EXHIBIT

Aslin, Casi

From:	Featherstone, Cary
Sent:	Thursday, August 17, 2017 6:23 PM
To:	Oligschlaeger, Mark
Cc:	Lyons, Karen; Majors, Keith; Young, Matthew
Subject:	FW: Next Week-- 2018 rate cases for KCPL and GMO

Ron Klote of KCPL, contacted us to meet about the upcoming 2018 rate cases for KCPL and GMO.

Matt, Karen, Keith and I met with Ron Klote and Tim Rush last Thursday, August 10th in Staff's audit room.

KCPL indicated they want to take advantage of filing true-up results in surrebuttal, like that discussed with you and others in Jefferson City few weeks ago.

Notes from the meeting:

KCPL plans to file a rate case no earlier than December 1—Ron indicated likely in January 2018. He said they will file KCPL for sure and possible GMO case at same time, and maybe even a steam case on GMO side. Tim Rush said KCPL intends to file a "simple" (his words) case. Will not contain a lot of difficult issues but file a straight-forward case.

1. The test year will be June 30, 2017 with June 30, 2018 as true-up period, leaving update period to Staff.

2. The new customer information system (CIS) is one of the main drivers in case and it isn't expected to go in service until April 2018. Ron said this date could slip a bit but will likely not know this until mid-October . KCPL wants to amortize the new $120 million billing system over 15 years – KCPL and GMO will need amortization rates approved by the Commission in these rate cases.

3. KCPL was concerned about how we handle the true-up if they use the surrebuttal. We discussed getting the necessary data needed for the true-up and told them what ever Commission decides on duration of case (11 months vs 10 months or 9 months) we will make work. With CIS system, KCPL said it needed the June 2018 true-up date for the April in service.

4. Board of Public Utilities (municipality in Kansas City, Kansas) notified Southwest Power Pool and KCPL of its intent on wanting to be part of KCPL' zone—what Independence Power & Light did couple of years ago—which costs KCPL money. KCPL was just notified and KCPL doesn't know any more than this – they didn't know if this will occur to be included in case.

5. Retirements—brought up announced power plant retirements, most of which will occur after June 2018 true-up cutoff. Sibley 1 (GMO) is retired except some boiler systems for support to Sibley 2 and 3. Most of Sibley 1 will be retired and not included in rate base.

6. With retirement of coal at Lake Road for the unit referred to as "4/6 system" (Boiler 4 and Turbine 6), there are operational issues affecting the steam customers and ultimately the plant and O&M costs assigned/ allocated to electric and steam customers. This was a topic in the 2016 GMO rate case (ER-2016-0156) but went no where because KCPL had not filed a steam case with GMO electric. Tim Rush indicted something had to be done on allocations for steam system, so may likely need to file steam rate case.

Any other information you need let us know.

From: Ronald A. Klote [mailto:Ronald.Klote@kcpl.com]
Sent: Monday, August 07, 2017 9:10 AM
To: Featherstone, Cary
Subject: RE: Next Week

Let's shoot for 10:00 on Thursday the 10th. Thanks. Ron

From: Featherstone, Cary [mailto:cary.featherstone@psc.mo.gov]
Sent: Friday, August 04, 2017 5:58 PM
To: Ronald A. Klote <Ronald.Klote@kcpl.com>
Cc: Majors, Keith <keith.majors@psc.mo.gov>; Lyons, Karen <karen.lyons@psc.mo.gov>
Subject: RE: Next Week

Yes, I believe Thursday will work (assuming no conflicts with Karen or Keith, both who are involved in the Laclede Gas and Missouri Gas Energy rate cases. Audit room would be great.

From: Ronald A. Klote [mailto:Ronald.Klote@kcpl.com]
Sent: Friday, August 04, 2017 1:22 PM
To: Featherstone, Cary
Subject: Next Week

Cary,

Would you have any availability late next week say Thursday to meet and discuss with Tim and I a few items around rate case timing, true-ups, retirements. If you would like to come over here we could meet in the Staff meeting room. Thanks. Ron

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1007

Referring to Mr. Spanos' rebuttal testimony on page 5, line 16 through Page 6, line 2, please provide copies of the specific management plans including the detailed studies of the economics of rehabilitation and continued use or retirement of the structure that supported the retirement of the Sibley generation station that Mr. Spanos reviewed for the preparation of his rebuttal testimony in this case.

Response:

Sibley generating units were retired in November 2018. This was before initial discussions for this assignment which occurred in March 2019. Given that Mr. Spanos' work on this assignment was initiated after the retirement, then the economics of rehabilitation, continued use or retirement did not come into discussion.

Response Prepared By: John Spanos
Attachment: Q1007_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1008

Did Mr. Spanos perform any work related to GMO's regulatory asset of approximately $160 million for unrecovered Sibley 3 costs? If no, did Mr. Spanos review any of the work related to GMO's regulatory asset of approximately $160 million for unrecovered Sibley 3 costs? Did Mr. Spanos or GMO reconcile the difference between the regulatory asset and Mr. Spanos' Schedule JJS-1 with the approximately $160 million regulatory asset for unrecovered Sibley 3 cost to be recovered in future rates.

Response:

Mr. Spanos was initially asked in May 2017 to establish the net book value for the Sibley generating station as of June 30, 2017. GMO used the June 30, 2017 net book value and then added the following months plant and reserve activity to update the Sibley Unit 3 and Common net book value. The result of this computation resulted in the $160 million regulatory asset at December 31, 2018. For the current assignment Mr. Spanos was requested to establish the net book value of the Sibley generating station as of June 30, 2018. Mr. Spanos did not review or discuss with GMO any regulatory assets. Mr. Spanos Schedule JJS-1 reports June 2018 Sibley Unit 1, 2, 3 and Common net book value amounts which includes the allocation of the GMO $ 7.2 million annual depreciation allowance. The $160 million regulatory asset at December 2018 reports Sibley Unit 3 and Common net book value amounts and was based on Mr. Spanos June 2017 Sibley Unit 3 and Common net book value computation which excludes the allocation of the GMO $ 7.2 million annual depreciation allowance plus GMO adding plant and reserve activity for the following months thru December 2018.

Response Prepared By: John Spanos (Gannett Fleming)
Larry Mulligan (GMO)
Attachment: Q1008_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1010

Is Mr. Rogers' testimony that all coal plants have been retired? If no, why are some coal plants still in service?

Response:

No. There are many reasons why some coal plants are still in service, and it would be difficult to provide a comprehensive list because not all the reasons may be public.

A coal plant that is in service, like any electric generating plant, is probably being operated for a combination of reasons that relate to its efficiency, its cost, its ability to be dispatched, system stability, the need for its service, its ability to comply with emissions and other environmental regulations, and any state or federal laws and regulatory orders that affect its operations. \

Attachment: Q1010_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1019

Please provide copies of the documentation GMO management relied upon to date to provide a reasonable probability that the $160 million will be recovered in future rates. What is GMO's assessed probability (e.g. 75%, 50%, 10%) that the $160 million will be recovered in future rates

Response:
The Company believes that it is likely that it will receive recovery of the unrecovered plant assets following normal retirement accounting procedures. The Company has received recovery of unrecovered plant assets in the past with most recently the retirement of Montrose Unit 1.

The driver for the retirement of the unit is that the retirement is economically beneficially for ratepayers as documented in the Companies' 2017 IRP filings and as such, the retirement would presumably be agreeable to regulators. We assessed recovery of the Sibley amounts as being "probable", which from an accounting perspective means above 80%.

Response by: Ronald Klote, Director Regulatory Affairs

Attachment: Q1019_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1025

What is the annual amount of the Sibley Generating Station depreciation being recorded as a regulatory liability?

Response:

The annual amount of depreciation expense for all Sibley generating units recorded as a regulatory liability is $ 10,362,077.

Response Prepared By: Larry Mulligan
Attachment: Q1025_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1026

Please update the Company's response to OPC Data Request 8534 in ER-2018-0146 for the data related the Sibley Generating Station for 2018.

Response:

Please see the attached excel spreadsheet for Sibley plant activity for the period 1998 thru 2018.

Response Prepared By: Larry Mulligan

Attachment:
Q1026_OPC_GMO Sibley Plant Activity By Generating Unit 1998 Thru 2018.xlsx
Q1026_Verification.pdf

KCP&L GREATER MISSOURI OPERATIONS (GMO)
DATA REQUEST OPC-1026
CASE: EC-2019-0200
GMO SIBLEY PLANT ACTIVITY BY GENERATING UNIT
FOR THE YEAR 1998 THRU 2018
EXCLUDES ARO'S AND PLANT HELD FOR FUTURE USE
AMOUNTS ARE NOT JURSIDICTIONALIZED

Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
Prod-Unit Sibley #1	1999	31100-Stm Pr-Structures-Elec	$31,427.92		($24,706.44)		$6,721.48
		31200-Stm Pr-Boiler Plt Equip-Elec	$379,180.05		($40,707.73)		$338,472.32
		31400-Stm Pr-Turbogenerator-Elec			($59,070.08)		($59,070.08)
		31500-Stm Pr-Accessory Equip-Elec				$209,148.35	$209,148.35
		31600-St Pr-Misc Pwr Plt Equip-Elec	$0.00				$0.00
1999 Total			$410,607.97		($124,484.25)	$209,148.35	$495,272.07
	2000	31100-Stm Pr-Structures-Elec			($12,535.29)		($12,535.29)
		31200-Stm Pr-Boiler Plt Equip-Elec	$100,749.89		($62,732.94)		$38,016.95
		31202-Stm Pr-Boiler AQC Equip-Elec	$94,931.31				$94,931.31
		31400-Stm Pr-Turbogenerator-Elec	$111,642.93		($11,597.73)		$100,045.20
		31500-Stm Pr-Accessory Equip-Elec	$1,510,851.39		($3,000.00)		$1,507,851.39
2000 Total			$1,818,175.52		($89,865.96)		$1,728,309.56
	2001	31100-Stm Pr-Structures-Elec			($8,208.56)		($8,208.56)
		31200-Stm Pr-Boiler Plt Equip-Elec	$130,261.87		($37,198.18)		$93,063.69
		31400-Stm Pr-Turbogenerator-Elec	$483,304.13		($38,749.99)		$444,554.14
		31500-Stm Pr-Accessory Equip-Elec	$308,867.82		($61,215.63)		$247,652.19
2001 Total			$922,433.82		($145,372.36)		$777,061.46
	2002	31100-Stm Pr-Structures-Elec			($94,441.61)		($94,441.61)
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,526,333.41		($1,174,918.79)	$464.18	$1,351,878.80
		31202-Stm Pr-Boiler AQC Equip-Elec	$582,819.61				$582,819.61
		31400-Stm Pr-Turbogenerator-Elec	$252,865.08		($69,153.85)	($14,440.02)	$169,271.21
		31500-Stm Pr-Accessory Equip-Elec	($1,765,088.84)		($46,983.03)	$13,975.84	($1,800,096.03)
2002 Total			$1,596,929.26		($1,387,497.28)	$0.00	$209,431.98
	2003	31100-Stm Pr-Structures-Elec	$76,461.38		($46,843.23)		$29,618.15
		31200-Stm Pr-Boiler Plt Equip-Elec	($52,574.52)	$0.00	($6,553.55)	$0.00	($59,128.07)
		31202-Stm Pr-Boiler AQC Equip-Elec	($1,588.75)				($1,588.75)
		31400-Stm Pr-Turbogenerator-Elec	$268,305.15			$0.00	$268,305.15
		31500-Stm Pr-Accessory Equip-Elec	$34,800.23		($41,970.66)		($7,170.43)
2003 Total			$325,403.49	$0.00	($95,367.44)	$0.00	$230,036.05
	2004	31100-Stm Pr-Structures-Elec		$0.00	($1,562.44)		($1,562.44)
		31200-Stm Pr-Boiler Plt Equip-Elec	$149,333.09	$0.00	($9,859.72)		$139,473.37
		31400-Stm Pr-Turbogenerator-Elec	$47,552.27		($8,509.26)		$39,043.01
2004 Total			$196,885.36	$0.00	($19,931.42)		$176,953.94
	2005	31200-Stm Pr-Boiler Plt Equip-Elec	$207,953.06			($62,374.20)	$145,578.86
		31400-Stm Pr-Turbogenerator-Elec	$390,776.71			($250.82)	$390,525.89
		31500-Stm Pr-Accessory Equip-Elec	$63,641.46				$63,641.46
2005 Total			$662,371.23			($62,625.02)	$599,746.21

KCP&L GREATER MISSOURI OPERATIONS (GMO)
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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2006	31100-Stm Pr-Structures-Elec	$2,214.45				$2,214.45
		31200-Stm Pr-Boiler Plt Equip-Elec	$230,752.27		($16,294.37)		$214,457.90
		31202-Stm Pr-Boiler AQC Equip-Elec	$0.00				$0.00
		31400-Stm Pr-Turbogenerator-Elec	$206,902.10		($12,851.00)	$21,068.43	$215,119.53
		31500-Stm Pr-Accessory Equip-Elec	$500.65				$500.65
		31600-St Pr-Misc Pwr Plt Equip-Elec	$52,671.80				$52,671.80
		34100-Oth Prod-Structures-Elec	$0.00				$0.00
		34200-Oth Prod-Fuel Holders-Elec	$21,068.43			($21,068.43)	($0.00)
		34300-Oth Prod-Prime Movers	($0.00)				($0.00)
		34400-Oth Prod-Generators-Elec	$0.00				$0.00
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2006 Total		$514,109.70		($29,145.37)	$0.00	$484,964.33
	2007	31100-Stm Pr-Structures-Elec	$64,164.09		($15,942.47)		$48,221.62
		31200-Stm Pr-Boiler Plt Equip-Elec	$56,652.95		($201,107.37)		($144,454.42)
		31202-Stm Pr-Boiler AQC Equip-Elec	$12,240.76				$12,240.76
		31400-Stm Pr-Turbogenerator-Elec	$418,253.92		($178,849.37)	$3,153.53	$242,558.08
		31500-Stm Pr-Accessory Equip-Elec	($500.65)		($52,553.87)		($53,054.52)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($52,671.80)				($52,671.80)
		34200-Oth Prod-Fuel Holders-Elec	($0.00)				($0.00)
		34400-Oth Prod-Generators-Elec	$3,153.53			($3,153.53)	($0.00)
	2007 Total		$501,292.80		($448,453.08)	$0.00	$52,839.72
	2008	31200-Stm Pr-Boiler Plt Equip-Elec	$5,899,624.66		($71,978.48)		$5,827,646.18
		31202-Stm Pr-Boiler AQC Equip-Elec	$720.44				$720.44
		31400-Stm Pr-Turbogenerator-Elec	$337,585.55		($50,350.85)		$287,234.70
		31500-Stm Pr-Accessory Equip-Elec	$14,805.36				$14,805.36
		31600-St Pr-Misc Pwr Plt Equip-Elec	$66,525.55				$66,525.55
		34200-Oth Prod-Fuel Holders-Elec	($92.10)				($92.10)
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2008 Total		$6,319,169.46		($122,329.33)		$6,196,840.13
	2009	31100-Stm Pr-Structures-Elec			($59,014.30)		($59,014.30)
		31200-Stm Pr-Boiler Plt Equip-Elec	$244,694.94		($85,862.27)		$158,832.67
		31400-Stm Pr-Turbogenerator-Elec	($355.23)				($355.23)
		31500-Stm Pr-Accessory Equip-Elec	$3,185.61				$3,185.61
		31600-St Pr-Misc Pwr Plt Equip-Elec	$17,953.05				$17,953.05
		34200-Oth Prod-Fuel Holders-Elec	$92.10				$92.10
	2009 Total		$265,570.47		($144,876.57)		$120,693.90
	2010	31100-Stm Pr-Structures-Elec	$6,115.82		$0.00		$6,115.82
		31200-Stm Pr-Boiler Plt Equip-Elec	($5,170,844.80)		($2,703.71)		($5,173,548.51)
		31202-Stm Pr-Boiler AQC Equip-Elec	$1,800,000.02				$1,800,000.02
		31400-Stm Pr-Turbogenerator-Elec	$9,459.65		($6,355.00)		$3,104.65
		31500-Stm Pr-Accessory Equip-Elec	$11,563.86				$11,563.86
		34400-Oth Prod-Generators-Elec	$0.00				$0.00
	2010 Total		($3,343,705.45)		($9,058.71)		($3,352,764.16)
	2011	31200-Stm Pr-Boiler Plt Equip-Elec	$4,009.21		($48,640.71)		($44,631.50)
		31400-Stm Pr-Turbogenerator-Elec	($625.72)		($780.67)		($1,406.39)
		31500-Stm Pr-Accessory Equip-Elec	($4,768.52)				($4,768.52)
	2011 Total		($1,385.03)		($49,421.38)		($50,806.41)

KCP&L GREATER MISSOURI OPERATIONS (GMO)
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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2012	31100-Stm Pr-Structures-Elec	($6,115.82)				($6,115.82)
		31200-Stm Pr-Boiler Plt Equip-Elec	$888,002.12		($9,516.07)	$0.00	$878,486.05
		31400-Stm Pr-Turbogenerator-Elec	$199,106.94				$199,106.94
		31500-Stm Pr-Accessory Equip-Elec	$347.87				$347.87
	2012 Total		$1,081,341.11		($9,516.07)	$0.00	$1,071,825.04
	2013	31100-Stm Pr-Structures-Elec	$23,983.59				$23,983.59
		31200-Stm Pr-Boiler Plt Equip-Elec	$978,500.84		($33,702.39)		$944,798.45
		31400-Stm Pr-Turbogenerator-Elec	$137,129.12				$137,129.12
		31500-Stm Pr-Accessory Equip-Elec	$30,109.85				$30,109.85
		31600-St Pr-Misc Pwr Plt Equip-Elec	$64,367.17				$64,367.17
		34100-Oth Prod-Structures-Elec	$73,607.79				$73,607.79
	2013 Total		$1,307,698.36		($33,702.39)		$1,273,995.97
	2014	31200-Stm Pr-Boiler Plt Equip-Elec	($10,602.37)		($57,192.16)		($67,794.53)
		31400-Stm Pr-Turbogenerator-Elec	$225,596.19		($20,488.77)		$205,107.42
		31500-Stm Pr-Accessory Equip-Elec	$19,094.49				$19,094.49
		31600-St Pr-Misc Pwr Plt Equip-Elec	$1,195.55				$1,195.55
		34100-Oth Prod-Structures-Elec				($73,607.79)	($73,607.79)
	2014 Total		$235,283.86		($77,680.93)	($73,607.79)	$83,995.14
	2015	31100-Stm Pr-Structures-Elec	$24,838.97		($32,786.08)		($7,947.11)
		31200-Stm Pr-Boiler Plt Equip-Elec	$898,903.40		($442,070.44)		$456,832.96
		31400-Stm Pr-Turbogenerator-Elec	$217,441.70		($61,847.52)		$155,594.18
		31500-Stm Pr-Accessory Equip-Elec	$35,101.26				$35,101.26
		31600-St Pr-Misc Pwr Plt Equip-Elec	$0.00		($10,938.93)		($10,938.93)
	2015 Total		$1,176,285.33		($547,642.97)		$628,642.36
	2016	31100-Stm Pr-Structures-Elec	$17,298.00		($10,648.24)		$6,649.76
		31200-Stm Pr-Boiler Plt Equip-Elec	$353,373.64	$0.00	($166,894.78)	$0.00	$186,478.86
		31400-Stm Pr-Turbogenerator-Elec	$46,863.51		($224,716.20)		($177,852.69)
	2016 Total		$417,535.15	$0.00	($402,259.22)	$0.00	$15,275.93
	2017	31000-Stm Pr-Land-Elec	$0.00				$0.00
		31100-Stm Pr-Structures-Elec	($0.00)		($5,753.70)		($5,753.70)
		31200-Stm Pr-Boiler Plt Equip-Elec	($13,807.78)		($89,251.98)	$18,406.56	($84,653.20)
		31202-Stm Pr-Boiler AQC Equip-Elec	($0.00)		($66,451.90)		($66,451.90)
		31400-Stm Pr-Turbogenerator-Elec	($0.00)		($10,690,421.00)	($231,444.56)	($10,921,865.56)
		31500-Stm Pr-Accessory Equip-Elec	$0.00		($0.00)		$0.00
		31600-St Pr-Misc Pwr Plt Equip-Elec	($0.00)		($0.00)		($0.00)
	2017 Total		($13,807.78)		($10,851,878.58)	($213,038.00)	($11,078,724.36)
	2018	31000-Stm Pr-Land-Elec				($265,963.16)	($265,963.16)
		31100-Stm Pr-Structures-Elec			($3,800,100.58)		($3,800,100.58)
		31200-Stm Pr-Boiler Plt Equip-Elec	$103,587.10		($28,801,005.06)		($28,697,417.96)
		31202-Stm Pr-Boiler AQC Equip-Elec			($2,422,671.49)		($2,422,671.49)
		31400-Stm Pr-Turbogenerator-Elec			($3,448,570.53)		($3,448,570.53)
		31500-Stm Pr-Accessory Equip-Elec			($2,058,364.96)		($2,058,364.96)
		31600-St Pr-Misc Pwr Plt Equip-Elec			($150,041.32)		($150,041.32)
	2018 Total		$103,587.10		($40,680,753.94)	($265,963.16)	($40,843,130.00)
Prod-Unit Sibley #1 Total			$14,495,781.73	$0.00	($55,269,237.25)	($406,085.62)	($41,179,541.14)

Schedule RES-S-1
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KCP&L GREATER MISSOURI OPERATIONS (GMO)
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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
Prod-Unit Sibley #2	1998	31500-Stm Pr-Accessory Equip-Elec	$8,236.01				$8,236.01
1998 Total			$8,236.01				$8,236.01
	1999	31100-Stm Pr-Structures-Elec	$31,427.91		($30,402.62)		$1,025.29
		31200-Stm Pr-Boiler Plt Equip-Elec	$153,497.57		($18,781.60)		$134,715.97
		31400-Stm Pr-Turbogenerator-Elec	$272,335.00				$272,335.00
		31500-Stm Pr-Accessory Equip-Elec				$219,450.36	$219,450.36
1999 Total			$457,260.48		($49,184.22)	$219,450.36	$627,526.62
	2000	31200-Stm Pr-Boiler Plt Equip-Elec	$729,366.77		($27,325.37)		$702,041.40
		31202-Stm Pr-Boiler AQC Equip-Elec	$94,931.20				$94,931.20
		31400-Stm Pr-Turbogenerator-Elec	$1,907,488.02		($8,517.42)		$1,898,970.60
		31500-Stm Pr-Accessory Equip-Elec	$1,187,951.41				$1,187,951.41
2000 Total			$3,919,737.40		($35,842.79)		$3,883,894.61
	2001	31100-Stm Pr-Structures-Elec			($3,785.85)		($3,785.85)
		31200-Stm Pr-Boiler Plt Equip-Elec	($567,998.44)		($13,051.16)		($581,049.60)
		31400-Stm Pr-Turbogenerator-Elec	$957,287.68		($1,048,538.03)	$0.00	($91,250.35)
		31500-Stm Pr-Accessory Equip-Elec	$352,895.92				$352,895.92
2001 Total			$742,185.16		($1,065,375.04)	$0.00	($323,189.88)
	2002	31100-Stm Pr-Structures-Elec			($3,137.72)		($3,137.72)
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,240,952.51		($1,134,518.87)		$1,106,433.64
		31202-Stm Pr-Boiler AQC Equip-Elec	$554,765.14				$554,765.14
		31400-Stm Pr-Turbogenerator-Elec	$687,264.87		($12,417.11)		$674,847.76
		31500-Stm Pr-Accessory Equip-Elec	($1,508,139.96)		($38,995.90)		($1,547,135.86)
2002 Total			$1,974,842.56		($1,189,069.60)		$785,772.96
	2003	31100-Stm Pr-Structures-Elec	$6,407.02		($33,480.51)		($27,073.49)
		31200-Stm Pr-Boiler Plt Equip-Elec	$69,733.90		($18,779.65)	($11,745.72)	$39,208.53
		31202-Stm Pr-Boiler AQC Equip-Elec	$2.10				$2.10
		31400-Stm Pr-Turbogenerator-Elec	$48,795.09		($83,194.84)		($34,399.75)
		31500-Stm Pr-Accessory Equip-Elec	$61,065.74		($86,437.71)		($25,371.97)
2003 Total			$186,003.85		($221,892.71)	($11,745.72)	($47,634.58)
	2004	31200-Stm Pr-Boiler Plt Equip-Elec	$85,832.37		($8,139.35)		$77,693.02
		31400-Stm Pr-Turbogenerator-Elec	($301.92)	$0.00			($301.92)
2004 Total			$85,530.45	$0.00	($8,139.35)		$77,391.10
	2005	31200-Stm Pr-Boiler Plt Equip-Elec	$79,044.31				$79,044.31
		31400-Stm Pr-Turbogenerator-Elec	$231,004.94			$301.92	$231,306.86
		31500-Stm Pr-Accessory Equip-Elec	$251,264.06				$251,264.06
2005 Total			$561,313.31			$301.92	$561,615.23
	2006	31100-Stm Pr-Structures-Elec	$950.52				$950.52
		31200-Stm Pr-Boiler Plt Equip-Elec	$190,516.39				$190,516.39
		31202-Stm Pr-Boiler AQC Equip-Elec	$0.02				$0.02
		31400-Stm Pr-Turbogenerator-Elec	$3,809.82				$3,809.82
		31500-Stm Pr-Accessory Equip-Elec	$1,217.20				$1,217.20
		31600-St Pr-Misc Pwr Plt Equip-Elec	$22,608.82				$22,608.82
2006 Total			$219,102.77				$219,102.77

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2007	31100-Stm Pr-Structures-Elec	$65,428.00				$65,428.00
		31200-Stm Pr-Boiler Plt Equip-Elec	$359,237.60		($217,703.56)		$141,534.04
		31202-Stm Pr-Boiler AQC Equip-Elec	$12,240.70				$12,240.70
		31400-Stm Pr-Turbogenerator-Elec	$377,205.15		($106,200.18)	$2,484.84	$273,489.81
		31500-Stm Pr-Accessory Equip-Elec	($133,966.66)		($71,840.89)		($205,807.55)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($22,608.82)				($22,608.82)
		34400-Oth Prod-Generators-Elec	$2,484.84			($2,484.84)	($0.00)
	2007 Total		$660,020.81		($395,744.63)	$0.00	$264,276.18
	2008	31200-Stm Pr-Boiler Plt Equip-Elec	$473,508.07		($71,151.20)		$402,356.87
		31202-Stm Pr-Boiler AQC Equip-Elec	$720.46				$720.46
		31400-Stm Pr-Turbogenerator-Elec	$17,000.02		($410,392.10)		($393,392.08)
		31500-Stm Pr-Accessory Equip-Elec	$0.00				$0.00
		31600-St Pr-Misc Pwr Plt Equip-Elec	$35,258.52		($0.14)		$35,258.38
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2008 Total		$526,487.07		($481,543.44)		$44,943.63
	2009	31200-Stm Pr-Boiler Plt Equip-Elec	$55,391.56		($8,000.34)		$47,391.22
		31500-Stm Pr-Accessory Equip-Elec	$0.00				$0.00
		31600-St Pr-Misc Pwr Plt Equip-Elec	$18,048.15				$18,048.15
	2009 Total		$73,439.71		($8,000.34)		$65,439.37
	2010	31100-Stm Pr-Structures-Elec	$7,461.98				$7,461.98
		31200-Stm Pr-Boiler Plt Equip-Elec	$207,104.98				$207,104.98
		31202-Stm Pr-Boiler AQC Equip-Elec	$1,800,000.02				$1,800,000.02
		31400-Stm Pr-Turbogenerator-Elec	$11,405.48		($9,829.48)		$1,576.00
		31500-Stm Pr-Accessory Equip-Elec	$13,131.28				$13,131.28
	2010 Total		$2,039,103.74		($9,829.48)		$2,029,274.26
	2011	31100-Stm Pr-Structures-Elec	($406.80)				($406.80)
		31200-Stm Pr-Boiler Plt Equip-Elec	($338.76)		($10,086.73)		($10,425.49)
		31400-Stm Pr-Turbogenerator-Elec	$259,874.40		($2,050.50)		$257,823.90
		31500-Stm Pr-Accessory Equip-Elec	($5,292.19)				($5,292.19)
	2011 Total		$253,836.65		($12,137.23)		$241,699.42
	2012	31200-Stm Pr-Boiler Plt Equip-Elec	$903,055.61		($72,216.43)	$0.00	$830,839.18
		31400-Stm Pr-Turbogenerator-Elec	$70,401.36				$70,401.36
		31500-Stm Pr-Accessory Equip-Elec	$1,525.34				$1,525.34
	2012 Total		$974,982.31		($72,216.43)	$0.00	$902,765.88
	2013	31100-Stm Pr-Structures-Elec	($7,055.18)				($7,055.18)
		31200-Stm Pr-Boiler Plt Equip-Elec	$88,371.51		$0.00		$88,371.51
		31400-Stm Pr-Turbogenerator-Elec	$995,897.43				$995,897.43
		31500-Stm Pr-Accessory Equip-Elec	$70,418.30				$70,418.30
		34100-Oth Prod-Structures-Elec	$73,607.79				$73,607.79
	2013 Total		$1,221,239.85		$0.00		$1,221,239.85
	2014	31100-Stm Pr-Structures-Elec	$49,198.65		($14,549.80)		$34,648.85
		31200-Stm Pr-Boiler Plt Equip-Elec	$208,011.22		($48,871.33)		$159,139.89
		31400-Stm Pr-Turbogenerator-Elec	($405.66)				($405.66)
		31500-Stm Pr-Accessory Equip-Elec	$17,570.87				$17,570.87
		34100-Oth Prod-Structures-Elec				($73,607.79)	($73,607.79)
	2014 Total		$274,375.08		($63,421.13)	($73,607.79)	$137,346.16

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2015	31100-Stm Pr-Structures-Elec	$24,838.93				$24,838.93
		31200-Stm Pr-Boiler Plt Equip-Elec	$202,169.37		($303,559.96)		($101,390.59)
		31400-Stm Pr-Turbogenerator-Elec	$70,234.38		($52,117.51)		$18,116.87
		31500-Stm Pr-Accessory Equip-Elec	($0.00)				($0.00)
		31600-St Pr-Misc Pwr Plt Equip-Elec			($11,979.47)		($11,979.47)
	2015 Total		$297,242.68		($367,656.94)		($70,414.26)
	2016	31100-Stm Pr-Structures-Elec	$0.00		($11,208.38)		($11,208.38)
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,328,923.20	$0.00	($137,558.55)	($19,953.27)	$1,171,411.38
		31202-Stm Pr-Boiler AQC Equip-Elec			($66,451.90)		($66,451.90)
		31400-Stm Pr-Turbogenerator-Elec	($385,043.27)				($385,043.27)
	2016 Total		$943,879.93	$0.00	($215,218.83)	($19,953.27)	$708,707.83
	2017	31100-Stm Pr-Structures-Elec	($0.00)				($0.00)
		31200-Stm Pr-Boiler Plt Equip-Elec	$92,228.88				$92,228.88
		31202-Stm Pr-Boiler AQC Equip-Elec	$0.00				$0.00
		31400-Stm Pr-Turbogenerator-Elec	($0.00)		($26,902.00)	$231,444.56	$204,542.56
		31500-Stm Pr-Accessory Equip-Elec	($0.00)				($0.00)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($0.00)				($0.00)
	2017 Total		$92,228.88		($26,902.00)	$231,444.56	$296,771.44
	2018	31100-Stm Pr-Structures-Elec			($1,459,259.07)		($1,459,259.07)
		31200-Stm Pr-Boiler Plt Equip-Elec	$103,587.10		($20,697,610.40)		($20,594,023.30)
		31202-Stm Pr-Boiler AQC Equip-Elec			($2,396,207.74)		($2,396,207.74)
		31400-Stm Pr-Turbogenerator-Elec			($12,085,047.36)		($12,085,047.36)
		31500-Stm Pr-Accessory Equip-Elec			($1,914,617.62)		($1,914,617.62)
		31600-St Pr-Misc Pwr Plt Equip-Elec			($104,265.30)		($104,265.30)
	2018 Total		$103,587.10		($38,657,007.49)		($38,553,420.39)
Prod-Unit Sibley #2 Total			$15,614,635.80	$0.00	($42,879,181.65)	$345,890.06	($26,918,655.79)
Prod-Unit Sibley #3	1998	31200-Stm Pr-Boiler Plt Equip-Elec	($5,664.54)				($5,664.54)
		31500-Stm Pr-Accessory Equip-Elec	$8,236.01				$8,236.01
	1998 Total		$2,571.47				$2,571.47
	1999	31200-Stm Pr-Boiler Plt Equip-Elec	$3,345,763.41	($9,110.21)	($654,095.28)		$2,682,557.92
		31500-Stm Pr-Accessory Equip-Elec	$173,030.35		($27,864.77)	$544,998.79	$690,164.37
		31600-St Pr-Misc Pwr Plt Equip-Elec	$0.00				$0.00
	1999 Total		$3,518,793.76	($9,110.21)	($681,960.05)	$544,998.79	$3,372,722.29
	2000	31100-Stm Pr-Structures-Elec				$1,572,941.51	$1,572,941.51
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,633,256.29	$0.00	($174,400.20)		$1,458,856.09
		31202-Stm Pr-Boiler AQC Equip-Elec	$225,006.18				$225,006.18
		31400-Stm Pr-Turbogenerator-Elec	$144,980.78		($99,188.86)		$45,791.92
		31500-Stm Pr-Accessory Equip-Elec	$63,662.53		($28,870.07)		$34,792.46
		31600-St Pr-Misc Pwr Plt Equip-Elec	$47,381.03				$47,381.03
		34500-Oth Prod-Accessory Equip-Elec	$73.99				$73.99
	2000 Total		$2,114,360.80	$0.00	($302,459.13)	$1,572,941.51	$3,384,843.18
	2001	31100-Stm Pr-Structures-Elec	($1,354,973.80)		($720,129.82)		($2,075,103.62)
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,787,081.40		($221,282.12)	($449,950.03)	$2,115,849.25
		31400-Stm Pr-Turbogenerator-Elec	$14,163,775.17		($187,345.09)		$13,976,430.08
		31500-Stm Pr-Accessory Equip-Elec	$16,166.90		($140,820.95)		($124,654.05)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($47,381.03)				($47,381.03)
	2001 Total		$15,564,668.64		($1,269,577.98)	($449,950.03)	$13,845,140.63

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2002	31100-Stm Pr-Structures-Elec	$376,778.76		($32,401.24)		$344,377.52
		31200-Stm Pr-Boiler Plt Equip-Elec	$665,198.54		($185,699.57)		$479,498.97
		31202-Stm Pr-Boiler AQC Equip-Elec				$91,284.55	$91,284.55
		31400-Stm Pr-Turbogenerator-Elec	$736,714.93		($4,677,384.61)		($3,940,669.68)
		31600-St Pr-Misc Pwr Plt Equip-Elec			($48,445.26)		($48,445.26)
	2002 Total		$1,778,692.23		($4,943,930.68)	$91,284.55	($3,073,953.90)
	2003	31100-Stm Pr-Structures-Elec	$5,360.03				$5,360.03
		31200-Stm Pr-Boiler Plt Equip-Elec	$406,298.06	$0.00	($122,551.23)		$283,746.83
		31400-Stm Pr-Turbogenerator-Elec	$84,164.31		($15,211.93)		$68,952.38
		31500-Stm Pr-Accessory Equip-Elec	$88,387.48				$88,387.48
		31600-St Pr-Misc Pwr Plt Equip-Elec	$0.00				$0.00
	2003 Total		$584,209.88	$0.00	($137,763.16)		$446,446.72
	2004	31100-Stm Pr-Structures-Elec		$0.00			$0.00
		31200-Stm Pr-Boiler Plt Equip-Elec	$3,340,802.79		($693,349.77)		$2,647,453.02
		31400-Stm Pr-Turbogenerator-Elec	$636,921.85	$0.00	($88,915.20)		$548,006.65
		31500-Stm Pr-Accessory Equip-Elec	$220,346.38				$220,346.38
	2004 Total		$4,198,071.02	$0.00	($782,264.97)		$3,415,806.05
	2005	31200-Stm Pr-Boiler Plt Equip-Elec	$1,400,709.22				$1,400,709.22
		31400-Stm Pr-Turbogenerator-Elec				($101,164.53)	($101,164.53)
		31500-Stm Pr-Accessory Equip-Elec	$232,150.83				$232,150.83
		31600-St Pr-Misc Pwr Plt Equip-Elec	($222,724.46)				($222,724.46)
	2005 Total		$1,410,135.59			($101,164.53)	$1,308,971.06
	2006	31200-Stm Pr-Boiler Plt Equip-Elec	$2,867,796.39				$2,867,796.39
		31202-Stm Pr-Boiler AQC Equip-Elec				$12,327.74	$12,327.74
		31400-Stm Pr-Turbogenerator-Elec	$558,810.85			$343,883.60	$902,694.45
		31500-Stm Pr-Accessory Equip-Elec	$83,836.23				$83,836.23
		31600-St Pr-Misc Pwr Plt Equip-Elec	$222,724.46				$222,724.46
		34100-Oth Prod-Structures-Elec	$2,453.04			($2,453.04)	$0.00
		34200-Oth Prod-Fuel Holders-Elec	$15,073.08			($15,073.08)	($0.00)
		34300-Oth Prod-Prime Movers	$78,422.65			($78,422.65)	$0.00
		34400-Oth Prod-Generators-Elec	$253,035.28			($253,035.28)	$0.00
		34500-Oth Prod-Accessory Equip-Elec	$7,227.29			($7,227.29)	$0.00
	2006 Total		$4,089,379.27			($0.00)	$4,089,379.27
	2007	31100-Stm Pr-Structures-Elec	$102,095.01		($14,733.29)		$87,361.72
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,723,590.56		($1,644,330.79)	$701.72	$79,961.49
		31202-Stm Pr-Boiler AQC Equip-Elec	$15,101.06				$15,101.06
		31400-Stm Pr-Turbogenerator-Elec	$731,462.49		($182,586.45)		$548,876.04
		31500-Stm Pr-Accessory Equip-Elec	$20,323.34		($213,833.51)		($193,510.17)
		34100-Oth Prod-Structures-Elec	$0.00				$0.00
		34200-Oth Prod-Fuel Holders-Elec	$0.00				$0.00
		34300-Oth Prod-Prime Movers	$0.00				$0.00
		34400-Oth Prod-Generators-Elec	$701.72			($701.72)	$0.00
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2007 Total		$2,593,274.18		($2,055,484.04)	$0.00	$537,790.14

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2008	31100-Stm Pr-Structures-Elec	$9,201.81				$9,201.81
		31200-Stm Pr-Boiler Plt Equip-Elec	$8,675,410.46		($195,954.94)		$8,479,455.52
		31202-Stm Pr-Boiler AQC Equip-Elec	($1,506.30)				($1,506.30)
		31400-Stm Pr-Turbogenerator-Elec	$1,424,318.33		($79,259.78)		$1,345,058.55
		31500-Stm Pr-Accessory Equip-Elec	$2,447,285.66		($16,865.13)		$2,430,420.53
		34200-Oth Prod-Fuel Holders-Elec	$0.00				$0.00
		34300-Oth Prod-Prime Movers	$0.00				$0.00
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2008 Total		$12,554,709.96		($292,079.85)		$12,262,630.11
	2009	31100-Stm Pr-Structures-Elec	$38,061.70		($1,597.89)		$36,463.81
		31200-Stm Pr-Boiler Plt Equip-Elec	$102,887,763.22		($1,810,527.55)		$101,077,235.67
		31400-Stm Pr-Turbogenerator-Elec	$920,944.54				$920,944.54
		31500-Stm Pr-Accessory Equip-Elec	($1,814,981.02)		($56,299.15)		($1,871,280.17)
	2009 Total		$102,031,788.44		($1,868,424.59)		$100,163,363.85
	2010	31100-Stm Pr-Structures-Elec	$6,340.97				$6,340.97
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,430,120.61		($73,637.04)	($15,533.97)	$1,340,949.60
		31400-Stm Pr-Turbogenerator-Elec	$177,217.58		($121,721.86)	($0.00)	$55,495.72
		31500-Stm Pr-Accessory Equip-Elec	$51,471.46			$15,533.97	$67,005.43
		31600-St Pr-Misc Pwr Plt Equip-Elec	$28,552.83				$28,552.83
	2010 Total		$1,693,703.45		($195,358.90)	($0.00)	$1,498,344.55
	2011	31100-Stm Pr-Structures-Elec	$60,023.95		($4,834.13)		$55,189.82
		31200-Stm Pr-Boiler Plt Equip-Elec	($94,211,868.64)		($274,080.31)		($94,485,948.95)
		31202-Stm Pr-Boiler AQC Equip-Elec	$100,503,291.30				$100,503,291.30
		31400-Stm Pr-Turbogenerator-Elec	$1,081,932.78				$1,081,932.78
		31500-Stm Pr-Accessory Equip-Elec	$58,545.22		($32,156.66)		$26,388.56
	2011 Total		$7,491,924.61		($311,071.10)		$7,180,853.51
	2012	31100-Stm Pr-Structures-Elec	$78,912.65				$78,912.65
		31200-Stm Pr-Boiler Plt Equip-Elec	$3,710,961.90		($92,604.59)	$0.00	$3,618,357.31
		31202-Stm Pr-Boiler AQC Equip-Elec	$155,920.49				$155,920.49
		31400-Stm Pr-Turbogenerator-Elec	$87,095.09				$87,095.09
		31500-Stm Pr-Accessory Equip-Elec	$580.73		($18,931.73)		($18,351.00)
	2012 Total		$4,033,470.86		($111,536.32)	$0.00	$3,921,934.54
	2013	31100-Stm Pr-Structures-Elec	($3,060.47)				($3,060.47)
		31200-Stm Pr-Boiler Plt Equip-Elec	$4,275,306.43		$0.00	$0.00	$4,275,306.43
		31202-Stm Pr-Boiler AQC Equip-Elec	$156,058.64		($499,999.80)		($343,941.16)
		31400-Stm Pr-Turbogenerator-Elec	$1,081,131.58				$1,081,131.58
		31500-Stm Pr-Accessory Equip-Elec	$131,539.48				$131,539.48
		31600-St Pr-Misc Pwr Plt Equip-Elec	$63,136.19				$63,136.19
		34100-Oth Prod-Structures-Elec	$73,607.78				$73,607.78
	2013 Total		$5,777,719.63		($499,999.80)	$0.00	$5,277,719.83
	2014	31100-Stm Pr-Structures-Elec	$331,251.48		($96,939.21)		$234,312.27
		31200-Stm Pr-Boiler Plt Equip-Elec	$5,421,951.67		($418,587.14)	($7,427.06)	$4,995,937.47
		31400-Stm Pr-Turbogenerator-Elec	$2,193,338.96		($153,059.45)	$7,427.06	$2,047,706.57
		31500-Stm Pr-Accessory Equip-Elec	$979,811.72		$0.00		$979,811.72
		34100-Oth Prod-Structures-Elec				($73,607.78)	($73,607.78)
	2014 Total		$8,926,353.83		($668,585.80)	($73,607.78)	$8,184,160.25

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AMOUNTS ARE NOT JURSIDICTIONALIZED

Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2015	31100-Stm Pr-Structures-Elec	$2,937,256.09	$0.00	($18,126.82)		$2,919,129.27
		31200-Stm Pr-Boiler Plt Equip-Elec	$958,288.84	$0.00	($1,693,438.42)	$0.00	($735,149.58)
		31202-Stm Pr-Boiler AQC Equip-Elec	$2,418,393.98		($2,011,351.19)		$407,042.79
		31400-Stm Pr-Turbogenerator-Elec	$219,603.19		($241,934.93)	$0.00	($22,331.74)
		31500-Stm Pr-Accessory Equip-Elec	$672,209.08		($31,104.98)		$641,104.10
		31600-St Pr-Misc Pwr Plt Equip-Elec	$323,407.07		($72,473.14)		$250,933.93
	2015 Total		$7,529,158.25	$0.00	($4,068,429.48)	$0.00	$3,460,728.77
	2016	31100-Stm Pr-Structures-Elec	$249,042.37		($60,521.49)		$188,520.88
		31200-Stm Pr-Boiler Plt Equip-Elec	$46,308,636.29	$0.00	($6,068,718.48)	($154,262.69)	$40,085,655.12
		31202-Stm Pr-Boiler AQC Equip-Elec			($6,360,258.91)	$0.00	($6,360,258.91)
		31400-Stm Pr-Turbogenerator-Elec	$1,329,733.30	$0.00	($170,464.01)		$1,159,269.29
		31500-Stm Pr-Accessory Equip-Elec	$32,482.99		($772,386.80)		($739,903.81)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$31,633.68				$31,633.68
	2016 Total		$47,951,528.63	$0.00	($13,432,349.69)	($154,262.69)	$34,364,916.25
	2017	31000-Stm Pr-Land-Elec	$0.00				$0.00
		31100-Stm Pr-Structures-Elec	$471,568.23		($261,241.98)		$210,326.25
		31200-Stm Pr-Boiler Plt Equip-Elec	($1,030,165.98)	$0.00	($7,899,491.54)	($18,406.56)	($8,948,064.08)
		31202-Stm Pr-Boiler AQC Equip-Elec	$0.00				$0.00
		31400-Stm Pr-Turbogenerator-Elec	$1,068,499.08		($318,535.38)	$0.00	$749,963.70
		31500-Stm Pr-Accessory Equip-Elec	$620,470.43		($31,687.51)		$588,782.92
		31600-St Pr-Misc Pwr Plt Equip-Elec	$0.00		($1,552.46)		($1,552.46)
	2017 Total		$1,130,371.76	$0.00	($8,512,508.87)	($18,406.56)	($7,400,543.67)
	2018	31000-Stm Pr-Land-Elec				($108,656.90)	($108,656.90)
		31100-Stm Pr-Structures-Elec	($413,452.51)		($15,040,458.59)		($15,453,911.10)
		31200-Stm Pr-Boiler Plt Equip-Elec	($10,180,224.25)		($130,413,263.38)		($140,593,487.63)
		31202-Stm Pr-Boiler AQC Equip-Elec			($94,704,267.74)		($94,704,267.74)
		31400-Stm Pr-Turbogenerator-Elec	$230,169.13		($41,909,398.62)		($41,679,229.49)
		31500-Stm Pr-Accessory Equip-Elec	$10,481,495.38		($20,324,876.23)		($9,843,380.85)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$379,921.61		($1,066,015.16)		($686,093.55)
	2018 Total		$497,909.36		($303,458,279.72)	($108,656.90)	($303,069,027.26)
Prod-Unit Sibley #3 Total			$235,472,795.62	($9,110.21)	($343,592,064.13)	$1,303,176.36	($106,825,202.36)
Prod-Unit Sibley Plant Common	1998	31200-Stm Pr-Boiler Plt Equip-Elec	$944,806.46				$944,806.46
		31600-St Pr-Misc Pwr Plt Equip-Elec	$227,424.72				$227,424.72
	1998 Total		$1,172,231.18				$1,172,231.18
	1999	31100-Stm Pr-Structures-Elec	$2,075,022.60				$2,075,022.60
		31200-Stm Pr-Boiler Plt Equip-Elec	($2,123,465.40)		($113,487.40)		($2,236,952.80)
		31400-Stm Pr-Turbogenerator-Elec	$0.00				$0.00
		31600-St Pr-Misc Pwr Plt Equip-Elec	$49,066.36				$49,066.36
	1999 Total		$623.56		($113,487.40)		($112,863.84)
	2000	31000-Stm Pr-Land-Elec	$22,086.13				$22,086.13
		31100-Stm Pr-Structures-Elec	$4,069,751.32		($1,817.33)		$4,067,933.99
		31200-Stm Pr-Boiler Plt Equip-Elec	($56,334.16)		($51,695.09)		($108,029.25)
		31400-Stm Pr-Turbogenerator-Elec	$0.00				$0.00
		31500-Stm Pr-Accessory Equip-Elec	$0.00		($12,755.24)		($12,755.24)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($267,282.85)				($267,282.85)
	2000 Total		$3,768,220.44		($66,267.66)		$3,701,952.78

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2001	31100-Stm Pr-Structures-Elec	$1,041,917.36				$1,041,917.36
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,915,182.39		($581.73)	$449,950.03	$2,364,550.69
		31500-Stm Pr-Accessory Equip-Elec	$99,999.99				$99,999.99
		31600-St Pr-Misc Pwr Plt Equip-Elec	$25,714.67				$25,714.67
		34600-Oth Prod-Misc Pwr Plt Equip-E	$794,835.34				$794,835.34
	2001 Total		$3,877,649.75		($581.73)	$449,950.03	$4,327,018.05
	2002	31100-Stm Pr-Structures-Elec	$468,340.31	($22,121.50)	($858.78)	($2,022,972.86)	($1,577,612.83)
		31200-Stm Pr-Boiler Plt Equip-Elec	$398,750.33		($14,757.30)	$2,022,972.86	$2,406,965.89
		31202-Stm Pr-Boiler AQC Equip-Elec	$91,284.55			($91,284.55)	$0.00
		31400-Stm Pr-Turbogenerator-Elec			($10,692.63)		($10,692.63)
		31500-Stm Pr-Accessory Equip-Elec			($0.37)		($0.37)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$37.05				$37.05
		34600-Oth Prod-Misc Pwr Plt Equip-E	($794,835.34)				($794,835.34)
	2002 Total		$163,576.90	($22,121.50)	($26,309.08)	($91,284.55)	$23,861.77
	2003	31100-Stm Pr-Structures-Elec	$17,584.77				$17,584.77
		31200-Stm Pr-Boiler Plt Equip-Elec	$49,714.06		($199,154.35)		($149,440.29)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$290,383.15				$290,383.15
	2003 Total		$357,681.98		($199,154.35)		$158,527.63
	2004	31100-Stm Pr-Structures-Elec	$12,790.57				$12,790.57
		31200-Stm Pr-Boiler Plt Equip-Elec	$90,704.53	$0.00			$90,704.53
		31600-St Pr-Misc Pwr Plt Equip-Elec	$34,625.34	$0.00			$34,625.34
	2004 Total		$138,120.44	$0.00			$138,120.44
	2005	31100-Stm Pr-Structures-Elec	$376,102.99				$376,102.99
		31200-Stm Pr-Boiler Plt Equip-Elec	$125,555.35		($63,349.67)		$62,205.68
		31600-St Pr-Misc Pwr Plt Equip-Elec	$63,192.70	$0.00			$63,192.70
	2005 Total		$564,851.04	$0.00	($63,349.67)		$501,501.37
	2006	31100-Stm Pr-Structures-Elec	$96,059.83				$96,059.83
		31200-Stm Pr-Boiler Plt Equip-Elec	$769,729.21			$48,450.43	$818,179.64
		31201-Stm Pr-Boiler-Unit Train-Elec	$0.00				$0.00
		31600-St Pr-Misc Pwr Plt Equip-Elec	$24,977.88				$24,977.88
		34100-Oth Prod-Structures-Elec	$38,574.77			($38,574.77)	$0.00
		34400-Oth Prod-Generators-Elec	$2,755.34			($2,755.34)	$0.00
		34600-Oth Prod-Misc Pwr Plt Equip-E	$5,502.06			($5,502.06)	$0.00
	2006 Total		$937,599.09			$1,618.26	$939,217.35
	2007	31100-Stm Pr-Structures-Elec	$1,004,461.85		($289.24)	$0.00	$1,004,172.61
		31200-Stm Pr-Boiler Plt Equip-Elec	$522,571.45		($238,750.01)		$283,821.44
		31202-Stm Pr-Boiler AQC Equip-Elec	$22,602.08				$22,602.08
		31500-Stm Pr-Accessory Equip-Elec	$32,749.29		($16,733.36)		$16,015.93
		31600-St Pr-Misc Pwr Plt Equip-Elec	$46,645.12				$46,645.12
		34200-Oth Prod-Fuel Holders-Elec	($0.00)				($0.00)
		34500-Oth Prod-Accessory Equip-Elec	$0.00				$0.00
	2007 Total		$1,629,029.79		($255,772.61)	$0.00	$1,373,257.18

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2008	31100-Stm Pr-Structures-Elec	$583,411.84				$583,411.84
		31200-Stm Pr-Boiler Plt Equip-Elec	$1,584,033.72		($71,889.34)		$1,512,144.38
		31202-Stm Pr-Boiler AQC Equip-Elec	$494,741.54				$494,741.54
		31400-Stm Pr-Turbogenerator-Elec	$76,561.01		($6,570.35)		$69,990.66
		31500-Stm Pr-Accessory Equip-Elec	($1,152.64)				($1,152.64)
		31600-St Pr-Misc Pwr Plt Equip-Elec	($462,449.50)		($13,171.38)		($475,620.88)
		34100-Oth Prod-Structures-Elec	$0.00				$0.00
		34200-Oth Prod-Fuel Holders-Elec	$0.00				$0.00
	2008 Total		$2,275,145.97		($91,631.07)		$2,183,514.90
	2009	31100-Stm Pr-Structures-Elec	$11,715.50				$11,715.50
		31200-Stm Pr-Boiler Plt Equip-Elec	$330,364.61		($2,300.28)		$328,064.33
		31202-Stm Pr-Boiler AQC Equip-Elec	($3,002.27)				($3,002.27)
		31400-Stm Pr-Turbogenerator-Elec	$43,212.11				$43,212.11
		31500-Stm Pr-Accessory Equip-Elec	$5,165.26				$5,165.26
		31600-St Pr-Misc Pwr Plt Equip-Elec	$39,073.22		($22,157.77)		$16,915.45
	2009 Total		$426,528.43		($24,458.05)		$402,070.38
	2010	31100-Stm Pr-Structures-Elec	$560,452.44				$560,452.44
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,095,787.80				$2,095,787.80
		31202-Stm Pr-Boiler AQC Equip-Elec	$2,105,482.48				$2,105,482.48
		31400-Stm Pr-Turbogenerator-Elec	$50,534.38				$50,534.38
		31500-Stm Pr-Accessory Equip-Elec	$221,796.63				$221,796.63
		31600-St Pr-Misc Pwr Plt Equip-Elec	$110,454.83				$110,454.83
	2010 Total		$5,144,508.56				$5,144,508.56
	2011	31100-Stm Pr-Structures-Elec	$2,102,399.97		($92,005.60)	$0.00	$2,010,394.37
		31200-Stm Pr-Boiler Plt Equip-Elec	$5,680,338.03		($455,405.26)		$5,224,932.77
		31202-Stm Pr-Boiler AQC Equip-Elec	$116,316.95		($22,602.08)		$93,714.87
		31400-Stm Pr-Turbogenerator-Elec	$10,202.59				$10,202.59
		31500-Stm Pr-Accessory Equip-Elec	$200,346.14				$200,346.14
		31600-St Pr-Misc Pwr Plt Equip-Elec	$141,389.00				$141,389.00
	2011 Total		$8,250,992.68		($570,012.94)	$0.00	$7,680,979.74
	2012	31100-Stm Pr-Structures-Elec	$5,127,769.56		($88,484.83)		$5,039,284.73
		31200-Stm Pr-Boiler Plt Equip-Elec	$3,045,724.69		($70,211.43)		$2,975,513.26
		31400-Stm Pr-Turbogenerator-Elec	$17,615.52				$17,615.52
		31500-Stm Pr-Accessory Equip-Elec	$196,700.95				$196,700.95
		31600-St Pr-Misc Pwr Plt Equip-Elec	$564,028.78				$564,028.78
		34400-Oth Prod-Generators-Elec	$439,793.68				$439,793.68
	2012 Total		$9,391,633.18		($158,696.26)		$9,232,936.92
	2013	31100-Stm Pr-Structures-Elec	($281,474.24)			$0.00	($281,474.24)
		31200-Stm Pr-Boiler Plt Equip-Elec	$499,979.90		($19,295.07)	$0.00	$480,684.83
		31400-Stm Pr-Turbogenerator-Elec	$4,209.40				$4,209.40
		31500-Stm Pr-Accessory Equip-Elec	$293,551.70				$293,551.70
		31600-St Pr-Misc Pwr Plt Equip-Elec	$1,231,995.81				$1,231,995.81
		34400-Oth Prod-Generators-Elec				($439,793.68)	($439,793.68)
	2013 Total		$1,748,262.57		($19,295.07)	($439,793.68)	$1,289,173.82

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Asset Location	Accounting Year	Utility Account	Addition	Adjustment	Retirement	Transfer	Grand Total
	2014	31100-Stm Pr-Structures-Elec	$3,635,825.14	$0.00	($6,467.33)	$11,746.10	$3,641,103.91
		31200-Stm Pr-Boiler Plt Equip-Elec	$342,183.83		($10,744.05)		$331,439.78
		31400-Stm Pr-Turbogenerator-Elec	($125,331.92)				($125,331.92)
		31500-Stm Pr-Accessory Equip-Elec	($308,818.69)		($3,191.10)		($312,009.79)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$306,932.98				$306,932.98
	2014 Total		$3,850,791.34	$0.00	($20,402.48)	$11,746.10	$3,842,134.96
	2015	31100-Stm Pr-Structures-Elec	$7,519,163.26		($761,095.80)		$6,758,067.46
		31200-Stm Pr-Boiler Plt Equip-Elec	$3,887,975.57	$0.00	($823,586.90)		$3,064,388.67
		31400-Stm Pr-Turbogenerator-Elec	$502,023.22				$502,023.22
		31500-Stm Pr-Accessory Equip-Elec	$642,063.14		($6,925.43)		$635,137.71
		31600-St Pr-Misc Pwr Plt Equip-Elec	($182,365.10)		($111,025.42)		($293,390.52)
	2015 Total		$12,368,860.09	$0.00	($1,702,633.55)		$10,666,226.54
	2016	31100-Stm Pr-Structures-Elec	($368,495.49)		($216,968.61)		($585,464.10)
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,330,121.81	$0.00	($853,616.99)	$174,215.96	$1,650,720.78
		31201-Stm Pr-Boiler-Unit Train-Elec			$0.00		$0.00
		31400-Stm Pr-Turbogenerator-Elec	$3,158.15				$3,158.15
		31500-Stm Pr-Accessory Equip-Elec	$127,623.19		($156,142.40)		($28,519.21)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$82,630.53				$82,630.53
	2016 Total		$2,175,038.19	$0.00	($1,226,728.00)	$174,215.96	$1,122,526.15
	2017	31000-Stm Pr-Land-Elec	$0.00				$0.00
		31100-Stm Pr-Structures-Elec	$1,432,998.76		($69,232.44)		$1,363,766.32
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,020,523.27		($55,405.16)		$1,965,118.11
		31202-Stm Pr-Boiler AQC Equip-Elec	($0.00)				($0.00)
		31400-Stm Pr-Turbogenerator-Elec	$0.00				$0.00
		31500-Stm Pr-Accessory Equip-Elec	$480,729.86				$480,729.86
		31600-St Pr-Misc Pwr Plt Equip-Elec	$416,831.79		($41,855.66)		$374,976.13
	2017 Total		$4,351,083.68		($166,493.26)		$4,184,590.42
	2018	31000-Stm Pr-Land-Elec				($22,086.13)	($22,086.13)
		31100-Stm Pr-Structures-Elec	($1,994,389.74)		($39,059,431.34)	$7,430.36	($41,046,390.72)
		31200-Stm Pr-Boiler Plt Equip-Elec	$2,326,241.94		($44,581,721.98)		($42,255,480.04)
		31202-Stm Pr-Boiler AQC Equip-Elec			($2,713,538.70)		($2,713,538.70)
		31400-Stm Pr-Turbogenerator-Elec			($817,161.45)		($817,161.45)
		31500-Stm Pr-Accessory Equip-Elec	($140,891.42)		($5,279,351.79)		($5,420,243.21)
		31600-St Pr-Misc Pwr Plt Equip-Elec	$45,343.82		($2,740,410.70)		($2,695,066.88)
	2018 Total		$236,304.60		($95,191,615.96)	($14,655.77)	($94,969,967.13)
Pre-Unit Sibley Plant Common Total			$62,828,733.46	($22,121.50)	($99,896,889.14)	$91,796.35	($36,998,480.83)
Grand Total			$328,411,946.61	($31,231.71)	($541,637,372.17)	$1,334,777.15	($211,921,880.12)

Schedule RES-S-1
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KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1029

Is the $48 million invested in Sibley 3 in 2016, the largest component of the $160 regulatory asset? If no, what is the largest component?

Response:

The $48 million in Sibley 3 plant additions for accounting year 2016 is not the largest component of the regulatory asset. The $102 million in Sibley 3 plant additions for accounting year 2009 is the largest.

Response Prepared By: Larry Mulligan
Attachment: Q1029_Verification.pdf

2.2 Decommissioning and Cleaning

2.2.1 Steam System Draining

All water/steam spaces in the steam turbines and condenser will be drained and opened to permit ventilation. Turbine enclosures will be sealed and locked in place. The boilers will be drained rapidly, from hot condition if possible, and vented as fast as possible to allow water to evaporate. The boilers will be vented through the top and bottom manholes for several days, and then closed tight. All feedwater heaters will be drained and closed. Once these systems have been adequately drained, doors/hatches/openings will be stitch welded shut to prevent possible entry.

2.2.2 Boiler, Precipitator and Ash System Cleaning and Wash Down

Upon shut down of plant, KCP&L staff and vendors will vacuum boilers, precipitators, coal handling and ash systems. Once these systems are cleaned, the boilers and hoppers will be washed down. This cost covers the labor, equipment, and disposal of coal combustion residuals and slag located in this equipment.

2.2.3 Debris and Trash Removal

Upon shut down of the plant, KCP&L staff will remove and dispose of any loose furniture, office materials, trash, and combustible debris from the administration building, boiler house, turbine hall, and out buildings. Should the facility sit idle for an extended period, removing this material will prevent possible fire hazards. This cost estimate assumes that tenant debris will be disposed of at the Courtney Ridge Landfill located in Sugar Creek, MO at a cost of $82 per ton including transportation and disposal.

2.2.4 Fuel Oil, Lubricating, and Hydraulic Systems Drained

Upon shut down of the plant, KCP&L staff will drain approximately 69,500 gallons of fuel oils, lubricants, and hydraulic fluids as identified in the RMA from major systems such as turbine lube oil tanks, gear boxes, motors, and pumps. Igniter oil systems, including the tanks, underground piping, and above grade piping will be drained. Oils and greases located in miscellaneous barrels and containers shall be removed and disposed of as well. This cost includes labor, equipment, and disposal of fuel oils, lubricants, and hydraulic fluids located within the plant.

2.3 Environmental

2.3.1 Asbestos and Non-ACM Insulation Abatement

The cost for the removal of the asbestos-containing material (ACM) has been included in this estimate. The cost for the removal of friable ACM was developed using the quantities extracted (see Table 2-2) from the Power Engineers asbestos survey dated 12/18/17 (found in the Burns & McDonnell RMA). Based on the

- The trailers will be repowered from a distribution line extension. This will include:
  - A distribution line extension from the guard shack to security trailers – seven 40' poles, three 500kVA pole mounted transformers, and 1950' distribution line.
  - Three drops to trailers – three 75kVA transformers with 120V 225A panels, disconnects, and trenching.

A markup of the one-line drawings has been included in Appendix B.

2.1.6 Information Technology and Telecommunications

Sibley Station communications is tied to the rest of the KCP&L network via the Sibley microwave tower located near the 345kV Substation approximately 1.5 miles southeast of the plant. Existing single-mode and multi-mode fiber exists between the plant communications/LAN room, the 69kV Substation, the 161kV Substation, and the microwave building. Assuming the existing fiber infrastructure from the Admin/LAN room and through the 69kV and 161kV to the microwave building is not damaged or removed, this existing communication fiber infrastructure would be unaffected. These stations would continue to communicate via the existing fiber to the microwave facility and thereby would leave opportunities for continued connectivity to the KCP&L network for any remaining security or site monitoring needs. This estimate covers the cost for KCP&L staff to decommission or remove/provision circuits in Operations Technology (OT) and Information Technology (IT) network environments.

2.1.7 Switchyard Upgrades/Changes

The Sibley Switchyard scope of work is outlined below:

- Remove 161kV Unit 3 connection.
  - Remove redundant plant controls from breakers R5-10 and R7-10.
  - Add new bus differential relaying and panel to 161kV control building to protect the resulting open bus.
  - Switch 1088 remains as is, locked open.
- Remove 69kV Unit 1, Unit 2, Start-Up 1 & 2, and Start-Up 3 connections.
  - Plant no longer requires start-up connections.
- Primary station service supply is provided from 69kV yard. Reconfigure the AC system to support the new site configuration.
- There are existing independent DC battery systems for both 161kV and 69kV control buildings.
  - Evaluate and possibly reconfiguration the 69kV DC system.
  - Plant DC system overlap to be reconfigured and removed.
- Provide AC service to "guard shack" from distribution line/pole-mount transformer.

Table 2-1: Mechanical System Dependencies

Fluid/Material Type	System Names	Dependency	Maintain Functionality
Water	Fire Protection	All Units	No
Water	Circulating Water	Units 1/2	No
Water	Circulating Water	Unit 3	No
Water	Service Water	Units 1/2	No
Water	Service Water	Unit 3	No
Water	River Water	All Units	No
Water	Potable Water	All Units	No
Water	Sanitary System	All Units	No

A markup of the existing Process and Instrumentation Diagrams (P&IDs) have been included in Appendix B. The markups include a location for isolation for each system.

2.1.4 Electrical Systems Isolation

Unit 1 and Unit 2 generators operate at 2,400 volts and connect to the 69kV main bus. Unit 1 and 2 startup generator operates at 2,400 volts and connects to the 69kV main bus. Unit 3 generator operates at 22,000 volts and connects to the 161kV bus. Unit 3 startup generator operates at 4,160 volts and connects to the 69kV transfer bus. The generator and startup ties will be disconnected.

- Unit 1 generator tie to 69kV main bus will be isolated by removal of the Unit 1 69kV/13.8kV Generator Step-up Transformer (GSU) and Lock Out Tag Out (LOTO) of the bus disconnect switch 618.
- Unit 2 generator tie to 69kV main bus will be isolated by removal of the Unit 2 69kV/13.8kV GSU and LOTO of the bus disconnect switch 660.
- Unit 1 and 2 startup ties to 69kV startup bus will be isolated by removal of Unit 1 and 2 69kV/2.4kV startup transformer and LOTO of any bus disconnect switch.
- Unit 3 generator tie to 161kV bus will be isolated by removal of Unit 3 161kV/22kV GSU transformer and LOTO of the bus disconnect switch 1088.
- Unit 3 startup tie to 69kV transfer bus will be isolated by removal of the two Unit 3 69kV/4.16kV startup transformers and LOTO of any bus disconnect switch(es).

2.1.5 Electrical Systems Repowering

A landfill leachate system currently in operation will be changed from powered to gravity operation Repowering work will involve:

2.0 RETIREMENT-IN-PLACE SCOPE OF WORK

2.1 System De-Energization

2.1.1 Generator Hydrogen Evacuated

The hydrogen in Units 1 through 3 turbines will be purged by using an inert gas, the inert gas is replaced by air. Carbon dioxide or nitrogen can be used for this purpose, as they do not form combustible mixtures with hydrogen and are inexpensive. Gas purity sensors are used to indicate the end of the purging cycle, which shortens the shutdown time and reduces consumption of the purging gas. Carbon dioxide is favored due to the very high-density difference that easily displaces the hydrogen. The carbon dioxide is admitted to the bottom of the generator first, pushing the hydrogen out at the top. Then air is admitted to the top, pushing the carbon dioxide out at the bottom. Purging is best done with the generator stopped. Any hydrogen bottles/tanks will be removed from the site.

2.1.2 Intake and Discharge Closure

The Units 1, 2, and 3 intakes will be sealed by installing stop logs and then installing a permanent steel or concrete bulkhead and filling the Unit 1, 2, and 3 intake structures with concrete or flowable fill material. The intake structure in the Missouri River will remain, but equipment will be removed from the structure and openings will be permanently sealed and made safe. All underground intake piping will then be abandoned in place. The discharge tunnel associated with Units 1, 2, and 3 will be permanently sealed, as well, by installing a concrete or steel bulkhead and the entire length of the pipe will be filled with concrete or flowable fill to prevent any materials from entering or exiting the structure. All underground discharge piping will then be abandoned in place.

2.1.3 Mechanical Systems Isolation

Units 1, 2, and 3 service water and circulating water systems are operated independently while boiler makeup water is fed by a common system. Once the intake structure is sealed as mentioned in Section 2.1.2; the main water systems will be isolated including the fire protection system which is part of the filtered water on-site. Table 2-1 lists the main systems for Units 1, 2, and 3 that will be isolated and their unit dependency.

Once the production rates and material quantities were established, hourly labor and equipment costs were applied as well as disposal and recycling fees. Current market labor and equipment rates, disposal fees, and scrap quantities were verified through local scrap steel recycling outlets and landfills.

Backfill and topsoil materials are assumed to be readily available from an on-site borrow source and industry accepted unit rates were used for grading and seeding of the demolition areas. Flowable fill material is being proposed to seal the intake and discharge structures. These unit rates were based on past experience/judgments from similar projects and verified through review of RS Means national average costs for these activities.

Where information was available on quantities of regulated materials, asbestos, and universal waste, a bottom up estimate was developed for the removal and disposal of these items. Where information was not available, costs were developed using the qualifications, judgments, and industry experience of Burns & McDonnell's staff when performing similar work on facilities of a similar type, size, and vintage.

1.5 Statement of Limitation

Estimates and projections prepared by Burns & McDonnell relating to schedules, performance, construction costs, recovery costs, and operating and maintenance costs are based on our experience, qualifications, and judgment as a professional consultant. Since Burns & McDonnell has no control over weather, cost and availability of labor, material and equipment, labor productivity, contractor's procedures and methods, unavoidable delays, contractor's method of determining prices, economic conditions, government regulations and laws (including interpretation thereof), competitive bidding and market conditions or other factors affecting such estimates or projections. Burns & McDonnell does not guarantee that actual rates, costs, performance, schedules, etc., will not vary from the estimates and projections prepared by Burns & McDonnell.

Decommissioning costs include the removal of fuels, chemicals, greases, and lubricants drained from equipment along with cleaning of coal and ash from boilers, precipitators, and ash handling equipment. It is assumed that the majority of draining and cleaning work will be performed in house with KCP&L staff. Industry accepted unit rates or built up production rates and crews were applied to the tasks and quantities of materials to be drained, cleaned, removed, transported, and disposed of to determine the total retirement-in place cost.

To minimize hazards that can exist at an idled facility, KCP&L will also perform limited demolition work. The following facility and structures will be demolished:

- Unit 1 and 2 Precipitators and Ductwork
- Chimney
- Coal Conveyors and Handling Equipment

The costs for the retirement-in-place scenario includes abatement of asbestos and non-asbestos insulation and the costs of de-energizing mechanical and electrical equipment (see Appendix A) to remove the plant from service. Costs for the closure of the CCR impoundments and landfill are also included in the RIP estimate. The retirement-in-place cost also includes annual property tax, utilities, security, operation and maintenance costs assumed for the Plant as provided by KCP&L.

1.4.2 Full Demolition

The indicative full demolition estimate was developed using a "bottom up" approach, where the cost estimate is a result of site-specific quantity estimates. This estimate was based on as-built drawings (showing site layout); equipment general arrangement drawings; plant elevation drawings; and a site visit performed on November 15, 2017, where Burns & McDonnell developed a comprehensive list of the facilities to be demolished as well as the tasks associated with each of the demolition activities.

Once these tasks were developed, Burns & McDonnell used the information obtained during the site visit, as well as the plant as-built drawings, to quantify the building materials associated with each structure at the site. The materials quantified included construction and demolition debris, concrete, and ferrous and non-ferrous steel. Once building materials were quantified, industry standard demolition means and methods were applied to calculate the production rate at which demolition labors and equipment could safely and efficiently demolish the structures. The means, methods, and production rates were based on the judgments and expertise of Burns & McDonnell's subject matter experts. Most of the structures were assumed to be demolished using conventional labor and heavy equipment to remove structures to grade. As part of this estimate, implosion methods are being proposed to bring the boilers and chimney down.

1.3 Full Demolition Estimate

The base and upper bound estimated cost for full demolition are shown in Table 1-2.

Table 1-2: Summary of Base Case Full Demolition Costs

Cost Category*	Structure/Utilities Retirement	CCR Closure	Non-CCR Closure	TOTAL
Base Case Estimated Cost	$ 17,855,000	$ 8,170,000	$ 1,687,000	$ 27,712,000
Upper Bound Estimated Cost	$ 37,451,000	$ 10,811,000	$ 2,883,000	$ 51,145,000

** - Costs include direct, indirect, contingency and estimated owners costs*

The upper bound costs include the base case items along with the following:

- Slab and Foundation Demolition (to 2 feet below grade)
- Backfill from On-Site Borrow Source
- Asphalt Removal
- Fine Grading and Seeding
- Removal and Disposal of PCB coated Galbestos
- Units 1 thru 3 ACM Boiler Internals Abatement
- PCB Building Material Abatement

1.4 Estimating Methodology

1.4.1 Retirement-in-Place

Indicative retirement-in-place costs were developed using information provided by KCP&L and data collected by Burns & McDonnell in the *Sibley Generating Station Regulated Materials Assessment (RMA)*, dated March 2018 (Burns & McDonnell 2018) as well as a site visit performed on November 15, 2017. Burns & McDonnell estimated quantities of regulated materials based on a visual inspection of the facilities along with Burns & McDonnell's professional judgment. In the RMA, Burns & McDonnell staff walked the plant and created an inventory of regulated materials identified during the survey. This inventory was used to estimate the quantities of materials and the tasks required to be performed for the retirement-in-place effort. A KCP&L staff labor rate of $71.25 per hour was provided by KCP&L and current equipment, and unit pricing was then developed for each task. Unit pricing was developed for each site based on the labor rates, equipment costs, and disposal costs specific to the general area in which the work is to be performed.

1.0 EXECUTIVE SUMMARY

1.1 Summary/Introduction

Kansas City Power & Light Company (KCP&L) retained Burns & McDonnell Engineering Co., Inc. (Burns & McDonnell) to develop a scope of work (SOW) and associated cost estimate for the retirement-in-place (RIP) and full demolition of the Sibley power plant located on East Johnson Rd., Sibley, Missouri. The purpose of this document is to provide an initial RIP and full demolition scope of work and associated estimate for the Units 1 through 3, turbine hall, precipitators, coal handling, out buildings, and associated equipment.

Burns & McDonnell understands that a complete retirement of the Sibley Station will occur at the end of 2018. Two scope of work scenarios are being consider for the Sibley Station retirement, scenario one (1) is to put the plant in a cold, dark, and safe condition where it will remain in an idled condition indefinitely. Scenario two (2) is to perform a full demolition of the facility and restore the site to a flat, level condition.

1.2 Retirement-in-Place Estimate

The minimum, base and upper bound estimated costs for the one-time and annual retirement-in-place costs are shown in Table 1-1.

Table 1-1: Summary of Minimum, Base and Upper Bound Retirement-in-Place Costs

Cost Category*	Structure/Utilities Retirement	CCR Closure	Non-CCR Closure	TOTAL	Annual RIP Costs
Minimum Estimated Cost	$ 3,396,000	$ 8,170,000	$ 1,687,000	$ 13,253,000	$ 353,000
Base Case Estimated Cost	$ 20,693,000	$ 8,170,000	$ 1,687,000	$ 30,550,000	$ 353,000
Upper Bound Estimated Cost	$ 37,370,000	$ 10,811,000	$ 2,883,000	$ 51,064,000	$ 378,000

** - Costs include direct, indirect, contingency and estimated owners costs*

Abbreviation	Term/Phrase/Name
O&M	Operations and Maintenance
OT	Operational Technology
PCB	Polychlorinated Biphenyl
P&ID	Process and Instrumentation Diagrams
PPM	Parts per Million
RMA	Regulated Materials Assessment
RIP	Retirement-in-Place
SOW	Scope of Work
SY	Square Yard
SPCC	Spill Prevention, Control and Countermeasure Plan
T&D	Transportation and Disposal
TSCA	Toxic Substances Control Act
V	Volt

LIST OF ABBREVIATIONS

Abbreviation	Term/Phrase/Name
A	Ampere
AC	Alternating Current
ACM	Asbestos Containing Material
C&D	Construction and Demolition Debris
CCR	Coal Combustion Residuals
CIP	Critical Infrastructure Protection
CFC	Chlorofluorocarbon
CY	Cubic Yards
DC	Direct Current
GSU	Generator Step-Up Transformer
HDPE	High-Density Polyethylene
IDS	Intrusion Detection System
IT	Information Technology
KCP&L	Kansas City Power & Light
kV	Kilovolt
kVA	Kilovolt-Amp
LLDPE	Linear Low-Density Polyethylene
LOTO	Lockout Tagout

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Sibley Station Retirement Scope and Cost Estimate

prepared for

Kansas City Power & Light
Sibley Station Retirement Scope and Cost Estimate

Sibley, Missouri

Project No. 103871

Revision 1
4/12/2018

prepared by

Burns & McDonnell Engineering Company, Inc.
Kansas City, MO

BURNS McDONNELL

Sibley Station Retirement Scope and Cost Estimate

KCP&L energizing life

Kansas City Power & Light Company

Sibley Station Retirement Scope and Cost Estimate

Project No. 103871

Revision 1
4/12/2018

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1037

Was a $20 to $58 million range of retirement costs for the Sibley Generating Station provided at this meeting? If no, what is the current expected range for retirement costs for the Sibley Generating Station? Please provide copies of all the management studies that considered these costs in evaluation of the decision to retire the Sibley Generating Station.

Response:

At the November 1, 2018 meeting, a range of $20 to $58 million was provided for retirement cost. The Burns & McDonnell report Sibley Station Retirement Scope and Cost Estimate is attached.

Information Provided By:
Richard Pearce, PE, Manager of Engineering –

ATTACHMENT:
Q1037 – Burns and McDonnell report - Sibley Station Retirement Scope and Cost Estimate
Q1037_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1031

What is the cash flow impact of the MECG and OPC's accounting order on GMO for years 2019 thru GMO next expected rate case?

Response:

Based upon the deferral requested by MECG and OPC there is no near-term cash impact, however there is a potential for a significant earnings impact.

Response by: Ronald Klote, Director Regulatory Affairs

Attachment: Q1031_Verification.pdf

survey, a minor amount of friable ACM exists only in Unit 3 of the plant. For the retirement-in-place scenario only the friable ACM will be abated. All abated asbestos will be disposed of at the Courtney Ride Landfill located in Sugar Creek, MO at a cost of $132 per ton including transportation and disposal, for friable and non-friable asbestos.

Table 2-2: ACM Quantity Estimates

Material	Approximate Quantity	Units
Thermal System Insulation	478	linear feet

Electrical wiring and pipe gaskets were not sampled but are presumed asbestos-containing materials (PACM). Non-friable ACM such as electrical wiring, pipe gaskets, and transite siding will not be abated in this scenario. KCP&L plans to implement an asbestos maintenance program to monitor and ensure that the integrity of remaining ACM materials do not pose a threat to human health or the environment.

Thermal cycles of summer and winter can cause idle facilities to deteriorate rapidly. To reduce ongoing maintenance cost accessible non-asbestos insulation associated with Units 1 through 3 will be abated. Quantities of non-asbestos insulation were not provided. Burns & McDonnell used a factor of 96 linear feet of pipe insulation per megawatt and 338 square feet per megawatt to determine the amount of non-asbestos insulation associated with Units 1 through 3 (see Table 2-3). Approximately 2,500 tons of non-asbestos insulation will be disposed of as construction and demolition debris (C&D) material at the Courtney Ridge Landfill located in Sugar Creek, MO at a cost of $82 per ton including transportation and disposal.

Table 2-3: Non-ACM Insulation Quantity Estimates

Material	Approximate Quantity	Units
Thermal System Insulation	49,728	linear feet
Equipment Insulation/Other	315,800	square feet

2.3.2 Universal Waste Removal

This cost covers the removal and disposal of regulated materials, such as chlorofluorocarbons (CFCs), fluorescent light bulbs and ballasts, fire extinguishers, mercury switches, batteries, and E-waste as identified in the Burns & McDonnell RMA. This also covers the collection and disposal of small quantities of laboratory chemicals, solvents, paints, and other small-container hazardous materials.

Table 2-3: Universal Waste Quantity Estimates

Material	Approximate Quantity	Units
Light Fixtures (Mercury)	1,653	each
Other Devices (Mercury)	206	each
Bulbs (Mercury)	120	containers
PCB Ballasts	1,654	each
Nuclear Devices	29	each
Batteries	251	each
Refrigerant	72	units
Fire Extinguishers	177	each

2.3.3 Chemical Removal

This cost is to drain and remove chemicals identified in the Sibley Station Spill Prevention Control and Countermeasure (SPCC) Plan dated April 2015, and the Burns and McDonnell RMA. Systems will be opened and drained of lubricants, gear boxes cleaned of greases, and chemicals removed from storage tanks. A cost for such removal and disposal associated with equipment located in the Sibley Station plant has been estimated.

Table 2-4: Other Regulated Materials

Material	Approximate Quantity	Units
Chemicals	41,306	gallons
Chemicals	459	cylinders
Chemicals	4,005	containers

2.3.4 Oil Filled Transformers Drained

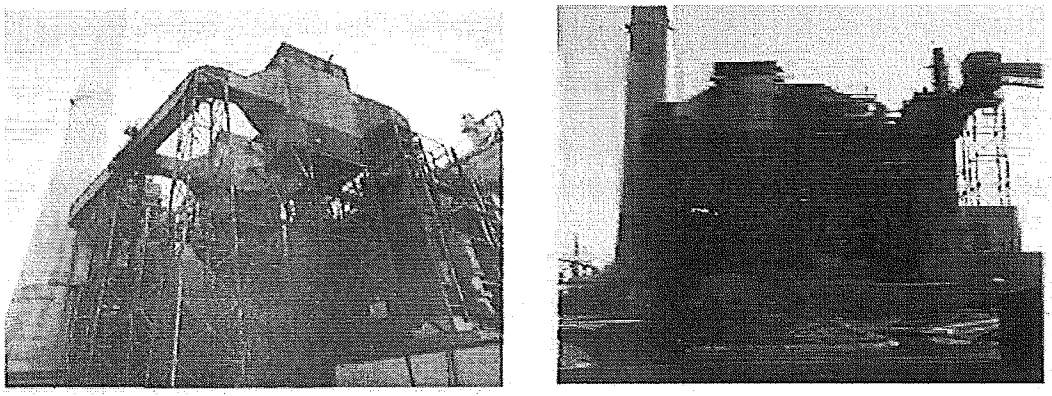
The transformers will be drained with the oil transported offsite for either recycling or disposal in accordance with regulatory requirements. Approximately 40,600 gallons of oil, as identified in the Burns & McDonnell RMA, will be removed upon idling the facility. This estimate assumes that the oil has a polychlorinated biphenyl (PCB) concentration of less than 50 parts per million (ppm). A cost of $1.00 per gallon was assumed for the removal and disposal of this oil.

2.4 Select Demolition

2.4.1 Precipitator Demolition

The Unit 1 and 2 precipitators and duct work are elevated structures that currently are in deteriorated condition. To eliminate long term hazards associated with an idled plant; the Unit 1 and 2 precipitators and duct work will be demolished as shown in Figure 3 (Appendix C). This cost includes demolishing the precipitators in their entirety and the associated horizontal duct work. The duct work will be demolished from elevation 827' to elevation 855'. Due to the proximity of the precipitators and duct work to the Units that will remain, this demolition work will be done with a crane and in a controlled manner.

Figure 2-1: Limits of Unit 1 & 2 Precipitator Demolition



2.4.2 Chimney Demolition

Sibley Station has one 700-foot chimney as shown in Figure 3 (Appendix C). This chimney has an opening at the bottom and with a rail line running through it. Over time condensation and weather elements can severely deteriorate idled concrete chimneys. To prevent hazards associated with the chimney once the Sibley plant is idled down the chimney will be demolished. Due to the limited work footprint, the chimney will be demolished by hand down to elevation 774' and the remaining 50 feet will be demolished mechanically.

2.4.3 Coal Handling Demolition

Coal handling equipment can become a safety concern due to deterioration and an attractive nuisance at an idled power plant. The potential for trespassers to climb on these structures and become injured is very high once this equipment is no longer in operation. To eliminate this hazard, KCP&L is electing to demolish coal handling conveyors and equipment at the Sibley Station as show in Figure 3 (Appendix C). Underground coal handling tunnels will also be demolished and backfilled. Fill material (approximately

8,650 CY) will be needed to backfill the coal unloading hopper and tunnels. This material is assumed to be available from an on-site borrow source.

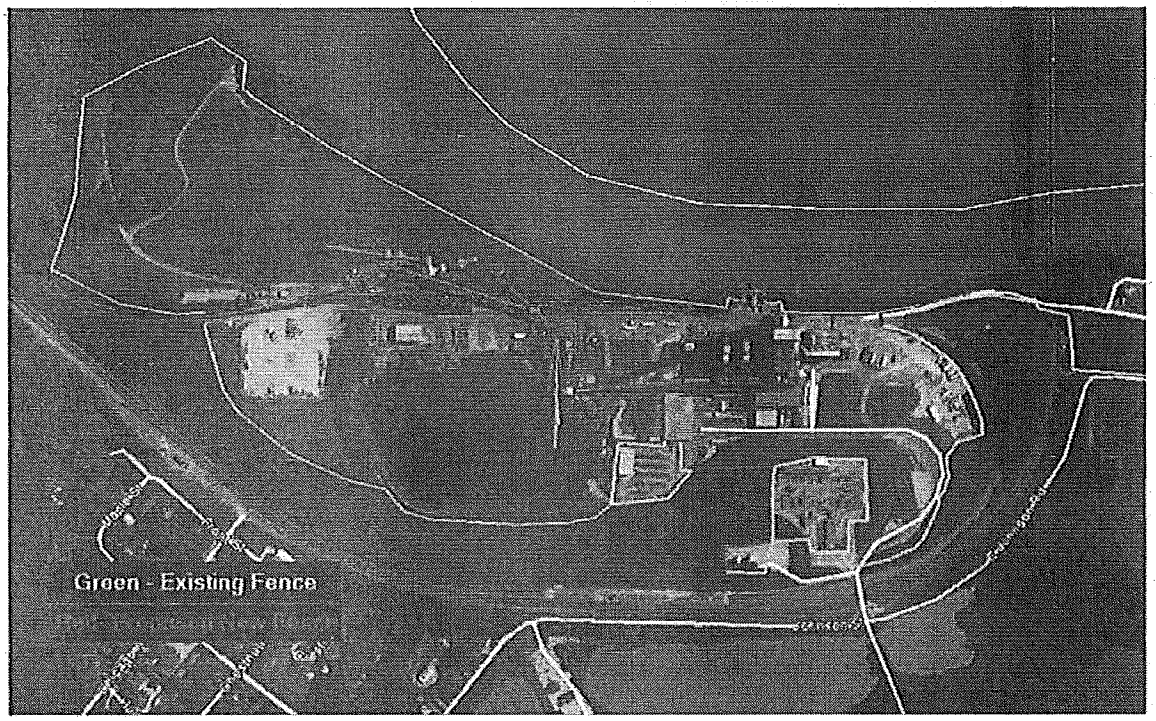
2.5 Fixed Costs

2.5.1 Site Security

It is assumed that the substation will remain in operation and will maintain its own security independent of the power plant and is not included in the scope of this project.

According to information provided to Burns & McDonnell by KCP&L, the existing perimeter fence does not entirely enclose the plant. Therefore, Burns & McDonnell recommends additional fencing and gates be installed to completely enclose the assets that will remain during and after the RIP. **Error! Reference source not found.** shows the existing fence and the proposed new fence locations, which would completely enclose the plant assets that will remain.

Figure 2-2: Proposed and Existing Fence for RIP



Burns & McDonnell estimates the additional fence needed to be approximately 700 linear feet plus an additional two (2) gates installed on the East and West ends of the train track. The cost for materials plus installation is estimated to be approximately $25 per linear foot and approximately $5,000 per gate. In

addition to adding new fencing, an assessment of the existing perimeter fence should be conducted and deficiencies in the existing perimeter fence addressed.

Because the site will be unmanned and is located near a populated neighborhood, Burns & McDonnell also recommends two 24/7 onsite security guards responsible for monitoring access to the facility, reporting any security concerns that arise, and performing regular inspections of site perimeter and remaining assets.

An existing trailer will be reposed to be used as the Security trailer for operation by the onsite security guards. The trailer should be relocated to the entry point to the site and repurposed with communication equipment. If lighting and clear visual of the access gate cannot be obtained from within the shelter than surveillance equipment should also be installed to allow for monitoring of the access road from within the guard shelter.

2.5.2 Property Tax

Long-term property tax costs will be determined by Kansas City Power & Light Company and have not been included in this estimate.

2.5.3 Utility Costs

Long-term utility costs will be determined by Kansas City Power & Light Company and have not been included in this estimate.

2.5.4 Maintenance Cost

Long-term maintenance costs will be determined by Kansas City Power & Light Company and have not been included in this estimate.

3.0 FULL DEMOLITION SCOPE OF WORK

3.1 General Conditions

3.1.1 General Conditions and Project Management

This covers the demolition Contractor's project team costs including, project management, safety personnel, travel expenses, per diem, tools, and consumables. This does not include KCP&L indirect costs for the project team's management of the demolition work.

3.1.2 Mobilization and De-Mobilization

This includes the mobilization of labor, equipment, supplies, and materials needed by the demolition contractor to perform the hazardous material removal, and demolition of the Sibley Station. Labor rates used are based on typical industrial demolition contractor rates. Equipment rates are typical of demolition industry rates and assume that specialized demolition equipment would be used.

The labor and equipment mobilized to the site was estimated to be:

- Superintendent: 1
- Laborers: 8 to 12
- Full-Time Safety Manager: 1
- Operators: 6
- Excavators: 3
- Loaders: 1
- Skidsteer: 2
- Aerial lifts: 3

3.1.3 Erosion Controls

These costs cover the installation, maintenance, and reporting associated with the necessary storm water pollution prevention controls that will need to be implemented. Best management practices will include the installation of a two-row silt fence, hay bales, and storm sewer protection, as needed, to confirm soil erosion control measures are met.

3.1.4 Permitting

This estimate includes costs associated with obtaining a demolition permit, storm water pollution prevention permit, notification with the Missouri Department of Natural Resource Air Pollution Control

Program, and equipment mobilization permits. These costs are based on projects of similar nature. No municipalities or government agencies were contacted to confirm permit costs.

3.1.5 Utility Cutting and Capping

As stated in Sections 2.1.3 and 2.1.4 of the RIP scenario, electrical and mechanical services will be disconnected and isolated prior to the start of demolition. Electrical and potable water services to the station will be cut and capped at the property boundaries.

3.1.6 Electrical Systems Repowering

A landfill leachate system currently in operation will be changed from powered to gravity operation. Repowering work will involve:

- The trailers will be repowered from a distribution line extension. This will include:
  - A distribution line extension from the guard shack to security trailers - seven 40' poles, three 500kVA pole mounted transformers, and 1950' distribution line.
  - Three drops to trailers – three 75kVA transformers with 120V 225A panels, disconnects, and trenching.

A markup of the one-line drawings has been included in Appendix B.

3.1.7 Information Technology and Telecommunications

Sibley Station communications are tied to the rest of the KCP&L network via the microwave tower located near the 345kV Substation approximately 1.5 miles southeast of the plant. Existing single-mode and multi-mode fiber exists between the plant communications/LAN room, the 69kV Substation, the 161kV Substation, and the microwave building. Full demolition of the existing plant buildings that contain the communication equipment will not affect any remaining communication to and from any remaining facilities at the 69kV or 161kV Substations and would leave opportunities to continue to provide connectivity to the KCP&L network should security or site monitoring facilities remain. This estimate covers the cost for KCP&L staff to decommission or remove/provision circuits in OT and IT network environments.

3.1.8 Switchyard Upgrades/Changes

The Sibley switchyard work associated with decommissioning is outlined below:

- Remove 161kV Unit 3 connection.
  - Remove redundant plant controls from breakers R5-10 and R7-10.
  - Add new bus differential relaying and panel to 161kV control building to protect the resulting open bus.

- Switch 1088 remains as is, locked open.

- Remove 69kV Unit 1, Unit 2, Start-Up 1 & 2, and Start-Up 3 connections.
  - Plant no longer requires start-up connections.
- Primary station service supply is provided from 69kV yard. Reconfigure the AC system to support the new site configuration.
- There are existing independent DC battery systems for both 161kV and 69kV control buildings.
  - Evaluate and possibly reconfiguration the 69kV DC system.
  - Plant DC system overlap to be reconfigured and removed.
- Provide AC service to "guard shack" from distribution line/pole-mount transformer.

3.1.9 Intake and Discharge Removal

Units 1, 2, and 3 receive cooling water from the Missouri River. The intake structure will be demolished down to the river mud line. Intake piping will be permanently sealed by installing steel or concrete bulkheads and be abandoned in place.

The discharge associated with Units 1, 2, and 3 will be permanently sealed by installing steel or concrete bulkheads and filling the pipes with concrete or flowable fill to prevent materials from entering or existing the structure. All underground discharge piping will be abandoned in place.

3.2 Environmental Costs

3.2.1 Asbestos Removal and Disposal

The removal of friable and non-friable asbestos-containing material (ACM) at the Sibley Station has been included in the full demolition estimate. For the full demolition scenario, the abatement cost for non-asbestos insulation has not been included as it is covered in the overall demolition costs. The cost for the removal of friable ACM was developed using the quantities extracted (see Table 2-2) from the Power Engineers asbestos survey dated 12/18/17 found in the Burns and McDonnell RMA. All asbestos will be disposed of at the Courtney Ridge Landfill located in Sugar Creek, MO at a cost of $132 per ton including transportation and disposal, for friable and non-friable asbestos.

Table 3-1: ACM Insulation Quantity Estimates

Material	Approximate Quantity	Units
Thermal System Insulation	478	linear feet
Galbestos Siding	298,216	square feet
Floor Tile	90	square feet

Electrical wiring and pipe gaskets were not sampled but are presumed asbestos-containing materials (PACM) and were included in this cost estimate. The following quantities were assumed based on experience with similar facilities of the similar size and vintage:

Table 3-2: PACM Quantity Estimates

Material	Approximate Quantity	Units
Wiring	30,000	linear feet
Gaskets	455	each

3.2.2 Chemical Removal

This cost is to drain and remove chemicals identified in the Sibley Station Spill Prevention Control and Countermeasure Plan (SPCC) dated April 2015, and the Burns and McDonnell RMA. Systems will be opened and drained of lubricants, gear boxes cleaned of greases, and chemicals removed from storage tanks. Removal and disposal of oils, lubricants, fuels, and chemicals associated with equipment located at Sibley Station has been estimated.

Table 3-3: Other Regulated Materials

Material	Approximate Quantity	Units
Chemicals	41,306	gallons
Chemicals	459	cylinders
Chemicals	4,005	containers

3.2.3 Universal Waste Removal and Disposal

This cost covers the removal and proper disposal of universal wastes, such as chlorofluorocarbons (CFCs), fluorescent light bulbs and ballasts, fire extinguishers, mercury switches, batteries, and E-waste identified in the Burns & McDonnell RMA. This cost also covers the collection and disposal of small quantities of laboratory chemicals, solvents, paints, and other small-container hazardous materials.

Table 3-4: Universal Waste Quantity Estimates

Material	Approximate Quantity	Units
Light Fixtures (Mercury)	1,653	each
Other Devices (Mercury)	206	each
Bulbs (Mercury)	120	containers
PCB Ballasts	1,654	each
Nuclear Devices	29	each
Batteries	251	each
Refrigerant	72	units
Fire Extinguishers	177	each

3.2.4 Fuel Oil, Lubricating, and Hydraulic Systems Drained

As stated in Section 2.2.4 of the RIP scenario, fuel oils, lubricants, and hydraulic oils identified in the Sibley Station Spill Prevention Control and Countermeasure (SPCC) Plan dated April 2015, and the Burns and McDonnell RMA will be drained and disposed.

3.2.5 Transformer Oil Disposal

As stated in Section 2.3.4 of the RIP scenario, the cost for the removal, disposal or recycling of transformer oil will be performed by the demolition contractor or their respected subcontractor. This estimate assumes the oil has a polychlorinated biphenyl (PCB) concentration of less than 50 parts per million (ppm). A cost of $1.00 per gallon was assumed for the removal and disposal of this oil.

3.3 Structure Demolition and Removal

3.3.1 Demolition

This cost includes activities associated with the demolition of the Units 1, 2, and 3, turbine hall, one concrete chimney, coal handling equipment, outbuildings and structures as shown on Figure 4 (Appendix C). These structures will be demolished to grade, and that non-masonry and non-metallic debris generated is clean and can be disposed of at a Class D landfill. All slabs and foundations will remain, and elevated equipment pads, pedestals, or columns will be demolished to the floor slab and the site will be left in a flat, level condition that allows for site drainage. Much of demolition work will be performed using conventional methods except for the boiler structures which will be imploded. No structures will remain after demolition.

3.3.2 Chimney Demolition

There is one 700-foot tall concrete chimney at Sibley Station. This cost covers the demolition and removal of this chimney. The chimney will be imploded in a safe manner and it is assumed that the concrete from the stack is clean and can be recycled.

3.4 Site Restoration and Civil Work

3.4.1 Railroad Track Removal

This cost includes the demolition of two (2) miles of rail and approximately 6,700 wood railroad ties as shown in Figure 4. The rails will be recycled, and railroad ties will be landfilled in a Class D landfill. All ballast material will remain on site.

3.4.2 Concrete Crushing

All brick, block, and concrete generated by demolition activities will be crushed for re-use on site as backfill. It is assumed that masonry debris meets clean fill standards and 35,750 CY of material will be crushed to +/- 2 inches in size.

3.4.3 Backfill and Compaction

Crushed masonry debris from the building demolition and an additional 7,500 CY of borrow fill material will be used to backfill basement areas, pits, and trenches to match the surrounding grade and allow for proper drainage. This material will be compacted to minimize future settling of the site. Masonry debris is assumed to meet clean fill standards and the borrow material is assumed to be readily available from an on-site source.

3.5 Scrap Salvage

3.5.1 Ferrous Metals

Burns & McDonnell has estimated that there is approximately 29,000 tons of ferrous metal at the Sibley Station. The costs for preparation and transportation of the scrap has been deducted from the scrap credit. It was assumed that metallic debris would be recycled and credited back to the project. On December 8, 2017, Burns & McDonnell contacted River Edge Recycling in Kansas City, MO and received the following ferrous scrap metal pricing:

- Plate and structural: $130/gross ton
- #1 heavy melt: $130/gross ton
- Sheet Iron: $115/ gross ton

- Re-Bar: $60/gross ton

See Appendix A (Cost Summary Sheet) for salvage credit value details.

3.5.2 Non-Ferrous Metals

Burns & McDonnell estimated there is approximately 1,740,000 pounds of non-ferrous metal at Sibley Station. The costs for preparation and transport of the scrap has been deducted from the scrap credit. It was assumed that metallic debris would be recycled and credited back to the project. On December 8, 2017, Burns & McDonnell contacted Rivers Edge Recycling in Kansas City, MO and received the following non-ferrous scrap metal pricing:

- Copper: $2.40 per pound
- Copper Wire: $1.30 per pound
- Stainless Steel 304: $0.25 per pound
- Stainless Steel 316: $0.50 per pound
- Yellow Brass: $1.75 per pound

See Appendix A (Cost Summary Sheet) for salvage credit value details.

3.6 Security

It is assumed that the landfill will remain open, the entrance to the landfill will be controlled by the landfill contractor, and the substation near the landfill will remain as the only critical asset at the site. Still undetermined is whether the substation adjacent to the plant would remain in operation. Costs for security modifications are included assuming that the substation is to remain in operation.

- Perimeter and entrance changes
  - The perimeter fence will need to be upgraded to meet KCP&L outer perimeter standards for the criticality of that substation (from the existing interior perimeter type). As of recent conversations, this decision was pending. Assuming fencing is replaced, and substation remains an asset that is not considered critical infrastructure protection (CIP).
  - Fencing costs includes 1,700 LF of chain link with 3-strand topper with manual gate, manual locks, and without IDS at $20/LF installed
- Security technology changes
  - Substation near the landfill is the asset remaining deemed likely to be considered as CIP critical and will require relocation of networking and security system controls (servers/switches) to allow remote monitoring of that and any other remaining assets (e.g. switchyard)
  - Assumes monitoring equipment is already in place and installed at the landfill and critical substation and includes moving only local control and storage devices from the existing

plant location to the control house at the substation, inside the already secure perimeter for that facility.

- Assumes that no trenching will be required, that communications with sufficient bandwidth already extends to the control house, and that sufficient space exists inside the control house for installation of a secure server rack enclosure for such equipment.

- Security staffing changes
  - Assumes that remaining CIP critical asset would have periodic inspections (monthly) of site and perimeter with a 2-hour walkthrough and documentation estimate per month
  - Incident response and investigative time not included
  - Initial cost includes initial law enforcement training for the now unoccupied substation
  - Security staffing during RIP or Demo activities are similar - on site security until facility no longer contains critical assets, estimated at approximately one year. Those costs are not shown as they are already included in staff reduction calculations as appropriate and are constant across the options.

3.7 Alternate Costs

3.7.1 PCB Coated Galbestos Siding

Galbestos is a carbon steel corrugated sheet metal used in the construction of walls and roofs in a wide range of structures from 1948 to 1979. While Galbestos is typically coated with an asbestos felt material, it has recently been discovered that Galbestos was also manufactured with high levels of PCB's. A cost estimate was included in the upper bound should the approximately 242,000 square feet of Galbestos siding at the Sibley plant contain PCB's with a concentration of 50 to 499 ppm. This cost includes labor, disposal, and transportation to properly handle these materials.

3.7.2 PCB Stained Concrete

Various areas of stained concrete were observed at Sibley Station while conducting the RMA. These areas were sampled for PCB's and the following quantities and concentrations of PCB stained concrete will be removed and disposed.

Table 3-5: PCB Concrete Quantities

Location	Approximate Quantity	Concentration (PPM)
Transformer Pads	3 CY	50 - 499
Transformer Pads	1 CY	> 500
Concrete Slabs	50 CY	1 - 49

3.7.1 Slabs and Foundations Demolition

All slabs and foundations within the limits of demolition (Appendix C) will be demolished to 2 feet below grade. This estimate assumes that the clean masonry material resulting from the demolition of the slabs and foundations will be recycled off site at a cost of $6 per ton including transportation and disposal.

3.7.2 Backfill

All voids and depressions created by the removal of any slabs and foundations will be backfilled with an onsite barrow (~4,600 CY). This material will be installed to match the surrounding elevations. It is assumed that a borrow source is readily available on site.

3.7.3 Asphalt Removal

All asphalt pavement (~4,600 CY) as show in Figure 1 (Appendix C), within the limits of demolition will be removed. It is assumed that this asphalt material is clean and will be recycled off site at a cost of $6 per ton including transportation and disposal.

3.7.4 Fine Grading and Seeding

The site will be graded (~105,000 SY) as shown in Figure 2 (Appendix C) to provide for positive sheet flow drainage and avoid ponding. A blended fescue mix of hydroseed will be installed in the affected area.

3.7.5 Boiler Internal ACM Abatement

This cost is to cover the abatement of the Unit 1 and 2 boiler insulation and refractory brick should it be found positive for asbestos. This work will be performed in conjunction with abatement of other asbestos-containing materials while the boilers are under containment. All asbestos will be disposed of at the Johnson County Landfill located in Shawnee, KS at a cost of $172 per ton including transportation and disposal, for friable asbestos.

Table 3-6: Boiler ACM Quantity Estimates

Material	Approximate Quantity	Units
Boiler Insulation	3,440	square feet
Boiler Refractory	2,100	net tons

3.7.6 PCB Building Material Abatement

Polychlorinated Biphenyl (PCB) have been found in building products such as caulk, paints, mastics, and sealants. When PCB's are incorporated into a manufactured product and have a concentration of less than 50 ppm they are classified as bulk PCB waste products and can be disposed of in a Class D landfill.

However, when the PCB concentration is greater than 50 ppm, special handling and disposal of these materials is required. PCB's in building materials were not sampled at the Sibley Station but an allowance is provided for the abatement and disposal of 250 tons of PCB building materials with a PCB concentration between 50 and 499 ppm.

4.0 COAL PILE AND IMPOUNDMENT CLOSURES

The following sections cover civil-related scope for both the retirement-in-place and full demolition options. Construction costs are provided in 2018 dollars and were developed from RS Means and cost data from previous Burns & McDonnell projects. The indicative cost estimates were prepared assuming work will be performed by a construction contractor outside of KCP&L.

4.1 Non-CCR Units

4.1.1 Coal Yard

Sibley operates two separate coal piles which are west of the main plant area. The north coal pile covers approximately 12.4 acres and the south covers approximately 6.5 acres. Both coal piles drain to adjacent runoff ponds (Appendix D). Cost estimates were prepared for closure by removal for both the coal piles and the coal pile runoff ponds.

4.1.1.1 Coal Pile – Closure by Removal

The estimate was prepared assuming coal has been removed by plant operations prior to decommissioning. The top two (2) feet of subgrade will be stripped and disposed of in the on-site landfill. This depth is intended to cover the removal of any remaining coal fines and ash-stabilized base material. The area will then be rough-graded and seeded.

4.1.1.2 Coal Pile – In-Place Closure

In-place closure of the coal pile assumes some coal is to remain in place on-site. Any remaining coal will be graded to drain prior to receiving a cover system. The cover system will consist of 12 inches of clay, 12 inches of vegetative material and seed. Cover material will be obtained from the on-site borrow area near the Sibley landfill.

4.1.1.3 Coal Pile Runoff Pond – Closure by Removal

Closure by removal will consist of dewatering the ponds, removing ponded sediment, and disposal of sediment in the on-site landfill. The ponds will be dewatered using two, 6-inch centrifugal pumps. Assumptions made to develop the cost estimate are as follows:

- The north coal pile runoff pond footprint is approximately 1.7 acres
- The south coal pile runoff pond footprint is approximately 2.9 acres
- Each pond is 10 feet deep with 3H:1V side slopes
- There is two (2) feet of sediment in the ponds at the time of closure

- Six inches of material will be over-excavated from the pond bottom to account for removal of any remaining coal fines

4.1.1.4 Coal Pile Runoff Pond – In-Place Closure

In-place closure of the coal pile runoff ponds will consist of dewatering the ponds, grading ponded sediment, and placement of a cover system. The ponds will be dewatered using two, 6-inch centrifugal pumps. The cover system will consist of 12 inches of clay, 12 inches of vegetative material, and seed. Cover material will be obtained from the on-site borrow area near the Sibley landfill. Assumptions made to develop the cost estimate are as follows:

- The north coal pile runoff pond footprint is approximately 1.7 acres
- The south coal pile runoff pond footprint is approximately 2.9 acres
- Each pond is 10 feet deep with 3H:1V side slopes
- There is two feet of sediment in the ponds at the time of closure

4.1.2 Process Wastewater Pond – Closure by Removal

The process wastewater pond currently receives non-CCR process flows as well as clarifier and filter waste streams. It is assumed the pond will be closed by removal at the time of retirement. The pond will be dewatered using a 6-inch centrifugal pump prior to removing ponded material. All excavated material will be hauled to the on-site landfill for disposal. Assumptions made to develop the cost estimate are as follows:

- The total pond footprint is approximately 0.4 acres
- The pond is 10 feet deep with 3H:1V side slopes
- There is two feet of sediment in the pond at the time of closure

4.1.3 Process Wastewater Pond – Closure by Removal with Backfill

Once the pond is closed by removing sediments per Section **Error! Reference source not found.**, the pond will be filled to grade using material obtained from the on-site borrow source near the Sibley landfill. Prior to filling, Burns and McDonnell assumed an additional six (6) inches of material will be removed to muck out the basin and find a solid subgrade to support fill operations.

4.2 CCR Impoundments

4.2.1 Slag Pond – Closure by Removal

The slag pond currently receives boiler slag from the plant (Appendix D). It is assumed the pond will be closed by removal of coal combustion residuals (CCR) material at the time of retirement. The pond will be dewatered using a 6-inch centrifugal pump prior to removing ponded slag. In addition to the slag, the existing concrete liner and underlying (beneficial use) material will be removed. All excavated CCR material will be hauled to the on-site landfill, and the concrete liner material will be disposed of in an off-site landfill at a cost of $34 per ton. Assumptions made to develop the cost estimate are as follows:

- The total pond footprint is approximately 1.0 acre
- The pond is 10 feet deep with 3H:1V side slopes
- There is two feet of sediment in the pond at the time of closure
- The existing concrete liner is 10 inches thick
- Concrete liner material will be disposed of in an off-site landfill approximately 15 miles from the site
- An additional two feet of underlying material will be excavated from beneath the concrete liner for disposal, to capture sediment potentially containing CCR material

4.2.2 Slag Pond – Closure by Removal with Backfill

Once the pond is closed by removal of CCR per Section **Error! Reference source not found.**, the pond will be filled to grade using material obtained from the on-site borrow source near the Sibley landfill.

4.2.3 Fly Ash Pond – In-Place Closure

The fly ash pond currently receives fly ash and miscellaneous plant flows (Appendix D). The cost estimate was prepared assuming partial in-place closure of the fly ash pond, which will consist of closure by removal of CCR from the east portion of the pond and depositing fly ash in the west portion. The pond will be dewatered using a 6-inch centrifugal pump. Closure of the east portion will include removing fly ash and 24 inches of underlying (liner) material. New berms will be constructed to divide the west pond from the east pond, and to divide the east pond further into north and south. The south area will function as a leachate pond once the landfill leachate piping is re-routed as part of the landfill closure scope. A section of the existing embankment adjacent to the Missouri River will be removed to allow the north area to drain to the river.

Excavated CCR and liner material will be stockpiled for dewatering prior to loading into trucks and transporting to the west portion of the pond. Any excess will be hauled to the Sibley landfill. The west

portion of the pond will be graded prior to receiving a cover system consisting of 18 inches of clay, 6 inches of vegetative material and seed. Cover and berm fill material will be obtained from the on-site borrow area near the Sibley landfill. Assumptions made to develop the cost estimate are as follows:

- The total pond footprint is approximately 16.3 acres
- The pond is 18 feet deep with 2H:1V side slope
- There is nine (9) feet of CCR material in the pond at the time of closure. Actual quantities will need to be surveyed prior to design to allow for optimum berm location and minimization of excess material hauled to the landfill.
- Twenty-four (24) inches of material will be over-excavated from the east portion (west portion will remain in place)
- New berms will have a top width of 20 feet with 4H:1V side slopes
- Material excavated from the existing embankment may be used to grade the north pond area to drain to the Missouri river

4.2.4 Fly Ash Pond – Closure by Removal

The full closure by removal option will consist of dewatering the pond using a 6-inch centrifugal pump and mechanically excavating ponded fly ash. In addition to the fly ash, 24 inches of underlying (liner) material will be removed. Excavated material will be double-handled to promote dewatering prior to disposal in the on-site landfill.

New berms will be constructed to divide the southeast area from the remainder of the pond. This portion will function as a leachate pond once the landfill leachate piping is re-routed as part of the landfill closure scope. A section of the existing embankment adjacent to the Missouri river will be removed to allow the north and west areas to drain to the river. Assumptions made to develop the cost estimate are as follows:

- The total pond footprint is approximately 16.3 acres.
- The pond is 18 feet deep with 2H:1V side slopes.
- There is nine feet of sediment in the pond at the time of closure.
- Twenty-four (24) inches of material will be over-excavated from the pond bottom.
- New berms will have a top width of 20 feet with 4H:1V side slopes
- Material excavated from the existing embankment may be used to grade the north pond area to drain to the Missouri river

After closure, the southeast portion of the pond will remain in place so that it may receive leachate flows from the existing on-site landfill as part of the landfill closure scope.

4.3 CCR Landfill – Final Cover

Final cover will be required at the Sibley landfill, which will include the top and the west slope; other areas have received final cover previously. Costs are included for installing a final cover system consisting of 18 inches of clay, 40-mil LLDPE geomembrane, and 12 inches of vegetative material and seed. Soil cover material will be obtained from the on-site borrow area west of the landfill.

Leachate generated by the landfill is currently pumped to the existing leachate pond. Because power will not be available at the landfill when the plant is retired, the leachate line will be re-routed so that it may gravity drain to the bermed area created within the southeast corner of the existing fly ash pond. Costs for re-routing the leachate line and installing a bottom liner system in the new leachate pond are included in the estimate. The bottom liner system will consist of 24 inches of clay, 60-mil HDPE geomembrane, and 12 inches of protective cover. Costs were also included to remove a portion of the north berm of the existing leachate pond to prevent the pond from impounding water once the leachate line is rerouted. The existing landfill operating permit will need to be modified to account for this change in operation and approved by the Missouri Department of Natural Resources. The existing discharge permit for the fly ash pond will also need to be modified to include leachate contributions.

4.4 CCR Landfill – Expansion

Depending on the retirement disposal quantities, there is potential for vertical and/or horizontal expansion to the west of the current landfill footprint. Based on the possible closure options and assumed quantities, between 55,100-326,600 cubic yards of CCR and/or impacted materials will be disposed of in the landfill at the time of retirement. **Error! Reference source not found.** summarizes assumed disposal quantities for the base and upper-bound scenarios examined as part of this scope. As of July 2017, there was approximately 70,000 cubic yards of existing airspace at Sibley landfill (per documentation provided by KCP&L). With a vertical expansion across the existing landfill footprint to an elevation of 895 feet, the total airspace could be increased to approximately 475,000 cubic yards (per documentation provided by KCP&L). It is currently assumed demolition debris will be removed and disposed of off-site. KCP&L may choose to dispose of demolition debris on-site, which would require approximately 60,000 cubic yards of landfill capacity.

Table 4-1: Potential CCR Disposal Quantities

Source	Disposal Quantity (CY)	
	Base	Upper/Alternate
Coal Pile	61,100	0
Coal Pile Runoff Pond	13,300	0
Slag Pond	4,800	6,300*
Process Wastewater Pond	600	900
Fly Ash Pond	49,700	245,000

*Includes demo'd concrete liner material

Should KCP&L choose to construct a vertical expansion of the existing landfill, a permit modification will be required but capital costs for construction should be minimal. Costs for permitting have not been included; however, costs have been prepared for final cover of the expansion area. Costs are included for installing a final cover system consisting of 18 inches of clay, 40-mil LLDPE geomembrane, and 12 inches of vegetative material and seed. Soil cover material will be obtained from the on-site borrow area west of the landfill.

APPENDIX A - COST ESTIMATE SUMMARY

RETIREMENT-IN PLACE

BURNS McDONNELL

KCP&L Sibley Generating Station
RIP Cost Estimate Summary

Item	Sub Item	Description	Minimum Cost Option		Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
1		**System De-Energization**						
1.1		Generator Hydrogen Evacuation		$ 12,000		$ 12,000		$ 12,000
1.2		Intake & Discharge Closure		$ 253,000		$ 714,000		$ 714,000
	1.2.1	Remove/Demo Equipment			$ 204,000		$ 204,000	
	1.2.2	Bulkhead Intake & Discharge	$ 253,000		$ 253,000		$ 253,000	
	1.2.3	Flowable Fill			$ 257,000		$ 257,000	
1.3		Mechanical System Isolation		$ 10,000		$ 10,000		$ 10,000
1.4		Electrical System Isolation/Reconfiguration		$ 275,000		$ 275,000		$ 275,000
	1.4.1	Distribution line extension from guard shack to security trailers	$ 146,000		$ 146,000		$ 146,000	
	1.4.2	Three drops to trailers	$ 129,000		$ 129,000		$ 129,000	
	1.4.3	Remove transformers for switchyard isolation purposes (cost/credit offset)	$ -		$ -		$ -	
1.5		Energy Delivery System Isolation				$ 563,000		$ 563,000
1.6		Security System Reconfiguration		$ 73,000		$ 73,000		$ 73,000
	1.6.1	Assess existing fence line and repair holes, washouts or downed fencing	$ 25,000		$ 25,000		$ 25,000	
	1.6.2	Install chain-link gates at railway access points on the East and the West ends of the plant	$ 10,000		$ 10,000		$ 10,000	
	1.6.3	Install additional fencing along south side of plant to enclose plant and water towers (note if terrain is impassible in this area then fencing may not be required)	$ 18,000		$ 18,000		$ 18,000	
	1.6.4	Refurbish existing trailer for use for security	$ 5,000		$ 5,000		$ 5,000	
	1.6.5	One Time 24/7 Onsite Guard Startup Cost	$ 15,000		$ 15,000		$ 15,000	
1.7		Decommissioning and re-provisioning of IT/OT network circuits and equipment		$ 32,000		$ 32,000		$ 32,000
		Subtotal for System De-Energization		**$ 655,000**		**$ 1,679,000**		**$ 1,679,000**
2		**Decommissioning and Cleaning**						
2.1		Drain Boiler, Condenser, Feedwater Heater, Boiler Feed Pumps		$ 17,000		$ 17,000		$ 17,000
2.2		Boiler, Precipitator & Ash System Cleaning		$ 210,000		$ 210,000		$ 210,000
	2.2.1	Labor & Equipment	$ 122,000		$ 122,000		$ 122,000	
	2.2.2	Disposal	$ 88,000		$ 88,000		$ 88,000	
2.3		Remove and Dispose all Tenant Debris, Trash & Combustibles				$ 96,000		$ 96,000
	2.3.1	Labor & Equipment			$ 45,000		$ 45,000	
	2.3.2	Disposal			$ 51,000		$ 51,000	
2.4		Lubricating & Hydraulic System Draining		$ 107,000		$ 107,000		$ 107,000
	2.4.1	Labor & Equipment	$ 30,000		$ 30,000		$ 30,000	
	2.4.2	Disposal	$ 77,000		$ 77,000		$ 77,000	
		Subtotal for Decommissioning & Cleaning Costs		$ 334,000		$ 430,000		$ 430,000

BURNS McDONNELL

KCP&L Sibley Generating Station
RIP Cost Estimate Summary

Item	Sub Item	Description	Minimum Cost Option		Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
3		**Environmental**						
3.1		Asbestos and Non-ACM Insulation Abatement		$ 560,000		$ 560,000		$ 11,788,000
	3.1.1	Scaffolding, Containment	$ 500,000		$ 500,000		$ 500,000	
	3.1.2	Abate Asbestos Containing Materials	$ 60,000		$ 60,000		$ 60,000	
	3.1.3	Abate Non-Asbestos Insulation					$ 11,228,000	
3.2		Universal Waste Removal				$ 150,000		$ 150,000
	3.2.1	Labor & Equipment			$ 48,000		$ 48,000	
	3.2.2	Disposal			$ 102,000		$ 102,000	
3.3		Regulated Materials & Chemical Removal		$ 697,000		$ 697,000		$ 697,000
	3.3.1	Labor & Equipment	$ 30,000		$ 30,000		$ 30,000	
	3.3.2	Disposal	$ 667,000		$ 667,000		$ 667,000	
3.4		Oil Filled Transformer Draining		$ 47,000		$ 47,000		$ 47,000
	3.4.1	Labor & Equipment	$ 6,000		$ 6,000		$ 6,000	
	3.4.2	Disposal	$ 41,000		$ 41,000		$ 41,000	
		Subtotal for Environmental		$ 1,304,000		$ 1,454,000		$ 12,682,000
4		**Select Demolition**						
4.1		Unit 1 & 2 Precipitator Demolition				$ 1,050,000		$ 1,050,000
4.2		Chimney Demolition				$ 8,500,000		$ 8,500,000
4.3		Coal Handling Demolition				$ 980,000		$ 980,000
		Subtotal for Select Demolition Costs		$ -		$ 10,530,000		$ 10,530,000
		TOTAL DIRECT COSTS		$ 2,293,000		$ 14,093,000		$ 25,321,000
		Indirect Costs						
		Engineering/Permitting/Construction Management		$ 298,000		$ 1,832,000		$ 3,292,000
		Bonds/Insurance		$ 46,000		$ 282,000		$ 506,000
		Contingency		$ 459,000		$ 2,819,000		$ 5,064,000
		TOTAL DIRECT AND INDIRECT COSTS		$ 3,096,000		$ 19,026,000		$ 34,183,000

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KCP&L Sibley Generating Station
RIP Cost Estimate Summary

Item	Sub Item	Description	Minimum Cost Option		Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
		Scrap Salvage Value						
		Ferrous Metal Value (1,940 tons)				$ (180,000)		$ (180,000)
		Non-Ferrous Value (50,750 lbs)				$ (53,000)		$ (53,000)
		Subtotal for all Scrap Salvage Value		$ -		$ (233,000)		$ (233,000)
		TOTAL NET COST		$ 3,096,000		$ 18,783,000		$ 33,950,000
		Owner Costs		$ 150,000		$ 950,000		$ 1,710,000
		Owner Contingency		$ 150,000		$ 950,000		$ 1,710,000
		TOTAL PROJECT COST (Including Owner Costs)		$ 3,396,000		$ 20,683,000		$ 37,370,000
A		Annual RIP Costs						
A.1		Site Security		$ 303,000		$ 303,000		$ 303,000
	A1.1	2 Onsite 24/7 guards ($11 an hour)	$ 300,000		$ 300,000		$ 300,000	-
	A1.2	Utility costs to maintain the trailer utilities estimated at $250/month including, $100 for electric (if metered), $150 for communications (phone and radio)	$ 3,000		$ 3,000		$ 3,000	
A.2		Property Tax (to be provided by KCP&L)		$ -		$ -		$ -
A.3		Utility Costs (to be provided by KCP&L)		$ -		$ -		$ -
A.4		Facility Inspection/Environmental Permit Costs		$ 50,000		$ 50,000		$ 75,000
A.5		Maintenance Costs (to be provided by KCP&L)		$ -		$ -		$ -
		Total Annual RIP Costs		$ 353,000		$ 353,000		$ 378,000

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FULL DEMOLITION

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KCP&L Sibley Generating Station
Full Demolition Cost Estimate Summary

Item	Sub Item	Description	Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
1		**General Conditions**				
1.1		Mobilization and De-Mobilization		$ 185,000		$ 185,000
1.2		Erosion Controls		$ 61,000		$ 61,000
1.3		Mechanical System Isolation		$ 10,000		$ 50,000
1.4		Electrical System Isolation/Reconfiguration		$ 129,000		$ 129,000
	1.4.1	Three drops to trailers	$ 129,000		$ 129,000	
	1.4.2	Remove transformers for switchyard isolation purposes (cost/credit offset)	$ -		$ -	
1.5		IT & Telecommunications Isolation or Re-Routing		$ 60,000		$ 60,000
	1.5.1	Decommissioning and re-provisioning of IT/OT network circuits and equipment	$ 32,000		$ 32,000	
	1.5.2	Fiber re-location, terminations and splicing	$ 28,000		$ 28,000	
1.6		Energy Delivery System Isolation		$ 563,000		$ 563,000
1.7		Full Removal of Intake & Discharge		$ 2,161,000		$ 2,161,000
	1.7.1	Install Coffer Dam	$ 1,275,000		$ 1,275,000	
	1.7.2	Bulkhead Piping	$ 170,000		$ 170,000	
	1.7.3	Demo Structure	$ 680,000		$ 680,000	
	1.7.4	Flowfill	$ 36,000		$ 36,000	
		Subtotal for General Conditions Costs		**$ 3,169,000**		**$ 3,209,000**
2		**Decommissioning and Cleaning**				
2.1		Drain Boiler, Condenser, Feedwater Heater, Boiler Feed Pumps		$ 17,000		$ 17,000
2.2		Boiler, Precipitator & Ash System Cleaning		$ 210,000		$ 210,000
	2.2.1	Labor & Equipment	$ 122,000		$ 122,000	
	2.2.2	Disposal	$ 88,000		$ 88,000	
2.3		Remove and Dispose all Debris, Trash & Combustibles		$ 96,000		$ 96,000
	2.3.1	Labor & Equipment	$ 45,000		$ 45,000	
	2.3.2	Disposal	$ 51,000		$ 51,000	
2.4		Lubricating & Hydraulic System Draining		$ 107,000		$ 107,000
	2.4.1	Labor & Equipment	$ 30,000		$ 30,000	
	2.4.2	Disposal	$ 77,000		$ 77,000	
		Subtotal for Decommissioning & Cleaning Costs		**$ 430,000**		**$ 430,000**

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KCP&L Sibley Generating Station
Full Demolition Cost Estimate Summary

Item	Sub Item	Description	Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
3		**Environmental Costs**				
3.1		Asbestos Removal and Disposal		$ 1,795,000		$ 5,708,000
	3.1.1	Scaffolding, Containment	$ 500,000		$ 500,000	
	3.1.2	Abate Asbestos Containing Materials	$ 1,295,000		$ 1,295,000	
	3.1.3	Galbestos Siding Disposal as PCB-containing (>50 ppm, but < 500 ppm)			$ 1,100,000	
	3.1.4	ACM Boiler Internals Abatement			$ 2,813,000	
3.2		PCB Building Materials Abatement		$ 562,000		$ 562,000
3.3		Universal Waste Removal and Disposal		$ 150,000		$ 150,000
	3.3.1	Labor & Equipment	$ 48,000		$ 48,000	
	3.3.2	Disposal	$ 102,000		$ 102,000	
3.4		Regulated Materials & Chemical Removal		$ 700,000		$ 700,000
	3.4.1	Labor & Equipment	$ 30,000		$ 30,000	
	3.4.2	Disposal	$ 670,000		$ 670,000	
3.5		Transformer Oil Disposal		$ 47,000		$ 47,000
	3.5.1	Labor & Equipment	$ 6,000		$ 6,000	
	3.5.2	Disposal	$ 41,000		$ 41,000	
3.6		PCB Impacted Concrete Removal		$ 29,000		$ 29,000
		Subtotal for all Environmental Costs		**$ 3,283,000**		**$ 7,196,000**
4		**Structure Demolition and Removal**				
4.1		Demolition of Units 1, 2, 3 Turbine Hall, Coal Handling, and Out Buildings		$ 4,830,000		$ 4,830,000
4.2		Chimney Demolition		$ 445,000		$ 8,500,000
4.3		Slab & Foundation Demolition				$ 619,000
4.4		Backfill from Borrow Source				$ 125,000
4.5		Asphalt Removal				$ 83,000
		Subtotal for Demolition and Removal		**$ 5,275,000**		**$ 14,157,000**

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KCP&L Sibley Generating Station
Full Demolition Cost Estimate Summary

Item	Sub Item	Description	Base Cost Option		Upper Cost Option	
			Subtask Cost	Task Subtotal Cost	Subtask Cost	Task Subtotal Cost
5		**Site Restoration**				
5.1		Rail Road Track Removal		$ 946,000		$ 946,000
5.2		Concrete Crushing		$ 390,000		$ 390,000
5.3		Backfill & Compaction		$ 410,000		$ 410,000
5.45		Fine Grading & Seeding				$ 360,000
		Subtotal for Site Restoration		**$ 1,746,000**		**$ 2,106,000**
		Subtotal Direct Costs		**$ 13,903,000**		**$ 27,098,000**
		Indirect Costs				
		Engineering/Permitting/Construction Management		$ 1,807,000		$ 3,523,000
		Bonds/Insurance		$ 278,000		$ 542,000
		Contingency		$ 2,781,000		$ 5,420,000
		Total Direct and Indirect Costs		**$ 18,769,000**		**$ 36,583,000**
		Scrap Salvage Quantity and Value				
		Ferrous Metals Quantity (29,000 tons)		$ (1,050,000)		$ (1,050,000)
		Non-Ferrous Quantity (2,265,000 lbs)		$ (1,740,000)		$ (1,740,000)
		Subtotal for all Scrap Salvage Value - SUM OF Item Nos 6.2 and 6.4		$ (2,790,000)		$ (2,790,000)
		Tot Net Cost		**$ 15,979,000**		**$ 33,793,000**
		Owner Costs		$ 938,000		$ 1,829,000
		Owner Contingency		$ 938,000		$ 1,829,000
		TOTAL PROJECT COST (Including Owner Costs)		**$ 17,855,000**		**$ 37,451,000**

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CCR CLOSURE

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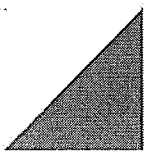


KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1038

Was the $34 to $58 million range of decommissioning costs for the Sibley Generating Station provided at this meeting? If no, what is the current expected range for decommissioning costs for the Sibley Generating Station? Please provide copies of all the management studies that considered these costs in evaluation of the decision to retire the Sibley Generating Station.

Response:

At the November 1, 2018 meeting, a range of $34 to $58 million was provide for the decommissioning (retirement and demolition) cost for the Sibley facility. The Burns & McDonnell report Sibley Station Retirement Scope and Cost Estimate is attached.

Information Provided By:
Richard Pearce, PE, Manager of Engineering –

ATTACHMENT:
Q1038 – Burns and McDonnell report - Sibley Station Retirement Scope and Cost Estimate
Q1038_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1039

Did any GMO officers approve the retirement of the Sibley Generating Station? If yes, provide copies of the documentation related to their approval with copies of the documentation relied upon to support their decision.

Response:

Please see the attached email string as well as the referenced attachment within the string.

Response by: Ronald Klote, Director Regulatory Affairs

Attachments:
Q1039_Officer Approval.msg
Q1039_Sibley Forced Outage - 9-18-18.docx
Q1039_Verification.pdf

Schallenberg, Robert

From: Darrin Ives
Sent: Friday, June 07, 2019 4:32 PM
To: Linda Nunn
Subject: FW: Sibley Forced Outage - 10-2-18

Internal Use Only

From: Kevin Bryant
Sent: Tuesday, November 13, 2018 4:12 PM
To: Duane Anstaett <Duane.Anstaett@kcpl.com>; Charles King <Charles.King@kcpl.com>; Chuck Caisley <Chuck.Caisley@kcpl.com>; Darrin Ives <Darrin.Ives@kcpl.com>; Ellen Fairchild <Ellen.Fairchild@kcpl.com>; Heather Humphrey <Heather.Humphrey@kcpl.com>; Kevin Noblet <Kevin.Noblet@kcpl.com>; Lori Wright <Lori.Wright@kcpl.com>; Maria Jenks <Maria.Jenks@kcpl.com>; Steve Busser <Steve.Busser@kcpl.com>; Terry Bassham <Terry.Bassham@kcpl.com>; Bruce Akin <Bruce.Akin@westarenergy.com>; Greg Greenwood <Greg.Greenwood@westarenergy.com>; Jeff Beasley <Jeff.Beasley@westarenergy.com>; Deb Grunst <Deb.Grunst@westarenergy.com>; Tony Somma <Tony.Somma@westarenergy.com>; Jerl Banning <Jerl.Banning@westarenergy.com>; John Bridson <John.Bridson@westarenergy.com>; Jeff Martin <Jeff.Martin@westarenergy.com>
Cc: Glen Brendel <Glen.Brendel@kcpl.com>; Mark Howell <Mark.Howell@kcpl.com>; Dominic Scardino <Dominic.Scardino@kcpl.com>; Robert Hollinsworth <Robert.Hollinsworth@kcpl.com>; Tony Schwartz <Tony.Schwartz@kcpl.com>; Mike White <Mike.White@kcpl.com>; Stan Lister <Stan.Lister@kcpl.com>; Douglas Mericle <Douglas.Mericle@westarenergy.com>; Troy Mussetter <Troy.Mussetter@westarenergy.com>; Terry Hedrick <Terry.Hedrick@kcpl.com>; Casey Bough <Casey.Bough@westarenergy.com>; Paul Von Hertsenberg <Paul.Von.Hertsenberg@westarenergy.com>; Lloyd Jackson <Lloyd.Jackson@westarenergy.com>; Burton Crawford <Burton.Crawford@kcpl.com>; Joe Fritton <Joe.Fritton@westarenergy.com>; Gail Bundren <Gail.Bundren@kcpl.com>
Subject: Re: Sibley Forced Outage - 10-2-18

Sounds good, DA.

KB

From: Duane Anstaett <duane.anstaett@kcpl.com>
Sent: Tuesday, November 13, 2018 12:07 PM
To: Kevin Bryant; Charles King; Chuck Caisley; Darrin Ives; Ellen Fairchild; Heather Humphrey; Kevin Noblet; Lori Wright; Maria Jenks; Steve Busser; Terry Bassham; Bruce Akin; Greg Greenwood; Jeff Beasley; Deb Grunst; Tony Somma; Jerl Banning; John Bridson; Jeff Martin
Cc: Glen Brendel; Mark Howell; Dominic Scardino; Robert Hollinsworth; Tony Schwartz; Mike White; Stan Lister; Douglas Mericle; Troy Mussetter; Terry Hedrick; Casey Bough; Paul Von Hertsenberg; Lloyd Jackson; Burton Crawford; Joe Fritton; Gail Bundren
Subject: Re: Sibley Forced Outage - 10-2-18

KB,

Thanks for the support here. Having heard nothing contrary we will move forward accordingly starting tomorrow. Any concern with this direction please just let us know.

Thanks and please have a safe day,
Duane Anstaett

From: Kevin Bryant <kevin.bryant@kcpl.com>
Sent: Saturday, November 10, 2018 12:39 PM
To: Duane Anstaett; Charles King; Chuck Caisley; Darrin Ives; Ellen Fairchild; Heather Humphrey; Kevin Noblet; Lori Wright; Maria Jenks; Steve Busser; Terry Bassham; Bruce Akin; Greg Greenwood; Jeff Beasley; Deb Grunst; Tony Somma; Jerl Banning; John Bridson; Jeff Martin
Cc: Glen Brendel; Mark Howell; Dominic Scardino; Robert Hollinsworth; Tony Schwartz; Mike White; Stan Lister; Douglas Mericle; Troy Mussetter; Terry Hedrick; Casey Bough; Paul Von Hertsenberg; Lloyd Jackson; Burton Crawford; Joe Fritton; Gail Bundren
Subject: Re: Sibley Forced Outage - 10-2-18

All,

With feedback from recent Management and Board meetings, I'd like to recommend moving forward with plans to cease burning coal at Sibley. Will you please let me know if you have any concerns with such action by end of day on Monday, November 12? Absent any notable feedback to suggest otherwise, we would like to beginning definitively moving forward on Tuesday, November 13.

Call me on the cell at (816) 810-3254 anytime with any questions or concerns. Thanks, in advance, for your consideration.

KB

From: Kevin Bryant <kevin.bryant@kcpl.com>
Sent: Wednesday, October 3, 2018 2:57 PM
To: Duane Anstaett; Charles King; Chuck Caisley; Darrin Ives; Ellen Fairchild; Heather Humphrey; Kevin Noblet; Lori Wright; Maria Jenks; Steve Busser; Terry Bassham; Bruce Akin; Greg Greenwood; Jeff Beasley; Deb Grunst; Tony Somma; Jerl Banning; John Bridson; Jeff Martin
Cc: Glen Brendel; Mark Howell; Dominic Scardino; Robert Hollinsworth; Tony Schwartz; Mike White; Stan Lister; Douglas Mericle; Troy Mussetter; Terry Hedrick; Casey Bough; Paul Von Hertsenberg; Lloyd Jackson; Burton Crawford; Joe Fritton; Gail Bundren
Subject: RE: Sibley Forced Outage - 10-2-18

Duane/Team,

Thanks for all of the work that went into such a comprehensive assessment of options that have yielded the recommendation you referenced. We will plan to review such recommendation at the CEO Staff meeting on October 15 in advance of a comparable review with the Evergy Board at the Operations Committee and full Board meeting later this month. Once we've reviewed with the Board, we can then circle back with the management team to review any feedback received and make a final decision.

KB

Kevin E. Bryant
KCP&L and Westar, Evergy Companies

Executive Vice President, Chief Operating Officer

O: (816) 556-2782 M: (816) 810-3254

kcpl.com
westarenergy.com
evergyinc.com
evergy.

From: Duane Anstaett
Sent: Tuesday, October 2, 2018 1:53 PM
To: Charles King <Charles.King@kcpl.com>; Chuck Caisley <Chuck.Caisley@kcpl.com>; Darrin Ives <Darrin.Ives@kcpl.com>; Ellen Fairchild <Ellen.Fairchild@kcpl.com>; Heather Humphrey <Heather.Humphrey@kcpl.com>; Kevin Bryant <Kevin.Bryant@kcpl.com>; Kevin Noblet <Kevin.Noblet@kcpl.com>; Lori Wright <Lori.Wright@kcpl.com>; Maria Jenks <Maria.Jenks@kcpl.com>; Steve Busser <Steve.Busser@kcpl.com>; Terry Bassham <Terry.Bassham@kcpl.com>; Bruce Akin <Bruce.Akin@westarenergy.com>; Greg Greenwood <Greg.Greenwood@westarenergy.com>; Jeff Beasley <Jeff.Beasley@westarenergy.com>; Deb Grunst <Deb.Grunst@westarenergy.com>; Tony Somma <Tony.Somma@westarenergy.com>; Jerl Banning <Jerl.Banning@westarenergy.com>; John Bridson <John.Bridson@westarenergy.com>; Jeff Martin <Jeff.Martin@westarenergy.com>
Cc: Glen Brendel <Glen.Brendel@kcpl.com>; Mark Howell <Mark.Howell@kcpl.com>; Dominic Scardino <Dominic.Scardino@kcpl.com>; Robert Hollinsworth <Robert.Hollinsworth@kcpl.com>; Tony Schwartz <Tony.Schwartz@kcpl.com>; Mike White <Mike.White@kcpl.com>; Stan Lister <Stan.Lister@kcpl.com>; Douglas Mericle <Douglas.Mericle@westarenergy.com>; Troy Mussetter <Troy.Mussetter@westarenergy.com>; Terry Hedrick <Terry.Hedrick@kcpl.com>; Casey Bough <Casey.Bough@westarenergy.com>; Paul Von Hertsenberg <Paul.Von.Hertsenberg@westarenergy.com>; Lloyd Jackson <Lloyd.Jackson@westarenergy.com>; Burton Crawford <Burton.Crawford@kcpl.com>; Joe Fritton <Joe.Fritton@westarenergy.com>; Gail Bundren <Gail.Bundren@kcpl.com>
Subject: FW: Sibley Forced Outage - 10-2-18

Good afternoon,

This email is to let the Evergy officer team know the direction being taken following a turbine trip due to vibration on Sibley Unit 3. Following a comprehensive evaluation of options we have determined the safest and most economical solution is to cease burning coal at the station and to move the remaining coal currently on the ground to Iatan. There is much more detail below and in the attached document.

I want to add that our team has done an excellent job of working to land this plant closure on the spot and did a fantastic job working to identify alternatives to remedy this situation. Many thanks to the team. Any questions please let me know.

Thanks and please have a safe day,

Duane Anstaett, PE
Vice President, Generation Operations
KCP&L and Westar, Evergy Companies

(816) 654-1603 (Office)
Duane.Anstaett@kcpl.com

kcpl.com
westarenergy.com

evergyinc.com

From: Duane Anstaett
Sent: Tuesday, October 2, 2018 1:34 PM
To: Robert Hollinsworth <robert.hollinsworth@kcpl.com>; Darrin Ives <darrin.ives@kcpl.com>
Cc: Scott Hinkle <scott.hinkle@kcpl.com>; Ben Cerra <ben.cerra@kcpl.com>; Terry Thomas <terry.thomas@kcpl.com>; Kim Grogan <kim.grogan@kcpl.com>; Mike White <Mike.White@kcpl.com>; Richard Pearce <richard.pearce@kcpl.com>; John Bridson <John.Bridson@westarenergy.com>; Terry Hedrick <terry.hedrick@kcpl.com>; Kevin Bryant <kevin.bryant@kcpl.com>; Chuck Caisley <Chuck.Caisley@kcpl.com>
Subject: RE: Sibley Forced Outage - 10-2-18

Good afternoon,

This is follow up from our report on 9-18-2018 and our decision to open Sibley 3 to make determination on next steps with unit 3 and the plant following a turbine trip due to vibration. Upon inspection we have two options:

1. Repair Sibley Unit 3 at an estimated $2.21M assuming risk that repairing the rotor does not ensure unit runs without issue until year end.

2. Cease burning coal now instead of 12/31/18 and for an estimated cost of $1.25M move remaining coal currently on the ground to Iatan.

It is our intention to cease burning coal and move to decommissioning activities. Upon receipt of this email Robert Hollinsworth will contact Eric Peterson to notify SPP and will contact Randy Adams at Local 412. I will forward this email to the rest of the Evergy officer team.

Thanks and please have a safe day,

Duane Anstaett, PE
Vice President, Generation Operations
KCP&L and Westar, Evergy Companies

(816) 654-1603 (Office)
Duane.Anstaett@kcpl.com

kcpl.com
westarenergy.com
evergyinc.com

From: Duane Anstaett
Sent: Tuesday, September 18, 2018 4:59 PM
To: Robert Hollinsworth <robert.hollinsworth@kcpl.com>; Darrin Ives <darrin.ives@kcpl.com>
Cc: Scott Hinkle <scott.hinkle@kcpl.com>; Ben Cerra <ben.cerra@kcpl.com>; Terry Thomas <terry.thomas@kcpl.com>; Kim Grogan <kim.grogan@kcpl.com>; Mike White <Mike.White@kcpl.com>; Richard Pearce <richard.pearce@kcpl.com>; John Bridson <John.Bridson@westarenergy.com>; Terry Hedrick <terry.hedrick@kcpl.com>; Kevin Bryant <kevin.bryant@kcpl.com>
Subject: RE: Sibley Forced Outage - 9-18-18

Darrin,

Robert will review my edits in the attached and the notes below sending back any clarifications/edits he thinks are needed. Otherwise, this is the status and plan for Sibley 3. Summary below (details attached);

1. Unit tripped on turbine vibration on 9/5
2. Since the 9/5 trip
    a. Evaluated unit from external openings and the control systems failure data.
    b. Prepared comprehensive list of options and associated costs with the options including handling of coal.
3. Believe best option is to open unit for full evaluation of unit condition.
    a. Expected to take about two weeks and,
    b. Cost to open unit is expected to be $263k.
    c. Already working internally and with Siemens for resources to open unit and developing plan for potential repairs.
4. Expect to know full status of unit condition in about two weeks (ie early October).
    a. Option 1 of attached recommended - if unit condition allows then make minimal repairs to unit that allow safe operation. Avoid moving coal.
    b. Option 3D of attached recommended – if unit condition requires extensive repairs then retire unit now instead of 12/31/18 and move coal currently on the ground at Sibley.

Thanks and please have a safe day,

Duane Anstaett, PE
Vice President, Generation Operations
KCP&L and Westar, Evergy Companies

(816) 654-1603 (Office)
Duane.Anstaett@kcpl.com

kcpl.com
westarenergy.com
evergyinc.com

From: Robert Hollinsworth
Sent: Tuesday, September 18, 2018 4:16 PM
To: Duane Anstaett <Duane.Anstaett@kcpl.com>
Cc: Scott Hinkle <Scott.Hinkle@kcpl.com>; Ben Cerra <Ben.Cerra@kcpl.com>; Terry Thomas <Terry.Thomas@kcpl.com>; Kim Grogan <Kim.Grogan@kcpl.com>; Mike White <Mike.White@kcpl.com>; Richard Pearce <Richard.Pearce@kcpl.com>; Robert Hollinsworth <Robert.Hollinsworth@kcpl.com>
Subject: Sibley Forced Outage - 9-18-18

Duane,

See attached updated information and options on Sibley 3 Forced Outage. Please let me know if you have any questions.

Thanks,

Robert Hollinsworth | Plant Manager | KCPL – Montrose and Sibley Stations | c: 660-441-2375 | robert.hollinsworth@kcpl.com

KCP&L

To: Duane Anstaett

Subject: Sibley Forced Outage

Date: September 18, 2018

Sibley Unit 3 Outage Summary

Sibley Unit 3 tripped on turbine vibration September 5th, 2018 at approximately 01:22. LP Bearing vibration measured up to 17.3 mils. Following the trip, it was decided to cool the unit and open LP Manways and Hotwell to inspect. On September 6th at 14:00 the turbine was visually inspected and L-0 LP blading was found to have damage.

Sibley LP History

On January 17th, 2017 the L-1 row in the LP had a blade failure. At the time of the failure a spare LP Rotor was onsite stored on the turbine deck. The spare rotor was obtained in 1984 after another LP Rotor Failure. The spare LP Rotor had previously been installed in the unit from ~2001-2008. The spare rotor was pulled in 2008 and sent to Siemens to make repairs for future use. It was decided in 2017 to swap the failed rotor for the spare. The spare was NDE'ed by Siemens onsite in 2017 with no indications found. Only item of note was rust present which was blasted prior to installation. The spare rotor operated from March 23rd, 2017 to the present time.

Options

Sibley 3 is scheduled to cease burning coal by December 31st, 2018. Plans were in place to fulfill coal contracts and place the unit in reliability market status by October 1st, 2018. The unit would remain in reliability market status until December. In December the unit would be started to burn the remainder of the coal onsite prior to decommissioning.

With the future of Sibley, we believe we have 3 viable options:

- Option 1: Open the LP to determine full extent of damage and perform minimal repairs to get the machine back to a safe operational state
- Option 2: Repair the LP Rotor fully as well as other damage caused by the hard trip
- Option 3: Do not repair the LP Rotor and proceed with decommissioning efforts ahead of schedule

Option 1

- To access the damage in the turbine we would need to open up the LP. The cost of only opening the LP is $263k
- It would take ~14 days from the time we issued a PO to have the LP opened for inspection
- Depending on the failure up to 20% of the LP blades could be removed to get the machine back operational
- Additional minor repairs would need to be made to damaged blades.
- The machine would need to be derated up to 20% if the damaged blades are removed
- Cost of inspecting would be charged to our maintenance accrual account
- Other Outage work caused by the hard trip expected to cost ~$200k

Option 2

- In 2017 we had a failure with similar signature and it cost ~$1.7M for repairs using a spare rotor
- We do not have a ready spare so we would need to purchase L-0 blades, repair stationary blade rings, and most likely replace L-1 blades. Estimated cost ~$2.5M
- Outage duration to make these repairs would be ~10 weeks from the decision to proceed
- Other Outage work caused by the hard trip expected to cost ~$200k
- If we replace the blades on the LP this cost would be capital

Option 3

- We currently have ~87,424 tons of coal on the ground (about 20 days)
    - 1 train is onsite with 72 cars still loaded. We are working with Fuels to get this train moved to Lake Road.
        - We cannot leave the cars loaded for more than 14 days according to our policy
        - The only two plants that can accommodate bottom dump cars in our fleet is Sibley and Lake Road.
        - With Sibley and Lake Road being GMO plants, we can make these moves somewhat seamless
        - Cost to move this train from Sibley to Lake Road is ~$160k
    - Options to move remainder of the coal onsite
        - A) We could load 7 trains and move to Lake Road
            - ~Cost for rail transportation is ~$1.05M
            - Would need to work with Lake Road to ensure they can handle the influx of inventory given current pile
        - B) We could truck remainder of coal to Lake Road
            - ~Cost for trucking is $1.75- $1.9M
            - Road damage potential for 3500+ trucks
        - C) We could truck remainder of coal to Hawthorn
            - ~Cost for trucking is $611-$874k
            - We would need to work with legal/regulatory/accounting
            - Road damage potential for 3500+ trucks
            - Resale would be at a cost of $360k
            - Total cost ~ $972k - $1.2M
            - Could increase property taxes by ~$50k
        - D) We could utilize a rotary dump train and move coal to Iatan
            - ~Cost for rail Transportation ~$560 – 700kk
            - We would need to get a train from storage
            - We would need to work with legal/regulatory/accounting
            - Resale would be at a cost of $470k
            - Total cost ~ $1.03 –1.2M
            - Could increase property taxes by ~$50k
    - Could move to Landfill
        - Would need to get approval
        - Would need to verify landfill capacity, could potentially need to expand landfill

- We would need to work with Accounting and Regulatory on how to charge the cost
    - 501 Fuel Adjustment Clause (KCPL vs GMO?) vs NFOM

Other

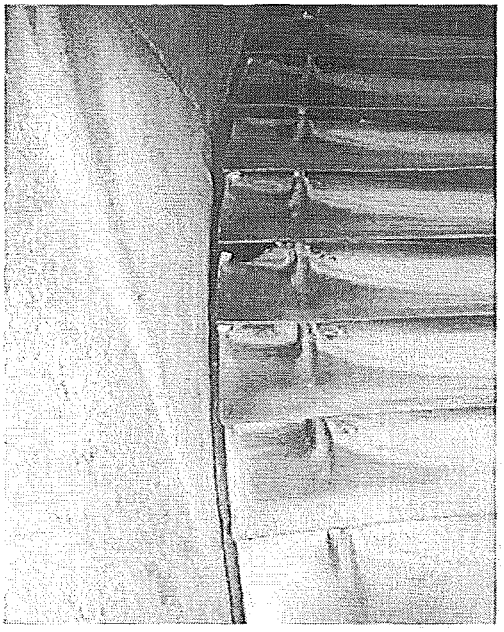
- Is burning coal in Sibley 2 an Option?
    - We do not believe so
        - Sibley 2 burns ~700 ton of coal a day at full load
            - This would require 124 days of full load operation
        - Sibley 2 has not been online since September 15, 2016
        - Sibley 2 experienced a extraction line failure which caused extensive boiler contamination September 15, 2016
        - The boiler was chemical cleaned but has not been used for generation post Chemical Clean
        - Sibley 2 is used for aux steam for Sibley 3 startups. Normal operating pressure for Sibley 2 is 1600 psi but during startups its only raised to 600-800 psi
        - Contractual issues with schedule change

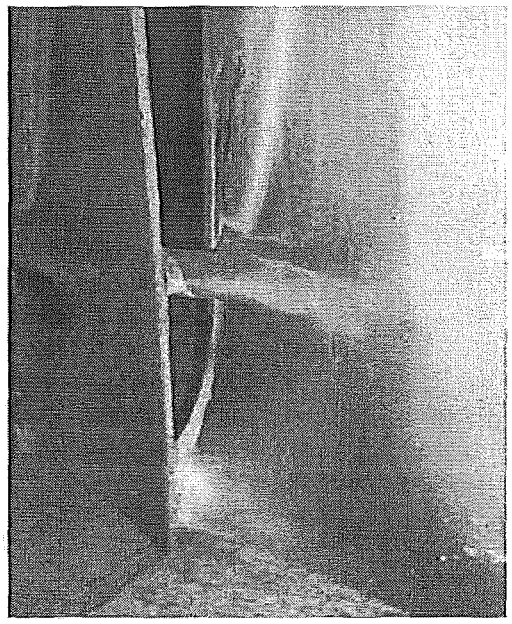
- Current Workforce
    - Boiler Ops – 28 (including PA's and Facilitator)
    - Fuel Ops – 15
    - Maintenance 16
    - Management – 8
    - Options
        - Start Decommissioning work charged to 10800
        - Force Resource Share
        - Release maintenance personnel to preference list locations

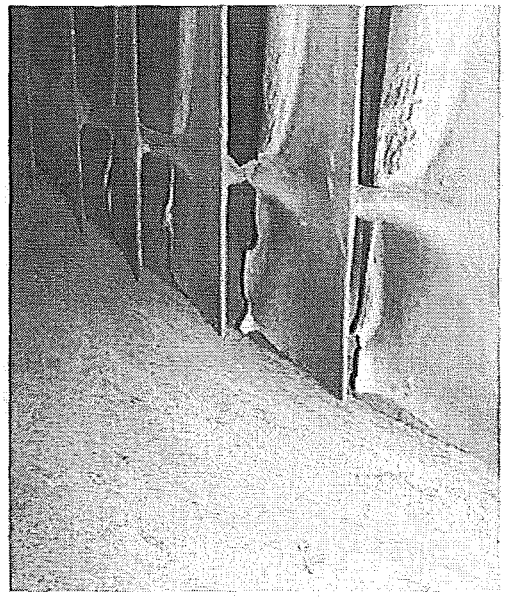
Recommendations

It is recommended by plant operations and engineering support to perform Option 1 to evaluate damage in the turbine. If a temporary repair can be made it would be the least cost option. If the total cost of turbine open/close and repair exceeds estimate of ~$700k then we would recommend moving to Option 3 (D) and move the remaining coal to Iatan Generating Station via estimated 7 trains.

Current Photos:







KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1040

Did the GMO Board of Directors approve the retirement of the Sibley Generating Station? If yes, provide copies of the documentation related to their approval with copies of the documentation relied upon to support their decision.

Response:

The Board of Directors was not asked to approve the retirement of the Sibley Generating Station; however they were briefed on the status at their October 29-30, 2018 meeting.

Response by: Ronald Klote, Director Regulatory Affairs

Attachment: Q1040_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1041

Did any Great Plains/Evergy officers approve the retirement of the Sibley Generating Station? If yes, provide copies of the documentation related to their approval with copies of the documentation relied upon to support their decision.

Response:

Please see the response to data request 1039 in this case.

Response by: Ronald Klote, Director Regulatory Affairs

Attachment: Q1041_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1043

On what date did GMO first inform the Staff of the Public Service Commission that GMO had retired the Sibley units?

Response:
The planned retirement by December 31, 2018, was announced in a press release in June of 2017.

On September 6, 2018, the Company reported in EFIS that Sibley 3 took a forced outage for high vibration on turbine at approximately 1:31 a.m. on September 5, 2018.

On September 12, 2018, the Company updated in EFIS that the estimated repair costs will exceed $200k, but the cause and ETR were not known at that time.

The Board of Directors was not asked to approve the retirement of the Sibley Generating Station; however they were briefed on the status at their October 29-30, 2018 meeting.

A presentation was made to the Commission Staff and OPC on November 1, 2018 (see presentation attached).

On December 12, 2018 an email was sent to Dan Beck of the MPSC Staff saying that the Company had decided not to repair the turbine. See the response to data request 8522 in this case for a copy of the email to Mr. Beck.

Response by: Ronald Klote, Director Regulatory Affairs

Attachment:
Q1043_11012018 Plant Retirements - presented to Missouri staff and OPC.pptx
Q1043_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1046

GMO witness Darren Ives refers to the retirement of the Sibley units being "driven by economics" on page 11 of his rebuttal testimony in this case. On what date prior to the November 2018 retirement of the Sibley units did GMO decide that the retirement was economically justified?

Response:

The November 2018 retirement at Sibley was regarding Units 2 and 3.. Sibley Unit 1 had been previously retired in June, 2017 due to a safety related boiler issue. Beginning with the 2009 GMO IRP, Sibley Units 1 and 2 were evaluated with respect to net present value revenue requirement (NPVRR). Beginning with the 2012 GMO IRP, Sibley Units 1, 2, and 3 were evaluated with respect to net present value revenue requirement (NPVRR). Each year after 2012, the three Sibley units were evaluated in the annual IRP filings. In 2017, the Preferred Plan included retiring Sibley Units 2 and 3 by 2019. As stated above, Sibley Unit 1 was retired in June, 2017 due to a safety related boiler issue.

Information Provided By:
Laura Becker, Manager, ERM

Attachment: Q1046_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190530
Date of Response: 6/19/2019

Question:1047

When did GMO first begin to consider whether the November 2018 retirement was economically justified?

Response:
The November 2018 retirement at Sibley was regarding Units 2 and 3. Sibley Unit 1 had been previously retired in June, 2017 due to a safety related boiler issue. Beginning with the 2009 GMO IRP, Sibley Units 1 and 2 were evaluated with respect to net present value revenue requirement (NPVRR). Beginning with the 2012 GMO IRP, Sibley Units 1, 2, and 3 were evaluated with respect to net present value revenue requirement (NPVRR). Each year after 2012 the three Sibley units were evaluated in the annual IRP updates and in the 2015 Triennial IRP filings. In 2017 the Preferred Plan included retiring Sibley Units 2 and 3 by 2019. As stated above, Sibley Unit 1 was retired in June, 2017 due to a safety related boiler issue.

Information Provided By:
Laura Becker, Manager, ERM

Attachment: Q1047_Verification.pdf

KCPL GMO
Case Name: 2019 Sibley Accounting Order Request/Complaint
Case Number: EC-2019-0200

Response to Schallenberg Bob Interrogatories - OPC_20190604
Date of Response: 6/24/2019

Question:1052

Did GMO consider the timing of the retirement of the Sibley Generation Station in its decision as to when GMO would file ER-2018-0146? If yes, please provide copies of all the documentation created from the consideration of Sibley retirement and the rate case operation of law date.

Response:

No. The timing of the filing of Case Nos. ER-2018-0145 (KCP&L) and -0146 (GMO) was driven by (1) the company's desire to reflect the Tax Cuts and Jobs Act of 2017 in customer rates, (2) the company's desire to reflect in customer rates efficiencies resulting from the merger of Great Plains Energy Incorporated and Westar Energy, Inc., and (3) the company's expected completion and placement in service of its new customer billing system.

Attachment: Q1052_Verification.pdf