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June 20, 2007

Linda Daugherty
Director, Southern Region
Pipeline and Hazardous Materials Safety Administration
233 Peachtree Street, Ste. 600
Atlanta, GA 30303

CPF 2-2007-5004M

Dear Ms. Daugherty,

This letter is in response to the May 2, 2007 Notice of Amendment MarkWest Energy Appalachia, L.L.C. received from the Pipeline and Hazardous Materials Safety Administration regarding an audit that was conducted on December 5-9, 2005.

Responses to the audit findings and supporting documentation are attached for review.

Feel free to contact me if you have any questions or need additional information.

Sincerely,

A handwritten signature in black ink, appearing to read "Bruce Gillick", is written over a horizontal line.

Bruce Gillick
Director of Environmental, Health & Safety
MarkWest Energy Partners, L.P.
1515 Arapahoe Street
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MarkWest Responses to the OPS Audit of the Appalachia Pipeline

Item 1.A

MarkWest welding procedures are incorrect. *Operations, Maintenance, and Emergencies Manual* (OM&E Manual) Section 6.54 references Section 2 of API 1104, instead of Section 5. It is also noted that OM&E Manual Section 6.5 similarly incorrectly references other sections of API 1104. See §§ 195.222(a), 195.234(b), and 195.230 to correct these inadequacies.

RESPONSE

All references to sections of API 1104 have been corrected to reflect the version incorporated by reference in accordance with §195.3 (19th edition, 1999 and its October 31, 2001 errata). Included is a copy of the revised edition of OM&E Manual Section 6.5 Welding.

Item 1.B

OM&E Manual Section 6.6 *Hydrostatic Test Requirements* does not require the temperature of the test medium or pipe to be recorded during the test period.

Response

The Temperature of the test medium or pipe is being documented during hydrotesting and recorded on OM&E Manual FORM 118 *Field Pressure & Test Report*. OM&E Manual Section 6.6 has been updated to include requiring the temperature of the test medium or pipe to be recorded during the testing period as per §195.310. Included is a copy of the revised edition of OM&E Manual Section 6.6 *Hydrostatic Test Requirements*.

Item 2

OM&E Manual Section 7.5 *Abandonment or Deactivation of Facilities* and Form 102 *MarkWest Abandonment or Deactivation of Facilities* are inadequate in that they do not differentiate between *abandonment* and *deactivation*. *Deactivation* is not defined and procedures do not specify the conditions under which operations and/or maintenance requirements, such as leak surveys, cathodic protection, public awareness programs, etc., can be terminated on *deactivated* pipelines.

Response

OM&E Manual Section 2 *Definitions* has been updated to include additional information within the definition of 'Abandoned'. A definition for 'Deactivated'

has been added to further differentiate between *abandoned* and *deactivated*. OM&E Manual Section 7.5 has also been updated to include information pertaining to deactivated pipelines. Included is a copy of the revised edition of OM&E Manual Section 2 and Section 7.5.

Item 3

MarkWest procedures do not address the requirement to determine the effectiveness of procedures, as required of §195.402(c)(13). OM&E Manual Section 7.9 *Training* conveys the following.

Once per year and at intervals not to exceed fifteen months, MarkWest shall evaluate . . . the program's effectiveness in achieving its objectives by reviewing personnel performance. Make any appropriate changes to the training program as necessary to ensure its effectiveness.

Response

OM&E Manual Section 7.9 *Training* has been updated to include additional information on procedure evaluation. Included is a copy of the revised edition of OM&E Manual Section 7.9.

Item 4

MarkWest procedures do not require personnel to have hand tools and flame retardant clothing available at the scene of an emergency. These items are necessary, based on conversation with MarkWest employees.

Response

OM&E Manual Section 5.1.1 has been updated to include various tools and equipment personnel will have on hand at the scene of an emergency. Included is a copy of the revised edition of OM&E Manual Section 5.1.1.

Item 5

MarkWest procedures do not adequately address the requirement to assess the extent and coverage of a vapor cloud and determine the hazardous areas. OM&E Manual Section 5.1.5 (b) requires the use of detection instruments to determine the concentration of HVL vapors in the area, but does not provide adequate details on how this will be done.

MarkWest procedures do not address how to determine the potential cloud location, size, dispersion, and movement so that a monitoring plant with instruments can be developed and implemented to identify the cloud coverage and hazard areas. Use of information such as terrain elevations, underground drainage systems, weather and wind information, spill volume, and length of time since release are not included in the procedures. The

number of available detection instruments and personnel should reflect the requirements of the plan. Below is an excerpt from OM&E Manual Section 5.1.5 (b).

A combustible gas indicator or "flame ionization gas detector" shall be used by a qualified MarkWest employee to determine the concentration of HVL vapors in the area. In the instance where flammable highly volatile liquids are present, the supervisor shall use an "explosimeter" to determine the extent and coverage of the vapor cloud and determine the hazardous areas.

Response

MarkWest has developed and implemented a procedure (IM-001 Volume Release and HCA Impact) within its Integrity Management Program to determine how a pipeline could affect its surrounding environment. This process first requires the determination of worse case release volumes, which ultimately are used to determine surrounding environment impact via overland spread, water transport and air dispersion. The type of modeling performed is product specific.

Worse case volume release was determined using the following data:

Pipe characteristics

Medium

Elevation profile

Valve location, type and closure type

Maximum flow rate

Time to confirm a leak and shutdown

For HVL segments, MarkWest has performed air dispersion analysis using the ARCHIE Model in order to determine the impact zone under a variety of circumstances (e.g., pooling versus light end dispersion, toxicity based on wind speed, flame jet, pool fire radiation and vapor cloud explosion). After review of the ARCHIE model and risk analysis results, MarkWest has elected to consider all of its HVL pipeline mileage to be subject to 195.452, based on the high risk associated with these pipelines when compared to crude pipeline assets.

The results of the ARCHIE Modeling are being used to develop a basis for the Public Awareness Program and Emergency Response Plans, as well as to determine resource requirements for employees, contractors and equipment. Section 5 of the OME Manual details the requirements for emergencies.

Changes have been made to OM&E Manual Section 5 to further elaborate on steps being performed once MarkWest personnel have arrived at an emergency location. Two separate sentences were added into this section regarding assistance, and advising emergency response personnel with the characteristics of the product. Information from IMP Manual Appendix D *HCA Impacts and Results* has been incorporated into a table and included within Section 5. A table including distances between facilities and pipeline motor operated control valves detailing piping

information and total volume of product has been incorporated into Section 5 for use during emergency conditions.

Item 6A

The Kenova cell phone number is not listed on the Kenova emergency call list (OM&E Manual Section 11.2.2). The number was recommended to be distributed in a 2004 Abnormal Condition Review.

Response

The Kenova cell phone number has been added to OM&E Manual Section 11.2.2. Included is a copy of the revised edition of OM&E Manual Section 11.2.2.

Item 6B

MarkWest procedures do not adequately address the requirements of §195.426, as indicated in the following excerpt from OM&E Manual Section 7.11. The excerpt only applies to launchers and receivers with vent valves, whereas §195.426 applies to all launchers and receivers. Also, allowing personnel to monitor the vent valve for audible and visual indications to insure the pressure has been relieved before opening the barrel to install or remove scrapers and spheres does not satisfy the requirement to use a suitable device, such as a pressure gauge, to indicate that pressure has been relieved.

For pipelines having scraper and sphere launching and receiving facilities with vent valves to depressurize the barrel, operators shall either monitor the vent valve for audible and visual indications, or install and observe pressure readings on a pressure gauge, to insure the pressure has been relieved before opening the barrel to install or remove scrapers or spheres.

Response

OM&E Manual Section 7.11 has been modified in accordance with §195.426. Included is a copy of the revised edition of OM&E Manual Section 7.11.

Item 6C

MarkWest procedures do not require adequate fire fighting equipment to be maintained at Kenova pump station, as required of §195.430.

Response

OM&E Manual Section 5.2 has been updated in accordance with §195.430. Included is a copy of the revised edition of OM&E Manual Section 5.2.

Item 6D

MarkWest procedures are not adequately descriptive. OM&E Manual Section 6.1 mimics the regulations, does not convey that MarkWest's recently installed SCADA system is a CPM system, and does not state the applicable requirements of the referenced section of API 1130. Excerpt from OM&E Manual Section 6.11 is listed below.

This section applies to each hazardous liquid pipeline transporting liquid in single phase (without gas in the liquid). On such systems, each new computational pipeline monitoring (CPM) leak detection system and each replaced component of an existing CPM system shall comply with Section 4.2 of API 1130 in its design and with any other design criteria addressed in API 1130 for components of the CPM leak detection system.

Response

OM&E Manual Section 6.11 has been updated in accordance with API 1130 Section 4.2. OM&E Manual Section 7.2 has been updated to include information detailing that a SCADA system is a CPM system. OM&E Manual Section 3 has also been updated to include the definition of SCADA. Included is a copy of the revised edition of OM&E Manual Sections 6.11, 7.2 and Section 3.

Item 6E

External protective coating procedures (OM&E Manual Sections 6.4.7 and 9.3) mimic the regulations, are very general, and do not provide a list of approved coating products and stated applications and restrictions. OM&E Manual Section 9.3 allows for coatings to be . . . *such as 'thin film epoxy', TGF-3, or any other acceptable coating. . . Joints, fittings, and tie-ins shall be coated with materials compatible with the coating on the pipe.*"

Response

A pipeline coating chart has been created detailing the type of coating, manufacturer, PPE requirements, applications and restrictions. This chart has been included in OM&E Manual Section 9 as Appendix 9.1 *Pipeline Coating Chart*. A reference has been added to Appendix 9.1 in OM&E Sections 6.4.7 and 9.3. Included is a copy of the revised edition of OM&E Manual Sections 6.4.7, 9.3 and Appendix 9.1.

Item 6F

MarkWest procedures do not convey the circumstances in which a close-interval survey or comparable technology is practicable and necessary to accomplish the objectives of paragraph 10.1.1.3 of NACE standard RP0169-96. For protected pipelines, OM&E Manual Section 9.2.2 indicates the objectives of NACE standard RP0169-96 §10.1.1.3

are to be met not more than two years after cathodic protection is installed. No applicable identified circumstances are found in the procedures.

Response

The table within OM&E Manual Section 9.2.2 has been updated to include information on close interval survey requirements with protected pipelines. Included is a copy of the revised edition of OM&E Manual Section 9.2.2.

Item 6G

MarkWest procedures are not specific in how MarkWest determines areas of active corrosion. Procedures do not convey specific criteria used in determining the areas where active corrosion, unless controlled, could result in a condition that is detrimental to public safety. The procedures convey that consideration should be given to those areas near people, homes, buildings, road crossings, and pipeline operating pressures, and that boundaries of Active Corrosion Zones will be determined; however, no specific criteria was found as to how these areas are established.

Excerpts from OM&E Manual Section 3.1 *Definitions*

Active Corrosion – Continuing corrosion, which could, unless controlled, result in a condition that is detrimental to public safety. Consideration should be given to those areas near people, homes, buildings, road crossings, and pipeline operating pressures.

Active Corrosion Zone – An area where the public could be exposed to hazards caused by active corrosion. Boundaries of other “Active Corrosion Zones” will be determined by an Engineering Services Pipeline/Corrosion/Pipeline Safety Engineer. This method will not apply to pipelines under cathodic protection.

Response

MarkWest provides procedure IM-012, Examination of Pipe and Associated Facilities which details specific procedures for the determination of active corrosion.

Item 6H

MarkWest procedures do not convey the time allowed to correct a condition (that could adversely affect the safe operation of the pipeline) discovered while performing annual corrosion monitoring surveys. OM&E Manual Section 9.12.1 conveys: *If adequate protection is not indicated, corrective steps shall be taken to restore the structure to the proper degree of protection.* Procedures do not address how much time is allowed to correct the condition.

Response

A response table has been incorporated within OM&E Manual Section 9.12.1 to include time frames for remediation of low potential conditions found during an Annual Corrosion Monitoring Survey. Information has also been incorporated

within this section to require a remedial action plan in the event that a condition cannot be corrected within the specified time frame.

Item 7A

MarkWest's Operator Qualification Program (rev. January, 2005) does not include provisions to ensure thorough evaluation that individuals performing covered tasks are qualified. The program does not convey that after December 16, 2004, observation of on-the-job performance may not be used as a sole method of evaluation.

Response

The MarkWest Operator Qualification program was revised (June 2007) to include provisions to ensure thorough evaluations of individuals performing covered tasks. In addition, a statement conveying that observation of on-the-job performance may not be used as a sole method of evaluation has been incorporated into the program. Included is the MarkWest revised edition (June 2007) Operator Qualification program.

Item 7B

MarkWest's Operator Qualification Program (rev. January, 2005) does not include provisions for training, as appropriate, as required of §195.505(h).

Response

The MarkWest Operator Qualification program was revised (June 2007) to include provisions for training, as appropriate, as required in accordance with §195.505(h). Included is the MarkWest revised edition (June 2007) Operator Qualification program.

Item 7C

MarkWest's Operator Qualification Program (rev. January, 2005) does not include provisions to notify the Administrator or a state agency as required of §195.505(i).

Response

The MarkWest Operator Qualification program was revised (June 2007) to include provisions to notify the Administrator or a state agency as required in accordance with §195.505(h). Included is the MarkWest revised edition (June 2007) Operator Qualification program