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| **Exhibit No.:** | _____ |
| **Issue(s):** | Cost Recovery Mechanism |
| **Witness/Type of Exhibit**: | Robinett/Direct |
| **Sponsoring Party**: | Public Counsel |
| **Case No**.: | GO-2019-0356<br>GO-2019-0357 |

# DIRECT TESTIMONY

# OF

# JOHN A. ROBINETT

Submitted on Behalf of the Office of the Public Counsel

## SPIRE MISSOURI INC.
**SPIRE MISSOURI EAST SERVICE TERRITORY**
**SPIRE MISSOURI WEST SERVICE TERRITORY**

CASE NO. GO-2019-0356
CASE NO. GO-2019-0357

September 27, 2019

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

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| In the Matter of the Application of Spire Missouri, Inc. to Change its Infrastructure System Replacement Surcharge in its Spire Missouri East Service Territory | ) ) ) ) | Case No. GO-2019-0356 |
| In the Matter of the Application of Spire Missouri, Inc. to Change its Infrastructure System Replacement Surcharge in its Spire Missouri West Service Territory | ) ) ) ) | Case No. GO-2019-0357 |

## AFFIDAVIT OF JOHN A. ROBINETT

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF COLE** )

John A. Robinett, of lawful age and being first duly sworn, deposes and states:

1. My name is John A. Robinett. I am a Utility Engineering Specialist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my direct testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

John A. Robinett
Utility Engineering Specialist

Subscribed and sworn to me this 27th day of September 2019.

NOTARY PUBLIC NOTARY SEAL STATE OF MISSOURI

JERENE A. BUCKMAN
My Commission Expires
August 23, 2021
Cole County
Commission #13754037

Jerene A. Buckman
Notary Public

My Commission expires August 23, 2021.

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**DIRECT TESTIMONY**
**OF**
**JOHN A. ROBINETT**

**SPIRE MISSOURI EAST**

**SPIRE MISSOURI WEST**

**CASE Nos. GO-2019-0356 and GO-2019-0357**

**Q. What is your name and what is your business address?**

A. John A. Robinett, P.O. Box 2230, Jefferson City, Missouri 65102.

**Q. By whom are you employed and in what capacity?**

A. I am employed by the Missouri Office of the Public Counsel ("OPC") as a Utility Engineering Specialist.

**Q. Have you previously provided testimony before the Missouri Public Service Commission?**

A. Yes. Please see Schedule JAR-D-1.

**Q. What is your work and educational background?**

A. A copy of my work and educational experience is attached to this testimony as Schedule JAR-D-1.

**Q. What is the purpose of your direct testimony?**

A. The purpose of this direct testimony is to address Spire's Infrastructure System Replacement Surcharge ("ISRS") applications in Case Nos. GO-2019-0356 and GO-2019-0357. In this testimony I will address Spire's lack of evidence to show the cast iron and non-cathodically protected steel services it replaced as part of this ISRS request were worn out or in a deteriorated condition. I will also discuss the replacement of cathodically protected steel mains that Spire is seeking to pass through the ISRS. It is my opinion that these replacements are improper expenses for recovery under an ISRS.

**Q. Does your testimony maintain that all of the costs that Spire seeks to recover in these cases are not ISRS eligible?**

A. No. After reviewing Spire's applications and associated work papers, I have come to the conclusion that, for purposes of this case, there is no reason for the Commission to find that the joint encapsulation projects and relocations Spire performed are not ISRS eligible due to Spire providing sufficient documentation to support the ISRS eligibility of these projects. This includes, for example, the various letters Spire received from entities with the power of eminent domain showing the need for relocations due to construction.

**ISRS Eligibility of Cathodically Protected Steel Replacements**

**Q. Is Spire replacing cathodically protected steel mains and seeking recovery of the cost of those replacements in this ISRS applications?**

A. Yes. As Spire and the Commission's Gas Safety Department both acknowledge, Spire did not have any unprotected steel mains remaining in either the Missouri East or Missouri West systems prior to beginning the work that Spire is seeking ISRS recovery for in this application. However, the work orders that Spire has provided show that they are claiming costs related to the replacement of steel mains in both of its applications. Therefore, Spire must be replacing protected steel mains and seeking recovery of the costs related to those replacements in both of its ISRS applications.

**Q. Are you aware of any federal or Missouri state mandate to replace cathodically protected steel mains in the manner that Spire is engaged in?**

A. No. I have reviewed 20 CSR 4240-40.030(15) as part of this case. However, this section of the rule does not lay out or state a mandated replacement program for cathodically protected steel mains.

I have also reviewed Spire West's (formerly MGE's) Safety Line Replacement Program approved by the Commission in case number GO-2002-50. Paragraph 12 on page 8 of the approved program discusses a cathodically protected steel replacement program designated as the "5-5-3 program," which means that it triggers replacement of a minimum of 5 miles of pipes per year if 5 leaks within 500 feet are reported over a three-year period. However, this program does not apply to the vast majority of the replacements that Spire West is performing. I know this for two different reasons. First, I searched the work orders that Spire West provided and determined that out of the more than 300 work orders, only twenty-one indicated that they were an attempt to fix leaks. The second reason I know that Spire West is not replacing pipes pursuant to this 5-5-3 replacement program is because of the number of replacements being made. Spire has reported only 429 total corrosion related leaks for mains over the past three years.[1] Even if I give the company the greatest benefit of the doubt by assuming that every single one of these leaks was part of a 5-5-3 trigger, it still only results in less than 86 triggers of the 5-5-3 program for this year. If I further assume that each 5-5-3 trigger was independently responsible for an entire work order, it means that the 5-5-3 replacement mandate could, at best, only ever apply to 86 out of the more than 300 work orders Spire West submitted in this ISRS application.

[1] Spire reported 93 corrosion related leaks for mains in 2018, 210 in 2017, and 126 in 2016. Schedule JAR-D-6

I also reviewed the pipe replacement program approved by the Commission for Spire East in GO-91-275. This replacement program included no mandate for the replacement of cathodically protected steel mains.

**Q. Is there any evidence to show that the cathodically protected steel mains and services that Spire replaced and are seeking to recover costs for in these ISRS applications are worn out or in a deteriorated condition?**

A. No. I am not aware of any evidence to show that the cathodically protected steel mains and services that Spire replaced and are seeking ISRS recovery for are worn out or in a deteriorated condition. It is important to remember that the whole point of cathodic protection is to slow down the rate of degradation or corrosion that naturally occurs in metal pipes, thus lengthening the useable life of the pipes. Cathodic protection can be done in a number of different ways. One such way includes using a "sacrificial anode" which is a piece of metal with a more negative electrode potential than the pipe that is being protected. This sacrificial anode then wears out or deteriorates instead of the pipe that it is attached to. This means that cathodically protected pipes should, all else being equal, wear out or deteriorate at a much slower rate than non-cathodically protected steel pipes given that the cathodically protected steel pipe should not begin to wear out until after the cathodic protection has been exhausted. This fact is important when considering average service lives, as I will discuss later in my testimony. For now, all that is necessary to understand is that Spire has not offered any evidence at all to show that the cathodically protected steel mains or services it replaced were worn out or in a deteriorated condition.

**ISRS Eligibility of cast iron mains and non-cathodically protected steel main and service line replacements**

**Q. Are there any work order authorization sheets that cause OPC concern regarding the eligibility of projects?**

A. Yes. I focused my analysis on the work orders provided for Spire West projects. I discovered several work orders that raised significant concerns to me for a variety of reasons. The first is 800041, which is the first project from the June actuals attached as schedule JAR-D-2. This work order claims to be ISRS eligible for cast iron main replacement; however, a review of the retired assets indicate no cast iron being retired. In addition attached as Schedule JAR-D-3, work orders 802173, 802217, 802175 fail to provide vintages of mains and services being retired as part of the project. The same is true of work orders 802804, 802703, 802352, 802386, 802320, 802175, 802217, 802255, 801554, 801553, 802113, 802028, 801552, 801551, 801899, 800666, 801260, 800642, and 800348 from the July update also attached as schedule JAR-D-3. Attached as Schedule JAR-D-4 is the only work order 800227 that identifies graphitization corrosion as need for replacement. Finally, work order 800224 attached as Schedule JAR-D-5 has a budget description of replacement of cast iron main, however, a review of the work order retirements paints an entirely different picture as the only units being retired are coated steel mains.

**Q. Has Spire provided any evidence that the cast iron and non-cathodically protected steel mains and services, which it replaced and for which it is seeking recovery in this petition, are worn out or deteriorated?**

A. No. Spire's verified application includes a chart that lists every work order for which Spire is seeking ISRS recovery and identifies what portion of the ISRS statue Spire is relying on to demonstrate eligibility for each work order. The vast majority of these work orders cite to section 393.1009(5)(a) RSMo, which allows ISRS recovery for "mains, valves, service lines, regulator stations, vaults and other pipeline system components installed to comply with state or federal safety requirements as replacements for existing facilities that have worn out or are in deteriorated condition," as the basis for ISRS eligibility. However, Spire has failed to provide any tangible evidence that any of the pipes replaced under the work orders that rely on this section actually meet the definition of "worn out or in a deteriorated condition."

**Q. Has Spire provided any evidence of testing performed on replaced cast iron and non-cathodically protected steel mains and services?**

A. No. In the past, I have sent Spire several data requests related to the subject of testing. Spire has consistently stated that it does not perform any test to determine if the pipes it is replacing are worn out or in a deteriorated condition. Example data requests and responses that I have sent and received in previous cases are included in Schedule JAR-D-17. I do not have any reason to believe that Spire has changed its position since these last cases and they certainly did not include any evidence related to testing performed on the pipes they replaced in the current applications.

**Q. Has Spire provided any evidence concerning leak history analysis or leak reporting regarding the cast iron and non-cathodically protected steel mains and services it replaced?**

A. My review of the Spire Missouri West work orders indicated twenty-one work orders that were undertaken to repair some sort of leak. Further, there are leak statistics provided in the annual reports Spire submits to the Federal Department of Transportation which are attached in Schedule JAR-D-6. Additionally attached as schedule JAR-D-7 are all of the work orders for Spire Missouri West that are in response to leaks.

**Q. Is there any reason that Spire should be performing testing or leak analysis on its lines?**

A. Yes. In preparing for this case, I reviewed Spire's Commission Approved Replacement Plans. The case file numbers for the plans are GO-2002-50 for Spire Missouri West and GO-91-275 for Spire Missouri East. Both of these replacement plans included requirements for testing that Spire is supposed to be performing.

**Q. What did the replacement plans that you reviewed say with regard to testing and leak analysis/reporting requirements?**

A. The Spire West replacement plan (attached as Schedule JAR-D-8) filed July 30, 2001, in Case No. GO-2002-50 at page 4 paragraph 10 B, discusses how Spire West's predecessor Missouri Gas Energy was to collect a coupon (small sample of pipe) of every cast iron main break and then analyze it for graphitization/corrosion.

The Spire East "Commission Approved Replacement Plan" (attached as Schedule JAR-D-9) is found in Case No. GO-91-275 and was filed June 18, 1993. It discusses how Spire, (then Laclede Gas Company) had implemented annual flame-ionization mobile leak survey of all its cast iron mains with additional special surveys conducted when weather/ground conditions warranted.

**Q. Are there any other considerations that need to be addressed regarding the eligibility of recovery under an ISRS for cast iron and non-cathodically protected steel mains and service replacements?**

A. Yes, Spire has previously attempted to rely on the age of the pipes being replaced as a basis for claiming that they are worn out or deteriorated. However, age alone is insufficient to prove that any given segment of pipe is worn out or deteriorated, let alone sufficient to support an entire ISRS application.

**Q. Is the statement that age alone is insufficient to prove pipes are worn out or deteriorated consistent with the position taken by the Commission Staff?**

A. Yes, Staff's Safety Engineering Manager, Ms. Kathleen McNelis, PE, produced a memorandum that was filed in a Liberty Midstates Gas case (File No. GO-2019-0091) stating that "age of . . . pipe does not meet the criteria used in Staff's evaluation because the age of pipe is not necessarily a safety concern; provided that the pipe is in good condition." This Staff recommendation/memorandum is attached as Schedule JAR-D-10 .While that case dealt specifically with PVC pipes, the logic of Ms. McNelis' conclusion should hold true with absolutely any material.

**Q. Is there any other evidence that demonstrates why age alone is not a sufficient factor for determining whether pipes are worn out or deteriorated?**

A. In the regulatory context, age of infrastructure is most commonly associated with the concept of depreciation.

> Depreciation as applied to depreciable utility plant, means the loss in service value not restored by current maintenance, incurred in connection with the consumption or perspective retirement of utility plant in the course of service

> from causes which are known to be in current operation and against which the utility is not protected by insurance. Among these causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in art, changes in demand, and requirements of public authorities.[2]

The Public Utilities Depreciation Practices published by the National Association of Regulatory Utility Commissioners, a publication on which utility depreciation experts commonly rely, define the factors that depreciation accounts for on pages 11 through 18. These pages are attached as Schedule JAR-D-11.

**Q. Are there any other depreciation resources that discuss the factors of depreciation?**

A. Yes. For example, those factors are discussed on Pages 70 through 73 of Depreciation Systems written by Frank K. Wolf and W. Chester Fitch published by the Iowa State University Press in 1994. Specifically, the authors discuss issues with the use of physical condition as a measure of depreciation. The first issue is that wear and tear do not account for all retirements. The second issue discussed is the difficulty of measuring the physical condition. The paragraph ends with the following statement: "Though it is possible to measure directly the wear of railroad track and the corrosion of cast iron pipe, easily measurable wear is not characteristic of most industrial property." These specific pages are attached as Schedule JAR-D-12.

Another depreciation resource that references depreciation factors is the Introduction To Depreciation For Public Utilities and Other Industries published by Edison Electric

[2] Public Utility Depreciation Practices published by National Association of Regulatory Utility Commissioners, August 1996 page. 13. This definition is footnoted in previous document as sourced from Uniform System of Accounts for Class A and Class B Electric Utilities, 1958, rev.,1962.

Institute and American Gas Association in April 2013. The section I rely on in this text discusses the average service life of assets. Attached as Schedule JAR-D-13 is page 59. It defines service life of a unit of property as the number of years elapsing from the time a unit of property is placed into service until it is removed or abandoned. Additionally, it defines average service life of an account as the average of the lives of all such units within a plant account.

**Q. Why is average service life important?**

A. The average service life is used for determining the depreciation rate for a particular account. As a depreciation expert, I expect approximately half of assets to be retired before the average service and half of them to exceed the average service life.

**Q. What are the average service lives for Spire East and West for Mains and Services?**

A. Attached as Schedule JAR-D-14 are the depreciation rates approved by the Commission in Case Nos. GR-2017-0215 and GR-2017-0216. The average service lives for Spire West are 50 years for mains and 40 years for services. Spire West currently does not have different average service lives by material type for its mains and services unlike Spire East. The average service lives for Spire East for Cast iron main is 80 years, steel mains is 80 years, and plastic mains is 70 years. Spire East's average service lives for steel, plastic, and copper services is 44 years.

**Q. Are there any important considerations to be made regarding these average service lives?**

A. I can think of two important points to consider regarding these average service lives. The first is the simple fact that the there is a significant difference between the average service

life for pipes on the eastern side of the state and the average service life for pipes on the western side of the state despite the pipes being made of the same material. This only serves to illustrate my point that average service lives are not a good proxy for determining the condition of pipe lines. The difference in average service lives between Spire Missouri East and Missouri West are the result of historical data retention. Laclede (now Spire Missouri East) has retained historical depreciation records for approximately the last 150 years. Unlike Laclede, the MGE properties (now Spire Missouri West) experienced a significant data loss. The reason for the data inadequacy is that when Southern Union Company acquired Missouri Gas Energy in 1994 from WRI, WRI's plant retirement records were not transferred to the possession of MGE. Due to the property records not being transferred as part of the sale in 1994, neither the Company nor Staff have been able to perform a statistically valid study that reflects the life of MGE's assets. So it is highly likely that, like other natural gas utilities in this state, Spire Missouri West is utilizing surrogate depreciation rates until the time when sufficient data exists to perform a statistically valid study. This historical data loss is the reason for why the average service life for mains on the west side of the state are twenty to thirty years less than mains on the east depending on material.

The second thing that I would consider important is that, because neither Spire Missouri West nor its predecessors differentiated between any pipe material for mains, the average useable life of cathodically protected steel pipes should be longer than the 50 year average service life approved by the Commission in Case No. GR-2017-0216. This is because cathodically

protected steel should last longer than cast iron and the average service life is an average of both cast iron and steel service lives.

**Q. What conclusions do you draw from all of this information regarding depreciation and average service lives in relation to Spire's applications?**

A. All of the resources cited clearly reinforce the statement that age alone is insufficient to prove that any given segment of pipe is worn out or deteriorated. Therefore, the fact that a particular segment of pipe may be older than the average service life for that type of material does not mean that the pipe is worn out or deteriorated.

**Q. Does the retirement of plastic that was not worn out or deteriorated raise any other concerns regarding depreciation and average service lives?**

A. Over time the retirements of these portions and segments of plastic mains and services that are being retired that are not in a worn out or deteriorated condition will eventually affect the useful life of the main or service of plastic when added up over time. In other words, Spire's continued retirement of pipe that is not worn out or deteriorated will result in an inaccurate measure of the useful life of that plant.

**Q. Is there anything that the Commission can do to remedy this potential issue from occurring?**

A. Yes. For purposes of depreciation records, the Commission could order Spire to record all plastic main and services retired as part of ISRS projects as outlier retirements which are removed from the depreciation data when a future depreciation study is performed.

**Q. Did you pursue other discovery that would allow you to make a determination of the condition of each type, vintage, and size of main or service being replaced?**

A. As part of this case I asked Spire to provide the inner diameter and outer diameter measurements with maximum and minimum tolerances for all types and sizes of mains and services used by Spire. Spire was unable to provide this data for any mains or services prior to 2012.

**Q. Did you seek any additional information from Spire?**

A. Yes. OPC sent a data request inquiring for the average annual corrosion rate. Spire's response was they do not track this information. Additionally, OPC requested the average age of Spire's mains by type. This information was also not able to be provided to OPC. In fact, Spire stated it would take weeks to create the queries to determine the average age of their infrastructure.

**Q. What was the purpose of seeking the dimensions of mains and services and the annual corrosion rate of each type of main or service line?**

A. The purpose of my request was for OPC to have the ability to determine whether the mains and services being retired were worn out or deteriorated by examining the maximum and minimum wall thickness and then applying the average corrosion rate over the average age of each type of mains or services in order to determine what wall thickness would remain and if the remaining wall thickness provided a level of safety when pressurized. This information was OPC's attempt to determine if mains and services being replaced were truly worn out or in a deteriorated state, but Spire either doesn't know or is unwilling to provide this information to help prove the actual or calculated state of the mains and services.

**Q. Does Spire's inability to provide the average age of its infrastructure cause other concerns for OPC?**

A. Yes. Spire's inability to provide the average age of mains and services by type and size draws major concerns for depreciation as it may be proof that Spire is not properly recording and tracking plant in service assets according to the Federal Energy Regulatory Commission ("FERC") Uniform System of Accounts ("USOA") and Commission rules.

**Q. Are there any other concerns raised by Spire's claim that the cast iron and non-protected steel mains and services that it replaced were worn out or deteriorated?**

A. Yes. Based on past Spire ISRS cases, the applications Spire filed, and the direct testimony of Craig R. Hoeferlin, I began to believe that Spire was attempting to claim that **all** of the cast iron and non-protected steel mains and services it had in use (including both those being replaced in this ISRS application and those still in the ground) were worn out or in a deteriorated state. To confirm my suspicion, I sent Spire several data requests asking if this was truly its position. Spire provided responses to my data requests, included as Schedule JAR-D-15, that confirmed that it was claiming that all cast iron mains and non-cathodically protected steel mains and services were worn out or deteriorated. This raises significant concerns for me, because I do not see how Spire could possibly be meeting its duty to provide safe and adequate service if this is true.

**Q. Could you please elaborate?**

A. Certainly. Spire's application cites to its statutory duty to provide safe and adequate service as one of the justifications for all of the replacements it performed. I understand this to mean that Spire is claiming that it was required to replace the pipes identified in these ISRS applications in order to continue providing safe and adequate services because of their condition. But Spire is also claiming that the pipes it did not replace are in the same condition.

Therefore, under Spire's theory, it would also have needed to replace the pipes it did not replace in order to meet its obligation to provide safe and adequate service. Because Spire did not replace these other pipes, one could argue Spire has therefore failed to meet its statutory duty to provide safe and adequate services.

**Q. Are you claiming that Spire is not providing safe and adequate services?**

A. No. I do not agree with Spire's claim that it needed to replace the pipes identified in these ISRS applications in order to continue providing safe and adequate services because I have seen no evidence to show that the pipes Spire replaced were worn out or in a deteriorated condition. It is only under Spire's own theory that Spire has failed to provide safe and adequate service. However, if the Commission were to agree with Spire that all of its cast iron and non-cathodically protected steel pipes are worn out or deteriorated, I believe that it would be incumbent upon the OPC to initiate a complaint proceeding as Spire would clearly not be providing safe and adequate service under those conditions, especially given how they have failed to prioritize cast iron main replacements in Spire West.

**Q. What do you mean?**

A. When I examined the annual reports that Spire West has provided to the United States Department of Transportation, I noticed that between the 2015 and 2016 reports, Spire had replaced 19.09 miles of cathodically protected steel mains and 4.62 miles of cast iron mains. This meant that 80.51% of the mains replaced in the west between 2015 and 2016 were cathodically protected steel mains and not cast iron mains. I similarly found 85.09% of the mains replaced between 2016 and 2017 and 83.30% replaced between 2017 and 2018 were cathodically protected steel and not cast iron mains. Given these findings, I must conclude

that Spire is not prioritizing cast iron main replacements in the west, despite these pipes being much older.

**Q. If what you say is true about Spire's claim to not be providing safe and adequate service, why hasn't the Commission's Gas Safety Department become involved?**

A. The OPC sent several data requests to the Commission's Gas Safety Department concerning their understanding of Spire's gas distribution system. The Gas Safety Department responded by informing us that they do not monitor the condition of Spire's gas distribution system to see if it is worn out or deteriorated. The responses provided by the Commission's Gas Safety Department are attached as Schedule JAR-D-16.

**ISRS eligibility of plastic replacements**

**Q. Does Spire's filed ISRS applications contain costs related to the replacement of plastic mains or services?**

A. Yes. Spire in this case has filed two cases for each Spire Missouri West and Spire Missouri East. One case eliminates the plastic consistent with the last two Commission orders. The other includes all of the plastic that had been previously removed by Commission orders. This second set of cases for Missouri East and Missouri West should be denied.

**Q. Are both Spire Missouri East and Spire Missouri West seeking recovery of the cost of replacement of plastic mains and service lines that were not worn out or deteriorated from its customers?**

A. Yes. In direct contradiction to the Missouri Court of Appeals Western Districts' ("Western District") mandate, Spire is seeking recovery of replacement costs for plastic that was not

worn out or deteriorated as part of the ISRS filings for both its Missouri East and West territories.

**Q. In your opinion, should Spire be allowed to recover any portion of the costs related to the replacement of plastic mains and services that were not worn out or in a deteriorated condition?**

A. No. Counsel has advised that the Missouri Courts have spoken on this point and spoken clearly. Spire may not collect costs associated with the replacement of plastic components that are not worn out or in a deteriorated condition. In the past, Spire has attempted to claim that there are no costs associated with the replacement of plastic components; however, it is important to acknowledge that there will always be a cost under any method that is used for ineligible main replacement. For example, even if there is less pipe going into the ground, due to a modification of Spire's gas distribution system brought on by a change in pressure, this does not mean that it did not cost something to replace that portion of main. Similarly, just because it is cheaper to replace the entire main rather than reuse an existing portion does not mean there were no costs associated with the replacement of that portion of main.

**Q. Is it possible to calculate a specific disallowance for just the replacement of plastic mains and services?**

A. In my opinion, the Commission should disallow cost recovery related to all the replacements Spire claims as ISRS eligible based on Spire's failure to show that those replacements were of infrastructure that was truly worn out or deteriorated. However, it is possible to calculate a disallowance for just the replacement of plastic infrastructure using the same methodology

employed by Staff and ordered by the Commission in the GO-2018-0309 and GO-2018-0310 and GO-2019-0115 and GO-2019-0116 cases.

**Conclusion**

**Q. Can you please summarize your testimony for the Commission?**

A. The Commission should disallow recovery for the replacement of any cast iron, non-cathodically protected steel, cathodically protected steel, and plastic mains or service lines that are not worn out or in a deteriorated condition since Spire has been unable to prove that that any of the mains and services that are being replaced are in a worn out or deteriorated condition and has no federal or Missouri state mandate to replace either plastic mains and service lines or cathodically protected mains and service lines. This is evidenced by the data requests we have received over the past several ISRS cases.

**Q. Are you recommending that none of the items Spire has included in its application are ISRS eligible?**

A. No. OPC is accepting, for purposes of this case, ISRS eligibility of any joint encapsulation projects and relocations due, in part, to Spire providing documentation from entities with the power of eminent domain that verify the need for such relocations. Also, I am not recommending that Spire never be allowed to recover costs associated with the remaining portions of these projects. I am simply stating that these costs are just not eligible for expedited recovery through the ISRS. Spire may still file a general rate proceeding to request that any capital additions that are not deemed eligible for recovery under the ISRS statue be included in new rates.

**Q. Does this conclude your direct testimony?**

A. Yes, it does.