

Emeaba Kalu Kelly

From: [REDACTED]
Sent: Tuesday, November 10, 2015 10:45 AM
To: Emeaba Kalu Kelly
Cc: [REDACTED]
Subject: CPF 1-2015-5018H 151343_ Colonial Accident - Item 2 of NTSB Information Request to VASCC
Attachments: NTSB Information Request 110315.docx

Below is our response to item 2 of your request:

PHMSA does not have specific requirements for the method and tools needed for small or slow leaks.

Federal Liquid Integrity Management regulations only requires that operators have a means to detect leaks, with additional requirements and guidance of what is needed to evaluate operator capabilities. However, the Federal Pipeline Safety Regulations do not go as far as requiring what specifics methods/tools to use for different leak scenarios. Our inspectors do however look at the analysis and adequacy of an operator's means to detect leaks in the course of inspections.

PHMSA does have guidance and Frequently Asked Questions (FAQs) for Liquid Integrity Management on PHMSA's public website. PHMSA also has an R&D project underway to develop some guidance material for improving leak detection system design.

For leak rates so small as to not be detected by operator leak detection instrumentation including SCADA and CPM leak monitoring systems, the following appear to be the only known methods that have discovered these type leaks:

1. Visual evidence of a leak
2. The smell of petroleum products by the operator patrolling the ROW
3. The public (the case with the Colonial leak)
4. Finding dead vegetation along the ROW

From the Liquid Integrity FAQs (<http://primis.phmsa.dot.gov/iim/faqs.htm>) under questions 9.4 and 9.5:

9.4 What criteria must an operator consider in determining whether enhancements to leak detection are required?

Operators are required to have a means of detecting leakage on their pipelines. Operators must evaluate that capability and improve it, if necessary, to protect the high consequence area. The evaluation must include at least the following factors:

- *length and size of the pipeline*
- *type of product carried*
- *the pipeline's proximity to the high consequence area*
- *the swiftness of leak detection*
- *location of nearest response personnel*
- *leak history, and*
- *risk assessment results.*

In addition, PHMSA Pipeline Safety believes the operator should consider:

- *system operating characteristics (e.g., steady state operation, high transient pressure and flow),*
- *current leak detection method for the HCA areas,*

- *use of SCADA,*
- *thresholds for leak detection,*
- *flow and pressure measurement,*
- *specific procedures for lines that are idle but still under pressure,*
- *specific consequences related to sole source water supplies regarding additional leak detection means,*
- *testing of leak detection means, such as physical removal of product from the pipeline to test the detection, and*
- *any other characteristics that are part of the system leak detection.*

Last Revision: 10/22/01

9.5 What is the minimum acceptable leak detection system in order to comply with 195.452 (i) (3), which states "an operator must have a means to detect leaks on its pipeline system."?

PHMSA Pipeline Safety will address leak detection capability with each operator according to the requirements of the regulation. This includes a "means to detect leaks" and an evaluation of the capability of the leak detection means. The rule specifies several factors that the evaluation must consider. These, and additional factors that PHMSA Pipeline Safety believes the operator should consider are outlined in FAQ 9.4.

PHMSA Pipeline Safety will evaluate the operator's process for considering these factors and making decisions about the adequacy of leak detection during integrity management inspections.

Last Revision: 12/16/05

From: Emeaba Kalu Kelly [REDACTED]
Sent: Tuesday, November 03, 2015 12:52 PM
To: Rick Vanderploeg
Cc: Chhatre Ravindra
Subject: NTSB Information Request to VASCC

Dear Mr. Vanderploeg:

Kindly provide the information in the attached request to the NTSB before the close of business on November 10, 2015.

Thank you.

Kalu Kelly Emeaba
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