

Pipeline and Hazardous Materials Safety Administration

Office of Pipeline Safety

Transmittal of Oak Ridge National Lab Report on:
*Updated Safety Review and Assessment of
Pipelines Adjacent to the Indian Point Site*

December 16, 2022



Overview

- Recap of request from Senators Schumer & Gillibrand and Representative Jones for independent review.
- Review of key report findings
- Guidance on obtaining the full report
- Actions PHMSA is taking



Recap of Request

Senators Schumer and Gillibrand and Representative Jones asked that PHMSA:

“In addition to our request for an independent comprehensive analysis of the safety risks posed by the AIM project, we also ask that you reassess and review all past FERC, PHMSA and NRC assessments related to the safety of the 26- and 30-inch pipelines nearby Indian’s Point Unit 3.”



Recap of Request

And later in the letter:

”We ask that this review provides detailed information regarding potential impacts to spent fuel pools and the Independent Spent Fuel Storage Installation.”



Independent Review



Independent Review

PHMSA contracted Oak Ridge National Laboratory (ORNL) to perform the analysis. The analysis was independent from previous efforts and included a review of:

- The U.S. Nuclear Regulatory Commission (NRC) Expert Evaluation Team report;
- The Holtec Post-shutdown Decommissioning Activities Report;
- The AIM Final Environmental Impact Statement;
- Other relevant documents to identify potential hazards to the ongoing decommissioning activities at the Indian Point Site; and
- Documents provided by concerned citizens.



Independent Review

- Upon receipt of the draft report, PHMSA asked the FERC, NRC OIG, NRC and NYDPS to peer review the document for factual accuracies. Each of these agencies has different roles in pipeline/nuclear safety.
- The NRC and NYDPS provided factual comments. The NRC OIG and FERC declined to review the report.
- All comments were relayed to ORNL for their consideration, in keeping with their independent analysis and review.



Findings

An unintentional natural gas release and subsequent ignition resulting can be a very serious and hazardous event... that can pose a threat to public safety, including buildings, equipment, and people that can't take cover.

“However, it is improbable that an unintentional natural gas release from any of these three pipelines will cause physical damage that adversely affects the structural integrity of safety-related structures, systems, or components or the leak tightness of spent fuel casks and class A, B, C, and GTCC waste containers at the Indian Point Site, including spent fuel in dry storage at the ISFSI.” - Executive Summary



General Comments

We are sharing the full report on our website for anyone to access and pose questions.

This is a technical report. It will take most people considerable time to read and digest.

The report is written to look at the **worst possible combination of events and scenarios.**

For example, the report looks at worst case scenarios involving flash fires/fireballs and jet fires. Each of these are different and have different potential impacts on the surrounding area.



The Technical Analysis

The report covers a broad set of considerations, including a pipeline failure and the potential consequences of:

- missiles (airborne projectiles);
- a flash fire or fireball;
- a jet fire;
- thermal radiation as a function of distance and time;
- thermal radiation as a function of block valve closure; and
- an over pressurization event caused by an explosion.



The Technical Analysis

The report evaluates various potential threats to pipeline integrity such as:

- internal and external corrosion;
- stress corrosion cracking;
- third party and mechanical damage;
- incorrect operational procedure;
- weather-related and outside force;
- manufacturing related defects and welding issues;
- equipment related threats.

It does not consider existing regulations to mitigate these risks.



Specific comments

“The 26 in. and 30 in. pipelines are co-located within the same 65-ft. wide right-of-way. Should one of these pipelines rupture, it is likely that the other could be damaged or rupture as a result... **Even in this case... This situation results in the same conclusions as for a single pipeline rupture. That is, the hazardous heat fluxes are of sufficiently short duration that the safety-related structures, systems, and components and radioactive material shipping containers are unlikely to experience serious damage.”** (page 28)



Specific Comments

“Explosions caused by unconfined methane gas plumes are highly unlikely, even in the event of a pipeline break. This fact is a result of the buoyant nature of the gas cloud and the relatively low flame speed for methane. In the unlikely event of an explosion, however, nearby buildings and structures... may experience damage...” (page 41-42)

This is why PHMSA is focused on pipeline safety and integrity management.



Questions

We invite public review and are creating an opportunity for written follow-up questions—to ensure technical experts can fully examine and explain the report’s findings, including additional consultation with ORNL.

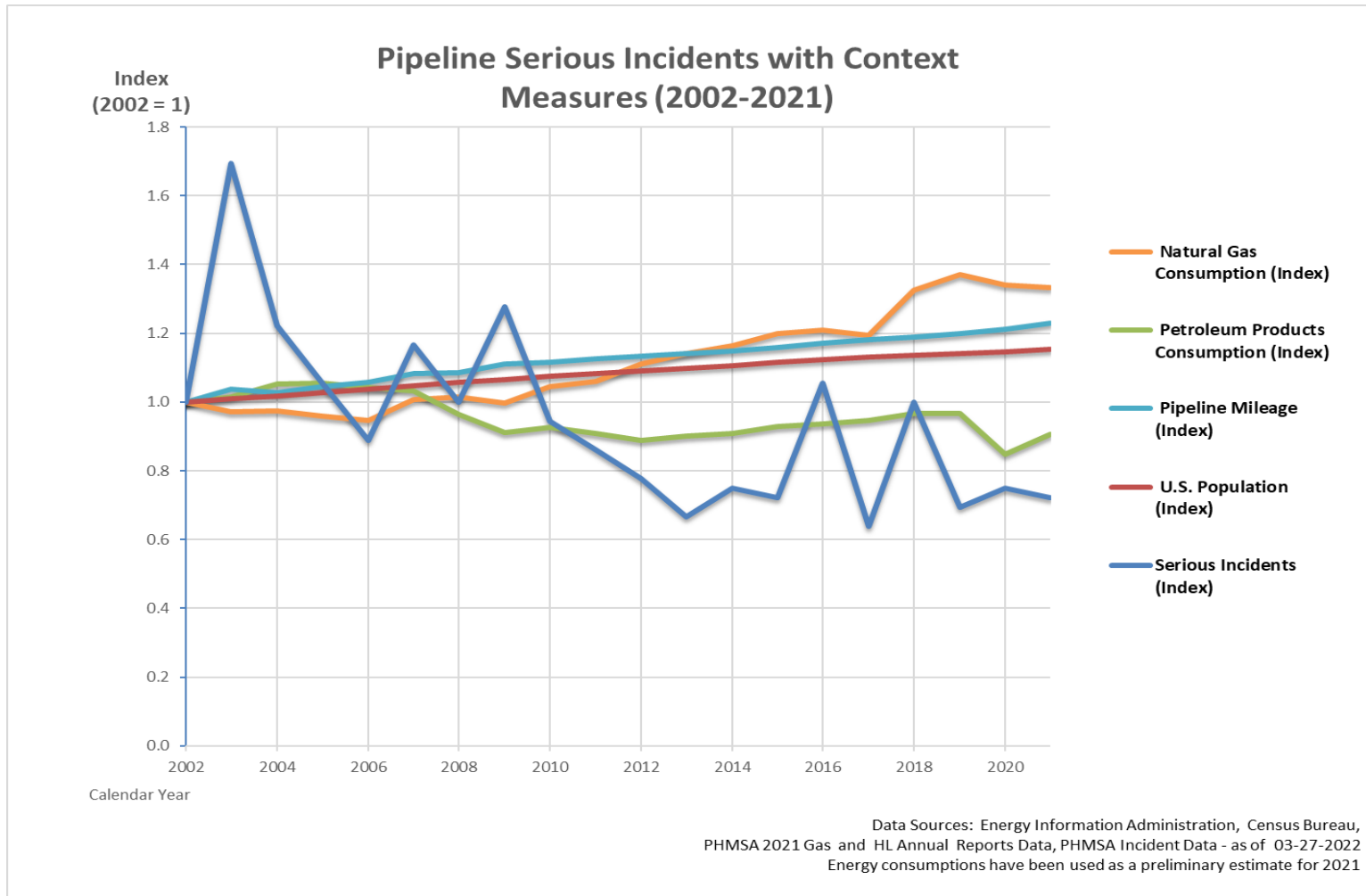
We also understand that there may be general questions about worst case scenarios and efforts to protect against pipeline failures. We will keep the question docket open for 3-6 months (depending on continued interest).

Please direct questions to: PHMSAPublicAffairs@dot.gov so that we can help educate how we are focusing on protecting the public against pipeline safety risks.



What is PHMSA doing to mitigate risk?

PHMSA is working toward **zero** adverse pipeline impacts on people and the environment. While serious incidents are decreasing, even one is too many.



Changes We are Making

In the last year, PHMSA completed 3 major pipeline safety regulatory updates.

- New automatic and remote shutoff valve requirements: needed to provide fast shutdown of pipelines.

- A new rule for gas transmission pipelines:
 - strengthens Integrity Management requirements, including identifying and evaluating all potential threats;
 - bolsters corrosion control standards to include surveys for interference of corrosion protection, internal and external corrosion monitoring, and corrosion protection testing;
 - institutes new requirements for inspections after extreme weather events; and expands criteria and expedites timelines for pipeline repairs.



Changes We are Making

Updating Potential Impact Radius calculation requirements to consider equity issues (can all people navigate an immediate threat as quickly as the current PIR calculation suggests?)

- We held a public meeting this week to receive input from the public on ways to improve this calculation.
- We would value your input and perspective.
- We are planning another public meeting in early 2023.



Research and Ideas We are Considering

- We are investing in research that will help detect pipeline defects BEFORE they fail.
- We are investing in research on ways to detect even small leaks.
- We are looking for ways to quickly alert the public to emergencies on pipelines near them – maybe through a text-alert system.
- While we have no authority to engage on siting issues, we are supporting better land development discussions between the public, land development officials and companies.



Your Input/Perspective is Requested

- Thank you for staying engaged.
- Your experience and perspectives are valuable. You may have ideas and solutions that would make a positive safety difference.
- We hope to see you engaging in our public meetings in 2023 and sharing your ideas.



Questions and Answers

