STATE OF NEW YORK
DEPARTMENT OF PUBLIC SERVICE

CASE 20-G-0195 - In the Matter of Staff's Analysis of Local Distribution Company Performance Related to the Pipeline Safety Measures.

2019 PIPELINE SAFETY PERFORMANCE MEASURES REPORT

Pipeline Safety Section
Office of Electric, Gas and Water
June 11, 2020

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Executive Summary

The pipeline safety performance measures that make up this report are the result of collaborative efforts beginning in the 1990's between New York's 11 major natural gas local distribution companies (LDCs) and the New York State Department of Public Service (DPS). Revised in 2017, these measures improve identification and tracking in areas that are critical to pipeline safety. Most of the data used in the report was gathered and submitted by the LDCs using processes developed from these collaborative efforts.

This report examines the results of LDC performance in specific safety areas that include damage prevention, emergency response, and leak management for 2019. Also examined are the results of audits and investigations that verify compliance with the minimum pipeline safety regulations. The Pipeline Safety and Reliability Section of the Office of Electric, Gas and Water has been producing this report since 2004.

Performance related to the total damage prevention measure improved significantly, approximately 10.5%, from the previous calendar year, due largely to an increase in one-call tickets (going from 777,371 to 841,849) and a decrease in the total number of damages (going from 1,595 to 1,546). The 30-minute, 45-minute, and 60-minute emergency response time performances all remained consistent, with the total year-end leak backlog improving roughly 14.1% from the previous calendar year (going from 13,381 to 11,490). Both the total number of leaks discovered and leaks repaired declined, going from 20,488 and 23,795 in 2018, to 18,641 and 22,450 in 2019, respectively, a decrease of 1,847 leaks discovered and 1,345 leaks repaired. In 2018, non-compliances were identified in all 11 of the major LDCs' operating service territories.

Overall, the data indicates that performance has substantially improved for LDCs across the state over the seventeen-year period Staff has been reporting performance to the New York State Public Service Commission (Commission). As LDCs continue their outreach efforts, adopt better practices in responding to leak, odor, and emergency reports, and work to replace leak-prone infrastructure, Staff expects further performance improvements will occur. A high-level discussion of the results for each performance measure follows below.

The first measure, damage prevention, gauges the success of LDCs in minimizing damage to buried natural gas facilities caused by excavation activities. The damage prevention measure is broken down into four categories: damages due to (1) mismarks, or the inaccurate marking by the LDC of its affected underground facility; (2) LDC's and their contractors; (3) third party excavator error; and (4) no-calls, or failure of an excavator to provide notice of intent to excavate to the one-call notification system. All four categories saw improvements as follows: mismarks went from 0.52 in 2018, to 0.48 in 2019 (8.8%); LDC's and their contractors went from 0.11 to 0.08 (32.8%); third party excavator error went from 1.01 to 0.88 (12.9%); and no-calls went from 0.41 to 0.40 (0.3%).

The second measure, emergency response, reflects the LDCs' ability to respond promptly to reports of leak, odor, and emergency notifications by examining the percentage of reports that were responded to within three response time intervals. The first criterion is, response to 75% of emergency reports within 30 minutes; the second, response to 90% within 45 minutes; and the third, response to 95% within 60 minutes.

LDC performance for each of the emergency response time intervals remained consistent in 2019. In general, the

LDCs have continued to use technologies such as global position systems (GPS) to quickly identify the most appropriate employee to respond to leak, odor, or emergency reports, and have continued placing, or added personnel, in certain geographical areas during times of day that have historically high volumes of emergency notifications. In addition, the Commission has begun to incorporate positive revenue adjustments within the LDC's respective rate proposals to encourage further improvements.

The third measure, leak management, examines LDCs' performance related to their leak inventories in addition to, and new to this calendar year's report, the evaluation of leaks discovered and leaks repaired. Potentially hazardous leaks include any leak that requires repair pursuant to 16 NYCRR Part 255 (Types 1, 2A, and 2). Type 3 leaks, which do not have a prescribed repair timeframe are, by definition, considered to be "non-hazardous". Pursuant to 16 NYCRR Part 255, Type 3 leaks require reevaluation during the next required leakage survey or annually, whichever is sooner, to ensure that a public safety concern has not developed. While Type 3 leaks are not expected to become a safety concern, LDCs continue to eliminate these leaks on their systems because it reduces lost gas, maintenance costs, the total number of emergency reports, and because methane leakage is an environmental concern and the persistent odor added can negatively impact public awareness efforts.

For leaks requiring repair, the end of the calendar year generally coincides with the beginning of the frost season. During this timeframe, there is a greater chance of natural gas migration into a building because the natural gas cannot vent as readily through the soil to the atmosphere due to the blanket of frost. In general, all LDCs have demonstrated improvement in these measures over the past several years. The total year-end

leak backlog improved roughly 14.1% from the previous calendar year (reduced from 13,381 to 11,490). The repairable year-end leak backlog remained at 32 leaks. Both the total number of leaks discovered, and leaks repaired declined, going from 20,488 and 23,795 in 2018, to 18,641 and 22,450 in 2019, respectively.

For the fourth measure, non-compliances identified by Staff through annual audit activity, LDCs are evaluated on their compliance with the Commission's minimum pipeline safety regulations. This measure looks at non-compliance issues as identified by Staff during audits and investigations of the LDCs. Each year, Staff conducts statistically-based audits and investigations of the LDCs to determine their compliance. Each non-compliance identified represents an area where an LDC failed to meet these minimum requirements as prescribed.

The data reported varies greatly from year to year, which is due, in part, to Staff's five-year audit cycle. These audits and investigations of the pipeline safety regulations occur on varying frequencies determined by the risk each regulation poses to public safety. The regulations are identified either as "high risk", in which an audit is conducted annually, or as "other risk", which are evaluated on a frequency (two, three, four, or five-year) not to exceed five years.

In 2018, Staff identified non-compliances in all 11 of the major LDCs' operating service territories, although improvements have been made in each of the previous five calendar years. This is due, in part, to the negative revenue adjustments which have been incorporated into most of the LDCs' respective rate plans. Regardless of the efforts made thus far, the goal for each LDC should remain the complete elimination of all non-compliances with pipeline safety regulations.

Introduction

The pipeline safety performance measures were developed as a means of evaluating LDC performance in areas presenting higher safety risks. Performance measures are tools used to gauge the maintaining and improvement of the safe and reliable operation and maintenance of natural gas distribution systems. These measures show how companies are performing from year to year, as well as the performance trends over time.

In developing the performance measures, Staff first identified areas in the LDCs' systems or operations that carry greater potential for harm to the public if performance is sub-standard. Methods were then developed for capturing and tracking data, so they could be used as a practical management tool. This process resulted in identifying three performance measures: damage prevention – which examines damage to the LDCs' buried facilities resulting from excavator activities, which is a leading cause of incidents involving natural gas pipelines both within New York State and nationally; emergency response – which examines the amount of time that it takes an LDC to reach the scene of a reported gas leak, odor, or emergency notification; and leak management - which examines LDC performance in reducing and managing leak inventory levels. This year's report includes a new leak management analysis: the evaluation of leaks discovered, and leaks repaired, in total, and per each LDC's respective system mileage.

On August 15, 2013,[1] the Commission issued a request for proposals for an independent consultant to perform a focused operational audit of the performance measure data as submitted

[1] Case 13-M-0314, Central Hudson Gas & Electric Corporation, et al. – Operational Audit, Letters to LCDs (issued August 15, 2013).

by nine of the 11 LDCs mentioned in this report. The audit's objectives were to assess the completeness and accuracy of the performance measure data LDCs submitted and assess comparability among the utilities.

On April 20, 2016, the Commission issued an Order[2] releasing the completed audit report and provided guidance on LDC response to the recommendations. Implementation plans to address each recommendation were due by May 20, 2016. In general, the consultant reported that the LDCs complied with the intent of these performance measures and, for the most part, accurately reported their respective data. Some of the consultant's recommendations focused on the LDCs' lack of written policies and procedures to address and collect data, instances where the methodology used to calculate the data has varied, and minor inconsistencies among LDCs in the compilation of their respective data.

An example of where the data has varied is in the use of classifications of resent, refreshed, revised, retransmitted, reissued, or relocated one-call notifications. In short, the terminology used between the one-call centers are inconsistent - which may have led to these tickets having been accounted for differently among the LDCs. Per the most recent guidance Staff provided each LDC in December 2015, retransmits, or refreshes, are defined as a one-call ticket which has the same requesting party and location as the proposed scope of work. As stated in last year's performance measures report, retransmits, or refreshes, should be excluded by all LDCs from the one-call ticket count for the purposes of the damage prevention measure.

[2] Case 13-M-0314, supra, Order Releasing Report and Providing Guidance on Response (issued April 20, 2016).

On March 10, 2017, the Commission issued an Order[3] approving the submitted implementation plans and directed the LDCs to implement those plans. As a result of the Order, the issue identified with how retransmitted or refreshed one-call tickets are counted should resolve itself within the next few years as LDCs make changes to their existing programs. Thus, the data represented in this year's report may vary per LDC based on the extent to which each LDC has incorporated into its reporting process the treatment of these specific types of one-call tickets and how well the LDC followed the 2017 guidance and submitted implementation plans.

For the final measure, non-compliances identified by Staff, LDCs are evaluated on their compliance with the Commission's minimum pipeline safety regulations. This measure looks at non-compliance issues as identified by Staff during audits and investigations of the LDCs. Each year, Staff conducts statistically based audits and investigations of the LDCs to determine their compliance. Each non-compliance identified represents an area in which an LDC failed to meet the prescribed minimum requirements.

Non-compliance with pipeline safety regulations could cause or contribute to a major incident. For this reason, it's important these audit findings are publicly transparent and continue to track performance, as well as repeat violations, over time. A further deterrent to non-compliances are negative revenue adjustments, which have been incorporated into most of the LDCs' respective past and current rate plans.

[3] Case 13-M-0314, supra, Order Approving Implementation Plans (issued March 10, 2017).

Performance and Analysis

Throughout this report, except for the compliance measure, the figures display performance results from 2015 through 2019 for each LDC.[4] The grey columns in the bar graphs represent 2015 through 2018, and the black column represents the 2019 results. For the compliance measure, the results from 2014 through 2018 are displayed based on the timing of when audits were completed. The blue horizontal lines on the bar graphs represent the combined LDC performance levels for the specifically identified measure.

Damage Prevention

Damage to underground natural gas facilities due to excavation activity is one of the leading causes of natural gas pipeline failures and accidents, both statewide and nationally.

Damage prevention procedures are designed to work as follows: (1) an excavator provides notice of their intent to excavate to a one-call notification system and waits two full working days for underground facilities to be marked;[5] (2) the one-call notification system transmits an excavation notice ("one-call ticket" or "ticket") to the member operators whose facilities may be affected by that excavation activity; (3) the affected operators clearly and accurately mark the location of their buried facilities in or near the excavation area; and (4) excavators work carefully around the marked facilities to avoid damage. Damages to underground facilities can be categorized by

[4] Historical calendar year data and associated Case numbers can be found in Appendix A of this report.

[5] New York State has two one-call notification systems, one for New York City and Long Island, New York 811, and the second for the remainder of the state, Dig Safely New York.

identifying where in this four-step process the root cause of an incident lies.

Evaluating the number of damages in relation to the volume of construction and excavation activity in an LDC's respective service territory provides a useful basis for assessing performance. The data used in these analyses are contained in Appendices B and C. The method used to normalize each LDC’s data is the number of damages per 1,000 one-call tickets. As previously mentioned, inconsistencies were identified through the operational audit. Thus, the data represented in this year’s report may vary by LDC when compared to prior performance measure reports.

The numbers of damages are then categorized as damages resulting from mismarks, excavator error, company employees and contractors, and no-calls. Each ticket received provides an LDC with the opportunity to mark its affected facilities accurately. Hence, for damages due to mismarks, the report examines the number of damages caused by mismarks per 1,000 tickets received for each LDC and so on for each of the other categories.

Once a one-call ticket is requested by calling the toll-free telephone number, 811, and the facilities are marked, the excavator can, if working carefully, avoid damage to underground facilities. Third party excavator error damages are historically the largest component of total damages, primarily because of the need to educate third party contractors in safe excavation and best practices. Most large excavators are aware of the existence of the one-call systems and their requirement to provide notification. Many excavators are not as well-versed in the additional requirements - such as respecting tolerance zones, verifying locations of underground facilities by means of hand-dug test holes, notifying operators of unverifiable marked

facilities, maintaining the markings, and maintaining four inches of clearance with powered equipment and the verified facility. Educating excavators on how to avoid underground facility damage once mark-outs have been requested requires more in-depth training and outreach. The Commission cannot order such training for non-utility excavator personnel. This is one of the reasons why, through its enforcement process, the Commission considers reducing penalties contingent upon successful completion of training provided by the one-call centers or Dig Safely New York's certified excavator program.

Damage caused by LDC personnel or by its contractors are also included in the damage analysis as a separate category. These personnel should have sufficient training, qualifications, and experience to work carefully near the LDC's facilities. LDCs should also have better control over contractors hired by them to perform work, than they do over unaffiliated excavators. Thus, this category should be the smallest contributor to the total damages and, in theory, the easiest to improve. The current measure tracks damages caused by all utility operations within an LDC. That is, for an electric and gas combination utility, damage to gas facilities caused by electric crews or electric company contractors are combined.

Damages due to no-calls are instances where an excavator failed to provide notice of their intent to excavate to either of the one-call notification systems. This measure provides an indication of the general level of awareness excavators have about the one-call notification systems. A high percentage of damage in this category indicates that additional and more effective efforts are needed to make excavators aware of the dangers of working around buried facilities and the importance of using the one-call systems.

It is important to note that the damage prevention measure evaluates actual damages to an LDC's underground natural gas facilities. Based on the data reported in 2019, 99.8% of one-call tickets had no associated damage to natural gas facilities. This is consistent with the Common Ground Alliance's (CGA)[6] 2018 Damage Information Reporting Tool (DIRT),[7] which found that when a call is made prior to excavation, damage occurs less than 1.0% of the time.

A total of 1,546 underground damages were reported in 2019 for the 11 major natural gas LDC facilities. For the previous nine years, the average number of total damages has been 1,588. This consistency demonstrates that any performance improvements or declines have primarily been driven by the number of one-call tickets. As previously mentioned, the total damage prevention measure improved in 2019 due largely to an increase in one-call tickets (going from 777,371 to 841,849).

Staff supports the LDCs' and excavators' efforts by enforcing the Commission's damage prevention regulations prescribed within 16 NYCRR Part 753 - Protection of Underground Facilities. Over the past five years, approximately 2,380 citations have been issued, which has led to an increase of training sessions being completed by excavators with either New York 811 or Dig Safely New York as part of the Department's enforcement process. Additionally, approximately $4,765,761 in penalties have been collected for this same five-year period.

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[6] The Common Ground Alliance is a national association of stakeholders involved in damage prevention that identifies and disseminates best practices, conducts public awareness programs, and collects and analyzes data regarding damages to underground utility facilities.

[7] http://commongroundalliance.com/media-reports/dirt-report-2018

Figure 1 below displays the collective performance regarding the damage prevention measures. Note the increase in the total number of one-call tickets and respective improved performance for each of the categories in 2019.

Damage Prevention Metric	2015	2016	2017	2018	2019
Number of Tickets	801,920	827,512	978,049	777,371	841,849
Mismarks	0.48	0.39	0.37	0.52	0.48
Co. & Co. Contractor Error	0.10	0.08	0.08	0.11	0.08
Excavator Error	1.08	0.98	0.78	1.01	0.88
No-Calls	0.51	0.44	0.37	0.41	0.40
Total Damages (per 1,000)	2.18	1.89	1.60	2.05	1.84

Figure 1 – Collective Damage Prevention Performance

As previously mentioned, there was an 8.3% increase in the number of one-call tickets.[8] When reviewing the number of damages, there were: five fewer mismark damages (going from 405 in 2018, to 400 in 2019); twenty-four fewer company and company contractor damages (going from 88 to 64); and 45 fewer third-party damages (going from 787 to 742). For no-call damages, there were 25 more damages (going from 315 in 2018, to 340 in 2019). Specific LDC performance for each of the damage prevention categories is located in Appendices B and C.

[8] The total damage performance may not equal the sum of the four categories due to rounding.

Individual LDC performance for total damages per 1,000 tickets, is displayed in Figure 2 below.

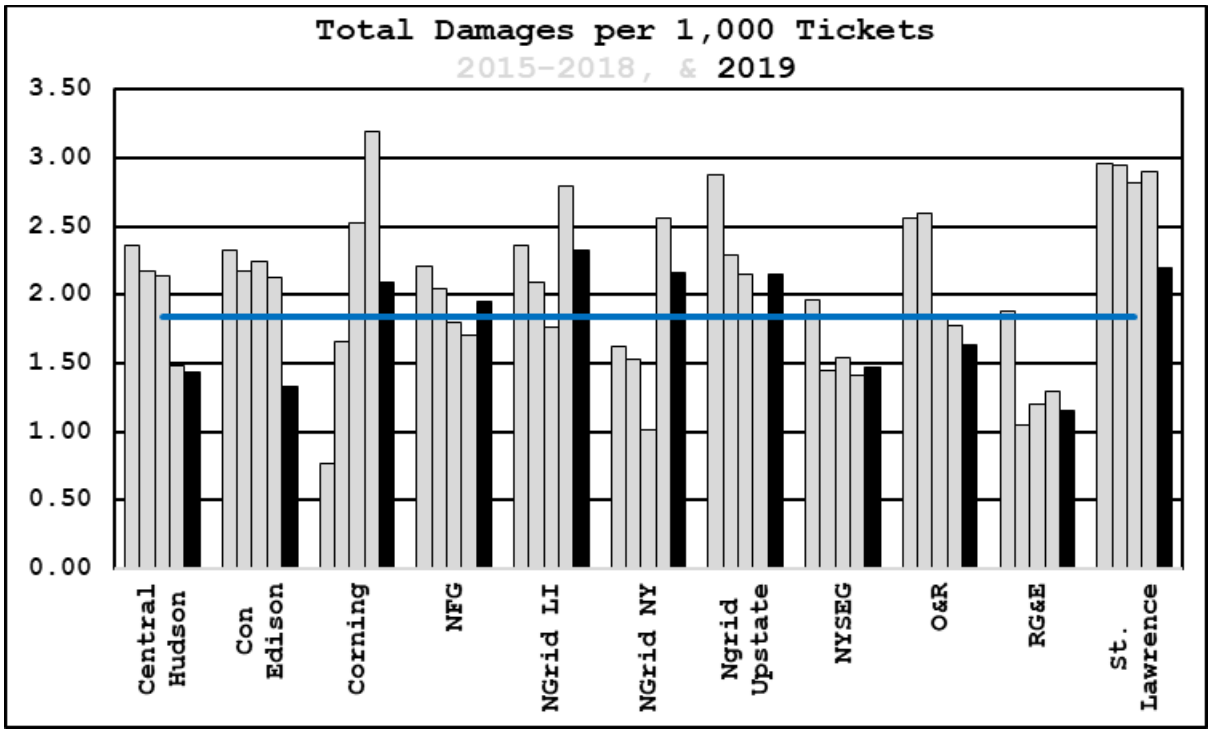

Figure 2 – Total Damages per 1,000 Tickets

As seen in Figure 2, eight LDCs improved and three LDCs performed worse than the previous year. Among those improving, gains were made by Consolidated Edison Company of New York, Inc. (Con Edison) (37.5%) going from 238 total damages in 2018, to 168 in 2019; Corning Natural Gas Corporation (Corning) (34.4%) going from 26 to 10; St. Lawrence Gas Company, Inc. (St. Lawrence) (24.2%) going from 12 to 10; Keyspan Gas East Corporation d/b/a National Grid (NGrid LI) (16.7%) going from 354 to 320; The Brooklyn Union Gas Company d/b/a National Grid NY (NGrid NY) (15.7%) going from 329 to 302; Rochester Gas & Electric Corporation (RG&E) (11.4%) going from 93 to 90; and Orange & Rockland Utilities, Inc. (O&R) (7.6%) going from 60 to 56. For Central Hudson Gas & Electric Corporation (Central

Hudson) (3.0%), minor improvements were made when normalized with one-call ticket increases, even though total damages went from 44 in 2018, to 45 in 2019.

LDC performance for excavator error damages per 1,000 tickets, is displayed in Figure 3.

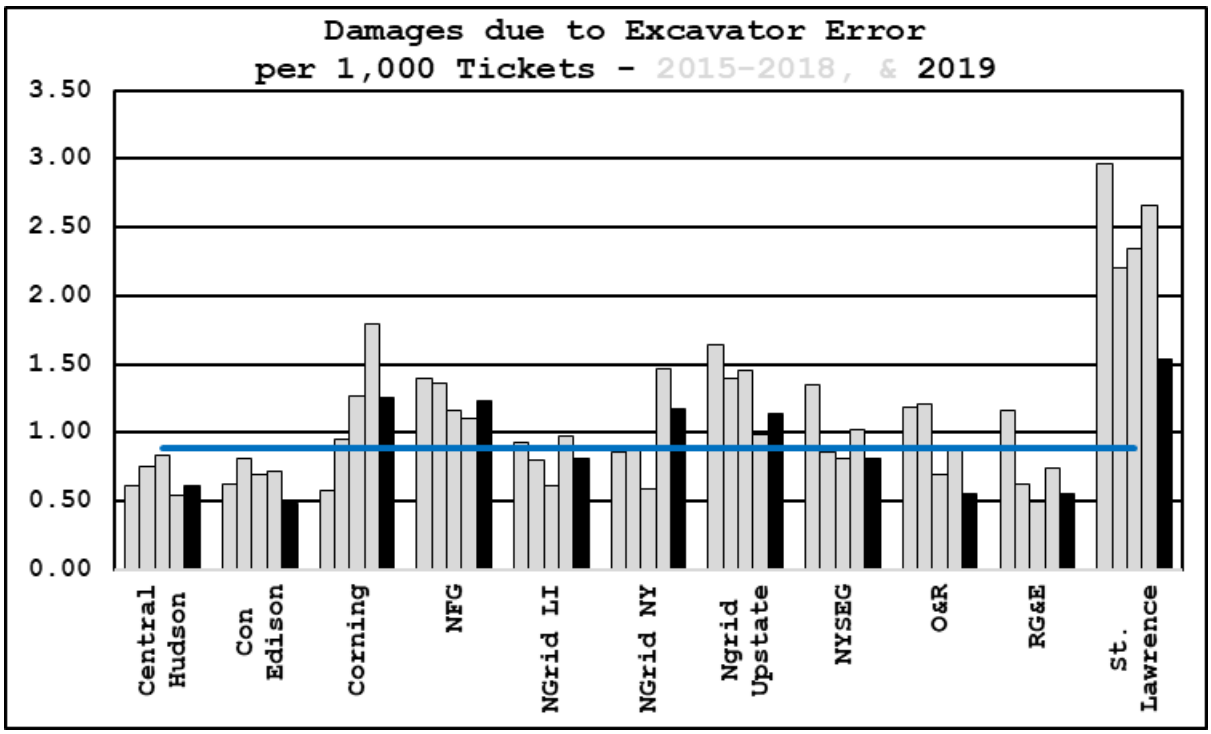

Figure 3 – Excavator Error Damages per 1,000 Tickets

As seen in Figure 3, eight LDCs improved and three LDCs performed worse than the previous year. Among those improving, gains were made by St. Lawrence (42.8%), going from 11 excavator error damages in 2018 to seven in 2019; O&R (37.5%) going from 30 to 19; Con Edison (33.6%) going from 80 to 60; Corning (30.0%) going from nine to six; RG&E (25.7%) going from 53 to 43; New York State Electric & Gas Corporation (NYSEG) (20.3%) going from 64 to 54; NGrid NY (20.0%) going from 188 to 164; and NGrid LI (17.5%) going from 124 to 111. As LDCs continue their outreach, education, and training efforts, the

general public and excavators will be more informed as to the required safe digging protocols prescribed within the one-call regulations, found in 16 NYCRR Part 753.

LDC performance for no-call damages per 1,000 tickets, is displayed in Figure 4 below.

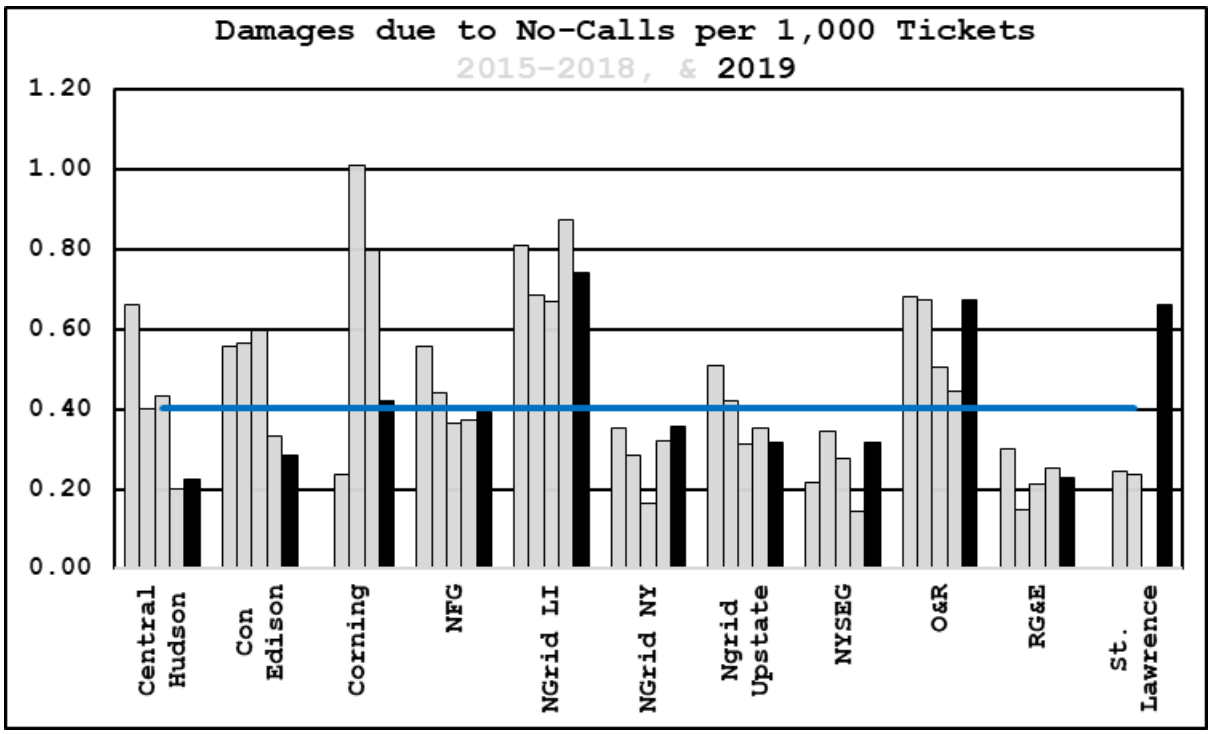

Figure 4 – No-call Damages per 1,000 Tickets

As seen in Figure 4, five LDCs improved and six LDCs had worse performance than the previous year. Among those LDCs with improved performance, gains were made by Corning (47.5%) going from four no-call damages in 2018, to two in 2019; Con Edison (13.9%) going from 37 to 36; NGrid LI (15.3%) going from 111 to 102; Niagara Mohawk Power Corporation d/b/a National Grid (NGrid Upstate) (10.2%) going from 36 to 34; and RG&E (8.5%) remaining at 18.

Use of the three-digit 811 dialing system, consistent enforcement taken by Staff for violations of 16 NYCRR Part 753,

newer legislation,[9] and public outreach, education, and training efforts taken by LDCs and the one-call systems all contributed to raising excavator awareness regarding their obligations to not only participate in the one-call system, but to excavate safely around underground facilities.

To aid in the enforcement of 16 NYCRR Part 753, LDCs voluntarily forward information they collect about excavators who damaged underground facilities without having mark-out requests. In a more recent effort, some LDCs have also begun reporting more of their damages, regardless of cause or entity that damaged the facility, allowing Staff to perform more damage investigations in real-time.

Once notified, Staff can evaluate the details of each damage, perform on-site interviews and investigations, identify the root cause or causes of the damage, obtain any pertinent information (or photographs, etcetera) and pursue enforcement actions where appropriate. This enforcement effort, coupled with higher reporting frequencies and associated penalties, are deterrents to non-compliance. Where appropriate, enforcement cases are resolved by a consent order agreement in which the financial penalty is often reduced if the excavator agrees to attend either a free training provided by the one-call system covering the area where the damage occurred or complete Dig Safely New York's certified excavator program. All LDCs are encouraged to continue in their efforts to notify Staff of Part 753 incidents.

LDC performance for mismark damages per 1,000 tickets is displayed in Figure 5 below.

[9] Case 18-M-0777, In the Matter of Excavator Training Requirements to Comply with Chapter 333 of the Laws of 2018.

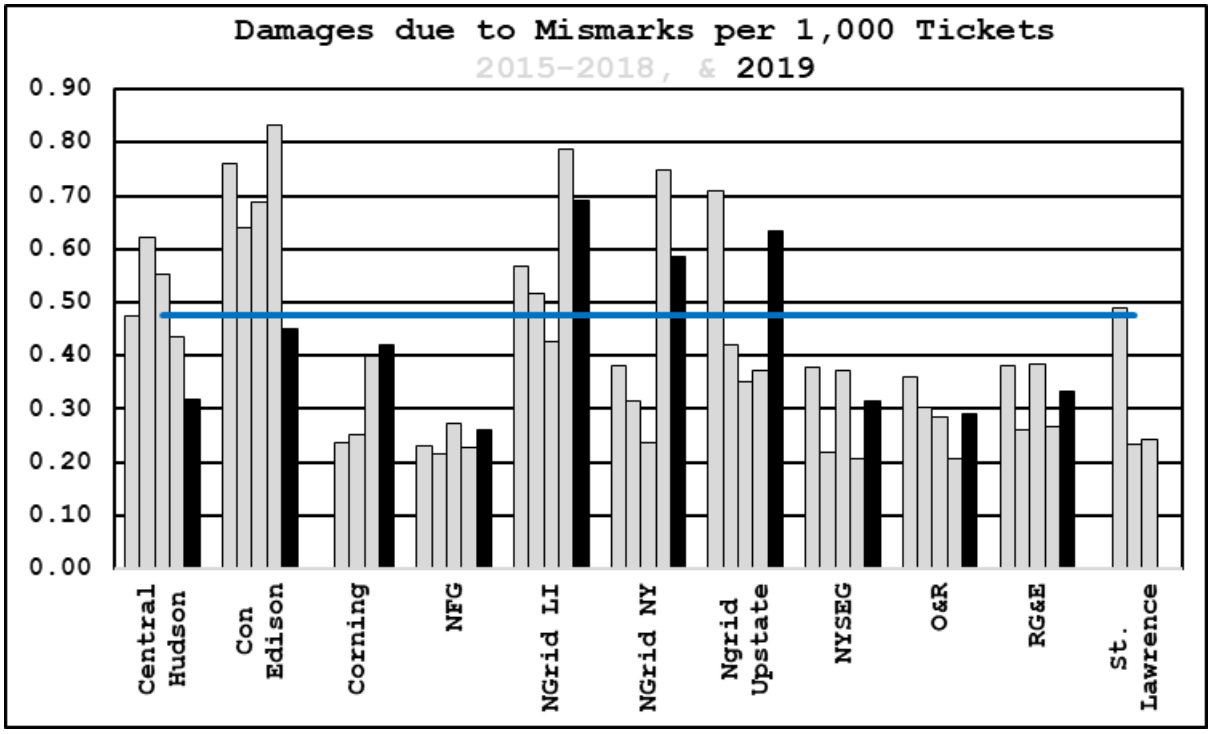

Figure 5 – Mismark Damages per 1,000 Tickets

As seen in Figure 5, five LDCs improved and six LDCs performed worse than the previous year. Among those LDCs with improved performance, gains were made by St. Lawrence (100.0%) going from one mismark damage in 2018, to zero in 2019; Con Edison (45.8%) going from 93 to 57; Central Hudson (27.1%) going from 13 to 10; NGrid NY (21.6%) going from 96 to 82; and NGrid LI (12.5%) going from 100 to 95. Overall, LDCs showed an 8.8% improvement in performance going from 405 mismark damages in 2018, to 400 in 2019.

Staff typically expects to see general improvements for damages due to mismarks as LDCs continually adopt best practices to locate their facilities, as they remove older leak-prone pipe, which is more difficult to accurately identify on facility records than the newer pipe that replaced it, whose exact locations are known, and as LDCs develop better controls over their locating contractors.

LDC performance for company and its contractor damages per 1,000 tickets is displayed in Figure 6 below.

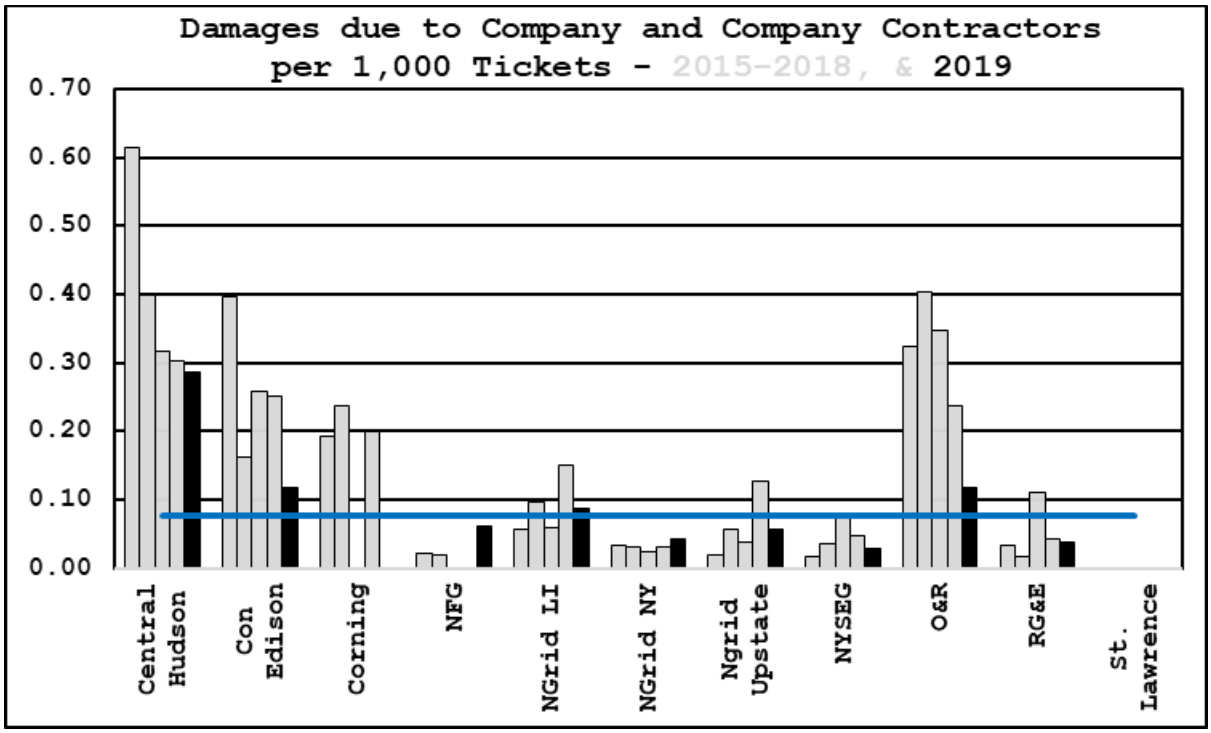

Figure 6 – Damages due to Company and Company Contractors per 1,000 Tickets

As seen in Figure 6, eight LDCs improved, one LDC remained the same, and two LDCs performed worse than the previous year. Among those LDCs with improved performance, gains were made by Corning (100.0%) going from one company and its contractor damage in 2018, to zero in 2019; NGrid Upstate (56.1%) going from 13 to six; Con Edison (52.6%) going from 28 to 15; O&R (50.6%) going from eight to four; NGrid LI (41.8%) going from 19 to 12; NYSEG (37.0%) going from three to two; RG&E (8.5%) remaining at three; and Central Hudson (5.2%) remaining at nine. St. Lawrence again achieved zero damages in 2019.

With the Commission's support and encouragement, the LDCs have increased their proactive removal of leak-prone pipe.

This leads to more excavation from both the LDC's and their contractors near and around buried natural gas facilities, which, in turn, increases the opportunity for damage. Despite this increased excavation activity, performance in this category improved, going from 88 damages in 2018 to 64 in 2019.

On the other hand, LDCs are expected to maintain better control over the contractors they hire to perform work for them than they do over third-party excavators. These employees should have the training, qualifications, and experience to work carefully near and around underground natural gas facilities. The LDCs point out that often these damages are to facilities that are in the process of being removed. When damaged, their own crews and contractors are more prepared than third-party excavators to promptly control the situation.

While it's true that damage to facilities can occur when they are being removed, Staff believes that LDCs should not minimize this category of damages. These damages still have the potential to harm workers and members of the public and should be avoided. All damages not only pose safety concerns but have the potential to lead to service outages and other disruptions, such as road closures and evacuations.

As noted above, this measure has the lowest number of damages, and is the smallest contributor to the overall damage prevention measure. Further, the graph's vertical scale in Figure 6 makes the year-to-year changes appear more dramatic than those displayed in Figures 2, 3, 4, and 5. This graph's vertical scale exaggerates the fluctuations for the smaller LDCs. It has been noted several times that the smaller LDCs (such as Corning and St. Lawrence) can have dramatic variations from year to year because of the relative lack of one-call tickets in their territories. In fact, the data suggests that

even the larger LDCs can experience sizable volatility in performance.

While there is value in evaluating recent trends in performance, it is worth taking a step back to look at this year's data in relation to that of ten years ago. Figure 7 displays the collective damage prevention performance from calendar years 2010 and 2019.

Metric	2010	2019
Number of Tickets	664,895	841,849
Mismarks	0.55	0.48
Co. & Co. Contractor Error	0.11	0.08
Excavator Error	1.29	0.88
No-calls	0.55	0.40
Total (per 1,000)	2.51	1.84

Figure 7 – Comparison between 2010 and 2019

Emergency Response

Commission regulation 16 NYCRR §255.825(d) requires that LDCs provide a monthly report that includes a breakdown of the total number of leak, odor, and emergency reports received and responded to during the month in intervals of 15 minutes during normal business hours, weekdays outside business hours, and weekends and holidays. The following have been established as expected emergency response standards: respond to 75% of leak, odor, and emergency reports within 30 minutes; 90% within

45 minutes; and 95% within 60 minutes. Typically, LDCs have few instances of response times exceeding 60 minutes.[10]

The intent of the reporting requirement and the performance measure is to evaluate LDC response to natural gas leak, odor, and emergency notifications that are generated by the public or other authorities (for example, police, fire, and municipalities). For the purposes of reporting, the response times are measured from the time the notification is sent from the company dispatch to the time qualified company personnel arrive at the location.[11]

Figure 8 displays the 11 major LDCs annual emergency response time performance for each standard since 2015, with the 2019 performance presented in black. In contrast to the previous four calendar years, the total number of leak, odor, and emergency reports increased (7.4%), going from 177,410 in 2018, to 190,617 in 2019. This increase in reports, for 2019, led to declines in performance for all three emergency response time categories. Regardless, LDCs, once again, exceeded the 75%, 90%, and 95%, minimum standards for the calendar year.

In addition to the LDCs' efforts, the Commission has encouraged further improvements beyond the established standards by incorporating positive revenue adjustments into the LDCs' respective rate plans.

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[10] The LDCs are expected to review the circumstances of each instance exceeding 60 minutes and, where possible, work towards their elimination.

[11] Qualified personnel are defined as company representatives who are properly trained and equipped to investigate leak, odor, and emergency reports in accordance with accepted company procedures and 16 NYCRR §255.604 - operator qualification requirements.

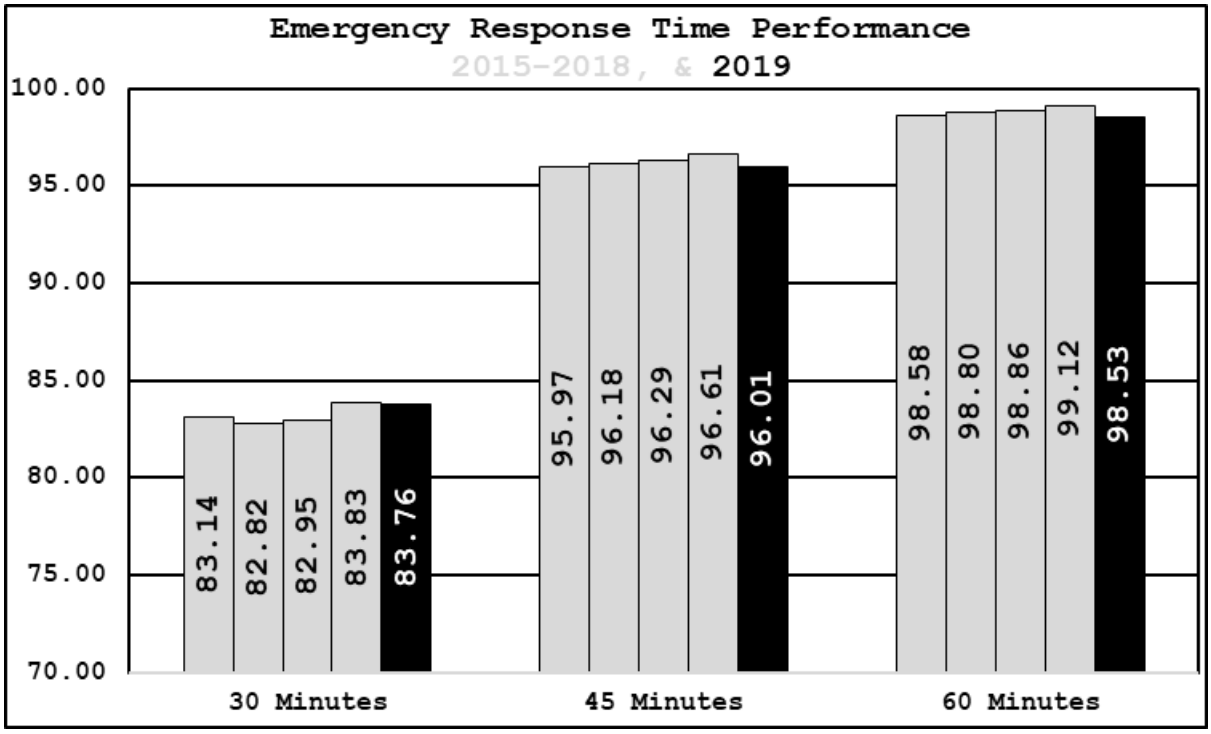


Figure 8 – Emergency Response Time Performance

Over the past 17 years, leak, odor, and emergency notifications across the LDCs have decreased from 227,905 in 2003, to 190,617 in 2019; or by 16.4%. These declines in notification volumes may be attributed to the reduction of leak backlogs, which will be discussed below in the leak management section, and aggressive and proactive leak prone pipe removal programs approved by the Commission.

Figure 9 presents data for calendar years 2015 through 2019, arranged by LDC and percentage of emergency response times achieved within 30 minutes.

LDCs	2015	2016	2017	2018	2019
Central Hudson	77.0	77.7	79.2	82.8	83.3
Con Edison	88.2	89.1	90.0	92.0	94.9
Corning	79.1	83.8	86.6	77.2	79.9
NFG	93.3	91.4	94.0	94.7	95.0
NGrid LI	78.0	77.2	74.3	74.1	75.4
NGrid NY	75.9	76.2	77.3	78.9	78.1
NGrid Upstate	82.7	82.3	80.4	79.3	79.4
NYSEG	80.6	82.0	79.0	76.1	72.5
O&R	89.0	88.9	89.0	88.2	92.4
RG&E	81.4	77.8	75.5	75.6	64.3
St. Lawrence	83.6	78.5	79.6	79.6	81.9

Figure 9 – Emergency Response Times for 30 Minutes (%)

As seen in Figure 9, NYSEG and RG&E were the only LDCs that failed to meet the 30-minute standard. The data for the 45- and 60-minute response times are provided in Appendices D and E, respectively.

It is encouraging to see that all LDCs have made efforts over the years to reach the emergency response time standards jointly established for this measure. Staff expects all LDCs to continue evaluating and monitoring their performance

and to identify areas where best practices can be implemented to further exceed the benchmarks.

Leak Management

The purpose of evaluating the LDCs' leak management programs is to gauge how LDCs are responding to and addressing leaks on their systems, eliminating potentially hazardous leaks that are found, and reducing their backlogs of total leaks. New to the leak management analysis in this year's report are the evaluations of leaks discovered and leaks repaired, in total and per each LDC's respective system mileage.

The natural gas pipeline safety regulations contained in 16 NYCRR Part 255 include requirements for classifying leaks according to their relative hazard by considering factors such as whether natural gas migration is detected near buildings, in manholes, vaults, catch basins, under paved versus unpaved areas, etcetera. All leaks classified as potentially hazardous must be monitored and repaired according to the pipeline safety regulations, with any hazardous conditions being immediately eliminated. All other leaks must be reevaluated during the next required leakage survey or annually, whichever is less, but have no mandatory repair timeframes.

Unrepaired, potentially hazardous leaks pose an increased safety risk to the public. The risk is further exacerbated when the ground contains frost, which increases the chance natural gas will migrate into buildings. The frost acts essentially as a blanket that does not allow the gas to readily vent to atmosphere through the soil, allowing the natural gas to find underground pathways and enter structures. Although leak backlogs on any day are a snapshot in time, the end of the calendar year is significant since it generally coincides with

the beginning of the frost season. Thus, all data analyses are presented as of the last two weeks in December.

The data reported by the LDCs related to leak management are contained in Appendices F, G, H, I, J, and K. The leak management measure looks at the year-end backlog of potentially hazardous leaks and in total. This measure does not substitute for, and is not a reflection upon, any LDC's compliance with pipeline safety regulations. The data reported include leak repairs on mains and services by material type; the backlogs of potentially hazardous leaks and in total; and repaired and discovered potentially hazardous leaks.

Analysis of leak management data can also provide an indication of the material types susceptibility to leakage. As a means of continuously improving leak management programs, Staff encourages LDCs to identify and remove leak prone pipe, such as cast or wrought iron, bare or ineffectively coated steel, and certain brittle plastic materials. Incentive programs to remove deteriorating and leak prone infrastructure and/or reducing leak backlogs have been incorporated into the LDCs' past and current rate plans. The long-term goal is the elimination of pipeline infrastructure that, due to its vulnerability to leaks, presents greater safety risks to the public. Thus, the aging pipeline infrastructure is removed and replaced with modern materials that have shown to be less likely to leak. These replacement programs are the primary driver in the significant reduction of hazardous leaks, total leaks, and the associated fugitive methane emissions.

The overall year-end backlog of potentially hazardous leaks remained consistent at 32 from 2018 to 2019 and is down 97.2% when compared to 1,154 in 2003. This demonstrates that LDCs have maintained continual efforts in managing leak surveys

and are completing them earlier in the year, to allow for time to repair discovered leaks.

Figure 10 displays the backlog of potentially hazardous leaks[12] from 2015 through 2019. The numerical leak data for this category is contained in Appendix H.

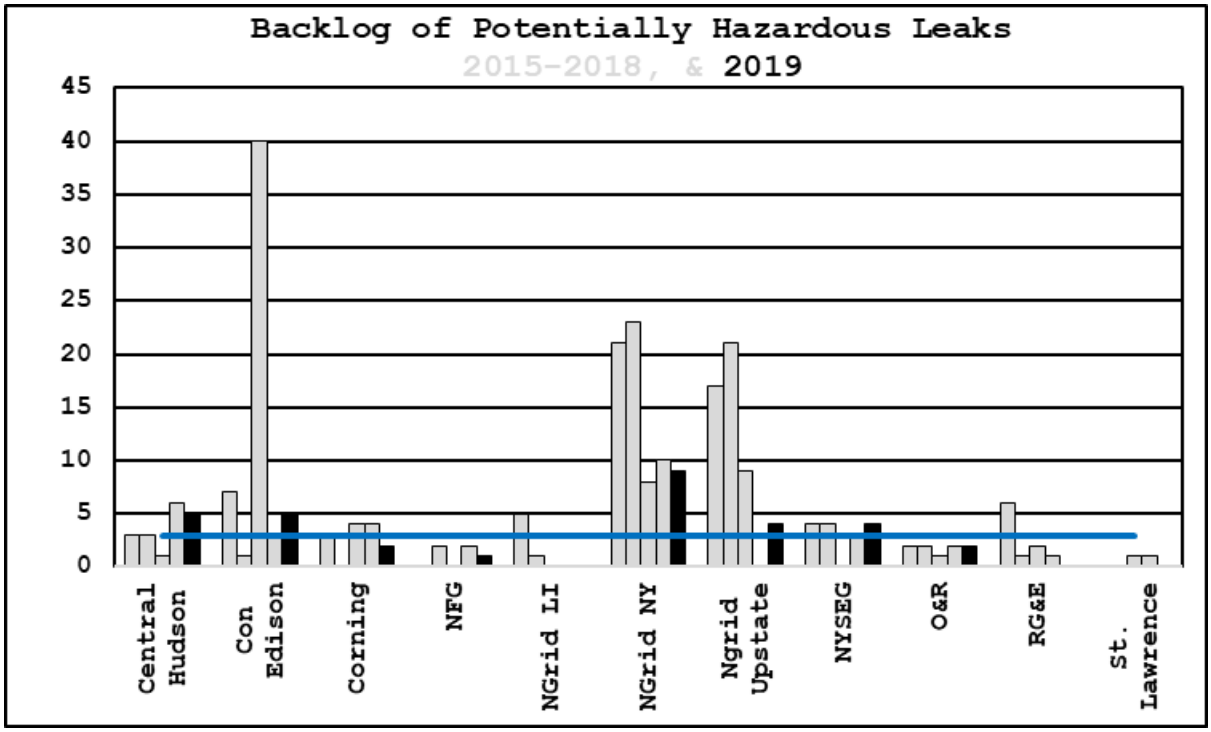


Figure 10 – Backlog of Potentially Hazardous Leaks

As seen in Figure 10, LDCs' continued efforts have led to negligible backlogs for potentially hazardous leaks entering the frost season, the last two weeks in December.

[12] A backlog of leaks requiring repair is defined as active leaks in the system consisting of: Type 1, requiring immediate effort to protect life and property, continuous action to eliminate the hazard, and repairs on a day-after-day basis or the condition kept under daily surveillance until corrected; Type 2A, monitored every two weeks and repaired within six months; and Type 2, monitored every two months and repaired within one year.

Total leak backlogs include all potentially hazardous leaks, as identified above, and Type 3 leaks. Type 3 leaks are defined as not potentially hazardous at the time of inspection and are reasonably expected to remain that way. However, Type 3 leaks must be reevaluated during the next regularly scheduled required leakage survey or annually, whichever is less, though they have no mandatory repair timeframe.

Without a mandatory repair timeframe, LDCs could allow this backlog to grow while still meeting the minimum pipeline safety regulations. In recent years, and like that of potentially hazardous leak backlogs, negative revenue adjustments have been incorporated into most of the respective LDC's rate plans for total leak backlogs.

Figure 11 displays the backlog of total leaks (Type 1, 2A, 2, and 3) from 2015 through 2019. The numerical leak data is contained in Appendix G.

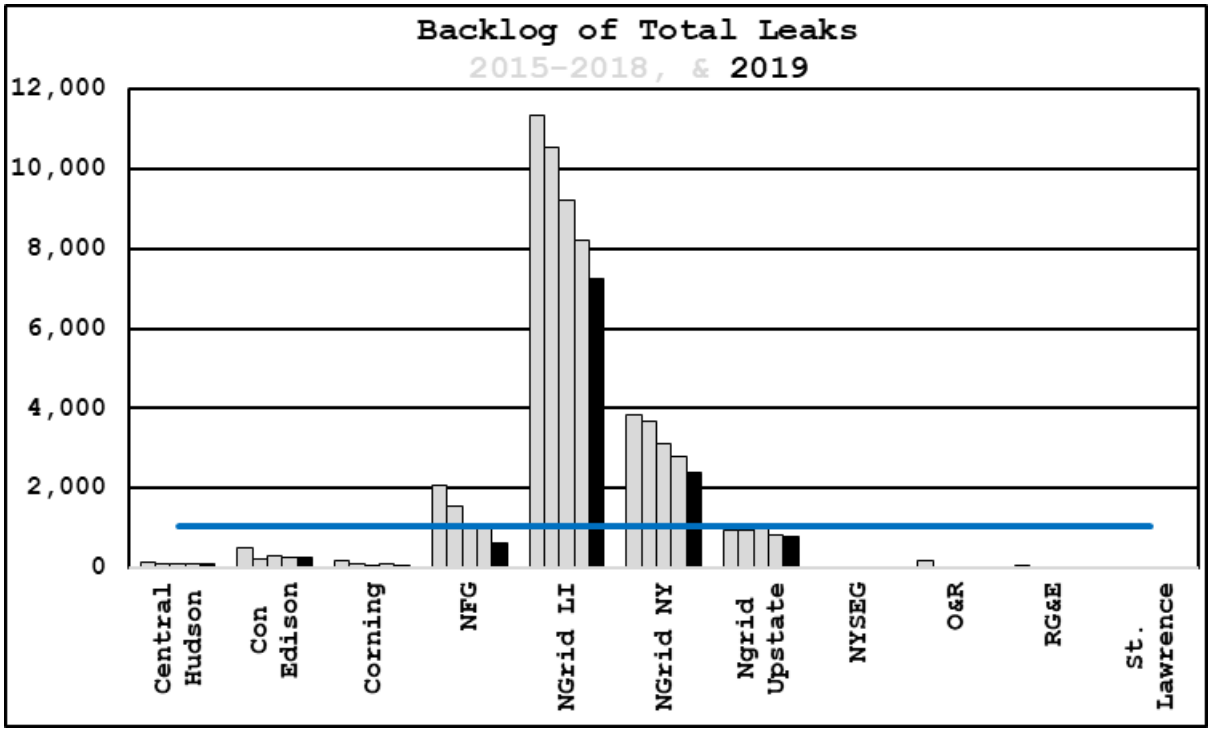
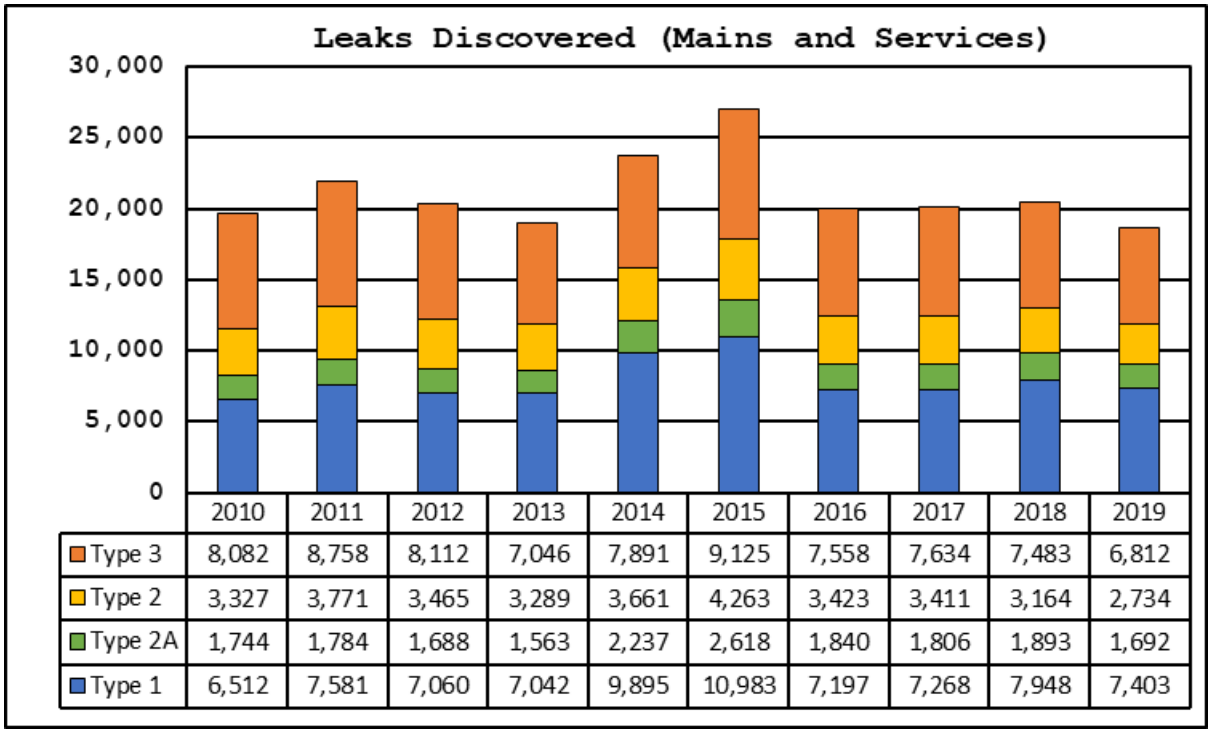


Figure 11 – Backlog of Total Leaks

As seen in Figure 11, NGrid LI and NY continue to be outliers in this category but nonetheless have improved from the previous calendar year. NGrid LI and NY improved approximately 11.5% and 15.0%, respectively, when comparing 2018 to 2019, which resulted in a total of 1,364 fewer backlogged leaks. Their total leak backlogs, however, are considerably higher than that of the next highest LDC, NGrid Upstate, and accounts for 83.9% of the overall total leak backlog. Taken in total, National Grid LI, NY, and Upstate account for 90.9% of the LDC's total leak backlog.

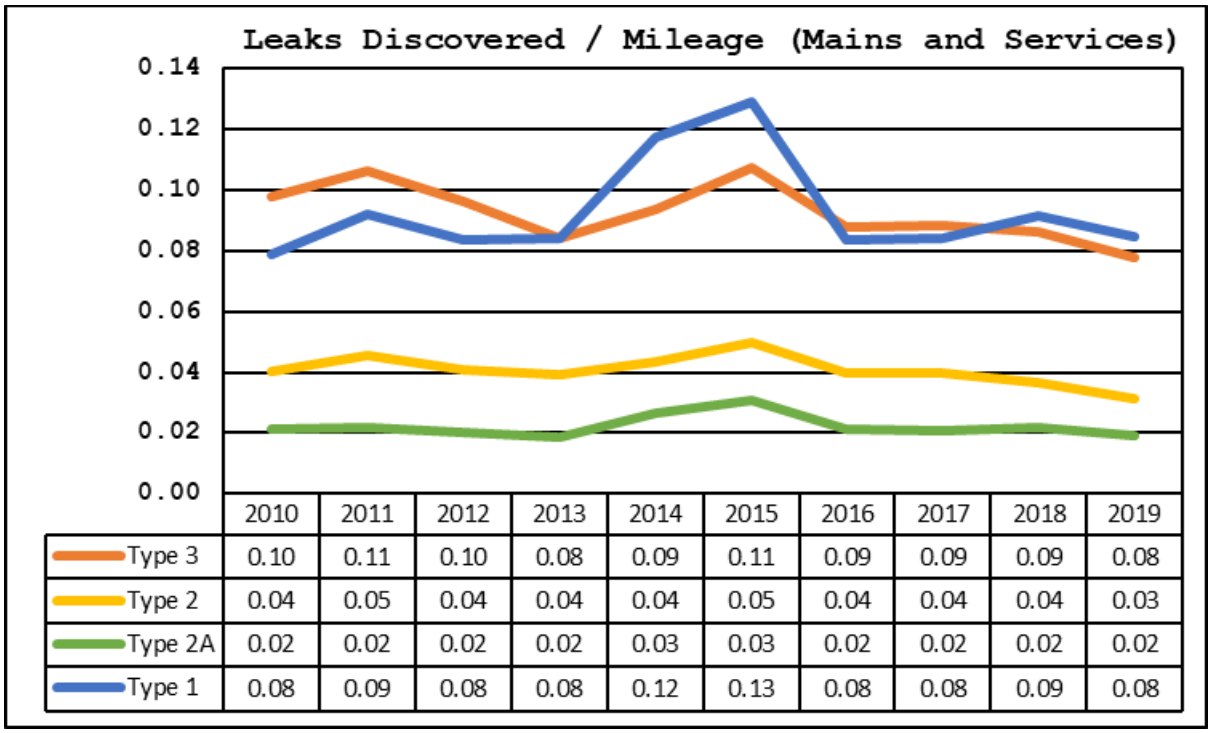
Statistically, performance improvements within this measure include St. Lawrence (100.0%) going from a backlog of one total leak in 2018, to zero in 2019; Corning (58.3%) going from 115 to 48; NFG (43.5%) going from 1,073 to 608; O&R (30.0%) going from 10 to seven; Central Hudson (4.4%) going from 91 to 87; and NGrid Upstate (1.5%) going from 815 to 803. As the accelerated removal of leak prone pipe continues over the next several years, Staff expects that the backlog of total leaks will continue to improve.

New to the leak management analysis: Figures 12 and 13 display the collective number of leaks discovered per leak type, and per system mileage, respectively; Figures 14 and 15 display the collective number of leaks repaired per leak type and per system mileage, respectively; and Figures 16 and 17 display the collective number of leaks repaired per material type and per system mileage, respectively.



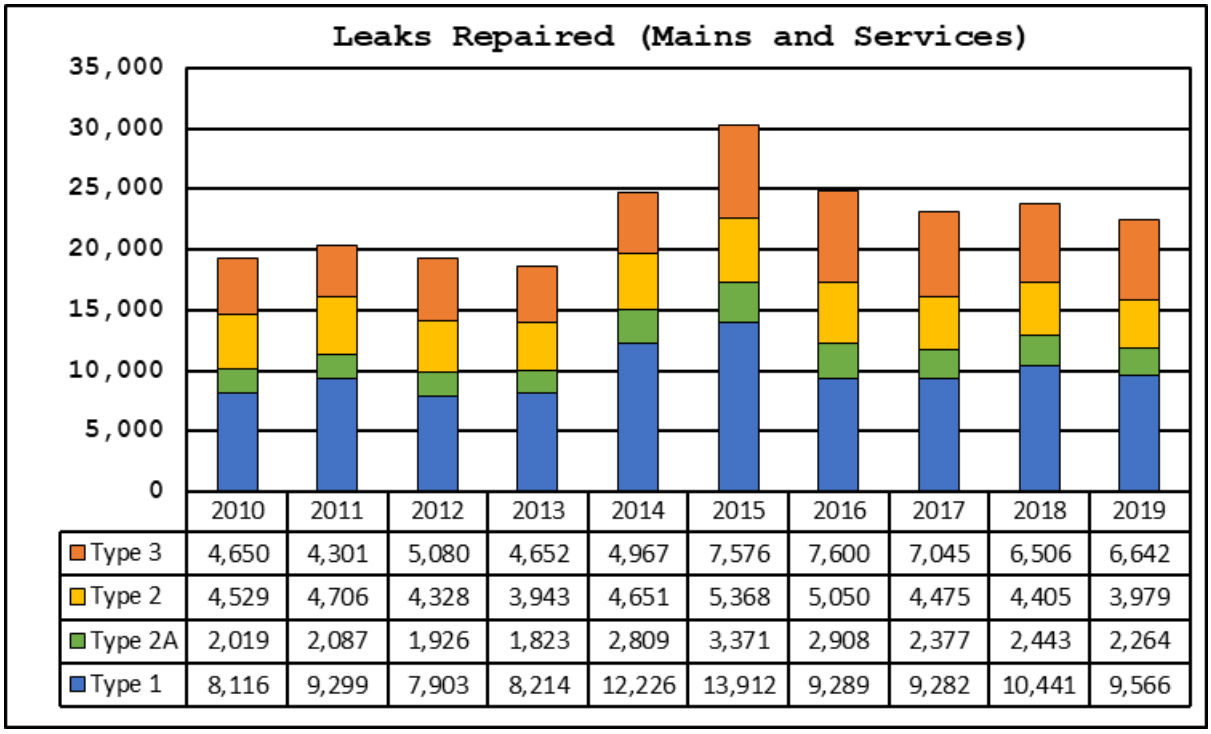
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Type 3	8,082	8,758	8,112	7,046	7,891	9,125	7,558	7,634	7,483	6,812
Type 2	3,327	3,771	3,465	3,289	3,661	4,263	3,423	3,411	3,164	2,734
Type 2A	1,744	1,784	1,688	1,563	2,237	2,618	1,840	1,806	1,893	1,692
Type 1	6,512	7,581	7,060	7,042	9,895	10,983	7,197	7,268	7,948	7,403

Figure 12 – Leaks Discovered by Type



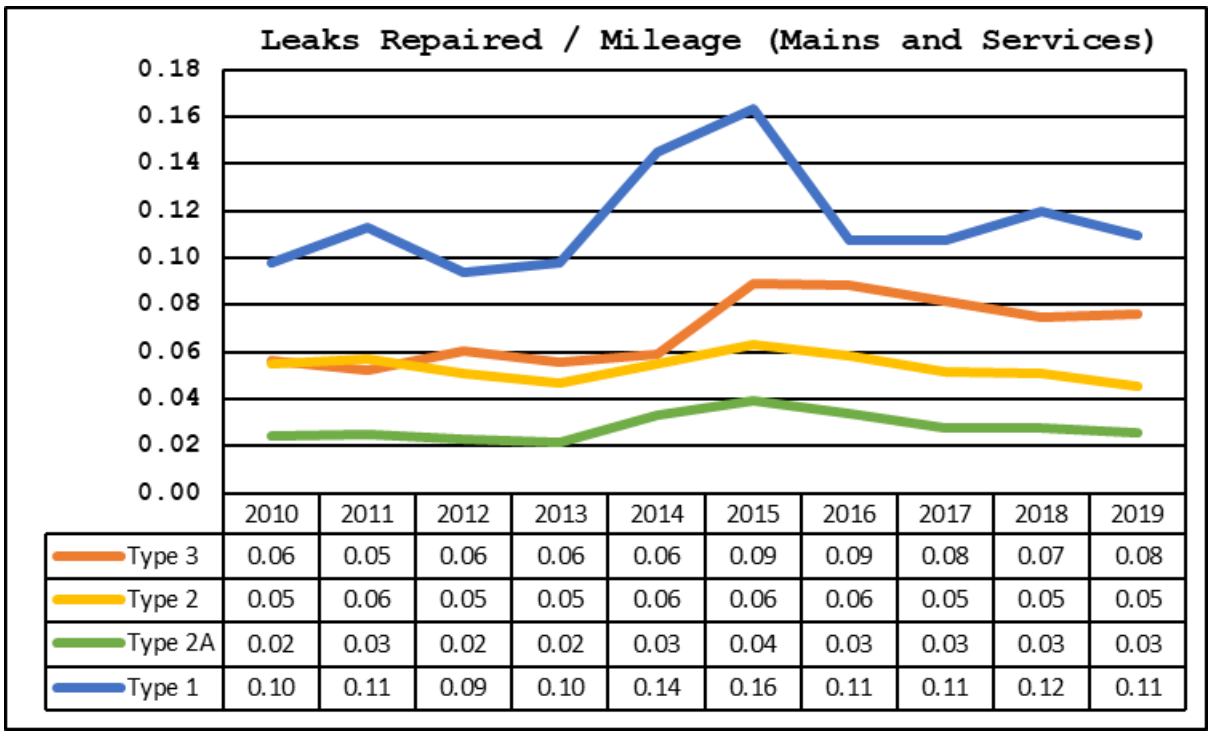
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Type 3	0.10	0.11	0.10	0.08	0.09	0.11	0.09	0.09	0.09	0.08
Type 2	0.04	0.05	0.04	0.04	0.04	0.05	0.04	0.04	0.04	0.03
Type 2A	0.02	0.02	0.02	0.02	0.03	0.03	0.02	0.02	0.02	0.02
Type 1	0.08	0.09	0.08	0.08	0.12	0.13	0.08	0.08	0.09	0.08

Figure 13 – Leaks Discovered by Type / Mileage



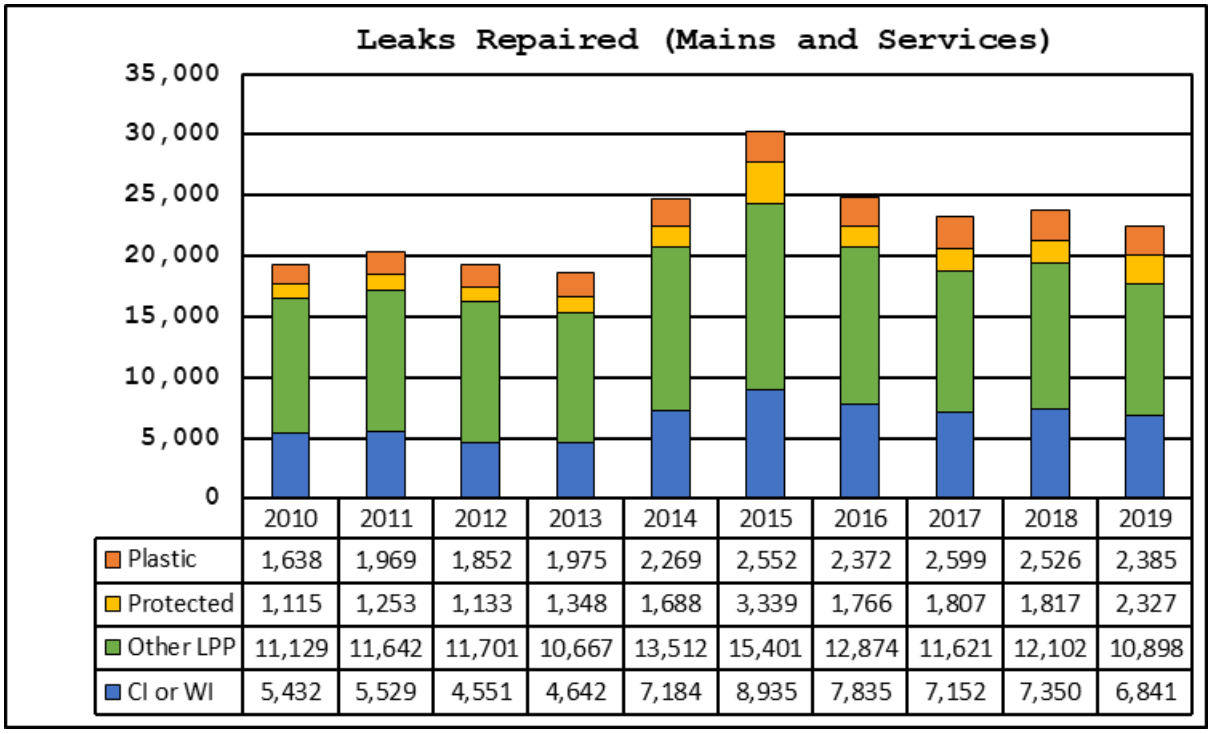
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Type 3	4,650	4,301	5,080	4,652	4,967	7,576	7,600	7,045	6,506	6,642
Type 2	4,529	4,706	4,328	3,943	4,651	5,368	5,050	4,475	4,405	3,979
Type 2A	2,019	2,087	1,926	1,823	2,809	3,371	2,908	2,377	2,443	2,264
Type 1	8,116	9,299	7,903	8,214	12,226	13,912	9,289	9,282	10,441	9,566

Figure 14 – Leaks Repaired by Type



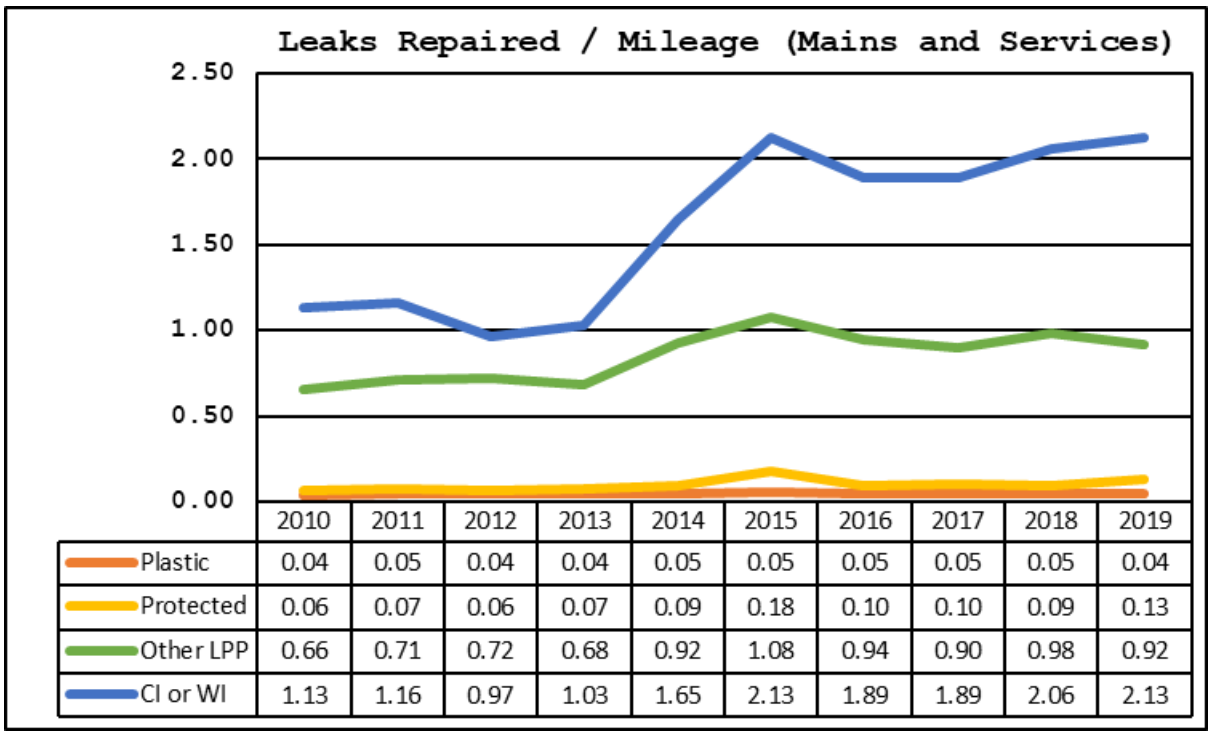
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Type 3	0.06	0.05	0.06	0.06	0.06	0.09	0.09	0.08	0.07	0.08
Type 2	0.05	0.06	0.05	0.05	0.06	0.06	0.06	0.05	0.05	0.05
Type 2A	0.02	0.03	0.02	0.02	0.03	0.04	0.03	0.03	0.03	0.03
Type 1	0.10	0.11	0.09	0.10	0.14	0.16	0.11	0.11	0.12	0.11

Figure 15 – Leaks Repaired by Type / Mileage



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Plastic	1,638	1,969	1,852	1,975	2,269	2,552	2,372	2,599	2,526	2,385
Protected	1,115	1,253	1,133	1,348	1,688	3,339	1,766	1,807	1,817	2,327
Other LPP	11,129	11,642	11,701	10,667	13,512	15,401	12,874	11,621	12,102	10,898
CI or WI	5,432	5,529	4,551	4,642	7,184	8,935	7,835	7,152	7,350	6,841

Figure 16 – Leaks Repaired by Material



	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Plastic	0.04	0.05	0.04	0.04	0.05	0.05	0.05	0.05	0.05	0.04
Protected	0.06	0.07	0.06	0.07	0.09	0.18	0.10	0.10	0.09	0.13
Other LPP	0.66	0.71	0.72	0.68	0.92	1.08	0.94	0.90	0.98	0.92
CI or WI	1.13	1.16	0.97	1.03	1.65	2.13	1.89	1.89	2.06	2.13

Figure 17 – Leaks Repaired by Material / Mileage

As seen in Figures 12 and 14, the collective number of Type 1, 2A, 2, and 3 leaks discovered and repaired have generally decreased when comparing 2018 with that of 2019. When these figures are normalized by the combined system mileage, as seen in Figures 13 and 15, performance is relatively consistent between calendar years.

Figure 16 shows the collective number of leaks repaired separated by material type (plastic, protected, other leak prone pipe not including cast and wrought-iron, and cast and wrought-iron). Note the higher number of leaks repaired on other leak prone pipe (10,898 for 2019) and cast and wrought iron (6,841 for 2019). When normalizing these figures by the respective materials system mileage, as seen in Figure 17, an inverse relationship is formed. While more leaks are repaired on other leak prone pipe, the rate for leaks repaired on cast and wrought iron (2.13) is more than double that of other leak prone pipe (0.92). This data suggests that cast and wrought iron pipelines have a greater potential for leakage than other leak prone pipe, with other leak prone pipe being seven times more likely to leak than non-leak prone pipe.

The LDCs account for this within their leak prone pipe removal programs by assigning weighted factors to each material type. When the risk assessment models are finalized, these prioritized listings of leak prone pipe segments are used by LDCs to focus their replacement efforts. This provides a higher level of public safety.

Non-Compliances Identified through Audit Process

For the final measure, non-compliances identified by Staff through the audit process, LDCs are being evaluated on their compliance with the Commission’s minimum pipeline safety

regulations. This measure looks at non-compliance issues as identified by Staff during audits and investigations of the LDCs. Each year, Staff conducts statistically-based audits and investigations of the LDCs to determine their compliance with the Commission's regulations. Each non-compliance identified represents an area in which an LDC failed to meet these minimum requirements as prescribed.

Staff conducts compliance audits and investigations on a calendar year basis. The statistically-based audits typically include a review of record and field activities. For the record audits, Staff reviews the previous calendar year's documentation and reports on any instances of non-compliance with the pipeline safety regulations. Throughout the remainder of the year, Staff accompanies LDC crews to perform field audits of the actual work being performed and compares those tasks with the requirements of the regulations and the LDCs' applicable procedures. Like the record audit, any instances of non-compliance are documented and then reported.

For investigations, Staff is made aware, either through mandatory reporting or notifications, that an accident or incident has occurred. Once notified, Staff evaluates the details of the event, performs on-site investigations and/or interviews, identifies the root cause or causes of the accident or incident, obtains any pertinent information or photographs, and documents any instances of non-compliance.

For this measure, the year identified includes both the statistically based audits and investigations for that calendar year.[13] Since the 2020 audits of 2019 records are in

[13] This typically includes records generated, field activities, or accidents and incidents which were performed or occurred during the specific calendar year.

progress, Figure 18 below displays the total number of non-compliances from 2014 through 2018. The total number of non-compliances are then normalized by the number of operating headquarters (OHQs) within an LDC. For each OHQ, Staff conducts a separate audit of activities as prescribed by Staff's five-year audit plan. The associated data per LDC and the number of OHQs is located in Appendices L and M.

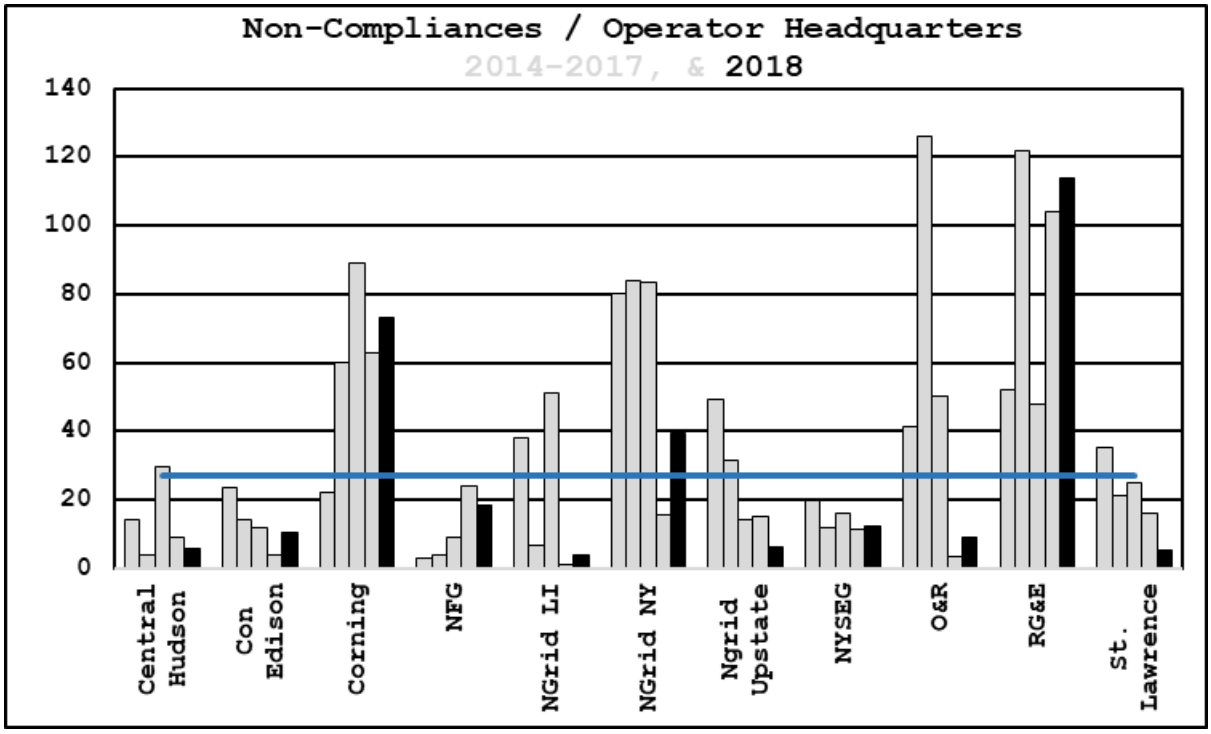


Figure 18 – Non-Compliances Identified through Audits

As seen in Figure 18, the data varies greatly from year to year; therefore, the year to year graph does not represent a direct comparison of year to year compliance. This is due, in part, to Staff's five-year audit plan, which reviews sections of the pipeline safety regulations on varying frequencies based on the likelihood of risk to public safety (life, property, and the environment).

The regulations are either identified as “high risk”, which are audited annually, or as “other risk”, which are audited on a two, three, four, or five-year frequency, but does not exceed five years. The specific code sections identified, and corresponding risk classifications is located in Appendix N.

Staff’s focus is on compliance with the minimum pipeline safety regulations, but also includes areas in which LDCs, based upon historic experiences and identified risks, have chosen to exceed these minimum standards. In 2018, non-compliances were identified in all LDCs’ operating service territories with overall improvements having been realized in each of the previous five calendar years. This is due, in part, to the mechanisms that have been incorporated into most of the LDCs’ respective rate plans, which attach regulatory liabilities for the non-compliances identified.

Conclusion

Natural gas is a safe and reliable energy commodity when handled and transported properly. Pipeline safety performance measures are an important management tool that provide the ability to evaluate trends in key areas such as damage prevention, emergency response, leak management, and non-compliances with the Commission’s regulations. The LDCs must continue to focus on these areas to further reduce risks in distributing natural gas to consumers.

Over the past 10 years, LDCs have worked to improve performance in the key areas of safety as identified within this report. Over this time, damage prevention performance improved 26.7% going from 2.51 to 1.84 in total damages per 1,000 one-call notifications; response to leak, odor, and emergency reports within 30-minutes improved from 82.2% to 83.8%; and the

year-end backlogs of potentially hazardous leaks and in total have decreased 83.0% and 55.8%, going from 188 and 25,980, to 32 and 11,490. As LDCs continue their education and outreach efforts, adopt best practices in responding to leak, odor, and emergency reports, and work to remove leak prone pipe, further improvements will occur.

Staff will continue to evaluate LDCs' performance via the measures contained within this report and encourage LDCs to evaluate their past and current practices. LDCs with clear opportunities for improvement when compared to their peers should reach out to the LDCs that showed superior performance levels to determine the incremental and, if necessary, entirely new approaches needed to achieve improvement.

Those LDCs that made significant improvements are further encouraged to respond to this report and share the best practices that have enabled them to make these improvements. Staff will continue to meet with LDCs on a regular basis and will monitor LDC performance. Performance trends will be discussed with LDCs at these meetings and will be analyzed in future performance measure reports.[14]

[14] Due to SARS-CoV-2 (also known as COVID-19), fluctuations may occur with the 2020 calendar year data. Thus, it is important that the LDCs maintain focus on these performance measures during this period to ensure the same, if not a greater level of public safety.

Appendix A

Historical Case Numbers[15]

Year Analyzed	Case Number
2003	04-G-0457
2004	05-G-0204
2005	06-G-0566
2006	07-G-0461
2007	08-G-0413
2008	09-G-0454
2009	10-G-0225
2010	11-G-0242
2011	12-G-0222
2012	13-G-0213
2013	14-G-0176
2014	15-G-0248
2015	16-G-0254
2016	17-G-0245
2017	18-G-0260
2018	19-G-0298

[15] The appendices to this report include the most recent year under analysis plus the four previous years. This table is provided to aid those wishing to research prior years.

Appendix B

Number of One-Call Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	21,136	22,522	25,302	29,795	31,422
Con Edison	93,510	92,054	100,397	111,669	126,182
Corning	5,193	4,214	3,952	5,010	4,772
NFG	95,284	97,457	98,714	101,503	111,451
NGrid LI	156,964	164,892	185,313	126,872	137,703
NGrid NY	177,824	191,140	283,474	128,359	139,826
NGrid Upstate	104,422	104,991	102,770	101,798	107,008
NYSEG	55,468	55,180	61,600	62,853	66,504
O&R	27,790	29,697	31,820	33,777	34,209
RG&E	60,274	61,289	80,447	71,598	78,227
St. Lawrence	4,055	4,076	4,260	4,137	4,545

Number of Damages due to Mismarks

LDCs	2015	2016	2017	2018	2019
Central Hudson	10	14	14	13	10
Con Edison	71	59	69	93	57
Corning	0	1	1	2	2
NFG	22	21	27	23	29
NGrid LI	89	85	79	100	95
NGrid NY	68	60	67	96	82
NGrid Upstate	74	44	36	38	68
NYSEG	21	12	23	13	21
O&R	10	9	9	7	10
RG&E	23	16	31	19	26
St. Lawrence	0	2	1	1	0

Damages due to Mismarks per 1,000 Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	0.47	0.62	0.55	0.44	0.32
Con Edison	0.76	0.64	0.69	0.83	0.45
Corning	0.00	0.24	0.25	0.40	0.42
NFG	0.23	0.22	0.27	0.23	0.26
NGrid LI	0.57	0.52	0.43	0.79	0.69
NGrid NY	0.38	0.31	0.24	0.75	0.59
NGrid Upstate	0.71	0.42	0.35	0.37	0.64
NYSEG	0.38	0.22	0.37	0.21	0.32
O&R	0.36	0.30	0.28	0.21	0.29
RG&E	0.38	0.26	0.39	0.27	0.33
St. Lawrence	0.00	0.49	0.23	0.24	0.00

Appendix B (Continued)

Number of Damages due to No-calls

LDCs	2015	2016	2017	2018	2019
Central Hudson	14	9	11	6	7
Con Edison	52	52	60	37	36
Corning	0	1	4	4	2
NFG	53	43	36	38	44
NGrid LI	127	113	124	111	102
NGrid NY	63	54	47	41	50
NGrid Upstate	53	44	32	36	34
NYSEG	12	19	17	9	21
O&R	19	20	16	15	23
RG&E	18	9	17	18	18
St. Lawrence	0	1	1	0	3

Damages due to No-calls per 1,000 Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	0.66	0.40	0.43	0.20	0.22
Con Edison	0.56	0.56	0.60	0.33	0.29
Corning	0.00	0.24	1.01	0.80	0.42
NFG	0.56	0.44	0.36	0.37	0.39
NGrid LI	0.81	0.69	0.67	0.87	0.74
NGrid NY	0.35	0.28	0.17	0.32	0.36
NGrid Upstate	0.51	0.42	0.31	0.35	0.32
NYSEG	0.22	0.34	0.28	0.14	0.32
O&R	0.68	0.67	0.50	0.44	0.67
RG&E	0.30	0.15	0.21	0.25	0.23
St. Lawrence	0.00	0.25	0.23	0.00	0.66

Number of Damages due to Excavator Error

LDCs	2015	2016	2017	2018	2019
Central Hudson	13	17	21	16	19
Con Edison	58	74	70	80	60
Corning	3	4	5	9	6
NFG	133	133	115	112	137
NGrid LI	145	131	112	124	111
NGrid NY	152	172	165	188	164
NGrid Upstate	171	146	149	100	122
NYSEG	75	47	50	64	54
O&R	33	36	22	30	19
RG&E	70	38	40	53	43
St. Lawrence	12	9	10	11	7

Appendix B (Continued)

Damages due to Excavator Error per 1,000 Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	0.62	0.75	0.83	0.54	0.60
Con Edison	0.62	0.80	0.70	0.72	0.48
Corning	0.58	0.95	1.27	1.80	1.26
NFG	1.40	1.36	1.16	1.10	1.23
NGrid LI	0.92	0.79	0.60	0.98	0.81
NGrid NY	0.85	0.90	0.58	1.46	1.17
NGrid Upstate	1.64	1.39	1.45	0.98	1.14
NYSEG	1.35	0.85	0.81	1.02	0.81
O&R	1.19	1.21	0.69	0.89	0.56
RG&E	1.16	0.62	0.50	0.74	0.55
St. Lawrence	2.96	2.21	2.35	2.66	1.54

Number of Damages due to Co. & Co. Contractor Error

LDCs	2015	2016	2017	2018	2019
Central Hudson	13	9	8	9	9
Con Edison	37	15	26	28	15
Corning	1	1	0	1	0
NFG	2	2	0	0	7
NGrid LI	9	16	11	19	12
NGrid NY	6	6	7	4	6
NGrid Upstate	2	6	4	13	6
NYSEG	1	2	5	3	2
O&R	9	12	11	8	4
RG&E	2	1	9	3	3
St. Lawrence	0	0	0	0	0

Damages due to Co. & Co. Contractor Error per 1,000 Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	0.62	0.40	0.32	0.30	0.29
Con Edison	0.40	0.16	0.26	0.25	0.12
Corning	0.19	0.24	0.00	0.20	0.00
NFG	0.02	0.02	0.00	0.00	0.06
NGrid LI	0.06	0.10	0.06	0.15	0.09
NGrid NY	0.03	0.03	0.02	0.03	0.04
NGrid Upstate	0.02	0.06	0.04	0.13	0.06
NYSEG	0.02	0.04	0.08	0.05	0.03
O&R	0.32	0.40	0.35	0.24	0.12
RG&E	0.03	0.02	0.11	0.04	0.04
St. Lawrence	0.00	0.00	0.00	0.00	0.00

Appendix B (Continued)

Number of Total Damages

LDCs	2015	2016	2017	2018	2019
Central Hudson	50	49	54	44	45
Con Edison	218	200	225	238	168
Corning	4	7	10	16	10
NFG	210	199	178	173	217
NGrid LI	370	345	326	354	320
NGrid NY	289	292	286	329	302
NGrid Upstate	300	240	221	187	230
NYSEG	109	80	95	89	98
O&R	71	77	58	60	56
RG&E	113	64	97	93	90
St. Lawrence	12	12	12	12	10

Total Damages per 1,000 Tickets

LDCs	2015	2016	2017	2018	2019
Central Hudson	2.37	2.18	2.13	1.48	1.43
Con Edison	2.33	2.17	2.24	2.13	1.33
Corning	0.77	1.66	2.53	3.19	2.10
NFG	2.20	2.04	1.80	1.70	1.95
NGrid LI	2.36	2.09	1.76	2.79	2.32
NGrid NY	1.63	1.53	1.01	2.56	2.16
NGrid Upstate	2.87	2.29	2.15	1.84	2.15
NYSEG	1.97	1.45	1.54	1.42	1.47
O&R	2.55	2.59	1.82	1.78	1.64
RG&E	1.87	1.04	1.21	1.30	1.15
St. Lawrence	2.96	2.94	2.82	2.90	2.20

Appendix C[16]

Central Hudson	2015	2016	2017	2018	2019	LDCs
Number of Tickets	21,136	22,522	25,302	29,795	31,422	841,849
Mismarks	0.47	0.62	0.55	0.44	0.32	0.48
No-Calls	0.66	0.40	0.43	0.20	0.22	0.40
Excavator Error	0.62	0.75	0.83	0.54	0.60	0.88
Co. & Co. Contractor Error	0.62	0.40	0.32	0.30	0.29	0.08
Total	2.37	2.18	2.13	1.48	1.43	1.84

Con Edison	2015	2016	2017	2018	2019	LDCs
Number of Tickets	93,510	92,054	100,397	111,669	126,182	841,849
Mismarks	0.76	0.64	0.69	0.83	0.45	0.48
No-Calls	0.56	0.56	0.60	0.33	0.29	0.40
Excavator Error	0.62	0.80	0.70	0.72	0.48	0.88
Co. & Co. Contractor Error	0.40	0.16	0.26	0.25	0.12	0.08
Total	2.33	2.17	2.24	2.13	1.33	1.84

Corning	2015	2016	2017	2018	2019	LDCs
Number of Tickets	5,193	4,214	3,952	5,010	4,772	841,849
Mismarks	0.00	0.24	0.25	0.40	0.42	0.48
No-Calls	0.00	0.24	1.01	0.80	0.42	0.40
Excavator Error	0.58	0.95	1.27	1.80	1.26	0.88
Co. & Co. Contractor Error	0.19	0.24	0.00	0.20	0.00	0.08
Total	0.77	1.66	2.53	3.19	2.10	1.84

[16] The “Total” performance level may not equal the sum of the four-metrics due to rounding.

Appendix C[16] (Continued)

NFG	2015	2016	2017	2018	2019	LDCs
Number of Tickets	95,284	97,457	98,714	101,503	111,451	841,849
Mismarks	0.23	0.22	0.27	0.23	0.26	0.48
No-Calls	0.56	0.44	0.36	0.37	0.39	0.40
Excavator Error	1.40	1.36	1.16	1.10	1.23	0.88
Co. & Co. Contractor Error	0.02	0.02	0.00	0.00	0.06	0.08
Total	2.20	2.04	1.80	1.70	1.95	1.84

NGrid LI	2015	2016	2017	2018	2019	LDCs
Number of Tickets	156,964	164,892	185,313	126,872	137,703	841,849
Mismarks	0.57	0.52	0.43	0.79	0.69	0.48
No-Calls	0.81	0.69	0.67	0.87	0.74	0.40
Excavator Error	0.92	0.79	0.60	0.98	0.81	0.88
Co. & Co. Contractor Error	0.06	0.10	0.06	0.15	0.09	0.08
Total	2.36	2.09	1.76	2.79	2.32	1.84

NGrid NY	2015	2016	2017	2018	2019	LDCs
Number of Tickets	177,824	191,140	283,474	128,359	139,826	841,849
Mismarks	0.38	0.31	0.24	0.75	0.59	0.48
No-Calls	0.35	0.28	0.17	0.32	0.36	0.40
Excavator Error	0.85	0.90	0.58	1.46	1.17	0.88
Co. & Co. Contractor Error	0.03	0.03	0.02	0.03	0.04	0.08
Total	1.63	1.53	1.01	2.56	2.16	1.84

Appendix C[16] (Continued)

NGrid Upstate	2015	2016	2017	2018	2019	LDCs
Number of Tickets	104,422	104,991	102,770	101,798	107,008	841,849
Mismarks	0.71	0.42	0.35	0.37	0.64	0.48
No-Calls	0.51	0.42	0.31	0.35	0.32	0.40
Excavator Error	1.64	1.39	1.45	0.98	1.14	0.88
Co. & Co. Contractor Error	0.02	0.06	0.04	0.13	0.06	0.08
Total	2.87	2.29	2.15	1.84	2.15	1.84

NYSEG	2015	2016	2017	2018	2019	LDCs
Number of Tickets	55,468	55,180	61,600	62,853	66,504	841,849
Mismarks	0.38	0.22	0.37	0.21	0.32	0.48
No-Calls	0.22	0.34	0.28	0.14	0.32	0.40
Excavator Error	1.35	0.85	0.81	1.02	0.81	0.88
Co. & Co. Contractor Error	0.02	0.04	0.08	0.05	0.03	0.08
Total	1.97	1.45	1.54	1.42	1.47	1.84

O&R	2015	2016	2017	2018	2019	LDCs
Number of Tickets	27,790	29,697	31,820	33,777	34,209	841,849
Mismarks	0.36	0.30	0.28	0.21	0.29	0.48
No-Calls	0.68	0.67	0.50	0.44	0.67	0.40
Excavator Error	1.19	1.21	0.69	0.89	0.56	0.88
Co. & Co. Contractor Error	0.32	0.40	0.35	0.24	0.12	0.08
Total	2.55	2.59	1.82	1.78	1.64	1.84

Appendix C[16] (Continued)

RG&E	2015	2016	2017	2018	2019	LDCs
Number of Tickets	60,274	61,289	80,447	71,598	78,227	841,849
Mismarks	0.38	0.26	0.39	0.27	0.33	0.48
No-Calls	0.30	0.15	0.21	0.25	0.23	0.40
Excavator Error	1.16	0.62	0.50	0.74	0.55	0.88
Co. & Co. Contractor Error	0.03	0.02	0.11	0.04	0.04	0.08
Total	1.87	1.04	1.21	1.30	1.15	1.84

St. Lawrence	2015	2016	2017	2018	2019	LDCs
Number of Tickets	4,055	4,076	4,260	4,137	4,545	841,849
Mismarks	0.00	0.49	0.23	0.24	0.00	0.48
No-Calls	0.00	0.25	0.23	0.00	0.66	0.40
Excavator Error	2.96	2.21	2.35	2.66	1.54	0.88
Co. & Co. Contractor Error	0.00	0.00	0.00	0.00	0.00	0.08
Total	2.96	2.94	2.82	2.90	2.20	1.84

Appendix D

Emergency Response Times for 45 Minutes (%)

LDCs	2015	2016	2017	2018	2019
Central Hudson	98.6	98.5	99.0	98.8	98.9
Con Edison	99.2	99.3	99.4	99.5	99.7
Corning	95.3	97.5	98.1	95.6	96.9
NFG	98.1	98.0	98.7	98.7	98.9
NGrid LI	94.4	95.7	95.6	95.3	96.0
NGrid NY	92.4	93.1	93.8	94.8	95.3
NGrid Upstate	95.3	95.3	95.1	94.3	94.3
NYSEG	93.8	95.1	93.4	92.9	89.1
O&R	99.1	98.9	99.1	99.1	99.3
RG&E	95.4	93.3	90.9	95.5	82.5
St. Lawrence	95.3	92.8	93.7	93.2	91.7

Appendix E

Emergency Response Times for 60 Minutes (%)

LDCs	2015	2016	2017	2018	2019
Central Hudson	99.7	99.7	99.9	99.8	99.9
Con Edison	99.9	99.9	99.9	99.9	99.9
Corning	98.1	99.5	99.2	98.6	98.7
NFG	99.3	99.4	99.7	99.6	99.7
NGrid LI	98.7	99.6	99.5	99.6	99.5
NGrid NY	96.6	97.2	97.7	98.5	98.8
NGrid Upstate	98.6	98.6	98.5	98.2	98.1
NYSEG	97.9	98.8	98.4	97.8	94.6
O&R	99.9	99.9	99.9	99.9	99.9
RG&E	98.9	97.8	95.7	97.7	89.2
St. Lawrence	97.9	98.1	98.5	98.2	95.7

Appendix F

Leak Repairs on Mains by Material

LDCs	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast / Wrought Iron	Copper	Other
Central Hudson	68	0	0	0	10	107	0	0
Con Edison	3,463	137	0	264	99	2,810	0	0
Corning	87	9	1	10	1	0	0	0
NFG	1,150	0	0	63	53	291	0	16
NGrid LI	763	88	37	19	91	243	0	0
NGrid NY	175	0	0	67	39	3,054	0	0
NGrid Upstate	12	39	0	31	12	276	0	0
NYSEG	12	0	0	17	10	2	0	1
O&R	90	0	0	6	32	0	0	0
RG&E	0	0	0	33	3	0	0	69
St. Lawrence	0	0	0	0	0	0	0	0

Appendix G

Leak Repairs on Services by Material

LDCs	Unprot. Bare	Unprot. Coated	Prot. Bare	Prot. Coated	Plastic	Cast / Wrought Iron	Copper	Other
Central Hudson	81	0	0	80	40	47	0	0
Con Edison	1,712	149	0	1,162	398	0	167	0
Corning	91	18	0	4	46	0	0	0
NFG	281	0	0	58	348	0	0	7
NGrid LI	857	126	103	8	431	0	35	0
NGrid NY	232	0	0	205	427	7	383	0
NGrid Upstate	105	150	0	27	133	4	16	0
NYSEG	19	0	0	17	66	0	0	1
O&R	199	0	0	28	140	0	0	0
RG&E	0	0	0	42	6	0	0	90
St. Lawrence	0	0	0	2	0	0	0	0

Appendix H

Backlog of Potentially Hazardous Leaks

LDCs	2015	2016	2017	2018	2019
Central Hudson	3	3	1	6	5
Con Edison	7	1	40	3	5
Corning	3	0	4	4	2
NFG	0	2	0	2	1
NGrid LI	5	1	0	0	0
NGrid NY	21	23	8	10	9
NGrid Upstate	17	21	9	0	4
NYSEG	4	4	0	3	4
O&R	2	2	1	2	2
RG&E	6	1	2	1	0
St. Lawrence	0	0	1	1	0

Appendix I

Repaired Potentially Hazardous Leaks

LDCs	2015	2016	2017	2018	2019
Central Hudson	352	278	324	326	224
Con Edison	10,700	7,857	7,149	7,713	7,406
Corning	194	101	60	98	133
NFG	2,195	1,353	1,020	1,069	843
NGrid LI	2,332	2,100	1,958	2,226	2,085
NGrid NY	4,236	3,876	3,955	4,356	4,095
NGrid Upstate	1,533	990	858	775	586
NYSEG	308	168	196	171	87
O&R	487	287	307	291	239
RG&E	306	224	305	260	110
St. Lawrence	8	3	2	4	0

Appendix J

Discovered Potentially Hazardous Leaks

LDCs	2015	2016	2017	2018	2019
Central Hudson	366	240	283	304	208
Con Edison	5,846	3,666	4,146	4,259	3,814
Corning	163	84	69	95	118
NFG	2,199	1,356	1,023	1,071	826
NGrid LI	2,070	1,886	1,801	1,997	1,947
NGrid NY	4,649	3,340	3,270	3,340	3,400
NGrid Upstate	1,463	1,046	1,068	1,145	836
NYSEG	315	180	198	199	145
O&R	463	281	298	297	250
RG&E	322	378	327	294	285
St. Lawrence	8	3	2	4	0

Appendix K

Backlog of Total Leaks

LDCs	2015	2016	2017	2018	2019
Central Hudson	126	102	111	91	87
Con Edison	523	239	312	250	262
Corning	200	116	73	115	48
NFG	2,066	1,533	1,028	1,073	608
NGrid LI	11,330	10,556	9,232	8,199	7,256
NGrid NY	3,820	3,676	3,118	2,803	2,382
NGrid Upstate	936	961	979	815	803
NYSEG	39	13	8	10	14
O&R	170	26	6	10	7
RG&E	60	11	11	14	23
St. Lawrence	0	0	1	1	0

Appendix L

High Risk Non-Compliances Identified through Audit Process

LDCs	2014	2015	2016	2017	2018	# of OHQs
Central Hudson	22	14	56	36	25[17]	5
Con Edison	70	50	21	17	17	5
Corning	4	36	72	8	36	1
NFG	25	25	31	116	55	9
NGrid LI	32	13	84	2	8	2
NGrid NY	89	55	49	19	16	2
NGrid Upstate	114	130	50	45	44	11
NYSEG	105	83	61[18]	71	74	13
O&R	12	216	11	5	5	2
RG&E	40	42	29	22	45	1
St. Lawrence	15	17	9	9	3	1

[17] One of the 25 violations noted was for 16 NYCRR Part 255.619(a). There was a total of 99 occurrences documented in the respective audit letter.

[18] One of the 61 violations noted was for 16 NYCRR Part 255.557(c)(8). There was a total of 822 occurrences documented in the respective audit letter.

Appendix M

Other Risk Non-Compliances Identified through Audit Process

LDCs	2014	2015	2016	2017	2018	# of OHQs
Central Hudson	49	6	92	9	4	5
Con Edison	47	20	38	3	35	5
Corning	18	24	17	55	37	1
NFG	1	8	50	100	108	9
NGrid LI	44	0	18	0	0	2
NGrid NY	65	100	115	12	63	2
NGrid Upstate	425	218	105	125	21	11
NYSEG	150	67	149	77	83	13
O&R	71	36	89	2	13	2
RG&E	12	80	19	82	69	1
St. Lawrence	20	4	16	7	2	1

Appendix N

Code Section Risk

Part	Section	Subdivision	Description	Risk
255	14	(a)	Conversion to Service Subject to this Part	High
255	14	(b)	Conversion to Service Subject to this Part	Other
255	17	All	Preservation of Records	Other
255	53	All	Materials - General	High
255	65	All	Materials - Transportation of Pipe	High
255	103	All	Pipe Design - General	High
255	143	All	Design of Pipeline Components - General Requirements	High
255	159	All	Design of Pipeline Components - Flexibility	High
255	161	All	Design of Pipeline Components - Supports and Anchors	High
255	163	All	Compressor Stations - Design and Construction	Other
255	165	All	Compressor Stations - Liquid Removal	Other
255	167	All	Compressor Stations - Emergency Shutdown	High
255	169	All	Compressor Stations - Pressure Limiting Devices	High
255	171	All	Compressor Stations - Additional Safety Equipment	Other
255	173	All	Compressor Stations - Ventilation	High
255	179	All	Valves on Pipelines to Operate at 125 PSIG (862 kPa) or More	High
255	181	All	Distribution Line Valves	High
255	183	All	Vaults - Structural Design Requirements	High
255	185	All	Vaults - Accessibility	Other
255	187	All	Vaults - Sealing, Venting, and Ventilation	Other
255	189	All	Vaults - Drainage and Waterproofing	High
255	190	All	Calorimeter or Calorimixer Structures	Other
255	191	All	Design Pressure of Plastic Fittings	Other
255	193	All	Valve Installation in Plastic Pipe	Other
255	195	All	Protection Against Accidental Overpressuring	High
255	197	All	Control of the Pressure of Gas Delivered from High Pressure Distribution Systems	High
255	199	All	Requirements for Design of Pressure Relief and Limiting Devices	High
255	201	All	Required Capacity of Pressure Relieving and Limiting Stations	High
255	203	All	Instrument, Control, and Sampling Piping and Components	Other
255	225	All	Qualification of Welding Procedures	High
255	227	All	Qualification of Welders	High
255	229	All	Limitations On Welders	Other
255	230	All	Quality Assurance Program	Other
255	231	All	Welding - Protection from Weather	High
255	233	All	Welding - Miter Joints	High
255	235	All	Preparation for Welding	High
255	237	All	Welding - Preheating	Other
255	239	All	Welding - Stress Relieving	Other
255	241	(a),(b)	Inspection and Test of Welds	High
255	241	(c)	Inspection and Test of Welds	Other
255	243	(a),(b),(c),(d),(e)	Nondestructive Testing - Pipeline to Operate at 125 PSIG (862 kPa) or More	High

Part	Section	Subdivision	Description	Risk
255	243	(f)	Nondestructive Testing - Pipeline to Operate at 125 PSIG (kPa) or More	Other
255	244	All	Welding Inspector	High
255	245	All	Welding - Repair or Removal of Defects	High
255	273	All	Joining of Materials other than by Welding - General	High
255	279	All	Joining of Materials other than by Welding - Copper Pipe	High
255	281	All	Joining of Materials other than by Welding - Plastic Pipe	High
255	283	All	Plastic Pipe - Qualifying Joining Procedures	Other
255	285	(a),(b),(d)	Plastic Pipe - Qualifying Persons to make Joints	High
255	285	(c)(e)	Plastic Pipe - Qualifying Persons to make Joints	Other
255	287	All	Plastic Pipe - Inspection of Joints	Other
255	302	All	Notification Requirements	High
255	303	All	Compliance with Construction Standards	High
255	305	All	Inspection - General	High
255	307	All	Inspection of Materials	High
255	309	All	Repair of Steel Pipe	High
255	311	All	Repair of Plastic Pipe	High
255	313	(a),(b),(c)	Bends and Elbows	High
255	313	(d)	Bends and Elbows	Other
255	315	All	Wrinkle Bends in Steel Pipe	High
255	317	All	Protection from Hazards	Other
255	319	All	Installation of Pipe in a Ditch	Other
255	321	All	Installation of Plastic Pipe	High
255	323	All	Casing	Other
255	325	All	Underground Clearance	High
255	327	All	Cover	Other
255	353	All	Customer Meters and Regulators - Location	Other
255	355	All	Customer Meters and Regulators – Protection from Damage	Other
255	357	(a),(b),(c)	Customer Meters and Service Regulators - Installation	Other
255	357	(d)	Customer Meters and Service Regulators - Installation	High
255	359	All	Customer Meter Installations - Operating Pressure	Other
255	361	(a),(b),(c),(d)	Service Lines - Installation	Other
255	361	(e),(f),(g),(h),(i)	Service Lines - Installation	High
255	363	All	Service Lines - Valve Requirements	Other
255	365	(a),(c)	Service Lines - Location of Valves	Other
255	365	(b)	Service Lines - Location of Valves	High
255	367	All	Service Lines - General Requirements for Connections	Other
255	369	All	Service Lines - Connections to Cast Iron or Ductile Iron Mains	Other
255	371	All	Service Lines - Steel	Other
255	373	All	Service Lines - Cast Iron and Ductile Iron	Other
255	375	All	Service Lines - Plastic	Other
255	377	All	Service Lines - Copper	Other
255	379	All	New Service Lines not in Use	Other
255	381	All	Service Lines - Excess Flow Valve Performance Standards	Other
255	455	(a)	External Corrosion Control - Buried or Submerged Pipelines Installed after July 31, 1971	Other
255	455	(d),(e)	External Corrosion Control - Buried or Submerged Pipelines Installed after July 31, 1971	High

Part	Section	Subdivision	Description	Risk
255	457	All	External Corrosion Control - Buried or Submerged Pipelines Installed before July 31, 1971	High
255	459	All	External Corrosion Control - Examination of Buried Pipeline when Exposed	Other
255	461	(a),(b),(d),(e),(f),(g)	External Corrosion Control - Protective Coating	Other
255	461	(c)	External Corrosion Control - Protective Coating	High
255	463	All	External Corrosion Control - Cathodic Protection	High
255	465	(a),(e)	External Corrosion Control - Monitoring	High
255	465	(b),(c),(d),(f)	External Corrosion Control - Monitoring	Other
255	467	All	External Corrosion Control - Electrical Isolation	Other
255	469	All	External Corrosion Control - Test Stations	Other
255	471	All	External Corrosion Control - Test Leads	Other
255	473	All	External Corrosion Control - Interference Currents	Other
255	475	All	Internal Corrosion Control - General	Other
255	476	(a),(c)	Internal Corrosion Control - Design and Construction of Transmission Line	High
255	476	(d)	Internal Corrosion Control - Design and Construction of Transmission Line	Other
255	479	All	Atmospheric Corrosion Control - General	Other
255	481	All	Atmospheric Corrosion Control - Monitoring	Other
255	483	All	Remedial Measures - General	High
255	485	(a),(b)	Remedial Measures - Transmission Lines	High
255	485	(c)	Remedial Measures - Transmission Lines	Other
255	487	All	Remedial Measures - Distribution Lines other than Cast Iron or Ductile Iron Lines	Other
255	489	All	Remedial Measures - Cast Iron and Ductile Iron Pipelines	Other
255	490	All	Direct Assessment	Other
255	491	All	Corrosion Control Records	Other
255	503	All	Test Requirements - General	Other
255	505	(a),(b),(c),(d)	Strength Test Requirements for Steel Pipelines to Operate at 125 PSIG (862 kPa) or More	High
255	505	(e),(h),(i)	Strength Test Requirements for Steel Pipelines to Operate at 125 PSIG (862 kPa) or More	Other
255	507	All	Test Requirements for Pipelines to Operate at less than 125 PSIG (862 kPa)	Other
255	511	All	Test Requirements for Service Lines	Other
255	515	All	Environmental Protection and Safety Requirements	Other
255	517	All	Test Requirements - Records	Other
255	552	All	Upgrading / Conversion - Notification Requirements	Other
255	553	(a),(b),(c),(f)	Upgrading / Conversion - General Requirements	High
255	553	(d),(e)	Upgrading / Conversion - General Requirements	Other
255	555	All	Upgrading to a Pressure of 125 PSIG (862 kPa) or More in Steel Pipelines	High
255	557	All	Upgrading to a Pressure Less than 125 PSIG (862 kPa)	High
255	603	All	Operations - General Provisions	High
255	604	All	Operator Qualification	High
255	605	All	Essentials of Operating and Maintenance Plan	High
255	609	All	Change in Class Location - Required Study	High
255	611	(a),(d)	Change in Class Location - Confirmation or Revision of Maximum Allowable Operating Pressure	Other
255	613	All	Continuing Surveillance	Other
255	614	All	Damage Prevention Program	High

Part	Section	Subdivision	Description	Risk
255	615	All	Emergency Plans	High
255	616	All	Customer Education and Information Program	High
255	619	All	Maximum Allowable Operating Pressure - Steel or Plastic Pipelines	High
255	621	All	Maximum Allowable Operating Pressure - High Pressure Distribution Systems	High
255	623	All	Maximum and Minimum Allowable Operating Pressure - Low Pressure Distribution Systems	High
255	625	(a),(b)	Odorization of Gas	High
255	625	(e),(f)	Odorization of Gas	Other
255	627	All	Tapping Pipelines Under Pressure	High
255	629	All	Purging of Pipelines	High
255	631	All	Control Room Management	High
255	705	All	Transmission Lines - Patrolling	High
255	706	All	Transmission Lines - Leakage Surveys	High
255	707	(a),(c),(d),(e)	Line Markers for Mains and Transmission Lines	Other
255	709	All	Transmission Lines - Record Keeping	Other
255	711	All	Transmission Lines - General Requirements for Repair Procedures	High
255	713	All	Transmission Lines - Permanent Field Repair of Imperfections and Damages	High
255	715	All	Transmission Lines - Permanent Field Repair of Welds	High
255	717	All	Transmission Lines – Permanent Field Repairs of Leaks	High
255	719	All	Transmission Lines - Testing of Repairs	High
255	721	(b)	Distribution Systems - Patrolling	Other
255	723	All	Distribution Systems -Leakage Surveys and Procedures	High
255	725	All	Test Requirements for Reinstating Service Lines	Other
255	726	All	Inactive Service Lines	Other
255	727	(b),(c),(d),(e),(f),(g)	Abandonment or Inactivation of Facilities	Other
255	729	All	Compressor Stations – Procedures for Gas Compressor Units	High
255	731	All	Compressor Stations – Inspection and Testing of Relief Devices	High
255	732	All	Compressor Stations - Additional Inspections	High
255	735	All	Compressor Stations – Storage of Combustible Materials	Other
255	736	All	Compressor Stations - Gas Detection	High
255	739	(a),(b)	Pressure Limiting and Regulating Stations - Inspection and Testing	High
255	739	(c),(d),(e),(f)	Pressure Limiting and Regulating Stations - Inspection and Testing	Other
255	741	All	Pressure Limiting and Regulating Stations - Telemetering or Recording Gauges	Other
255	743	(a),(b)	Pressure and Limiting and Regulating Stations - Testing of Relief Devices	High
255	743	(c)	Regulator Station MAOP	Other
255	744	(c),(d),(e)	Service Regulators and Vents - Inspection	Other
255	745	All	Transmission Line Valves	High
255	747	All	Valve Maintenance - Distribution Systems	Other
255	748	All	Valve Maintenance - Service Line Valves	Other
255	749	All	Vault Maintenance	Other
255	751	All	Prevention of Accidental Ignition	High
255	753	All	Caulked Bell and Spigot Joints	Other
255	755	All	Protecting Cast Iron Pipelines	High

Part	Section	Subdivision	Description	Risk
255	756	All	Replacement of Exposed or Undermined Cast Iron Piping	High
255	757	All	Replacement of Cast Iron Mains Paralleling Excavations	High
255	801	All	Reports of accidents	Other
255	803	All	Emergency Lists of Operator Personnel	Other
255	805	(a),(b),(e),(g),(h)	Leaks - General	Other
255	807	(a),(b),(c)	Leaks - Records	Other
255	807	(d)	Leaks - Records	High
255	809	All	Leaks - Instrument Sensitivity Verification	High
255	811	(b),(c),(d),(e)	Leaks - Type 1 Classification	High
255	813	(b),(c),(d)	Leaks - Type 2A Classification	High
255	815	(b),(c),(d)	Leaks - Type 2 Classification	High
255	817	All	Leaks - Type 3 Classification	Other
255	819	(a)	Leaks - Follow-Up Inspection	High
255	821	All	Leaks - Nonreportable Reading	High
255	823	(a),(b)	Interruptions of Service	Other
255	825	All	Logging and Analysis of Gas Emergency Reports	Other
255	829	All	Annual Report	Other
255	831	All	Reporting Safety-Related Conditions	Other
255	905	All	High Consequence Areas	High
255	907	All	General (IMP)	Other
255	909	All	Changes to an Integrity Management Program (IMP)	Other
255	911	All	Required Elements (IMP)	High
255	915	All	Knowledge and Training (IMP)	High
255	917	All	Identification of Potential Threats to Pipeline Integrity and Use of the Threat Identification in an Integrity Program (IMP)	High
255	919	All	Baseline Assessment Plan (IMP)	High
255	921	All	Conducting a Baseline Assessment (IMP)	High
255	923	All	Direct Assessment (IMP)	High
255	925	All	External Corrosion Direct Assessment (ECDA)(IMP)	High
255	927	All	Internal Corrosion Direct Assessment (ICDA)(IMP)	High
255	931	All	Confirmatory Direct Assessment (CDA)(IMP)	High
255	933	All	Addressing Integrity Issues (IMP)	High
255	935	All	Preventive and Mitigative Measures to Protect the High Consequence Areas (IMP)	High
255	937	All	Continual Process of Evaluation and Assessment (IMP)	High
255	939	All	Reassessment Intervals (IMP)	High
255	941	All	Low Stress Reassessment (IMP)	Other
255	945	All	Measuring Program Effectiveness (IMP)	Other
255	947	All	Records (IMP)	Other
255	1003	All	General Requirements of a GDPIM Plan	High
255	1005	All	Implementation Requirements of a GDPIM Plan	High
255	1007	All	Required Elements of a GDPIM Plan	High
255	1009	All	Required Report when Compression Couplings Fail	High
255	1011	All	Records an Operator Must Keep (GDPIM)	Other
255	1015	All	GDPIM Plan Requirements for a Master Meter or a Small Liquefied Petroleum Gas (LPG) Operator	High
261	15	All	Operation and Maintenance Plan	High
261	17	(a),(c)	Leakage Survey	High
261	19	All	High Pressure Piping	Other
261	21	All	Carbon Monoxide Prevention	High

Part	Section	Subdivision	Description	Risk
261	51	All	Warning Tag Procedures	High
261	53	All	HEFPA Liaison	High
261	55	All	Warning Tag Inspection	High
261	57	All	Warning Tag - Class A condition	High
261	59	All	Warning Tag - Class B condition	High
261	61	All	Warning Tag - Class C Condition	Other
261	63	All	Warning Tag - Action and Follow-Up	Other
261	65	All	Warning Tag Records	Other
193	2011	All	Reporting	Other
193	2017	All	Plans and Procedures	High
193	2019	All	Mobile and Temporary LNG Facilities	High
193	2057	All	Thermal Radiation Protection	High
193	2059	All	Flammable Vapor-Gas Dispersion Protection	High
193	2067	All	Wind Forces	High
193	2101	All	Design - Scope	High
193	2119	All	Design - Records	High
193	2155	All	Structural Requirements	High
193	2161	All	Design - Dikes	High
193	2167	All	Covered Systems	High
193	2173	All	Water Removal	High
193	2181	All	Impoundment Design and Capacity	High
193	2187	All	Nonmetallic Membrane Liner	High
193	2301	All	Construction - Scope	High
193	2303	All	Construction Acceptance	High
193	2304	All	Corrosion Control Overview	High
193	2321	All	Nondestructive Tests	High
193	2401	All	Equipment - Scope	High
193	2441	All	Equipment - Control Center	High
193	2445	All	Sources of Power	High
193	2501	All	Operations - Scope	High
193	2503	All	Operating Procedures	High
193	2505	All	Operations - Cooldown	High
193	2507	All	Monitoring Operations	High
193	2509	All	Emergency Procedures	High
193	2511	All	Personnel Safety	High
193	2513	All	Transfer Procedures	High
193	2515	All	Investigations of Failures	High
193	2517	All	Purging	High
193	2519	All	Communication Systems	High
193	2521	All	Operating Records	Other
193	2603	All	Maintenance - General	High
193	2605	All	Maintenance Procedures	High
193	2607	All	Foreign Material	Other
193	2609	All	Support Systems	High
193	2611	All	Fire Protection	High
193	2613	All	Auxiliary Power Sources	High
193	2615	All	Isolating and Purging	High
193	2617	All	Maintenance - Repairs	High
193	2619	All	Control Systems	High
193	2621	All	Testing Transfer Hoses	High
193	2623	All	Inspecting LNG Storage Tanks	High
193	2625	All	Corrosion Protection	High

Part	Section	Subdivision	Description	Risk
193	2627	All	Atmospheric Corrosion Control	Other
193	2629	All	External Corrosion Control – Buried or Submerged Components	Other
193	2631	All	Internal Corrosion Control	Other
193	2633	All	Interference Currents	Other
193	2635	All	Monitoring Corrosion Control	High
193	2637	All	Remedial Measures	High
193	2639	All	Maintenance Records	Other
193	2703	All	Design and Fabrication	Other
193	2705	All	Construction, Installation, Inspection, and Testing	High
193	2707	All	Operations and Maintenance	High
193	2709	All	Security	High
193	2711	All	Personnel Health	Other
193	2713	All	Training - Operations and Maintenance	High
193	2715	All	Training - Security	High
193	2717	All	Training - Fire Protection	High
193	2719	All	Training - Records	Other
193	2801	All	Fire Protection	High
193	2903	All	Security Procedures	High
193	2905	All	Protective Enclosures	High
193	2907	All	Protective Enclosure Construction	High
193	2909	All	Security Communications	High
193	2911	All	Security Lighting	High
193	2913	All	Security Monitoring	High
193	2915	All	Alternative Power Sources	High
193	2917	All	Warning Signs	Other