

Exhibit No.:
Issue(s): Pensions
Witness: Jared Giacone
Sponsoring Party: MoPSC Staff
Type of Exhibit: Rebuttal Testimony
Case No.: GR-2021-0108
Date Testimony Prepared: June 17, 2021

MISSOURI PUBLIC SERVICE COMMISSION

FINANCIAL AND BUSINESS ANALYSIS DIVISION

AUDITING DEPARTMENT

REBUTTAL TESTIMONY

OF

JARED GIACONE

**SPIRE MISSOURI INC., d/b/a SPIRE
SPIRE EAST and SPIRE WEST
GENERAL RATE CASE**

CASE NO. GR-2021-0108

*Jefferson City, Missouri
June 2021*

**** Denotes Confidential Information ****

Rebuttal Testimony of
Jared Giacone

1 A. Staff’s recommendation is to set pension contributions for the Spire East plan
2 at \$32.4 million and \$4.4 million for the Spire West plan based on the statutorily required
3 funding level.

4 Q. How much is the difference between Spire’s proposed funding level and
5 Staff’s recommended funding level?

6 A. The difference is \$9.1 million for the Spire East plan and \$2.5 million for the
7 Spire West plan.

8 Q. What is pension funding?

9 A. Pension funding is the contributions Spire pays to a pension trust in order to fund
10 its retiree benefit payments. There are federal laws that require companies to fund their pension
11 plans. The Employee Retirement Income Security Act of 1974 (“ERISA”) governs
12 private industry retirement plans. By law, ERISA requires private industry retirement plans to
13 maintain an 80% minimum Funding Target Attainment Percentage (“FTAP”) according to the
14 ERISA calculation. ERISA also imposes variable rate insurance premiums to the
15 Pension Benefit Guaranty Corporation (“PBGC”) for under-funded pension obligations and
16 puts restrictions in place for plans that are considered “at-risk”.

17 Q. What are PBGC insurance premiums?

18 A. There are two separate PBGC premiums. One is a flat-rate per participant and
19 is required regardless of the funded status of the pension plan and the other is a variable
20 premium calculated up to a maximum cap based on the funded status of the plan.

21 Q. How does ERISA define “at-risk”?

22 A. The instructions for IRS Form 5500 Schedule SB state, “Determining whether a
23 plan is in at-risk status. A plan with over 500 participants is in at-risk status for 2020 if both:

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1 the FTAP for 2019 is less than 80%, *and* the at-risk funding target attainment percentage
2 for 2019 is less than 70%.” That means that if the FTAP calculation was less than 80% then
3 another calculation would need to be done to show the funding percentage using worst-case
4 scenario actuarial assumptions, such as assuming all payouts were paid as lump-sums and all
5 employees retire at their earliest eligible retirement date. If this calculation is below 70%, then
6 the company is considered at-risk. If the initial FTAP calculation is 80% or greater the at-risk
7 funding target calculation is not required.

8 Q. Is the Spire East or Spire West pension plan considered “at-risk”?

9 A. No.

10 Staff reviewed Spire East’s latest IRS Form 5500 Schedule SB dated July 17, 2020,
11 signed by its actuary and the section labeled Box 4 for “at-risk” was not checked. The FTAP
12 reported on the form was 85.35%. It should be noted that the FTAP calculation is reduced by
13 the carryover and prefunding balance of \$9.7 million. The carryover and prefunding balance is
14 the amount Spire has contributed over and above the minimum ERISA required contributions
15 in prior years. The carryover and prefunding balance can be used by Spire in future years to
16 offset any minimum required contributions. For purposes of stating the plan valuation with the
17 carryover and prefunding balance based on the IRS Form 5500 dated July 17, 2020, the plan
18 funding percentage would be nearly 90% per the numbers used in the ERISA calculations. The
19 Spire East IRS Form 5500 Schedule SB is attached to this testimony as Schedule JG-r1.

20 Staff also reviewed Spire West’s latest IRS Form 5500 Schedule SB dated
21 September 25, 2020, signed by its actuary and the section labeled Box 4 for “at-risk” was not
22 checked. The FTAP reported on the form was 90.57%. The Spire West retirement plan did not
23 have a carryover and prefunding balance on the IRS Form 5500 Schedule SB dated

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1 September 24, 2020. The Spire West IRS Form 5500 Schedule SB is attached to this testimony
2 as Schedule JG-r2.

3 Q. Are the pension funding contribution amounts based on any assumptions?

4 A. Yes. Pension plan funding status is always in flux and it is just a snapshot at any
5 given point in time using actuarial assumptions. That means pension plan funding status and
6 the amount of pension funding contributions required is a moving target. Many assumptions
7 are used and those assumptions can change over time, which alters the amount of pension
8 funding required. One of the most critical and unknown assumptions is the actual rate of return
9 on plan assets over time. Other factors include interest rates (which affect the bond discount
10 rates), number of employees covered by the plan, age of employees covered by the plan, actual
11 retirement date of employees covered by the plan and mortality rates.

12 Q. Who calculates the pension funding level options?

13 A. Spire's actuary, Willis Towers Watson performs calculations and provides the
14 information in reports sent to Spire. Staff submitted Data Request Number 359 requesting the
15 documentation supporting the amounts in Mr. Felsenthal and Mr. Krick's direct testimony. The
16 Company responded with the Cash Forecast report dated October 30, 2020 from its actuary
17 Willis Towers Watson. The Cash Forecast is attached to this testimony as Schedule JG-r3.

18 Q. Does the Cash Forecast list different funding scenarios?

19 A. Yes. The Cash Forecast lists three different funding scenarios.

Option 1	Baseline	Fund greater of minimum required contribution and amount needed to maintain an 80% Adjusted Funding Target Attainment Percentage
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Option 2	Scenario 1 One-Time Acceleration of Funding	Fund a large one-time payment so the funded status of each plan reaches 100% (fully funded on a market basis)
Option 3	Scenario 2 Level Funding over Period	Fund the amount of the large one-time payment over a five-year period (One-time payment amount divided by 5 and adjusted for time value)

1 Source: Spire Pension Plan Cash Forecast report dated October 30, 2020

2 Q. Which of the three funding options corresponds to Mr. Felsenthal's
3 and Mr. Krick's direct testimony?

4 A. Option 3. Spire is proposing to include funding to reach a 100% funded status
5 in five years on a market basis which could result in reduced or eliminated PBGC variable rate
6 premiums and possibly less future pension funding required.

7 Q. Which of the three funding options does Staff recommend?

8 A. Option 1.

9 Q. Why does Staff recommend Option 1?

10 A. Staff's position satisfies the statutory requirement for pension funding to
11 maintain an 80% ERISA funding target, avoids at-risk status and avoids any benefit restrictions
12 from being imposed. Staff's position requires the least amount of funding in rates
13 from customers.

14 Staff does not agree with placing a burden on current ratepayers with higher rates for
15 Spire to achieve a fully-funded pension status on a market basis to the potential benefit of future

1 ratepayers realizing possible savings of reduced or eliminated PBGC variable rate premiums
2 and possible reduced future pension funding requirements.

3 Q. Why would it not be advantageous to support targeted 100% funding of the
4 pension obligations?

5 A. It is important to note that the targeted funding percentage calculations take into
6 account current and future employee benefit obligations. That means the benefit obligations of
7 employees who have not yet retired are included in the calculation. This allows time for plan
8 assets and contributions to grow the pension fund and earn a return before those current
9 employees retire. Increasing the funding target percentage above the federal statutorily required
10 ERISA minimum of 80% would raise customer rates disproportionately in the present case
11 compared to including a more normalized level of pension expense over time based on
12 ERISA funding guidelines.

13 Q. Does not funding the pension obligations at 100% imperil the pension funds?

14 A. No. The ERISA funding calculations and PBGC premiums are designed to
15 prevent private company pension plans from failing. The Commission set rates at
16 an 80% ERISA funding level in the previous Spire rate case and as of the most recent IRS Form
17 5500 available, the plans are not considered to be “at-risk” according to ERISA criteria.
18 In addition, as stated previously in this testimony, even though funding was set at
19 the 80% minimum, the funding attainment calculation based on the most recent IRS Form 5500
20 Schedule SB available was 85.35% for the Spire East plan and 90.57% for the Spire West plan.
21 Increasing the funding target to 100% would raise rates with no guarantee that the plans would
22 actually achieve the target percentage due to variations in the assumptions mentioned
23 previously in this testimony. It is possible the plan would be less than the 100% funding target

1 but it is also possible that the plan could exceed the 100% funding target which would indicate
2 pension contributions and thus, customer rates, were set too high.

3 Q. You mentioned the Commission addressed the funding levels in its
4 Amended Report and Order from the previous Spire rate cases, GR-2017-0215 and
5 GR-2017-0216. What was the Commission's decision?

6 A. The Commission's decision in the Amended Report and Order from the prior
7 Spire rate case, GR-2017-0215/0216 states on page 93,

8 The pension asset of LAC has grown quite large and a 90 percent funding
9 level would lower PGCB premiums in the future and prevent the
10 regulatory asset from increasing in size substantially. However,
11 a 90 percent funding level would require an additional \$2 million in
12 pension expense, thus, raising rates. Additionally, the ERISA minimums
13 are calculated to take into consideration growth of the funds through
14 returns, thus, additional investment may not be needed.

15
16 In balancing the needs of the ratepayers to keep rates from increasing,
17 with the need Spire Missouri to fulfill its pension obligations, the
18 Commission determines that an 80 percent ERISA funding level
19 (\$29 million) for LAC is the most just and reasonable level.

20
21 With regard to MGE's pension asset funding, Spire Missouri, Staff, and
22 Public Counsel reached consensus that the funding level should
23 be \$5.5 million. Having reviewed the evidence before it, the Commission
24 determines that \$5.5 million is a just and reasonable funding level for
25 MGE's pension expense.

26 Q. The Commission ordered the ERISA 80% minimum of \$29 million for the
27 Spire East (formerly LAC) plan in the last rate case. What is the comparison of the amount the
28 Company actually contributed to the pension plan trust since the effective date of rates from
29 that case versus the amount included in rates?

30 A. The history is summarized in the table below for the Spire East pension plan.

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1 The effective date of rates was April 19, 2018 for the GR-2017-0215 rate case:
2

Time period	Amount in rates	Contributions Company made to the pension trust
April 19, 2018 - September 30, 2018 (165 days)	\$13,109,589	\$9,985,000
October 1, 2018 - September 30, 2019	\$29,000,000	\$19,600,000
October 1, 2019 - September 30, 2020	\$29,000,000	\$22,150,000
October 1, 2020 - December 31, 2020 (92 days)	\$7,309,589	\$19,500,000
Total	\$78,419,178	\$71,235,000

3
4 Q. Would the contribution history compared to the amount in rates listed in the
5 table above indicate that the Company has grave concern for the funding status of the
6 Spire East pension plan?

7 A. No. Since the effective date of rates in the last rate case through the update
8 period of December 31, 2020 in this case, the Company actually contributed less to the
9 Spire East pension fund than the 80% ERISA minimum amount that was included in rates. The
10 difference lowered the regulatory asset, meaning the Company recovered a portion of the
11 amounts that it had funded in excess of the amount included in rates from prior cases. If there
12 was grave concern for the Spire East pension funding status, it is reasonable to conclude that
13 the Company would have at least funded the entire amount that was included in rates as opposed
14 to drawing down the regulatory asset even more than the amortized amount of the regulatory
15 asset that was included in rates.

16 Q. Does the same situation apply to the Spire West (formerly MGE) plan?

17 A. The Spire West pension plan has a regulatory liability which means that
18 ratepayers have paid more in rates for contributions to the pension plan trust over time than the

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1 Company actually paid to the pension trust. So although the Company contributed more to the
2 Spire West pension trust since the April 19, 2018 effective date of rates from
3 the GR-2017-0216 case through the December 31, 2020 update period in this case, a regulatory
4 liability still exists. Since ratepayers have paid more in rates over time than the Company
5 actually contributed to the Spire West pension trust, it is certainly not necessary to include a
6 contribution level above the minimum 80% ERISA funding calculation for the Spire West
7 pension plan in this case.

8 Q. Does this conclude your rebuttal testimony?

9 A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a)
Spire Request for Authority to Implement a)
General Rate Increase for Natural Gas)
Service Provided in the Company's)
Missouri Service Areas)

Case No. GR-2021-0108

AFFIDAVIT OF JARED GIACONE

STATE OF MISSOURI)
)
COUNTY OF JACKSON) ss.

COMES NOW JARED GIACONE and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Jared Giacone*; and that the same is true and correct according to his best knowledge and belief.

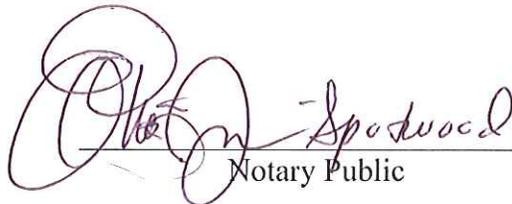
Further the Affiant sayeth not.



JARED GIACONE

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Jackson, State of Missouri, at my office in Kansas City, on this 15th day of June 2021.



Notary Public



EBONEY JACKSON-SPOTWOOD
My Commission Expires
April 8, 2023
Clay County
Commission #19865798

**SCHEDULE SB
(Form 5500)**

Department of the Treasury
Internal Revenue Service

Department of Labor
Employee Benefits Security Administration

Pension Benefit Guaranty Corporation

**Single-Employer Defined Benefit Plan
Actuarial Information**

This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code).

▶ **File as an attachment to Form 5500 or 5500-SF.**

OMB No. 1210-0110

2018

This Form is Open to Public Inspection

For calendar plan year 2018 or fiscal plan year beginning 10/01/2018 and ending 09/30/2019

▶ **Round off amounts to nearest dollar.**

▶ **Caution:** A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan <u>SPIRE MISSOURI EMPLOYEES' RETIREMENT PLAN</u>		B Three-digit plan number (PN) ▶	<u>001</u>
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>SPIRE MISSOURI INC.</u>		D Employer Identification Number (EIN) <u>43-0368139</u>	
E Type of plan: <input checked="" type="checkbox"/> Single <input type="checkbox"/> Multiple-A <input type="checkbox"/> Multiple-B		F Prior year plan size: <input type="checkbox"/> 100 or fewer <input type="checkbox"/> 101-500 <input checked="" type="checkbox"/> More than 500	

Part I Basic Information

1 Enter the valuation date: Month <u>10</u> Day <u>01</u> Year <u>2018</u>			
2 Assets:			
a Market value.....	2a	<u>224944598</u>	
b Actuarial value	2b	<u>228810407</u>	
3 Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target	(3) Total Funding Target
a For retired participants and beneficiaries receiving payment	<u>470</u>	<u>34799172</u>	<u>34799172</u>
b For terminated vested participants	<u>205</u>	<u>13595900</u>	<u>13595900</u>
c For active participants	<u>1903</u>	<u>168535175</u>	<u>208215682</u>
d Total	<u>2578</u>	<u>216930247</u>	<u>256610754</u>
4 If the plan is in at-risk status, check the box and complete lines (a) and (b)..... <input type="checkbox"/>			
a Funding target disregarding prescribed at-risk assumptions	4a		
b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b		
5 Effective interest rate.....	5	<u>5.51 %</u>	
6 Target normal cost	6	<u>15557814</u>	

Statement by Enrolled Actuary

To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE	Signature of actuary	<u>07/17/2020</u>
	Date	<u>20-07695</u>
<u>COREY BRUNO</u>	Type or print name of actuary	Most recent enrollment number
<u>WILLIS TOWERS WATSON US LLC</u>	Firm name	<u>314-719-5900</u>
<u>101 SOUTH HANLEY ST. LOUIS, MO 63105</u>	Address of the firm	Telephone number (including area code)

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions

For Paperwork Reduction Act Notice, see the Instructions for Form 5500 or 5500-SF.

**Schedule SB (Form 5500) 2018
v. 171027**

Part II Beginning of Year Carryover and Prefunding Balances		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year).....	9482581	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8).....	9482581	0
10	Interest on line 9 using prior year's actual return of <u>3.08</u> %.....	292063	0
11	Prior year's excess contributions to be added to prefunding balance:		
	a Present value of excess contributions (line 38a from prior year).....		53180
	b(1) Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>5.76</u> %.....		3063
	b(2) Interest on line 38b from prior year Schedule SB, using prior year's actual return.....		0
	c Total available at beginning of current plan year to add to prefunding balance.....		56243
	d Portion of (c) to be added to prefunding balance.....		0
12	Other reductions in balances due to elections or deemed elections.....	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d - line 12).....	9774644	0

Part III Funding Percentages			
14	Funding target attainment percentage	14	85.35%
15	Adjusted funding target attainment percentage.....	15	84.42%
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement	16	92.53%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.	17	%

Part IV Contributions and Liquidity Shortfalls					
18 Contributions made to the plan for the plan year by employer(s) and employees:					
(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees
01/15/2019	5700000	0			
04/15/2019	5700000	0			
07/15/2019	5700000	0			
10/11/2019	2800000	0			
06/15/2020	2850000	0			
			Totals ▶	18(b)	18(c)
				22750000	0

19	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:	
	a Contributions allocated toward unpaid minimum required contributions from prior years.....	19a 0
	b Contributions made to avoid restrictions adjusted to valuation date	19b 0
	c Contributions allocated toward minimum required contribution for current year adjusted to valuation date.....	19c 21864501
20	Quarterly contributions and liquidity shortfalls:	
	a Did the plan have a "funding shortfall" for the prior year?.....	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	b If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
	c If line 20a is "Yes," see instructions and complete the following table as applicable:	
Liquidity shortfall as of end of quarter of this plan year		
(1) 1st	(2) 2nd	(3) 3rd
0	0	0
		(4) 4th
		0

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:	1st segment: 3.92%	2nd segment: 5.52%	3rd segment: 6.29%	<input type="checkbox"/> N/A, full yield curve used
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b Applicable month (enter code)..... **21b** 4

22 Weighted average retirement age **22** 59

23 Mortality table(s) (see instructions) Prior regulation: Prescribed - combined Prescribed - separate Substitute

Current regulation: Prescribed - combined Prescribed - separate Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment. Yes No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment. Yes No

26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment. Yes No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment **27**

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years	28	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....	29	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29)	30	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6)	31a	15557814
b Excess assets, if applicable, but not greater than line 31a	31b	0

32 Amortization installments:	Outstanding Balance	Installment
a Net shortfall amortization installment.....	37574991	6284107
b Waiver amortization installment	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount **33**

34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33).....	34	21841921
	Carryover balance	Prefunding balance
35 Balances elected for use to offset funding requirement.....	0	0
36 Additional cash requirement (line 34 minus line 35).....	36	21841921
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c).....	37	21864501

38 Present value of excess contributions for current year (see instructions)

a Total (excess, if any, of line 37 over line 36)	38a	22580
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	38b	0

39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)..... **39** 0

40 Unpaid minimum required contributions for all years **40** 0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected 2 plus 7 years 15 years

b Eligible plan year(s) for which the election in line 41a was made 2008 2009 2010 2011

SCHEDULE SB (Form 5500) <small>Department of the Treasury Internal Revenue Service</small> <small>Department of Labor Employee Benefits Security Administration</small> <small>Pension Benefit Guaranty Corporation</small>	Single-Employer Defined Benefit Plan Actuarial Information This schedule is required to be filed under section 104 of the Employee Retirement Income Security Act of 1974 (ERISA) and section 6059 of the Internal Revenue Code (the Code). ▶ File as an attachment to Form 5500 or 5500-SF.	<small>OMB No. 1210-0110</small> 2019 This Form is Open to Public Inspection
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For calendar plan year 2019 or fiscal plan year beginning 01/01/2019 and ending 12/31/2019

▶ **Round off amounts to nearest dollar.**
 ▶ **Caution:** A penalty of \$1,000 will be assessed for late filing of this report unless reasonable cause is established.

A Name of plan <u>SPIRE MISSOURI WEST RETIREMENT INCOME PLAN</u>	B Three-digit plan number (PN) ▶	<u>008</u>
C Plan sponsor's name as shown on line 2a of Form 5500 or 5500-SF <u>SPIRE MISSOURI INC.</u>	D Employer Identification Number (EIN) <u>43-0368139</u>	

E Type of plan: Single Multiple-A Multiple-B Other

F Prior year plan size: 100 or fewer 101-500 More than 500

Part I Basic Information

1	Enter the valuation date: Month <u>01</u> Day <u>01</u> Year <u>2019</u>		
2	Assets:		
	a Market value	2a	<u>119315083</u>
	b Actuarial value	2b	<u>125842493</u>
3	Funding target/participant count breakdown	(1) Number of participants	(2) Vested Funding Target
	a For retired participants and beneficiaries receiving payment	<u>832</u>	<u>90256942</u>
	b For terminated vested participants	<u>125</u>	<u>5468720</u>
	c For active participants	<u>267</u>	<u>41294854</u>
	d Total	<u>1224</u>	<u>137020516</u>
4	If the plan is in at-risk status, check the box and complete lines (a) and (b)..... <input type="checkbox"/>		
	a Funding target disregarding prescribed at-risk assumptions	4a	
	b Funding target reflecting at-risk assumptions, but disregarding transition rule for plans that have been in at-risk status for fewer than five consecutive years and disregarding loading factor	4b	
5	Effective interest rate	5	<u>5.48 %</u>
6	Target normal cost	6	<u>3607404</u>

Statement by Enrolled Actuary
 To the best of my knowledge, the information supplied in this schedule and accompanying schedules, statements and attachments, if any, is complete and accurate. Each prescribed assumption was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.

SIGN HERE			
	Signature of actuary	<u>09/25/2020</u>	Date
	<u>COREY BRUNO</u>	<u>20-07695</u>	Most recent enrollment number
	Type or print name of actuary	<u>314-719-5900</u>	Telephone number (including area code)
	<u>WILLIS TOWERS WATSON US LLC</u>		
	Firm name		
	<u>101 S HANLEY ROAD</u> <u>ST. LOUIS, MO 63105-3437</u>		
	Address of the firm		

If the actuary has not fully reflected any regulation or ruling promulgated under the statute in completing this schedule, check the box and see instructions

Part II Beginning of Year Carryover and Prefunding Balances		(a) Carryover balance	(b) Prefunding balance
7	Balance at beginning of prior year after applicable adjustments (line 13 from prior year)	0	0
8	Portion elected for use to offset prior year's funding requirement (line 35 from prior year)	0	0
9	Amount remaining (line 7 minus line 8)	0	0
10	Interest on line 9 using prior year's actual return of <u>-6.78</u> %.....	0	0
11	Prior year's excess contributions to be added to prefunding balance:		
a	Present value of excess contributions (line 38a from prior year)		77115
b(1)	Interest on the excess, if any, of line 38a over line 38b from prior year Schedule SB, using prior year's effective interest rate of <u>5.65</u> %		4357
b(2)	Interest on line 38b from prior year Schedule SB, using prior year's actual return		0
c	Total available at beginning of current plan year to add to prefunding balance		81472
d	Portion of (c) to be added to prefunding balance		0
12	Other reductions in balances due to elections or deemed elections	0	0
13	Balance at beginning of current year (line 9 + line 10 + line 11d – line 12)	0	0

Part III Funding Percentages			
14	Funding target attainment percentage.....	14	90.57%
15	Adjusted funding target attainment percentage	15	90.57%
16	Prior year's funding percentage for purposes of determining whether carryover/prefunding balances may be used to reduce current year's funding requirement.....	16	90.44%
17	If the current value of the assets of the plan is less than 70 percent of the funding target, enter such percentage.....	17	%

Part IV Contributions and Liquidity Shortfalls		18 Contributions made to the plan for the plan year by employer(s) and employees:					
(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees	(a) Date (MM-DD-YYYY)	(b) Amount paid by employer(s)	(c) Amount paid by employees		
04/15/2019	1600000	0					
07/15/2019	1600000	0					
10/11/2019	1300000	0					
01/15/2020	1300000	0					
09/14/2020	700000						
			Totals ▶	18(b)	6500000	18(c)	0

19	Discounted employer contributions – see instructions for small plan with a valuation date after the beginning of the year:			
a	Contributions allocated toward unpaid minimum required contributions from prior years.....	19a	0	
b	Contributions made to avoid restrictions adjusted to valuation date	19b	0	
c	Contributions allocated toward minimum required contribution for current year adjusted to valuation date.....	19c	6246461	
20	Quarterly contributions and liquidity shortfalls:			
a	Did the plan have a "funding shortfall" for the prior year?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
b	If line 20a is "Yes," were required quarterly installments for the current year made in a timely manner?.....	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
c	If line 20a is "Yes," see instructions and complete the following table as applicable:			
Liquidity shortfall as of end of quarter of this plan year				
(1) 1st	(2) 2nd	(3) 3rd	(4) 4th	
0	0	0	0	

Part V Assumptions Used to Determine Funding Target and Target Normal Cost

21 Discount rate:

a Segment rates:	1st segment: 3.74%	2nd segment: 5.35%	3rd segment: 6.11%	<input type="checkbox"/> N/A, full yield curve used
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b Applicable month (enter code) **21b** 4

22 Weighted average retirement age **22** 61

23 Mortality table(s) (see instructions) Prescribed - combined Prescribed - separate Substitute

Part VI Miscellaneous Items

24 Has a change been made in the non-prescribed actuarial assumptions for the current plan year? If "Yes," see instructions regarding required attachment..... Yes No

25 Has a method change been made for the current plan year? If "Yes," see instructions regarding required attachment..... Yes No

26 Is the plan required to provide a Schedule of Active Participants? If "Yes," see instructions regarding required attachment..... Yes No

27 If the plan is subject to alternative funding rules, enter applicable code and see instructions regarding attachment..... **27**

Part VII Reconciliation of Unpaid Minimum Required Contributions For Prior Years

28 Unpaid minimum required contributions for all prior years.....	28	0
29 Discounted employer contributions allocated toward unpaid minimum required contributions from prior years (line 19a).....	29	0
30 Remaining amount of unpaid minimum required contributions (line 28 minus line 29).....	30	0

Part VIII Minimum Required Contribution For Current Year

31 Target normal cost and excess assets (see instructions):

a Target normal cost (line 6).....	31a	3607404
b Excess assets, if applicable, but not greater than line 31a	31b	0

32 Amortization installments:

	Outstanding Balance	Installment
a Net shortfall amortization installment	13088475	2587723
b Waiver amortization installment.....	0	0

33 If a waiver has been approved for this plan year, enter the date of the ruling letter granting the approval (Month _____ Day _____ Year _____) and the waived amount..... **33**

34 Total funding requirement before reflecting carryover/prefunding balances (lines 31a - 31b + 32a + 32b - 33)..... **34** 6195127

	Carryover balance	Prefunding balance	Total balance
35 Balances elected for use to offset funding requirement	0	0	0
36 Additional cash requirement (line 34 minus line 35)			6195127
37 Contributions allocated toward minimum required contribution for current year adjusted to valuation date (line 19c)			6246461

38 Present value of excess contributions for current year (see instructions)

a Total (excess, if any, of line 37 over line 36)	38a	51334
b Portion included in line 38a attributable to use of prefunding and funding standard carryover balances	38b	0

39 Unpaid minimum required contribution for current year (excess, if any, of line 36 over line 37)..... **39** 0

40 Unpaid minimum required contributions for all years..... **40** 0

Part IX Pension Funding Relief Under Pension Relief Act of 2010 (See Instructions)

41 If an election was made to use PRA 2010 funding relief for this plan:

a Schedule elected 2 plus 7 years 15 years

b Eligible plan year(s) for which the election in line 41a was made 2008 2009 2010 2011

SCHEDULE JG-r3

HAS BEEN DEEMED

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IN ITS ENTIRETY