

**BEFORE  
THE PUBLIC UTILITIES COMMISSION OF OHIO**

In the Matter of the Application of The East )	
Ohio Gas Company d/b/a Dominion Energy )	Case No. 15-1712-GA-AAM
Ohio for Approval to Change Accounting )	
Methods	

**ANNUAL REPORT OF  
THE EAST OHIO GAS COMPANY D/B/A DOMINION ENERGY OHIO**

The East Ohio Gas Company d/b/a Dominion Energy Ohio (DEO or the Company), pursuant to the Commission’s November 3, 2016 Opinion and Order adopting the Pipeline Safety Management Program (PSMP), respectfully submits its annual report detailing DEO’s PSMP-related expenses deferred in calendar year 2017 and a description of activity in 2017 on PSMP initiatives. In support of its annual report, DEO states as follows:

1. DEO is an Ohio corporation engaged in the business of providing natural gas service to customers in Ohio and, as such, is a “natural gas company” and “public utility” as defined by R.C. 4905.03(E) and 4905.02(A), respectively.
2. On November 3, 2016, in accordance with R.C. 4905.13, the Commission approved DEO’s application to establish a regulatory asset to defer up to \$15 million annually through the PSMP to reduce key risks, continue to ensure the safe and reliable operation of its system, and ensure compliance with pipeline safety laws. The Commission required DEO to file an annual report for its PSMP by June 1 each year, beginning in 2017 for calendar year 2016 expenditures, detailing the deferred expenses, baseline performance levels for each safety initiative, safety performance improvements compared to the baselines, results of ongoing and future investigations, any mid-term adjustments, and efforts towards identifying efficiencies and implementing cost-savings measures. The Commission further required DEO’s annual report to include an audit report prepared by DEO’s external auditor summarizing its findings

with respect to the accuracy of DEO's accounting for PSMP-related expenditures.

3. The Commission also established that, with the filing of the annual report, Staff should conduct an annual review of reported program expenditures and file a Staff Report no later than 90 days subsequent to the annual report. Once the Staff Report is filed, DEO is granted 30 days to accept Staff's recommendations or to object thereto.

4. In support of this annual report, DEO includes the following appendices:

- **Attachment A:** Schedule of Deferred Costs for the Twelve Months Ended December 31, 2017
- **Attachment B:** Report Prepared by DEO's Independent Auditor
- **Attachment C:** Programmatic Review of PSMP Initiatives for 2017

5. The programmatic review contains various metrics, statistics, and other measures to assist in gauging and improving the effectiveness of these programs. (*See* Application ¶¶ 9–10 (Oct. 1, 2015).) The PSMP metrics, statistics, and other measures are in various states of development, but are expected to be more fully established as implementation of the PSMP progresses. Efforts to identify appropriate baselines continue as the PSMP initiatives are developed and implemented. In accordance with the stipulation and application, the measures are subject to change based on further internal review and discussions with Staff. As the Company gains additional experience implementing and analyzing the programs, including newly available data, it may be determined that new or refined metrics provide better measures of program effectiveness.

6. The approval of PSMP application in late 2016 delayed the implementation of a number of initiatives. As a result, many initiatives remain in early stages of development, and opportunities to identify savings and efficiencies have accordingly not yet emerged. DEO will be identifying savings and efficiency opportunities as the initiatives are fully implemented.

7. DEO's PSMP application observed that the PSMP is "intrinsically forward looking and thus subject to further development," including the development of new initiatives in response to changing conditions or regulations. (Appl. ¶ 9.) The programmatic review includes continued discussion of two initiatives that were not included in DEO's original application but were first included in DEO's annual report regarding 2016 activities: the Underground Storage Integrity Program, in response to the PHMSA rulemaking docket in 2016-0016, and Gathering Rights of Way Maintenance, in response to the PHMSA rulemaking docket no. 2010-0026 (also known as the "Miscellaneous Rule"). Only incremental expenses under these initiatives are being deferred, and their deferral will not cause DEO to exceed the \$15 million annual cap on deferrals approved by the Commission. Further details regarding these initiatives are provided in Attachment C.

8. Additionally, in accordance with Staff's August 30, 2017 recommendation in this proceeding, DEO has worked with its auditor to ensure that the auditor's report contains detail substantially similar to the report produced by Columbia Gas of Ohio, Inc. DEO would note that given differences between its program and Columbia's, the reports may not be identical. DEO believes that Staff's recommendation has been satisfied, but DEO is willing to work with Staff to ensure all appropriate information is reasonably presented.

WHEREFORE, DEO respectfully submits this annual report for Commission Staff's review, and requests a recommendation that all 2017 PSMP-related expenses be deferred.

Dated: June 1, 2018

Respectfully submitted,

/s/ Andrew J. Campbell

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ATTORNEYS FOR THE EAST OHIO GAS  
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**CERTIFICATE OF SERVICE**

I hereby certify that a copy of this Annual Report was served by electronic mail this 1st day of June 2018 to the following:

Thomas Lindgren  
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/s/ Andrew J. Campbell  
One of the Attorneys for The East Ohio Gas  
Company d/b/a Dominion Energy Ohio

## **Attachment A**

**THE EAST OHIO GAS COMPANY d/b/a DOMINION ENERGY OHIO**  
**PIPELINE SAFETY MANAGEMENT PROGRAM (PSMP)**  
**DEFERRED COSTS FOR THE TWELVE MONTHS ENDED DECEMBER 31, 2017**  
**CASE NO. 15-1712-GA-AAM**

[illegible]

## **Attachment B**





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## **INDEPENDENT ACCOUNTANTS' REPORT ON APPLYING AGREED-UPON PROCEDURES**

To the Board of Directors  
The East Ohio Gas Company  
Cleveland, Ohio

RE: Public Utility Commission of Ohio Case No. 15-1712-GA-AAM

We have performed the procedures enumerated below which were agreed to by The East Ohio Gas Company d/b/a Dominion Energy Ohio (a wholly-owned subsidiary of Dominion Energy, Inc.) (the "Company") and the Public Utility Commission of Ohio (the "PUCO") (collectively, "the specified parties"), solely to assist the PUCO with respect to its evaluation of the Company's compliance with PUCO Case No. 15-1712-GA-AAM in conjunction with the balance of accumulated cost deferrals for the Pipeline Safety Management Program ("PSMP") for the period January 1, 2017 through December 31, 2017. The Company's management is responsible for the Company's compliance with these requirements. This agreed-upon procedures engagement was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. The sufficiency of these procedures is solely the responsibility of those parties specified in this report. Consequently, we make no representation regarding the sufficiency of the procedures described below either for the purpose for which this report has been requested or for any other purpose.

The procedures that were performed and our findings are as follows:

1. We obtained from Company management the detail of the PSMP cost deferrals by month for the period from January 1, 2017 to December 31, 2017 and agreed the total deferrals to the Company's summary schedule to be filed with the PUCO as part of the annual report, and performed the following procedures:
  - a. Removed prior year PSMP activity from current year totals (account 1242153 in the Company's general ledger). Agreed the remaining activity to the change in the 2017 PSMP cost deferrals using the detail obtained in Step 1 above and by adding the difference between the December estimate and actual cost deferrals.
  - b. Agreed the beginning balance of account 1242153, the sum of the 2017 activity from the detail of the PSMP cost deferrals by month, and the difference between the December estimate and actual deferrals to the ending balance of account 1242153.
  - c. We haphazardly selected 3 months included in the detail obtained in Step 1 above. For each month selected, we haphazardly selected 5 individual cost line items from the detail (15 total selections) and agreed the cost included in the detail to supporting documentation for each selection.

- i. Selected 8 labor charges and recalculated the total charges selected by multiplying the total hours charged by the employee to a PSMP-related WBS code by the employee's activity rate without exception. We agreed the total hours charged to the WBS and the employee's activity rate to the Company's payroll system, and found them to be in agreement. We inspected the Company's records and determined that the selected employees were assigned to a PSMP-eligible position.
  - ii. Selected 3 supplier charges and agreed the selections to a third party invoice by multiplying the unit price by quantity shipped, and found them to be in agreement.
  - iii. Selected 3 contractor service charges and agreed the selections to a third party invoice by multiplying the hours charged by the service rate, and found them to be in agreement.
  - iv. Selected 1 third party charge and agreed the charge selected to a third party invoice, and found them to be in agreement.
2. We obtained from Company management the monthly detail of the carrying charges included in the PSMP cost deferrals for the period from January 1, 2017 to December 31, 2017 and performed the following procedures:
  - a. We agreed the monthly detail of the carrying charges to the total carrying charges included in the detail obtained in Step 1 above, and found them to be in agreement.
  - b. We haphazardly selected 3 months, and recalculated the monthly carrying charges for the selected months without exception by multiplying the Company's average of the monthly beginning and ending balance by the Commission approved three percent per annum rate without compounding.

We were not engaged to, and did not, conduct an examination, the objective of which would be the expression of an opinion on the Company's compliance with PUCO Case No. 15-1712-GA-AAM in conjunction with the balance of accumulated cost deferrals for the PSMP for the period January 1, 2017 through December 31, 2017. Accordingly, we do not express such an opinion. Had we performed additional procedures, other matters might have come to our attention that would have been reported to you.

This report is intended solely for the information and use of the specified parties listed above and is not intended to be and should not be used by anyone other than these specified parties.

*Deloitte & Touche LLP*

May 29, 2018

## **Attachment C**

**Dominion Energy Ohio**  
**2018 Pipeline Safety Management Program (PSMP)**  
**Annual Report**

**Table of Contents**

<b>Damage Prevention Initiatives.....</b>	<b>2</b>
Unconventional Locate Expert Program.....	2
Enhanced Excavation Monitoring Program .....	3
Damage Investigation Program.....	4
Enhanced Leak Survey Program.....	4
Enhanced Excavator Communication & Training Program.....	5
Cross Bore Verification Program .....	7
<b>Advanced Workforce Training Initiative .....</b>	<b>8</b>
<b>Asset Data Collection Initiative .....</b>	<b>11</b>
Asset Data Strategy .....	11
MAOP Validation .....	12
<b>Quality Assurance Program .....</b>	<b>13</b>
<b>Underground Storage Integrity Program .....</b>	<b>14</b>
<b>Gathering Rights of Way Maintenance Initiative .....</b>	<b>15</b>

## **Introduction**

Dominion Energy Ohio (DEO) continued to make significant strides in enhancing its Pipeline Safety Management Programs (PSMP) during 2017. DEO implemented several key actions, which are discussed more fully below, to meet or exceed the PUCO and Company's own expectations.

## **DAMAGE PREVENTION INITIATIVES**

### **Unconventional Locate Expert Program**

In 2017, DEO continued to engage with United States Infrastructure Corporation, LLC (USIC) for unconventional locating services in order to implement the Unconventional Locate Program. Also in 2017, DEO worked with the USIC to develop metrics and baselines to track improvements in the accuracy of locating service lines and reductions in excavation damages resulting from this program. After piloting the program for much of the year, DEO implemented and launched the Unconventional Locate Program in September 2017.

In 2018, DEO will continue working with USIC on areas where the process can be improved and additional metrics captured. DEO would observe that in many cases, the inability to locate service lines reflects the presence of hard cover (e.g., asphalt or concrete). To address this obstacle, DEO is in the process of experimenting with new technology that could potentially be utilized to improve the success rate of the program.

**Metrics:** 2017 will be considered the baseline year, with the exception of "damages per one thousand tickets," for which 2016 will be the baseline.

- Damages per one thousand tickets
  - Baseline: 3.28<sup>1</sup>
  - 2017: 2.99
- Total number of tickets sent to unconventional crews: 707 tickets
- Service lines addressed through unconventional locate program
  - Service lines assessed: 503 services
  - Service lines successfully located: 405 services
  - Percentage of successfully located services: 80.5%
  - Total number of damages on unconventionally located service lines: 0 damages
- Completion of Service Line Data (SLD) sheets for service line unconventionally located
  - Total number of opportunities to complete a SLD: 319

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<sup>1</sup> In the Annual Report for 2016 PSMP Expenses, the number reported for "damages per one thousand tickets" was reported as 3.22 damages per thousand tickets. Here and throughout the report, this figure has been updated to 3.28 to reflect the final updating of 2016 data.

- DEO does not require USIC to fill out a SLD when the work is to replace the service line because a new SLD will be created when the service is installed.
- Total number of Service Line Data (SLD) sheets completed: 255 SLDs
- SLD completion rate: 79.9%
  - If the service line is not to be replaced, the expectation is to complete a SLD every time the unconventional crew locates a service. However, there are circumstances that prevent USIC from completing a SLD including:
    - pipe could not be verified visually,
    - service line is very long and only a small portion was in scope of the excavation, or
    - an irregular service where only a portion could be located.

### **Enhanced Excavation Monitoring Program**

In June 2017, DEO launched the Ticket Risk Assessment (TRA) program. The TRA program analyzes all tickets that are called in through Ohio's One Call System and assigns it a risk score 1-6 (six being the highest) based on a predetermined risk algorithm. The risk algorithm utilizes a number of probability factors including: excavator's damage history, location, type of excavation, excavation method, etc. Tickets that score a risk probability of 5.0 or higher are routed to a TRA technician and are prioritized for excavation monitoring based on geography.

In 2018, DEO will continue with the TRA program. Currently, there are eight full-time TRA technicians from USIC dedicated to the program with the goal to add four more in 2018. These technicians will be sourced from the experienced staff at USIC in the operating areas that currently do not have coverage.

**Metrics:** 2017 will be considered the baseline year, with the exception of "damages per one thousand tickets," for which 2016 will be the baseline.

- Damages per one thousand tickets
  - Baseline: 3.28
  - 2017: 2.99
- Tickets assessed through the risk algorithm
  - Total tickets: 165,607 tickets
  - Percentage of tickets with a risk probability score  $\geq 5.0$ : 10.75%
    - Total number of tickets with a risk probability score  $\geq 5.0$ : 17,804 tickets
- Tickets monitored by TRA technician
  - Total tickets: 5,892 tickets
  - Percentage of tickets with a risk score  $\geq 5.0$  monitored by TRA technician: 29.71%
- Damages on tickets with a risk score  $\geq 5.0$ 
  - Total damages on tickets with a risk score  $\geq 5.0$ : 171 damages

- Number of damages with TRA technician on site: 51 damages
- Damage ratio on tickets with a risk score  $\geq 5.0$ : 9.60 damages per one thousand tickets
  - Without utilizing a TRA technician: 10.07 damages per one thousand tickets
  - With utilization of a TRA technician: 8.66 damages per one thousand tickets

### **Damage Investigation Program**

In 2017, DEO hired a supervisor to oversee the Damage Investigation Program and developed job descriptions for the positions that will be responsible for conducting damage investigations. This team of experts will work with Operations, USIC and excavators to conduct root-cause analysis of damages. The initial team will be aligned to enhance coverage of high-volume tickets areas. In turn, the data from the investigations will be analyzed for trends and shared across the organization to identify opportunities for continuous improvement that will reduce damages.

**Metrics:** 2018 will be considered the baseline year, with the exception of “damages per one thousand tickets,” for which 2016 will be the baseline.

- Damages per one thousand tickets
  - Baseline: 3.28
  - 2017: 2.99
- Number of investigations both completed and closed within a thirty-day period.
- Determination of root cause of damage based on investigations.
- Others as determined by baseline assessments of initial metrics.

### **Enhanced Leak Survey Program**

In 2017, DEO identified all of the High Pressure (HP) Distribution pipelines that were not leak surveyed on an annual basis and performed an accelerated leak survey.

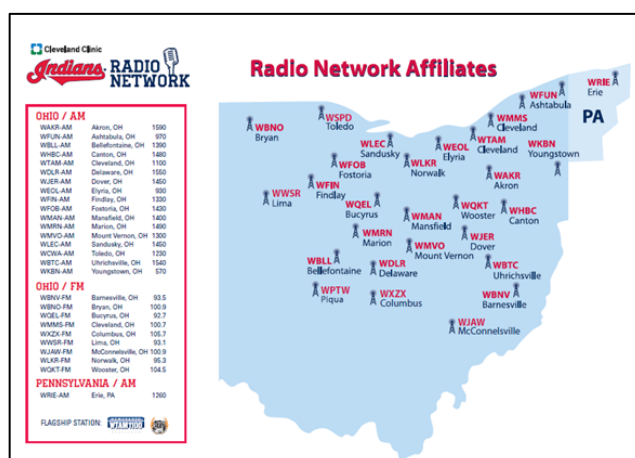
**Metrics:** 2017 will be considered the baseline year.

- Total miles of HP distribution pipeline that are not on an annual leak survey schedule: 383.5 miles
  - Total miles of HP distribution pipelines that received an accelerated leak survey: 383.5 miles
- Total number of leak indications reported
  - Grade 1 leaks: 0 leaks
  - Grade 2 leaks: 199 leak indications
    - Grade 2 leaks repaired and confirmed on HP: 39 leaks

## Enhanced Excavator Communications and Training Program

DEO launched several programs to enhance public and excavator communication and awareness; the following initiatives were deployed in 2017:

- Cleveland Indians – 8-1-1 “Call Before You Dig” campaign
  - Radio: 162 spots
    - Cleveland Indians Radio Network Quick Facts:
      - 1.8 AQH (Average Quarter-Hour) rating
      - 34,700 AQH listeners
      - 125,000 A18+ (age 18 or older) average nightly listeners
      - 271,300 A18+ tuned into the home opener on April 11<sup>th</sup>
    - Aired on WTAM 1100 and WMMS 100.7 simulcast and across the entire Indians radio network (18 AM stations and 9 FM stations)



- Digital: 89 half-inning spots
  - Upper LED signage at Progressive Field
  - Full season, every home game
- Outfield Wall Signage
  - Entire 2017 season
  - 1,874 exposures
  - QI Media Value - \$434,935
- National Excavator Initiative (NEI) – DEO joined this organization, the goal of which is to present a united damage prevention campaign targeting excavators that provides meaningful information regarding underground damage prevention, underground facility awareness and safety messages designed to drive continued awareness.
  - NEI 2017 successes:



- Development of the *Safe Excavator* app available in format for both iPhone and Android systems.
  - Nationally known personality Mike Rowe of the Discovery Channel series *Dirty Jobs* has been contracted as national spokesperson for NEI.
- Public Opinion Strategies (POS) Research – DEO engaged POS to perform qualitative and quantitative research on the impact of current public awareness and excavator communication program efforts regarding damage prevention.
  - Objectives of Research included:
    - Awareness/perceptions about natural gas safety and “Call Before You Dig”.
    - Likelihood of calling 811 before digging on property.
    - What barriers exist that may dissuade people from calling 811 before digging.
    - Attitudes towards the 2016 law involving fines.
    - Messages to encourage greater compliance with 811.
  - Methods Used
    - Focus groups with DEO customers, non-customers, professional excavators and emergency responders.
    - In-depth telephone interviews with public officials.
    - Telephone surveys with adults living in DEO’s service territory and pipeline counties.
  - Research Results
    - Public Opinion Strategies completed their extensive research and polling project that was conducted from November to December 2017 with the following key findings:
      - Awareness levels about “Call Before You Dig” is high, however most respondents do not recall the actual phone number (811).
      - Participants, especially professional excavators, report high compliance levels, though many admitted performing excavation activities such as gardening, tree planting and putting in mailboxes without calling before they dig.
      - Most participants were not aware of fines associated with repeat offenses for damages to underground facilities where no call was made to One Call Center.
- Paradigm Collaborative Program – DEO is participating in the Paradigm Collaborative Program, which assists pipeline operators to increase public awareness of pipeline safety through consistent messaging specifically targeted to individual stakeholder groups.
  - Stakeholder groups include: Affected Public, Emergency Officials, Excavators, Public Officials and Schools.
  - Each communication includes a stakeholder-specific brochure, an operator profile and a business reply survey to measure understandability of the message, outreach and behavior.

**Metrics:** 2017 will be considered the baseline year, with the exception of “damages per one thousand tickets,” for which 2016 will be the baseline.

- Damages per one thousand tickets
  - Baseline: 3.28
  - 2017: 2.99
- Annual Paradigm Collaborative Program Survey Results

	Paradigm Collaborative Program Survey - 2017				
	Affected Public	Emergency Officials	Excavators	Public Officials	School
Within the past 2 years, do you recall receiving information from a pipeline company?	27%	81%	71%	68%	36%
Do you know how to recognize a pipeline right-of-way?	71%	89%	83%	85%	72%
Do you know how to recognize a pipeline leak?	65%	90%	82%	81%	68%
Have you ever heard of 811?	50%		84%	87%	76%
If you were planning on digging, which of the following actions would you be likely to take? (Call 811)	72%		87%	93%	88%
What will you do if you see suspicious activity on or near a pipeline right-of-way? (Call 911, Pipeline Company)	90%		71%	81%	88%
What would you do in the event of a pipeline emergency? (Call 911, Pipeline Company)	96%		89%		92%

### **Cross-Bore Verification Program**

In 2017, the program focused on legacy projects from the onset of the PIR (Pipeline Infrastructure Replacement) program in 2008 through 2011 (in 2012 DEO implemented a procedure to verify that mainlines do not intersect sewer lines). The audit consisted of videoing the sewer mains and laterals, in order to verify that DEO had not cross-bored any of these sewer mains or laterals. The results of the 2017 audits returned zero cross-bores identified.

Also in 2017, DEO examined the current process for collecting and storing data related to new construction. DEO made the decision to enhance this process and engaged a new contractor who has the capability of doing precise, high-detail audits of post-construction sewer videos that are provided by contractors. This is not legacy work that falls under the PSMP; it is a new initiative that will begin in 2018.

Because the 2017 audit resulted in zero cross-bores identified, and having consulted with Staff, DEO will not continue with the legacy cross-bore verification program in 2018. However, DEO will continue to monitor cross-bores that are reported through other means and if deemed necessary will incorporate legacy cross-bore verification back into the PSMP.

**Metrics:** 2017 will be considered the baseline year. The following metrics reflect the results conducted on legacy projects.

- Total feet of sewer mains inspected: 73,899 feet
- Total number of sewer laterals inspected: 591 laterals
- Total number of cross-bores identified through legacy inspections: 0 cross-bores
- Total number of cross-bores identified through other means: 6 cross-bores

## ADVANCED WORKFORCE TRAINING INITIATIVE

In 2017, DEO continued implementing the comprehensive workforce training strategy in partnership with The Mosaic Company to develop and complete the Gas Measurement and Regulation (GM&R) curriculum. The strategy includes five work streams that create the foundation of the Advanced Workforce Training Initiative (AWTI), which allows DEO to execute training in a repeatable fashion and in the way adults learn best, namely, by incorporating process context, hands-on-practice, and real-world scenarios, which would be performed at DEO's centralized training facility. Below are milestones reached in 2017 for each of the five work streams:

- Instructor Development
  - Completed development of the comprehensive Instructor Development Plan, including job descriptions, training observation tools, learning development paths, and a communication plan.
  - Began implementation of the comprehensive Instructor Development Plan, including:
    - Roll-out of the communication plan.
    - Transition of training staff into the new job roles called Technical Learning & Development Specialist (TL&DS).
    - Training from Friesen, Kaye and Associates on facilitation skills, classroom coaching skills, and adult learning methodologies.
    - Developed a training observation form (TL&DS Delivery Observation Form), which will be deployed in 2018 to assess performance standards
- Training Development Production Process
  - Developed and implemented a Style Guide which includes the rules to follow when documenting training materials at DEO, including grammar, templates, approved acronyms, etc.

- Developed and implemented a curriculum development process, including the inclusion of the Darwin Information Typing Architecture (DITA) methodology to ensure content reusability is achieved when writing curriculum.
  - Developed and implemented a curriculum approval process, including review and approval of the curriculum by the leaders of each company process area allowing for improved operational alignment in step-by-step job aids and terms used in the field.
  - Developed criteria for level one, two, and three assessments, based on Kirkpatrick's Four-Level Training Evaluation Methodology.
  - Developed an AWTI communication plan template for rolling out updated curriculum to individual company process areas to increase awareness and understanding of the changes.
- Technology
  - Purchased and implemented Survey Monkey, Xyleme, Questionmark, Performance Support, and the Advanced Workforce Training System.
    - Survey Monkey – an electronic tool used to solicit level one assessments from employees upon completion of a training course to measure the effectiveness of training.
    - Xyleme – a content management system in which training materials are developed, published, and maintained on one platform.
    - Question Mark – an electronic assessment tool that contains level two and three assessments including, knowledge assessments, skill checks, skill assessments, and operator qualification written assessments. An important feature of this tool allows DEO to improve the testing integrity through question randomization for knowledge assessments and operator qualification written assessments.
    - Performance Support – electronic support tool, which includes step-by-step job-aids, best practices, and standard operating procedures (SOPs) for employees to access information in real-time while performing tasks in the field.
    - Advanced Workforce Training System (AWTS) – a Management of Change platform that creates a notification from a defined source of change to a role/task in a company-process area. Sources of change include such things as SOPs, operator qualifications, guidelines, manuals, etc. Upon completion of the changes to curriculum associated with a role/task, the notifications are cleared from AWTS.
- Curriculum Development
  - Transitioned all equipment and materials from various locations to the centralized training center.
  - Updated Gas Measurement and Regulation (GM&R) curriculum including scenario-based activities allowing for the full utilization of the Technical Training facilities areas – Training Town and Flow Lab.

- Rolled out the AWTI communication plan, regarding the updated GM&R curriculum, for all GM&R employees in December 2017.
- Completed the Storage task analysis, including all items needed for the new Integrity rule that went into effect on January 18, 2018.
- Completed the Field Metering Services (FMS) and emergency response task analysis.
- Defined criteria for refresher training.
- Defined sources of change categories that affect potential curriculum updates.
- Structured On-the-Job Training (S-OJT)
  - Defined parameters in which a task learned in the classroom should be reinforced with S-OJT.
  - Identified on-the-job training tasks and appropriate repetitions for GM&R.
  - Created skills checks for GM&R OJT tasks.

In 2018, DEO will continue development and implementation of the AWTI work streams.

**Metrics:** To measure the success of the AWTI, DEO will use 2017 baseline metrics (unless otherwise noted below) based on curriculum completion dates and implementation of the support technologies.

- Instructional effectiveness
  - TL&DS Delivery Observation Form
    - The TL&DS Delivery Observation Form will be deployed in 2018.
  - Level one surveys – Survey Monkey
    - DEO created and deployed level one surveys utilizing Survey Monkey to pilot user acceptance of the online evaluation tool, which resulted in a total of 314 level one surveys completed.
  - As new curriculum is implemented the results of the level one surveys and the TL&DS observations will be utilized to determine performance measures to assess instructional effectiveness.
- Knowledge assessment scores of employees completing the modified curriculum
  - DEO will begin assessing knowledge and effectiveness (level two assessments) beginning in 2018 and at this time expects that 2018 will provide the baseline.
- Time to competency by job classification
  - GM&R
    - Baseline: 7 years based on estimates by subject matter experts.
    - The new GM&R curriculum is projected to reduce the time to competency for new hires to 3 ½ years, which will continuously be measured to establish an actual timeline for competency.
    - Compilation of data for this metric will begin in the fourth quarter of 2018 when all GM&R training progression courses and associated skill assessments (level three assessments) are completed for the GM&R pilot group.

- Utilization of the Performance Support Tool
  - Eight people used the Help and Support tool for pilot courses in 2017. The tool will expand to the balance of the workforce as curricula are built.
- Number of employees completing the training progression and refresher courses
  - Eight individuals completed two GM&R pilot courses in 2017.

## **ASSET DATA COLLECTION INITIATIVE**

In 2017, DEO focused on two primary components of the Asset Data Collection Initiative.

### **Asset Data Strategy**

First, DEO formed an Asset Data Strategy (ADS) team to focus on the implementation of the asset data strategy roadmap that was developed in 2016 in partnership with Accenture. The roadmap objectives were focused on improvements in the following areas:

- Establish an asset data governance structure across the organization to efficiently respond to a changing regulatory environment.
- Establish a single source of record for asset information to increase efficiency and ensure consistency of data.
- Provide the ability to enter asset information electronically in the field to an enterprise system.
- Reduce time from As-Built to Close by limiting manual entries.
- Optimize and simplify asset data process hand-offs between the lines of business.
- Improve data access to required asset information to perform the work in the field.
- Create a single, integrated asset register in the system(s) of record that tie back to a given asset.

The ADS team focused its 2017 efforts in three main areas:

1. Developed a strategy regarding DEO's geographic information system (GIS) to ensure ADS objectives of effectively capturing and managing asset data in the future are met.
  - Completed GIS strategy assessment for GIS Platform migration to Esri, including a 2018 Esri Portal deployment. Implementation of the Esri Portal will provide GIS view access to field employees who currently have no GIS access. In addition, GIS mobile users will have custom views by department, including or excluding information as requested. Completion of the Esri platform migration will improve field mapping options, GIS asset data analytics and integration between GIS and SAP compliance and construction asset data.

- As part of overall GIS roadmap, developed a detailed conflation recommendation. The conflation process starts with selecting a new, more accurate landbase and/or control source (e.g., street centerline data, parcel data, GPS coordinates, etc.). Conflation is the process of then adjusting the existing GIS spatial features (i.e., gas facilities and/or landbase in GIS) so that they align with the new landbase and improve the spatial accuracy of DEO mapped assets. Improved spatial accuracy will allow existing GIS to use GPS technology. The landbase maintenance strategy resulted in recommendations to leverage third party landbase sources to improve mapping of the GIS landbase in relation to assets. Legacy record conversion will allow electronic access to legacy records for field and office users.
- 2. Identified a Data Governance operating model and Data Governance roles; commenced developing an asset data catalog to ensure critical asset data are defined and can be measured.
  - Began creation of the Data Catalog, completed an assessment of Data Catalog software, completed documentation of the Data Governance operating model, and developed training material for the Data Governance Lead role, Owners and subject matter experts (SMEs) to establish Data Governance processes.
  - Established a new DEO Data Quality and Governance position to lead the Data Governance Committee.
- 3. Determined and documented future state construction mobile-ready processes, including geospatial asset data collection recommendations.
  - Documented recommendations for future geospatial asset location strategy.
  - Documented a future state mobile-ready process for design to construction close to capture asset information when installing assets.

Work on these activities will continue in the 2018 calendar year.

**Metrics:** Metrics identified for Asset Data Strategy are shown below. Because the Asset Data Strategy component is still being developed and not yet fully implemented, the baseline will be the first full year preceding implementation. Metric baselines will be reported back in subsequent years and the metrics will continue to be evaluated as this program is deployed.

- Average days to final update of mapping in GIS after construction is complete with goal of reaching 60 days
- Percentage of new construction facilities mapped to the GIS with complete data
- Relevant DOT report data

### **MAOP Validation**

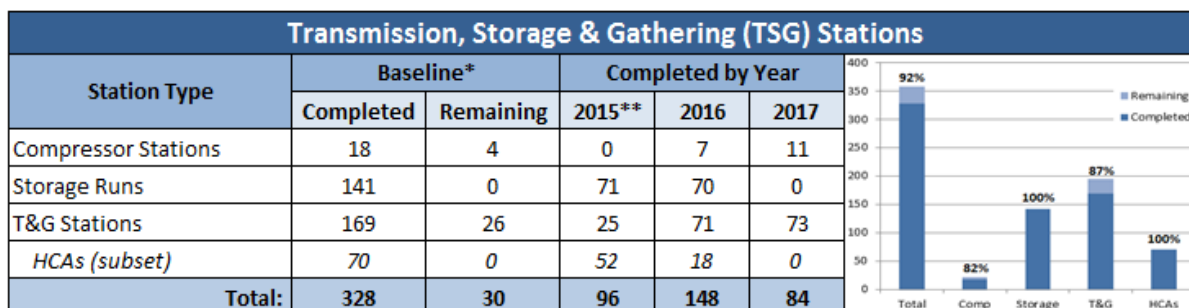
The second focus under the Asset Data Collection Initiative was the review of MAOP data to ensure it is “traceable, verifiable and complete” (or TVC) for all Transmission, Storage and Gathering stations. In

addition to Transmission, Storage and Gathering stations, DEO will also review distribution stations for TVC. 2017 was used to begin piloting the validation process for distribution stations, which will continue throughout 2018, with MAOP validation research set to begin in 2019.

Additionally in 2017, DEO began to review Transmission and Storage pipelines for TVC. Although each pipeline being reviewed has an established MAOP, existing record quality and validation have not previously been measured. Pipeline information is currently gathered utilizing paper processes. In 2017, the records research group began reviewing pipeline records for the purposes of verifying their completeness and identifying gaps in existing data. This review will continue through 2018.

#### Metrics:

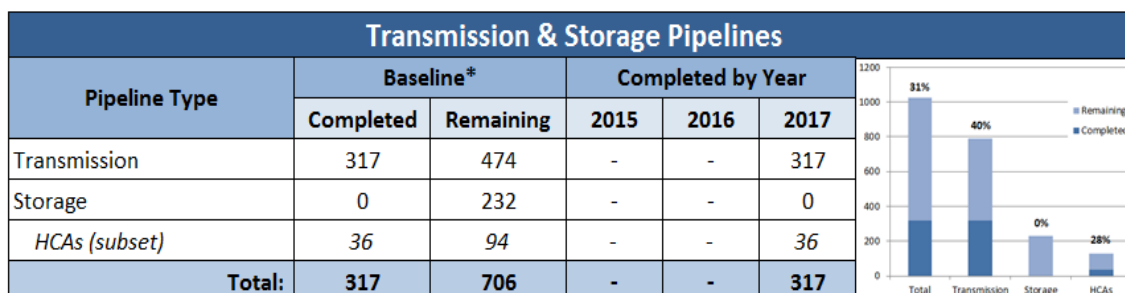
- Total number Transmission, Storage and Gathering (TSG) Stations MAOP validated



\*Baseline is the total number of stations identified for review: 358 stations

\*\*Validation of 2015 stations predated effective date of deferral authority

- Total number of miles of Transmission and Storage Pipelines MAOP validated



\*Baseline is the total number of pipeline miles identified for review: 1,023 miles

## QUALITY ASSURANCE

In 2017, DEO developed job descriptions for positions in the new Quality Assurance department. In the second quarter of 2017, the QA Coordinator role was developed to oversee the newly created QA Specialist positions. The responsibilities of the QA Coordinator include, but are not limited to, the following: development of a QA plan; oversight of QA Specialist tasks and responsibilities; creation and monitoring of performance measures; continuous improvement of the program; and other duties as



necessary. In the fourth quarter of 2017, a QA Specialist position was filled externally, with a start date in the first quarter of 2018. The QA team will be a centralized, dedicated internal auditing team that will evaluate employee and contract work performance. The program will include regularly scheduled, detailed audits to monitor compliance with standard operating procedures, PHMSA regulations and guidelines.

In 2018, DEO will finalize and publish the QA Plan and begin assessments in the second quarter.

**Metrics:** These initiatives are still being developed; DEO expects to develop baseline data in 2018 and to provide further guidance on metrics in next year's report.

- Total number of audits/assessments
- Total number of nonconformities identified
- Analysis of QA assessments to identify trends

## UNDERGROUND STORAGE INTEGRITY PROGRAM

In December 2016, PHMSA issued an Interim Final Rule (IFR) on underground natural gas storage. The promulgation of minimum federal standards would establish new safety standards under the Pipeline Safety Regulations at Title 49, CFR Parts 191 and 192, for the currently unregulated facilities (including wells, wellbore tubing, and casing) at underground natural gas storage facilities. This IFR responds to Section 12 of the Protecting our Infrastructure of Pipelines and Enhancing Safety Act of 2016, which was enacted following the serious natural gas leak at the Aliso Canyon facility in California on October 23, 2015.

In 2017, DEO evaluated current processes and procedures against the mandatory and non-mandatory recommendations of API 1171 to identify gaps, completed a high-level gap analysis, and created and published a Storage Integrity Management Plan (SIMP). As part of the SIMP, a risk ranking was completed and a summary of the results and associated metrics were updated in the plan. Also, in 2017 DEO created a full-time position responsible for managing the Underground Storage Integrity Program. The Storage Integrity Program Manager's responsibilities includes, but are not limited to,: implementing the overall strategy to comply with the rule; overseeing data gathering plans to support threat identification and risk ranking; identifying preventive and mitigative measures; incorporating information gathered from the field; performing quality assurance of the plan; determining performance metrics; documenting procedures; ensuring continuous improvement of the program; etc.

**Metrics:** A risk ranking was completed in 2017 and will be used as the baseline. Risk is defined as the consequence of a realized threat multiplied by the likelihood of its occurrence. Threats and consequences were categorized as defined in *Table 1 – Potential Threats and Consequences of API RP 1171*. Data was collected and provided for integration into the GSA application, which returned a

relative risk assessment. These were then normalized by the number of wells and the results are in the table below, which are defined as the baseline scores.

<b>DEO Risk Ranking</b>	
<b>Performance Measure</b>	<b>2017</b>
Normalized Risk from Design Score	2.05
Normalized Risk from Integrity Score	4.53
Normalized Risk from O&M Score	0.14
Normalized Risk from Well Intervention Score	0.00
Normalized Risk from Well: Third Party Score	0.00
Normalized Risk from Weather and Outside Forces Score	0.79
Normalized Risk from Reservoir: Third Party Score	0.10
Normalized Risk from Geologic Uncertainty Score	0.04
Normalized Risk from Reservoir Fluids Score	0.11
Percentage of Baseline Casing Inspection Logs Completed	53%

## **GATHERING RIGHTS OF WAY MAINTENANCE INITIATIVE**

The Type B Gathering ROW Clearing initiative began in the 3<sup>rd</sup> quarter of 2017 with two vendors being awarded approximately 50 miles each of Type B Gathering Lines to be cleared. Along with clearing, the scope of the pilot project also included easement research, line locating and staking, customer communication (in the form of mailers, door hangers and face-to-face communication), mowing and line marker installation. In 2018, the scope and metrics of the pilot will be reviewed and the remaining miles will be awarded with a tentative schedule to complete over the next 5-7 years.

Along with having safe, clear access to the Gathering Lines additional benefits are seen as a result of the clearing initiative.

- Enhanced communications with Dominion and non-Dominion customers
- Confirmation of easement rights
- Identification of incorrectly mapped lines
- Identification of encroachments
- Identification of exposures
- Development of a long term vegetation management plan

### **Metrics:**

- Total miles of Gathering lines to be assessed: 584 miles
- Customer communication
  - Parcels identified: 1,189

- Customers receiving communication (mailers sent): 1,055
- Miles of Gathering lines located: 21 miles
- Miles of Gathering ROWs cleared: 13.5 miles
- Number of new line markers or replacement stickers installed: 420

**This foregoing document was electronically filed with the Public Utilities**

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**Case No(s). 15-1712-GA-AAM**

Summary: Text 2018 PSMP Annual Report electronically filed by Ms. Rebekah J. Glover on behalf of The East Ohio Gas Company d/b/a Dominion Energy Ohio