Pipeline Integrity –

Lessons Learned from PHMSA Closed Cases

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Williams – Atlantic Gulf – Eastern Interstates
(Transcontinental Gas Pipeline)
Tuesday – May 9th, 2023

AUCSC

Appalachian Underground Corrosion Short Course

PHMSA – Pipeline & Hazardous Materials Safety Administration

- The Department of Transportation (DOT) is the Federal Agency which has enforces the Natural Gas Pipeline Safety Act of 1968.
- The RSPA (Research and Special Programs Administration) was the group under DOT that had oversight of pipelines and it existed up until 2004.
- In 2005 PHMSA was created as a result of the Special Programs Improvement Act of 2004.
- Office of Pipeline Safety (OPS) is under PHMSA and is responsible for overseeing 2.3 million miles of natural gas and liquid pipelines.
  - PHMSA's stated mission is to protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives. To do this, the agency establishes national policy, sets and enforces standards, educates, and conducts research to prevent incidents. We also prepare the public and first responders to reduce consequences if an incident does occur.
  - PHMSA maintains a website that contains all of the Cases Initiated, Orders Issued, and Cases Closed.
    - The website is as follows: https://primis.phmsa.dot.gov/comm/reports/enforce/CaseStatus_opid_0.html?nocache=6896#_TP_1_tab_1

Summary of Enforcement Case Status

- This table provides the total number of cases opened for each year, and a count of how many of these cases were closed at the time this report was generated.

Overall Case Status: 2002-2023 [1]

Year Opened	Number of Cases Opened	Corresponding Cases Closed	Percent Cases Closed	Percent Cases Pending
2002	160	160	100%	0%
2003	144	144	100%	0%
2004	223	223	100%	0%
2005	297	297	100%	0%
2006	233	233	100%	0%
2007	255	255	100%	0%
2008	182	182	100%	0%
2009	181	181	100%	0%
2010	199	198	99%	1%
2011	207	207	100%	0%
2012	276	276	100%	0%
2013	266	265	100%	0%
2014	154	154	100%	0%
2015	197	195	99%	1%
2016	164	161	98%	2%
2017	229	229	100%	0%
2018	199	193	97%	3%
2019	223	216	97%	3%
2020	195	183	94%	6%
2021	264	243	92%	8%
2022	227	166	73%	27%
2023	70	33	47%	53%
Totals	4,545	4,394	97%	3%

Export Table

Corrective Action Orders (CAOs)

- A Corrective Action Order usually addresses issues resulting from an accident, spill, or other significant, immediate, or imminent safety or environmental concern.

Cases Involving Corrective Action Orders: 2002-2023 [1]

Year Opened	Number of Cases Opened	Corresponding Cases Closed	Percent Cases Closed	Percent Cases Pending
2002	7	7	100%	0%
2003	19	19	100%	0%
2004	9	9	100%	0%
2005	9	9	100%	0%
2006	7	7	100%	0%
2007	7	7	100%	0%
2008	6	6	100%	0%
2009	5	5	100%	0%
2010	11	10	91%	9%
2011	10	10	100%	0%
2012	10	10	100%	0%
2013	5	4	80%	20%
2014	6	6	100%	0%
2015	11	11	100%	0%
2016	9	7	78%	22%
2017	2	2	100%	0%
2018	1	0	0%	100%
2019	3	2	67%	33%
2020	3	1	33%	67%
2021	6	1	17%	83%
2022	3	1	33%	67%
2023	0	0	0%	0%
Totals	149	134	90%	10%

Notices of Probable Violations (NOPVs)

- These notices may include proposed civil penalties, a proposed compliance order requiring the operator to take one or more corrective actions, or both proposed civil penalties and a proposed compliance order.

Cases Involving Notices of Probable Violation: 2002-2023 (1)

Year Opened	Number of Cases Opened	Corresponding Cases Closed	Percent Cases Closed	Percent Cases Pending
2002	58	58	100%	0%
2003	48	48	100%	0%
2004	86	86	100%	0%
2005	98	98	100%	0%
2006	53	53	100%	0%
2007	69	69	100%	0%
2008	45	45	100%	0%
2009	58	58	100%	0%
2010	45	45	100%	0%
2011	70	70	100%	0%
2012	77	77	100%	0%
2013	82	82	100%	0%
2014	46	46	100%	0%
2015	52	52	100%	0%
2016	63	62	98%	2%
2017	61	61	100%	0%
2018	74	71	96%	4%
2019	65	59	91%	9%
2020	57	48	84%	16%
2021	78	68	87%	13%
2022	78	32	41%	59%
2023	23	1	4%	96%
Totals	1,386	1,289	93%	7%

Notices of Amendment (NOAs)

- A Notice of Amendment alleges that an operator's written plans or procedures fail to meet regulatory requirements and proposes that they be amended.

Cases Involving Notices of Amendment: 2002-2023 (1)

Year Opened	Number of Cases Opened	Corresponding Cases Closed	Percent Cases Closed	Percent Cases Pending
2002	60	60	100%	0%
2003	48	48	100%	0%
2004	93	93	100%	0%
2005	133	133	100%	0%
2006	104	104	100%	0%
2007	102	102	100%	0%
2008	59	59	100%	0%
2009	50	50	100%	0%
2010	41	41	100%	0%
2011	60	60	100%	0%
2012	102	102	100%	0%
2013	85	85	100%	0%
2014	34	34	100%	0%
2015	54	54	100%	0%
2016	35	35	100%	0%
2017	62	62	100%	0%
2018	52	51	98%	2%
2019	64	64	100%	0%
2020	68	68	100%	0%
2021	86	83	97%	3%
2022	71	61	86%	14%
2023	19	5	26%	74%
Totals	1,482	1,454	98%	2%

Notices of Proposed Safety Order

- A Notice of Proposed Safety Order addresses pipeline integrity risks that may not constitute a hazardous facility requiring immediate corrective action, but do need to be addressed over time.

Cases Involving Notices of Proposed Safety Order [1]

Year Opened [A]	Number of Cases Opened	Corresponding Cases Closed	Percent Cases Closed	Percent Cases Pending
2010	3	3	100%	0%
2011	6	6	100%	0%
2012	4	4	100%	0%
2013	2	2	100%	0%
2014	2	2	100%	0%
2015	4	2	50%	50%
2016	3	3	100%	0%
2017	2	2	100%	0%
2018	5	4	80%	20%
2019	2	2	100%	0%
2020	1	0	0%	100%
2021	3	0	0%	100%
2022	3	0	0%	100%
2023	1	0	0%	100%
Totals	41	30	73%	27%

Why?

- Good statistics on various PHMSA enforcement actions and amounts of fines but why do I care?
- The take away is not in these numbers but in the actual details of the cases themselves.
- These are what we will call the "Lessons Learned" from the events that have occurred.
- As a group, the people involved in Pipeline Integrity have a tendency not to discuss their short comings with each other.
- The information presented herein is a matter of public record and the stated goal is to use this information to get us as Operators talking about what we have done wrong and **more importantly** what we have done to correct those mistakes.
- Hopefully, we will all be able to take these "Lessons Learned" back with us to our companies and **ultimately make each Operator safer as a result**.

2018 Closed Cases (Total of 193 – Page 1/7)

- PHMSA "closes" enforcement cases once it is satisfied that all identified correction actions have been taken, all inadequate procedures corrected, and all civil penalties paid.

Cases Closed: 2018				
Date Closed	Operator	Region	Date Opened	Case Number
01/02/18	COLONIAL PIPELINE CO	Eastern	07/12/16	120165006
01/02/18	PORTLAND NATURAL GAS TRANSMISSION SYSTEM	Eastern	06/06/17	120171014M
01/03/18	PLAINS MARKETING L.P.	Southwest	07/11/16	420165024
01/03/18	EL PASO NATURAL GAS CO	Southwest	07/21/16	420161005
01/04/18	AIRCRAFT SERVICES INTERNATIONAL GROUP (ASIG)	Western	01/04/18	520186003W
01/08/18	OZARK GAS TRANSMISSION L.L.C. (SPECTRA ENERGY PARTNERS LP)	Southwest	11/03/16	420161012
01/08/18	ISLAND ENERGY	Western	08/18/17	520170012M
01/08/18	SUNOCO PIPELINE L.P.	Southwest	06/02/16	420165020
01/12/18	AMERICAN MIDSTREAM (MIDLA) LLC	Southwest	04/20/15	420151007
01/17/18	OLIKTOK PIPELINE COMPANY	Western	09/13/17	520170017
01/17/18	OLIKTOK PIPELINE COMPANY	Western	01/17/18	520180002W
01/18/18	ENLINK LBU-ORV	Central	11/02/15	320155009
01/22/18	EASTERN SHORE NATURAL GAS CO	Eastern	12/21/17	120171023M
01/23/18	TRANSCONTINENTAL GAS PIPE LINE COMPANY	Southern	05/12/17	220171002
01/24/18	GULF SOUTH PIPELINE COMPANY LP	Southern	01/24/18	220181001W
01/25/18	TIDEWATER INC	Western	01/25/18	520186007W
01/26/18	DISTRIGAS OF MASSACHUSETTS LLC	Eastern	05/11/17	120173001M
01/31/18	QUESTAR SOUTHERN TRAILS PIPELINE COMPANY	Western	01/31/18	520181002W
02/02/18	COLLINS PIPELINE CO	Southern	02/02/18	220185001W
02/13/18	BOC GASES	Western	05/24/17	520176016
02/14/18	ENERGY XXI USA INC	Southwest	05/16/17	420177002M
02/21/18	COFFEYVILLE RESOURCES CRUDE TRANSPORTATION LLC	Central	07/25/16	320165006
02/27/18	WILLIAMS FIELD SERVICES	Eastern	10/30/17	120175030M
02/28/18	EASTERN SHORE NATURAL GAS CO	Eastern	01/17/17	120171002
02/28/18	CENTRAL FLORIDA PIPELINE CORP	Southern	02/28/18	220186001W
02/28/18	SHELL PIPELINE CO. L.P.	Southwest	07/07/16	420165023
03/02/18	TOLEDO REFINING COMPANY LLC	Eastern	03/02/18	120185013W
03/02/18	UTICA EAST OHIO MIDSTREAM LLC	Eastern	06/08/17	120176002M

2018 Closed Cases (Total of 193 – Page 2/7)

- PHMSA "closes" enforcement cases once it is satisfied that all identified correction actions have been taken, all inadequate procedures corrected, and all civil penalties paid.

	Cases Closed: 2018				
2	Date Closed	Operator	Region	Date Opened	Case Number
31	03/02/18	COLUMBIA MIDSTREAM GROUP LLC	Eastern	12/14/17	120176008M
32	03/02/18	PAA NATURAL GAS STORAGE LLC	Central	04/05/17	320171005M
33	03/02/18	RICHMOND CITY OF	Eastern	03/02/18	120180001W
34	03/07/18	INLAND CORPORATION	Eastern	02/06/17	120175003
35	03/08/18	ENTERPRISE PRODUCTS OPERATING LLC	Southern	04/01/16	220165002
36	03/12/18	PACIFIC OPERATORS OFFSHORE	Western	10/03/17	520177003M
37	03/13/18	PANTHER OPERATING COMPANY LLC	Southwest	09/29/16	420165032
38	03/16/18	RESOLUTE NATURAL RESOURCES COMPANY	Western	03/16/18	520185003W
39	03/16/18	WYOMING REFINING CO	Western	03/16/18	520186010W
40	03/16/18	TESORO ALASKA PIPELINE COMPANY LLC	Western	03/16/18	520186009W
41	03/22/18	FREEPORT LNG DEVELOPMENT L.P.	Southwest	03/22/18	420181004W
42	03/23/18	OKTEX PIPELINE COMPANY LLC	Southwest	04/10/17	420171006
43	03/26/18	RATON GAS TRANSMISSION CO	Western	03/26/18	520181005W
44	03/26/18	MIPC LLC	Eastern	03/26/18	120185011W
45	03/26/18	WEST SHORE PIPELINE CO	Eastern	06/20/16	120165004
46	03/27/18	COLONIAL PIPELINE CO	Eastern	04/27/17	120175013
47	03/27/18	COLUMBIA GAS TRANSMISSION LLC	Eastern	03/27/18	120181008W
48	03/28/18	WHITE CLIFFS PIPELINE LLC	Central	05/11/17	320175003M
49	03/30/18	ONEOK NGL PIPELINE LLC	Central	05/18/17	320175005
50	03/30/18	THUNDER CREEK NGL PIPELINE LLC	Western	08/14/17	520175019
51	04/09/18	MARDI GRAS PIPELINE LLC	Southwest	03/04/09	420091007
52	04/12/18	PLAINS MARKETING L.P.	Western	01/25/18	520180003M
53	04/16/18	DEVON ENERGY PRODUCTION CO. LP	Western	04/16/18	520186012W
54	04/17/18	COLONIAL PIPELINE CO	Eastern	04/17/18	120185019W
55	04/24/18	BUCKEYE PARTNERS LP	Eastern	03/16/17	120175007
56	04/25/18	TRANS-UNION INTERSTATE PIPELINE L.P.	Southwest	04/25/18	420181006W
57	05/03/18	ALYESKA PIPELINE SERVICE CO	Western	02/01/11	520115001S
58	05/07/18	KIANTONE PIPELINE CORP	Eastern	05/07/18	120185021W
59	05/07/18	GRANITE STATE GAS TRANSMISSION INC	Eastern	05/07/18	120181010W
60	05/10/18	WYOMING PIPELINE COMPANY	Western	08/15/17	520176023

2018 Closed Cases (Total of 193 – Page 3/7)

- PHMSA "closes" enforcement cases once it is satisfied that all identified correction actions have been taken, all inadequate procedures corrected, and all civil penalties paid.

	Cases Closed: 2018				
2	Date Closed	Operator	Region	Date Opened	Case Number
61	05/10/18	BUCKEYE PARTNERS LP	Eastern	05/10/18	120185015W
62	05/10/18	TENNESSEE GAS PIPELINE COMPANY	Eastern	02/09/18	120181004M
63	05/10/18	TRANSCONTINENTAL GAS PIPE LINE COMPANY	Eastern	02/13/18	120181006M
64	05/10/18	CALIBER NORTH DAKOTA LLC	Central	09/29/17	320176012
65	05/14/18	DANVILLE CITY OF	Eastern	05/14/18	120180003W
66	05/14/18	PHILLIPS 66 PIPELINE LLC	Southwest	02/13/17	420175003
67	05/14/18	ENERGY XXI PIPELINE LLC	Southwest	05/16/17	420179002
68	05/14/18	PHILLIPS 66 PIPELINE LLC	Southwest	05/13/14	420145011
69	05/14/18	PHILLIPS 66 PIPELINE LLC	Southwest	09/22/14	420145023
70	05/14/18	EASTERN SHORE NATURAL GAS CO	Eastern	05/14/18	120181011W
71	05/15/18	STATOIL OIL & GAS LP	Central	09/29/17	320176011M
72	05/16/18	DOMINION ENERGY CAROLINA GAS TRANSMISSION LLC	Southern	05/16/18	220181002W
73	05/17/18	COLUMBIA GAS TRANSMISSION LLC	Eastern	05/17/18	120181014W
74	05/22/18	CLEARWATER GAS SYSTEM	Southern	05/22/18	220180001W
75	05/29/18	DAKOTA GASIFICATION COMPANY	Central	05/29/18	320185004W
76	06/07/18	TEXAS EASTERN TRANSMISSION LP (SPECTRA ENERGY PARTNERS LP)	Eastern	10/30/17	120171016M
77	06/08/18	PLAINS MARKETING L.P.	Southern	08/12/16	220166003
78	06/11/18	TENNESSEE GAS PIPELINE COMPANY	Southwest	06/13/16	420161004
79	06/11/18	CRIMSON GULF LLC	Southwest	04/04/16	420165008M
80	06/11/18	CRIMSON GULF LLC	Southwest	04/04/16	420165007
81	06/11/18	LAKE CHARLES LNG COMPANY LLC	Southwest	06/11/18	420183004M
82	06/11/18	WHITECAP PIPE LINE COMPANY L.L.C.	Southwest	10/20/17	420177005M
83	06/14/18	ALASKA PIPELINE CO	Western	03/16/18	520180004M
84	06/15/18	ENERGY XXI USA INC	Southwest	05/16/17	420177001
85	06/15/18	CITY OF SUSANVILLE	Western	07/05/16	520160008
86	06/20/18	COLORADO INTERSTATE GAS CO	Western	08/26/16	520166005
87	06/22/18	PHILADELPHIA ENERGY SOLUTIONS REFINING AND MARKETING LLC	Eastern	09/12/17	120176007M
88	06/22/18	LONG BEACH GAS DEPT CITY OF	Western	09/22/17	520170019
89	06/22/18	IMTT-BAYONNE	Eastern	12/21/17	120175004
90	06/22/18	ALGONQUIN GAS TRANSMISSION L.L.C. (SPECTRA ENERGY PARTNERS	Eastern	12/18/17	120171006

2002-2023 Closed Cases

- PHMSA “closes” enforcement cases once it is satisfied that all identified correction actions have been taken, all inadequate procedures corrected, and all civil penalties paid.

Listing of Cases Closed

Nationwide

This report lists all of the enforcement cases closed by PHMSA in a given year, beginning in 2002. The yearly tables include the date the case was closed, the name of the operator involved, the PHMSA Region initiating the enforcement action(s), the date on which the case was opened, and the PHMSA case number. PHMSA "closes" enforcement cases once it is satisfied that all identified corrective actions have been taken, all inadequate procedures corrected, and all civil penalties paid. Separate reports provide a listing of cases based on the type of enforcement action involved.

- 2023 YTD
- 2022
- 2021
- 2020
- 2019
- 2018
- 2017
- 2016
- 2015
- 2014
- 2013
- 2012
- 2011
- 2010
- 2009
- 2008
- 2007
- 2006
- 2005
- 2004
- 2003
- 2002

Cases Closed: 2023 YTD (1)

Date Closed	Operator	Region	Date Opened	Case Number
01/05/23	LOS ANGELES WATER & POWER	Western	04/27/22	52022037NOPV
01/05/23	FLINT HILLS RESOURCES, LC	Central	06/08/22	32022051NOA
01/10/23	CONTINENTAL RESOURCES, INC.	Central	08/01/22	32022021NOA
01/10/23	SPIRE MISSOURI INC. EAST	Central	03/17/22	32022033NOPV
01/10/23	GRANITE STATE GAS TRANSMISSION INC	Eastern	11/17/22	12022074NOA
01/10/23	SOUTHERN STAR CENTRAL GAS PIPELINE, INC	Central	04/28/22	32022044NOA
01/11/23	VENTURE GLOBAL GATOR EXPRESS, LLC	Southwest	01/11/23	42023024WL
01/12/23	NORTH DAKOTA PIPELINE COMPANY LLC	Central	04/12/22	32022022NOPV
01/12/23	DENBURY ONSHORE, LLC	Southwest	09/14/22	42022048NOPV
01/12/23	GULF RUN TRANSMISSION, LLC	Southwest	01/12/23	42023030WL

01/23/18 – Transcontinental Gas Pipeline Corp (#14)

TRANSCONTINENTAL GAS PIPE LINE COMPANY

Case CPF 220171002

This report lists key information pertaining to a particular enforcement case [(1)]. For cases any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Fi Amendment.

Case Summary | Documents

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	220171002
Case Type	Proposed Civil Penalty Proposed Compliance Order Warning Item
Subject(s)	Corrosion Control - Gas Pipelines Incident Reports - Gas Pipelines Procedure Manuals - Gas Pipelines
Region	Southern
Date Opened	05/12/17
Status	CLOSED
Proposed Civil Penalty	$53,500
Assessed Civil Penalty	$53,500
Collected Civil Penalty	$53,500
Compliance Order	Yes
Final Order Date	10/31/17
Date Closed	01/23/18

2. § 192.475 Internal corrosion control: General.

(a) Corrosive gas may not be transported by pipeline, unless the corrosive effect of the gas on the pipeline has been investigated and steps have been taken to minimize internal corrosion.

Transco transported gas in its storage field pipelines at Station 77 in Seminary, Mississippi, but did not investigate the corrosive effects of the gas it transported nor did Transco determine if steps were necessary to minimize internal corrosion.

Transco operates a natural gas storage field at Station 77 but it did not investigate the corrosive effects of the gas being transported between the storage caverns and onsite dehydration plants (DHPs). Further, Transco did not identify any steps necessary to minimize internal corrosion of any pipelines within the above-referenced storage fields.

01/23/18 – Transcontinental Gas Pipeline Corp (#14)

1. **§ 191.5 Immediate notice of certain incidents.**
   (a) At the earliest practicable moment following discovery, but no later than one hour after confirmed discovery, each operator must give notice in accordance with paragraph (b) of this section of each incident as defined in §191.3.

   Transco failed to give notice in accordance with §191.5(b) at the earliest practicable moment following the discovery of an incident, as defined in §191.3. Specifically, Transco failed to notify the National Response Center (NRC) of the unintentional release of natural gas exceeding three million cubic feet that occurred on August 11, 2016.

   Transco records documented that on August 11, 2016, a relief valve at the Clarke County Exchange facility released an estimated 3.2 million cubic feet of natural gas. At the time of the release, the pressure at the referenced relief valve was approximately 770 psig. The set point of the relief valve was 800 psig, per Transco records documenting the valve's previous inspection.

   Under normal operations, a relief valve with a set point of 800 psig would not be expected to relieve at 770 psig, and any activation under such conditions would be considered unintentional. Part §191.3 of the Code of Federal Regulations defines an *incident*, in part, as an event with "*unintentional estimated gas loss of three million cubic feet or more from a pipeline.*" §191.5(a) required Transco to give notice in accordance with §191.5(b) at the earliest practicable moment following discovery of the *incident*. Records documenting the release volume and the relief device set point were obtained by the PHMSA inspector.

Proposed Civil Penalty

related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation and has recommended that Transco be preliminarily assessed a civil penalty of $53,500 for Item 1 above.

01/25/18 – Tidewater, Inc. (#16)

TIDEWATER, INC

Case CPF 520186007W

This report lists key information pertaining to a particular enforcement case [(1)]. For cases initiated
any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Final Orders
Amendment.

Case Summary | Documents

Case Summary

Operator	TIDEWATER, INC
Case Number	520186007W
Case Type	Warning Letter
Subject(s)	Corrosion Control - Hazardous Liquid Pipelines Operations and Maintenance - Hazardous Liquid Pipelines
Region	Western
Date Opened	01/25/18
Status	CLOSED
Date Closed	01/25/18

01/25/18 – Tidewater, Inc. (#16)

2. **§195.583 What must I do to monitor atmospheric corrosion control?**
(a) You must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	Then the frequency of inspection is:
Onshore	At least once every 3 calendar years, but with intervals not exceeding 39 months.
Offshore	At least once each calendar year, but with intervals not exceeding 15 months.

A review of the records showed that Tidewater has not monitored the atmospheric corrosion of its exposed pipeline since April 2013. From the previous inspection, Tidewater was advised to conduct atmospheric corrosion monitoring by April 2016. Review of the available record (maintenance order #2247) demonstrated that the atmospheric monitoring was conducted on December 5, 2017. The operator's Operations and Maintenance Manual, Section 403.7 Above Ground Piping, states all aboveground piping will be inspected every 3 years not to exceed 39 months. Therefore, Tidewater failed to monitor atmospheric corrosion of its exposed pipeline in accordance with §195.583(a).

3. **§195.579 What must I do to mitigate internal corrosion?**
(c) Removing pipe. Whenever you remove pipe from a pipeline, you must inspect the internal surface of the pipe for evidence of corrosion. If you find internal corrosion requiring corrective action under §195.585, you must investigate circumferentially and longitudinally beyond the removed pipe (by visual examination, indirect method, or both) to determine whether additional corrosion requiring remedial action exists in the vicinity of the removed pipe.

Tidewater conducted a pipeline modification project in 2015 (Hinko Pipeline modification project). Tidewater cannot show records to demonstrated that an internal inspection for corrosion was performed on the removed pipe. Therefore, Tidewater failed to inspect the internal surface of a removed pipeline for evidence of corrosion in accordance with §195.579(c).

01/31/18 – Questar Southern Trails Pipeline Co. (#18)

QUESTAR SOUTHERN TRAILS PIPELINE COMPANY

Case CPF 520181002W

This report lists key information pertaining to a particular enforcement case [(1)]. For cases ini
any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Final
Amendment.

Case Summary | Documents

Case Summary

Operator	QUESTAR SOUTHERN TRAILS PIPELINE COMPANY
Case Number	520181002W
Case Type	Warning Letter
Subject(s)	Corrosion Control - Gas Pipelines Damage Prevention Program - Gas Pipelines Integrity Management - Gas Pipelines Maintenance - Gas Pipelines
Region	Western
Date Opened	01/31/18
Status	CLOSED
Date Closed	01/31/18

01/31/18 – Questar Southern Trails Pipeline Co. (#18)

1. **§ 192.491 Corrosion control records.**
(c) Each operator shall maintain a record of each test, survey, or inspection required by this subpart in sufficient detail to demonstrate the adequacy of corrosion control measures or that a corrosive condition does not exist. These records must be retained for at least 5 years, except that records related to §192.465(a) and (e) and 192.475(b) must be retained for as long as the pipeline remains in service.

Although the requested records were provided for review, they were not completed in a correct manner and demonstrated insufficient detail to demonstrate the adequacy of corrosion control measures. The documentation provided during the inspection of the 2015 annual survey, lacked both the survey date and personnel identification for whom conducted the survey; this was shown on page 3 of the survey. The documentation, on page 41, also lacked the personnel identification for whom conducted the survey. For the 2016 annual survey audit, page 3 lacked the personnel identification for whom conducted the survey as well.

03/27/18 – Colonial Pipeline Co. (#44)

COLONIAL PIPELINE CO

Case CPF 120175013

This report lists key information pertaining to a particular enforcement case [(1)]. For cases i
any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Fin
Amendment.

Case Summary | Documents

Case Summary

Operator	COLONIAL PIPELINE CO
Case Number	120175013
Case Type	Proposed Civil Penalty
Subject(s)	Construction - Hazardous Liquid Pipelines
Region	Eastern
Date Opened	04/27/17
Status	CLOSED
Proposed Civil Penalty	$32,800
Assessed Civil Penalty	$32,800
Collected Civil Penalty	$32,800
Final Order Date	03/07/18
Date Closed	03/27/18

03/27/18 – Colonial Pipeline Co. (#44)

VASCC Inspector Field Observations:

1. CPL applied Special Polymer Coating SP-2888 Brush Grade to seven welds prior to the VASCC inspector's arrival. The coating had visible white streaks, indicating that the coating was not thoroughly mixed prior to application.
2. The coating application construction crew was mixing Special Polymer Coating SP-2888 Brush Grade by hand with a wooden paint paddle and applied the coating to the additional welds while the VASCC was on-site.

The VASCC inspector informed CPL that the coating was not mixed with the use of a variable speed drill fitted with a mixing impeller, as required by the *manufacturer's specifications.* In CPL's NOI Response to the VASCC dated April 22, 2016, CPL stated that they agreed that "the mixing method specified in the product specifications for mixing coating type SP-2888 is by mechanical means." Subsequently CPL removed and recoated all coating in question.

Therefore, CPL failed to construct each pipeline system in accordance with comprehensive written specifications.

Proposed Civil Penalty

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed $205,638 per violation per day the violation persists up to a maximum of $2.056,380 for a related series of violations. For violations occurring between January 4, 2012 to August 1, 2016, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed $100,000 per violation per day, with maximum penalty not to exceed $1,000,000 for related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation(s) and has recommended that you be preliminarily assessed a civil penalty of $32,800 as follows:

Item number	PENALTY
1	$32,800

06/22/18 – Algonquin Gas Transmission, L.L.C. (Spectra) (#88)

ALGONQUIN GAS TRANSMISSION, L.L.C. (SPECTRA ENERGY PARTNERS,

Case CPF 120171006

This report lists key information pertaining to a particular enforcement case [(1)]. For cases initiated after Jan
any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Final Orders in certa
Amendment.

Case Summary | Documents

Case Summary

Operator	ALGONQUIN GAS TRANSMISSION, L.L.C. (SPECTRA ENERGY PARTNERS,
Case Number	120171006
Case Type	Proposed Civil Penalty
Subject(s)	Corrosion Control - Gas Pipelines
Region	Eastern
Date Opened	12/18/17
Status	CLOSED
Proposed Civil Penalty	$65,500
Assessed Civil Penalty	$65,500
Collected Civil Penalty	$65,500
Final Order Date	06/22/18
Date Closed	06/22/18

06/22/18 – Algonquin Gas Transmission, L.L.C. (Spectra) (#88)

As a result of the inspections, it appears that you have committed probable violations of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violations are:

1. **§192.465 External corrosion control: Monitoring**

   (a) Each pipeline that is under cathodic protection must be tested at least once each calendar year, but with intervals not exceeding 15 months, to determine whether the cathodic protection meets the requirements of §192.463…

   (d) Each operator shall take prompt remedial action to correct any deficiencies indicated by the monitoring.

AGT failed to take prompt remedial action to correct deficiencies indicated by its cathodic protection (CP) monitoring.

During the inspection, the PHMSA inspector reviewed CP monitoring records from 2012-2014 for AGT's pipeline system located in the Westwood, MA operating area. The records show that in 9 instances Enbridge failed to take remedial action to correct low potential deficiencies indicated by annual CP monitoring at 6 different test stations within the Boston/Westwood and Hubline areas prior to the next scheduled inspection.

The CP criterion for each test station and the inspection results are stored in AGT's PCS database.

1. For test station 103+70 16in IF Potter STA:
   a. The "-100 mV criteria" was designated
   b. Native/depolarized potentials:
      i. Are required with this criterion to demonstrate the level of polarization achieved.
      ii. Were not documented in 2012 and 2013.

06/22/18 – Algonquin Gas Transmission, L.L.C. (Spectra) (#88)

2. For five additional test stations:
   a. The criterion designated was the -0.850 VDC "ON" criterion, in accordance with 49 CFR Part 192 Appendix D (I)(A)(1).
   b. AGT SOP *2-2200, Application of Cathodic Protection Criteria*, dated 4/09/2010, Pages 3-4, defines this criterion and how it is applied, stating in part:

      "RESPONSE/REMARKS. This is a negative (cathodic) potential of at least 850 mV with the cathodic protection applied…

      ACTION. CONSIDER voltage drops other than those across the structure-to-electrolyte boundary for valid interpretation of this voltage measurement:

      - Measuring or calculating the voltage drop(s);
      - Reviewing the historical performance of CP system;
      - Evaluating the physical/ electrical characteristics of the pipe and its environment;

      Determining if there is physical evidence of corrosion."

The IR Free measurements in the Annual Survey records represent the measured structure pipe-to-soil reading with IR drop eliminated. As these IR Free measurements are more positive than - 0.850V, they fail to meet the requirements of 49 CFR Part 192 Appendix D (I)(A)(1). Readings failing to meet criteria must have prompt remedial actions taken to correct these deficiencies. Remedial action should correct the deficiency before the next monitoring cycle required by §192.465. The presence of consecutive years of IR Free readings more positive than -0.850V indicates that these deficiencies were not promptly corrected.

06/22/18 – Algonquin Gas Transmission, L.L.C. (Spectra) (#88)

2. **§192.481 Atmospheric corrosion control: Monitoring.**

   (a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	Then the frequency of inspection is:
Onshore	At least once every 3 calendar years, but with intervals not exceeding 39 months

AGT failed to inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion at a frequency of at least once every 3 calendar years, but with intervals not exceeding 39 months, at 3 locations on its Q pipeline System within the Boston/Westwood area.

During the inspection, the PHMSA inspector reviewed atmospheric corrosion inspection records from 2012 through November 4, 2015 for AGT's Q and I System pipelines, located in the Westwood, MA operating area.

The records indicated that Valve Q11, Milford M&R #20, and Valve H11-Q1-Launcher, atmospheric corrosion inspections occurred on 4/5/2012. At the time of the inspection, AGT did not have atmospheric corrosion inspection records for 2015 for these locations. On 11/6/2015 and 11/9/2015, after the inspection, AGT conducted atmospheric corrosion inspections at the three locations referenced above.

Thus, AGT exceeded the 39-month limit by 123 days for 2 locations, and by 126 days for 1 location.

06/22/18 – Algonquin Gas Transmission, L.L.C. (Spectra) (#88)

Proposed Civil Penalty

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed $209,002 per violation per day the violation persists, up to a maximum of $2,090,022 for a related series of violations. For violations occurring prior to November 2, 2015, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation(s) and has recommended that you be preliminarily assessed a civil penalty of $65,500 as follows:

Item number	PENALTY
1	$ 40,300
2	$ 25,200

12/12/18 – Texas Eastern Transmission (Spectra) (#177)

TEXAS EASTERN TRANSMISSION, LP (SPECTRA ENERGY PARTNERS, LP)

Case CPF 120181024W

This report lists key information pertaining to a particular enforcement case [(1)]. For cases initiated after Jan
any), and PHMSA's Final Order (if an Order is issued) are provided. PHMSA only issues Final Orders in certa
Amendment.

Case Summary | Documents

Case Summary

Operator	TEXAS EASTERN TRANSMISSION, LP (SPECTRA ENERGY PARTNERS, LP)
Case Number	120181024W
Case Type	Warning Letter
Subject(s)	Corrosion Control - Gas Pipelines Emergency Response - Gas Pipelines Procedure Manuals - Gas Pipelines Qualification of Pipeline Personnel - Gas Pipelines
Region	Eastern
Date Opened	12/12/18
Status	CLOSED
Date Closed	12/12/18

12/12/18 – Texas Eastern Transmission (Spectra) (#177)

1. **§ 192.481 Atmospheric Corrosion Control: Monitoring**

   (a) Each operator must inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion, as follows:

If the pipeline is located:	Then the frequency of inspection is:
Onshore	At least once every 3 calendar years, but with intervals not exceeding 39 months
Offshore	At least once each calendar year, but with intervals not exceeding 15 months

Texas Eastern failed to inspect each pipeline or portion of pipeline that is exposed to the atmosphere for evidence of atmospheric corrosion at a frequency of at least once every 3 calendar years, but with intervals not exceeding 39 months, at 46 inspection locations within its Delmont Station.

During the inspection, the PHMSA inspector reviewed atmospheric corrosion inspection records from 2012 – 2016 for Texas Eastern's pipelines located in the North-East System.

The records demonstrated that Texas Eastern failed to inspect 46 atmospheric corrosion evaluation locations within the Delmont Station at least once every 3 calendar years. Atmospheric corrosion evaluations were performed on 11/14/2012, with next inspections due by 12/31/15. The next atmospheric corrosion evaluations were performed on 3/9/2016.

Therefore, Texas Eastern failed to inspect portions of its pipelines exposed to the atmosphere for evidence of atmospheric corrosion at least once every 3 calendar years at its Delmont Station.

12/12/18 – Texas Eastern Transmission (Spectra) (#177)

5. **§ 192.805 Qualification Program**

   Each operator shall have and follow a written qualification program. The program shall include provisions to:

   (a) Ensure through evaluation that individuals performing covered tasks are qualified;

Texas Eastern failed to ensure through evaluation that individuals performing covered tasks are qualified.

During the inspection, the PHMSA inspector reviewed Enbridge Compliance Atmospheric Reports as well as Veriforce Field Verification Reports.

Texas Eastern Technician Candidate ID: tf-613037-01 did not have Task ID: 417OP: Atmospheric Corrosion Monitoring, qualifying them to inspect for Atmospheric Corrosion. Candidate ID: tf-613037-01 is listed on Enbridge Compliance Atmospheric Report as the technician who performed this task in 76 instances on the Northeast System: Uniontown-Delmont.

When questioned, Texas Eastern stated that Candidate ID: tf-613037-01 was observed by another technician that is qualified under Task ID: 417OP. However, Texas Eastern could not produce any documentation to demonstrate that the individual was observed by a qualified individual when performing the task.

12/12/18 – Texas Eastern Transmission (Spectra) (#177)

Under 49 U.S.C. § 60122 and 49 CFR § 190.223, you are subject to a civil penalty not to exceed $209,002 per violation per day the violation persists, up to a maximum of $2,090,022 for a related series of violations. For violations occurring prior to November 2, 2015, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item(s) identified in this letter. Failure to do so will result in Texas Eastern Transmission, LP being subject to additional enforcement action.

Tenaska – Antioch M&R

Valve V-266 at M.P. 1502.292 / SS 6096+41 – Fluvanna County, Virginia

Power Operator removed and replaced with Manual Operator

WGP Form #0200A FA Tracker MOCR #71821

Galvanic anodes disconnected and valve section now protected by impressed current anodes powered by rectifier system

Explanation of action taken in regard to PHMSA warning letter dated 5/8/2017 – CPF 1-2017-1021W

by Conway Wolfrey and Bill Deaton

Appalachian Underground Corrosion Short Course

PHMSA Warning Letter CPF 1-2017-1012W dated May 8, 2017 – relevant information highlighted

U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

820 Bear Tavern Road, Suite 103
West Trenton, NJ 08628
609.771.7800

WARNING LETTER

OVERNIGHT EXPRESS DELIVERY

May 8, 2017

Mr. Mark Cluff
VP Safety & Operational Discipline
Transcontinental Gas Pipe Line Company
One Williams Center
Tulsa, OK 74172

CPF 1-2017-1012W

Dear Mr. Cluff:

From August 1 – 5, 2016, representatives of the Pipeline and Hazardous Materials Safety Administration (PHMSA), Office of Pipeline Safety, pursuant to Chapter 601 of 49 United States Code, inspected Transcontinental Gas Pipe Line Company's (Transco) VA-North District, PHMSA Unit #891 in Manassas, VA.

As a result of the inspection, it appears that you have committed a probable violation of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violation is:

1. **§ 192. 605 Procedural Manual for operations, maintenance, and emergencies**

   (a) General. Each operator shall prepare and follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. For transmission lines, the manual must also include procedures for handling abnormal operations. This manual must be reviewed and updated by the operator at intervals not exceeding 15 months, but at least one each calendar year. This manual must be prepared before operations of a pipeline system commence. Appropriate parts of the manual must be kept at locations where operations and maintenance activities are conducted.

Transco failed to follow for each pipeline, a manual of written procedures for conducting operations and maintenance activities and for emergency response. Specifically, Transco failed to

follow its written procedure *20.06.03, Cathodic Protection Criteria*, Rev.13, dated 3/27/2013 (Procedure), pursuant to 192.463(a).

§192.463 (a) states "Each cathodic protection system required by this subpart must provide a level of cathodic protection that complies with one or more of the applicable criteria contained in Appendix D of this part. If none of these criteria is applicable, the cathodic protection system must provide a level of cathodic protection at least equal to that provided by compliance with one or more of these criteria."

Transco's Procedure establishes the CP protection criteria utilized to confirm adequate external corrosion control on their facilities. The 3 criteria listed in this procedure are:

1. -0.850 Volt Pipe-to-Soil (with IR drop considered),
2. 100 mV Voltage Shift (Polarization Decay), and
3. 300 mV Shift.

Section 1.0. Using the -0.850 Volt Pipe-to-Soil Criteria, paragraph 1.3 states "Consider any voltage (IR) drops according to WilSOP O&M 20.06.02 – Methods for IR Drop Correction."

During the inspection, the PHMSA inspector reviewed annual CP survey records for 2014, 2015 and 2016 for test points within Transco's Virginia - North district.

The 2014 records at relative station engineering numbers 76599+25, 76599+26 and 76599+27 (test points 30, 31 and 32), located at the V-266 flow control valve within the Tenaska-Antioch M&R station, indicated the following:

1. Inspection remarks: "Mags not interrupted."
2. Structure P/S [Pipe to Soil] and Structure IRF [IR Free]:
   a. Values recorded under the "Structure IRF" column were more negative than the values in the "Structure P/S" column at test points 30 and 31, indicating that current sources may have been interrupted and that IR drop had not been considered.
   b. Transco Asset Integrity personnel indicated that there are uninterruptable anodes at this location that are not detached during annual CP surveys.

Structure P/S	Structure IRF	Native P/S	OCP	Casing P/S	Inspection Remarks	Inspection Date
-1.118	-1.193				Mags not interrupted	3/20/2014
-1.156	-1.181					2/25/2015
-1.023	-1.089					4/14/2016
-1.094	-1.170				Mags not interrupted	3/20/2014
-1.089	-1.117					2/25/2015
-0.971	-1.047					4/14/2016
-4.002	-2.157				Mags not interrupted	3/20/2014

3. The "Native P/S" column of the report was blank. The lack of native pipe-to-soil readings in the "Native P/S" column prevents application of criterion other than the -0.850 Volt Pipe-to-Soil criteria, such as the 100 mV Voltage Shift or 300 mV Criteria found in Transco's 20.06.03 procedure for CP criteria.

Thus, Transco did not demonstrate that IR-drop was considered at these tests points, or that another valid cathodic protection criterion was utilized at this location in accordance with their written procedures.

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed $205,638 per violation per day the violation persists up to a maximum of $2,056,380 for a related series of violations. For violation occurring between January 4, 2012 to August 1, 2016, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed $100,000 per violation per day, with a maximum penalty not to exceed $1,000,000 for a related series of violations. We have reviewed the circumstances and supporting documents involved in this case, and have decided not to conduct additional enforcement action or penalty assessment proceedings at this time. We advise you to correct the item identified in this letter. Failure to do so will result in Transco being subject to additional enforcement action.

Be advised that all material you submit in response to this enforcement action is subject to being made publicly available. If you believe that any portion of your responsive material qualifies for confidential treatment under 5 U.S.C. 552(b), along with the complete original document, you must provide a second copy of the document with the portions you believe qualify for confidential treatment redacted and an explanation of why you believe the redacted information qualifies for confidential treatment under 5 U.S.C. 552(b).

No reply to this letter is required. If you choose to reply, please submit all correspondence in this matter to Robert Burrough, Acting Director, PHMSA Eastern Region, 820 Bear Tavern Road, Suite 103, West Trenton, NJ 08628. Please refer to **CPF 1- 2017-1012W** on each document you submit, and whenever possible provide a signed PDF copy in electronic format. Smaller files may be emailed to robert.burrough@dot.gov. Larger files should be sent on a CD accompanied by the original paper copy to the Eastern Region Office.

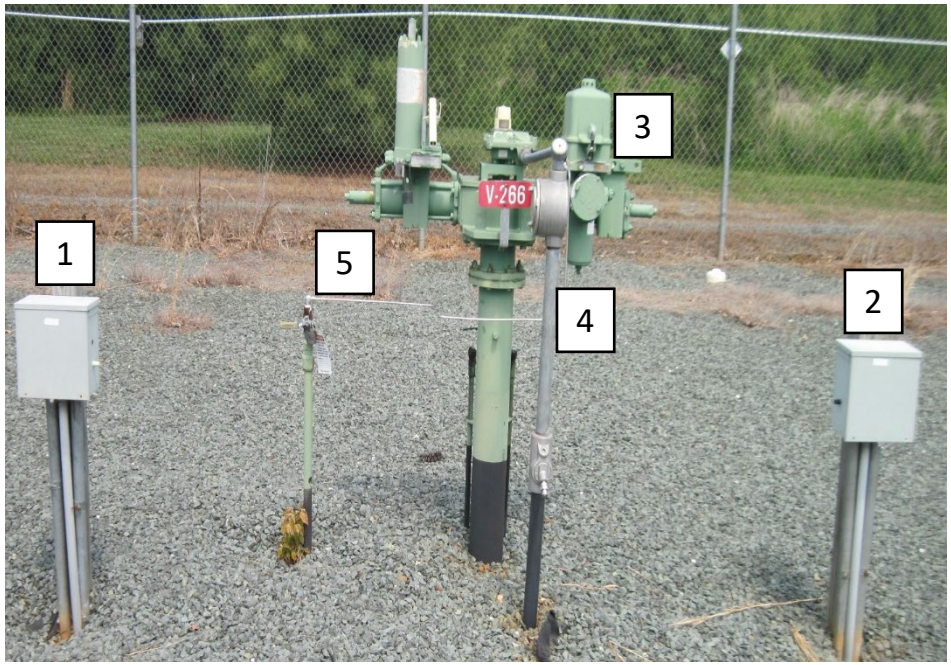
Additionally, if you choose to respond to this (or any other case), please ensure that any response letter pertains solely to one CPF case number.

Sincerely,

Robert Burrough
Acting Director, Eastern Region
Pipeline and Hazardous Materials Safety Administration

Valve V-266 with operator May 2014

1. Upstream insulating flange box with flange wires unbonded. Galvanic anodes connected to the valve side of flange.
2. Downstream insulating flange box with flange wires unbonded. Galvanic anodes connected to the valve side of flange.
3. Gas powered valve operator.
4. Control and signal wire conduit connected to operator for control and valve position indication.
5. Power Gas connected to operator.



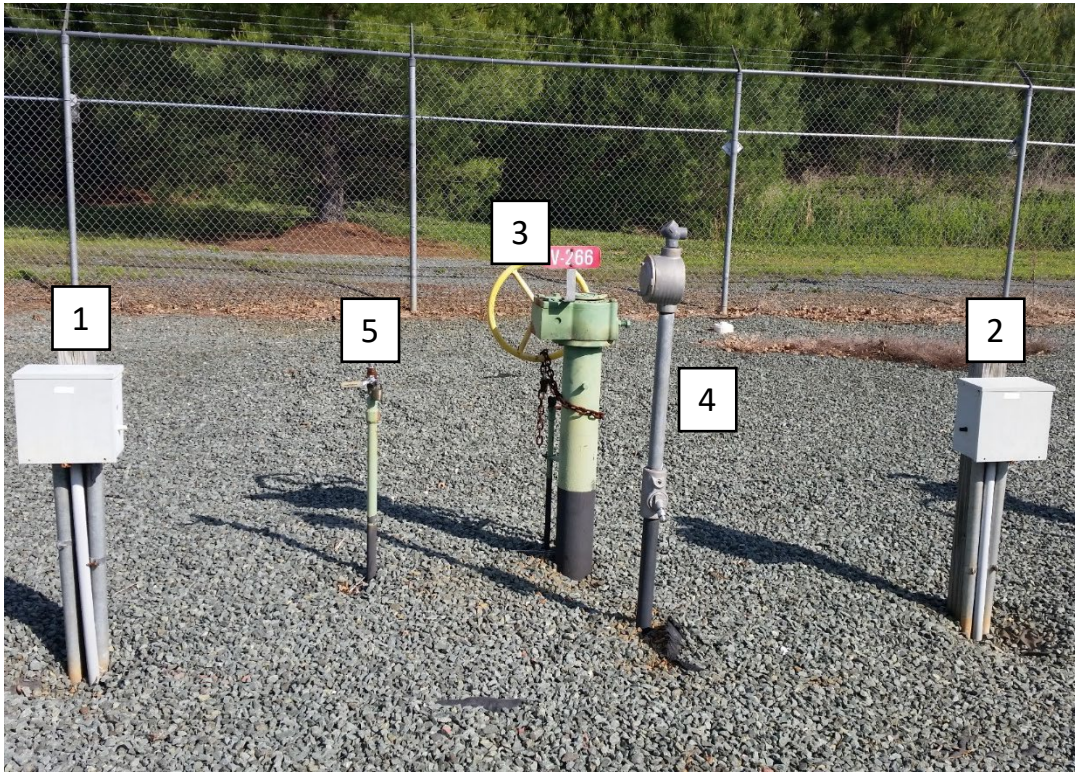

Opposite Side

Resolution

- Interruption could have been performed but it was determined that the operator and associated conduit were not needed anymore. So, it was decided that this equipment would be removed so that the galvanic anodes could be detached, the isolation flanges bonded, and allow the impressed current from nearby rectifiers protect the pipe.
- IR free pipe to soil readings were first required in 2013 but the interruption of small banks of galvanic anodes is difficult to perform due to the resistance of current interrupters. The current interrupters typically do not allow the flow of current due to their internal resistance.
- Despite not taking IR free pipe to soil readings at this location per Procedure 20.06.03, the galvanic anodes have protected the below ground valve and associated piping from corrosion.

Valve V-266 with operator May 2017

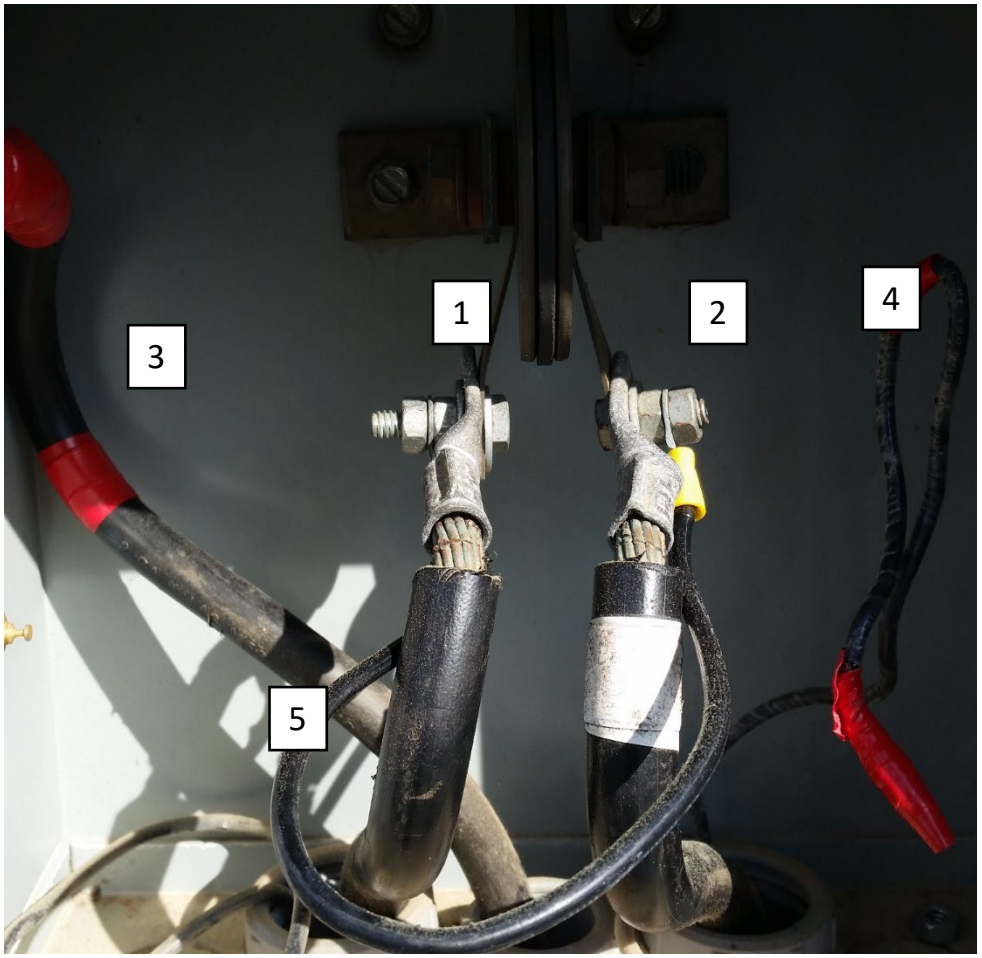
1. Upstream insulating flange box with flange wires bonded. Galvanic anodes disconnected from the valve side of flange.
2. Downstream insulating flange box with flange wires bonded. Galvanic anodes disconnected from the valve side of flange.
3. Manual valve operator with hand wheel.
4. Control and signal wire conduit disconnected from operator.
5. Power Gas disconnected from operator.




Opposite Side

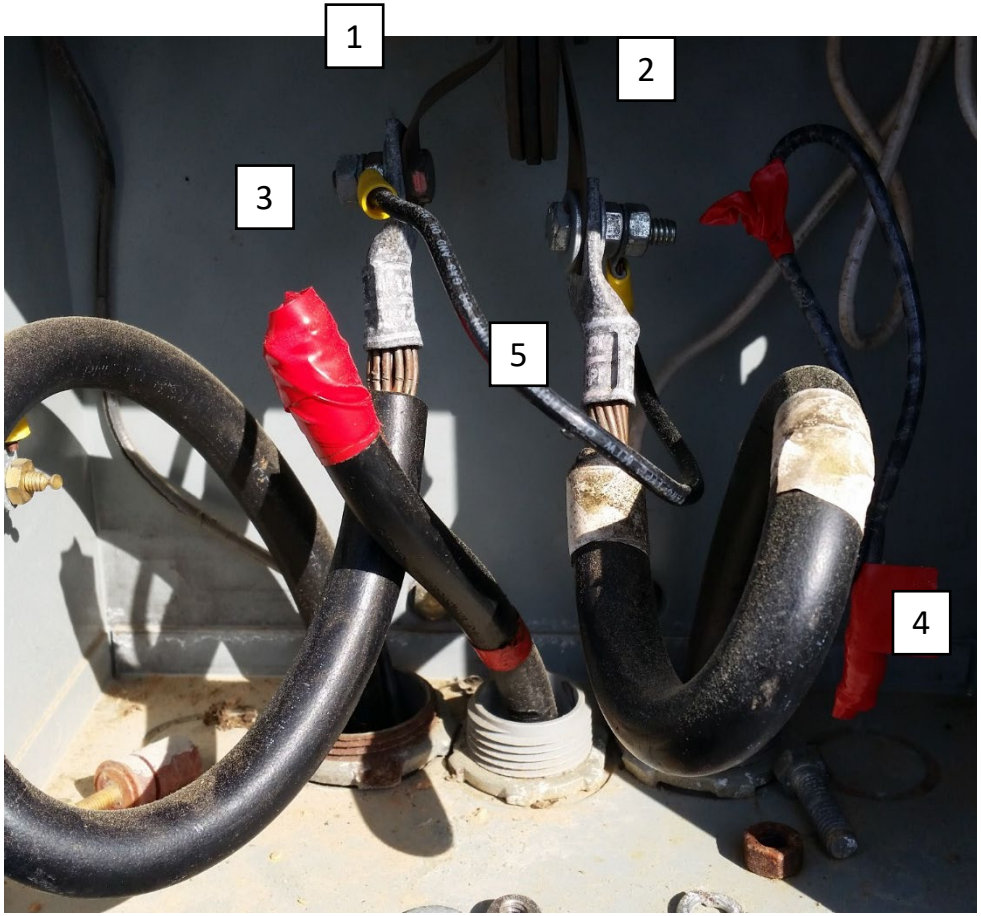
Inside view of upstream flange box May 2017

1. Flange wire.
2. Flange wire.
3. Anode wire.
4. Anode wire.
5. Bonding wire.



Inside view of downstream flange box May 2017

1. Flange wire.
2. Flange wire.
3. Anode wire.
4. Anode wire.
5. Bonding wire.



05/19/17 – Danville, City of (#76a)

Item number	PENALTY
1	$18,700

Case Summary

Operator	DANVILLE, CITY OF
Case Number	120130010
Case Type	Proposed Civil Penalty Warning Item
Subject(s)	Corrosion Control - Gas Pipelines (withdrawn) Maintenance - Gas Pipelines
Region	Eastern
Date Opened	12/23/13
Status	CLOSED
Proposed Civil Penalty	$18,700
Assessed Civil Penalty	$0
Collected Civil Penalty	$0
Basis for penalty reduction	Operator provided additional evidence
Consent Order Date	07/19/16
Date Closed	05/19/17

The City of Danville (City) failed to cathodically protect, in accordance with Subpart I, each segment of buried or submerged pipe that is required to be repaired because of external corrosion. Specifically, the City repaired a segment of externally corroded buried pipe and failed on one occasion to cathodically protect the pipe as required by §192.483(c) after corrosion was found.

On 11/15/2011, the City repaired a corrosion leak on a 2 inch bare steel service line with a leak clamp. On 5/23/2013, after the finding was identified during the 5/8/2013 VA SCC inspection, the City replaced the service line with plastic pipe.

05/19/17 – Danville, City of (#76b)

The City's response:

Note that the allegation states that the subject gas service line at 101 Marshall Terrace was replaced on 5/21/13 with a two inch diameter service thirteen days after the 5/8/13 VA SCC visit.

In 1990 the City had approximately 5800 bare steel services in its natural gas distribution system. The bare steel services at that time accounted for approximately 37% of the City's services.

In 2005, the City began a very pro-active bare steel replacement program that utilized both City crews and contractor crews. As of this letter there are approximately 137 bare steel services remaining in the system.

The service line noted by the VA SCC was repaired in 11/15/2011 when the bare steel service lines were being aggressively replaced. In February 2012 the contract with the contractor working on the bare steel service line replacements expired and the City crew's focus shifted to cast iron and ductile iron main replacements.

Many of the remaining bare steel services are connected to cast iron and ductile iron mains; therefore, it was considered that the bare steel replacements would continue but at a slower pace. Since 1990, the City has spent nearly $4,000,000 (average replacement cost of $700 per service) to remove the bare steel service lines from its natural gas distribution system.

While the City's bare steel service replacement program is not directly correlated to the issues addressed in this item, the City has spent a significant amount of money to remove over 94% of its bare steel services and it was always the intent of the City to replace the service identified in Item 1.

A review of our Annual Reports will verify the above replacement information.

Case Summary

Operator	DANVILLE, CITY OF
Case Number	120130010
Case Type	Proposed Civil Penalty Warning Item
Subject(s)	Corrosion Control - Gas Pipelines (withdrawn) Maintenance - Gas Pipelines
Region	Eastern
Date Opened	12/23/13
Status	CLOSED
Proposed Civil Penalty	$18,700
Assessed Civil Penalty	$0
Collected Civil Penalty	$0
Basis for penalty reduction	Operator provided additional evidence
Consent Order Date	07/19/16
Date Closed	05/19/17

06/15/17 – Transcontinental Gas Pipe Line Company (#96a)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

1. §192.605 Procedural manual for operations, maintenance, and emergencies.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part.

Transco's written procedure 70.14.01, *Pipeline Repair*, Rev. 23, dated 11/09/16, is inadequate in that it contains conflicting information regarding methods of repair to be utilized for certain defects.

Table 1 of Transco's procedure 70.14.01, *Pipeline Repair*, Rev. 23, dated 11/09/16, summarizes the repair options available for various types of defects. Section 5.1.1 of this procedure instructs the Asset Integrity Manager to "Determine the appropriate repair method according to Table 1".

The information in Table 1 conflicts with the options provided in the rest of the procedure regarding repair options for external corrosion defects that are greater than 80% of the wall thickness, but not leaking. The Table indicates that the preferred method for repairing these defects is a Type "A" Sleeve or Cut Out. For Type "B" Sleeves it states that they are "optional/not recommended" as a repair method.

Figure 4 of the procedure provides a decision flow chart for repairing corrosion defects. Following through the flowchart, it indicates the repair options when less than 20% of the wall thickness remains at a corrosion anomaly are a Type "B" Sleeve or Cut Out.

Finally, Section 4.1.2.3 of the procedure states the following when evaluating corrosion:

"If the remaining wall thickness is less than 20% of nominal, cut out and replace as a cylinder or install a type "B" sleeve."

The information in Table 1 conflicts with the flowchart found in Figure 4 and with Section 4.1.2.3 of the procedure. As Table 1 is to be used as reference by the Asset Integrity Manager in determining the appropriate repair method for a defect under section 5.1.1, there should be no conflict between its contents and the repair methods recommended by other portions of the procedure.

06/15/17 – Transcontinental Gas Pipe Line Company (#96b)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

2. §192.605 Procedural manual for operations, maintenance, and emergencies.

(1) Operating, maintaining, and repairing the pipeline in accordance with each of the requirements of this subpart and subpart M of this part.

Transco's written Policy 70.16.00.07, *DOT Valve Maintenance*, Rev. 7, dated 12/31/2012, is inadequate in that it does not provide sufficient detail for meeting the requirements of 192.745(a).

§192.745(a) states in part: "Each transmission line valve that might be required during an emergency must be inspected and partially operated…"

During the inspection, the PHMSA inspectors reviewed Transco's valve inspection records and Transco's Operation and Maintenance (O&M) procedures.

Transco's Policy 70.16.00.07 *DOT Valve Maintenance* states in part:

"1.2 It is the policy that the District maintains a list of DOT valves.

1.2.1 Depending on the facilities in the District, this list may include the following valves that could be utilized during an emergency:

- Compressor Station Block Valves
- Compressor Station Side Gate Valves
- Compressor Station Blowdown Valves
- Mainline and Lateral Block Valves
- Mainline and Lateral Crossover Valves (between parallel lines)
- Mainline and Lateral Block B1 and B2 Valves (bypass)
- Meter Station Tap Valves
- Automatic ESD Station Fuel Gas Supply Valves
- Offshore Platform Isolation Valves
- Offshore Platform Blowdown Valves

3.1 The District Manager is responsible for compliance with this policy throughout their assigned geographic region."

The procedure and policy failed to provide details, such as:

1. Criteria/process for the emergency valve designation process
2. Individuals responsible for developing the valve designation criteria
3. Process for keeping the list of emergency valves current
4. Documentation requirements
5. Process to review records for completeness and accuracy

06/15/17 – Transcontinental Gas Pipe Line Company (#96c)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

3. §192.605 Procedural manual for operations, maintenance, and emergencies.

(2) Controlling corrosion in accordance with the operations and maintenance requirements of Subpart I of this part.

Transco's written procedures for corrosion control, including 20.06.03, *Cathodic Protection Criteria,* Rev. 13, dated 03/27/2013, and 20.07.01, *Annual Cathodic Protection Surveys*, Rev. 14, dated 1/30/2013, fail to address the requirements of 192.463(c). Specifically, they are inadequate in that they do not contain information such as criteria, investigation or remedial measures regarding excessive polarization or overprotection of facilities.

Procedures for controlling corrosion in accordance with the requirements of Subpart I are required under §192.605(b)(2). §192.463(c), found in Subpart I of 49 C.F.R. Part 192, requires that "The amount of cathodic protection must be controlled so as not to damage the protective coating or the pipe."

The procedures do not include sufficient guidance on controlling the amount of cathodic protection, such as:

1. Criteria for what indicates over voltage, such as a threshold polarized potential;
2. A process for determining if indications of over voltage are a threat to the integrity of a pipeline or its protective coating; and
3. Remedial actions if the over voltage is determined to be a threat to the pipeline or its protective coating.

06/15/17 – Transcontinental Gas Pipe Line Company (#96d)

Case Summary

4. §192.605 Procedural manual for operations, maintenance, and emergencies.

(2) Controlling corrosion in accordance with the operations and maintenance requirements of Subpart I of this part.

Transco's written procedure 20.53.04, *Insulating Flange Testing*, Rev. 6, dated 2/25/2013, is inadequate in that it fails to provide sufficient guidance with regards to §192.467(d). Specifically, it does not provide guidance consistent with Transco's current practices for determining when further testing is required after a potential, unintentional short is discovered.

Procedures for controlling corrosion in accordance with the requirements of Subpart I are required under §192.605(b)(2). §192.467(d), found in Subpart I of 49 C.F.R. Part 192, requires that "Inspection and electrical tests must be made to assure that electrical isolation is adequate."

Transco's procedure 20.53.04, dated 2/25/2013, Section 2.2 states in part "Consider further testing as outlined in the following processes in this procedure if the IR drop is less than 100 mV" when testing IR drop across an insulating flange. The procedure lacks specificity on how it is determined that further testing is needed. Transco personnel indicated that after a potential, unintentional short at an electrical insulating flange is discovered based on an IR drop across it of less than 100 mV, no further testing or other actions are performed if the cathodic protection levels remain adequate (pass utilized cathodic protection criteria). The procedure does not include sufficient guidance for making this determination.

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

06/15/17 – Transcontinental Gas Pipe Line Company (#96e)

- Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Number	120171013M
se Type	Notice of Amendment
bject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Opened	05/09/17
Status	CLOSED
e Closed	06/15/17

Table 1 – Permanent Repairs for Pipeline Defects

Defect Type	Available Repair Method						
	Recoat Only	Sanding	Type "A" Sleeve[1]	Type "B" Sleeve	Bolt On Clamp	Composite Reinforced Sleeve	Cut Out
Leaking Defects	Not Permitted	Not Permitted	Not Permitted	Optional	Optional – Consult Asset Integrity	Not Permitted	Preferred method*
Leaking Mechanical (Dresser) Coupling	Repair by tightening, using housing (pumpkin) or cutout.						
Mechanical Equipment Leaks (Valves and Fittings)	Repair in accordance with manufacturer's guidelines, or cut out and replace.						
Metal Loss < 10% Nominal WT	Preferred method	Not Permitted	Optional	Optional	Optional	Optional	Optional
Metal Loss ≥10% & ≤80% Nominal WT & Passes B31G/RSTRENG	Preferred method	Not Permitted	Optional	Optional	Optional	Optional	Optional
Metal Loss ≥10% & <80% Nominal WT & Fails RSTRENG	Not Permitted	Not Permitted	Optional	Optional	Not Permitted	Preferred method	Optional
Metal Loss ≥ 80% of Nominal WT	Not Permitted	Not Permitted	Not Permitted	Optional	Optional – Consult Asset Integrity	Not Permitted	Preferred method

AUCSC

Appalachian Underground Corrosion Short Course

06/15/17 – Transcontinental Gas Pipe Line Company (#96f)

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Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

1.6	If the polarized potential (*Instant Off*) if less than -1200 mV overprotection possibilities need to be further investigated. **NOTE**: Attempt to locate all additional current sources to properly determine polarized potentials. Take into account coating type, pipe specifications and readings to determine if there is a threat to integrity. Use of coupons, close interval survey, smart tools, or other technologies may be warranted for further investigation. If feasible mitigate the over protection by decreasing your rectifier readings.

06/15/17 – Transcontinental Gas Pipe Line Company (#96g)

- **Case Summary**

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

2.2	Take a voltage (IR) drop from one side of the flange to the other side. **NOTES:** • This number should approximate the difference between the two P/S potentials taken in the previous step. • Perform further testing as outlined in the following processes in this procedure if the IR drop is less than 100 millivolts (mV) regardless of whether both sides meet Cathodic Protection polarization criteria or not.

06/15/17 – Transcontinental Gas Pipe Line Company (#96h)

- **Case Summary**

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

1.2 It is the policy that each District maintain a list of DOT valves. The list may exist in Maximo, OMS, or some other electronic or hardcopy version. This list must be reviewed annually.

1.3 It is the policy to conduct maintenance and inspection in accordance with 07.10.322-PMR – VA-V Valve Inspection and Maintenance. Complete form F07-812 – Valve Inspection Report or information can be kept in the Computerized Maintenance Management System (CMMS), i.e. Maximo or OMS, if all the required data is captured.

06/15/17 – Transcontinental Gas Pipe Line Company (#96i)

- Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

1.4 Review each submitted F07-812 – Valve Inspection Report for completeness and accuracy. Take prompt remedial action to correct any valve found inoperable, unless an alternative valve can be designated. Document remedial actions taken on the F07-812 Valve Inspection Report.

2.2 The frequency of reviewing the DOT valve list shall be at intervals not exceeding 15 months, but at least once each calendar year.

3.0 Responsibility

3.1 The District Manager is responsible for compliance with this policy throughout their assigned geographic region.

06/15/17 – Transcontinental Gas Pipe Line Company (#96j)

- **Case Summary**

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171013M
Case Type	Notice of Amendment
Subject(s)	Procedure Manuals - Gas Pipelines
Region	Eastern
Date Opened	05/09/17
Status	CLOSED
Date Closed	06/15/17

Between May 23, 2016 and October 28, 2016, a representative from the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to chapter 601 of 49 United States Code, inspected Transcontinental Gas Pipe Line Company's (Transco) plans and procedures as part of an integrated inspection of Transco's Charlottesville and Princeton Divisions. As a result of the inspection, Transco was issued a Notice of Amendment on May 9, 2017, which proposed amendment of your procedures.

Transco submitted its amended procedures on June 9, 2017. My staff reviewed the amended procedures, and it appears that the inadequacies outlined in this Notice of Amendment have been corrected.

This letter is to inform you no further action is necessary and this case is now closed. Thank you for your cooperation.

06/27/17 – Transcontinental Gas Pipe Line Company (#105a)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120161009
Case Type	Proposed Civil Penalty
Subject(s)	Welding - Gas Pipelines
Region	Eastern
Date Opened	11/02/16
Status	CLOSED
Proposed Civil Penalty	$39,700
Assessed Civil Penalty	$39,700
Collected Civil Penalty	$39,700
Final Order Date	06/27/17
Date Closed	06/27/17

From September 15 -19, 2014, a representative of the Pipeline and Hazardous Materials Safety Administration (PHMSA), pursuant to Chapter 601 of 49 United States Code, inspected Williams's Transcontinental Gas Pipe Line Company's (Transco) replacement of sections of mainlines A, B and C within Unit #2881-Elliott City in Owings Mills, MD.

As a result of the inspection, it appears that you have committed a probable violation of the Pipeline Safety Regulations, Title 49, Code of Federal Regulations. The items inspected and the probable violation is:

1. **§192.243 Nondestructive testing.**

   (b) Nondestructive testing of welds must be performed:

   (1) In accordance with written procedures, . . .

Transco failed to nondestructively test a weld in accordance with its written procedure, which references API Standard 1104.

Specifically, Transco did not place an image quality indicator (IQI) across the repaired area of a repair weld as prescribed in API Std. 1104, Subsection 11.1.6 Placement of Image Quality Indicators. The Overview in Williams's SOP states that "The purpose of this Williams procedure is to establish the minimum requirements for Nondestructive Testing (NDT), inspection, and/or evaluation to meet or exceed the NDT requirements as set forth in American Petroleum Institute (API) 1104, latest Pipeline and Hazardous Materials Safety Administration (PHMSA) accepted edition."

API Std. 1104, Section 11, Procedures for Nondestructive Testing, Subsection 11.1.6 Placement of Image Quality Indicators (IQI), paragraph 11.1.6.1 Film, outlines the placement of IQI on films to be interpreted. Paragraph 11.1.6.1 states in part that:

> "The IQI shall be placed as follows:
>
> a. …When a repaired weld is radiographed, an additional IQI shall be placed across each repaired area."

06/27/17 – Transcontinental Gas Pipe Line Company (#105b)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120161009
Case Type	Proposed Civil Penalty
Subject(s)	Welding - Gas Pipelines
Region	Eastern
Date Opened	11/02/16
Status	CLOSED
Proposed Civil Penalty	$39,700
Assessed Civil Penalty	$39,700
Collected Civil Penalty	$39,700
Final Order Date	06/27/17
Date Closed	06/27/17

During the inspection, the PHMSA inspector requested Line C NDT records for any welds which required repair. Transco provided x-ray film and records associated with weld ML-20 and its repair identified as ML-20R.

The PHMSA inspector observed that there was no IQI placed across the repaired area of the weld. Subsequent to PHMSA's identification of the issue, Transco re-radiographed the repaired weld ML-20R with proper IQI placement, as required in API Std. 1104. On September 18, 2014, the PHMSA inspector photographed the original x-ray film for ML-20 and ML-20R, along with the corrected x-ray film for ML-20R depicting proper placement of the IQI across the repaired area within view 84-90.

Therefore, Transco did not meet the requirement in Subsection 11.1.6 Placement of Image Quality Indicators, paragraph 11.1.6.1 Film of API Std. 1104 which it incorporated into its written NDT procedures.

Proposed Civil Penalty

Under 49 United States Code, § 60122, you are subject to a civil penalty not to exceed $205,638 per violation per day the violation persists up to a maximum of $2.056,380 for a related series of violations. For violations occurring between January 4, 2012 to August 1, 2016, the maximum penalty may not exceed $200,000 per violation per day, with a maximum penalty not to exceed $2,000,000 for a related series of violations. For violations occurring prior to January 4, 2012, the maximum penalty may not exceed $100,000 per violation per day, with maximum penalty not to exceed $1,000,000 for related series of violations. The Compliance Officer has reviewed the circumstances and supporting documentation involved in the above probable violation(s) and has recommended that you be preliminarily assessed a civil penalty of $39,700 as follows:

Item number	PENALTY
1	$39,700

06/27/17 – Transcontinental Gas Pipe Line Company (#105c)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120161009
Case Type	Proposed Civil Penalty
Subject(s)	Welding - Gas Pipelines
Region	Eastern
Date Opened	11/02/16
Status	CLOSED
Proposed Civil Penalty	$39,700
Assessed Civil Penalty	$39,700
Collected Civil Penalty	$39,700
Final Order Date	06/27/17
Date Closed	06/27/17

Respondent did not contest the allegation of violation and paid the proposed civil penalty of $39,700. In accordance with 49 C.F.R. § 190.208(a)(1), such payment authorizes the Associate Administrator to make a finding of violation and to issue this final order.

The Notice alleged that Respondent violated 49 C.F.R. § 192.243(b)(1) by failing to nondestructively test a weld in accordance with its written procedure, which references American Petroleum Institute Standard (API Std.) 1104. Specifically, Transco did not place an image quality indicator (IQI) across the repaired area of a repair weld as prescribed in API Std. 1104, subsection 11.1.6, "Placement of IQIs."

Respondent did not contest this allegation of violation. Accordingly, based upon a review of all of the evidence, I find that Respondent violated 49 C.F.R. § 192.243(b)(1) by failing to nondestructively test a weld in accordance with its written procedure that references API Std. 1104, which requires an additional IQI to be placed across each repaired area of a weld that is radiographed.

This finding of violation will be considered a prior offense in any subsequent enforcement action taken against Respondent.

In summary, having reviewed the record and considered the assessment criteria for each of the Items cited above, I assess Respondent a total civil penalty of **$39,700**. Transco paid the full penalty amount by wire transfer on November 16, 2016.

12/21/17 – Transcontinental Gas Pipe Line Company (#208)

Case Summary

Operator	TRANSCONTINENTAL GAS PIPE LINE COMPANY
Case Number	120171022W
Case Type	Warning Letter
Subject(s)	Welding - Gas Pipelines
Region	Eastern
Date Opened	12/21/17
Status	CLOSED
Date Closed	12/21/17

Williams provided 2016-2017 welder qualification records, which included Form WGP-0120 WilSOP Welder Qualification Records (WGP-0120), and Form WGP-0149 WilSOP Weld Inspection Film Report (WGP-0149).

The WGP-0120s documented that two welders were destructively qualified under the applicable procedure on September 17, 2016 and/or September 19, 2016 at Station 175. Both welders were subsequently requalified by non-destructive examination (NDE) on November 23, 2016 per the requirements of § 192.229(c)(1) and Williams Procedure.

The WGP-0149s showed the acceptability of the welds under API 1104 Section 9. However, the November 23, 2016 form did not properly identify the welders who performed the qualification welds. Typically, the radiographic interpretation report utilized for welder requalification will include the following information, but not limited to:

- Objective for record keeping purposes
- Welder identification – name and/or last four digits of his social security
- Welder number or an assigned project stencil in order to establish continuity

During the inspection exit meeting and in subsequent follow-up requests, Williams conveyed that it could not provide any documentation directly tying the two welders in question to the requalification welds and/or associated NDE records provided.

Therefore, Williams failed to maintain adequate documentation of two welders to support welder requalification, per the requirements of § 192.229(c) - API Std. 1104.

Miscellaneous

- Failure to install CP system – Proposed 12021045NOPV_PCO PCP_12222021_(19-151550)_text.pdf (dot.gov) and Final 12021045NOPV_Final Order_04222022_(19-151550)_text.pdf (dot.gov)

- PHMSA: Stakeholder Communications - Listing of Cases Closed (dot.gov)