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June 11, 2009

Byron Coy, P.E.
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration
Mountain View Ofc. Park
820 Bear Tavern Road Suite 306
West Trenton, NJ 08628

Re: CPF 1-2009-1005M

Dear Mr. Coy:

In May, 2008, representatives from the Pipeline and Hazardous Materials Safety Administration ("PHMSA") and the New York Public Service Commission ("NYPSC") inspected Texas Eastern Transmission, LP's ("TETLP") procedures for operations and maintenance in South Plainfield, New Jersey. During this inspection, PHMSA and NYPSC identified three (3) areas of apparent inadequacies in TETLP's plans or procedures. PHMSA issued a Notice of Amendment ("NOA") on May 14, 2009 relating to these apparent inadequacies. This letter is TETLP's response to the three areas identified by PHMSA.

TETLP is a unit of Spectra Energy Transmission ("SET"). SET has developed comprehensive operating procedures for its business units, and thus TETLP's responses reference SET's Operations and Maintenance Plan ("O&M Plan") and Standard Operating Procedures ("SOP").

1. § 192.467 External corrosion control: electrical isolation.

- (c) Except for unprotected copper inserted in a ferrous pipe, each pipeline must be electrically isolated from metallic casings that are a part of the underground system. However, if isolation is not achieved because it is impractical, other measures must be taken to minimize corrosion of the pipeline inside the casing.**

PHMSA Finding

TETCO procedures for addressing shorted casings are not adequate. TETCO has two similar, but different, written procedures addressing other measures for shorted casings

when remediation of the shorted casing is not practical. TETCO representatives could not explain the need for the two procedures, nor explain the different requirements in each based on casing class location, odorized versus non odorized gas in the carrier pipe, filled casing with insulating materials versus non filled casings. TETCO representatives said that these two procedures were apparently redundant and that one of the two procedures was not needed. The procedures are: Procedure 1. Operations and Maintenance Plan, Section 8, Corrosion, and Procedure 2: Standard Operating Procedure 1-6010, Pipeline Patrol and Leakage Survey Criteria.

TETLP Response

SET's O&M Plan is intended for general guidance only. Specific requirements for shorted casing leak surveys are contained in SET's SOP 1-6010, "Pipeline Patrol and Leakage Survey Criteria". To minimize the potential confusion caused by having two similar procedures, Spectra Energy has revised the O&M Plan to delete the specific requirements for leakage surveys and simply include a reference to SOP 1-6010. See Attachment 1 for a redlined version of the revisions to Section 8 of SET's O&M Plan.

PHMSA and NYPSC noted that TETLP representatives "could not explain the need for the two procedures, nor explain the different requirements in each based on casing class location, odorized versus non odorized gas in the carrier pipe, filled casing with insulating materials versus non filled casings". SET's procedures are developed, drafted and revised by SET's Technical Services Department in its Houston, TX office. PHMSA typically reviews operating procedures in the Houston Office, where the subject matter experts ("SME") for each procedure are available to explain the basis for the requirements. Since SMEs did not participate in the South Plainfield inspection, the rationale for the requirements in the procedures questioned by PHMSA and NYPSC are provided below.

The frequencies for casing leak surveys based on casing class location for non-shorted casings specified in SET's procedures are identical to the requirements for leak surveys specified by §192.706, which requires the following leak survey frequency:

- *Class 1 and 2 Locations: Once per calendar year not to exceed 15 months*
- *Class 3 Locations: Twice per calendar year not to exceed 7½ months*
- *Class 4 Locations: Four times per calendar year, not to exceed 4½ months*

SET's requirements for instrumented leak surveys for non-shorter casings in areas where the gas is non-odorized in Class 3 and 4 Locations are based on the requirements of §192.706, which requires:

"Leakage surveys of a transmission line must be conducted at intervals not exceeding 15 months, but at least once each calendar year. However, in the case of a transmission line which transports gas in conformity with §192.625 without

an odor or odorant, leakage surveys using leak detector equipment must be conducted:

(a) In Class 3 locations, at intervals not exceeding 7 1/2 months, but at least twice each calendar year; and

(b) In Class 4 locations, at intervals not exceeding 4 1/2 months, but at least four times each calendar year."

To more proactively monitor shorted casings that have not been filled with insulating material, SET's procedures require leak surveys using leak detection equipment be performed on these casings at twice the frequency required by §192.706. This increased frequency has been implemented to more quickly identify and respond to potential leaks caused by the increased corrosion potential for the pipe within shorted casings.

Once a shorted casing has been filled with insulating material, the potential for corrosion has been minimized on the carrier pipe. For shorted casings that have been filled with insulating material, SET's SOP 1-6010 specifies leak survey requirements that are consistent with §192.706. Upon review of SOP 1-6010, SET has determined revisions are needed to avoid potential confusion caused by the last table in this procedure. The revisions to SOP 1-6010 are provided in Attachment 2.

2. §192.615 Emergency plans.

(b) Each operator shall:

(2) Train the appropriate operating personnel to assure that they are knowledgeable of the emergency procedures and verify that the training is effective.

PHMSA Finding

In its Operating and Maintenance Plan, Section 13.0 Procedural Section for Emergencies, TETCO utilizes language in 13.12 *Employee Training* describing "periodic training" and "performance of all participants shall be reviewed to determine areas of improvement." "Periodic" and "reviewed" are broad terms with no schedule of training or measure to gauge the effectiveness of training. The procedures must be more definite in defining the term "periodic" and must give more direction on how to verify that the training is effective.

TETLP Response

SET's O&M Plan is intended for general guidance, with specific requirements for emergencies contained in SET's U.S. Operations Crisis Management Plan and SOP 5-2010 "Area Emergency and Security Procedures". To minimize the potential confusion caused by the O&M Plan having specific requirements for emergency plans, SET has

revised the O&M Plan to delete the specific requirements for emergency plan training and simply include a reference to SET's Crisis Management Plan and SOP 5-2010. See Attachment 3 for the revisions to Section 13 of the O&M Plan.

SET's U.S. Operations Crisis Management Plan is intended for emergencies that require a Region Office or Main Office response. SOP 5-2010 sets forth the requirements for Area specific emergency response plans. Both SET's U.S. Operations Crisis Management Plan and SOP 5-2010 contain specific references to annual training. Revisions to these plans have been made to explicitly require measurement of the effectiveness of the training. See Attachment 4 for revisions to the U.S. Operations Crisis Management Plan and Attachment 5 for revisions to SOP 5-2010.

3. §192.745 Valve maintenance: Transmission lines.

(a) Each transmission line valve that might be required during any emergency must be inspection and partially operated at intervals not exceeding 15 months, but at least once each calendar year.

PHMSA Finding

TETCO needs to provide additional guidance to insure that TETCO's Valve Maintenance and Trouble Report Form 7T-32 is completed correctly by TETCO personnel.

In Standard Operating Procedure 5-5010, Valve Inspection and Maintenance, TETCO's procedures describe the annual operation of transmission lines required during an emergency. The reporting of this inspection and any resulting maintenance is recorded on the Valve Maintenance and Trouble Report (Form 7T-32). There is a split column on the form entitled % Valve operated. One of the split columns is entitled Open, the other entitled Closed. Per the supervisory staff, if a valve is operated by opening it partially or full, the % operated is be entered into the Open split column. If the valve is in the closed position, and it fully or partially closed, the % operated would be entered into the Closed split column. There were instances recorded where both columns contained identical numbers, indicating a possible erroneous entry. The procedures must state more clearly to the operating staff on the recording of the % and direction each valve is operated.

TETLP Response

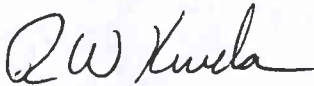
SET's Valve Maintenance and Trouble Report (Form 7T-32) is no longer being used to document valve maintenance. In 2007, SET implemented the Maximo work management system to document valve maintenance. The Maximo job plan requires the employee to document if the valve was partially or fully operated with a simple "yes / no" response. This eliminates the potential for possible erroneous entry of data noted by PHMSA and NYPSC. If the response to this question is "no", then a follow-up work

order to partially or fully operate the valve is required. Since there is no longer a requirement to document % Open or % Closed, no changes to SET's procedures are necessary. See Attachment 6 for an example of the Maximo valve maintenance documentation.

We trust that you will find these responses and revisions to the SOPs fully address the issues noted in the NOA and you will consider this matter closed.

Please feel free to call me at (713) 627-6388 if you have any questions or would like to discuss this issue further.

Sincerely,



Rick Kivela
Director, Operational Compliance

Attachments

cc (with attachments)

Stephen Gliebe, P.E.
Pipeline and Hazardous Materials Safety Administration
Mountain View Ofc. Park
820 Bear Tavern Road Suite 306
West Trenton, NJ 08628

ATTACHMENT 1

CPF 1- 2009-1005M

**Revision to O&M Plan Section 8
Corrosion**

- To facilitate the application of a cathodic protection current
- To isolate the structure from another structure
- To prevent passage of the cathodic protection current to a structure not owned or operated by the Company
- Where electrical contact with another structure would preclude effective cathodic protection

Casings

Each pipeline must be electrically isolated from metallic casings that are part of the underground system. If isolation cannot be achieved, then other measures must be taken.

Remedial Measures – Casings

Where there is an indication on existing installations that corrosion is occurring on the carrier pipe, or where a cathodic protection installation is rendered ineffective as a result of an electrical short between the casing and the carrier pipe, prompt remedial measures must be initiated. Remedial action should be initiated prior to the next scheduled inspection sequence.

Some of these remedial measures are:

- 1) Apply additional cathodic protection to the pipe.
- 2) Where possible, provide adequate clearance between the pipe and the casing, or insert a piece of insulating material between the line pipe and the casing.

When the above methods are not practical or are not successful, leakage surveys using gas detection equipment shall be performed ~~per the following charts, or periodic inline tool inspections may be performed at the frequency mentioned in the charts for shorted casings in SOP #1-6010, "Pipeline Patrol and Leakage Survey Frequency Criteria".~~

LEAKAGE SURVEY SCHEDULE FOR SHORTED CASINGS

(~~Not Filled with Insulating Material~~)

<u>Class Location</u>	<u>Frequency of Survey</u>	<u>Maximum Interval</u>
1	2 per year	7 ½ months
2	2 per year	7 ½ months
3	4 per year	4 months
4	8 per year	2 months

NOTE: Additional leakage surveys are not required if the casing has been filled with a high-dielectric filler. The leakage survey requirements shall be conducted per the schedule below.

LEAKAGE SURVEY SCHEDULE FOR SHORTED CASINGS

(Filled with Insulating Material)

<u>Class Location</u>	<u>Frequency of Survey</u>	<u>Maximum Interval</u>
1	1 per year	15 months
2	1 per year	15 months
3	2 per year	7 ½ months
4	4 per year	4 months

Inspection and Testing of Isolating Devices

The required monitoring of cathodic protection systems and the analysis of the test data are usually sufficient to ensure that electrical isolation on cathodically protected pipelines is adequate. Specific tests should be made on insulating devices to ensure the adequacy of the electrical isolation and to pinpoint operational problems on cathodic protection systems. Some of these tests are high frequency impedance measurements, DC resistance measurements, and DC potential measurements.

Insulating Devices in Combustible Atmospheres

Insulating devices must not be installed in potentially combustible atmospheres unless precautions are taken to ensure that an arc will not occur.

Precautions to be taken to prevent arcing include the installation of galvanic anode type grounding cells or commercial lightning or fault arrestors across the insulating gap.

Where an insulating device is located in a potentially hazardous atmosphere and a lightning arrestor is required, the lightning arrestor must be suitable for use in a combustible atmosphere. If the arrestor is not suitable for use in a combustible atmosphere, then the arrestor must be either installed or located in a non-hazardous area or exchanged for a lightning arrestor that is suitable for a hazardous area. Electrical conductors of adequate size and with proper insulation shall be used between the insulating device and the lightning arrestor.

AC Effects of Electrical Power Transmission Lines

When a pipeline is located in proximity to electrical powerlines, consideration should be given to determine the areas which might cause operational difficulties in the cathodic protection system. The electric company should be consulted when electrical installations have been identified as the possible cause of operational difficulties on the cathodic protection system. In determining the solution to the common problems of corrosion, the following factors should be taken into consideration:

ATTACHMENT 2

CPF 1- 2009-1005M

**Revision to Standard Operating Procedure 1-6010
Pipeline Patrol and Leakage Survey
Frequency Criteria**



Procedure Name: ***Pipeline Patrol and Leakage
Survey Frequency Criteria***

Procedure Number: 1-6010

Date: 09/01/2007

Page: 4 of 6

***Frequency
of Leakage
Surveys***



ACTION	RESPONSE/REMARKS
PERFORM leakage surveys at the intervals specified in this section and in accordance with SOP #1-6020, "Leakage Surveys Utilizing Gas Detection Equipment" to satisfy the requirement outlined in the note below.	
NOTE: 49 CFR Part 192.706 stipulates that each operator of a transmission line will provide for periodic leakage surveys once each calendar year at intervals not exceeding 15 months. It is understood that aerial and ground patrols can satisfy this requirement at the discretion of Region Technical Management.	
NOTE: 49 CFR Par 192.706 (a) and (b) stipulates that leakage surveys will be conducted utilizing leak detection equipment in Class 3 and 4 Locations where non-odorized gas is being transported. 49 CFR Par 192.935 (d) (3) stipulates that semi-annual leak surveys will be conducted on lines operating below 30% SMYS located in a Class 3 or Class 4 area but not in a High Consequence Area for unprotected pipelines or cathodically protected pipelines where electrical surveys are impractical.. Leak detection equipment is not required for these surveys.	



Procedure Name: **Pipeline Patrol and Leakage
Survey Frequency Criteria**

Procedure Number: 1-6010

Date: 09/01/2007

Page: 5 of 6



ACTION		RESPONSE/REMARKS	
Onshore Leakage Surveys			
Class Locations	Frequency of Surveys	Maximum Interval Between Surveys	DOT Requirements
1	1 per year	15 mo	Same
2	1 per year	15 mo	Same
3*	2 per year	7½ mo	Same
4*	4 per year	4½ mo	Same

NOTE:

* Class 3 and 4 areas where non-odorized gas is being transported must be surveyed using gas detection equipment.

**Shorted Casing
Leakage Surveys**

CONDUCT leakage survey using gas detection equipment, at all shorted casing locations with non-odorized gas which have not been remediated using the intervals specified in the following tables. This includes those lines that transport odorized gas. Leakage surveys are not required for those locations with odorized gas.

Additional leakage surveys are not required for shorted casings that have been filled with an insulating material (such as wax) as a means to minimize corrosion of the carrier pipe. Leakage surveys on those shorted casings which have been filled with an insulating material shall be on the same frequency as the "Onshore Leakage Surveys" specified above.

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REFERENCE SOP #1-6020 and **SOP #1-6040** as applicable.

**Leakage Survey Schedule for Shorted Casings
(Not filled with insulating material)**

Class Locations	Frequency of Surveys	Maximum Interval Between Surveys
1	2 per year	7 ½ mo



Procedure Name: **Pipeline Patrol and Leakage
Survey Frequency Criteria**

Procedure Number: 1-6010

Date: 09/01/2007

Page: 6 of 6

ACTION		RESPONSE/REMARKS
2	2 per year	7 ½ mo
3	4 per year	4 mo
4	8 per year	2 mo

**Leakage Survey Schedule for Shorted Casings
(Filled with insulating material)**

Class Locations	Frequency of Surveys	Maximum Interval Between Surveys
1	N/A	N/A
2	N/A	N/A
3	2 per year	7 ½ mo
4	4 per year	4 mo

ATTACHMENT 3

CPF 1- 2009-1005M

**Revision to O&M Plan Section 13
Procedural Section for Emergencies**

**13.12**
Employee Training
49 CFR 192.615(b)(2)

~~Periodic~~ Training sessions shall be conducted for appropriate supervisors and employees each calendar year and at intervals not to exceed 15 months as described at the end of SOP #5-2010, "Area Emergency and Security Procedures"; and in the SETpectra Energy Transmission U.S. OperationsRegional Crisis Management Plan.

~~Appropriate management shall be responsible to see that each of their departmental supervisors and employees is trained.~~

~~Intra Area training shall be conducted on a periodic basis to familiarize all field operating personnel with their location's methods of response to emergencies. Such sessions shall consist of, but not be limited to, the following:~~

- ~~• Location and operation of pipeline sectionalizing valves;~~
- ~~• Location and proper handling of emergencies in Meter and Regulator Stations; and~~
- ~~• Location and what to do during an emergency at a compressor station.~~

~~Subsequent to each emergency, the performance of all participants shall be reviewed to determine possible areas of improvement.~~

~~Deficiencies in the procedures or training that may be revealed by the review shall be corrected.~~

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13.13
Abnormal Operations
49 CFR 192.605(c)

An abnormal operation is defined as:

- 1) A situation where an operating design limit has been exceeded, a component has malfunctioned, or a deviation from normal operation has occurred, any of which could result in an emergency.
- 2) Personnel error which may result in a hazard to persons or property.

Examples of abnormal operations are as follows, but not all-inclusive: unplanned shutdowns, abnormal pressure loss or drop in flow rate, line blockage, communications loss, operation of any safety device, malfunction of critical equipment, or other circumstances.

ATTACHMENT 4

CPF 1- 2009-1005M

Revision to U.S. Operations Crisis Management Plan

PART 5: CRISIS MANAGEMENT PLAN - MAINTENANCE

Maintenance Responsibilities

Program maintenance refers to the refreshing, updating and exercising of Company's crisis management capabilities. This includes plan revisions, regular training for crisis management personnel and exercising of the crisis management structure.

The Director of Integrated Preparedness Planning Team is responsible for the administration of the IPP Program. Plan Administrators in the operating units shall be responsible for the maintenance of the operating unit crisis management plans. Senior management of the operating units is responsible for ensuring maintenance activities for their emergency response and evacuation plans and processes are completed. Maintenance requirements are listed in Appendix B – Crisis Management Plan Maintenance.

Maintenance Schedule

The maintenance activities associated with the Company's crisis management and emergency response plans shall be established and maintained on a calendar cycle.

Training

Training ensures that a desired level of response quality is maintained throughout the organization by communicating to crisis management team members the organization's overall philosophy of crisis management and their assigned roles and responsibilities. Training shall be conducted with the following considerations in mind:

- New crisis management team members should be trained in their role and responsibilities as soon as possible upon assignment to their respective team
- At a minimum, on-going team members should receive annual refresher training on their respective crisis management processes and individual role and responsibilities
- Team members should be trained whenever material changes are performed to their respective crisis management processes or individual roles and responsibilities
- The effectiveness of the training shall be determined by methods such as written exam, CBT tests, or post emergency simulation evaluation of the training's effectiveness.

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Exercises

In order to ensure the Company is capable of implementing its crisis management and emergency response plans and procedures, a program of regular exercises shall be

ATTACHMENT 5

CPF 1- 2009-1005M

**Revision to Standard Operating Procedure 5-2010
Area Emergency and Security Procedures**


 Procedure Name: **Area Emergency and Security Procedures**

Procedure Number: 5-2010

Date: 05/01/2009

Page: 19 of 19

ACTION	RESPONSE/REMARKS
ENSURE that all employees RECEIVE training / receive certification on IS-100 (on-line FEMA course) within three months after assignment to a location, if they do not have the certificate.	
ENSURE that all employees COMPLETE on-line training and RECEIVE certification on IS-200 (FEMA course) within six months after assignment to a location, if they do not have the certification.	
CONDUCT an Emergency and Security Procedures Manual training session with area personnel once each calendar year, but not to exceed fifteen (15) months.	Area personnel are responsible to review the Area Emergency and Security Procedures Manual. The review is to be documented on Form #7T-9 .
<u>ENSURE that a process is in place to determine the effectiveness of the training.</u>	<u>Methods such as written exams, CBT tests, post emergency simulation of training effectiveness, or other method approved by the Director of operational Compliance shall be used.</u>
COMPLETE the Attendance Record (Form #7T-9).	

Reporting



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ATTACHMENT 6

CPF 1- 2009-1005M

Example Maximo Valve Maintenance Documentation

Work Order Details //

WO: 3048047
Status: COMP
Parent: 3048012
Work Type: PERIODIC
Sub Type: INSPECT
Vendor:
Lead: RRRAYMOND
Work Group: UNIO SL-PLSP
Supervisor: JWD AVELER

Due Date: 6/30/2009
Actual Start: 6/3/2009
Priority: 0
Problem Code:
Cause Code:
Remedy Code:

Region: NORTHEAST
Area: UNIONTOWN
Supporting Loc: UNIO SL

DOT/NEB: Y
FERC: N
STATE AGENCY: N

OSHA: N
EPA: N
LOCAL AGENCY: N

Job Plan: 1560 Valve Inspection and Maintenance
Asset: 71948 VALVE BALL, 24 IN WE X WE
Location: 87471 2-6330 MP 1021 66, 24 IN ACCESSIBLE

Task ID	Summary	Value 1	Value 2	Date	Qual	Safety Plan	Observations
10	GAS CONTROL shall be notified in advance of any activity that could effect the flow of gas.				7200P		
20	PERFORM Visual Inspection and normal maintenance to valve.				7200P	MODEL DVLV1	
30	IS remedial action on valve or related equipment required?		N	6/3/2009			
40	BLEED valve body of all liquids and pressure, if required				0070P		
50	PERFORM gear box maintenance if required to include lubrication, water removal and winterization.					VLV HANDLES1	
60	WAS valve inspected and fully or partially operated to insure reliability?		Y	6/3/2009	0070P	VLV HANDLES1	