

Detailed Facility Survey

Certification Statement : I am authorized to make this submission on behalf of the owners and operators of the facility or facilities, as applicable, for which the submission is made and I certify that the statements and information in this submission are to the best of my knowledge and belief true, accurate, and complete.

Partner Information

| | |
|---|---|
| Report Year | 2017 |
| Partner Name | Dominion Energy Transmission, Inc. |
| Facility Name | Dominion Energy Transmission - Transmission Pipelines (TPL) |
| Industry Segment - Gathering and Boosting | No |
| Industry Segment - Transmission and Storage | Yes |
| Industry Segment - Distribution | No |
| Participating Sources - Blowdowns | Yes |
| Participating Sources - Mains- Cast Iron and Unprotected Steel | No |
| Participating Sources - Services- Cast Iron and Unprotected Steel | No |
| Participating Sources - Excavation Damages | No |
| Participating Sources - Reciprocating Compressors - Rod Packing Vent | No |
| Participating Sources - Centrifugal Compressors - Venting | No |
| Participating Sources - Pneumatic Controllers | No |
| Source does not exist at this facility - Blowdowns | No |
| Source does not exist at this facility - Mains- Cast Iron and Unprotected Steel | No |

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|---|-------------------------------|
| Source does not exist at this facility - Services- Cast Iron and Unprotected Steel | No |
| Source does not exist at this facility - Excavation Damages | No |
| Source does not exist at this facility - Reciprocating Compressors - Rod Packing Vent | No |
| Source does not exist at this facility - Centrifugal Compressors - Venting | No |
| Source does not exist at this facility - Pneumatic Controllers | No |
| Methane Challenge Partner ID Number | MC006 |
| Methane Challenge Facility ID Number | MC006022 |
| GHGRP ID Number | 563217 |
| <u>Pre-populated using certified Part 98 Subpart W annual report:</u> | |
| Reporting Year | 2017 |
| Version | 1 |
| Date Certified | 2018-03-27T15:55:46.000-04:00 |

Transmission Pipeline Blowdowns between Compressor Stations

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|---------------------------------|--|
| <u>Quantification Method:</u> | Subpart W Method 1, based on volume, temperature, and pressure |
| <u>Equipment or event type:</u> | Pipeline integrity work (e.g., the preparation work of modifying facilities, ongoing assessments, maintenance or mitigation) |
| Total number of blowdowns: | 11 |
| Total CH4 emissions (mt CH4): | 351.8134283 |
| <u>Equipment or event type:</u> | Traditional operations or pipeline maintenance |
| Total number of blowdowns: | 2624 |
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| Total CH4 emissions (mt CH4): | 737.6581365 |
| <u>Equipment or event type:</u> | Equipment replacement or repair (e.g., valves) |
| Total number of blowdowns: | 8 |
| Total CH4 emissions (mt CH4): | 484.7924 |
| <u>Equipment or event type:</u> | Pipe abandonment |
| Total number of blowdowns: | 0 |
| Total CH4 emissions (mt CH4): | 0 |
| <u>Equipment or event type:</u> | New construction or modification of pipelines including commissioning and change of service |
| Total number of blowdowns: | 147 |
| Total CH4 emissions (mt CH4): | 5477.8228446 |
| <u>Equipment or event type:</u> | Operational precaution during activities (e.g. excavation near pipelines) |
| Total number of blowdowns: | 33 |
| Total CH4 emissions (mt CH4): | 295.6313226 |
| <u>Equipment or event type:</u> | All other pipeline segments with a physical volume greater than or equal to 50 cubic feet |
| Total number of blowdowns: | 10 |
| Total CH4 emissions (mt CH4): | 269.3076465 |
| <u>Quantification Method:</u> | Subpart W Method 2, based on measurement |
| <u>Equipment or event type:</u> | Calculated using flow meter |
| Total number of blowdowns: | 0 |

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| Total CH4 emissions (mt CH4): | |
| <u>Voluntary Actions Taken to Reduce Methane Emissions</u> | |
| Total number of blowdowns to which a BMP was applied: | 38 |
| Number of blowdowns that routed gas to compressor or capture system for beneficial use: | 0 |
| Number of blowdowns that routed gas to flare: | 0 |
| Number of blowdowns that routed gas to low-pressure system: | 38 |
| Number of hot taps utilized that avoided the need to blowdown gas to the atmosphere: | 1 |
| Total potential emissions (mt CH4): | 10417.28 |
| Emission reductions from voluntary action (mt CH4): | 5960.41 |
| Additional Information: | Percent methane reduction for 2017 was 57.2%, exceeding the company's Methane Challenge Commitment of 50% methane reduction from planned maintenance blowdowns on transmission pipelines by 2021. |

General Information

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Detailed Facility Survey

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Partner Information

| | |
|--|---|
| Report Year | 2017 |
| Partner Name | Dominion Energy West Virginia and Dominion Energy Ohio (Hope Gas, Inc. and The East Ohio Gas Company) |
| Facility Name | Dominion Hope Gas West Virginia |
| Industry Segment - Gathering and Boosting | No |
| Industry Segment - Transmission and Storage | No |
| Industry Segment - Distribution | Yes |
| Participating Sources - Blowdowns | No |
| Participating Sources - Mains-Cast Iron and Unprotected Steel | Yes |
| Participating Sources - Services-Cast Iron and Unprotected Steel | Yes |
| Participating Sources - Excavation Damages | No |
| Participating Sources - Reciprocating Compressors - Rod Packing Vent | No |
| Participating Sources - Centrifugal Compressors - Venting | No |
| Participating Sources - Pneumatic Controllers | No |
| | No |

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|---|-------------------------------|
| Source does not exist at this facility - Blowdowns | |
| Source does not exist at this facility - Mains- Cast Iron and Unprotected Steel | No |
| Source does not exist at this facility - Services- Cast Iron and Unprotected Steel | No |
| Source does not exist at this facility - Excavation Damages | No |
| Source does not exist at this facility - Reciprocating Compressors - Rod Packing Vent | No |
| Source does not exist at this facility - Centrifugal Compressors - Venting | No |
| Source does not exist at this facility - Pneumatic Controllers | No |
| Methane Challenge Partner ID Number | MC008 |
| Methane Challenge Facility ID Number | MC008002 |
| GHGRP ID Number | 527064 |
| <u>Pre-populated using certified Part 98 Subpart W annual report:</u> | |
| Reporting Year | 2017 |
| Version | 1 |
| Date Certified | 2018-03-26T14:03:15.000-04:00 |

Dist - Mains

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| Initial inventory of cast iron distribution mains as of January 1 of the first year of current commitment (miles): | 0 |
| Initial inventory of unprotected steel distribution mains as of | 946 |

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| January 1 of the first year of current commitment (miles): | |
| Distribution Mains, Gas Service - Unprotected Steel (Total miles of distribution mains): | 907 |
| Distribution Mains, Gas Service - Unprotected Steel (Total miles of distribution mains): | 907 |
| Distribution Mains, Gas Service - Protected Steel (Total miles of distribution mains): | 832 |
| Distribution Mains, Gas Service - Plastic (Total miles of distribution mains): | 1478 |
| Distribution Mains, Gas Service - Cast Iron (Total miles of distribution mains): | 0 |
| Distribution Mains, Gas Service - Reconditioned Cast Iron (with cured-in-place liners) (Total miles of distribution mains): | 0 |
| Distribution Mains, Gas Service - Unprotected Steel with cured-in-place liners (Total miles of distribution mains): | 0 |
| Distribution Mains, Gas Service - Unprotected Steel (Annual CH4 emissions (mt CH4)): | 1919.93 |
| Distribution Mains, Gas Service - Protected Steel (Annual CH4 emissions (mt CH4)): | 48.99 |
| Distribution Mains, Gas Service - Plastic (Annual CH4 emissions (mt CH4)): | 280.83 |
| Distribution Mains, Gas Service - Cast Iron (Annual CH4 emissions (mt CH4)): | 0 |
| Distribution Mains, Gas Service - Reconditioned Cast Iron (with | 0 |

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| cured-in-place liners) (Annual CH4 emissions (mt CH4)): | |
| Distribution Mains, Gas Service - Unprotected Steel with cured-in-place liners (Annual CH4 emissions (mt CH4)): | 0 |
| Miles of cast iron mains (Replaced with plastic): | 0 |
| Miles of cast iron mains (Replaced with protected steel) : | 0 |
| Miles of cast iron mains (Rehabilitated with cured-in-place liners): | 0 |
| Retired without replacement: | 0 |
| Miles of unprotected steel mains (Cathodically protected or replaced with protected steel): | 11.9 |
| Miles of unprotected steel mains (Replaced with Plastic): | 19.4 |
| Miles of unprotected steel mains (Rehabilitated with cured-in-place liners): | 0 |
| Retired without replacement: | 0 |
| Miles of unprotected steel mains (Emission reductions from voluntary action (mt CH4)): | 58.75 |
| Additional Information: | Dominion East Ohio Gas and Hope Gas combined replaced 3.1% of unprotected steel and cast iron distribution mains, exceeding the 1.5% replacement by 2021 Methane Challenge commitment. |

Dist - Services

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| Initial inventory of cast iron services as of January 1 of the first year of current commitment (count) | 0 |
| Initial inventory of unprotected steel services as of January 1 of the first year of current commitment (count) | 18492 |

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| Distribution Services, Gas Service - Unprotected Steel (Total number of services) | 16744 |
| Distribution Services, Gas Service - Protected Steel (Total number of services) | 16090 |
| Distribution Services, Gas Service - Plastic (Total number of services) | 80411 |
| Distribution Services, Gas Service - Copper (Total number of services) | 0 |
| Distribution Services, Gas Service - Cast Iron (Total number of services) | 0 |
| Distribution Services, Gas Service - Reconditioned Cast Iron (with Plastic Liners) (Total number of services) | 0 |
| Distribution Services, Gas Service - Unprotected Steel with Plastic Liners (Total number of services) | 0 |
| Distribution Services, Gas Service - Unprotected Steel (Annual CH4 emissions) | 535.08 |
| Distribution Services, Gas Service - Protected Steel (Annual CH4 emissions) | 54.12 |
| Distribution Services, Gas Service - Plastic (Annual CH4 emissions) | 13.52 |
| Distribution Services, Gas Service - Copper (Annual CH4 emissions) | 0 |
| Distribution Services, Gas Service - Cast Iron (Annual CH4 emissions) | 0 |
| Distribution Services, Gas Service - Reconditioned Cast Iron (with Plastic Liners) (Annual CH4 emissions) | 0 |
| Distribution Services, Gas Service - Unprotected Steel with Plastic Liners (Annual CH4 emissions) | 0 |
| Number of cast iron services - Replaced with plastic | 0 |
| Number of cast iron services - Replaced with protected steel | 0 |
| Number of cast iron services - Replaced with copper | 0 |
| Number of cast iron services - Reconditioned with cured-in-place liners | 0 |
| Number of unprotected steel services - Cathodically protected or replaced with protected steel | 0 |
| Number of unprotected steel services - Replaced with plastic | 1044 |
| Number of unprotected steel services - Replaced with copper | 0 |
| Number of unprotected steel services - Rehabilitated with cured-in-place liners | 0 |

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| Emission reductions from voluntary action (mt CH4) | 31.53 |
| Additional Information | |

General Information

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| Date and time when the report was submitted | 2018-11-28 07:43:29.605 |
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Partner Information

| | |
|--|---|
| Report Year | 2017 |
| Partner Name | Dominion Energy West Virginia and Dominion Energy Ohio (Hope Gas, Inc. and The East Ohio Gas Company) |
| Facility Name | Dominion Energy Ohio - The East Ohio Gas Co (Dist) (Ohio) |
| Industry Segment - Gathering and Boosting | No |
| Industry Segment - Transmission and Storage | No |
| Industry Segment - Distribution | Yes |
| Participating Sources - Blowdowns | No |
| Participating Sources - Mains-Cast Iron and Unprotected Steel | Yes |
| Participating Sources - Services-Cast Iron and Unprotected Steel | Yes |
| Participating Sources - Excavation Damages | No |
| Participating Sources - Reciprocating Compressors - Rod Packing Vent | No |
| Participating Sources - Centrifugal Compressors - Venting | No |
| Participating Sources - Pneumatic Controllers | No |

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|---|-------------------------------|
| Source does not exist at this facility - Blowdowns | No |
| Source does not exist at this facility - Mains- Cast Iron and Unprotected Steel | No |
| Source does not exist at this facility - Services- Cast Iron and Unprotected Steel | No |
| Source does not exist at this facility - Excavation Damages | No |
| Source does not exist at this facility - Reciprocating Compressors - Rod Packing Vent | No |
| Source does not exist at this facility - Centrifugal Compressors - Venting | No |
| Source does not exist at this facility - Pneumatic Controllers | No |
| Methane Challenge Partner ID Number | MC008 |
| Methane Challenge Facility ID Number | MC008001 |
| GHGRP ID Number | 527057 |
| <u>Pre-populated using certified Part 98 Subpart W annual report:</u> | |
| Reporting Year | 2017 |
| Version | 1 |
| Date Certified | 2018-03-29T10:39:48.000-04:00 |

Dist - Mains

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| Initial inventory of cast iron distribution mains as of January 1 of the first year of current commitment (miles): | 59 |
| | 5044 |

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| Initial inventory of unprotected steel distribution mains as of January 1 of the first year of current commitment (miles): | |
| Distribution Mains, Gas Service - Unprotected Steel (Total miles of distribution mains): | 4691 |
| Distribution Mains, Gas Service - Unprotected Steel (Total miles of distribution mains): | 4691 |
| Distribution Mains, Gas Service - Protected Steel (Total miles of distribution mains): | 7509 |
| Distribution Mains, Gas Service - Plastic (Total miles of distribution mains): | 7504 |
| Distribution Mains, Gas Service - Cast Iron (Total miles of distribution mains): | 31 |
| Distribution Mains, Gas Service - Reconditioned Cast Iron (with cured-in-place liners) (Total miles of distribution mains): | 0 |
| Distribution Mains, Gas Service - Unprotected Steel with cured-in-place liners (Total miles of distribution mains): | 0 |
| Distribution Mains, Gas Service - Unprotected Steel (Annual CH4 emissions (mt CH4)): | 9925.48 |
| Distribution Mains, Gas Service - Protected Steel (Annual CH4 emissions (mt CH4)): | 442.03 |
| Distribution Mains, Gas Service - Plastic (Annual CH4 emissions (mt CH4)): | 1426.19 |
| Distribution Mains, Gas Service - Cast Iron (Annual CH4 emissions (mt CH4)): | 142.08 |
| | 0 |

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| Distribution Mains, Gas Service - Reconditioned Cast Iron (with cured-in-place liners) (Annual CH4 emissions (mt CH4)): | |
| Distribution Mains, Gas Service - Unprotected Steel with cured-in-place liners (Annual CH4 emissions (mt CH4)): | 0 |
| Miles of cast iron mains (Replaced with plastic): | 3 |
| Miles of cast iron mains (Replaced with protected steel) : | 0 |
| Miles of cast iron mains (Rehabilitated with cured-in-place liners): | 0 |
| Retired without replacement: | 0 |
| Miles of unprotected steel mains (Cathodically protected or replaced with protected steel): | 0 |
| Miles of unprotected steel mains (Replaced with Plastic): | 140 |
| Miles of unprotected steel mains (Rehabilitated with cured-in-place liners): | 0 |
| Retired without replacement: | 1 |
| Miles of unprotected steel mains (Emission reductions from voluntary action (mt CH4)): | 270.66 |
| Additional Information: | Dominion East Ohio Gas and Hope Gas combined replaced 3.1% of unprotected steel and cast iron distribution mains, exceeding the 1.5% replacement by 2021 Methane Challenge commitment. |

Dist - Services

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|---|---|
| Initial inventory of cast iron services as of January 1 of the first year of current commitment (count) | 0 |
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| Initial inventory of unprotected steel services as of January 1 of the first year of current commitment (count) | 417623 |
| Distribution Services, Gas Service - Unprotected Steel (Total number of services) | 394294 |
| Distribution Services, Gas Service - Protected Steel (Total number of services) | 101901 |
| Distribution Services, Gas Service - Plastic (Total number of services) | 651588 |
| Distribution Services, Gas Service - Copper (Total number of services) | 47414 |
| Distribution Services, Gas Service - Cast Iron (Total number of services) | 0 |
| Distribution Services, Gas Service - Reconditioned Cast Iron (with Plastic Liners) (Total number of services) | 0 |
| Distribution Services, Gas Service - Unprotected Steel with Plastic Liners (Total number of services) | 0 |
| Distribution Services, Gas Service - Unprotected Steel (Annual CH4 emissions) | 12600.25 |
| Distribution Services, Gas Service - Protected Steel (Annual CH4 emissions) | 342.78 |
| Distribution Services, Gas Service - Plastic (Annual CH4 emissions) | 109.59 |
| Distribution Services, Gas Service - Copper (Annual CH4 emissions) | 239.24 |
| Distribution Services, Gas Service - Cast Iron (Annual CH4 emissions) | 0 |
| Distribution Services, Gas Service - Reconditioned Cast Iron (with Plastic Liners) (Annual CH4 emissions) | 0 |
| Distribution Services, Gas Service - Unprotected Steel with Plastic Liners (Annual CH4 emissions) | 0 |
| Number of cast iron services - Replaced with plastic | 0 |
| Number of cast iron services - Replaced with protected steel | 0 |
| Number of cast iron services - Replaced with copper | 0 |
| Number of cast iron services - Reconditioned with cured-in-place liners | 0 |
| Number of unprotected steel services - Cathodically protected or replaced with protected steel | 0 |
| Number of unprotected steel services - Replaced with plastic | 19093 |
| | |

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|---|--------|
| Number of unprotected steel services - Replaced with copper | 0 |
| Number of unprotected steel services - Rehabilitated with cured-in-place liners | 0 |
| Emission reductions from voluntary action (mt CH4) | 576.59 |
| Additional Information | |

General Information

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|---|-------------------------|
| Date and time when the report was submitted | 2018-11-28 07:43:29.605 |
| Version of submitted report | v1 |

Detailed Facility Survey

Certification Statement : I am authorized to make this submission on behalf of the owners and operators of the facility or facilities, as applicable, for which the submission is made and I certify that the statements and information in this submission are to the best of my knowledge and belief true, accurate, and complete.

Partner Information

| | |
|---|--|
| Report Year | 2017 |
| Partner Name | Dominion Energy Utah, Wyoming, and Idaho (Questar) |
| Facility Name | Dominion Energy Questar Gas Company (Dist) (Utah) |
| Industry Segment - Gathering and Boosting | No |
| Industry Segment - Transmission and Storage | No |
| Industry Segment - Distribution | Yes |
| Participating Sources - Blowdowns | No |
| Participating Sources - Mains- Cast Iron and Unprotected Steel | No |
| Participating Sources - Services- Cast Iron and Unprotected Steel | No |
| Participating Sources - Excavation Damages | Yes |
| Participating Sources - Reciprocating Compressors - Rod Packing Vent | No |
| Participating Sources - Centrifugal Compressors - Venting | No |
| Participating Sources - Pneumatic Controllers | No |
| Source does not exist at this facility - Blowdowns | No |
| Source does not exist at this facility - Mains- Cast Iron and Unprotected Steel | No |
| | No |

| | |
|---|-------------------------------|
| Source does not exist at this facility - Services- Cast Iron and Unprotected Steel | |
| Source does not exist at this facility - Excavation Damages | No |
| Source does not exist at this facility - Reciprocating Compressors - Rod Packing Vent | No |
| Source does not exist at this facility - Centrifugal Compressors - Venting | No |
| Source does not exist at this facility - Pneumatic Controllers | No |
| Methane Challenge Partner ID Number | MC007 |
| Methane Challenge Facility ID Number | MC007001 |
| GHGRP ID Number | 527555 |
| <u>Pre-populated using certified Part 98 Subpart W annual report:</u> | |
| Reporting Year | 2017 |
| Version | 1 |
| Date Certified | 2018-03-23T18:09:15.000-04:00 |

Distribution Excavation Damages

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| <u>Excavation damages during reporting year</u> | |
| Total number of excavation damages | 1182 |
| Total number of excavation damages per thousand locate calls | 3 |
| Total number of excavation damages which resulted in a release of natural gas | 1147 |
| Total number of excavation damages which resulted in the pipeline being shut down | 1182 |
| | 2 |

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|---|---|
| Total number of excavation damages where the operator was given prior notification of excavation activity | |
| <u>Total number of excavation damages per class location (optional, if data is available)</u> | |
| Class 1 | |
| Class 2 | |
| Class 3 | |
| Class 4 | |
| <u>Total number of excavation damages by pipe material and part of system involved</u> | |
| Steel - Main | |
| Steel - Service | |
| Steel - Inside Meter/Regulator Set | |
| Steel - Other | 0 |
| Cast Iron - Main | |
| Cast Iron - Service | |
| Cast Iron - Inside Meter/Regulator Set | |
| Cast Iron - Other | 0 |
| Copper - Main | |
| Copper - Service | |
| Copper - Inside Meter/Regulator Set | |
| Copper - Other | 0 |
| Plastic - Main | |
| Plastic - Service | |
| Plastic - Inside Meter/Regulator Set | |
| Plastic - Other | 0 |
| Other - Main | |

| | |
|---|-----|
| Other - Service | |
| Other - Inside Meter/Regulator Set | |
| Other - Other | 0 |
| <u>Total number of excavation damages by type that caused excavation damage incidents</u> | |
| Contractor | 936 |
| Railroad | 0 |
| County | 1 |
| State | 2 |
| Developer | 1 |
| Farmer | 0 |
| Utility | 16 |
| Municipality | 41 |
| Occupant | 185 |
| Unknown/Other | 0 |
| <u>Total number of excavation damages by apparent root cause</u> | |
| One-Call Notification Practices Not Sufficient | 359 |
| Locating Practices Not Sufficient | 104 |
| Excavation Practices Not Sufficient | 618 |
| One-Call Notification Center Error | 0 |
| Abandoned Facility | 2 |
| Deteriorated Facility | 0 |
| Previous Damage | 9 |
| Other/Miscellaneous | 90 |
| <u>Voluntary Actions Taken to Reduce Methane Emissions in ReportYear</u> | |
| | |

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| Actions taken to minimize excavation damages/reduce methane emissions from excavation damages | 1) Contracted with third-party utility locator to do standby location service on lines 4-inches in diameter and greater; 2) Conduct annual training for known excavators; 3) 811 posters and television advertising. |
| Company-specific goal for reducing excavation damages and/or methane emissions from excavation damages (when available) | None |
| Progress in meeting company-specific goal (when available) | Program implemented per commitment. |
| Additional Information | Excavation damages for which no locate request was called in (333 incidents) are included in the "One-Call Notification Practices Insufficient" root cause category above. |

General Information

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|---|-------------------------|
| Date and time when the report was submitted | 2018-11-28 07:42:31.695 |
| Version of submitted report | v1 |