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

Administrator

1200 New Jersey Avenue, SE.
Washington, DC 20590

AUG 26 2010

The Honorable Jim Matheson
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Matheson:

Thank you for your letter regarding the pipeline failure that occurred on the evening of June 11, 2010, in your district. In particular, you have asked about the potential environmental impact of that failure, which resulted in the release of 33,000 gallons of crude oil into Red Butte Creek; the conduct and compliance history of the operator, Chevron Pipe Line Company (Chevron); the enforcement history of the pipeline segment where the failure occurred; the events preceding and potential causes of the failure; and the procedures that will govern the Department's ongoing accident investigation. Secretary LaHood has asked me to respond on his behalf.

We were pleased to hear that my staff was able to update you on the investigation into the cause of the failure. I would like to commend the efforts of the emergency personnel who responded to this incident. Their quick action helped to contain the spill, mitigate its effect on the environment, and protect the general health and safety of your constituents. As I understand it, that result was due, in part, to the regular drills and liaison activities that your first responder community conducts with local pipeline operators, including Chevron. It is my sincere hope that these kinds of interactions continue in the future. I am enclosing responses to the questions you raised.

The Department applauds the efforts of your district's first responders in containing this spill and hope that the information provided addresses your concerns about the safe and effective operation of this pipeline.

I hope you find this information helpful.

Regards,

Cynthia Quarterman

Enclosure

The U.S. Department of Transportation's Response to Questions Raised in a June 16, 2010, Letter from Congressman Jim Matheson

The Pipeline and Hazardous Materials Safety Administration (PHMSA) administers the Nation's Pipeline Safety Laws and Regulations, the Federal safety standards that apply to the transportation of natural gas and hazardous liquids by pipeline. In the case of interstate pipeline operators and facilities—such as the Chevron pipeline that failed in Utah's 2nd District on June 11 and 12, 2010—PHMSA is solely responsible for enforcing these requirements.

Safety Regulations and Inspections

According to its records, PHMSA has conducted a comprehensive safety inspection of Chevron's facilities and records every 2 years for the past decade, and the most recent of those inspections occurred in August 2009, with no violations reported. Those records also indicate that PHMSA performed a supplemental Integrity Management and Operator Qualification inspection of the Chevron pipeline in August 2007.

- The PHMSA found that Chevron violated the Pipeline Safety Regulations for this pipeline on one occasion in the past decade. Specifically, in a March 2008 Final Order, the Agency found that the company had not performed a number of monthly tank inspections, a violation that resulted in the assessment of a $66,000 Civil Penalty and a Compliance Order requiring 1.2 million dollars worth of modifications to its piping systems and corrosion mitigation. The PHMSA also issued Chevron a warning letter in August 2007 for failing to keep certain records and a notice to revise a portion of its operations and maintenance manual in July 2003.

- In addition, Chevron is required by the Pipeline Safety Laws and Regulations to perform an integrity assessment of the pipeline in your district every five (5) years. One method of assessment is to perform an internal survey with a "smart pig," a device capable of detecting wall loss, geometric deformations, and other anomalies. The most recent smart pig assessment on this pipeline segment occurred in June 2008, with no significant abnormalities reported.

Leak Detection System

The operation of this pipeline's leak detection system is a matter that requires a brief description of Chevron's pipeline system. The failed segment is part of a much larger, 182.5-mile-long pipeline system that transports crude oil from Chevron's Rangely Colorado Terminal to its Salt Lake Refinery. That system consists of two 10-inch lines: the No. 1 line, built in 1948 (currently not in service), and the No. 2 line, built in 1952 (the one that experienced the failure).

- The leak detection capabilities for the No. 2 line are limited by the line's location, design, and operational characteristics. In particular, the elevation profile of the No. 2 line varies dramatically between its points of origin and termination, ranging anywhere from 4,234 to 8,450 feet above sea level. Additionally, the low

- operating pressure coupled with variations in the crude oil density and flow rates of the line make rapid leak detection of smaller leaks particularly challenging on this pipeline segment.

- Chevron uses a so-called "meter-in, meter-out system" of leak detection on the No. 2 line, i.e., an electronic control system that calculates the amount of product injected into the system on a hourly basis and compares that result with the amount received by the Salt Lake Refinery. However, the immediate accuracy of a "meter-in, meter-out system" is limited, and such systems routinely register what are commonly referred to as "overs" and "shorts," anomalous flow trend readings that usually equalize over time. Thus, while a catastrophic failure would be immediately detectable, a smaller leak, such as the one experienced on the No. 2 line, is more difficult to discover. Since the event however, Chevron has made modifications to their leak detection software and hardware to enhance their ability to detect smaller leaks.

- With that information in mind, a team of PHMSA engineers reviewed Chevron's actions prior to the release and the functioning of its pipeline system on June 11 and 12, 2010. Though subject to revision, as the Agency continues its investigation, the Agency's preliminary conclusion is that the company had no reason to know that a leak had occurred on the No. 2 line before its control room personnel received the telephone call from Salt Lake City personnel during the early morning hours of June 12.

The Purported Cause of the Failure and Pipe Excavation

The purported cause of the failure is an electric arc transmitted by a metallic fence post located in the right-of-way (ROW) into the Chevron No. 2 line.

- In that regard, based on reports from the field investigation and an interview with an electric company representative, it appears that the substation and associated fence were installed in the early-1980s, a decade before PHMSA established its comprehensive damage prevention program for hazardous liquid pipeline systems. Chevron does, however, have an obligation to install aboveground pipeline markers in certain areas and to inspect its pipeline ROWs at regular intervals.

- It should also be noted that PHMSA inspected Chevron's ROW shortly after the accident and discovered areas of overgrowth, a particular concern for a pipeline subject to aerial patrols and surveillance. The Agency has asked Chevron to address that issue and is contemplating the need for further action. We do not have any information at this time to suggest that the installation of a metallic fence post is a cause for concern with respect to any other pipelines. Chevron is

currently working with the University of Utah to remove much of the brush and trees along the Chevron ROW to allow better surveillance of the ROW condition.

- Regarding excavation, a PHMSA engineer oversaw the excavation of the fence post and the repairs made to the failed pipeline segment, and the Agency monitored Chevron's successful leak test of the line as well as the restart of the line.

- Chevron has been patrolling this line weekly for the past few years (although the Federal requirement is for bi-weekly patrols) and they will continue to patrol weekly. Also, within 45 days of returning this line to service, Chevron has agreed to perform an encroachment survey by foot along this pipeline segment as well as an aboveground electrical survey to ensure there are no additional unknown underground structures in close proximity to this pipeline. Chevron has completed this encroachment survey between Little Mountain and University of Utah, and is in the process of doing a survey for other electrical installations on their ROW for the rest of the Western United States.

- Although PHMSA was satisfied that the line was safe before the restart, PHMSA is continuing to evaluate information about the failure of this system to determine if more patrolling is needed, if adequate outside electric current protections are present, and whether the leak detection system can be improved, given the terrain in the area and the complex operating characteristics of the line. The PHMSA anticipates having its accident investigation complete by September 2010. Any regulatory non-compliances or needed corrective safety actions will be addressed through our enforcement process.