



U.S. Department
Of Transportation
Pipeline and
Hazardous Materials
Safety Administration

820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
609.989.2171

**NOTICE OF PROBABLE VIOLATION
PROPOSED CIVIL PENALTY
and
PROPOSED COMPLIANCE ORDER**

UPS OVERNIGHT DELIVERY

May 11, 2011

Mr. David Vattimo, Regional Vice President
Kinder Morgan Liquid Terminals LLC
8500 West 68th Street
Argo, IL 60501

CPF 1-2011-5001

Dear Mr. Vattimo:

On May 4, 2010, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code conducted an investigation into an accident that occurred on October 28, 2009, at Kinder Morgan Liquid Terminals LLC (KM) in Perth Amboy, New Jersey. The accident involved a failure in the piping system, resulting in the release of approximately 8,600 gallons of Fuel Oil into KM breakout tank dike containment area (Tank #57).

On October 28, 2009, Kinder Morgan notified the National Response Center (NRC Report #921903) of the accident at the Perth Amboy Terminal. The accident occurred when Colonial Pipeline Company was pumping No. 2 Fuel Oil into KM's Tank #57. During the transfer, the tank valve on Tank #57 closed prematurely. This valve closure caused a pressure surge in the piping system that was designed to relieve into a designated KM surge tank (Tank #42). It was noted during the investigation that the isolation valve on Tank #42 was found in the closed position which did not allow the surge pressure in the piping system to dissipate into Tank #42. The resulting pressure surge in the system caused a failure of the flange bolts on a vertical flange located at the base of Tank #57. This surge led to a failure of two expansion joints and the release of product into the dike area.

As a result of the accident investigation conducted directly related to this incident, it appears that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

1. §195.402(c)(7) Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(7) Starting up and shutting down any part of the pipeline in a manner designed to assure operation within the limits prescribed by paragraph §195.406, consider the hazardous liquid or carbon dioxide in transportation, variations in altitude along the pipeline, and pressure monitoring and control devices.

KM failed to have and follow written startup and shutdown procedures for the Perth Amboy Terminal in its Operation and Maintenance (O&M) manual.

During the investigation, KM personnel did not provide any startup and shutdown procedures for this facility. It was noted during the investigation that the isolation valve at Tank #42 was closed, as a result of a recent maintenance issue, making the tank inoperable. This valve line-up issue would have been identified if appropriate startup and shutdown procedures were in place and followed at the time of the accident. Appropriate startup and shutdown procedures would have included line-up procedures which are essential to ensuring that all appropriate valves are in the correct position to allow for an unimpeded path during tank loading and unloading operations, and ensuring appropriate pressure relief provisions are in place.

2. §195.402(c)(8) Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline commence, and

appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(8) In the case of a pipeline that is not equipped to fail safe, monitoring from an attended location pipeline pressure during startup until steady state pressure and flow conditions are reached and during shut-in to assure operation within limits prescribed by §195.406.

KM failed to have and follow procedures for monitoring pressures and other parameters from an attended location, as required under §195.402 (c)(8), to assure the Maximum Operating Pressure (MOP) limits are not exceeded. During the investigation, KM personnel stated that it did not have procedures established for monitoring pressures in accordance with §195.402 (c)(8).

During the investigation, it was noted that the Perth Amboy facilities were not equipped to fail safe. Even though a relief system was in place, the system was not designed to fail safe. The design of the relief system at the terminal would only provide a minimal amount of time for personnel to respond in the event of an abnormal situation before the capacity of Tank #42 would be breached.

3. §195.402(c)(9) Procedural manual for operations, maintenance, and emergencies

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(9) In the case of facilities not equipped to fail safe that are identified under §195.402(c)(4) or that control receipt and delivery of the hazardous liquid or carbon dioxide, detecting abnormal operating conditions by monitoring pressure, temperature, flow or other appropriate operational data and transmitting this data to an attended location.

KM failed to have and follow written procedures as required by §195.402 (c)(9) for facilities at the Perth Amboy Terminal.

Pursuant to §195.402(c)(9), an operator is required to have and follow procedures to detect abnormal operating conditions for facilities that are not equipped to fail safe or that control the receipt and delivery of hazardous liquid liquids.

The procedures must address detection of abnormal operating conditions by monitoring pressure, temperature, flow or other appropriate operational data and transmission of this data to an attended location.

During the investigation, it was noted that the Perth Amboy facilities were not equipped to fail safe. Even though a relief system was in place, the system was not designed to fail safe. The design of the relief system at the terminal would only provide a minimal amount of time for personnel to respond in the event of an abnormal situation before the capacity of Tank #42 would be breached. KM did not have procedures in place to address detection of abnormal operating conditions nor transmitting the data to an attended location.

4. §195.402(c)(3) Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

(c) Maintenance and normal operations. The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.

KM failed to have written procedures in its Operation and Maintenance (O&M) Manual for overpressure safety devices and overfill protection systems as outlined in this subpart, specifically §195.428. During the investigation, KM personnel did not provide written procedures for operating, maintaining, repairing, and inspecting overpressure safety devices and overfill protection systems pursuant to § 195.428.

5. **§195.402(c)(3) Procedural manual for operations, maintenance, and emergencies.**

(a) **General.** Each operator shall prepare and follow for each pipeline system a manual of written procedures for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. This manual shall be reviewed at intervals not exceeding 15 months, but at least once each calendar year, and appropriate changes made as necessary to insure that the manual is effective. This manual shall be prepared before initial operations of a pipeline commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

(c) **Maintenance and normal operations.** The manual required by paragraph (a) of this section must include procedures for the following to provide safety during maintenance and normal operations:

(3) **Operating, maintaining, and repairing the pipeline system in accordance with each of the requirements of this subpart and subpart H of this part.**

KM failed to have and follow written procedures for valve maintenance as outlined under §195.420.

During the investigation, KM was requested to provide its procedure for valve maintenance applicable to the automated shell gate valve located on Tank# 57 and the gate valve on the 8" tank line to surge Tank #42; however KM did not provide any documentation of procedures to show compliance with this section of the code.

During the investigation it was noted that the automated gate valve on Tank #57 closed prematurely due to an electrical fault on the control system connecting the high level alarm to the automated gate valve. The investigation also noted that the gate valve on the 8" tank line to Tank #42 was in the closed position. The operator stated that the gate valve had been closed to allow for maintenance of the relief valve to Tank #42 and was not reopened when the maintenance was completed.

6. **§195.428(a) Overpressure safety devices and overfill protection systems**

(a) **Except as provided in paragraph (b) of this section, each operator shall, at intervals not exceeding 15 months, but at least once each calendar year, or in the case of pipelines used to carry highly volatile liquids, at intervals not to exceed 7½ months, but at least twice each calendar year, inspect and test each pressure limiting device, relief valve, pressure regulator, or other item of pressure control equipment to determine that it is functioning properly, is in good mechanical condition, and is adequate from the standpoint of capacity and reliability of operation for the service in which it is used.**

KM failed to inspect and test the relief device located on surge Tank# 42 to determine that it was adequate from the standpoint of capacity, at the intervals required under §195.428(a). At the time of the inspection, KM did not provide any documentation confirming that the capacity of the relief device on Tank# 42 was adequate to relieve the anticipated pressure and flow rates in the piping system in the event of overpressure situation.

No documentation was provided by the operator demonstrating that the relief device for Tank #42 had been checked for capacity prior to the October 28, 2009 incident.

7. §195.408 Communications.

(a) Each operator must have a communication system to provide for the transmission of information needed for the safe operation of its pipeline system.

(b) The communication system required by paragraph (a) of this section must, as a minimum, include means for:

(1) Monitoring operational data as required by §195.402(c)(9);

At the time of the accident KM demonstrated that it did not have a communication system to provide for the transmission of information needed for the safe operation of its pipeline. Due to the lack of SCADA communications between the Kinder Morgan terminal and Colonial Pipeline during pumping operations, Colonial’s control room could not see the level alarms at the Perth Amboy terminal. The communication system in place at the time of the accident was not capable of transmitting information such as: pressure, temperature, flow or other operational data on inbound product movements which directly affects the safe operation of this pipeline.

Proposed Civil Penalty

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed \$100,000 for each violation for each day the violation persists up to a maximum of \$1,000,000 for any related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation(s) and has recommended that you be preliminarily assessed a civil penalty of \$425,000 as follows:

<u>Item number</u>	<u>PENALTY</u>
1	\$122,500
2	\$85,000
3	\$30,000
4	\$30,000
5	\$30,000
6	\$42,500
7	\$85,000

Proposed Compliance Order

With respect to items 1, 2, 3, 4, 5, 6 and 7, pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to KM. Please refer to the *Proposed Compliance Order*, which is enclosed and made a part of this Notice.

Response to this Notice

Enclosed as part of this Notice is a document entitled *Response Options for Pipeline Operators in Compliance Proceedings*. Please refer to this document and note the response options. Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b). If you do not respond within 30 days of receipt of this Notice, this constitutes a waiver of your right to contest the allegations in this Notice and authorizes the Associate Administrator for Pipeline Safety to find facts as alleged in this Notice without further notice to you and to issue a Final Order.

In your correspondence on this matter, please address to Byron Coy, PE, Director, PHMSA Eastern Region, 820 Bear Tavern Road, Suite 103, W. Trenton, NJ 08628 and refer to **CPF 1-2011-5001**. For each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,



Byron Coy, PE
Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration

Enclosures: *Proposed Compliance Order*
Response Options for Pipeline Operators in Compliance Proceedings

PROPOSED COMPLIANCE ORDER

Pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration (PHMSA) proposes to issue to Kinder Morgan Liquid Terminals LLC (KM), a Compliance Order incorporating the following remedial requirements to ensure the compliance of KM's Perth Amboy, NJ with the pipeline safety regulations:

1. In regard to Item Numbers 1-5 of the Notice pertaining to KM's failure to have written procedures, KM must prepare written procedures addressing the requirements of the following regulations for the Perth Amboy Terminal, NJ:
 - § 195.402(c)(7) Startup and Shutdown
 - § 195.402(c)(8) Pipeline Monitoring
 - § 195.402(c)(9) Detecting Abnormal Operating Conditions
 - § 195.428 Overpressure safety devices and overfill protection systems
 - § 195.420 Valve maintenance

2. In regards to Item Number 6 of the Notice pertaining to the overpressure safety devices and overfill protection systems under § 195.428(a), KM must ensure that all jurisdictional overpressure safety devices at the Perth Amboy Terminal are adequate from a standpoint of capacity and meet the requirements outlined under §195.428 of the code.

3. In regards to Item Number 7 of the Notice pertaining to the communications requirements under § 195.408, KM must update their current control/communication system/s to allow for transmission of information needed for the safe operation of its pipeline system. The communication system must be capable of detecting abnormal operating conditions by way of monitoring pressure, temperature, flow or other operational data on inbound/outbound product movement. The update must include provisions for on-site monitoring from attended locations (either automatic or manual means) and consideration for disseminating information to other locations.

4. Implement the recommendation as outlined on page 3 of KM's March 2010 Pipeline Hydraulics Report. This recommendation included the redesigning of the relief system and associated piping to ensure the maximum pressures within the system do not exceed Maximum Operating Pressure during normal and abnormal operations.

5. KM shall conduct a comprehensive field review of all pipeline facilities to ensure that all the manually operated valves that have the potential to isolate a safety relief device from performing its intended function, have been adequately secured to prevent inadvertent closure.

6. KM must complete the requirements outlined in **Item 1 above within 90 days of receipt of the Final Order**. The requirements outlined in **Item 2, 3, and 4 above, must be completed within 180 days of receipt of the Final Order**. The requirement outlined in **Item 5 above must be completed within 60 days of receipt of the Final Order**. All documentation demonstrating compliance with each of the items outlined in this order must be submitted to Byron Coy, Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration, Suite 103, Bear Tavern Road, West Trenton, NJ 08628 for review.

7. It is requested (not mandated) that KM maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Byron Coy, Director, Eastern Region, Pipeline and Hazardous Materials Safety Administration. It is requested that these costs be reported in two categories: 1) total cost associated with preparation/revision of plans, procedures, studies and analyses, and 2) total cost associated with replacements, additions and other changes to pipeline infrastructure.