

MISSOURI PUBLIC SERVICE COMMISSION

STAFF's GAS INCIDENT REPORT

Appendix G

Credentials and Case Participation

Spire Missouri Inc. d/b/a Spire Missouri West

Case No. GS-2019-0015

*Commission Staff Division
Safety Engineering Department
July 31, 2019 - Jefferson City, Missouri*

**TABLE OF CONTENTS OF
STAFF's GAS INCIDENT REPORT
CREDENTIALS AND CASE PARTICIPATION**

**SPIRE MISSOURI WEST
CASE NO. GS-2019-0015**

| | |
|------------------------------|---|
| Brian J. Buchanan | 1 |
| Clinton L. Foster | 3 |
| John D. Kottwitz | 5 |
| Kathleen A. McNelis, PE..... | 9 |

Educational and Employment Background and Credentials
of
Brian J. Buchanan

I earned an Associates of Science degree in Civil Engineering and Construction Management from State Tech (Formerly Linn State Tech) in Missouri. I am a member of the Professional Fire and Fraud Investigators Association (PFFIA).

I am currently employed as a Technical Specialist II in the Safety Engineering Department in the Commission Staff Division of the Missouri Public Service Commission (“Commission”). The Safety Engineering Department performs inspections of natural gas pipeline operators jurisdictional to Missouri for enforcement of Missouri pipeline safety regulations, and performs investigations of pipeline related incidents. Training of Staff in the Safety Engineering Department to perform inspections and investigations is provided by the Pipeline and Hazardous Materials Administration (PHMSA)’s Inspector Training and Qualifications Division (TQ). The following is a listing of the PHMSAA TQ training requirements that I have completed:

| Course Title from PHMSA TQ Learner Transcript |
|---|
| PHMSA-PL1245 Safety Evaluation of Distribution Integrity Management Programs (DIMP) Course |
| PHMSA-PL1250 Safety Evaluation of Gas Pipeline Systems Course |
| PHMSA-PL1255 Gas Pressure Regulation and Overpressure Protection Course |
| PHMSA-PL1310 Plastic and Composite Materials Course |
| PHMSA-PL1GLAW Introduction to Gas Laws |
| PHMSA-PL1HCA High Consequence Areas |
| PHMSA-PL1IPROC Integrity Management Processes |
| PHMSA-PL1ODOR Natural Gas Odorization |
| PHMSA-PL1P192 - Introduction to Part 192 |
| PHMSA-PL1PRESS Fundamentals of Gas Pressure Regulators |
| PHMSA-PL1RA Introduction to Risk Assessment Methods |
| PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course |
| PHMSA-PL3256 Pipeline Failure Investigation Techniques Course |
| PHMSA-PL3257 Pipeline Safety Regulation Application and Compliance Procedures Course |
| PHMSA-PL3267 Fundamentals of Integrity Management Course |

| Course Title from PHMSA TQ Learner Transcript |
|---|
| PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course |
| PHMSA-PL3293 Corrosion Control of Pipeline Systems Course |
| PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Programs Course |
| PHMSA-PL3CP Fundamentals of Pipeline Corrosion and Cathodic Protection |
| PHMSA-PL3ECDA External Corrosion Direct Assessment |
| PHMSA-PL3ELEC Fundamentals of Basic DC Electricity |
| PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs |
| PHMSA-PL3PP Fundamentals of Plastic Pipe |
| PHMSA-PL3REG Regulatory Overview |
| PHMSA-PL3WELD Introduction to Pipeline Welding |

The following is a listing of cases before the Commission in which I have previously provided testimony or analysis through affidavits:

| Company | Case Number | Filing Description | EFIS file date |
|----------------------|--------------------|---------------------------|---------------------------------------|
| Spire Missouri | GC-2018-0159 | Staff Report | 5/17/2018 |
| Laclede Gas Company | GS-2016-0160 | Staff Gas Incident Report | 10/21/2016 |
| City of New Florence | GS-2017-0324 | Progress Report | 06/29/2018, 03/29/19, 6/28/2019 |

Educational and Employment Background and Credentials
of
Clinton L. Foster

I earned a Bachelor of Science in Civil Engineering degree from the University of Missouri – Columbia. I am registered as an Engineer Intern in Missouri.

I am currently employed as a Utility Engineering Specialist II in the Safety Engineering Department in the Commission Staff Division of the Missouri Public Service Commission (“Commission”). The Safety Engineering Department performs inspections of natural gas pipeline operators jurisdictional to Missouri for enforcement of Missouri pipeline safety regulations, and performs investigations of pipeline related incidents. Training of Staff in the Safety Engineering Department to perform inspections and investigations is provided by the Pipeline and Hazardous Materials Administration (PHMSA)’s Inspector Training and Qualifications Division (TQ). The following is a listing of the PHMSA TQ training requirements that I have completed:

| Course Title from PHMSA TQ Learner Transcript |
|--|
| PHMSA-PL1245 Safety Evaluation of Distribution Integrity Management Programs (DIMP) Course |
| PHMSA-PL1250 Safety Evaluation of Gas Pipeline Systems Course |
| PHMSA-PL1255 Gas Pressure Regulation and Overpressure Protection Course |
| PHMSA-PL1310 Plastic and Composite Materials Course |
| PHMSA-PL1DIMP Introduction of Distribution Integrity Management Program |
| PHMSA-PL1GLAW Introduction to Gas Laws |
| PHMSA-PL1HCA High Consequence Areas |
| PHMSA-PL1IPROC Integrity Management Processes |
| PHMSA-PL1P192 - Introduction to Part 192 |
| PHMSA-PL1PRESS Fundamentals of Gas Pressure Regulators |
| PHMSA-PL1RA Introduction to Risk Assessment Methods |
| PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course |
| PHMSA-PL3256 Pipeline Failure Investigation Techniques Course |
| PHMSA-PL3257 Pipeline Safety Regulation Application and Compliance Procedures Course |
| PHMSA-PL3267 Fundamentals of Integrity Management Course |
| PHMSA-PL3291 Fundamentals of (SCADA) System Technology and Operations Course |
| PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Program Course |

| Course Title from PHMSA TQ Learner Transcript |
|--|
| PHMSA-PL3293 Corrosion Control of Pipeline Systems Course |
| PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Course |
| PHMSA-PL3355 Safety Evaluation of Control Room Management Programs |
| PHMSA-PL3600 Root Cause/Incident Investigation Course |
| PHMSA-PL3CP Fundamentals of Pipeline Corrosion and Cathodic Protection |
| PHMSA-PL3DA Drug and Alcohol Testing for the Pipeline Industry |
| PHMSA-PL3ECDA External Corrosion Direct Assessment |
| PHMSA-PL3ELEC Fundamentals of Basic DC Electricity |
| PHMSA-PL3HIP The History of Intelligent Pigging |
| PHMSA-PL3IC Investigating and Managing Internal Corrosion of Pipelines |
| PHMSA-PL3OQ Operator Qualification |
| PHMSA-PL3PAP Public Awareness Programs for Pipeline Operators |
| PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs |
| PHMSA-PL3PP Fundamentals of Plastic Pipe |
| PHMSA-PL3REG Regulatory Overview |
| PHMSA-PL3SCADA Fundamentals of SCADA Systems |
| PHMSA-PL3WELD Introduction to Pipeline Welding |

The following is a listing of cases before the Commission in which I have previously provided testimony or analysis through affidavits:

| Company | Case Number | Filing Description | EFIS file date |
|----------------------|--------------------|---------------------------|---|
| Spire Missouri, Inc. | GC-2018-0159 | Staff Report | 5/17/18 |
| City of New Florence | GS-2017-0324 | Progress Report | 12/29/2017, 6/29/2018, 12/28/2018, 3/29/2019, 6/28/2019 |
| Laclede Gas Company | GS-2014-0226 | Staff Gas Incident Report | 12/18/2014 |

Educational and Employment Background and Credentials
of
John D. Kottwitz

I earned a Bachelor of Science in Civil Engineering degree from the University of Missouri – Rolla (now the Missouri University of Science and Technology). I have an Engineer-in-Training certificate in Missouri. I am a member of the Gas Piping Technology Committee (GPTC).

I am currently employed as a Utility Engineering Specialist III in the Safety Engineering Department in the Commission Staff Division of the Missouri Public Service Commission (“Commission”). The Safety Engineering Department performs inspections of natural gas pipeline operators jurisdictional to Missouri for enforcement of Missouri pipeline safety regulations, and performs investigations of pipeline related incidents. Training of Staff in the Safety Engineering Department to perform inspections and investigations is provided by the Inspector Training and Qualifications Division (TQ) of the Pipeline and Hazardous Materials Administration (PHMSA). The following is a listing of the PHMSA TQ training requirements that I have completed:

| Course Title from PHMSA TQ Learner Transcript |
|--|
| PHMSA-PL1245 Safety Evaluation of Distribution Integrity Management Programs (DIMP) Course |
| PHMSA-PL1250 Safety Evaluation of Gas Pipeline Systems Course |
| PHMSA-PL1255 Gas Pressure Regulation and Overpressure Protection Course |
| PHMSA-PL1297 Gas Integrity Management (IM) Protocol Course |
| PHMSA-PL1310 Plastic and Composite Materials Course |
| PHMSA-PL1DIMP Introduction of Distribution Integrity Management Program |
| PHMSA-PL1HCA High Consequence Areas |
| PHMSA-PL1ICDA Internal Corrosion Direct Assessment |
| PHMSA-PL1IPROC Integrity Management Processes |
| PHMSA-PL1IRA Introduction to Risk Assessment Methods |
| PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course |
| PHMSA-PL3251 Safety Evaluation of Pipeline Corrosion Control Systems Course I |
| PHMSA-PL3252 Safety Evaluation of Pipeline Corrosion Control Systems Course II |
| PHMSA-PL3254 Joining of Pipeline Materials Course |
| PHMSA-PL3256 Pipeline Failure Investigation Techniques Course |
| PHMSA-PL3257 Pipeline Safety Regulation Application and Compliance Procedures Course |

| Course Title from PHMSA TQ Learner Transcript |
|---|
| PHMSA-PL3267 Fundamentals of Integrity Management Course |
| PHMSA-PL3291 Fundamentals of (SCADA) System Technology and Operation Course |
| PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course |
| PHMSA-PL3293 Corrosion Control of Pipeline Systems Course |
| PHMSA-PL3296 Pipeline Reliability Assessment Seminar |
| PHMSA-PL3306 External Corrosion Direct Assessment (ECDA) Field Course |
| PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Programs Course |
| PHMSA-PL3355 Safety Evaluation of Control Room Management Programs |
| PHMSA-PL3365 Public Awareness Program Effectiveness Evaluation (PAPEE) Seminar |
| PHMSA-PL3600 Root Cause/Incident Investigation Course |
| PHMSA-PL3DA Drug and Alcohol Testing for the Pipeline Industry |
| PHMSA-PL3ECDA External Corrosion Direct Assessment |
| PHMSA-PL3IC Investigating and Managing Internal Corrosion of Pipelines |
| PHMSA-PL3OQ Operator Qualification |
| PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs |
| PHMSA-PL3PAP Public Awareness Programs for Pipeline Operators |
| PHMSA-PL3SCADA Fundamentals of SCADA Systems |
| PHMSA-PL3SCCDA Stress Corrosion Cracking Direct Assessment |

The following is a listing of cases before the Commission in which I have previously provided testimony or analysis:

| Company | Case Number | Filing Description | File Date |
|---|--------------|--|------------------------|
| Missouri Pipeline Company | GA-89-126 | Direct Testimony | 5/10/1989 |
| Summit Natural Gas of Missouri | GC-2014-0202 | Staff Report | 2/10/2014 |
| Laclede Gas Company | GE-2002-372 | Staff Recommendation | 2/28/2002 |
| Atmos Energy Corporation | GE-2003-0007 | Staff Recommendation Staff Recommendation | 8/12/2002 11/5/2002 |
| Missouri Association of Natural Gas Operators | GE-2003-0137 | Staff Recommendation | 1/9/2003 |
| City of Kennett, Missouri | GE-2003-0503 | Staff Recommendation | 6/6/2003 |

| Company | Case Number | Filing Description | File Date |
|--------------------------------|--------------|--|------------------------------------|
| Ameren Missouri | GE-2017-0164 | Staff Recommendation | 3/22/2017 |
| Laclede Gas Company | GO-90-140 | Staff Recommendation Staff Recommendation Staff Recommendation | 2/22/1990 6/4/1990 3/14/1991 |
| Associated Natural Gas Company | GO-90-167 | Staff Recommendation | 4/9/1990 |
| Laclede Gas Company | GO-91-275 | Staff Recommendation | 7/13/1993 |
| Kansas Power & Light Company | GO-91-277 | Staff Recommendation | 3/10/1992 |
| Laclede Gas Company | GO-91-387 | Staff Recommendation | 7/15/1991 |
| City of Perryville, Missouri | GO-92-73 | Staff Recommendation | 11/8/1991 |
| Western Resources | GO-94-130 | Staff Recommendation | 11/16/1993 |
| Missouri Public Service | GO-96-186 | Staff Recommendation | 12/13/1995 |
| Missouri Gas Energy | GO-96-336 | Staff Recommendation | 5/7/1996 |
| Associated Natural Gas Company | GO-97-180 | Staff Recommendation | 12/10/1996 |
| Union Electric Company | GO-98-25 | Staff Recommendation | 10/16/1997 |
| Missouri Public Service | GO-98-508 | Staff Recommendation | 6/11/1999 |
| Associated Natural Gas Company | GO-98-567 | Staff Recommendation | 7/7/1998 |
| Missouri Gas Energy | GO-99-302 | Staff Recommendation | 2/257/1999 |
| Missouri Gas Energy | GO-2002-50 | Staff Recommendation | 9/6/2001 |
| Laclede Gas Company | GO-2003-0506 | Staff Recommendation Multiple Status Reports | 6/13/2003 Annually |
| Atmos Energy Corporation | GO-2006-0253 | Staff Recommendation | 12/16/2005 |
| Kansas Power & Light Company | GR-90-50 | Direct Testimony | 3/22/1990 |
| Missouri Public Service | GR-90-198 | Direct Testimony | 9/11/1990 |
| Missouri Gas Energy | GS-2003-0468 | Staff Recommendation | 9/2/2004 |

| Company | Case Number | Filing Description | File Date |
|---------------------|--------------------|---------------------------|------------------|
| AmerenUE | GS-2006-0199 | Staff Gas Incident Report | 3/10/2006 |
| Laclede Gas Company | GS-2007-0130 | Staff Gas Incident Report | 2/2/2007 |
| Laclede Gas Company | GS-2011-0245 | Staff Gas Incident Report | 12/22/2011 |
| Laclede Gas Company | GS-2014-0226 | Staff Gas Incident Report | 12/18/2014 |
| Ameren Missouri | GS-2016-0159 | Staff Gas Incident Report | 5/31/2017 |
| Laclede Gas Company | GS-2016-0160 | Staff Gas Incident Report | 10/21/2016 |

Educational and Employment Background and Credentials
of
Kathleen A. McNelis, PE

I earned a Bachelor of Chemical Engineering degree from the Georgia Institute of Technology and a Master's of Science in Metallurgical Engineering from the University of Missouri in Rolla (now the Missouri University of Science and Technology). I am a registered Professional Engineer (PE) in Missouri. I am a member of the National Association of Pipeline Safety Representatives (NAPSR) and the National Association of Corrosion Engineers (NACE).

I am currently employed as the Utility Regulatory Engineering Manager of the Safety Engineering Department in the Commission Staff Division of the Missouri Public Service Commission ("Commission"). The Safety Engineering Department performs inspections of natural gas pipeline operators jurisdictional to Missouri for enforcement of Missouri pipeline safety regulations, and performs investigations of pipeline related incidents. Training of Staff in the Safety Engineering Department to perform inspections and investigations is provided by the Pipeline and Hazardous Materials Administration (PHMSA)'s Inspector Training and Qualifications Division (TQ). The following is a listing of the PHMSA TQ training requirements that I have completed:

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| PHMSA-PL1310 Plastic and Composite Materials Course |
| PHMSA-PL1DIMP Introduction of Distribution Integrity Management Program |
| PHMSA-PL1GLAW Introduction to Gas Laws |
| PHMSA-PL1HCA High Consequence Areas |
| PHMSA-PL1ICDA Internal Corrosion Direct Assessment |
| PHMSA-PL1IPROC Integrity Management Processes |
| PHMSA-PL1ODOR Natural Gas Odorization |
| PHMSA-PL1P192 - Introduction to Part 192 |

| Course Title from PHMSA TQ Learner Transcript |
|--|
| PHMSA-PL1PRESS Fundamentals of Gas Pressure Regulators |
| PHMSA-PL1RA Introduction to Risk Assessment Methods |
| PHMSA-PL3242 Welding and Welding Inspection of Pipeline Materials Course |
| PHMSA-PL3254 Joining of Pipeline Materials Course |
| PHMSA-PL3256 Pipeline Failure Investigation Techniques Course |
| PHMSA-PL3257 Pipeline Safety Regulation Application and Compliance Procedures Course |
| PHMSA-PL3267 Fundamentals of Integrity Management Course |
| PHMSA-PL3291 Fundamentals of (SCADA) System Technology and Operation Course |
| PHMSA-PL3292 Safety Evaluation of Inline Inspection (ILI)/Pigging Programs Course |
| PHMSA-PL3293 Corrosion Control of Pipeline Systems Course |
| PHMSA-PL3306 External Corrosion Direct Assessment (ECDA) Field Course |
| PHMSA-PL3322 Evaluation of Operator Qualification (OQ) Programs Course |
| PHMSA-PL3355 Safety Evaluation of Control Room Management Programs |
| PHMSA-PL3365 Public Awareness Program Effectiveness Evaluation (PAPEE) Seminar |
| PHMSA-PL3600 Root Cause/Incident Investigation Course |
| PHMSA-PL3CP Fundamentals of Pipeline Corrosion and Cathodic Protection |
| PHMSA-PL3DA Drug and Alcohol Testing for the Pipeline Industry |
| PHMSA-PL3ECDA External Corrosion Direct Assessment |
| PHMSA-PL3ELEC Fundamentals of Basic DC Electricity |
| PHMSA-PL3IC - Investigating and Managing Internal Corrosion of Pipelines |
| PHMSA-PL3OQ Operator Qualification |
| PHMSA-PL3PAP Public Awareness Programs for Pipeline Operators |
| PHMSA-PL3PIG Fundamentals of Launching and Receiving Maintenance Pigs |
| PHMSA-PL3PP Fundamentals of Plastic Pipe |
| PHMSA-PL3REG Regulatory Overview |
| PHMSA-PL3SCADA Fundamentals of SCADA Systems |
| PHMSA-PL3SCCDA Stress Corrosion Cracking Direct Assessment |
| PHMSA-PL3WELD Introduction to Pipeline Welding |
| PHMSA-PL4LNG Fundamentals of Liquefied Natural Gas (LNG) |

The following is a listing of cases before the Commission in which I have previously provided testimony or analysis through affidavits:

| Company | Case Number | Filing Description | EFIS file date |
|---|-------------------------------|---|---|
| Grain Belt Express | EA-2016-0358 | Staff Rebuttal Report | 1/24/2017 |
| Roeslein Alternative Energy Services, LLC-Investor(Gas) | GA-2016-0271 | Staff Recommendation | 6/28/2016 |
| Spire Missouri | GC-2018-0159 | Staff Report | 5/17/2018 |
| Summit Natural Gas of Missouri | GO-2018-0195 | Staff Preliminary Report | 3/21/2018 |
| Liberty Utilities | GO-2019-0091 | Staff Recommendation | 1/9/2019 |
| Ameren Missouri | GR-2014-0061 | Staff Recommendation | 12/18/2014 |
| Summit Natural Gas of Missouri | GR-2014-0096 | Staff Recommendation | 10/10/2014 |
| Summit Natural Gas of Missouri | GR-2014-0097 | Staff Recommendation | 10/10/2014 |
| Empire District Gas | GR-2014-0108 | Staff Recommendation | 12/18/2014 |
| Laclede Gas Company | GR-2014-0121 | Staff Recommendation | 12/19/2014 |
| Laclede Gas Company | GR-2014-0231 | Staff Recommendation | 12/18/2015 |
| Ameren Missouri | GR-2014-0238 | Staff Recommendation | 6/16/2015 |
| Summit Natural Gas | GR-2015-0101 | Staff Recommendation | 12/14/2015 |
| Empire District Gas | GR-2015-0109 | Staff Recommendation | 12/16/2015 |
| Laclede Gas Company | GR-2017-0215 and GR-2017-0216 | Staff Report - Class Cost of Service Report | 9/22/2017 |
| Liberty Utilities | GR-2018-0013 | Staff Report – Class Cost of Service | 3/16/2018 |
| City Utilities of Springfield | GS-2004-0257 | Status Reports | 04/5/2016, 01/6/2017 |
| Laclede Gas Company | GS-2009-0270 | Staff Gas Incident Report | 7/15/2009 |
| Missouri Gas Energy | GS-2011-0248 | Staff Gas Incident Report | 12/9/2011 |
| Ameren Missouri | GS-2016-0159 | Staff Gas Incident Report | 5/31/2017 |
| Laclede Gas Company | GS-2016-0160 | Staff Gas Incident Report | 10/21/2016 |
| City of New Florence | GS-2017-0324 | Progress Report | 12/29/2017, 06/29/2018, 6/28/2019 |