U.S. Department
of Transportation
**Pipeline and
Hazardous Materials Safety
Administration**

8701 South Gessner, Suite 1110
Houston, TX 77074

NOTICE OF PROBABLE VIOLATION

PROPOSED CIVIL PENALTY
AND
PROPOSED COMPLIANCE ORDER

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 24, 2010

Mr. John Swearingen, President
Marathon Pipe Line LLC
539 South Main Street
Findley, Ohio 45840

CPF 4-2010-5013

Dear Mr. Swearingen:

From March to October 2009, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA) pursuant to Chapter 601 of 49 United States Code conducted an investigation of a Marathon Pipe Line (Marathon) accident that occurred at the St. James Terminal, Louisiana on March 10, 2009. The accident involved the explosion of a crude oil sump located in the terminal that occurred during Marathon's execution of a Drain Line Tie-in project. Hazardous vapors were ignited by a welder beveling the drain lines for welding, using a flame cutter. The accident resulted in one fatality and three injuries.

As a result of this investigation, 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 violation(s) are:

1. **§195.52 Telephonic notice of certain accidents.**
(a) At the earliest practicable moment following discovery of a release of the hazardous liquid or carbon dioxide transported resulting in an event described in §195.50, the operator of the system shall give notice, in accordance with paragraph (b) of this section, of any failure that:
(1) Caused a death or an injury requiring hospitalization;
(2) Resulted in either a fire or explosion not intentionally set by the operator;
(3) Caused estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding $50,000;

(4) Resulted in pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water quality standards, caused a discoloration of the surface of the water or adjoining shoreline, or deposited a sludge or emulsion beneath the surface of the water or upon adjoining shorelines; or
(5) In the judgment of the operator was significant even though it did not meet the criteria of any other paragraph of this section.

During the investigation, it was discovered that Marathon failed to make telephonic reports to the National Response Center for two accidents that met telephonic reporting criteria, as follows:

- On January 8, 2006 an inflatable bladder type plumber's plug failed on Marathon's Garyville 30-inch crude oil pipeline located at the LOCAP St. James Station resulting in a release of crude oil and vapors. Grinding by a contract welder ignited the crude oil vapors. The welder suffered slight burns from the resulting fire.
- On November 13, 2007 a mud plug failed on Marathon's Lima 22-inch crude oil Pipe Line (Rosedale-Roachdale) in the Martinsville, IL area resulting in a release of crude oil and vapors. The vapors ignited. No injuries resulted from the accident.

Marathon did not believe these releases were reportable due to the lack of volume released. Condition 2 does not require a specific volume release to be reportable. The fact that there was a liquid (vapor) released and a fire resulted from the release of that liquid means a notification is required.

2. **§195.54 Accident reports.**
(a) Each operator that experiences an accident that is required to be reported under §195.50 shall as soon as practicable but not later than 30 days after discovery of the accident, prepare and file an accident report on DOT Form 7000-1, or a facsimile.

As a result of this investigation, it was learned that Marathon failed to prepare and file an accident report on DOT Form 7000-1 for two accidents that met accident reporting criteria, as follows:

- On January 8, 2006 an inflatable bladder type plumber's plug failed on Marathon's Garyville 30-inch crude oil pipeline located the LOCAP St. James Station resulting in a release of crude oil and vapors. Grinding by a contract welder ignited the crude oil vapors, and the welder suffered slight burns.
- On November 13, 2007 a mud plug failed on Marathon's Lima 22-inch crude oil Pipe Line (Rosedale-Roachdale) in the Martinsville, IL area resulting in a release of crude oil and vapors. The vapors ignited. No injuries resulted from the accident.

Marathon did not believe these releases required a report due to the lack of volume released. The fact that there was liquid (vapor) released and a fire resulted from the release of that liquid requires a written report.

3. **§195.402 Procedural manual for operations, maintenance, and emergencies.**
(a) General. Each operator shall prepare and follow for each Pipe Line 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 Pipe Line commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

Marathon failed to follow its procedures and did not properly prepare and execute Marathon Pipe Line's (MPL) Standard MPLOPR007 "Commissioning, Decommissioning, and Recommissioning Pipe Line Systems" (CDRSTD), as described below. Marathon issued "CDR No. 40001-005, Drain Line Tie-Ins, Revision 1" (CDRACT) on March 9, 2009 to cover the work to be performed on the St. James Terminal Drain Line Tie-in project. Failure to follow the MPL procedures may have contributed to the accident that occurred on March 10, 2009. The following are instances of Marathon's failure to follow its

procedures.

MPL's Lockout/Tagout (LOTO) procedures were not followed

Marathon failed to follow its procedures and did not adequately secure the facility that contained liquid or gas by not using slip blind flanges to isolate the sump drain lines as required in the CDRACT. To ensure safety during this work, CDRACT Section III, paragraph C required that MPL's LOTO procedures be followed. The LOTO procedure applies to all employees and contractors and establishes the minimum requirements for lockout and/or tagout of energy devices in which the unexpected energizing or release of stored energy could cause injury to personnel or have a negative environmental impact or damage equipment. The steps to be taken for LOTO are included in Marathon's Standard MPLJES306, Energy Isolation Policy (Lock Out Tag Out) which requires in Section 7.5.6 the use of and the installation of slip blind flanges to isolate and make the work area safe. The Contractor used its own Hot Work/Confined Space Work Permit form to ensure compliance with Marathon's CDRACT. However, it was not completed correctly. Contrary to the isolation requirement of the CDRACT, the Lockout/Tagout requirements of Section VI, Isolation to isolate the work area of hazardous vapors was checked "N/A" by the preparer. The CDRACT in Section III, Paragraph C required that Marathon's Lockout/Tagout procedures be followed. The Lock Out/Tag Out process was partially completed. Marathon and its contractor tagged and locked many valves, etc. before work started on the Drain Line Tie-In. However, slip blind flanges to isolate the 2-inch and the 4-inch drain lines from the sump were not installed. The use of Energy Isolation Devices, such as slip blind flanges, are required because valves that could have been used to isolate the sump lines had not yet been installed on the 2-inch and 4-inch sump drain lines terminating at the sump.

All key on-site personnel did not attend a pre-job safety meeting

Marathon failed to follow its procedure which requires that "The Pre-job safety meeting shall be attended by all key on-site Contractors and Subcontractors". Marathon was asked for and provided a list of all "key contractors". This list was compared to a list of attendees in the Job Safety Analysis (JSA) and indicates that not all key contractor or Marathon personnel involved in the Drain Line Tie-In project work were present in the meeting when the JSA was conducted and work assignments for the work day were identified and made. Marathon's Contractors are required to follow the requirements of Marathon's Standard TNLSFT002, Contractor Safety Program, and included in this standard are requirements for contractors to have pre-job meetings and to require key employees attend these meetings. These requirements are included in two sections of the standard. Section 2.2.1.1 of the standard requires a pre-job meeting before commencement of work and Section 2.2.1.2 requires attendance by all key on-site Contractors and Subcontractors.

Continuous monitoring for hazardous vapors in the excavation work area was not performed

Marathon failed to make the work area safe by not continuously monitoring for hazardous vapors (LEL and H_2S) as required in Section III, J of the CDRACT. PHMSA views continuous monitoring as uninterrupted in time, sequence, substance, or extent. Marathon did not provide records to demonstrate that the contractor monitored continuously during welding and/or hot work activity. The Contractor's Hot Work/Confined Space Work Permit shows that the monitoring was only performed three times. Additionally, from interviews following the accident, it was learned that the hazardous vapors monitor was not in the excavation work area when the work was being performed but instead was with the Firewatch, who was not in the excavation work area but near the track hoe. Effective monitoring can only be performed when the monitor's tube is placed near or adjacent where the hazardous fumes would be in contact with the source of ignition (the flame cutter), and the monitor should have been continuously utilized in the excavation work area during work activities. After the accident, tests were performed on the monitor that was utilized during the drain line tie-in work. The test results indicated that the monitor was functioning properly at the time of the accident, that it was capable of monitoring continuously, but it was not capable of recording the data.

The excavation work area in the Drain Line Tie-in project was not considered a confined space
Marathon failed to identify the excavation work area as a confined space and include Marathon's Standard TNLHES310 "Confined Space Entry" in the CDRACT. A Hazardous Confined Space is defined by Marathon in Standard TNLHES310 in section 7.7.1 as a space that "contains or has a potential to contain a hazardous atmosphere". Marathon's Contractor in its "Excavation Safety Inspection Checklist" noted that the depth of the excavation was to be 6-feet. Additionally, MPL Standard TNLHES310, states that a work area with certain characteristics such as those described as 7.7.5.9 as entry into a confined space where welding, cutting or other spark-producing operations are performed should be considered as Hazardous Confined Space entries. Had the CDR considered the excavation work area where the welding and cutting was to be performed during the Drain Line Tie-In as a confined space, critical safety steps (e.g.; monitoring equipment must have the calibration checked (bump test) or else a full calibration performed prior to each day's use) that could have prevented the accident would have been required to have been performed.

4. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. Each operator shall prepare and follow for each Pipe Line 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 Pipe Line commence, and appropriate parts shall be kept at locations where operations and maintenance activities are conducted.

Marathon failed to prepare and follow the necessary procedure for the installation of mud plugs. Section VII of the CDRACT, Section B, Work Sequence Item #3 requires the installation of "mud plug on both lines if LELs are present". Marathon utilized bentonite Mud Plugs during the Drain Line Tie-in project for the isolation of hazardous vapors from the sump into the work area. A procedure for installing bentonite Mud Plugs was not included in the CDR, and Marathon failed to provide a procedure for installing the bentonite Mud Plugs. While Marathon's Standard MPLMNT04 "Pipe Replacement" describes the use of bentonite Mud Plugs when making tie-ins similar to that on the Drain Line Tie-in project, the standard was not included in the CDR. The unreferenced standard states in Section 3.16.8 that all vapor plugs (including bentonite Mud Plugs) should be operated per the manufacturer's recommendations and procedures; however, Marathon did not demonstrate that the manufacturer's recommendations and procedures were available and followed during the installation and operation of the bentonite Mud Plugs. During this investigation, PHMSA could not find any manufacturer's recommendations for the use of bentonite clay as a vapor barrier mud plug.

5. §195.402 Procedural manual for operations, maintenance, and emergencies.

(a) General. ***(see above)***

(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:

(6) Minimizing the potential for hazards identified under paragraph (c)(4) of this section and the possibility of recurrence of accidents analyzed under paragraph (c)(5) of this section.

The regulations require that operators prepare procedures to provide safety during maintenance and normal operations. There were three Marathon accidents caused by ineffective hazardous vapor isolation. Marathon investigated each of these accidents prior to the accident of March 10, 2009. The investigations did not result in actions that minimized the reoccurrence of subsequent accidents specifically the March 10, 2009 accident.

There have been three Marathon accidents caused by ineffective hazardous vapor isolation since 2001, as follows:

1. November 13, 2007 - Martinsville Area, IL - Lima 22-inch Crude (Rosedale-Roachdale). Mud plug failed releasing liquid and hazardous vapors. The vapors ignited. No injuries.
2. December 12, 2002 - Houston-Centennial Area, Beaumont, TX- Creal Springs 24-26-inch Product line. While purging the atmospheric drain line system with nitrogen, water was pushed through an isolation mud plug. No injuries.
3. March 20, 2001 - Woodpat Crude Oil Pipe Line, Marion Co. IL. Mud pack failed and vapors from the released hazardous liquid ignited. Five contractor employees were injured.

Marathon investigated these accidents, and the recommendations and actions taken based on analysis of information on the prior accidents did not result in sufficient minimization of the possibility of a recurrence, as required by §195.402(c)(6), to prevent the accident that occurred at the St. James Terminal, Louisiana on March 10, 2009. Since the March 10, 2009 accident, Marathon has conducted investigations and identified specific recommendations and areas of improvement to minimize the possibility of recurrence of accidents involving energy isolation, specific procedures for the use of mud plugs, and revisions to Marathon's CDR standard which were communicated to PHMSA in a letter, dated November 13, 2009. Marathon should continue to evaluate the effectiveness of the changes that have been implemented as a result of the investigations into the March 10, 2009 accident to ensure the changes are effective in sufficiently minimizing the possibility of recurrence of accidents.

6. **§195.501 Scope.**
(a) This subpart prescribes the minimum requirements for operator qualification of individuals performing covered tasks on a pipeline facility.
(b) For the purpose of this subpart, a covered task is an activity, identified by the operator, that:
(1) Is performed on a pipeline facility;
(2) Is an operations or maintenance task;
(3) Is performed as a requirement of this part; and
(4) Affects the operation or integrity of the pipeline.

§195.505 Qualification program.
Each operator shall have and follow a written qualification program. The program shall include provisions to:
(a) Identify covered tasks;

Marathon failed to identify a covered task in its Operator Qualification (OQ) program. A covered task performed during the Drain Line Tie-in project (use of bentonite mud plugs to isolate hazardous vapors) was not found to be in Marathon's OQ program, and no records were made available showing that this task was in the OQ program. The covered task not identified in Marathon's OQ Plan that contributed to the March 10, 2009 accident involves the installation and operation of bentonite mud plugs as a vapor barrier to isolate hazardous vapors. Isolation of hazardous vapors in a pipeline meets all of the criteria of the four part test as the task is performed on a pipeline facility; is a maintenance task required for performing certain repairs or modifications; is performed as a requirement of this part for performing certain repairs or modifications; and affects the operation or integrity of the pipeline. Marathon includes in its OQ Plan other covered tasks covering methods used for isolation purposes (e.g.: #17 "Operate hot tap machine"; # 43 "Install freeze plug"; # 52 "Isolate and drain pipeline"; # 86 – Install stopples), but there is no covered tasks for isolation of a pipeline using bentonite mud plugs to isolate hazardous vapors.

7. **§195.505 Qualification program.**
Each operator shall have and follow a written qualification program. The program shall include provisions to:
(b) Ensure through evaluation that individuals performing covered tasks are qualified;

Marathon failed to ensure through evaluation that individuals were qualified. Marathon failed to provide records or any other documentation to demonstrate compliance with the requirements of the OQ program. A covered task was performed during the Drain Line Tie-in project (use of bentonite mud plugs to isolate hazardous vapors) but no records were made available showing that this task was in the OQ program; and no records were made available showing that individuals were qualified to perform the covered task of installing and operating bentonite mud plugs as a vapor barrier to isolate hazardous vapors.

8. **§195.505 Qualification program.**
Each operator shall have and follow a written qualification program. The program shall include provisions to:
(h) After December 16, 2004, provide training, as appropriate, to ensure that individuals performing covered tasks have the necessary knowledge and skills to perform the tasks in a manner that ensures the safe operation of pipeline facilities;

Marathon did not provide training, as appropriate, to ensure that individuals performing the covered task of installing and operating bentonite mud plugs as a vapor barrier to isolate hazardous vapors had the necessary knowledge and skills to perform the task in a manner that ensured the safe operation of pipeline facilities during the Drain Line tie-in project at the St. James Terminal, Louisiana on and around March 10, 2009.

9. **§ 199.105 Drug tests required.**
(b) *Post-accident testing*. As soon as possible but no later than 32 hours after an accident, an operator shall drug test each employee whose performance either contributed to the accident or cannot be completely discounted as a contributing factor to the accident. An operator may decide not to test under this paragraph but such a decision must be based on the best information available immediately after the accident that the employee's performance could not have contributed to the accident or that, because of the time between that performance and the accident, it is not likely that a drug test would reveal whether the performance was affected by drug use.

Nine surviving employees were identified by Willbros as being present at the accident site in their email, dated July 8, 2009, response to PHMSA's request. These nine employees are required to be drug tested by the regulations because their *performance either contributed to the accident or cannot be completely discounted as a contributing factor to the accident.* However, Marathon failed to test six of the nine Willbros' employees. Neither Marathon nor Willbros provided documentation to indicate why this testing was not performed as required by the regulations.

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 $1,071,400 as follows:

Item number	PENALTY
1.	$ 41,700
2.	$ 41,700
3.	$ 100,000
6.	$ 788,000
9.	$ 100,000

Warning Items

With respect to item 5, we have reviewed the circumstances and supporting documents involved in this case and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to promptly correct these item(s). Be advised that failure to do so may result in Marathon being subject to additional enforcement action.

Proposed Compliance Order

With respect to item(s) 2, 3, 4, 6, 7, and 8 pursuant to 49 United States Code § 60118, the Pipeline and Hazardous Materials Safety Administration proposes to issue a Compliance Order to Marathon Pipe Line Co. 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 Pipe Line 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 refer to CPF 4-2010-5013 and for each document you submit, please provide a copy in electronic format whenever possible.

Sincerely,

R. M. Seeley
Director, Southwest Region
Pipeline and Hazardous Materials Safety Administration

Enclosure: *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 Marathon Pipe Line LLC (Marathon) a Compliance Order incorporating the following remedial requirements to ensure the compliance of Marathon with the Pipeline safety regulations:

1. In regard to Item Number 2 of the Notice pertaining to Marathon's failure to submit an accident reports on DOT Form 7000-1, or a facsimile to PHMSA within 30 days for a fire that occurred at St. James Station on January 8, 2006 and in the Martinsville, Il area on November 13, 2007, Marathon must submit this report within 90 days following receipt of the Final order.

2. In regards to Item Number 3 of the Notice, Marathon must identify deficiencies observed during the review of personnel performance in preparing and following Marathon's Standard MPLOPR007 "Commissioning, Decommissioning and/or Recommissioning Pipeline Systems (CDR)" procedure while executing the Drain Line Tie-in project, integrate the findings into its training program, and provide this training to its employees within 90 days following receipt of the Final Order.

3. In regards to Item Number 4 of the Notice, Marathon must prepare a procedure for the installation of mud plugs within 90 days following receipt of the Final Order.

4. In regards to Item Number 6, 7 and 8 of the Notice pertaining to Marathon's failure to include in its Operator Qualification Program the installation and operation of bentonite mud plugs as a vapor barrier to isolate hazardous vapors as a covered task(s) and provide appropriate qualification methodologies and training to ensure that individuals performing the covered task(s) have the necessary knowledge and skills to perform the task(s) in a manner that ensures the safe operation of pipeline facilities.

5. Submit the results of the Proposed Compliance Order item above to Mr. R. M. Seeley, Region Director, Southwest Region, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, 8701 South Gessner, Suite 1110, Houston, TX 77074.

6. Marathon Pipe Line LLC shall maintain documentation of the safety improvement costs associated with fulfilling this Compliance Order and submit the total to Mr. R. M. Seeley, Director, Southwest Region, Pipeline and Hazardous Materials Safety Administration. Costs shall 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.