

December 09, 2010

Mr. Chris Hoidal  
Director, Western Region  
Pipeline and Hazardous Materials Safety Administration  
12300 W. Dakota Ave., Suite 110  
Lakewood, Co 80228

Re: CPF 5-2010-5029M

Dear Mr. Hoidal:

Merit Energy Company (Merit) is in receipt of your "Notice of Amendment" dated October 21, 2010, inadequacies found within Merit Energy Company's procedures for the Sage Creek NGL Pipeline and the Bairoil CO2 Pipeline in Wyoming.

In regard to the subject inspection, Merit Energy Company has undertaken an in-depth evaluation of its Operation and Maintenance Procedures and has addressed each of the inadequacies indentified during the audit. To fully explain the steps taken by Merit Energy Company in rectifying the issues, we have attached the following:

1. A copy of the "Notice of Amendment" letter dated October 21, 2010.
2. A pdf file of each procedure from our revised O&M Manual addressing the NOA items as follows:

NOA Item 1 – Section 6.6.1

NOA Item 2 – Section 2A.10

NOA Item 3 – Section 2.17.3

NOA Item 4 – Section 4.3.1, 4A.3 & 4A.15

NOA Item 5 – Section 4.4.1 & 4.4.2

NOA Item 6 – Section 2.3

NOA Item 7 – Section 2.3 & 2.16

NOA Item 8 – Section 2.11.5 & Word Document BOC02MLV.docx &  
SCNGLMLV.docx

NOA Item 9 – Section 2.12.1.5

NOA Item 10 – Section 2.12.1.1

NOA Item 11 – Section 2.12.1.7

NOA Item 12 – Section 2.12

3. Included is a CD containing a copy of this letter and the above O&M Procedure Sections.

Should there be any questions or if additional information is required, please contact me at the address below.

Sincerely,



Jay Prudhome  
Vice President Northern Rockies  
13727 Noel Rd., Suite 500  
Dallas, TX 75240

## **6.6 WELDING**

### **6.6.1 WELDING PROCEDURES**

[§195.214]

Two requirements are required for welding. First, the welding procedures used must be recorded in detail and include results of qualifying tests. Qualification of welding procedures to establish that welds have suitable mechanical properties and soundness shall be made using destructive testing and will conform to ANSI-31.4 and API 1104, 20th Edition. The welding procedure shall be re-qualified when a change in materials or other factors require a change in welding procedure. The procedure and qualifying test record will be retained by the field office and followed whenever the procedure is used.

Second, all welding will be performed by a qualified welder using the qualified welding procedure mentioned above.

## **2A.10 PIPELINE SHUTDOWN PROCEDURES**

[§195.402(c)(7)]

The pipeline is equipped for fail safe operations and appropriate pump shutdown or valve closure occurs when overpressure is encountered. Nonetheless, pressures and flow is monitored either on site or from SCADA systems when equipped. Pipeline shutdown procedures are contained in the STANDARD OPERATING PROCEDURES and/or OPERATOR QUALIFICATION STANDARDS maintained in the Sage Creek Plant Operations Office.

### **2.17.3 HIGH HAZARD AREAS**

[§195.402(c)(4)]

Some areas and facilities are considered to present a higher risk to the public and will require the quickest possible response in the event of an emergency. These locations are determined by:

- 1) The degree of hazard to the general public.
- 2) Proximity to residential, commercial and industrial areas.
- 3) Topography

The following procedures are used to minimize hazards in these areas:

- 1) All high hazard area installations follow the procedures set forth in Section 2.6 Prevention of Third Party Damage.
- 2) Additional cover over the pipeline may be maintained in the high hazard areas if appropriate.
- 3) Portable flare systems are not practicable for use on hazardous liquid pipelines. For HVL pipelines, Standard Operating Procedures have been developed to provide guidance on evacuation. The procedure addresses the reduction of the pressure within the pipeline while minimizing the quantity of HVL product to be removed. When required, flare pits may be constructed and the material ignited and burned in a controlled manner.
- 4) During such times of disposal of HVL product, road access and egress to the area is controlled by trained personnel.  
High hazard areas are indicated in Section 2A.17 of this manual.

### **4.3 PREPARATION**

[§195.402(e)(2), 195.403(a)(1)]

#### **4.3.1 READINESS**

To assure efficient execution of this procedure, the following conditions of readiness shall be observed:

1. Drawings of the Pipeline shall be available in the field office and in each responsible foreman's vehicle. Additionally, maps shall be available at each facility office.
2. Company vehicles will be equipped with first aid kits, hand tools, fire extinguishers and other equipment necessary to respond to emergencies.
3. Vehicle radios, if equipped, and mobile telephones shall be maintained in good working order.
4. Field employees shall be qualified in the operation of Facility equipment and trained in emergency response procedures.
5. The Senior Local Manager or designee will be familiar with the Police and Fire Departments and other agencies having jurisdiction along the Pipeline Right-of-Way. See "ALERTING AND NOTIFICATION PROCEDURES" in Section 4A.15 of the manual for lists of names and numbers.

### **4A.3 PREPARATION**

[§195.402(e)(2)]

The personnel involved in this operation and their telephone numbers are listed in Section 4A.15. The following equipment is available in the event of an emergency:

Goggles  
Hand Tools  
Explosion Proof Flashlights  
Fire Extinguishers & First Aid Kits  
Split Sleeves and other repair items

#### **4A.15      ALERTING AND NOTIFICATION PROCEDURES**

##### **4A.15.1   DISASTER TEAM AND/OR ANCILLARY PERSONNEL**

In the event that the Person-In-Charge wishes to alert additional persons to provide assistance or to take command of the situation, the Sage Creek Senior Local Manager or designee will be contacted.

#### **4.4   PRECAUTIONS**

##### **4.4.1   HAZARDS**

Contractors and other people assisting in an emergency are not necessarily aware of the characteristics of liquid crude oil, hydrocarbon vapors, hydrocarbon vapors mixed with air or Carbon Dioxide. They must be cautioned that vapors:

1. can be invisible,
2. can be odorless,
3. have components that are heavier than air,
4. may flow to and collect in lower areas,
5. are most hazardous in calm weather,
6. and, can cause asphyxiation due to lack of oxygen.

##### **4.4.2   VAPOR CLOUD SIZE AND MOVEMENT**

The size and movement of a vapor cloud shall be monitored using an LEL/oxygen detection device. Hydrocarbon and Carbon Dioxide vapors can migrate underground and accumulate in buildings and other enclosed areas. Therefore, caution must be exercised to protect the public.

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## 2.3 OPERATING HISTORY, MAPS & RECORDS

[§195.404 & 195.402(c)(1)]

An operating history, including daily operating data will be kept by the operator as described in this manual. This operating history will be maintained by the Senior Local Manager or designee and available to personnel as needed. The operator's logs, charts, and other operating records will be kept for three years.

1. Daily Operating Data which includes, at a minimum, the following information:

- Date
- Time
- Flow Rate Pumped
- Flow Rate Received
- Discharge Pressure at each pump station
- Pressure at each receiving station

**Note: Pressure and flow information recorded on charts will document portions of the operating history requirements.**

2. Operating and maintenance records will be maintained for the periods indicated. These records are as follows:
  - A. Current location and identification of each breakout tank, pump station, scraper and sphere facility, pipeline valve facility, facilities to which 195.402(c)(9) applies, rights of way and safety devices to which 195.428 applies.(Current maps).[§195.404(a)(1)]
  - B. Any emergency or abnormal operation and the response made. (3 years) [§195.404(b)(2)]
  - C. Date, location, and description of each repair made to pipe will be kept for the life of the pipeline. [§195.404(c)(1)]
  - D. Date, location, and description of each repair made to parts of pipeline other than pipe will be kept for at least one year. [§195.404(c)(2)]
  - E. Record of each right-of-way and navigable water inspection. (2 years or until next inspection, whichever is longer) [§195.412]
  - F. Records of corrosion monitoring of protected pipe, unprotected pipe, exposed pipe inspections, corrosion coupon analysis and internal corrosion inspections. (Life of the pipeline) [§195.569, .573(a), .573(b), .579(b)(3) and .579(c)].
  - G. Records of rectifier inspections. (5 Years) [§195.573(c)].
  - H. Records of all valve and overpressure safety device inspections (2 years or until the next inspection, whichever is longer) [§195.420, §195.428(a), §195.404(a)(1)(ii) & (iv)]
  - I. Inspection and test records for relief valves on HVL tanks (2 years)

[§195.428(b)].

- J. Inspection and test records for firefighting equipment (2 years) [§195.430].
- K. inspection records for breakout tanks (2 years) [§195.432]
- L. Training, certification, and performance records for all personnel as required by Operator Qualification regulations.
- M. Records pertaining to continuing public education programs (2 years) [§195.440].
- N. Current maps and records indicating the diameter, grade, type and wall thickness of all pipe and the maximum operating pressure of each pipeline. (Current maps and records) [§195.404(a)(3) & §195.404(a)(4)]
- O. Current location maps and identification of all crossings of public roads, railroads, rivers, buried utilities and foreign pipeline crossings. (Current maps) [(§195.404(a)(2)]
- P. Records of one call locate requests and their disposition (2 years)

Construction records and maps as required in Section 6.2.1 of this manual will be maintained in the facility operations office. These records will be updated by the Senior Local Manager or designee as needed. Maps and alignment sheets can be of great benefit to individuals operating the pipeline. The Senior Local Manager or designee will ensure that these maps and alignment sheets are updated as necessary. Copies of this information will be available to field personnel at all times.

Maps or records will be kept showing the location of cathodically protected piping, cathodic protection facilities, and neighboring structures bonded to the cathodic protection system. Cathodic protection maps and records must be kept for the life of the pipeline. These records must be in sufficient detail to demonstrate the adequacy of the corrosion control measures.

Any records, for which a retention interval is not given in this manual, will be kept for three years or until the next inspection is done, whichever is longer.

## **2.16 PERSONNEL REVIEW**

[§195.403(c)(13)]

The work done by personnel will be evaluated periodically to determine the effectiveness of the procedures used in normal operating and maintenance. If deficiencies are found, corrective action will be taken. This review will be coordinated by the Senior Local Manager or designee and will be performed and documented in conjunction with the annual O&M Manual review.

## 2.11.5

### VALVE INSPECTION

[§195.420]

Pipeline valves required for isolation, blow down of facilities or used in the event of an emergency shall be inspected at intervals not exceeding 7 ½ months, but at least twice per calendar year, to determine that they are in good working order and functioning properly. *Form OPS.07* "Valve Inspection Record," will be utilized for these inspections. Valves will either have individual locking devices on each valve or will be located within fenced areas with locked gates.

All electrically operated valves shall be checked both for electrical and manual operation. The Senior Local Manager or designee will prepare a list of those valves required for isolation or blow down. These valves will be inspected using the following procedure:

1. Remove any locking devices attached to the valve being inspected.
2. Inspect the valve for product leakage at flanges, bonnet, stem seals, or packing.
3. If leakage is found note in "remarks" column and attempt to correct by tightening flange bolts, injecting stem sealant, etc., depending on source of leakage. Note any corrective action taken in "repairs" column.

**NOTE: THE FOLLOWING STEP ASSUMES THAT THE VALVE BEING INSPECTED IS A MAINLINE VALVE, WHICH IS USUALLY FULLY OPEN. THE PERSON PERFORMING THIS INSPECTION SHOULD NOT PERFORM THIS STEP ON A FULLY-CLOSED VALVE UNTIL ASSURING THAT THE CONSEQUENCES OF OPENING THE VALVE WILL NOT RESULT IN ACCIDENT OR INJURY TO PROPERTY OR PERSONNEL.**

**THE PERSON PERFORMING AN INSPECTION SHOULD ALSO BE AWARE THAT THE FLOW OF PRODUCT THROUGH THE VALVE WILL DECREASE SOMEWHAT, AND SHOULD ASSURE THAT THIS WILL NOT CREATE AN UPSET IN A PROCESS OR UNIT INVOLVED WITH THIS VALVE.**

4. Operate the valve from its fully open position to its 50% closed position, noting especially the ease of operation of the hand wheel or other valve operator. If the device exhibits excessive resistance, attempt to correct by lubrication or other methods as required, depending on the type of valve being inspected. Note these facts in the "remarks" and "greased" columns.
5. Return the valve to its original position and re-install any locking devices.
6. Record all information on the appropriate forms for the system

inspection and maintenance records.

### Bairoil C02 Pipeline Main Line Valves

Valve Size	Valve Type	Normal Position	Valve Serial Number
10"	Cameron Ball	Open	99401
12"	Cameron Ball	Open	99411
10"	Cameron Ball	Open	99407
10"	Cameron Ball	Open	99415
12"	Cameron Ball	Open	99414

### Sage Creek NGL Pipeline Main Line Valves

Valve Size	Valve Type	Normal Position	Valve Serial Number
6"	Cooper Cameron Ball	Open	11003535-026
6"	TK Ball	Open	98J0533
6"	Cooper Cameron Ball	Open	367201
6"	Cooper Cameron Ball	Open	11008041-017
6"	Cooper Cameron Ball	Open	11003537-011
4"	Cooper Cameron Ball	Open	11002994

#### 2.12.1.5 PROTECTIVE COATING

[§195.557, 195.559, 195.561]

Except for bottoms of above ground breakout tanks, each buried or submerged pipe and pipeline component meeting the following date requirements and found in §195.401(c) must be externally coated.

- 3/31/70 – Interstate pipelines excluding low stress
- 7/31/77 – Interstate offshore gathering excluding low stress
- 10/20/85 – Intrastate pipeline excluding low stress
- 7/11/91 – Carbon Dioxide pipeline
- 8/10/94 – Low stress pipeline

Additionally, pipelines converted under §195.5 and has an external coating before being placed into service or is a segment that is relocated, replaced or substantially altered will be externally coated. Coating material will be designed to prevent external corrosion and which has sufficient adhesion to prevent moisture penetration, is sufficiently ductile to prevent cracking,

has sufficient strength to prevent damage due to handling or soil stress, is able to support cathodic protection and possesses adequate insulating qualities. The surface of the pipe or component must be properly cleaned and coating must be applied according to manufacturer's specifications.

The pipe coating will be inspected immediately prior to lowering it into the ditch and backfilling. It will be inspected visually and 100% electrically inspected using a conductive contact with a holiday detector having the appropriate voltage setting for the coating used. Any damage will be repaired using appropriate procedures. The pipe coating will be protected from adverse ditch conditions or damage from supporting blocks. The backfill material used will be free of rocks adjacent to the pipe or a rock shield will be used to protect the pipe coating.

If the pipe is being installed by boring, precautions will be taken to minimize the damage to the coating, including the application of a special coating in addition to, and on top of, the standard corrosion prevention material. A Company representative will be present during all boring operations where potential damage to pipe coating could occur.

#### **2.12.1.1 CATHODIC PROTECTION-GENERAL [195.563(a),(b),(c),&(d)]**

Except in unusual circumstances, all company pipelines will be cathodically protected. The following conditions will be used as a guide to determine the requirement for cathodic protection for a specific pipeline:

1. Each buried or submerged pipeline that is constructed, relocated, replaced or otherwise changed after the applicable dates must have cathodic protection applied within one year after construction or modification is complete:
  - 3/31/70 – Interstate pipelines excluding low stress
  - 7/31/77 – Interstate offshore excluding low stress
  - 10/20/85 – Intrastate excluding low stress
  - 7/11/91 – Carbon dioxide pipeline
  - 8/10/94 – Low stress pipelines
  
2. Each buried or submerged pipeline which has been converted from a service not jurisdictional under Part 195 into a service that is jurisdictional must have cathodic protection if a) the pipeline has cathodic protection that in general meets requirements or b) if the segment is relocated replaced or altered.

3. All other buried or submerged pipelines that are effectively coated will be cathodically protected.
4. Bare pipelines must be cathodically protected.

#### 2.12.1.7 CATHODIC PROTECTION MONITORING

[§195.573]

Tests shall be conducted once per calendar year, not to exceed 15 months, to determine if the cathodic protection system is adequate. Results of tests will be recorded on **Form OPS.19** "Cathodic Protection Survey". Separately protected sections of bare or ineffectively coated pipe (valve settings etc.) must be tested once per three (3) calendar years, not to exceed 39 months.

Each cathodic protection rectifier or other impressed current power source will be inspected six (6) times per calendar year, not to exceed 2 ½ months between inspections. Inspections will be documented on **Form OPS.18** "Rectifier/Bond Reading Log".

Each critical bond, each reverse current switch and each diode shall be inspected six (6) times per calendar year, not to exceed 2 ½ months between inspections. The results of the inspections shall be recorded on **Form OPS.18** "Critical Bond Inspection."

Any deficiencies will be corrected promptly . Remedial action will be taken prior to the next inspection period. When remedial actions taken are unsuccessful in returning the cathodic protection to an acceptable minimum level (-0.85V pipe to soil) an in-depth evaluation of the cathodic protection system will be conducted by the Senior Local Manager or designee in conjunction with a corrosion professional. The evaluation will include an assessment of the applicability of conducting a Close Interval Survey (CIS), Direct Current Voltage Gradient (DCVG) or other technology to assess the overall condition of the Cp System. When sound engineering practices determines that the performance of a CIS or other technology is necessary, it shall be performed and documented so that the following conditions are addressed:

- Assess the overall effectiveness of the cathodic protection system
- Provide baseline operating data
- Locate areas of inadequate protection levels
- Identify areas likely to be adversely affected by construction, stray currents, or other unusual environmental conditions
- Select areas to be monitored periodically

## 2.12 CORROSION

[§195.551]

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- All pipelines and breakout tanks must meet the requirements of Subparts **D** and **F** of 49 CFR 195. The procedures established in this manual fully satisfy the requirements of Subparts **D** and **F**. All Company pipelines shall be cathodically protected. Supervisors that are responsible for the operations of pipelines will be thoroughly familiar with corrosion control requirements and the procedures to ensure that the requirements are met. Records demonstrating compliance with corrosion control requirements will be maintained for a minimum of 5 years. Exposed portions of buried pipelines (195.569), conducting annual tests to monitor external corrosion (195.573(a)(1), evaluations of unprotected pipe and cathodically protected pipe in areas which active corrosion is found (195.573(b), evaluations of coupons or other monitoring equipment (195.579(b)(3) and internal pipe inspections from removing pipe from a pipeline (195.579(c) will be retained for as long as the pipeline remains in service.