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**New York State Office of the State Comptroller**  
Thomas P. DiNapoli

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Division of State Government Accountability

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# Pipeline Safety Oversight

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## Public Service Commission

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Report 2015-S-31

March 2016

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## Executive Summary

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### Purpose

To determine whether the Public Service Commission (PSC) is providing oversight of pipeline safety in accordance with State regulations and federal performance standards. Our audit scope covered the period April 1, 2013 through October 21, 2015.

### Background

The Pipelines and Hazardous Materials Safety Administration (PHMSA) within the federal Department of Transportation administers pipeline safety nationwide. To do this, it delegates some of its authority to states and provides partial reimbursement for the costs they incur. In New York, the PSC operates a federally certified safety program for intrastate and interstate pipelines. Inspections are performed by the Department of Public Service (DPS), which reports to the PSC. The PSC manages enforcement actions for intrastate pipelines, while PHMSA handles enforcement actions for interstate pipelines. New York's pipelines transmit, gather, and distribute natural gas and hazardous liquids including crude oil, refined petroleum products, and other highly volatile, flammable, or toxic liquids. As of 2014, New York had 91,181 miles of natural gas pipelines and 1,153 miles of hazardous materials pipelines. Between 1995 and 2014, New York had 194 pipeline incidents with 23 fatalities, 123 injuries, and \$77 million in property damage. PHMSA relies on state inspectors as the "first line of defense" to enforce pipeline safety, implement underground utility damage prevention programs, and promote public education and public awareness campaigns. PHMSA annually evaluates New York's pipeline safety program using six performance metrics: Damage Prevention Program, Inspection Activity, Inspector Qualification, Leak Management, Enforcement, and Incident Investigation.

### Key Findings

- DPS staff do not verify the accuracy of the information on employee/contractor qualifications maintained by individual Operators which DPS staff rely on during field audits.
- DPS has not set up a process to identify instances where Operators failed to notify them as required. We determined that Operators did not notify DPS of six gas-related incidents in 2015 that should otherwise have been reported. These incidents involved evacuations, road closures, a business closure, and other situations that left businesses and residents without gas.
- DPS does not perform analyses of all available data to better identify potential high-risk areas.

### Key Recommendations

- Ensure the qualifications for Operators' employees and contractors are accurately documented and supported in the Operators' or independent third parties' files.
- Develop procedures to identify instances when Operators fail to report incidents as required and update the Manual to reflect those procedures.
- Work with the Operators to identify all available sources of pipeline safety data, and then determine which analyses can best provide both DPS and the Operators with the most valuable information to help identify risks and improve pipeline safety.

## **Other Related Audits/Reports of Interest**

[Department of Environmental Conservation: Collection and Use of Oil Spill Funds \(2014-S-59\)](#)

[Department of Environmental Conservation: Selected Aspects of Inactive Hazardous Waste Site Remediation Cost Recovery \(2014-S-14\)](#)

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**State of New York**  
**Office of the State Comptroller**

**Division of State Government Accountability**

March 8, 2016

Ms. Audrey Zibelman  
Chairperson  
Public Service Commission  
Building 3 Empire State Plaza  
Albany, NY 12223

Dear Ms. Zibelman:

The Office of the State Comptroller is committed to helping State agencies, public authorities, and local government agencies manage their resources efficiently and effectively. By so doing, it provides accountability for tax dollars spent to support government operations. The Comptroller oversees the fiscal affairs of State agencies, public authorities, and local government agencies, as well as their compliance with relevant statutes and their observance of good business practices. This fiscal oversight is accomplished, in part, through our audits, which identify opportunities for improving operations. Audits can also identify strategies for reducing costs and strengthening controls that are intended to safeguard assets.

Following is our audit report entitled *Pipeline Safety Oversight*. The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

This audit's results and recommendations are resources for you to use in effectively managing your operations and in meeting the expectations of taxpayers. If you have any questions about this report, please feel free to contact us.

Respectfully submitted,

*Office of the State Comptroller*  
*Division of State Government Accountability*

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This report is also available on our website at: [www.osc.state.ny.us](http://www.osc.state.ny.us)

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## Background

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New York State's pipelines transmit, gather, and distribute gas and other hazardous liquids (crude oil, refined petroleum products, and other highly volatile, flammable, or toxic liquids). As of 2014, New York had 91,181 miles of natural gas pipelines and 1,153 miles of hazardous materials pipelines. According to Department of Public Service (DPS) records, between 1995 and 2014, New York had 194 pipeline incidents resulting in 23 fatalities, 123 injuries, and \$77 million in property damage.

The Pipeline and Hazardous Materials Safety Administration (PHMSA) within the federal Department of Transportation administers pipeline safety nationwide. PHMSA relies on state inspectors as its "first line of defense" to enforce pipeline safety, implement underground utility damage prevention programs, and promote public education and public awareness campaigns. To accomplish this task, PHMSA delegates some of its authority to states and provides partial reimbursement for the costs they incur in this effort. In New York State, the Public Service Commission (PSC) operates a federally certified safety program for intrastate and interstate pipelines. Inspections are performed by DPS staff, who report to the PSC. New York State generally has equivalent, or more stringent, safety standards than those required by federal regulations. DPS is responsible for enforcement actions that involve intrastate pipelines, while PHMSA is responsible for enforcement actions on interstate pipelines.

DPS conducts investigations of accidents and performs Operator inspections, which typically include a review of operations, maintenance, and construction. Operators include any entity that engages in the transportation of gas. In recent years, DPS' inspections have also focused on integrity management, including Operator plans for ensuring higher-risk infrastructures are identified, assessed, and continually monitored; Operator qualifications; and Operator training programs.

PHMSA evaluates New York's pipeline safety program annually and has generally found that New York State is doing a good job of monitoring Operators. However, in its most recent evaluation, PHMSA did comment that DPS needed to amend both its manual for Operator training and its inspection forms to allow for trending of data. PHMSA also expressed satisfaction with PSC's plan to accelerate the replacement of high-risk pipelines.

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## Audit Findings and Recommendations

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Our audit found DPS has conducted standard inspections as required for all Operators, but could improve its oversight of Operator qualifications and unreported incidents. Further, more complete analysis of data on pipeline safety, some of which is available from outside sources, could allow DPS to better predict high-risk areas in an effort to prevent incidents from occurring rather than following up on incidents that have already happened.

### Inspections and Violations

We found DPS conducted all inspections and followed up on violations as required. Beginning in 2015, PHMSA guidelines requires state programs to examine each Operator's inspection units within a five-year interval. Prior to 2015, inspections were still generally expected to be completed within the five-year cycle, but not officially required. We found DPS completed its required inspections within a shorter time frame of three years, allowing it to provide more frequent on-site monitoring of Operators.

When an audit is completed, DPS issues a compliance letter to the Operator citing any violations identified. We found that, although Operators are given time frames within which violations must be corrected, neither the federal regulations nor DPS have set time frames to follow up on those violations. Instead, DPS generally follows up on violations during the next field assessment or records audit. In addition, for certain high-level violations, such as an unqualified welder, DPS' practice is to follow up immediately to ensure the situation is remediated as soon as possible and that no other similar incidents have occurred. Our tests showed DPS completed its required follow-up on violations consistent with its practice.

### Operator Qualifications

DPS generally relies on Operators to provide accurate information about the qualifications of their employees. However, we found instances where documentation did not support the employees' stated qualifications.

DPS' Staff Guideline Manual (Manual) states, "Field assessments will also be conducted on an ongoing basis to determine/verify that personnel performing work, under covered tasks, are properly qualified." We found DPS only verifies the qualifications for the employees or contractors they observe performing various tasks during a site visit, and then only against a spreadsheet of employee qualifications which is prepared and maintained by the Operators. This spreadsheet generally contains the employee's name, code section for the task, and the date qualified. Some Operators show the date for requalification as well. DPS management and staff told us they rely on this spreadsheet as the sole verification of qualifications, and it is not their practice to verify that the Operator maintains documentation supporting the information in the spreadsheet.

During our site visits to nine Operators, we reviewed 95 employee and contractor files encompassing 2,673 separate qualifications to determine if the Operators' documentation

supported the qualification listing provided to DPS employees. We identified 36 instances where the information in the spreadsheet was either not accurate (28) or there was no supporting documentation (8). For eight of the 28 instances where the spreadsheet data was not accurate, the employee or contractor would not have been qualified to perform that covered task on the date of our site visit. However, we did not identify any instances where an employee actually performed these tasks during the period when their qualifications had lapsed. In response to our findings, DPS indicated they visited the Operators with identified issues to determine if the employees had performed covered tasks without current qualifications and reported that they found no such instances had occurred.

Current State and federal regulations do not specifically require Operators to maintain supporting documentation other than the spreadsheet of qualifications. However, we believe some supporting documentation should be required to ensure that certification dates are accurate and to provide a means to verify that information was entered into the spreadsheet correctly. This is especially important in light of the National Transportation Safety Board's findings related to a March 2014 East Harlem explosion where federal investigators found DPS had not adequately audited utilities to ensure Operators who were fusing pipelines were properly qualified. In response to our findings, DPS noted it has taken steps to address these issues. Specifically, DPS has revised its five-year audit procedures to clarify that program evaluations will occur for each pipeline Operator at intervals that do not exceed five years and will include audits of covered task training, testing and evaluations, and on-site field evaluations.

We noted that, at some of the locations, Operators are moving to an electronic testing system maintained by the Northeast Gas Association (NGA), although use of this system is not mandated. Under this new system, employees and contractors take qualification tests electronically. The results are maintained by the NGA and made available to the Operators. DPS plans to access this information during field assessments to verify that a person performing work is qualified to do so. DPS therefore needs to ensure the NGA system is accurately maintaining this information before accepting it as evidence of qualifications.

## Unreported Incidents

New York State regulations require Operators to promptly notify DPS of any accidents or incidents involving a pipeline which cause injury or death to any person or damage to property, or could cause concern because of coverage by news media. However, we identified six instances occurring during the first eight months of 2015 where Operators did not notify DPS of gas-related incidents that were reported in the media. These incidents involved evacuations, road closures, the closure of a business, and other situations that left both businesses and residents without gas for several days. When DPS is not notified of reportable incidents involving a gas pipeline, it cannot properly carry out its monitoring responsibilities. Further, DPS cannot ensure the Operators performed all required actions to correct problems, nor can it respond to public inquiries of the incident adequately or in a timely manner.

We found DPS relies almost exclusively on the Operators to report any accidents and incidents. It is not DPS' practice to proactively identify unreported incidents, nor are there procedures in



the Manual for DPS employees to identify or follow up on cases where Operators do not report incidents as required. However, DPS officials stated that when they learn an Operator failed to report an incident, they do investigate and take appropriate actions. Such actions could include issuing violations or conducting audits to ensure the Operator has met all its required responsibilities.

In response to our preliminary findings, DPS stated it was aware of two of the six unreported instances we identified and that staff had performed follow-up investigations. Further, officials noted the Gas Safety Section has now subscribed to an electronic news feed, which is expected to provide staff with real-time information. In addition, they indicate their Manual is currently being revised to clarify that the annual audit letters sent to all Operators should include all accidents that met reporting criteria, including any that were not reported by the Operators as required.

## Data Sources and Uses

PSC's mission is to ensure affordable, safe, secure, and reliable access to electric, gas, steam, telecommunications, and water services for New York State's residential and business consumers while protecting the natural environment. One way DPS can help ensure the safety of gas pipelines and better manage risk is to develop risk assessment strategies that evaluate and analyze available data to identify common high-risk areas. More sophisticated analyses could improve oversight of both the Operators that DPS is responsible for monitoring as well as its own employees' performance.

During the course of our audit, we identified an abundance of information about pipeline safety that is collected by various sources, including DPS itself. This data includes, but is not limited to:

- Data already collected and maintained by DPS:
  - The number and types of violations by Operator
  - The number and types of leaks
  - The number and types of incidents reported by Operators
  - The construction of certain pipeline projects
- Data required to be maintained by the Operators and reviewed by DPS:
  - Identification of threats to pipelines, and efforts taken to address those threats
  - Location of leaks with monitoring efforts and repair attempts
- Data collected by outside organizations:
  - "Call Before You Dig"
  - Data collected by municipal agencies (e.g., Fire Department of New York) on their own gas pipeline inspection activities

We found DPS does collect and analyze some data in an ongoing effort to measure and improve Operator performance, and thereby increase the overall safety of pipeline systems. For example, DPS currently prepares annual performance measure reports showing how major Operators have performed during the year according to matrices for damage prevention, emergency responses,

and leak management. According to DPS officials, these performance targets are also incorporated into utility rate plans, with monetary impacts for failure to improve and maintain performance.

We identified areas where additional routine analysis of the data currently maintained by DPS, the Operators, and other organizations could be used to further improve DPS' gas safety risk assessment process. For example, DPS does not summarize and analyze data on leaks, violations, and incidents as a whole by region. Analyses of this information, such as those depicted in Exhibits A and B appended to this report, could help DPS pinpoint common areas of risk throughout New York State. In addition, some of this data analysis could also be used to improve internal management of DPS' own performance. For example,

- DPS currently maintains several databases, but they are generally stand-alone, non-integrated systems. Consolidating these systems and databases could increase efficiency and enhance management's monitoring and communication activities.
- DPS does not have a central database containing information about all the inspections that have been conducted. Instead, inspection data is recorded in individual systems maintained by regional offices. A centralized system would allow management to more efficiently oversee the program as whole.
- To monitor individual inspectors' performance and productivity, DPS supervisors currently analyze violation and inspection data manually, even though this information is maintained electronically.
- DPS also has databases that identify which inspectors are responsible for required follow-up on reported incidents or certain types of construction. However, we found these features are not consistently being used to ensure these follow-up activities are actually conducted.

We also identified certain data already kept by Operators that could be useful for both oversight and risk management. For example, as of 2011, federal regulations require Operators to develop a Distribution Integrity Management Program (Program) which, among other things, requires each Operator to identify threats to its pipeline in areas such as corrosion; natural forces; excavation damage; other outside force damage; material, weld, or joint failure; equipment failure; and incorrect operation; and any other concerns that could threaten the integrity of its pipeline. While DPS has conducted audits of these Programs to ensure they are in compliance with regulations, it has not developed a comprehensive system to collect and analyze the data on identified threats across the entire system. Such a system would not only take greater advantage of the data required by this regulation, but could also facilitate efforts to share information about identified threats among the Operators.

We also found that individual Operators can maintain information on buildings that no longer have a current customer, but still show gas usage. Though this data is available internally to specific units within the Operators, they have generally not developed the means to identify and share this information, even among other parts of their own organization. DPS could work with the Operators to determine what data should be uniformly collected and how that data should be analyzed to further develop best practices for reducing safety risks.

In response to our findings, officials agreed that data collection and analysis are important processes and indicated that staff will continue to refine and advance its capabilities to help further pipeline safety. DPS staff noted that some federal officials have also recommended that inspection records be more automated to better identify areas where Operators in general are having the most issues. To address some of these concerns, officials indicate they have contacted the Office of Information Technology Services with a request to develop a system that will integrate the various data sets that DPS currently maintains.

## Recommendations

1. Ensure the qualifications for Operators' employees and contractors are accurately documented and supported in the Operators' or independent third parties' files.
2. Develop procedures to identify instances when Operators fail to report incidents as required and update the Manual to reflect those procedures.
3. Work with the Operators to identify all available sources of pipeline safety data, and then determine which analyses can best provide both DPS and the Operators with the most valuable information to help identify risks and improve pipeline safety.

## Audit Scope and Methodology

The objective of our audit was to determine whether PSC is providing oversight of pipeline safety in accordance with State regulations and federal performance standards. Our audit scope covered the period April 1, 2013 through October 21, 2015.

To accomplish our audit objective and assess related internal controls, we reviewed DPS' policies and procedures and State and federal laws, interviewed DPS officials and employees, and visited Operator work sites. We also reviewed inspection workbooks, qualification records, compliance letters, DPS databases, and performance reports. We interviewed PHMSA officials and researched what data is available from various sources. We reviewed a judgmental sample of inspection and violation reports to determine if DPS conducted all inspections and followed up on violations as required. To select our sample, we reviewed the compliance reports for the last two years of inspections for 20 Operators to ensure that inspections were actually performed, the findings were noted, and the inspection dates provided to us were accurate. We then reviewed other supporting documentation to determine whether DPS had followed up on the violations noted in the prior inspection reports. We compared DPS records of gas leaks with our own media searches of reported incidents for the period January 1, 2015 through August 31, 2015. Finally, we also interviewed officials and reviewed records to establish an understanding of the key internal controls related to pipeline safety, including inspection and monitoring programs, and assessed their adequacy in relation to the areas we audited.

We conducted our performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient,

appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objective. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objective.

In addition to being the State Auditor, the Comptroller performs certain other constitutionally and statutorily mandated duties as the chief fiscal officer of New York State. These include operating the State's accounting system; preparing the State's financial statements; and approving State contracts, refunds, and other payments. In addition, the Comptroller appoints members to certain boards, commissions, and public authorities, some of whom have minority voting rights. These duties may be considered management functions for purposes of evaluating organizational independence under generally accepted government auditing standards. In our opinion, these functions do not affect our ability to conduct independent audits of program performance.

## Authority

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The audit was performed pursuant to the State Comptroller's authority as set forth in Article V, Section 1 of the State Constitution and Article II, Section 8 of the State Finance Law.

## Reporting Requirements

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We provided a draft copy of this report to DPS officials for their review and formal comment. Their comments were considered in preparing this report and are attached in their entirety to it. In their response, officials took exception to some of our conclusions, but noted that they are taking steps related to the intent of our recommendations. DPS' response also refers to various actions and initiatives it has taken to provide oversight of pipeline safety, several of which were already discussed in the draft audit report and continue to be acknowledged in this final report. Also, our rejoinders to certain DPS comments are included at the end of this report as State Comptroller's Comments.

Within 90 days after final release of this report, as required by Section 170 of the Executive Law, the Chairperson of the Public Service Commission shall report to the Governor, the State Comptroller, and the leaders of the Legislature and fiscal committees, advising what steps were taken to implement the recommendations contained herein, and where recommendations were not implemented, the reasons why.

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## Contributors to This Report

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## Division of State Government Accountability

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### Vision

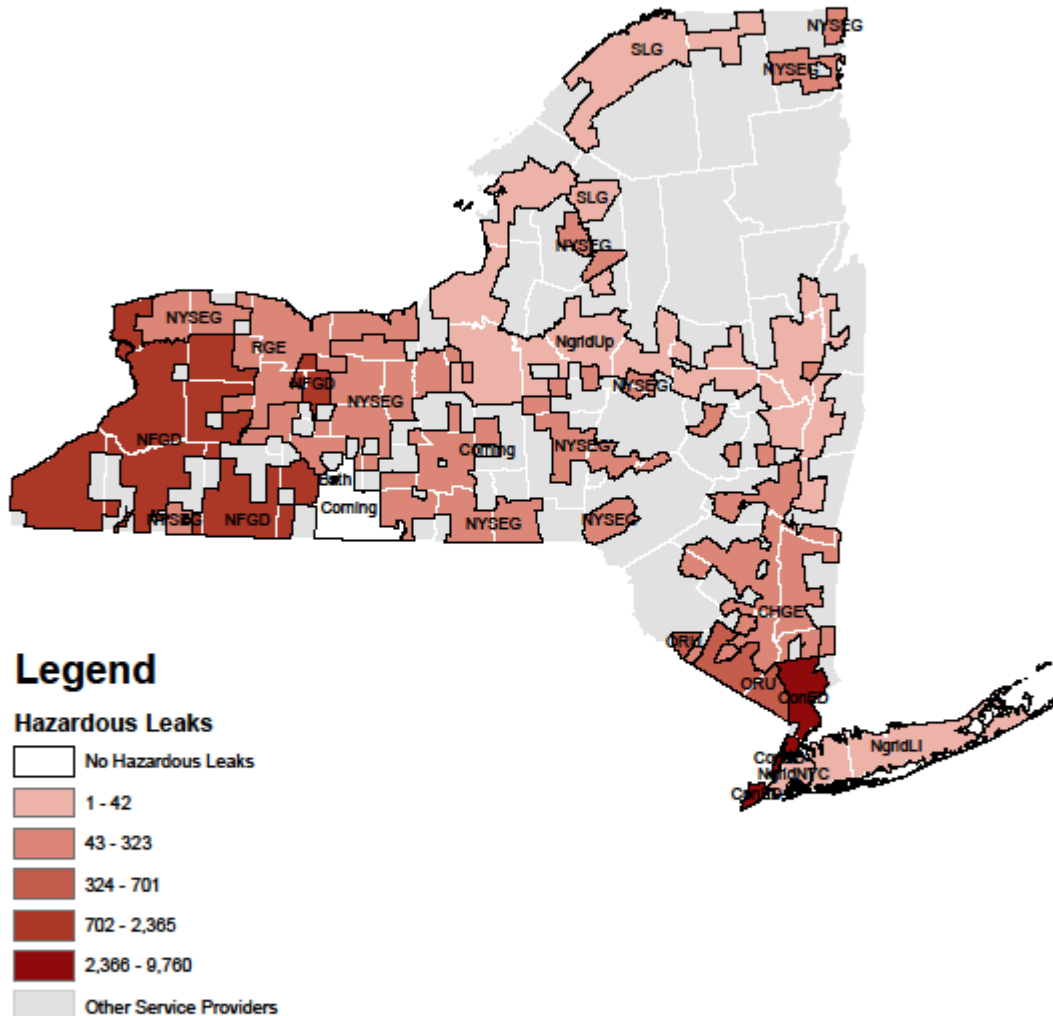
A team of accountability experts respected for providing information that decision makers value.

### Mission

To improve government operations by conducting independent audits, reviews and evaluations of New York State and New York City taxpayer financed programs.

## Exhibit A

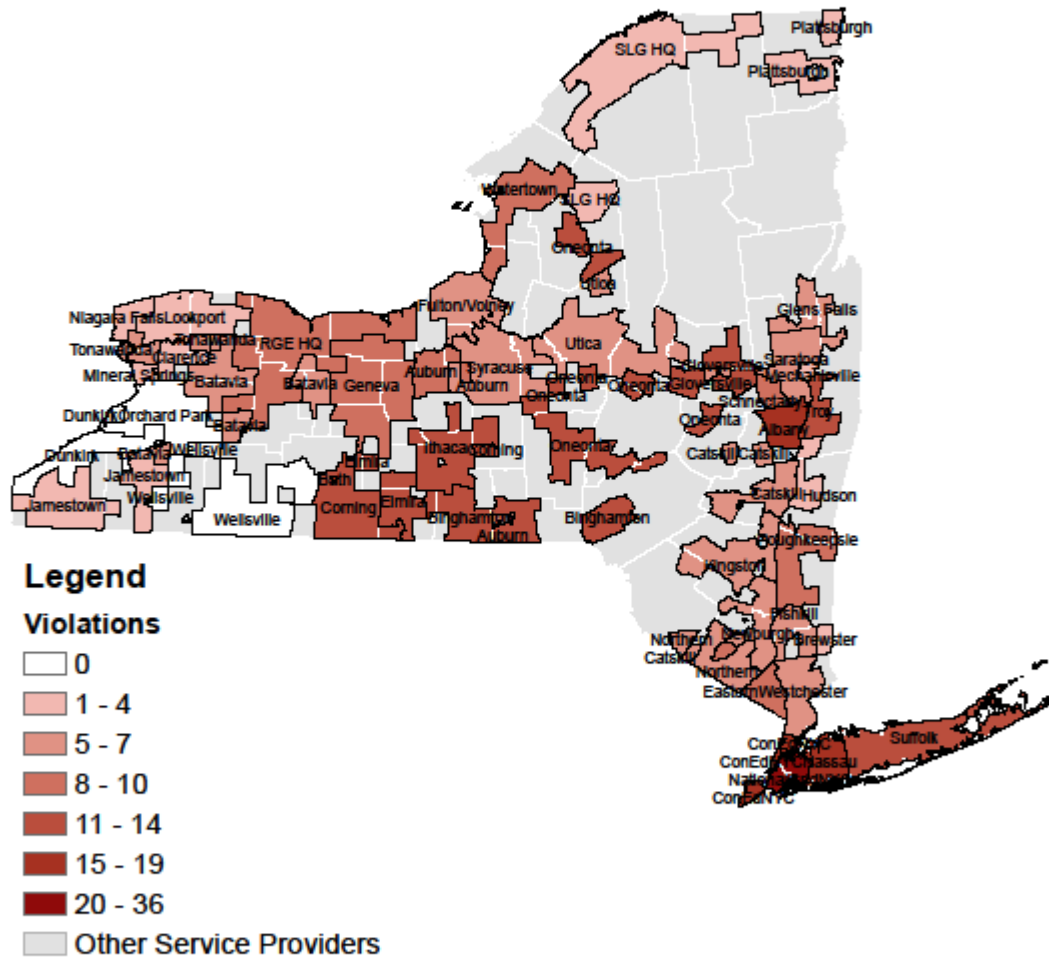
# Hazardous Leaks in NYS Pipelines by Utility District Service Area for Major Utilities (2013-2014)



Please note: this map represents the 10 largest utilities in New York State: Bath Electric, Gas & Water System (Bath); Consolidated Edison Company of N Y, Inc. (ConEd); Central Hudson Gas & Electric Corporation (CHGE); Coming Natural Gas Corporation (Coming); National Fuel Gas Distribution Corporation (NFGD); National Grid (NatGrid); New York State Electric & Gas Corporation (NYSEG); Orange and Rockland Utilities, Inc. (ORU); Rochester Gas & Electric Corporation (RGE); and St. Lawrence Gas Company, Inc.(SLG). 6 localities served by multiple utilities were excluded from this map due to data limitations. Other (smaller) service providers are not included on this map.

# Exhibit B

## High Risk Violations in NYS Pipelines by Operator Headquarter for Major Utilities (2013-2014)



Please note: this map represents the 10 largest utilities in New York State: Bath Electric, Gas & Water System (Bath); Consolidated Edison Company of N Y, Inc. (ConEd); Central Hudson Gas & Electric Corporation (CHGE); Coming Natural Gas Corporation (Coming); National Fuel Gas Distribution Corporation (NFGD); National Grid (NatGrid); New York State Electric & Gas Corporation (NYSEG); Orange and Rockland Utilities, Inc. (ORU); Rochester Gas & Electric Corporation (RGE); and St. Lawrence Gas Company, Inc. (SLG). Other service providers are not included on this map. Please note corporate headquarter offices are not included for the purposes of this map due to limited geographic reference data. 6 localities served by multiple utilities were excluded from this map due to data limitations. Other (smaller) service providers are not included on this map.



# Agency Comments



**Department of  
Public Service**

**Public Service Commission**

**Audrey Zibelman**  
Chair

**Patricia L. Acampora**  
**Gregg C. Sayre**  
**Diane X. Burman**  
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**Kimberly A. Harriman**  
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January 19, 2016

Mr. John Buyce  
Audit Director  
State Government Accountability  
Office of the State Comptroller  
110 State Street-11th Floor  
Albany, New York 12236

Dear Mr. Buyce,

The New York State Department of Public Service (DPS) has reviewed the draft Office of the State Comptroller (OSC) Final Pipeline Safety Oversight Audit (PSOA) provided to the DPS on December 14, 2015. Ensuring cost effective, reliable and safe natural gas utility operations is of utmost importance to the DPS and the agency makes every effort to remain “best in class” as a regulator of this critical industry. As such, DPS was pleased to note that, as expected, OSC did not identify any significant concerns during the extensive audit of the Pipeline Safety Section (DPS Pipeline Safety).

DPS notes OSC’s recognition that the DPS audits Operators (natural gas companies, local distribution companies) more frequently than required under our grant agreements with the Pipeline and Hazardous Materials Administration (PHMSA); DPS completes audits every three years instead of the five years allowed under the terms of our grants. This means DPS inspects gas safety compliance, existing facilities, and consistent application of best practices more often than the federal government requires under the pipeline safety grant program. OSC also found that DPS performed all the inspections it is required to perform and DPS “follows up immediately” after identifying high-level violations.



January 14, 2016  
Department of Public Service Response

DPS was also pleased to find only three minor observations were identified in the report:

- Operator Qualifications – Of 2,673 Operator employee credentials reviewed by the auditors, only 36 records, or 1.3%, were identified where documentation was either not found or insufficient to support the employees’ qualifications. DPS further reviewed these exceptions and determined that at no point did any of the 36 employees in question perform work while not qualified.
- Accident and Incident Reporting – Approximately 950 gas related accidents and incidents were reported to DPS by the Operators during the period January 1, 2015 through August 31, 2015. While auditing that period of time, OSC identified a total of six instances that were not reported to DPS by the Operators as required. Upon further research by DPS, this number was reduced to four, or 0.4%.
- Data Analysis - The recommendation to “identify all available sources of pipeline safety data” does not fully recognize the numerous means by which data is obtained and analyzed by DPS Pipeline Safety, including emergency response time, leak backlog, incident reporting, and pipe replacement data recorded by the Operators and Distribution Integrity Management Program metric data maintained by the federal government, to proactively identify and address potential safety threats.

That being said, DPS is committed to ensuring all opportunities for improvement are thoroughly assessed and the DPS Pipeline Safety Section is enacting, where beneficial, appropriate changes to its operations that are responsive to the OSC observations. The following information will further illustrate the extensive work the DPS Pipeline Safety Section performs in each area and clearly demonstrates its achievements in the areas audited by OSC.

#### Operator Qualifications

OSC Recommendation: Ensure the qualifications for Operators’ employees and contractors are accurately documented and supported in the Operators’ or independent third parties’ files.

January 14, 2016  
Department of Public Service Response

DPS Response:

The OSC found that DPS should “ensure” that all Operators accurately document information about the qualifications of their employees and contractors and that such information is supported in the Operators’ or an independent third-party’s files. OSC states, “DPS generally relies on Operators to provide accurate information about the qualifications for their employees.” To the extent that this finding implies that the agency procedures do not “ensure” accurate documentation of employee qualifications, we disagree.

DPS requires public utility gas companies to maintain accurate and comprehensive information. The Operators have the legal responsibility to maintain accurate information. DPS’s stated responsibility is to make certain the Operators maintain the information. Per Operator Qualification (OQ) rules, (16 NYCRR § 255.604 and 49 CFR Part 192 Subpart N) “each operator shall have and follow a written qualification program” and shall “maintain records that demonstrate compliance with this section.” When DPS Pipeline Safety finds discrepancies within those records, DPS addresses them.

OSC cites to the “DPS Staff Guideline Manual,” which states that DPS Field Assessments (audits) are used “to determine/verify that personnel performing work, under covered tasks, are properly qualified.” Acknowledging that DPS always verifies the qualifications of persons actually performing the work when DPS is auditing on-site and that DPS observes the completion of the covered tasks being performed (among hundreds of other regulatory requirements), OSC nonetheless found that DPS should not rely solely on a check of Operator “spreadsheets” to confirm such qualifications. Rather, DPS should ensure the qualifications for each Operator’s employees and contractors are accurately documented and supported in the Operator’s files. First, the use of the term “spreadsheet” is a misnomer. Many Operators utilize extensive databases to record and monitor the status of qualifications, as defined by 16 NYCRR Part 255.604(b)(1), for all personnel qualified to perform covered tasks on a pipeline. DPS Pipeline Safety staff review these databases, which include each employee’s qualification history, to ensure the qualifications are appropriate for the employees staff witnessed performed covered tasks. While a few, smaller, Operators track this information using an Excel spreadsheet rather than a complex database system, it would not be accurate to conclude that DPS Staff uses “only” a simple “spreadsheet” because such conclusion minimizes

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 Department of Public Service Response

the completeness and value of the qualification data maintained by the Operators. In addition, rather than maintaining an in-house system, several Operators have contracted with the Northeast Gas Association (NGA), an independent, third-party verification company, to fulfill their obligations to test, track, and monitor their employees' qualifications. DPS Pipeline Safety staff can now instantly verify the qualifications of an employee performing a covered task at a worksite by using a cell phone to scan the employee's identification card. The card is directly linked to NGA's database, which provides a historical record of the employee's qualifications and can immediately alert staff if those qualifications are expired. OSC found it is not the DPS "practice to verify that the Operator maintains documentation supporting the information in the spreadsheet;" this observation is not accurate. It is not standard practice for Operators that use written tests to retain completed tests for DPS to audit because there is no rule to do so, and because public disclosure of the test threatens the integrity of the testing process. Also, under the OQ program used by several Operators, each Operator has been required to sign a statement stating that individually-completed tests would not be retained. This requirement further enhances the Operators' control environment while mitigating the test participants' opportunities to cheat. Public disclosure of the tests would lead to the need to constantly create new tests to preserve test integrity. Further, storing completed tests at DPS could also jeopardize the integrity of the process, as tests would potentially be the subject of a FOIL request.

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In an attempt to balance the competing demands of test integrity and audit functions, DPS is working with other states – Connecticut, Massachusetts, Maine, Pennsylvania, and New Hampshire – to obtain a commitment from NGA, that the qualifying tests upon which the Operators' qualifying information is based, will be maintained in some manner, regardless of whether they were written tests or given electronically. Using NGA as the third party verifier also eliminates the risk that the tests will be disclosed the public via a FOIL request. DPS and other Eastern Region State's will be meeting with NGA in Albany on January 25, 2016 to impress upon NGA the need to retain this information. DPS believes the NGA's administration of a written test that includes NGA proctoring and test evaluation at each test location will ensure the tests' integrity. The NGA's oversight and administration of tests through a special computer-based testing program will further enhance test integrity. Moreover, the NGA's program offers instant verification of qualification dates by use of Quick Response (QR) codes and an electronic

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system to which Staff has been granted access.<sup>1</sup> The NGA’s system has the ancillary benefit of increasing the mutual aide pool that many gas companies can use for obtaining additional crews to respond to severe events such as Hurricane Sandy.<sup>2</sup>

OSC notes that during its audit of DPS, OSC reviewed 2,673 Operator credentials. Of those, in 36, or approximately 1.3%, the Operator’s records did not prove that the employee had been properly qualified.<sup>3</sup> In following up on the OSC findings, DPS found that no “covered task” had been performed by any of these 36 individuals. In other words, DPS investigated and cleared all of the OSC exceptions by reviewing each exception listed to see if the Operator’s qualification records met the four criteria required by 49 CFR Part 192.807(a), 16 NYCRR Part 255.604(b), and PHMSA’s “*Examples of a Probable Violation or Inadequate Procedures*” for OQ records (Attachment 1). DPS found no evidence that any covered task was completed by any individual that did not have verified credentials (or was not directed by someone who had verified credentials).<sup>4</sup> As such, when OSC states, “In response to our findings, DPS indicated they visited the Operators with identified issues to determine if any other employees had performed covered tasks without current qualifications and reported that they found no such instances had occurred,” the use of the term “other” is misleading since no employees performing covered tasks had done so without currently being qualified.

Last year DPS revised its 5-year audit procedures to clarify that OQ program evaluations will occur for each pipeline operator at intervals that do not exceed five years. DPS will audit written OQ programs and procedures, covered task training, testing and evaluations, and conduct on-site OQ field evaluations. In the past, DPS relied on verification of credentials during the field audit process because, under 16 NYCRR §255.604, a violation (which is what DPS auditors

<sup>1</sup> Staff performing OQ audits have been given equipment capable of reading QR codes.

<sup>2</sup> This assumes each Operator reviews the NGA program to assure qualifications account for equipment and procedures used by that Operator.

<sup>3</sup> DPS reviewed the same 2,673 credentials and found only 22 instances in which the credentials could not be verified (less than 0.8 %). As stated in the OSC report, there was no evidence that any covered task was completed by any individual that did not have verified credentials.

<sup>4</sup> 16 NYCRR §255.604 requires individuals who perform a covered task to be qualified to perform that covered task or be directed and observed by an individual who is qualified. An individual whose qualifications lapsed cannot perform that covered task unless “directed and observed by an individual that is qualified.”

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are seeking to identify) does not occur until a covered task is completed by a nonqualified individual or an individual who had not been “directed and observed” by a qualified individual. Therefore, while review of OQ databases alone may flag individuals whose qualifications are not “current,” these databases alone do not indicate that the operator qualification rules are not being followed. The revised DPS audit procedures also include documentation requirements that will comply with the program requirements found in PHMSA’s “Guidelines for States Participating in the Pipeline Safety Program.”

### Reporting of Incidents

OSC Recommendation: Develop procedures to identify instances when Operators fail to report incidents as required and update the Manual to reflect those procedures.

#### DPS Response:

OSC found six instances in which Operators “did not notify DPS of gas-related incidents that were reported in the media.” The requirement that Operators report incidents is found in 16 NYCRR §255.801, which states,

Reports of accidents . . .

- (a) Each operator shall report all accidents where gas facilities may be involved, which cause injury or death to any person or damage to property, or could cause concern because of coverage by news media.

Similarly, “incidents,” as used in the federal rules, are defined as follows:

Incident is defined as an event that includes a death, or personal injury necessitating inpatient hospitalization; estimated property damage of \$50,000 or more, the unintentional estimated gas loss of three million cubic feet or more, the shutdown of an LNG facility, or is significant in the judgment of the operator, even though it did not meet the reporting criteria.<sup>5</sup>

Inasmuch as 16 NYCRR §255.801 does not define “accident,” DPS has always applied the plain meaning of the word; that is, an accident is an incident that happens “unexpectedly” and

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<sup>5</sup> Typically, incidents that meet the definition of “incident” found in 49 CFR §191.3 require on site investigation by DPS Pipeline Safety.

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“unintentionally.”<sup>6</sup> An event must meet the definition of “accident” or “incident” in the first instance for its reporting to be required. Of utmost importance, therefore, is that Operators notify the DPS when injury or death after an unexpected event has occurred. Since 2012, DPS Pipeline Safety has identified no incidents involving injury, death or product release in which operators failed to notify DPS. Moreover, scheduled repairs of leaks, including those that cause disruption to normal traffic patterns, are not considered “accidents” simply because they receive media attention.<sup>7</sup> Because “incidents” under the federal rules involve injury, death, or significant product release, Staff does verify that the Operator has notified DPS and the National Response Center (NRC) as required for events that meet this criteria.

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To assist Operators in implementing these Part 255 reporting requirements, DPS provides Operators with frequently updated after hours DPS Staff call lists to facilitate Operator reporting to DPS Pipeline Safety during non-business hours, including weekends and holidays. Therefore, DPS goes above and beyond in remaining available to Operators during off-hour periods. When DPS does identify incidents that were not reported, DPS notifies the Operators of the lapse as part of the DPS Pipeline Safety Section’s audit process or in a stand-alone letter.

That being said, the OSC audit ultimately identified six instances during the first eight months of 2015 that involved gas events that attracted media attention in which public utility gas companies had not reported the event to DPS. During this period, there were 950 incidents reported to DPS. DPS Pipeline Safety further researched the six instances and determined that only four (or 0.4% of reportable incidents and accidents) represent violations of 16 NYCRR §255.801 and will be cited as appropriate:

- Staff was aware of two of the instances at the time they were reported by news media; Staff performed the required follow-up investigations.<sup>8</sup>

<sup>6</sup> The Oxford Dictionary defines “accident” as “an unfortunate incident that happens unexpectedly and unintentionally, typically resulting in damage or injury.”

<sup>7</sup> Leaks that result in evacuations must be reported to DPS by noon the next business day.

<sup>8</sup> DPS has not identified exact addresses in this response due to privacy protections.

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- The third instance involved an after-hours event and after-hours news reporting. Staff was not notified of the event timely and therefore could not investigate the incident until a later date.
- The fourth instance involved contractor damage, two interruptions, and an evacuation. This event by itself is technically not reportable. However, DPS guidance given to operators prior to this event lists accidents that involve “evacuations” as one something that typically leads to media coverage and should, therefore, be reported.

The two remaining instances involved news media inquiries made directly to the Public Affairs (PA) Office of Consolidated Edison Company of New York, Inc. (CECONY). The PA commented to the news media about leaks that occurred beyond gas meters, which under Part 255 are not the responsibility of the Operator and are not required to be reported. Neither CECONY gas operations nor on-site CECONY personnel were aware of the media attention. CECONY, however, has taken steps so that its Gas Operations are notified when CECONY PA comments on gas events so that required DPS notifications can take place. Though these two events garnered media attention, neither would require the Operator to report to DPS pursuant to Part 255.<sup>9</sup>

In sum, contrary to the OSC findings, DPS has no evidence to suggest that Operators are not reporting incidents requiring DPS investigation. However, to further mitigate the risk that operators are not fully complying with Part 255, DPS Pipeline Safety has, as OSC describes, subscribed to a Google news feed, which is expected to provide Staff up-to-date information about all Operator activities that gain “media” attention in real time. The Google news subscription should satisfy the intent of this recommendation while avoiding the displacement of DPS Staff resources better assigned to verified safety accidents.

The DPS is revising its Pipeline Safety Staff Guideline Manual (SGM) to clarify that in the annual audit letters sent to all Operators, DPS Staff should include all incidents that met reporting criteria but were not reported by the Operators. While DPS can demonstrate that all

<sup>9</sup> It should be noted that this requirement was instituted prior to the advent of the internet when “media” referred only to print, television, and radio reports. Notification based only on media attention is not a safety issue; its purpose is solely so DPS knows what information has been provided to the public and so that the DPS can provide further information if necessary.

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non-reporting issues are appropriately addressed as DPS Pipeline Safety became aware of them, to double-check the OCS observation, the SGM will now specifically require that instances of non-reporting of accidents be included in the audit letters.

As part of its continuous improvement, DPS Pipeline Safety also is working with gas companies to streamline off-hours reporting to take advantage of technology (e.g., email) that was not available when the requirement to notify DPS of accidents or incidents first went into effect. For example, we believe that accidents that meet the federal definition of “incident” should continue to be immediately reported telephonically. However, notification of accidents that meet reporting requirements, but are less serious in nature, can be made through email reporting. The original intent of the requirement to report events that “could cause concern because of coverage by news media” was not to prompt an investigation, but to provide information on events that may cause public concern. We believe this change will strike the proper balance between notifications that are made for informational purposes and those that require DPS investigation.

#### Data Sources and Uses

OSC Recommendation: Work with the Operators to identify all available sources of pipeline safety data, and then determine which analysis can best provide both DPS and the Operators with the most valuation information to help identify risks and improve pipeline safety.DPS Response:

While recognizing that DPS collects and analyzes “some” data in an effort to measure and improve operator performance, OSC found that DPS should “develop risk assessment strategies that evaluate and analyze available data to identify common high-risk areas.” We disagree with this finding as DPS has available to it and readily uses multiple sources of data, as described below, to identify and address potential safety threats.

Even though DPS, as OSC observes, uses several unconnected databases of information, DPS Pipeline Safety regularly analyzes all of the data gathered from utilities throughout the State. Using this data, for more than a decade, DPS Pipeline Safety has reported to the Public Service Commission (PSC, Commission) the results of DPS Pipeline Safety’s analysis of the myriad data available. The result of these analyses, the Pipeline Safety Measure Report, which DPS Pipeline Safety presents annually, is the first of its kind nationwide and quantifies safety

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metrics such as emergency response time, leak backlogs, and Liquid Petroleum Pipeline replacement, using data being collected and reported by all Operators. In fact, the federal Distribution Integrity Management Program (DIMP) regulations used these DPS metrics as the model for what data Operators are required to track and keep. While it is impossible to identify incidents that have been prevented due to the tracking of this data, DPS can conclusively state that the identification of these high risk areas, the neglect of which could have led to incidents, has contributed to improved safety. For instance, the percentage of damage per 1,000 Dig Safely locate requests has decreased from close to 7% in 2013 to 1.71% in 2014, a decrease of more than 75%. During the same time period, hazardous leak backlogs have decreased by over 90%, from 1,178 in 2013 to 108 in 2014. Similar improvements have been made in emergency response times, all of which signal substantial improvements to the State's gas infrastructure and utility operations over the last decade.

To assure continued improvement, DPS Pipeline Safety Staff has added, and the PSC has adopted, performance metrics developed using data that identified regulatory and procedural failures among the Operators. The metrics trigger associated utility negative revenue adjustments (NRAs) when gas companies fail to perform at acceptable performance levels. These metrics not only assure that distribution companies maintain established baseline expectations, but that Operators continue to make safety improvements. In addition, as of 2015, NRAs are in place that increase leak prone pipe replacements on a set schedule and impose consequences on gas companies for failure to decrease gas safety violations. Over \$100 million dollars of shareholder funds is now at stake for failure to meet these stringent metrics.

It was a DPS analysis of existing pipeline inventory data and total leak backlogs and the risks identified by an assessment of the State's aging gas pipeline inventories that pointed to the need for accelerated replacement programs that will reduce and eliminate leak prone pipelines throughout the State. By Commission order, the replacement timeframe has been reduced from over 40 years in 2013 to just over 27 years in 2015; it is expected to be further reduced to meet the Commission's stated goal of elimination of all leak prone pipe within 20 years or less.

In addition to the development of the annual Performance Measure Report and Gas Rate Performance Metrics, the DPS regularly analyzes contributing factors related to incident investigations throughout the State. While not a purely numerical data exercise, DPS assesses the lessons learned after each gas incident in any one distribution company's service territory and

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applies them when investigating other gas companies. Physical evidence such as that observed during Superstorm Sandy and the 2012 Horseheads, New York explosion led the Commission to order immediate changes to operating procedures to address identified risks. That is, in response to Operator failures during Superstorm Sandy, the Commission ordered gas distribution companies to review and revise their gas emergency plans, which now include best practices developed through workgroups comprised of both Staff and pipeline operator personnel. Based upon DPS Pipeline Safety's investigative findings after the Horseheads explosion, the Commission ordered the State's gas distribution companies to collect data and perform a risk analysis comparing municipal facility records to gas company records to identify where municipal facilities interfered with or created an undermining condition near gas facilities. Where such conditions existed, the Operators were required to remediate those conditions. Based upon information gleaned in personal interviews with Horseheads residents who noticed but did not call about natural gas odors, the Commission also ordered the State's Operators to develop, implement, and assess the effectiveness of enhanced public awareness programs for public reporting of gas odors.

These actions illustrate that DPS Pipeline Safety in fact diligently analyzes data and takes swift action in response to known safety threats by recommending Commission orders to improve safety. Continuous improvement should be the goal of any pipeline regulator or pipeline operator, and DPS has actively and aggressively made improvements based upon the data it collects. Resources such as the software solution currently being developed by the state Office of Information Technology Services (OITS) will better allow DPS Pipeline Safety to analyze data to further enhance actions taken by the Commission. With the aid of the OITS, DPS has been developing an integrated platform for better data analysis where needed. These improvements and efforts are ongoing with a platform that will be functional in the near future.

The OSC report identifies additional sources of data which, in its opinion, could be useful for statewide risk management. Those sources include both Distribution Integrity Management Program data Operators are required to develop and information discovered through DPS' collective work with the Operators and municipal agencies that may further allow for new best practices to reduce safety risks. While OSC acknowledges that the operators and municipal agencies generally do not actually share their information with the Department, DPS Pipeline Safety agrees that further evaluation and continued improvement of sharing such information

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should be at the forefront of the program. Having identified this issue, the Commission commenced a management audit (Case 13-M-0314) to review the accuracy, consistency, and effectiveness of data that gas Operators (and electric companies) do report to the DPS. After DPS reviews the final report on this data audit, expected in the near-term, the Commission will address any data integrity concerns and may adopt new requirements as necessary. Furthermore, the DPS is scheduled to host a Pipeline Safety Seminar during the second half of 2016. The seminar will focus on regulatory changes made in response to high risk areas already identified since the last seminar in 2013 and other safety issues being identified nationwide facing the natural gas and hazardous liquid pipeline industry. DPS Pipeline Safety will use this as an opportunity to meet with pipeline Operators to discuss what other data should be collected and analyzed to develop additional practices that further reduce risks to the New York gas system.

In sum, the Department of Public Service appreciates this opportunity to respond to the recommendations contained in the OSC draft report of its audit of the DPS Pipeline Safety Section's Oversight. Further, we hope that the discussion embodied in this response will assist OSC in developing their final report. Please feel free to contact me if additional information or clarification is needed.

Sincerely,



Audrey Zibelman  
Chair

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## State Comptroller's Comments

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1. Our audit did not question the existence of Operators' "extensive databases." Moreover, as detailed in the report, DPS staff relied exclusively on the "spreadsheets" maintained by the Operators during their field visits without verifying spreadsheet information to supporting documentation. Further, as also detailed in the report, our sample testing identified 36 instances wherein either spreadsheet data was inaccurate or there was no supporting documentation for it.
2. We do not dispute that several Operators contracted with the Northeast Gas Association (NGA) to fulfill their testing, tracking, and monitoring of employee qualifications. However, this service was not up and running during our audit period, and Operators are not required to use the NGA system. Furthermore, not all the qualification tests can be taken electronically through the NGA system – as some covered tasks require physical performance tests.
3. As noted in our report, we recommended the Operators (not DPS) maintain supporting documentation to ensure certification dates are accurate and to provide a means to verify the accuracy of spreadsheet information. Therefore, the information would most likely not be subject to FOIL requests of DPS.
4. We modified the final report to clarify this matter as noted in DPS' response.
5. NYS regulations are stricter than federal regulations in this area and require Operators to report incidents that "could cause concern due to coverage by the media." Further, our report does not state or imply that scheduled repairs of leaks, including those that cause disruption to normal traffic patterns, should be considered "accidents" simply because they receive media attention.
6. As detailed on page 7 of the report, Operators did not notify DPS of six gas-related incidents that were reported in the media and impacted the public. Further, our report does not state or imply that DPS had to formally investigate each these incidents. However, we maintain that the Operators should have notified DPS of them. Also, we are pleased that DPS has apparently taken steps to implement our related recommendation.
7. A "safety issue" is not the requirement of NYCRR 255.801. As noted on page 7 of our report, the regulations require notification if an accident or incident could cause concern because of coverage by news media. Further, the Internet has been readily available for many years, and therefore we believe DPS procedures should have been updated to include this aspect of media reporting as well as other technological advances.
8. DPS misses the point. We do not dispute DPS' access to and analysis of data obtained from multiple sources. Rather, we clearly recommended that DPS determine which analysis can best provide both DPS and the Operators with the most valuable information to help identify risks and improve pipeline safety.
9. We acknowledge that actions taken after events have occurred can be beneficial. However, the essence of our recommendation was for DPS to perform risk assessments (take proactive measures) to better identify risk areas to help prevent problems before they occur.
10. In fact, our report does not acknowledge that operators and municipal agencies generally do not share their information with DPS. Rather, as stated in our report on page 9, "We also

identified certain data already kept by Operators that could be useful for both oversight and risk management.” In addition, the data within the Operators’ Distribution Integrity Management Program is available to DPS, as evidenced by DPS’ assertions that they have reviewed these programs and conducted audits of their content.