiting device, relief valve, pressure regulator, or other pressure control equipment shall be subjected to inspections and tests to determine that it meets the following:

(1) It is in good mechanical condition;

(2) It is adequate from the standpoint of capacity and reliability of operation for the service in which it is employed;

(3) It is properly installed and protected from dirt, liquids, or other conditions that might prevent proper operation; and

(4) It is set to function at the correct pressure. This includes set-point check, and where practical, a check for shut-off (lock-up).

B. Overpressure safety devices installed on hazardous liquid pipelines that transport highly volatile liquids shall be tested at least twice per calendar year, at intervals not to exceed 7½ months. All other overpressure safety devices installed on hazardous liquid pipelines shall be tested at least once per calendar year at intervals not to exceed 15 months.

C. Pursuant to § 195.428 (c), API RP 2350, and NFPA 30 Chapter 4.6, the Bridger Transfer Services Swan Ranch facility meets the definition of an attended facility. Above ground storage tanks shall be gauged at frequent intervals and the methods of NFPA 30 4.6.1.1 (1) are applied as overfill protection. The following procedure shall be used to verify and test tank level gauging and verification.

(1) Tank levels shall be checked via automatic tank gauges every six hours.

(2) Tank levels shall be manually gauged by an approved gauging device every 24 hours and verified against the automatic tank gauge. If the automatic tank gauge is found to be more than 1" out of calibration, the automatic tank gauging device shall be recalibrated.

(3) Automatic tank gauges shall be equipped with Hi, and Hi-Hi level alarms pursuant to API RP 2350.

(4) Hi and Hi-Hi level alarms shall be tested at least once per calendar year at intervals not to exceed 15 months.

Location of devices and records of inspections shall be kept on the form referenced at the end of this section.

2. When maintenance or other operations may cause installed pressure regulating devices to be ineffective, protection against accidental over-pressuring shall be initiated as follows:

   A. Pressures in the affected facility shall be continuously monitored utilizing gauges selected after considering pressure levels and degree of control required;

   B. Valves used for manually throttling pressure will be constantly attended;

   C. Maintenance or operation shall be carried out by qualified personnel; and

   D. Adequate communications shall be established and maintained until the installed pressure regulating devices are returned to service.

Responsibilities

1. The Area Supervisor or designee is responsible for ensuring that correct equipment, test facilities, certification, and testing procedures are used.

2. All mainline relief devices and test pressure limiting and regulating stations shall be tested by qualified personnel.

3. The Area Supervisor or designee is responsible for monitoring inspection and test schedules for regulator and relief valve testing.

4. Capacities of relief valves and regulators will be calculated by the Manager of Compliance or other qualified personnel.

5. The Area Supervisor or designee is responsible for assuring the acquisition and submittal of all records to proper departments.

Records

1. Records for relief valve and regulator testing, inspections and capacity checks are to be recorded and retained at the Office of Record for a minimum of five years.

2. Calculation of capacities will be retained for a minimum of five years at the Office of Record.

Overpressure Safety Devices

Date	Valve Location	Description	As Found (psi)	As Set (psi)	Tested By Initials	Seal Number
	Meter Skid PRV	Sinclair Incoming Pipeline Relief				
	CRH Sales LACT	CRH Suction				
	CRH Sales LACT	CRH Discharge				
	Sinclair Sales LACT	Pump Discharge Relief to Suction				
	Sinclair Sales LACT	Pipeline Relief Valve				
	Sinclair Sales LACT	Suction Piping Relief				

Overfill Protection Systems

Date	Tank	Alarm Tested OK? (Y/N)	Alarm Reset? (Y/N)	Tested By Initials
	1010			
	1011			

Inspected by: _____

Signed: _____ Date: _____

Overpressure Safety Devices and Overfill Protection Systems Inspection	
Reference:	49 CFR § 195.428
Frequency:	Each Calendar year, not to exceed 15 months.

3.

Overpressure Safety Devices

Date	Valve Location	Description	As Found (psi)	As Set (psi)	Tested By Initials	Seal Number
	Meter Skid PRV	Sinclair Incoming Pipeline Relief				
	CRH Sales LACT	CRH Suction				
	CRH Sales LACT	CRH Discharge				
	Sinclair Sales LACT	Pump Discharge Relief to Suction				
	Sinclair Sales LACT	Pipeline Relief Valve				
	Sinclair Sales LACT	Suction Piping Relief				

Overfill Protection Systems

Date	Tank	Alarm Tested OK? (Y/N)	Alarm Reset? (Y/N)	Tested By Initials
10/1/15	1010			
10/1/15	1011			

Inspected by: _____

Signed: _____ Date: _____

activities shall record the date and types of activities conducted, and list the participants of the activity. These records shall remain on file for a minimum of five (5) years.

3. Operations shall maintain logs recording all notifications of planned or ongoing excavation activities. Operations shall record the information and immediately relay this information to the Area Supervisor or designee. The Area Supervisor or designee is to compile all applicable information.

4. Pertinent information on notifications made through any one-call system that is recorded and maintained by the system need not be duplicated in Company files.

5. Telephone logs and one-call notifications that require action shall be maintained for five (5) years or per state requirements whichever is longer.

Encroachment to Company Facilities

This section applies to all facilities and provides Bridger Swan Ranch guidelines to handle construction projects that encroach upon Bridger Swan Ranch's buffer zone, fee owned property, easements, etc. such encroachments must be inspected to prevent damage to the pipeine facilities and protect the public an employees. Companies or infividuals seeking to cross any of Bridger Swan Ranch's pipeline systems should complete the line crossing encroachment permit.

Activities near the pipeline facilities that may require inspection include:

- Blasting
- Installing foreign pipelines
- Installing electric cables, telephone or cable TV lines
- Drilling holes for poles, posts, anchors or oil, water and gas wells
- Installing parking lots, driveways, mobile homes, garages, shed, swimming pools, barns, junkyards or trees
- Any other activities that may require excavation
- Crossing pipelines with heavy equipment
- Removing cover from pipelines (agricultural land leveling, road or highway construction, drainage work, etc.)

Basic Rights

If a third party's activities threaten safely operating Bridger Swan Ranch's facilities, Bridger Swan Ranch may order the third party to discontinue such action. If a third party damages a pipeline or other facility, Bridger Swan Ranch has the right to reimbursement for such actions.

Bridger Swan Ranch has certain basic rights in the land through easements, franchises, permits, license agreements, leasehold, fee ownership, etc., that allow

for constructing and operating Bridger Swan Ranch facilities. The value and extent of Bridger Swan Ranch's rights depend upon the underlying agreement's terms and conditions. Bridger Swan Ranch has the right to act in accordance with terms and conditions of the underlying agreement. In cases where Bridger Swan Ranch owns the property in fee, any encroachment on the property is considered trespassing. The company is prepared to take any ledal action necessary to portect its real and personal property rights and the safety and property of other persons.

Basic Responsibilities

When Bridger Swan Ranch's pipeline is identified by pipeline markers, stakes or by telling a third party where the line is located, such identifiers must be accurate and comply with the requirements of state One-Call organizations.

Surveillance and Reporting

Be alert for upcoming projects that may endanger Bridger Swan Ranch pipelines or facilities. If you observe construction activity that may involve Bridger Swan Ranch pipelines or facilities, immediately inform the appropriate supervisor. If the appropriate supervisor cannot be reached, notify the next available supervisor.

The public is often aware of projects, including underground phone, electrical, sewer and water facilities and street construction projects long before work begins. Since rural road construction and land leveling are less publicized, inform area contractors and road crews of Bridger Swan Ranch line locations and the rules regarding construction activity.

Notify your supervisor of any construction projects that may encroach on Bridger Swan Ranch's land or land rights or any activity that will negatively affect or endanger Bridger Swan Ranch's assets.

Immediately investigate any construction activity near Bridger Swan Ranch pipeline to see that proper procedures are or were followed. To prevent facility damage and protect safety, a Bridger Swan Ranch representative should be present with communications equipment and a vehicle during construction activity on or near Bridger Swan Ranch pipeline facilities. The representative should park the vehicle a safe distance from the construction activity.

The following are guidelines to be aware of during construction near Bridger Swan Ranch facilities:

- Maintain minimum horizontal and vertical clearances outlined in Tables 1 and 2 of this section

- Bridger Swan Ranch's pipeline should be crossed at 90-degree angles plus or minus 10 degrees

- Allow adequate space to maintain and replace involved facilities
- Prevent detrimental interference to cathodic protection facilities
- Prevent the influence of alternating current on Bridger Swan Ranch pipelines and related facilities
- Prevent hazardous working conditions for personnel operating and maintaining the pipelines
- Electrical bonding or any conductive connection between a Bridger Swan Ranch pipeline and any other pipe, cable or associated structure is prohibited, except by specific approval from regional corrosion personnel.

Excavating Pressurized Lines

Before excavation, the line must be located with a water probe, probe rod, vacuum truck or exposed by hand. If a probe rod must be used, inspecting the coating in the excavated area is required and any damaged areas must be repaired before backfilling. DO NOT locate pressurized lines using power equipment.

Power equipment excavation should be done parallel to the pipeline unless right-of-way congestion prevents adequately positioning excavating equipment. Digging across the line with power equipment should be avoided wherever possible.

Do not operate power equipment closer than 18-inches to the line. Remove material less than 18-inches from the pipeline by hand or by crumbling the material into the ditch by hand so power equipment can remove it.

A spotter will work with the equipment operator to ensure the pipeline or coating is not damaged. Report any damage to the pipeline to the Company's supervisor immediately.

Excavation activities are documented on the Excavation Inspection Report. Foreign line crossings are documented on the Foreign Structures Report.

Horizontal Distance

When new facility construction parallels the Company's transmission or gathering pipelines, horizontal clearances shall be as shown in Table 4. Establish any horizontal clearance less than that specified in the table by agreement between the Company and the underground facility's owner.

Table 4 - Horizontal Distance from Company Facilities

Facility	Horizontal Distance from Company Facilities
Buried Pipelines	At least 10 feet
Buried telephone cable	At least 10 feet
Overhead telephone cable	At least 25 feet
Buried electric cables 440 VAC or less	At least 10 feet
Buried electric cables 440 VAC to 37.5 KVAC	At least 25 feet
Overhead electric lines 37.5 KVAC or less	At least 25 feet
Buried or overhead electric lines – facilities over 37.5 KV, A.C. or D.C. electric cable	By agreement

Follow recommended minimum vertical clearances as shown in Table 4 when repairing, installing or constructing pipelines or cables across a Company pipeline. Maintain underground utility depth to obtain these clearances across the entire easement

Table 5 - Vertical Distance from Company Facilities

Facility	Vertical Clearance from Company Facility
New construction	When installing underground utilities, the last line should be placed beneath all existing lines unless it is impossible or unreasonable to do so.
Buried steel pipelines	At least a 12 inch vertical earth separation from a Company pipeline less than 12 inches in diameter. At least a 24 inch vertical separation from a Company pipeline 12 inches or greater i diameter.
Buried non-steel pipelines	At least a 12 inch vertical earth separation from a Company pipeline less than 12 inches in diameter. At least a 24 inch vertical separation from a Company pipeline 12 inches or greater i diameter. Install flagging tape above the Company pipeline, approximately 3 feet on each side and directly over the cable or utility line for a distance of at least 15 feet.
Buried telephone and electric cables – 440 VAC or less	At least a 12 inch vertical earth separation from a Company pipeline less than 12 inches in diameter. At least a 24 inch vertical separation from a Company pipeline 12 inches or greater i diameter. The cable must have a nonconductive outer sheath extending at least 10 feet each direction from the Company pipeline. Install flagging tape above the Company pipeline, approximately 3 feet on each side and directly over the cable or utility line for a distance of at least 15 feet.
Fiber optic cables	Efforts should be made to install all fiber optic crossings at least 3 feet below Company pipelines. Installing a concrete barrier is recommended, but may not be practical when the cabl is a direct bore. In that case, the clearance and markings become more critical.
Buried electric cables 440 VAC to 37.5 KVAC	At least a 12 inch vertical earth separation from a Company pipeline less than 12 inches in diameter. At least a 24 inch vertical separation from a Company pipeline 12 inches or greater i diameter. The cable must have a nonconductive outer sheath extending at least 10 feet each direction from the Company pipeline. Install flagging tape above the Company pipeline, approximately 3 feet on each side and directly over the cable or utility line for a distance of at least 15 feet.
Facility over 37.5 KVAC	Vertical separation of an electric cable or line operating at more than 37.5 Kilovolts A.C. or D.C will be established by agreement.

Directional Drilling

A Bridger Swan Ranch representative must follow the procedures outlined in this section when a third party, contractor, etc. will perform directional drilling operations parallel to and/or within the minimum specified clearance of the Company's pipeline facilities.

The Bridger Swan Ranch representative can ask a contractor to stop drilling if the

operation is deemed unsafe or there is a concern that damage to the pipeline facilities may occur. A contractor is responsible for any damage to the pipeline facilities incurred because of the drilling.

Before starting a job, the contractor will:

- Notify One-Call for a utility locate request

- Contact Bridger Swan Ranch and advise of the proposed drilling route, expected clearance between the drilling tool and pipeline facilities and construction schedule

- Demonstrate that the boring tool can be accurately positioned

The Bridger Swan Ranch representative will periodically measure clearance between the boring tool and pipeline facilities. A third party's facility must maintain the vertical and horizontal clearances described in Tables 1and 2.

Upon completion of the directional drill, the Bridger Swan Ranch representative will:

- Conduct a leakage survey along the length of the directional drilled path

- Conduct another leakage survey within 30 to 60 days from the previous leakage survey to verify pipeline integrity

- The Third Party will develop as-built drawings. Drawings should indicate the third party's name, location of its utility line and the measured horizontal and vertical separation between the third parties and Company's facilities

Land Leveling or Improvement - Company Notified

When advance notice of proposed land leveling or improvement is received, field personnel will notify their Supervisor. Submit requests to reduce pipeline cover or construction over the pipeline to ROW for review. Upon notification, visit the site as soon as possible to determine to what extent theBridger Swan Ranch pipeline may be affected. Evaluate alternatives for sloping the land or making improvements to avoid relocating the Bridger Swan Ranch pipeline or removing soil over a buried line. Conduct a cover survey, profile and mark the pipeline's location. If the leveling or improvement cannot be accomplished without relocating or modifying the Bridger Swan Ranch pipeline, gather pertinent facts, including:

- The exact location and description of the proposed leveling or improvement
- A description of the required modification to Bridger Swan Ranch pipeline facilities
- Possible alternatives to avoid disturbing Bridger Swan Ranch pipeline

The Terminal Manager will review the information and determine required

modifications. Details and costs will be developed and a determination will be made as to what agreements are necessary between Bridger Swan Ranch and landowner.

Land Leveling or Improvement - Company Not Notified

When land leveling or improvements involving a Bridger Swan Ranch pipeline or facility are started without prior approval, notify the supervisor immediately. Contact the Terminal Manager and determine Bridger Swan Ranch's rights. Inspect the premises immediately and take necessary steps to correct or prevent unsafe conditions.

Blasting and Seismic Activity

Provide Engineering/ Consultant the following information when blasting is anticipated:

- Configuration of explosive charges (point, line or grid)
- Number of charges, spacing between charges, types of charges and weights
- Distance between pipeline and nearest charge for each pipeline
- Angle between pipeline and explosive line or grid (if grid, number of rows and charges per row)
- Pipe description of each pipeline
- Alternatives to blasting that were considered

Proper blasting procedures and minimum distances to avoid pipeline damage must be determined through engineering analysis. Standoff distances of 100 feet for line or grid configurations containing a total charge weight of greater than 100 pounds are required.

Buildings near Pipelines

It is recommended that buildings be a minimum of 25 feet or greater (if required by local ordinances) from any pipeline or off the pipeline easement, whichever distance is greater.

External Corrosion Control

Reference: 49 CFR §§ 195.557-577

Scope

These procedures establish methods for control and monitoring of external corrosion on buried or submerged pipelines, breakout tanks, and structures.

Procedures

1. Protective Coating:

   A. Each buried or submerged pipeline installed after March 31, 1970 (for interstate pipelines) or October 20, 1985 (for intrastate pipelines) or August 10, 1994 (for low-stress--less than 20% SMYS--pipelines) is to be coated prior to installation with that coating most suited to the laying conditions to be encountered and to the service conditions which will prevail during the life of the facility (§195.557).

   B. Coating material for external corrosion control under §195.557 shall:

      (1) Be designed to mitigate corrosion of the buried or submerged pipeline;

      (2) Have sufficient adhesion of the metal surface to prevent under-film migration of moisture;

      (3) Be sufficiently ductile to resist cracking;

      (4) Have enough strength to resist damage due to handling and soil stress;

      (5) Support any supplemental cathodic protection; and

      (6) If the coating is an insulating type, have low moisture absorption and provide high electrical resistance.

   C. Coatings on joints, fittings, and tie-ins shall be coated with materials compatible with the coatings on the pipe.

   D. All external coating required by §195.557 shall be inspected using holiday detectors to check for any faults not observable by visual examination prior to lowering the pipe into the ditch or submerging the pipe. Any damage found shall be repaired.

2. Cathodic Protection:

   A. Each buried or submerged pipeline that is installed, relocated or replaced after March 31, 1970 (for interstate pipelines) or October 20, 1985 (for

intrastate pipelines) or August 10, 1994 (for low-stress--less than 20% SMYS—pipelines) shall have cathodic protection. The cathodic protection shall be operational within 1 (one) year after the pipeline is installed, relocated, replaced, or otherwise changed (§195.563).

B. Breakout Tanks (§ 195.565)

(1) Cathodic Protection shall be installed to protect the bottom of any above ground breakout tank of above 500 barrels of capacity in accordance with ASI/API RP 651.

(2) Adequacy of cathodic protection on breakout tanks shall be assessed in accordance with standards and procedures in paragraph D of this section.

(3) Cathodic protection on breakout tanks shall be surveyed at least once each calendar year but with intervals not exceeding fifteen (15) months in accordance with standards and procedures in paragraph E of this section.

C. Test Leads (§ 195.567)

(1) Each buried or submerged onshore pipeline that is required to have cathodic protection under § 195.563 shall have electrical test leads.

(2) The test leads shall be located at sufficient intervals to obtain electrical measurements indicating the functionality of cathodic protection.

(3) Any test leads that are installed shall have enough slack so that backfilling will not unduly stress or break the test lead.

(4) Test lead wire shall be attached by thermite welding, pin brazing, or silver soldering. The connection shall be tested for mechanical strength and electrical continuity. The connection shall not cause a stress concentration on the pipe.

(5) Any test leads that are installed in conduit shall be insulated from the conduit.

(6) All exposed portions of the connections must be thoroughly cleaned and coated. The coating shall be electrically insulating and compatible with the pipeline coating and the insulation on the test lead.

(7) All test leads shall be maintained such that the condition of the test lead allows electrical measurements to be accurately taken.

D. Determining Adequacy of Cathodic Protection (§ 195.571)

(1) Structures will be considered adequately protected if they meet at least one of the criteria defined in paragraphs 6.2 and 6.3 of NACE SP 0169. Determination of whether the structures meet the various criteria and which criterion is applicable will be made by the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs.

(2) Except for special conditions discussed in paragraphs C(4) and C(5) of this section, a minimum voltage of -850 millivolts (mV) measured across the pipe structure-electrolyte interface to a saturated copper-copper sulfate reference electrode is required. This measurement may be taken with the current applied; however, in cases where the reference electrode is not placed at the pipe structure-electrolyte interface or the metallic connection to the pipe is remote from the measurement location, correction for IR drop(s) must be considered.

(3) If criteria in paragraph C(2) are not used, a 100 mV polarization shift criteria can be used except for special conditions discussed in paragraphs C(4) and C(5). When a 100 mV polarization shift is selected, a minimum of 100 mV of cathodic polarization (i.e., 100 mV shift between the instant off potential and the depolarized potential or native potential) measured between the structure surface and a stable reference electrode contacting the electrolyte is required. Methods and frequency for verifying this criterion shall be determined by the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs.

(4) The Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs may identify special conditions that exist where accepted criteria are not effective at controlling corrosion and other methods must be used to achieve protection.

(a) Sulfides, bacteria, complexing agents, elevated temperatures, acid environments, and dissimilar metals may require potentials more negative than -850 mV or more than 100 mV of polarization.

(b) Cases involving stray currents, telluric currents and stray electrical gradients may require other considerations.

(c) A net protective current from the electrolyte to the pipe surface as measured by an earth current technique may be used on bare or ineffectively coated pipelines where general or long line corrosion activity is of primary concern.

(d) Potentials that result in excessive generation of hydrogen will be avoided to minimize the possibility of cathodic disbonding of coating systems or damage to the pipe.

(e) In some situations, such as aerated high resistivity soil or concrete, a less stringent criterion may be sufficient.

(f) Periodic in-line inspection (internal intelligent pig) can be used to determine the presence or absence of pitting corrosion. Absence of corrosion damage or the halting of its growth may indicate effective corrosion control.

(5) The Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs may approve other standard reference half-cells to be substituted for the saturated Cu-$CuSO_4$ half-cell with appropriate correction of potential to an equivalent saturated Cu-$CuSO_4$ potential.

E. Monitoring of Cathodic Protection (§ 195.573)

(1) Each buried or submerged pipeline facility that is under cathodic protection is to be surveyed at least once each calendar year but with intervals not exceeding fifteen (15) months. The applied protection shall be considered adequate when one or more of the criteria in Paragraph C above has been satisfied.

(2) The annual surveys will be the structure-to-electrolyte potential surveys consisting of potential measurements made at test leads, valves, and other test points where electrical contact can be made by qualified personnel. Test points used when taking structure-to-electrolyte readings over or near an anode or anodes shall not, by themselves, be considered representative readings. Additional monitoring locations may be identified by the Manager of Compliance or designee. The readings for a survey area (chart or segment) are to be taken within an established time frame to allow for a sound engineering analysis of the results.

(3) Within two years of the installation of cathodic protection, the conditions that would require a close-interval survey or comparable technology is necessary will be identified, in accordance with paragraph 10.1.1.3 of NACE SP 0169.

(4) Cathodic protection impressed current sources, diodes, critical bonds and reverse current switches will be monitored a minimum of six times each calendar year, but with intervals not to exceed 2½ months. Impressed current sources include rectifiers, solar generators, thermo-electric generators, and engine generators. Additional monitoring must be performed at critical sources as determined by Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs.

(5) All other bonds (system continuity, non-critical interference, etc.) are to be monitored at least once each calendar year but with intervals not exceeding fifteen (15) months.

(6) If there is an indication that a deficiency exists, the deficiency is to be documented and reported to the Manager of Compliance who will initiate prompt remedial action to correct the deficiency. This action must be carried out by qualified personnel. The deficiency will be corrected as required by §195.401(b) or §195.452(h) in the event that the deficiency involves a pipeline in an integrity management program.

F. Electrical Isolation (§ 195.575)

(1) Electrical isolation is to be maintained between the Company's buried or submerged facilities and any foreign underground structures or other Company buried or submerged facility unless they are connected electrically and cathodically protected as a single unit.

(2) One or more insulating devices will be installed where electrical isolation of a portion of a pipeline is necessary to facilitate the application of corrosion control.

(3) All insulating devices will be inspected and electrically tested to assure that isolation is adequate.

(4) All valve boxes, platforms, and casings are to be checked for isolation each calendar year but at intervals not exceeding fifteen (15) months and the results recorded in the appropriate corrosion control survey.

(5) The monitoring frequency of other isolation devices will be determined by the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs.

(6) Testing isolation devices, casings, boxes and platforms shall be conducted by qualified personnel.

(7) An insulating device may not be installed in an area where a combustible atmosphere is anticipated, unless precautions are taken to prevent arcing. Galvanic grounding cells, arc dissipation devices or equivalent protection will be used across the insulating device to prevent arcing in areas where a combustible atmosphere is anticipated.

(8) When a Metal Oxide Varistor (MOV) or other arc dissipation device is installed across an isolation device in a combustible atmosphere to prevent arcing, it must be monitored annually for effectiveness.

(9) Special design considerations by the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs are necessary where the pipeline is in close proximity to electrical transmission towers, counterpoise, footings, ground cables, or other areas where it is reasonable to foresee fault currents or unusual risk of lightning. Design considerations will include

protection against damage from fault currents or lightning and may include the use of ribbon type galvanic anodes to protect the pipeline from fault currents and lightning damage. Protective measures will include protection at insulation devices. The installation of galvanic ground beds may be required to allow the dissipation of transient currents.

(10) Upon notification by a qualified person that a casing, valve box, brace legs or platform is not electrically isolated from the pipeline, or that an isolation device is no longer providing proper electrical isolation, the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs shall, within eighteen (18) months, provide appropriate remediation. However, if potentials fall below protective levels, remedial measures will be taken as specified in this section of the manual.

(11) Remediation design must consider public and personnel safety as the first priority.

(12) An attempt to clear a shorted casing must be made if it is practical and can be safely accomplished.

(a) The Area Supervisor or designee and Manager of Compliance shall be consulted to determine if a reduction in pressure is necessary. Before any movement of a loaded pipeline is attempted, stress calculations must be requested from the Operations Manager or designee. A site-specific study must be performed of construction and historical parameters. The evaluation should take into consideration the type of line pipe, the type of circumferential welds, engineering notes from the original construction, the location of any wrinkle bends in the vicinity, the corrosion history, the isolation history of the casing, and any other factors which might affect the pipe as it is being moved.

(b) If an in-service attempt to clear a shorted casing is made but is not successful, the following further measures may be taken:

1. Additional cathodic protection as determined by the Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs may be required;
2. Shorted casings are to be re-evaluated prior to next scheduled shutdown to determine if clearing the short is practical.

(c) The following measures may be used to address shorted casings:

1. The preferred method of repair is removal of the casing or installation of a new carrier pipe without a casing;

2. The existing carrier pipe must be evaluated to ensure that the pipe has adequate strength to withstand all loads and meets the requirements of the Company standards before the casing is removed;
3. Changing the position of the carrier pipe to eliminate metal to metal contact;
4. Changing out the carrier pipe;
5. Examining the carrier pipe by other methods such as an internal intelligent pig; or
6. Other approved measures not included on this list.

(d) If an attempt to clear a shorted casing cannot be safely accomplished or such an attempt is impractical because of the characteristics of the site, then the following shall be done:

1. The Area Supervisor or designee shall notify the Operations Manager and the Manager of Compliance in writing describing the reasons why such an attempt to clear the short is unsafe and/or impractical;
2. Additional cathodic protection as determined by the Area Supervisor or designee, Manager of Compliance and/or persons qualified by Company or other approved Company qualification programs may be required;
3. If practical, inspect the pipeline by means of an internal inspection device such as an intelligent pig; and
4. If a shorted casing has been deferred, re-evaluate prior to next scheduled shutdown to determine if clearing the short is practical.

(e) The Area Supervisor or designee and/or persons qualified by Company or other approved Company qualification programs may determine additional monitoring and/or remediation measures are required.

G. Interference Currents (§ 195.577)

(1) Reasonable effort shall be made to update appropriate documentation or as-built drawings to show each known location where the Company's pipeline is crossed by other buried structures such as pipelines, telephone cables, electrical cables, plastic sheathed telephone cables, sewer lines, drain lines, water lines, etc.

(2) Every reasonable effort should be made to ascertain the ownership of a foreign structure.

(3) Requests for joint interference tests by owners of foreign structures will receive a timely response.

(4) Every reasonable effort will be made to determine if the Company's cathodic protection has any adverse effect on existing adjacent underground metallic structures.

(5) During the annual corrosion control surveys, the pipeline will be observed for the presence of interference currents, stray currents, telluric currents or any other extraneous currents, which could be detrimental to the integrity of underground systems.

(6) During the annual corrosion control surveys, the pipeline will be monitored for the presence of induced AC currents in areas where induction is possible and could be detrimental to the integrity of the pipeline or pose a safety hazard to the public or operating personnel.

(7) If indications of interference, stray current or excessive AC potentials are observed, qualified personnel will perform testing and appropriate remedial action. Impressed current or galvanic anode systems will be designed and installed to minimize any adverse effects from interference currents on existing adjacent metallic structures.

H. Examinations of Buried Pipeline When Exposed (§ 195.559)

(1) Whenever any portion of any buried pipeline has been exposed for any reason, the portion exposed is to be examined for evidence of external corrosion, mechanical damage and, if coated, the condition of external coating for damage or deterioration. The condition of the external pipe surface and coating for each exposure must be documented on the appropriate form or report, even when visual examination of the pipe and coating is excellent.

(2) If external corrosion is found that requires repair, replacement or other action to comply with 49 CFR § 195.585, qualified personnel under Company or other approved Company qualification programs will conduct further investigation, circumferentially and longitudinally (by visual examination, indirect method, or both) sufficiently to determine whether additional corrosion exists requiring more remedial action in the vicinity of the initially discovered corrosion.

(3) Such investigation shall be by visual and/or indirect method(s) and to the extent dictated by sound professional judgment and applicable company procedures and standards.

Responsibilities

The Area Supervisor or designee is responsible for compliance with the above requirements and procedures of this section.

The qualified personnel responsible for corrosion control and the Area Supervisor or designee shall have a thorough knowledge of all portions of this procedure for which they are responsible (see § 195.555).

Records

All corrosion control records shall be retained at the Office of Record for the life of the facility.

Emergency Response Training

Reference:	49 CFR § 195.403

Scope

These procedures provide operation and maintenance personnel with training to recognize and take proper action during an emergency.

Procedures

1. All Company employees and maintenance contractors will be trained to carry out emergency procedures contained within this manual.

2. Company employees and maintenance contractors will be trained on the characteristics of the products transported, including miscibility with water, flammability of an air/product mixture, effects of vapors, including odorless vapors, and any other considerations related to safely transporting the product.

3. Company employees and maintenance contractors will be trained to recognize emergencies, conditions that are likely to cause emergencies and situations that can lead to emergencies. They will be trained to understand the effects of a pipeline failure, equipment malfunction, and an emergency that causes a hazardous liquid release. They will be trained to react appropriately and take corrective action when encountering any of the above listed situations. The employees will be trained to take all steps necessary to control any release of hazardous liquid and to minimize the potential for fire, explosion and environmental damage.

4. Company employees and maintenance contractors will have training on recognizing the types, sizes and consequences of fires including hazardous liquid fires. They will also have training on the types and usage of portable fire extinguishers as well as any other on-site fire control equipment. If feasible, a simulated pipeline emergency will be part of the fire extinguisher training program.

5. The Area Supervisor or designee will maintain a thorough knowledge of the emergency response procedures and training program contained within this manual.

6. At least once each calendar year, at intervals not exceeding 15 months, the Company will:

   A. Review the performance of all personnel in meeting the objectives of the emergency response training program; and

   B. Make appropriate changes to the emergency response training program, as necessary, to ensure the effectiveness of the program.

Responsibilities

Responsibility for these procedures rests with the Area Supervisor or designee.

Records

Pertinent documentation concerning these procedures will be maintained at Office of Record.

Pipeline Repair	
Reference:	**49 CFR §§ 195.28, 195.230, 195.234, 195.401, 195.422**

WELDING, NDT AND REPAIR/REMOVAL PROCEDURES

WELDING GENERAL

A qualified welder, in accordance with welding procedures, qualified to produce welds meeting the requirements of this section must perform welding. The quality of the test welds used to qualify the procedure is determined by destructive testing. A ground wire may not be welded to the pipe or fitting that is being welded.

Each welding procedure must be recorded in detail, including the results of the qualifying tests. These records are retained and followed whenever the procedure is used.

WELDER QUALIFICATION PROCEDURES

GENERAL

This procedure lists qualified welding procedures for welding on the Bridger Swan Ranch's hazardous liquids pipeline facilities. All work will be done in conformance with 49 CFR Part 195, API Standard 1104 20th Edition or ASME Section IX 2007 Edition, whichever code is applicable to the work being performed.

Perform all welding in conformance with the qualified welding procedure established for pipe size, wall thickness and material as provided in the applicable Welding Procedure. When welding materials of two separate material groups; use the procedure for the higher strength group.

PROCEDURE QUALIFICATION

Each pipeline welding procedure or portion thereof shall be qualified in accordance with API 1104 20th Edition or ASME Section IX 2007 Edition. Only destructive testing performed in accordance with the applicable welding standard may be used to qualify the test welds for the proposed welding procedure. The Plan Administrator will provide assistance with the qualification process. Welding procedures will be developed, qualified and published as necessary.

A non-standard welding procedure may be developed, qualified, recorded and used on specific projects when no standard welding procedure is available that meets the project needs or when, with the Bridger Swan Ranch's approval, the contractor elects to furnish its own qualified welding procedures. The Plan Administrator shall be consulted whenever a non-standard welding procedure is to be qualified and used on the Bridger Swan Ranch 's pressurized facilities.

The Project Manager shall be responsible for assuring the proper welding procedure qualification and for maintaining proper records of such at the construction site during construction. The non-standard qualified procedure, along with the supporting procedure qualification records shall be included in the project as-built documents and a copy sent to the Plan Administrator.

TRAINING

Review this information and the applicable welding procedures as necessary before performing the work.

DOCUMENTATION

Qualified welding procedures and welder qualification records are kept on file in the main office.

WELDER QUALIFICATION AND TESTING

Each welder must be qualified in accordance with API Standard 1104 20th Edition, Section 6 or ASME Boiler and Pressure Vessel Code, Section IX 2007 Edition. Supervisors are responsible for testing and maintaining welders' qualifications in conformance with this procedure.

No welder may weld with a particular welding process unless, within the preceding 6 calendar months the welder has:

Engaged in welding in that process **and**

Had one weld tested and found acceptable under API 1104 20th Edition. Each welding procedure must be recorded in detail including results of qualifying tests.

QUALIFICATION REQUIREMENTS

Bridger Swan Ranch will administer welder qualification tests at its discretion. A welder shall meet one of these eligibility requirements to be tested as a welder:

The person has passed a similar test recently

The person has successfully passed a welding training program with an accredited welding school or shows evidence of at least 12 months of welding experience

Bridger Swan Ranch is confident that the welder has comparable training and experience A Company welder must pass the Company Welder Tests listed below to be qualified contract welder must pass the Contract Welder Tests to be qualified.

COMPANY WELDER TESTS

Company and contract welders shall pass annual visual and destructive tests to be qualified for the appropriate welding procedure. A Company welder must pass Test 1 and 2 to be qualified:

Test 1 - API 1104 Test

The welder must complete a girth weld test using 12-inch OD, 0.250-inch or greater wall thickness minimum, Grade B or higher grade pipe nipples welded in either the horizontal plane or inclined from the horizontal plane at an angle of not more than 45 degrees. Welding will be done with a qualified cellulosic welding rod procedure.

The welder must complete a branch weld test using 12-inch OD, 0.250-inch or greater wall thickness minimum, Grade B or higher grade pipe welded with the run pipe in the horizontal position and the branch pipe axis extending vertically down. A full sized hole shall be cut in the run pipe. Welding will be done with a qualified cellulosic welding rod procedure.

The supervisor can require a welder to test on pipe similar to the highest grade and/or largest diameter pipe in the region.

Test 2 - Low Hydrogen Welding Test

The welder must complete longitudinal butt and fillet welds on a split sleeve (0.188-inch or thicker) installed on 12-3/4-inch OD pipe using a qualified low hydrogen (E7018) welding rod procedure and welded in conformance with API RP1104 20th Edition. The sample will be tested according to API RP1104 20th Edition.

Test 3 - ASME Section IX Test

The following test is optional, depending on regional management welding requirements:

The welder must complete the following using a qualified cellulosic rod welding procedure:

Girth weld test on 12-3/4-inch OD, 0.250-inch wt., Grade B or better pipe welded in the fixed 6G position

The sample will be tested in conformance with ASME Section IXIX 2007 Edition requirements and will qualify the welder to the essential variable limits specified in ASME Section IXIX 2007 Edition.

Special Welding Process Tests

The Plan Administrator may qualify a welder using an additional welding process if required for the operating area. The welder must follow Company-approved welding procedures when testing and welding.

CONTRACT WELDER TESTS

The test weld shall be destructively tested and accepted according to the requirements of the applicable code.

If a welder's qualification limits of essential variables are exceeded by a procedure specification, the welder shall be re-qualified before using the new procedure.

A welder may be required to re-qualify if the Company Representative determines a need to verify welder competency. A welder who fails a qualification test shall not be permitted to weld on any Company facilities. A welder may take a retest upon approval of the Company Representative.

API 1104 Test

The welder shall complete a girth weld test using 123⁄4 inches or larger OD, 0.250 inch wall thickness minimum, Grade B or higher-grade pipe welded with a qualified cellulosic welding rod procedure and tested according to qualified procedure. If two welders are making a weld on a 16-inch O.D. or larger pipe, each welder shall complete an entire weld on 1⁄2 of the pipe diameter, starting at the top of the pipe and ending at the bottom. The number of required weld straps shall be taken from each completed weld performed by each welder.

In addition, the welder shall complete a branch weld test using 123⁄4 inch OD, 0.250 inch wt. minimum, Grad B or higher grade pipe welded with a qualified cellulosic welding rod procedure and tested according to qualified procedure.

ASME Section IX Test (Optional)

The welder shall complete the following using a qualified ASME welding procedure:

Girth weld test on 12 3/4-inch OD, 0.188-inch wt., Grade B or better pipe welded in the fixed 6G position.

Both samples shall be tested in conformance with ASME Section IX 2007 Edition requirements and shall qualify the welder to the essential variable limits specified in ASME Section IX 2007 Edition.

MAINTAIN QUALIFICATION

A qualified welder can re-qualify using a particular welding process only if the welder can substantiate having engaged in welding with that process within the following time frame:

Within the preceding 6 calendar months for a first-time welder or a welder who:

- Performs welds infrequently using API 1104 20th Edition acceptance criteria
- Performs welding or is subject to welding on a CFR 49 Part 195 facility
- Performs welding on facilities that are tested under the acceptance criteria of ASME Section IX 2007 Edition

Within the preceding 7½ calendar months for a welder who regularly performs production welds that are tested under API 1104 20th Edition acceptance criteria.

The Plan Administrator must have adequate documentation to verify the welder's initial test results and any subsequent test results prior to re-qualification testing. The welder must make all weld passes for a re-qualification weld and demonstrate the ability to weld in all positions (i.e., make at least one-half of a girth weld from the top to bottom when two welders are making the test weld).

Welders shall maintain the qualification after the annual qualification date by either:

Passing a visual examination and submitting an acceptable x-ray of a 6-inch or larger production weld.

When the radiograph of a production weld is not available within the specified period, the welder may submit a radiograph of a test weld made on a 12-3/4-inch OD or larger pipe. The qualification is based on the radiographic contractor accepting the weld in conformance with the radiographic limits of acceptability in API 1104 or ASME Section 9 2007 Edition and B31.4 – *Process Piping, depending on the qualification standard*.

Passing a visual and destructive test on a 6-inch OD or larger test girth weld that is acceptable in conformance with Table 1 or ASME Section 9 2007 Edition and B31.4.

To maintain qualification for each welding process previously passed (SMAW, GMAW, etc.), the welder must provide an acceptable x-ray or destructive test for each welding process. If a Company or contract welder fails to maintain qualification within the period permitted, the welder must qualify by performing all initial qualification tests. The Maintenance Manager or Supervisor is responsible for tracking welders' qualification status.

WELDING CHANGES REQUIRING QUALIFICATION

The qualified welder can weld only within the limit of the essential variables in conformance with the applicable welding code and 49 CFR Part 195. If any of the essential variables are changed, the welder desiring to use a new procedure shall be re-qualified.

WELDER TESTING PROCEDURE

Conduct welder qualification testing in the presence of a representative acceptable to the Company. The testing welder is responsible for:

- All welding machine adjustments
- Pipe line-up and fit
- Rod selection and supply
- Branch connection layout, cut and fit
- Test coupon preparation
- The finished weld shall exhibit a neat, uniform and workmanlike appearance
- Be thoroughly brushed and cleaned
- Meet all applicable visual inspection requirements

DESTRUCTIVELY TESTING A WELD

The testing welder will cut the test straps in the manner described by the applicable testing code under the tester's supervision at locations the applicable test requires. Any strap the welder does NDT prepare correctly will be considered a disqualified sample.

The welder will submit straps cut from welds to the tester or a contract laboratory for evaluation. The welder will identify each strap with welder's initials, weld test number and strap test type (i.e., tensile - T, nick - N, root - R, face - F, side - S) using a steel stamp or permanent paint-type metal marker (i.e., Nisson). The straps will be destructively tested and evaluated in conformance with the applicable welding code. The tester will advise welders who fail a qualification test of the reason for failure.

Failed Test

1. A welder who fails any required qualification test for any procedure (API 1104 20th Edition, ASME Section IX 2007 Edition or low hydrogen) will not be allowed to weld using that procedure until passing all qualification tests. The welder will retest upon approval of company representative of an unacceptable test notification.

2. A welder who fails any qualification test may be disqualified or have

welding limitations. The Bridger Swan Ranch representative has the option of requesting a variance to retest the contract welder prior to the end of the 30-day period. The variance request must include acceptable proof of subsequent welder training that occurred after the initial test.

3. TRAINING

Supervisors are encouraged to provide time and outside support for welders to maintain qualification and qualify for new welding procedures when required for the operating area.

WELD, SAFETY, AND INTEGRITY PROCEDURES

WEATHER

Welding must be protected from weather conditions that would impair the quality of the completed weld.

ARC BURNS .

Each arc burn must be repaired or replaced with a new cylindrical section of pipe. If repaired Arc burns must be ground until no evidence of a hardened area exits, by using Ammonium per sulfate or Muriatic Acid. Area will be accepted if not more than 12½% of nominal wall thickness is removed. If it does not pass above reference other repair methods will be reviewed.

WELD STANDARDS OF ACCEPTABILITY

Each weld and welding must be inspected to ensure compliance with Bridger Swan Ranch acceptability standards. Visual inspection must be supplemented by nondestructive testing.

The acceptability of a weld is determined according to the standards in the appropriate section of API 1104 20th Edition. However, if a girth weld is unacceptable under those standards for a reason other than a crack, and if the Appendix to API Standard 1104 20th Edition applies to the weld, the acceptability of the weld may be determined under that appendix.

REPAIR OR REMOVAL OF WELD DEFECTS

Weld defects exceeding the acceptability standards of API 1104 20th'h Edition, Section 5 and Section 6 shall be removed or repaired.

VISUAL INSPECTION OF WELDS

All welds shall meet the visual inspection requirements of Bridger Swan Ranch. A

qualified welding inspector shall examine and accept welds in conformance with the following visual inspection requirements:

Girth arc welds shall be examined for:

Cracks: Any weld with a crack shall be removed

Grinder marks: Excessive grinder marks (as judged by the welding inspector) are not allowed

Pinholes and undercut in the final cap shall be repaired by recapping. Stripping or spot welding is not allowed

Weld metal: At no point shall crown surface be below outside surface of the pipe nor shall it be raised above parent metal by more than 1/16 inch. Two beads shall not be started in the same location. Face of the completed weld shall be approximately 1/8 inch wider than and centered along the original groove Fillet arc welds shall be examined as follows:

- Root pass, hot pass, and all filler passes shall be welded along the entire circumference
- Finished welds shall exhibit a code-compliant appearance and complete penetration around the entire circumference.

NON-DESTRUCTIVE TESTING OF A WELD

Nondestructive testing (NDT) requirements for girth, fillet, branch, and sleeve longitudinal welds are the same for new pipeline construction and pipeline repairs on existing facilities. A weld may be non-destructively tested by any process that will clearly indicate any defects that may affect the integrity of the weld.

Hydrostatically testing welds does not alter or reduce NDT requirements.

Welds shall be inspected by radiographic examination and/or other non-destructive testing methods or removed for physical tests. Contractor shall arrange the work in a manner that will permit maximum weld inspection use and assist in moving radiographic inspection equipment. The minimum number and location of welds to be inspected shall be in conformance with rules set forth in this section.

A weld may be non-destructively tested by any process that will clearly indicate any defects that may affect the integrity of the weld.

Any non-destructive testing of welds must be performed:

In accordance with a written set of procedures for non-destructive testing

With personnel that have been qualified in the established procedures and in the use of the equipment employed in the testing Procedures for the proper interpretation of each weld inspection must be established to ensure the acceptability of the weld. Procedures for the proper interpretation of each weld inspection must be established to ensure the acceptability of the weld under CFR 49 Part 195.228.

During construction, at least 10% of the girth welds made by each welder during each welding day must be non-destructively tested over the circumference of the weld.

All girth welds installed each day in the following locations must be non-destructively tested over the entire circumference, except that when non-destructive testing is impracticable for a girth weld, it need not be tested if the number of girth welds for which testing is impracticable does not exceed 10% of the girth welds installed that day:

Location where a release could reasonably be expected to pollute a stream, river, lake, reservoir, or other body of water, and any off-shore area

Within railroad or public road ROW

At overhead road crossings and within tunnels

Within the limits of any incorporated subdivision of a state government

Within populated areas When installing used pipe, 100% of the old girth welds must be non-destructively tested. At pipeline tie-ins, including tie-ins of replacement sections, 100% of the girth welds must be non-destructively tested.

NDE METHODS

This procedure defines Bridger Swan Ranch requirements and standards for Non-Destructive Examination, including, but NDT limited to: Radiographic, Magnetic Particle, and Liquid Penetrant Test Methods.

Non-Destructive Testing (NDT/ NDE) Contractor shall understand and conform to NDT requirements for the State in which work will be performed. NDT Contractor is responsible for notifying applicable State regulatory agency and securing any necessary approvals/permits before dispatching crews to work sites. NDT Contractor shall advise Bridger Swan Ranch Representative of any specific State requirements that supersede this standard before dispatching a crew. NDT Contractor shall provide all qualified labor required for non-destructive examination and physical testing activities, including necessary transportation and safety equipment. NDT

Contractor shall replace any NDE personnel deemed by the Bridger Swan Ranch Representative as unable to perform their duties. NDT Contractor shall supply all tools and equipment necessary for assembling, operating, repairing, and routinely maintaining NDE equipment. Transporting, storing, setting-up, maintaining, and calibrating all equipment are solely the responsibility of the NDT Contractor. All NOE equipment and employees shall conform to all applicable Federal and State regulatory agency requirements, local codes, and this standard. NDT Contractor shall control all NDE activities at the job site.

NDE testing shall conform to, or exceed requirements of, the following codes and standards, as applicable:

CFR 49 Part 195 - Pipeline Safety Regulations, most recent edition

API 1104 20th Edition - Standard for Welding Pipelines and Related Facilities (applicable sections), most recent DOT-approved edition

ASME Section V 2007 Edition - Nondestructive Examination, most recent DOT- approved edition

Practice, most recent DOT-approved edition

ASTM E709 - Standard Recommended Practice for Magnetic Particle, most recent DOT- approved edition

ASTM E165 - Standard Practice for Liquid Penetrate Inspection Method, most recent DOT-approved edition

ASTM E142 - Standard Method for Controlling Quality of Radiographic Testing, most recent DOT-approved edition

RADIOGRAPHIC EXAMINATION

At the job site, the Radiographic Technician is required to qualify an approved Radiographic Procedure Specification and document it. In addition, the Technician shall supply the Bridger Swan Ranch Representative with a copy of his/her latest certification and annual eye exam. Keep the Technician's certification, radiographic procedure documentation and annual eye exam in the project file for the life of the pipeline.

Refer to API Standard 1104 20lh Edition or ASME Section IX 2007 Edition for the applicable radiographic inspection requirements.

Record all nondestructive testing results on the NDT daily progress report the NDT contractor supplies. Include the x-ray daily reports in the project file in the Main Office, where they will be retained for the useful life of facility.

MAGNETIC PARTICLE EXAMINATION

NDT Contractor shall submit a copy of the magnetic particle testing procedure for the 'yoke' method for review and approval of the Bridger Swan Ranch Representative. Prior to the start of work, NDT Contractor shall submit certification papers - that all personnel performing testing are qualified and certified in conformance with SNT-TC-1A, to Company Representative.

Magnetization equipment may only be an AC/DC yoke. The current induction method is NDT allowed. Only dry, contrasting color powder ferromagnetic particles shall be used. Bridger Swan Ranch Representative shall approve equipment for powder application during the practical demonstration. NDT Contractor shall provide a magnetic field indicator (ASTM E709) during procedure qualification and while performing the work.

Each procedure shall be qualified at the job site by NDT Contractor demonstrating procedure's ability to detect known defect indications. A Bridger Swan Ranch Representative shall witness qualification tests.

LIQUID PENETRANT EXAMINATION

NDT Contractor shall demonstrate that the procedure reveals known defect indications normally detected on examined items (i.e., PSM-5 panel or equal). Bridger Swan Ranch Representative shall witness qualification test at the job site. NDT Contractor shall provide Bridger Swan Ranch Representative with evidence that personnel performing and interpreting tests are qualified and certified to SNT-TC-1A , Level II or higher.

The cleaning agent shall be a volatile solvent. Only color contrast, solvent-removable penetrant, and non-aqueous wet developer shall be used. Prior to use, the Bridger Swan Ranch Representative must approve all liquid penetrant equipment and materials during a practical procedure demonstration test.

Temperature of the examined surface shall not be less than 60F nor more than 125F during the entire examination. Examined and adjacent surfaces (within one inch of the test area) shall be cleaned and free of any dirt, grease, scale, oil, welding flux and spatter, etc. After cleaning, the area shall be allowed to dry for at least 5 minutes before penetrant is applied. Bridger Swan Ranch Representative may approve testing at surface temperatures below 60F when NDT Contractor successfully demonstrates a procedure that reveals known defects under the same conditions.

Penetrant may be applied by brushing or spraying. Dwell time shall be at least 10 minutes and most 15 minutes. Excess penetrant shall be removed by wiping repeatedly with clean, lint-free cloth or absorbent paper until most traces are

removed. Remaining traces shall be removed by lightly wiping with cloth or absorbent paper slightly moistened with solvent. Flushing surface with solvent before developing is prohibited.

Test surface shall be observed continuously during development to detect indications (that bleed out) and to determine their nature. Areas with excessive background color and broad areas of pigmentation caused by inadequate cleaning shall be cleaned and reexamined. NDT Contractor shall complete and submit daily liquid penetration test reports to Bridger Swan Ranch Representative. Discontinuity type dimensions and location in the weld or item shall be reported for each unacceptable discontinuity found. All repairs shall be reevaluated before acceptance. NDT Contractor's test report shall reference the liquid penetrant procedure used to perform the test.

PIPE WALL THICKNESS SURVEY

The Bridger Swan Ranch representative must conduct a wall thickness survey before welding and/or tapping on a pipeline or pressure vessel with an internal pressure greater than one atmosphere. Do NDT perform welding or tapping on pressurized piping or vessel when the survey indicates a wall thickness of less than 90% of nominal specified thickness?

The proposed welding area must be clean of scale, rust and pipe coating. Safety considerations with regards to asbestos and lead abatement should be discussed with EH&S prior to conducting coating/ paint removal operations.

Determine the existing wall thickness in the proposed welding area before welding on an active line. If the minimum wall thickness is less than 90% of nominal specified thickness, relocate the proposed welding. Conduct the wall thickness survey using an ultrasonic instrument. Check the instrument for proper calibration and operation before taking readings.

UT measurements should be taken continuously in the proposed welded area. Document the wall thickness readings at a maximum spacing of every 3 inches along the proposed welding area. Welding is not permitted over a lamination area. If a lamination or a low wall thickness reading is found, move the welding location upstream or downstream from the original point and repeat the survey. Ultrasonic thickness surveys are documented.

MINIMIZE FREQUENCY OF ADJACENT WELDS

Refer to API 1104 20th Edition or ASME 831.4

WELD METAL STRENGTH

When the Specified Minimum Yield Strengths (SMYS) of the pipe sections to be joined are unequal, the deposited weld metal shall have mechanical properties at least equal to the section with the higher strength.

SAFE WELDING PRESSURE

This procedure provides limitations for welding on a pressurized pipeline to maintain a safe working environment. It contains guidelines that apply to the pipeline's wall thickness and SMYS.

Conduct a pipe wall thickness survey and document findings before installing a hot tap connection, a welded fitting or a sleeve on a pressurized pipeline or appurtenance with an internal pressure greater than one atmosphere.

Use the Maximum Pressure Calculation (below) to calculate the allowable pressure for welding on pipelines of various diameters, wall thicknesses and grades with an internal pressure greater than one atmosphere. Do not exceed the pipe's stress level (% SMYS listed below) when welding on a pipe with an internal pressure greater than one atmosphere. Use the lower of the industry standard nominal wall thickness (t) or lowest measured value based on the wall thickness survey results.

Consider the maintenance history of the pipeline when assessing the safety of welding on an operating pipeline.

Maximum Pressure Calculation:

$P = 2 \times S \times t \times (\%SMYS) D$

Where:

P = Internal operating pressure, psig S = SMYS carrier pipe, psi t = Nominal wall thickness of carrier pipe to be welded in inches % SMYS = Percent of SMYS (see below) D =Nominal outside diameter of carrier pipe in inches

Nominal Wall Thickness Inches)	Maximum Pressure Factor (%SMYS) Using Low Hydrogen Electrodes
).101 to 0.150"	20
).151 to 0.187"	30
).188 to 0.209"	40
).210 to 0.280"	45
).281 to 0.321"	50
).322 to 0.405"	55
).406" and greater	60

*Note: Fillet welds on pressurized carrier piping are prone to cracking due to the extreme cooling action. Using a low-hydrogen welding process is recommended. If possible, stop or reduce flow during welding to minimize the pipe's cooling rate. Rapid pipeline cooling after welding can cause under bead cracking of the steel.

CHECK FOR COMBUSTIBLE ATMOSPHERE

Before welding, welder shall take steps to minimize the danger of accidental ignition to include completion of **Hot Work Permit.**

WELDING ROD CARE AND STORAGE

Take proper care of welding rods. External contaminants can dramatically affect the welding process and produce welds with undesirable properties.

E601O and 701O Rod: Keep these rods in a dry location after opening the container. For long-term storage, place electrodes in a rod oven as the welding rod Manufacturer recommends. Discard wet rods.

E7018 Rod: After opening the original rod container, take all practical precautions to minimize the flux coating's moisture absorption. Store rods in a rod oven. Do not use refrigerators or makeshift storage cabinets. Follow the

Manufacturer's directions for storing and drying. Discard wet rods. Rod can be taken from the oven and placed in a hermetically sealed plastic rod holder. Rod containers for day use shall have an 'O' ring seal to prevent humidity from entering the container.

Other Welding Consumables: Follow the Manufacturer's directions for storing and drying.

HOT WORK

This procedure establishes safe work practices for employees and contractors on Company facilities. Always ensure safe conditions when using flame or spark-generating equipment to perform work that could cause flammable vapors and gases or combustible dusts to ignite.

Hot work includes operations such as:

Welding, cutting or using igniters, heaters, etc. capable of producing sparks or open flame

Using equipment that produces static electricity in areas containing vapor, gas or combustible dust

Using equipment powered by internal combustion engines

Using electrical or power tools A **Hot Work Permit** will be used when there is the potential to ignite flammable or combustible materials. Use the **JHA Job Hazard Assessment** form to document safety meetings (job/task specific). Conduct a pre-job site safety meeting to advise affected employees of: Work hazards and safe work practices Specific applicable safety and health hazards Terms and conditions for the **Hot Work Permit** Site-specific emergency operations, including shutdown

GENERAL

All work performed by non-company personnel in Pipeline/logistics operating areas must be authorized by the appropriate company personnel. This authorization will be in accordance with the procedures set forth in this Safety Order, or in Safe Work Plan, or Confined Spaces Plan. It is the intent of this order and companion order to establish a standardized authorization system for all work in operating areas that will provide the necessary communication and job preparation to ensure safe work conditions. All work of high risk levels such as spark producing, arc or flame, personnel entry into enclosed spaces, or special hazard will be authorized by

procedures outlined in this order. High risk level work in operating areas should be avoided where practicable, by relocating the work to unrestricted areas. This order recognizes that certain identifiable risk levels of work exist, and that authorization procedures should increase appropriately with the risk. High risk involving flame or arc, or personnel entry into equipment, requires authorization with a Fire and Safety Permit signed by an Operating Supervisor with a mandatory separate audit and approval by a member of the Safety Department before work may commence. Lower risk work involving spark- producing procedures or equipment, requires authorizing with a Fire and Safety Permit, signed by an Operating Supervisor.

TYPICAL JOBS REQUIRING A FIRE AND SAFETY PERMIT

Supervisor/Safety Representative Permit

The following types of jobs will be authorized by a Fire and Safety Permit, signed by an Operating Supervisor, with a mandatory separate audit and approval by a Safety representative:

Flame - gas welding, gas torches, melting pots, electric welding, or any other flame.

Personnel entry into equipment-to enter a vessel, furnace, tank, sump, or any enclosed space (See confined Space Plan for special conditions to be met for entering equipment.)

Hot taps or drill on process equipment. (See Hot Tapping Procedures)

Sandblasting on atmospheric storage tanks.

Opening of flare systems (See Opening flare System Procedures)

Supervisor Permit The following types of jobs can be authorized by a Fire and Safety Permit, signed by an Operating Supervisor:

Operation of contained flame or burners (such as nitrogen trucks or hot wash equipment)

Sandblasting (Except atmospheric storage tanks)

Pneumatic or cold drilling or cutting on process equipment that has been isolated with blinds and cleaned of any product or residual vapers.

X-ray testing

The Operating Supervisor may, at their discretion, elect to secure a separate audit by a Safety Representative.

Work in Non-Operating Areas

Fire and Safety Permits are required in non-operating areas for the type of work in Sections II A. The Authorized Safety Representative/Facility Manager shall issue these permits. For personnel entry into enclosed spaces, there are no exceptions to the need for a Fire and Safety Permit. Also, hot work on tanks, columns, vessels, piping or tube bundles that have been in service always require a Fire and Safety Permit. Certain exceptions for hot work in non-operating areas are as follows: Hot work may be performed without a permit (except for items listed in the previous paragraph of this section) in the following approved areas: the Maintenance Shops, the Automobile Parking Lots, and other fabrication shops approved by the Safety Department. The Safety Department is responsible for updating and defining the authorized "hot work" areas.

RESPONSIBILITIES

Fundamental responsibility for safety within an operating area lies with the operating department. Operating personnel are most knowledgeable about the operating area and equipment, with regard to hazards and how to neutralize the hazards. Accordingly, it is the responsibility of the operating department to prepare the Fire and Safety Permit for all jobs that must be performed in an operating area.

Under normal circumstances, the on duty Supervisor will perform the tasks designated to the Supervisor in this order. In times of peak activity or special circumstance, it may be necessary for other knowledgeable Operating personnel to perform some or all of the preparatory oversight. In such instances, the on duty Operating Supervisor will familiarize himself with the preparation and sign the permit.

Maintenance personnel are responsible for being aware of the conditions under which the permit is issued, and for working within these conditions throughout the job.

PROCEDURES

Step 1 - Setting Conditions

The Operating Supervisor will decide what conditions must be met to achieve safe work conditions, and will set down these conditions in writing on the Fire and Safety Permit form. The Operating Supervisor is encouraged to consult the Maintenance Supervisor or a Safety representative. However, the primary responsibility for setting the condition lies with the Operating Supervisor.

Step 2 - Achieving Conditions

The Operating Supervisor will be responsible for insuring the conditions specified in Step 1 have been achieved.

Step 3 - Auditing Conditions

When the specified conditions have been met, the Operating Supervisor shall audit the job to insure that all the specified conditions have been achieved, and that no additional safety precautions are necessary.

For jobs of risk level outlined in Section 5.17.2 B the Operating Supervisor is then ready to sign the Fire and Safety Permit.

For jobs of risk level outlined in Section 5.17.2 A, the Safety Representative shall then perform an independent and mandatory audit to insure that all necessary safety precautions have been taken before work begins. The Safety Representative can, at this time, add whatever additional conditions he/she believes are required to insure job safety.

Step 4 - Notifying Adjacent Areas

It will be the joint responsibility of the Operating Supervisor, Maintenance Supervisor, and the Safety representative to determine what other parties must be informed of the pending work (such as adjacent but separate operating areas). For Supervisor/Safety representative permits (i.e., Section II A permits), the Safety representative will be responsible for notifying these parties. For Supervisor permits (Section II B Permits), The Operating Supervisor will be responsible for notifying these parties.

It will be the responsibility of the informed parties to insure that following shifts are made aware of the work.

Step 5 - Issuing the Permit

The Operating Supervisor will sign the permit, indicating that the conditions for safe work have been set, achieved and audited and that Operations is ready for the work to begin.

The Operator responsible for the area will sign the permit to indicate that he/she is aware of the job and the specified safe work conditions, and intends to comply with the conditions of the permit. The Operating Shift Supervisor responsible for the operating area shall always sign the permit.

The Safety Representative will then sign the permit (for jobs outlined in Section II), indicating that an independent mandatory audit has been

performed of the entire job preparation, and that work can proceed.

The Maintenance Supervisor responsible for the job will sign the permit, indicating that he/she understands the conditions of the permit, and has instructed all appropriate workmen regarding the job and the conditions to be maintained. The appropriate maintenance workman on the job will read and sign the permit, indicating that he/she has been instructed, and will comply with the conditions of the permit.

The Fire and Safety Permit is in effect when the above steps have been completed. The job can be started after the appropriate copies of the permit have be distributed as follows: White copy - Remain at job-site Yellow copy - Post in Control Room/Operations Center Pink copy - Retained by Pipeline/logistics Management A copy of every Fire and Safety Permit issued will be retained in the Pipeline/Logistics Department for a period of five years. All copies of Fire and Safety Permits issued by Operating Supervisor shall be forwarded to the Safety Office by the operating departments.

Step 6 - Maintaining Conditions of Permit

The Operator in whose area the work is being performed is responsible for maintaining the conditions of the permit throughout the duration of the job, insofar as operating or environmental conditions are concerned. When a firewatcher is specified by the permit, he/she shall discharge these duties as specified in Section V and Attachment II.

The appropriate workman performing the work and the Supervisor are responsible for working within the conditions of the permit throughout the duration of the job, insofar as maintenance procedures are concerned.

The Safety Representative shall make random audits of Fire and Safety Permit jobs in progress.

Step 7 - Continuation of Permit A permit is valid as long as the permit conditions are maintained and the work is not suspended for more than a four hour period. If work extends beyond a Pipeline / Logistics shift, the appropriate Operating Supervisor and workman will initial the appropriate permit at the beginning of their shift to indicate their understanding and responsibility for maintaining safe work conditions. Permits on continuous or around-the-clock jobs shall be renewed on the next daylight shift between the hours of 8:30 and 10:00 A.M.

FIREWATCH The primary responsibility of the Firewatch is to assure that situations involving hazards to personnel or operating equipment do not arise when flame or spark-producing activities are in progress in operating areas. The

secondary responsibility is to take prompt and proper action if these hazardous situations do arise. Firewatches are established when welding, burning, cutting, grinding, or other spark producing operations are planned in an area where flammable materials are present, or where there is the possibility of flammables being released. The decision as to whether a Firewatch is required is made by the Operating Supervisor who issues the Fire and Safety Permit. In the case of disagreement as to the need for a Firewatch, the Operating Department Manager shall make the decision.

Qualifications for a Firewatch shall include; (1) employee (contract or company) has received training in proper use of portable fire extinguishers, and (2) employee has approval of employee's supervisor and the Safety Department.

It is apparent that in order to be effective as a Firewatch, the person chosen must be aware of the potential hazards in the area, and what steps should be taken to minimize the risks. Therefore, it will be required that the Operating Supervisor discuss these items thoroughly with the chosen Firewatch.

The Firewatch must always be alert, and must always remain on the job scene whenever welding or spark producing operations are in progress. If operating duties need of restroom facilities, etc., require the Firewatch to leave the jobsite, all welding or spark producing operations must be shut down. The Firewatch must also remain at the job site for 30 minutes following completion of cutting or welding job.

To assist each person in understanding the responsibilities assigned to the Firewatch, a copy of the Firewatch Instructions (see attachment II) should be issued when duty is assigned.

Firewatch Instructions:

Because of the important responsibilities you assume when you become a Firewatch, you should be thoroughly familiar with the duties

Your primary responsibilities are:

Prevent ignition of any flammable material

Should a fire occur, turn in the fire alarm, or immediately extinguish it and notify your immediate supervisor

Maintain the conditions and requirements listed on the Fire and Safety Permit

STOP THE JOB if you observe any conditions which you consider to be hazardous

Circumstances and conditions of the job determine what the safety requirements and Firewatch duties will be. However, the following are basic to all jobs:

- Do not leave the jobsite while welding or spark producing operations are in progress. If other duties require you to leave the jobsite, you must stop the job.
- Before the job starts and during job progress, survey the entire area for potential release of flammable liquids or vapors. Always be on the lookout for possible operating upsets. Make sure that operators at nearby are aware of the work in progress.
- Prevent the taking of samples, venting or opening of pipe or equipment in the immediate area of the hot work where such action would release flammable liquids or vapors.
- Be certain that you understand how to shut down all welding equipment in the event of a flammable liquid or vapor release.
- Determine the exact location of firefighting equipment in the immediate area. Be certain you know how to operate this equipment.
- If you have any questions regarding the job, check with you supervisor or the Safety Representative.
- Be on the alert. Try to anticipate and prevent any conditions that would be hazardous
- You must remain on the job site for 30 minutes following completion of any welding or cutting operation

ELIMINATE / MINIMIZE HAZARDS

If work involves used drums, barrels, tanks, piping or other containers, thoroughly clean them of all flammable or toxic materials and contact the Project Supervisor for proper disposal procedures. Use only explosion-proof or intrinsically safe equipment, personal monitors and snuffers in hazardous areas.

Minimize the lower explosive limit (LEL) of the work atmosphere to less than 10%

Install signs and barriers as necessary and provide unobstructed and easily accessible passageways

Follow lock-out/tag-out procedures as applicable

Isolate equipment including piping by blanking, blind flanging or disconnecting. Mark all blanks and blind flanges to ensure that they are removed after completing the project

Eliminate or minimize potential fire hazards

Relocate combustible materials on floors, walls, partitions, ceilings or roofs when possible or protect with flameproof covers

Place appropriate fire extinguishers and sentries needed for the project

Inspect fire extinguishers before beginning work to ensure readiness

Inspect welding equipment before starting work to ensure it is in good condition and properly located, secured and fitted

STOPPING OR SUSPENDING PERMIT WORK Discontinue all permit work:

When requested by manager/supervisor/affected worker

When a prohibited condition arises

Before pressurizing lines. Check all piping for leaks during and after restoring full pressure

When weather changes affect worker safety

If the LEL of the work atmosphere is greater than 10%, thoroughly review the situation and implement safe procedures before continuing

RESUMING HOT WORK When work is suspended for any unsafe condition or for an extended period of time, re- inspect the work area and reauthorize the existing permit.

TIE-INS This procedure provides general guidelines for connecting to an existing line that is to be taken out of service to accommodate the connection. It is not intended to cover all situations that may be encountered in the course of the work. For those unique situations, consult the Maintenance Manager or Supervisor. The procedure for hot tapping an in-service pipeline installation is covered in the previous section.

PREPARING FOR TIE-IN PRIOR TO DRAIN-UP

In preparation for the tie-in and before actually draining-up the pipeline, consider requirements for notifying various civil and state authorities and residents living near the area of activity.

TIE-IN PROCEDURE

Prior to tie-in, if procedure involves removing a section of pipe to be replaced with a tee or similar fitting, the following are minimum actions:

- Establish communications between all necessary stakeholders of the project
- Use appropriate gas monitors to verify that the area atmosphere does not contain levels of combustible gases above 10% of the Lower Explosive Limit (LEL) for the product involved. If levels above 10% of LEL are present, remove combustible gases. If monitoring shows oxygen levels below 19.5%, the hazardous atmosphere must be mitigated prior to work
- Before any existing pipe section is removed, if a section is to be removed, the remaining sections must be electrically bonded
- Once an initial cut has been made on the pipeline, take observation readings at all exposed points, potential source points and at the extremities of the isolated section
- Consider using night caps where appropriate to facilitate grinding, beveling or other similar activity
- Observers shall take note of any pressure changes, surges or any other unusual or unexpected activity within the pipeline and communicate such to the other work crew members
- Follow all applicable welding, fusing and purging procedures during the replacement process

HOT TAPPING

Hot tapping is the technique of attaching a mechanical or welded branch fitting to piping in service and creating an opening in the piping without taking the piping out of service.

The hot tap branch connection shall comply with CFR 49 Part 195 and ASME B31.4. The installed piping base metal thickness and auxiliary support must provide support for the new connection and the hot tapping machine.

TAP LOCATION

Before choosing the hot tap location, Maintenance Manager or Supervisor shall assess the site to determine its suitability including, but not limited to depth of cover, access and environmental considerations and subsurface water removal requirements, as well as above and below ground obstructions. Once a potential site is determined, calculate to insure that the existing pipeline design and proposed fitting have adequate metal area available for reinforcement in conformance to ASME B31.4.

The tapping operation produces steel cuttings that fall directly into the pipeline. The possibility of damaging or impairing downstream equipment operation should be considered.

If the tap will be below grade, before initiating excavation activities, the on sight supervisor shall ensure that the appropriate One-Call system is contacted per state

requirements.

In the area of the proposed hot tap installation, buff the exposed pipe with a wire wheel to bare metal. A hot tap is not allowed on a pipeline if the minimum wall thickness is less than 90% of the nominal specified thickness. If any survey yields suspicious or inconsistent data, consult the Maintenance Manager or Supervisor.

Contact the Maintenance Manager for questions or concerns regarding hot tap placement and design.

HOT TAP FITTING

The hot tap fitting must be designed to match or exceed the line's MOP. An acceptable area of replacement calculation is required for all taps equal to and greater than 2-inches and must be included in the project file.

COORDINATING AND SCHEDULING

Maintenance shall contact the on sight supervisor prior to installing the tap assembly to ensure the appropriate pipeline pressures and flow rates are established for safe welding and tapping operations.

PRE-INSTALLATION CHECKLIST

Before proceeding with the hot tap installation, a Company representative shall ensure that

Job Hazard Analysis has been prepared

A qualified person is present during the hot tapping

The area where the connection is to be made has been identified and physically marked

The pipe wall thickness has been verified and any metal imperfections that might prevent a proper weld have been evaluated and approved by the Maintenance Manager or Supervisor

On sight supervisor to monitor and control pressure in the pipeline within the required limits during welding

All necessary testing for flammable vapors, oxygen and hazardous air contaminants has been conducted to ensure a safe environment

Potential safety and health hazards have been assessed, personal protective equipment provided and fire retardant clothing used as necessary

A hot work permit has been issued if required

A fire watch has been established and equipped with a suitable dry chemical fire extinguisher or pressurized fire hose

Signs and barriers should be used

HOT TAP INSTALLATION

Before welding is initiated, the on sight supervisor shall verify that flow and pressure conditions are within specified limits. The on sight supervisor shall maintain contact with the Control Center during welding and tapping operations to ensure maintaining flow and pressure requirements.

The on sight supervisor shall conduct a project orientation and safety meeting before work starts. Only qualified personnel should mount, assemble and operate the hot tapping machine. The hot tapping supervisor shall develop and follow procedures to safely execute hot tapping operations for the location and shall inspect the tapping equipment to ensure that:

The pipe and hot tap details the Company previously provided remain valid

The hot tap machine's pressure rating is adequate

Flange connections have proper gaskets and bolts

All trash, bolts, welding rods or other foreign objects in the tapping valve and fitting have been removed

The packing or seals on the hot tap machine have been checked and are adequate

The bleed-off valve has been checked to ensure it will hold pressure, is operable and is not obstructed

Hot tap fitting, valve and hot tap machine are aligned and adequately supported to prevent undue stresses

All bolts on the cutter and pilot bit are tight

The coupon catcher is on the pilot bit

If the tapping machine is equipped with an air motor, it cannot be natural gas-

operated The hot tap supervisor shall verify tapping dimensions and clearances to ensure that:

The proper cutting depth has been calculated to assure proper cutter penetration and to avoid cutting the opposite side of the pipeline

The cutter and pilot bit have been run through the tap valve to verify clearance and safe passage

The cutter and pilot bit can be fully retracted to allow closing the tap valve Once the work has started, it should proceed without interruption until the hot tap is completed and the isolating valve is closed. After completing the tap and before removing the tapping machine, the hot tap supervisor shall ensure that:

- The cutter and pilot bit are fully retracted
- The hot tap valve is closed
- The bleeder valve is open and all pressure has been bled off the hot tap machine
- The hot tap coupon has been retrieved and given to the Technical Manager for corrosion analysis

WELDED SLEEVES AND TAPS

This procedure provides a guideline for welding a sleeve or tap connection onto a pipeline or vessel with an internal pressure greater than one atmosphere. Welding on an ASME pressure vessel may require special consideration not covered in this section (see ASME Section IX Welding & Brazing Qualifications requirements).

DESIGN AND LOCATION

Before welding on the pipeline, confirm that:

The Bridger Swan Ranch Representative has reviewed a current copy of the pipeline alignment drawing on the pipeline to be tapped to confirm pipe diameter, wall thickness, grade, vintage and coating type. Wall thickness in the proposed welding area has been verified and is acceptable. If any survey yields suspicious or inconsistent data, consult the Maintenance Manager or Supervisor.

A welded branch connection meets the requirements of ASME B31.4 and CFR 49 Part 195

The pipeline operating pressure has been reduced to a safe level At least one fire extinguisher is manned during the entire welding and tapping

procedure Review hot/cold work procedures to determine applicability for the proposed work

PIPE PREPARATION AND SLEEV E INSTALLATION

In the area of the proposed fillet welding, buff the exposed pipe with a wire wheel to bare metal. The surfaces to be welded should be smooth, uniform and free of laminations, tears, scale, slag, grease, paint, coatings or other conditions that might adversely affect weld quality.

Fit the hot tap or sleeve fitting to the pipeline so that the root openings (the space between the abutting circumferential pipeline and fitting surfaces) are sufficient to permit 100% percent weld penetration. When necessary, minor field modifications to the fitting are allowed to ensure proper fit. Such modifications shall not compromise the fitting integrity. Under no circumstances shall the pipeline be ground without the Maintenance Manager or Supervisor's approval.

Mild steel backup strips are required on a sleeve under the longitudinal side welds to prevent the weld metal from being fused to the pipeline surface. Use AISI-SAE 1008 hot rolled mild steel and 1/16-inch maximum thickness. The strip should be 1½ inches wide for 12¾ inch OD and larger pipe or 1inch wide for smaller diameters. DO NOT USE STEEL STRAPPING BAND FOR BACKUP STRIPS. A machined relief in the sleeve for the backup strip is not required.

SLEEVE OR TAP WELDING

Do not weld when weather conditions would impair the quality of the completed weld.

Preheating the weld area may be required to eliminate any moisture. Under high flow conditions, heat may be applied at the same time welding is being performed.

Follow a Company approved welding procedure. In most situations, using low hydrogen rods is preferred to reduce the possibility of burn-through and weld cracking. On a sleeve, complete the weld on one longitudinal seam at a time or with two welders, complete both welds simultaneously, starting welds at opposite ends. After both seams have been completed, fillet weld one end of the sleeve completely, allow the fillet weld to cool and then weld the other end. During welding, visually inspect and monitor all welds and welding operations to ensure weld quality and conformance with the appropriate welding procedure. After cooling, examine all welds in conformance with this section. Conduct hot tapping in conformance with section 3.5.

SLEEVE MATERIAL

The weld sleeve used for a hot tap or reinforcement shall have the same wall thickness or greater (up to 0.125 inch thicker) and be of the same grade as or higher than the line pipe.

MULTIPLE REPAIR SLEEVE INSTALLATION

The minimum distance between sleeves, braces, etc. and girth welds shall be 12 inches for pipelines and 6 inches for pump station/ facility piping.

When repair sleeve ends will be located within 12 inches of a girth weld or the required sleeve is too long to be reasonably or practically fabricated and installed, a short doubler plate (see Attachment 1) can be used to install multiple sleeves or sleeves adjacent to girth welds. Install girth ends of repair sleeves under the doubler plate as close as practical to one another or to the carrier pipe girth weld edges. Do not use fillet welds for sleeve ends under the doubler plate. Fillet-weld the doubler plate ends.

TRAINING

Only a qualified welder may install a welded sleeve or tap.

DOCUMENTATION

Document the pipe's internal and external condition on the **Buried Pipeline Inspection Report.**

NOTE:

Encirclement Sleeve and Doubler Plate Should be the Same W.T. and Grade as the CarrierPipe.

TheFullEncirclementSleeveShouldbefieldcutfromtwo(2)separate sections of pipe large enough to permit the two halves to fit outside of and enclose the carrier pipe. The portion of the sleeve stock containing the longitudinal seam weld must be removed.

Use 1/16 inch A151-1008 Hot rolled milled steel backing strips. Steel banding straps are not acceptable. On 12 3/4 inch O.D. and larger pipe use 1 1/2 inch wide backing strip On 10 3/4 inch O.D. and smaller pipe use 1 inch wide backing strip

All sleeve and fillet girth welds to the carrier pipe will be made with low hydrogen welding rod (AWS 7018). Longitudinal welds may be welded using AWS E6010, E7010 or E8010 welding rod (per procedure).