

Exhibit No:
Issue: Evidence from 2018 ISRS Case
Showing Worn Out or
Deteriorated Condition of Cast
Iron and Bare Steel Facilities
Witness: Wesley E. Selinger
Type of Exhibit: 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, GO-2018-0310

DIRECT TESTIMONY

OF

WESLEY E. SELINGER

May 2020

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DIRECT TESTIMONY OF WESLEY E. SELINGER

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

2 A. My name is Wesley E. Selinger and my business address is 700 Market St., St. Louis,
3 Missouri, 63101.

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

5 A. I am presently employed as Manager, Rates and Planning at Spire Missouri Inc. (“Spire”
6 or the “Company”).

7 Q. **PLEASE STATE HOW LONG YOU HAVE HELD YOUR POSITION AND**
8 **BRIEFLY DESCRIBE YOUR RESPONSIBILITIES.**

9 A. I have been in my present position since September 2017, when I joined Spire. In this
10 position, I am responsible for managing rate and regulatory matters, including the
11 Company’s ISRS filings, as well as the rate/regulatory planning and research functions of
12 Spire and its two operating units in Missouri, Spire East and Spire West. As part of my
13 duties, I am responsible for the research, assessment, development, and implementation of
14 Spire’s rate/regulatory initiatives. I am also responsible for advancing those initiatives in
15 the applicable regulatory forum.

16 Q. **WHAT WAS YOUR EXPERIENCE PRIOR TO ASSUMING YOUR CURRENT**
17 **POSITION?**

18 A. Prior to joining Spire, from June 2012 through September 2013, I was employed by the
19 Center for Business and Regulation at the University of Illinois – Springfield as an assistant
20 to the Director of that organization. In that capacity, I assisted in research on regulatory
21 issues and worked with stakeholders from public and private sector groups concerning
22 regulatory issues. From September 2013 to August 2015, I was employed by Vectren
23 Corporation, an electric and natural gas combination utility located in Evansville, Indiana

1 as a Rates Analyst in the Company's Rates and Regulatory Department. In this role, I
2 managed several of the Company's rate adjustment filings, including but not limited to, the
3 Fuel Adjustment Clause and Pipeline Safety Adjustment. I also performed regulatory
4 research and participated in the evaluation and development of the Company's regulatory
5 initiatives. From August 2015 until joining Spire I was employed by Vectren Corporation
6 as a Senior Regulatory Policy Analyst. In that role, I participated in the evaluation and
7 development of the Company's strategic approach to regulatory developments and
8 initiatives; communicating results and feedback to the Company's executive leadership and
9 implementing those initiatives in the appropriate regulatory venue.

10 **Q. WHAT IS YOUR EDUCATIONAL BACKGROUND?**

11 A. I graduated from the University of Illinois – Springfield with a Bachelor's degree in
12 Economics with a minor in Accounting in 2013. I also earned a Master's Degree in Public
13 Administration, from the University of Illinois – Springfield, in 2016.

14 **Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE THIS**
15 **COMMISSION?**

16 A. Yes. I testified in Case Nos. GO-2019-0115, GO-2019-0116, GO-2019-0356, and GO-
17 2019-0357.

18 **I. PURPOSE OF DIRECT TESTIMONY**

19 **Q. WHAT IS THE PURPOSE OF YOUR DIRECT TESTIMONY?**

20 A. The purpose of my direct testimony is to point to the evidence in the record of these cases
21 that shows that the Company's cast iron and bare steel facilities are in a worn out or
22 deteriorated condition and thus qualify for inclusion in the Company's ISRS. I will also
23 discuss other information that was provided to the parties in the first phase of this

1 proceeding that further demonstrates the worn out or in deteriorated condition of these
2 facilities.

3 **II. FOCUS OF EVIDENCE IN FIRST PHASE**

4 **Q. WERE YOU INVOLVED IN THE FIRST PHASE OF THE 2018 ISRS**
5 **PROCEEDINGS?**

6 A. Yes, I was. While I did not submit testimony in the first phase of these proceedings, I was
7 involved in putting together the work orders and other analyses supporting the ISRS filings.

8 **Q. CAN YOU EXPLAIN WHY THE WORN OUT OR DETERIORATED**
9 **CONDITION OF SPIRE'S CAST IRON AND BARE STEEL FACILITIES WAS**
10 **NOT FULLY DISCUSSED WHEN THE COMPANY FILED ITS TESTIMONY IN**
11 **THE FIRST PHASE OF THIS PROCEEDING ON AUGUST 22, 2018?**

12 A. Yes. The primary reason is that Spire had no reason to believe that the worn out or
13 deteriorated condition of its cast iron and bare steel facilities was even an issue in these
14 cases. For nearly 15 years prior to this case, the Company had made ISRS filings in which
15 it sought to recover the costs of replacing such facilities and no party had ever contended
16 that such replacement costs were ineligible for inclusion in the ISRS due to a supposed
17 lack of evidence of their worn out or deteriorated condition. My understanding is that all
18 of the parties operated from the belief that replacement of cast iron and bare steel was at
19 the very heart of the ISRS Statute, and accepted that such materials had been deemed worn
20 out or deteriorated long ago. As quoted on page 11 below, the Office of Public Counsel
21 (“OPC”) confirmed this position as recently as 2017 in explicit representations to the
22 Western District Court of Appeals, to the effect that the ISRS Statute was specifically

1 intended to permit recovery of the costs incurred by the Company to replace its cast iron
2 and bare steel facilities.

3 **Q. BUT DIDN'T OPC CHANGE ITS POSITION ON THIS ISSUE DURING THE**
4 **FIRST PHASE OF THIS CASE?**

5 A. I honestly don't know when or how this change in position occurred. Perhaps it had
6 something to do with the fact that some of the OPC personnel working on the ISRS case
7 were unfamiliar with the history of the ISRS Statute and its relationship to cast iron and
8 bare steel, and therefore did not realize OPC's long history of endorsing the concept that
9 the mandated replacement of cast iron and bare steel is precisely the type of work
10 contemplated by the ISRS Statute, and that pipes subject to these mandates are by definition
11 worn out or deteriorated. Based on my review of the record produced in the first phase,
12 however, it is clear to me that OPC effectively concealed the complete reversal of its
13 position on cast iron and bare steel, and by doing so denied the Company any real
14 opportunity to show that the Company's cast iron and bare steel facilities are worn out or
15 deteriorated.

16 **Q. WHY DO YOU SAY THAT?**

17 A. It is important to keep in mind that the primary focus of the 2018 ISRS case, as well as the
18 two ISRS cases that preceded it, was on the issue of what costs, if any, should be excluded
19 from the Company's ISRS recoveries because certain *plastic* facilities, which everyone
20 recognized were generally not worn out or deteriorated, had been replaced or bypassed as
21 part of the Company's ISRS-eligible cast iron and bare steel replacement programs.
22 Spire's evidence and argument in these cases focused on the fact that no incremental costs
23 were incurred to replace ISRS-ineligible plastic because Spire's analyses showed that the

1 replacement or bypass of such plastic actually reduced ISRS costs. The critical point here
2 though is that no one, including OPC, had challenged the ISRS eligibility of the Company's
3 cast iron or bare steel facilities on the theory that such facilities were also not worn out or
4 in deteriorated condition.

5 **Q. DID OPC HAVE OPPORTUNITIES TO MAKE SUCH A CLAIM IF IT BELIEVED**
6 **THAT THE WORN OUT OR DETERIORATED CONDITION OF THE**
7 **COMPANY'S CAST IRON AND BARE STEEL FACILITIES WAS EVEN AN**
8 **ISSUE?**

9 A. Yes. It had multiple opportunities to do so but never did. OPC could have made this claim
10 when recommendations were filed in this case on August 6, 2018, or anytime within the
11 next 10 days, which is the period allowed to respond to pleadings such as Staff's
12 recommendation. At the very latest, OPC should have disclosed its position when it filed
13 its Response to Staff's recommendation on August 17, which was one day after the
14 Commission had specifically instructed parties to submit such responses. Because the Staff
15 had included the recovery of cast iron and bare steel replacement costs in its recommended
16 revenue requirement, OPC certainly should have notified the parties at this point if it truly
17 had a concern regarding whether such facilities were in a worn out or deteriorated
18 condition.

19 **Q. DID OPC DO SO?**

20 A. No. OPC gave no hint in its Response to the Staff's recommendation that it was departing
21 from its long-held position of supporting the inclusion of cast iron and bare steel
22 replacement costs, nor did it disclose its new theory that such facilities had not been shown
23 to be worn out or in deteriorated condition. Nor did OPC mention any other reason for

1 excluding the costs incurred for replacing these facilities, let alone propose an adjustment
2 to do so.

3 **Q. DID OPC CHALLENGE THE ELIGIBILITY OR RECOVERY OF THESE CAST**
4 **IRON AND BARE STEEL REPLACEMENT COSTS WHEN IT FILED ITS**
5 **DIRECT TESTIMONY ON AUGUST 22, 2018?**

6 A. No. Nowhere in that testimony did OPC even mention the Company's cast iron and bare
7 steel facilities, let alone assert that they had not been shown to be in a worn out or
8 deteriorated condition. Instead, both OPC witnesses Robinett and Schallenberg focused
9 their testimony almost exclusively on the issue of whether costs incurred by the Company
10 to replace *plastic* facilities were eligible for ISRS inclusion, implying that OPC had no
11 issue at all with the recovery of cast iron and bare steel replacement costs, just as it had no
12 issue with such recoveries over the past 15 years.

13 **Q. AS SOMEONE WHO HAS REGULARLY PREPARED AND FILED TESTIMONY**
14 **IN COMMISSION PROCEEDINGS, DO YOU BELIEVE OPC'S FAILURE TO**
15 **EVEN MENTION THE ISSUE RELATING TO CAST IRON AND BARE STEEL**
16 **REPLACEMENT COSTS IN ITS DIRECT TESTIMONY WAS IMPROPER?**

17 A. Yes, especially in since Staff and Spire had both relied on the longstanding truism, practice,
18 and understanding that cast iron and bare steel replacement costs are intrinsically ISRS
19 eligible. However, even if there was no prior understanding, practice or truism, it was still
20 improper for OPC not to include its position in testimony if it planned on ultimately making
21 this an issue in the case. In both ISRS and rate case proceedings, I know that when
22 preparing testimony, a party has an obligation under the Commission's rules to include in
23 its direct case ". . . all testimony and exhibits asserting and explaining that party's entire

1 case-in-chief.” Such a requirement is very important in my view in that it provides parties
2 an opportunity to understand, conduct discovery on, and respond to the positions of other
3 parties. Given this, if OPC was intent on pursuing the issue of whether the Company’s cast
4 iron and bare steel facilities had been shown to be worn out or deteriorated, it should have
5 stated, explained and supported its position in direct testimony. OPC’s failure to even
6 mention it strikes me as a very clear indication that it wasn’t an issue and that there was no
7 need to address it.

8 **Q. DID OPC EVEN IDENTIFY THIS AS AN ISSUE AT THE TIME THE PARTIES**
9 **PUT TOGETHER AN ISSUES LIST?**

10 A. No. Once again, OPC failed to specify the condition of the Company’s cast iron and bare
11 steel facilities and their eligibility for inclusion in the ISRS as an issue to be litigated as
12 part of the required Issues List. In fact, when it came to the issue of what costs should be
13 recovered by the Company in its 2018 ISRS case, OPC cited only the testimony of OPC
14 witness Robert Schallenberg, which consisted of a single question and answer on the
15 subject:

16 Q. What is OPC’s position related to Spire Missouri East’s and Spire
17 Missouri West’s ISRS applications in Case Nos. GO-2018-0309 and
18 GO-2018-0310?

19
20 A. OPC’s position is that these filings are also not compliant with the
21 statutory ISRS requirements. I note that Spire has once again
22 included costs for replacement of *plastic components that are not*
23 *worn out or in deteriorated condition*. Therefore, the Commission
24 should find Spire’s filings non-compliant, reject the application, and
25 order the applicants to exclude the non-compliant elements in future
26 applications. (*emphasis supplied*).
27

28 **Q. WHAT WOULD YOU HAVE TAKEN FROM THIS STATEMENT MADE BY OPC**
29 **IN THE ISSUES LIST?**

1 A. I would have viewed OPC’s reference to Mr. Schallenberg’s testimony as a clear indication
2 that the condition, eligibility and recovery of the Company’s cast iron and bare steel
3 facilities was not an issue that needed to be addressed by the Commission or any party for
4 that matter. The focus was on plastic facilities – and plastic facilities only – and there was
5 absolutely no reason to believe that the recovery of cast iron or bare steel facilities was at
6 issue.

7 **Q. DID OPC FINALLY GIVE AN INDICATION THAT IT INTENDED TO RAISE**
8 **THE CONDITION OF THE COMPANY’S CAST IRON AND BARE STEEL**
9 **FACILITIES AS AN ISSUE WHEN IT SUBMITTED ITS POSITION**
10 **STATEMENT?**

11 A. Not in any real sense and certainly not in time for the Company to do anything effective to
12 respond to such an assertion. At around 4:30 in the afternoon on the Friday before the
13 start of the evidentiary hearing the following Monday morning, OPC did file its Position
14 Statement which once again focused on the plastics issue, but then made the following
15 cryptic statement that did not even mention the Company’s cast iron and bare steel facilities
16 by name: “In addition, Spire provided no competent evidence to show that any of the pipes
17 that it seeks compensation for are worn out in a deteriorated condition.”

18 **Q. DID OPC CITE ANYTHING TO SUPPORT THIS LAST- MINUTE STATEMENT?**

19 A No. Unlike other portions of its Position Statement that dealt with the plastics issue, OPC
20 cited nothing in the written testimony or other pre-filed materials to support this statement.
21 In fact, the only thing referenced by OPC was a footnote in which the attorney writing the
22 Position Statement inaccurately claimed that: “Spire’s sole argument that the cast iron and
23 steel pipe it retired are worn out or in a deteriorated condition is the age of the pipes

1 themselves.” In fact, the Company, like OPC, had always maintained that age was only
2 one factor – albeit an important one – that supports a determination that facilities are worn
3 out or in deteriorated condition. At the same time, the Company cited a host of other factors
4 in the first phase of the proceeding which further substantiated the worn out or deteriorated
5 nature of these facilities – factors which I will discuss in the next section of my testimony.

6 **Q. IN YOUR OPINION WAS THIS ONE STATEMENT SUFFICIENT TO PUT THE**
7 **COMPANY ON NOTICE AND PROVIDE IT A FAIR OPPORTUNITY TO**
8 **RESPOND TO THE CONTENTION THAT THERE WAS NOT SUFFICIENT**
9 **EVIDENCE TO SUPPORT THE ELIGIBILITY OF ITS CAST IRON AND BARE**
10 **STEEL FACILITIES?**

11 A. Absolutely not. First, this statement was filed one business “hour” before the hearing
12 commenced the following Monday morning. In no way can this be considered an adequate
13 amount of time to digest, evaluate and prepare a full response to such an assertion – an
14 assertion that was not only contrary to the position OPC had taken for the previous 15
15 years, and contrary to its representation to the appeals court within the past year, but also
16 an assertion that OPC had not previously made or identified in its Response to Staff’s
17 recommendation, in its testimony, or in the issues list in these ISRS cases. In addition,
18 because it waited until the very brink of the evidentiary hearing to even mention this claim,
19 OPC effectively denied the Company any opportunity to conduct discovery or otherwise
20 probe into the meaning, basis for and support for such a contention.

21 **Q. ARE YOU AWARE OF ANY OTHER INSTANCE WHERE ONE BUSINESS**
22 **HOUR HAS BEEN DEEMED SUFFICIENT TO APPRISE A PARTY OF THE**

1 **ASSERTIONS BEING MADE AGAINST IT AND PROVIDE ADEQUATE TIME**
2 **TO RESPOND TO SUCH ASSERTIONS?**

3 A. No. In fact, I am aware of instances where the Commission has deemed such a shortened
4 time frame to be completely unacceptable for such a purpose. For example, we have to
5 wait 10 days after ISRS compliance tariffs have been approved for new ISRS rates to go
6 into effect, even though no party has voiced any opposition to the tariffs. It is my
7 understanding that the Commission has concluded that there is a legal requirement to give
8 parties at least 10 days so they can review the tariffs and file an application for rehearing.
9 Obviously, one business hour to respond to OPC’s vague claim regarding the condition of
10 the Company’s other “pipes” falls well short of the amount of time the Commission has
11 deemed necessary to respond to non-controversial compliance tariff filings.

12 **III. EVIDENCE SHOWING WORN OUT OR DETERIORATED CONDITION**

13 **Q. DID OPC’S FAILURE TO RAISE THE ISSUE THAT THERE WAS NO**
14 **EVIDENCE SHOWING THAT CAST IRON OR BARE STEEL PIPES ARE**
15 **WORN OUT OR DETERIORATED RESULT IN THERE ACTUALLY BEING**
16 **NO SUCH EVIDENCE?**

17 A. No. While the evidence wasn’t as extensive as it would have been had the Company been
18 advised up front that OPC intended to take this position, there was still significantly more
19 evidence supporting such a determination than OPC has asserted.

20 **Q. WAS ALL OF THIS EVIDENCE CONSIDERED BY THE WESTERN DISTRICT**
21 **COURT OF APPEALS WHEN IT RULED IN OPC’S FAVOR?**

1 A. No. It is my understanding that the Court denied Spire’s request to participate in OPC’s
2 appeal as a respondent so certainly the evidence on the record was not presented to the
3 Court in the same way that the Company would have presented it.

4 **Q. WHAT EVIDENCE ON THE RECORD WASN’T CONSIDERED BY THE**
5 **COURT?**

6 A. Based on my review of what the Court said in its Opinion, it does not appear that the Court
7 took into account the representations made by OPC in a brief submitted to the Western
8 District Court of Appeals in OPC’s appeal of an earlier ISRS case. These representations
9 were included in Exhibit A which was submitted into the record of these cases at the request
10 of the Commission. In its Brief, OPC described for the Court what it believed the ISRS
11 mechanism was designed to do. As OPC stated:

12 As the "replacement" surcharge title indicates, the ISRS was enacted mainly
13 in response to significant cost increases incurred by gas utilities complying
14 with the PSC's 1994 replacement program rules. 4 C.S.R. 240-40.030(15).
15 These rules mandated the systematic inspection, replacement and/or repair
16 of all steel service lines per 4 C.S.R. 40.030(15)(C); all cast iron
17 transmission lines, feeder lines, and mains per 4 C.S.R. 40.030(15)(D); and
18 all unprotected steel transmission lines, feeder lines and mains per 4 C.S.R.
19 240- 40.030(15)(E).

20
21 Had the Court taken this evidence into account it might have been less dismissive of the
22 Company’s contention that its cast iron and bare steel facilities were “by definition” worn
23 out or in a deteriorated condition within the meaning of the ISRS Statute. In fact, the Court
24 in WD82302 might have questioned why OPC was even challenging the eligibility of the
25 Company’s cast iron and bare steel program replacement costs at the Commission given
26 OPC’s representation less than a year before that the ISRS was “enacted mainly in response
27 to the significant cost increases incurred by gas utilities” to carry out these replacement
28 programs. Looked at another way, if the ISRS was not intended to permit the utility to

1 begin recovering on a more timely basis the costs incurred to replace these designated
2 facilities, as OPC said it was, then the Court might have legitimately asked why it was
3 enacted at all. Although I am not an attorney, these are the common-sense questions I
4 would have asked had the evidence set forth in Exhibit A been presented to me.

5 **Q. GIVEN OPC’S REPRESENTATION IN EXHIBIT A THAT THE ISRS STATUTE**
6 **WAS ENACTED MAINLY TO PERMIT RECOVERY OF THE INCREASED**
7 **COSTS INCURRED TO CARRY OUT THE REPLACEMENT PROGRAMS**
8 **MANDATED BY THE COMMISSION’S RULES, DOES IT MAKE SENSE TO**
9 **YOU THAT THE STATUTE WOULD HAVE IMPOSED NEW BARRIERS TO**
10 **THE TIMELY RECOVERY OF THOSE COSTS?**

11 A. Again, I’m not an attorney but that kind of result makes no sense at all to me. At the time
12 the ISRS was enacted in 2003, the Commission rules mandating the replacement or repair
13 of cast iron and bare steel facilities had already been in effect for a decade or longer due in
14 large part to the Commission’s determination that such facilities had already “deteriorated”
15 to a point that they needed to be replaced. It seems wholly implausible to me that in
16 enacting a statute that was designed to help utilities cope with the increased costs incurred
17 to do these replacements, the legislature would have implemented requirements that
18 essentially required gas utilities to prove *once again* that these facilities were worn out or
19 in a deteriorated condition. The Commission had long before determined that such
20 facilities were in a deteriorated condition; the General Assembly knew the Commission
21 had done so at the time it passed the ISRS statute and, as OPC acknowledges, the statute
22 was designed to make it easier, not harder, for utilities to recover the associated costs.

1 **Q. WHY DO YOU BELIEVE THE COMMISSION’S ENACTMENT OF SAFETY**
2 **RULES REQUIRING THE REPAIR OR REPLACEMERNT OF SUCH**
3 **FACILITIES WAS EQUIVALENT TO A DETERMINATION THAT SUCH**
4 **FACILITIES WERE ALREADY IN A “DETERIORATED CONDITION” WITHIN**
5 **THE MEANING OF THE ISRS STATUTE?**

6 A. I will leave the technical safety aspects of such rules to other witnesses who have already
7 provided significant testimony on this issue. As shown by the Court’s opinion, however,
8 the plain meaning or definition of deteriorate is as follows:

9 “The definition of ‘deteriorate’ is ‘to make inferior in quality or value,’ ‘to
10 grow worse,’ and ‘become impaired in quality, state, or condition.’” *In*
11 *Matter of Verified Application & Petition of Liberty Energy (Midstates)*
12 *Corp.*, 464 S.W.3d 520, 525 (Mo. banc 2015) (quoting WEBSTER’S
13 THIRD NEW INTERNATIONAL DICTIONARY 616 (1993)). “Clearly,
14 this definition indicates that deterioration is a gradual process that happens
15 over a period of time rather than an immediate event.”
16

17 Again, as a non-lawyer, it strikes me as highly implausible that the Commission would
18 have issued rules requiring that cast iron and bare steel facilities be replaced if such
19 facilities had not become inferior in quality or value, or impaired in quality, state or
20 condition. Instead, it is far more plausible that such facilities had already become
21 sufficiently “inferior in quality or value” or “grown worse” or become sufficiently impaired
22 in their “quality or value” at the time such rules were promulgated, that the Commission
23 determined they needed to be replaced to protect public safety. I understand that the
24 Western District Court of Appeals ultimately upheld the Commission’s rules mandating
25 such remedial actions, and I think this is a further indication that the Commission was not
26 ordering the replacement of facilities that were not already in a deteriorated condition.
27

1 **Q. DOES THE RECORD EVIDENCE IN THESE CASES PROVIDE OTHER**
2 **EVIDENCE SHOWING THE WORN OUT OR DETERIORATED CONDITION**
3 **OF THESE FACILITIES?**

4 A. Yes, some of which was noted and discussed by the Court of Appeals and some of which
5 was not, probably because it was never brought to the Court's attention. For example,
6 there is a substantial amount of evidence in the record showing the almost universal
7 recommendations by federal and state pipeline safety officials regarding the problematic
8 nature of cast iron and bare steel facilities and the need to replace them on an accelerated
9 basis. This evidence includes (i) the fact that the Commission made cast iron and bare
10 steel facilities subject to safety programs following a number of fatal explosions in the
11 late 80s; (ii) the Commission Safety Staff's expectation that Spire would ramp up its cast
12 iron replacements in 2010 after its copper replacement program was finished; (iii) the
13 issuance of a Commission report critical of the slower pace of cast iron replacements then
14 being undertaken by Missouri gas utilities under which all cast iron would not be replaced
15 until some was over 200 years old; (iv) the efforts of federal safety officials to encourage
16 accelerated replacement of pipes with known integrity risks, such as cast iron and bare
17 steel, after a series of deadly explosions in Philadelphia and Allenton Pennsylvania; (v)
18 advisories regarding the need to do so issued by the federal Pipeline and Hazardous
19 Materials Safety Administration ("PHMSA"); and (vi) reports issued by PHMSA praising
20 the Missouri ISRS mechanism for ensuring the prompt replacement of high-risk gas pipes.
21 See Exh. 3, Hoeflerlin Direct, pages 8-14. Notably, almost none of this evidence was
22 discussed by the Court in its opinion.

1 **Q. WHY DO YOU THINK SUCH EVIDENCE SHOWS THE WORN OUT OR**
2 **DETERIORATED CONDITION OF THE COMPANY’S CAST IRON AND BARE**
3 **STEEL FACILITIES?**

4 A. In my view, such evidence strongly supports a determination that the Company’s cast iron
5 and bare steel facilities are, at a minimum, in a deteriorated condition. It is simply not
6 tenable to believe that state and federal safety officials would be putting such an emphasis
7 on replacing these facilities if they were in a reasonably good condition. Instead, they
8 have obviously determined that such facilities have become “inferior in quality or value”,
9 “grown worse” or become impaired in their “quality or value” such that they pose a threat
10 to public safety and require remedial action. Because the Court of Appeals did not even
11 discuss these factors, I’m not sure they saw the nexus between these state and federal
12 actions and the issue of whether the Company’s cast iron and bare steel facilities are in a
13 deteriorated condition. Those with both the expertise and responsibility for making such
14 judgments have concluded they are, however, and this evidence should be relied upon by
15 the Commission as support for its earlier determination that such facilities are, at a
16 minimum, in a deteriorated condition within the meaning of the ISRS Statute.

17 **Q. IN ITS ORIGINAL POSITION STATEMENT IN THIS CASE, OPC INDICATED**
18 **THAT THE COMPANY RELIED ONLY UPON THE AGE OF THE COMPANY’S**
19 **CAST IRON AND BARE STEEL FACILITIES TO ESTABLISH THAT THEY**
20 **WERE IN A WORN OUT OR DETERIORATED CONDITION. DO YOU**
21 **AGREE?**

22 A. No. For the reasons I previously discussed, the evidence on the record regarding the worn
23 out or deteriorated condition of these facilities goes much deeper than that, even if OPC

1 chooses to ignore the fact. The Company, like OPC, has said that age is a factor that
2 should be taken into consideration when making such evaluation and doing so seems to
3 me to be inherently required by the very definition of “deteriorate” which, as previously
4 discussed, is a “gradual process [of growing worse or lesser in quality or value] that
5 happens over a period of time.” This temporal aspect of the definition clearly requires
6 that one take into account the length of time that a facility has been in the ground and has
7 been subject to the forces of deterioration.

8 **Q. DID THE COURT EVER STATE IN ITS OPINION THAT THE AGE OF**
9 **FACILITIES WAS IRRELEVANT?**

10 A. No. The Court did observe in its opinion that some of the facilities replaced by the
11 Company had not yet reached their estimated service life, a criticism that I believe
12 underscores the significance of age as a factor in determining whether something is in a
13 deteriorated condition.

14 **Q. DO YOU AGREE WITH THE COURT’S CRITICISM?**

15 A. Based on my own knowledge of how nearly all physical materials tend to degrade over
16 time, I think it is highly probable that nearly all of the Company’s buried cast iron and
17 bare steel facilities would have deteriorated to one degree or another after decades in the
18 ground. This is particularly true of bare steel that was not cathodically protected until
19 decades after installation since the evidence in this case establishes that bare steel corrodes
20 very easily and quickly. (Tr. 373, 374). In fact, OPC’s own engineering witness has
21 acknowledged that bare steel begins to corrode from the moment it is placed in the ground.
22 But I recognize that the Court has ruled on this issue. So to be responsive to the guidance
23 given by the Court in its Opinion, and subject to the Company’s request to take additional

evidence on this issue, I evaluated the same work orders that were in the record and evaluated by the Court to determine what portion of the Company’s cast iron and bare steel facilities had in fact reached or exceeded their useful service life prior to being replaced. These include Work Order 902101 contained in OPC Exhibit 202, Work Order 900992 contained in OPC Exhibit 208, and Work Order 900994 contained in OPC Exhibit 209.

Q. WHAT DID YOUR ANALYSIS SHOW REGARDING THE AGE OR VINTAGE OF THE CAST IRON FACILITIES REPLACED IN THE WORK ORDERS?

A. As shown by the following table, 87.06% of the cast iron facilities replaced in these Work Orders had already exceeded their estimated useful service life of 80 years.

OPC Exhibits 202, 208, and 209 - Retirements					
	Cast Iron		Steel		
	Mains	Services	Mains	Services	
900992	76.88%	n/a	n/a	100.00%	
900994	93.69%	n/a	n/a	99.56%	
902101	100.00%	n/a	n/a	n/a	
Total	87.06%	n/a	35.85%*	99.73%	

*As no steel mains were retired as part of these projects, steel main retirement information from all projects in these cases was used as the basis for this percentage. This figure is derived using a 69 year depreciable life for Spire West steel mains as proposed by Staff in Case No. GR-2017-0216.

Q. IS THIS PERCENTAGE OF THE FACILITIES THAT EXCEEDED THEIR USEFUL SERVICE LIFE REPRESENTATIVE OF THE AGE OF THE OTHER CAST IRON FACILITIES THAT WERE RETIRED AS A RESULT OF THE REPLACEMENTS INCLUDED IN THE COMPANY’S ISRS REVENUES IN THIS CASE?

1 A. Yes. In fact, as shown in the Work Order information included in the table below, the
 2 percentage of retired cast iron facilities that had exceeded their estimated service life was
 3 actually higher (94.76%) when all of the retirements in these cases are considered.

Footage Beyond Average Service Life - All 2018 Retirements					
	Spire East	Spire West	Total Feet Beyond Average Service Life	Total Retirements	%
Cast Iron Mains	407,672	231,313	638,985	674,314	94.76%
Steel Mains	804	362,303	363,107	1,087,055	33.40%
Steel Services	85,302	67,182	152,484	158,830	96.00%

4
5
6 **IV. CALCULATION OF REFUND AMOUNT**

7 **Q. PLEASE SUMMARIZE THE REFUND AMOUNTS FOR CAST IRON MAINS,**
 8 **STEEL MAINS, AND STEEL SERVICES, ASSUMING ALL OF THESE**
 9 **COMPONENTS ARE NEITHER WORN OUT OR IN A DETERIORATED**
 10 **CONDITION.**

11 A. The tables below illustrate the breakout of the Company’s refund calculation by operating
 12 unit for cast iron mains, steel mains, and steel services, as adjusted for the timed billed
 13 and interest using a weighted average interest rate over the collection period.

14

Case No. GO-2018-0309 - ISRS Refund Calculation				
	Spire East Revenue Refund	Adjusted for Collection Period*	Interest @2.83%**	Total
Cast Iron Mains	\$ 544,928.78	\$ 870,393.09	\$ 24,632.12	\$ 895,025.22
Steel Mains	\$ 28,490.07	\$ 45,506.06	\$ 1,287.82	\$ 46,793.88
Services	\$ 107,183.98	\$ 171,200.72	\$ 4,844.98	\$ 176,045.70
			Total Refund	\$ 1,117,864.80
*Assumes a collection period of 10/8/2018-5/13/2020				
**Interest rate based on a weighted average of the prime rate minus two over the collection period				

15

Case No. GO-2018-0310 - ISRS Refund Calculation				
	Spire West Revenue Refund	Adjusted for Collection Period*	Interest @2.83%**	Total
Cast Iron Mains	\$ 340,998.96	\$ 544,664.09	\$ 15,413.99	\$ 560,078.08
Steel Mains	\$ 1,996,736.48	\$ 3,189,307.85	\$ 90,257.41	\$ 3,279,565.27
Services	\$ 21,184.50	\$ 33,837.16	\$ 957.59	\$ 34,794.75
			Total Refund	\$ 3,874,438.10
*Assumes a collection period of 10/8/2018-5/13/2020				
**Interest rate based on a weighted average of the prime rate minus two over the collection period				

1

Case Nos. GO-2018-0309 and GO-2018-0310 - Combined ISRS Refund Calculation				
	Spire West Revenue Refund	Adjusted for Collection Period*	Interest @2.83%**	Total
Cast Iron Mains	\$ 885,927.74	\$ 1,415,057.18	\$ 40,046.12	\$ 1,455,103.30
Steel Mains	\$ 2,025,226.55	\$ 3,234,813.92	\$ 91,545.23	\$ 3,326,359.15
Services	\$ 128,368.48	\$ 205,037.88	\$ 5,802.57	\$ 210,840.45
			Total Refund	\$ 4,992,302.90
*Assumes a collection period of 10/8/2018-5/13/2020				
**Interest rate based on a weighted average of the prime rate minus two over the collection period				

2

3 **Q. DO YOU BELIEVE THIS REFUND AMOUNT IS OVERSTATED?**

4 A. Yes. In addition to my general belief that all of these facilities are in a deteriorated
5 condition, it is important to remember the critical fact that bare steel begins to corrode –
6 i.e. deteriorate – from the moment it is installed in the ground. Given this commonly
7 understood principle, I believe it would be more appropriate to only exclude those bare
8 steel main replacement costs that had been installed without cathodic protection for less
9 than 30 years.

10 **Q. IF THE COMMISSION WERE TO ORDER A REFUND OF THE**
11 **REPLACEMENT COSTS FOR THE CAST IRON THAT WAS RETIRED**
12 **BEFORE THE EXPIRATION OF ITS ESTIMATE SERVICE LIFE, WHAT**
13 **WOULD THAT AMOUNT BE?**

14 A. If the Commission excluded cast iron amounts based on the facilities retired in the Work
15 Orders found in OPC Exhibits 202, 208 and 209 only, it would be a total refund as of the
16 date this testimony is filed of approximately \$1,455,103, which takes into account time

1 billed and interest. If the Commission excluded the amounts based on the retirements
2 from all Work Orders in these cases, the refund would be \$675,342. Again, I want to
3 emphasize that all of the cast iron and bare steel replaced was worn out or in a deteriorated
4 condition. The information provided in this answer should not be construed as any
5 indication to the contrary.

6 **Q. WHAT DID YOUR ANALYSIS SHOW FOR THE STEEL FACILITIES RETIRED**
7 **AS A RESULT OF THE ISRS PROJECTS CONTAINED IN THESE WORK**
8 **ORDERS.**

9 A. As shown in the table above, 99.73% of the steel services retired had exceeded their
10 estimated service life, which would result in a refund of \$210,840 for those that had not.
11 Because these Work Orders did not contain retirements for steel mains, I reviewed the
12 retirement information included in all Work Orders for these ISRS cases, and utilized an
13 average service life of 69 years, based on Staff's recommended depreciation rate in Case
14 No. GR-2017-0216, Spire West's most recent general rate case proceeding. This is
15 consistent with Spire's recommended 70 year average service life from that case. The
16 result is that 35.85% of the retired facilities had exceeded their estimated service life. This
17 would result in a refund of \$3,326,359.

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

A. Yes.

