

Exhibit No:
Issue: Worn or Deteriorated Condition of Replaced Facilities
Witness: Craig R. Hoeflerlin
Type of Exhibit: Supplemental Direct Testimony
Sponsoring Party: Spire Missouri Inc.
Case Nos.: GO-2018-0309, GO-2018-0310

Date Prepared: May 13, 2020

SPIRE MISSOURI INC.

File Nos. GO-2018-0309; 2018-0310

SUPPLEMENTAL DIRECT TESTIMONY

OF

CRAIG R. HOEFERLIN

May 2020

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SUPPLEMENTAL DIRECT TESTIMONY OF CRAIG R. HOEFERLIN

1 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A. My name is Craig R. Hoeflerlin, and my business address is 700 Market Street, St. Louis,
3 Missouri, 63101.

4 **Q. WHAT IS YOUR PRESENT POSITION?**

5 A. I am presently employed by Spire Missouri (“Spire Missouri” or “Company”) as Vice
6 President – Operations Services.

7 **Q. DID YOU PREVIOUSLY SUBMIT TESTIMONY IN THESE PROCEEDINGS IN**
8 **2018?**

9 A. Yes, I submitted 15 pages of direct testimony in these proceedings. Among other things, I
10 testified to the conditions that led Spire to implement its systematic replacement program
11 to accelerate the replacement of cast iron and bare steel in a cost-effective manner, which
12 in turn led to the replacement of certain plastic facilities.

13 **Q. DID YOU ALSO PARTICIPATE IN THE ORIGINAL HEARING OF THESE**
14 **CASES BEFORE THE PUBLIC SERVICE COMMISSION?**

15 A. Yes, I provided live rebuttal testimony and was cross-examined by Staff and OPC on the
16 record.

17 **Q. WAS ALL OF THAT TESTIMONY TRUE AND ACCURATE TO THE BEST OF**
18 **YOUR KNOWLEDGE, INFORMATION AND BELIEF?**

19 A. Yes.

20 **Q. DO YOU WISH TO INCORPORATE THAT PRIOR TESTIMONY IN THESE**
21 **REMAND PROCEEDINGS?**

22 A. Yes.

1 **I. PURPOSE OF TESTIMONY**

2 **Q. WHAT IS THE PURPOSE OF SUBMITTING ADDITIONAL TESTIMONY IN**
3 **THESE PROCEEDINGS NOW?**

4 A. To supplement my prior testimony with evidence that specifically addresses the issue of
5 whether cast iron and bare steel are worn out or deteriorated.

6 **Q. WHY DIDN'T YOUR PREVIOUS DIRECT TESTIMONY SPECIFICALLY**
7 **ADDRESS WHETHER CAST IRON AND BARE STEEL ARE WORN OUT OR**
8 **DETERIORATED?**

9 A. While I believe my direct testimony addressed a number of considerations that support a
10 finding that such facilities are worn out or in a deteriorated condition, this was not an issue
11 in the case when my direct testimony was prepared and filed. My direct testimony was
12 specifically focused on the cost to replace plastic in connection with the cast iron and bare
13 steel replacement programs.

14 **II. CONDITION OF EVIDENCE IN THIS CASE**

15 **Q. HAVE YOU REVIEWED THE PHYSICAL EVIDENCE SUBMITTED IN THESE**
16 **CASES?**

17 A. Yes. The physical evidence presented in these cases consists of segments of pipe that were
18 replaced by projects included in the underlying ISRS application. These samples were
19 pulled by field crews in both Spire East and Spire West. After the pipe was removed from
20 the field, the physical samples were assembled at our Shrewsbury Service Center, where I
21 inspected them on May 6, 2020.

22 **Q. PLEASE DESCRIBE THE PHYSICAL EVIDENCE SUBMITTED.**

1 A. The physical evidence consists of two pallets of samples of pipe from Spire East and one
2 pallet of samples of pipe from Spire West. The pallets include samples of both cast iron
3 and bare steel pipes. These samples are all connected to ISRS projects from the Company's
4 2018 ISRS filings.

5 **Q. WHEN WERE THE 2018 PIPE SAMPLES OBTAINED BY SPIRE?**

6 A. The pipe samples were retrieved in April and May 2020.

7 **Q. ARE THE 2018 PIPE SAMPLES IN THE SAME OR SUBSTANTIALLY SIMILAR**
8 **CONDITION TODAY AS THEY WERE IN 2018?**

9 A. Yes. Given the advanced age of these pipes, the amount of wear and deterioration between
10 2018 and now would not have materially changed their condition.

11 **Q. DO YOU BELIEVE THIS EVIDENCE IS REPRESENTATIVE OF THE FIELD**
12 **CONDITION OF CAST IRON AND BARE STEEL PIPE IN SPIRE'S**
13 **DISTRIBUTION SYSTEM GENERALLY?**

14 A. Yes, absolutely. There is nothing unique about the pipe samples taken for this case. They
15 are very representative of the condition of the facilities replaced in the course of our
16 strategic replacement programs. They aren't the "best of the best" or the "worst of the
17 worst;" they are a representative sample of what we typically see in the field.

18 **Q. YOU PREVIOUSLY TESTIFIED ON CROSS-EXAMINATION REGARDING**
19 **THE GRAPHITIZATION PROCESS THAT OCCURS IN CAST IRON PIPES. DID**
20 **YOU OBSERVE GRAPHITIZATION IN ANY OF THE SAMPLES YOU**
21 **RECENTLY INSPECTED?**

1 A. Yes, a number of the cast iron samples show signs of advanced graphitization and
2 deterioration. Several of these samples were cracked, brittle or completely broken. This
3 demonstrates that these pipes have become substantially weakened over time.

4 **Q. DO YOU BELIEVE THE CAST IRON PIPES YOU OBSERVED COULD HAVE**
5 **CONTINUED TO SAFELY TRANSPORT NATURAL GAS?**

6 A. Not for long. Those pipes were severely deteriorated. The conditions I observed raise the
7 same safety concerns shared by the NTSB, PHMSA, and the PSC's Gas Safety Staff.

8 **Q. YOU PREVIOUSLY TESTIFIED REGARDING THE CORRISION PROCESS**
9 **THAT OCCURS IN BARE STEEL PIPES. DID YOU OBSERVE CORROSION IN**
10 **ANY OF THE SAMPLES YOU RECENTLY INSPECTED?**

11 A. Yes, a number of the bare samples show signs of advanced corrosion and deterioration.
12 Several of these samples contained open holes caused by corrosion of the steel pipe walls.
13 Most of the samples showed significant, irregular degradation of pipe wall thickness. This
14 demonstrates that these pipes had become substantially weakened over time.

15 **Q. DO YOU BELIEVE THE BARE STEEL PIPES YOU OBSERVED COULD HAVE**
16 **CONTINUED TO SAFELY TRANSPORT NATURAL GAS?**

17 A. Again, not for long. The conditions I observed raise the same safety concerns shared by
18 the NTSB, PHMSA, and the PSC's Gas Safety Staff.

19 **Q. DO YOU BELIEVE THIS EVIDENCE DEMONSTRATES THAT THE**
20 **REPLACED FACILITIES AT ISSUE IN THIS CASE WERE WORN OUT OR IN**
21 **A DETERIORATED CONDITION AT THE TIME THEY WERE REPLACED?**

1 A. Yes. Without question, some of the samples I observed were completely worn out. All of
2 the samples I observed were in a deteriorated condition to some extent. Most displayed
3 quite significant deterioration.

4 **Q. DO YOU HAVE ANY CONCLUDING REMARKS?**

5 A. Yes. My engineering staff and I are acutely aware of the hazards involved in the
6 transportation and distribution of natural gas to customers. It's our job to design a safe
7 natural gas system for our customers, and to ensure we comply with all federal and state
8 safety requirements for natural gas system operators. My staff and I are in regular
9 communication with the PSC's gas safety staff. We truly have a collaborative relationship
10 with the gas safety Staff, and it has worked well for decades to keep Missourians safe.
11 There is absolutely no doubt that both the Company and Staff view replacement of cast
12 iron and bare steel pipe to be an essential part of operating a safe system. There has never
13 been a dispute between the Company and the PSC's gas safety Staff regarding whether cast
14 iron and bare steel pipe qualifies for ISRS. We have both always understood that it does.
15 A contrary finding would needlessly increase safety risks to our customers and Missourians
16 generally.

17 **Q. DOES THIS COMPLETE YOUR DIRECT TESTIMONY?**

18 A. Yes.

19

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of the Application of Spire)
Missouri Inc. to Establish an Infrastructure)
System Replacement Surcharge in its Spire) File No. GO-2018-0309
Missouri East Service Territory)

In the Matter of the Application of Spire)
Missouri Inc. to Establish an Infrastructure)
System Replacement Surcharge in its Spire) File No. GO-2018-0310
Missouri West Service Territory)

A F F I D A V I T

STATE OF MISSOURI)
) SS.
CITY OF ST. LOUIS)

Craig R. Hoeflerlin, of lawful age, being first duly sworn, deposes and states:

1. My name is Craig R. Hoeflerlin. I am the Vice President – Operations Services for Spire Missouri Inc. My business address is 700 Market St., St. Louis, Missouri, 63101.

2. Attached hereto and made a part hereof for all purposes is my direct testimony on behalf of Spire Missouri Inc.

3. Under penalty of perjury I hereby swear and affirm that my answers contained in the attached testimony to the questions therein propounded are true and correct to the best of my knowledge and belief.

Craig R. Hoeflerlin
Craig R. Hoeflerlin (May 13, 2020)

Craig R. Hoeflerlin

This 13th day of May 2020.