Application of SOUTHERN CALIFORNIA GAS)COMPANY for authority to update its gas revenue)requirement and base rates)effective January 1, 2019 (U 904-G))

Application No. 17-10-008 Exhibit No.: (SCG-19-WP-R)

REVISED WORKPAPERS TO PREPARED DIRECT TESTIMONY OF MICHAEL H. BALDWIN

ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

DECEMBER 2017



2019 General Rate Case - REVISED INDEX OF WORKPAPERS

Exhibit SCG-19-WP-R - CS - OFFICE OPERATIONS

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Southern California Gas Company 2019 GRC - REVISED

Overall Summary For Exhibit No. SCG-19-WP-R

	Area: CS - OFFIC	Area: CS - OFFICE OPERATIONS					
	Witness: Michael H.	Baldwin					
		In 2016 \$ (000) In	curred Costs				
	Adjusted-Recorded	Adjusted-Recorded Adjusted-Forecast					
Description	2016	2017	2018	2019			
Non-Shared Services	87,019	87,093	85,976	84,297			
Shared Services	5,403	5,511	5,492	5,492			
Total	92,422	92,604	91,468	89,789			

Area: CS - OFFICE OPERATIONS

Witness: Michael H. Baldwin

Summary of Non-Shared Services Workpapers:

	In 2016 \$ (000) Incurred Costs				
	Adjusted- Recorded		Adjusted-Forecas	t	
Description	2016	2017	2018	2019	
A. CS - Office Operations	87,019	87,093	85,976	84,297	
Total	87,019	87,093	85,976	84,297	

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Workpaper:	VARIOUS

Summary for Category: A. CS - Office Operations

, , , ,							
F	Adjusted-Recorded	<u>In 2016\$ (000) Inc</u>	Adjusted-Forecast				
	2016	2017	2018	2019			
Labor	57,441	58,714	59,516	59,229			
Non-Labor	11,568	11,040	10,370				
NSE				10,257			
	18,006	17,335	16,086	14,807			
Total	87,015	87,089	85,972	84,293			
FTE	736.8	746.7	759.8	747.3			
Workpapers belonging t	o this Category:						
200000.000 CCC - Op	erations						
Labor	29,794	29,438	30,561	29,525			
Non-Labor	349	346	355	347			
NSE	0	0	0	0			
Total	30,143	29,784	30,916	29,872			
FTE	391.8	386.7	402.8	388.2			
200001.000 CCC - Su	pport						
Labor	4,760	5,522	5,753	5,742			
Non-Labor	3,022	3,066	3,254	3,282			
NSE	0	0	0	0			
Total	7,782	8,588	9,007	9,024			
FTE	55.6	63.9	66.0	65.8			
200002.000 Branch O	ffices						
Labor	8,989	8,795	8,795	9,322			
Non-Labor	2,602	2,559	2,559	2,689			
NSE	0	0	0	0			
Total	11,591	11,354	11,354	12,011			
FTE	129.1	124.7	124.7	125.7			
200003.000 Billing Se	ervices						
Labor	6,632	6,567	6,083	6,216			
Non-Labor	335	49	48	48			
NSE	0	0	0	0			
Total	6,967	6,616	6,131	6,264			
FTE	73.8	72.9	69.2	69.1			
200004.000 Credit an	d Collections						
Labor	2,966	3,003	2,845	2,845			
Non-Labor	1,255	1,255	1,255	1,255			
NSE	0	0	4	0			
Total	4,221	4,258	4,104	4,100			
FTE	36.1	36.5	34.1	34.5			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Workpaper:	VARIOUS

Г		In 2016\$ (000) Incu	rred Costs	
	Adjusted-Recorded		Adjusted-Forecast	
	2016	2017	2018	2019
200004.001 Credit an	d Collections Postage			
Labor	0	0	0	0
Non-Labor	0	0	0	0
NSE	995	995	995	995
Total	995	995	995	995
FTE	0.0	0.0	0.0	0.0
OO005.000 Remittan	ce Processing			
Labor	1,579	1,681	1,681	1,681
Non-Labor	3,349	3,121	2,534	2,313
NSE	0	0	0	0
Total	4,928	4,802	4,215	3,994
FTE	20.6	21.8	21.8	21.8
OO005.001 Remittan	ce Processing Postage			
Labor	0	0	0	0
Non-Labor	0	0	0	0
NSE	17,011	16,340	15,087	13,812
Total	17,011	16,340	15,087	13,812
FTE	0.0	0.0	0.0	0.0
OO006.000 Custome	r Service Other Office Ops an	d Technology		
Labor	1,909	2,783	2,873	2,973
Non-Labor	155	221	206	206
NSE	0	0	0	0
Total	2,064	3,004	3,079	3,179
FTE	19.9	28.7	29.7	30.7
OO007.000 Measurer	nent Data Ops (MDO)			
Labor	812	925	925	925
Non-Labor	501	423	159	117
NSE	0	0	0	0
Total	1,313	1,348	1,084	1,042
FTE	9.9	11.5	11.5	11.5

Beginning of Workpaper 200000.000 - CCC - Operations

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

Activity Description:

Labor and non-labor costs associated with the Customer Contact Center (CCC) Operations. CCC expenses cover the costs of answering customer telephone calls related to Gas Leaks, Service Orders, and Billing and Payments; responding to incoming email from customers; responding to inquiries from socalgas.com website and My Account; processing faxed fumigation orders; and, responding to other customer account related inquiries.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project CCC Operations O&M costs. 2016 Base Year customer contact volumes reflect customer adoption of self-service options resulting from SoCalGas' capital investments and continuous improvement efforts for IVR, web and mobile options. The forecast was built using call center workforce management software and based on projected call volume, level of service (LOS), average handle time (AHT), agent occupancy and shrinkage.

Non-Labor - Base YR Rec

For the CCC Operations non-labor category, a base year recorded forecast was used. These non-labor expenses primarily consist of office supplies, office furniture, headsets and travel expenses. (Communications and annual software maintenance and Telco are captured under the CCC-Support Non-Labor category).

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

	In 2016\$ (000) Incurred Costs								
		Adju	isted-Recor	ded		Ad	Adjusted-Forecast		
Years	2012	2013	2014	2015	2016	2017	2018	2019	
Labor	34,380	33,124	31,504	30,870	29,794	29,439	30,562	29,526	
Non-Labor	379	352	408	328	349	345	354	346	
NSE	0	0	0	0	0	0	0	0	
Total	34,758	33,476	31,913	31,198	30,143	29,784	30,916	29,872	
FTE	460.2	442.9	419.8	410.4	391.8	386.6	402.7	388.1	

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast	t Method	Bas	se Foreca	st	Forecast Adjustments			Adjusted-Forecast		
Years	5	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	29,794	29,794	29,794	-356	767	-269	29,438	30,561	29,525
Non-Labor	Base YR Rec	349	349	349	-3	6	-2	346	355	347
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Tota	I	30,143	30,143	30,143	-359	773	-271	29,784	30,916	29,872
FTE	Base YR Rec	391.8	391.8	391.8	-5.1	11.0	-3.6	386.7	402.8	388.2

Forecast Adjustment Details:

Forecast Adjust	iment Detail	S:						
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Other		47	0	0	47	0.5	1-Sided Adj	TNGUYEN20170310084413777
Explanation:	-			•		•	after temporar ervice Represe	y deployment to mitigate ntative.
2017 FOF-Ongo	bing	-961	-7	0	-968	-13.2	1-Sided Adj	TNGUYEN20161205090301460
Explanation:						•		tive. Reduction in AHT by ng from scripts.
2017 FOF-Ongo	bing	248	2	0	250	3.4	1-Sided Adj	TNGUYEN20161205090623227
Explanation:			•			•	er 2017. Enable by 2.6 seconds	e CSR on live calls to enroll
2017 FOF-Ongo	bing	-713	-5	0	-718	-9.8	1-Sided Adj	TNGUYEN20170310101054573
Explanation:		32,350 red	duction in	call volu		•		tive. Reduce CSR call ionality to the IVR and
2017 Other		102	1	0	103	1.4	1-Sided Adj	TNGUYEN20170310102031330
Explanation:	LOS - Adjı	ustment in	labor to in	ncrease	in CSR LO	S from 53	3.5% in 2016 to	54% in 2017.
2017 Other		-68	0	0	-68	-0.5	1-Sided Adj	TNGUYEN20170310084652013
Explanation:	Support M	anager (in 3k in non-l	Support) abor and	. 2016 E 0.5 FTE	Base year i s). An adju	numbers r stment of	eflect 6 months	ow under the Operations for this position (\$68k in 0.3k non-labor and -0.5 FTEs
2017 Other		-76	-1	0	-77	-0.8	1-Sided Adj	TNGUYEN20170310085015547

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE OPERATIONS Michael H. Baldwin A. CS - Office Operations 1. CCC - Operations 200000.000 - CCC - Operations							
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID
Explanation:	months for	this posi	ition (\$76k	in Labo	r, \$0.4k in	non-labor a	and 0.82 FTEs)	ear numbers reflect 10). An adjustment of -\$76k sition in forecast
2017 Other		192	1	0	193	2.0	1-Sided Adj	TNGUYEN20170310085309080
Explanation:	Adjustmer positions t		•	•			s include three	CCC Operations supervisor
2017 Other		144	1	0	145	2.0	1-Sided Adj	TNGUYEN20170310102320063
Explanation:	Meter Gro	wth - Incr	ease in C	SR Call	volume bas	sed on met	ter growth for 2	017 is 28,696 calls.
2017 RAMP Inc	remental	721	5	0	726	9.9	1-Sided Adj	TNGUYEN20170310135748300
Explanation:	RAMP (Safety) - Program to update customer contact information - this mitigation would improve facility access processes supporting leakage survey and inspection of aboveground pipeline for Customer Service Field. The cost is to provide additional time for CSR to collect/verify e-mail addresses and mobile phone numbers from customers when handling all types of live calls. Implemented July 2017. Increase in overall AHT of 7.5 seconds.						oveground pipeline for collect/verify e-mail	
2017 RAMP Inc	remental	8	0	0	8	0.0	1-Sided Adj	TNGUYEN20170511095735020
Explanation:				-	•		segment for ha	andling Emergency Orders 2017
2017 Total		-356	-3	0	-359	-5.1		
2018 Other		47	0	0	47	0.5	1-Sided Adj	TNGUYEN20170310084506587
Explanation:	-			•		•	after temporar ervice Represe	y deployment to mitigate entative.
2018 FOF-Ongo	bing	-1,119	-8	0	-1,127	-15.3	1-Sided Adj	TNGUYEN20161205090351973
Explanation:		eliminat	ing unnec	essary p		•		ative. Reduction in AHT by the OnLineHelp tool so
2018 FOF-Ongo	bing	994	7	0	1,001	13.6	1-Sided Adj	TNGUYEN20161205090655837
Explanation:	-		-		-	-	er 2017. Enable by 10 seconds	e CSR on live calls to enroll
2018 Other		1	0	0	1	0.0	1-Sided Adj	TNGUYEN20161205090810147
Explanation:	AM - CSR	Labor for	r AMI Traii	ning				

Area: Witness: Category: Category-Sub: Workpaper:	Mich A. C3 1. C0	ael H. Bal S - Office (CC - Opera	Operations	8				
Year Adj Gr	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID
2018 Other		-159	-1	0	-160	-2.2	1-Sided Adj	TNGUYEN20161205090918727
Explanation:	AM - CSF	R Labor de	crease for	r call volu	ume decrea	ase for AM	II.	
2018 Other		-68	0	0	-68	-0.5	1-Sided Adj	TNGUYEN20170310084708990
Explanation:	Support N Labor, \$0	Manager (i 9.3k in non	n Support). 2016 E 0.5 FTE	Base year	numbers re ustment of	eflect 6 months	ow under the Operations for this position (\$68k in 0.3k non-labor and -0.5
2018 Other		-76	-1	0	-77	-0.8	1-Sided Adj	TNGUYEN20170310085042517
Explanation:	months fo	or this pos	ition (\$76k	in Labor	r, \$0.4k in i	non-labor a	and 0.82 FTEs)	ear numbers reflect 10 . An adjustment of -\$76k sition in forecast
2018 Other		192	1	0	193	2.0	1-Sided Adj	TNGUYEN20170310085328300
Explanation:	-		-	-	6 Base Ye ve to ten m		s include three	CCC Operations supervisor
2018 Other		61	1	0	62	1.0	1-Sided Adj	TNGUYEN20170310085459740
Explanation:				-	n to suppor \$0.5K per		Dimas Site Man	nager will be added in 2018
2018 Other		-96	-1	0	-97	-1.0	1-Sided Adj	TNGUYEN20170310085741300
Explanation:	numbers	reflect 12	months fo	r this pos	sition (\$95.	7k in Labo		in 2018. 2016 Base year). An adjustment of -\$95.7k casted
2018 FOF-Ongo	oing	-1,022	-8	0	-1,030	-14.0	1-Sided Adj	TNGUYEN20170310101259057
Explanation:	volume -	189,134 re	eduction ir	ı call volu		2016 level l		ative. Reduce CSR call oving functionality to the IVR
2018 Other		205	2	0	207	3.0	1-Sided Adj	TNGUYEN20170310102114250
Explanation:	LOS - Ad	justment f	or labor to	increase	e in CSR L	OS from 5	3.5% in 2016 to	55% in 2018.
2018 Other		353	3	0	356	5.0	1-Sided Adj	TNGUYEN20170310102404037
Explanation:	Meter Gro	owth - Incr	ease in C	SR Call v	volume bas	sed on met	ter growth for 20	018 is 68,272 calls.

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE OPERATIONS Michael H. Baldwin A. CS - Office Operations 1. CCC - Operations 200000.000 - CCC - Operations							
Year Adj Gr	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2018 RAMP Inc	cremental	1,438	11	0	1,449	19.7	1-Sided Adj	TNGUYEN20170310151746770
Explanation:	RAMP - Program to update customer contact information - this mitigation would improve facility access processes supporting leakage survey and inspection of aboveground pipeline. The cost is to provide additional time for CSR to collect/verify e-mail addresses and mobile phone numbers from customers when handling all types of live calls. Implemented July 2017. Increase in overall AHT of 15 seconds.						nd pipeline. The cost is to ile phone numbers from	
2018 RAMP Inc	cremental	16	0	0	16	0.0	1-Sided Adj	TNGUYEN20170627142113110
Explanation:	RAMP - Ir	ncrease C	SR call vol	ume fo	^r Emergeno	cy calls 45	3 in 2018	
2018 Total		767	6	0	773	11.0		
2019 Other		47	0	0	47	0.5	1-Sided Adj	TNGUYEN20170310084519177
Explanation:	-			-		-	after temporary	y deployment to mitigate ntative.
2019 FOF-Ong	oing	-1,621	-12	0	-1,633	-22.2	1-Sided Adj	TNGUYEN20161205090422257
Explanation:	17 secs b	y eliminati	ng unnece	ssary p	hrasing fro	m scripts,		tive. Reduction in AHT by DnLineHelp tool so CSRs Is.
2019 FOF-Ong	oing	994	7	0	1,001	13.6	1-Sided Adj	TNGUYEN20161205090721180
Explanation:	-		-		-	-	er 2017. Enable by 10.3 seconds	CSR on live calls to enroll
2019 Other		1	0	0	1	0.0	1-Sided Adj	TNGUYEN20161205090818333
Explanation:	AM - CSF	R Labor for	· AMI Train	ing				
2019 Other		-160	-1	0	-161	-2.2	1-Sided Adj	TNGUYEN20161205090936203
Explanation:	AM - CSF	R Labor de	crease for	call vol	ume decrea	ase for AM	11.	
2019 Other		-68	0	0	-68	-0.5	1-Sided Adj	TNGUYEN20170310084726107
Explanation:	-68 0 ⁰ -68 -0.5 1-Sided Adj TNGUYEN20170310084726107 Reduction in 1 Special Services Manager. Responsibility of this area is now under the Operations Support Manager (in Support). 2016 Base year numbers reflect 6 months for this position (\$68k in Labor, \$0.3k in non-labor and 0.5 FTEs). An adjustment of -\$68k labor, -\$0.3k non-labor and -0.5 FTEs has been made to remove this position in forecast years.							

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 10 of 140

Area:		CS - OFFICE OPERATIONS Michael H. Baldwin								
Witness:		A. CS - Office Operations								
Category: Category-Sub:	A. CS - Office Operations 1. CCC - Operations									
Workpaper:		000.000 -		orations						
		000.000		crations						
Year Adj Gr	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID		
2019 Other		-76	-1	0	-77	-0.8	1-Sided Adj	TNGUYEN20170310085109500		
Explanation:	Reduction of 1 CCC Supervisor positon in November 2016. 2016 Base year numbers reflect 10 months for this position (\$76k in Labor, \$0.4k in non-labor and 0.82 FTEs). An adjustment of -\$76k labor, -\$0.4k non-labor and -0.82 FTEs has been made to remove this position in forecast years.							. An adjustment of -\$76k		
2019 Other		192	1	0	193	2.0	1-Sided Adj	TNGUYEN20170310085341237		
Explanation:	-		-	-	6 Base Yea ve to ten m		s include three	CCC Operations supervisor		
2019 Other		61	1	0	62	1.0	1-Sided Adj	TNGUYEN20170310085551347		
Explanation:		An Administrative Associate-4 position to support the San Dimas Site Manager will be added in 2018 at (\$60.9K annual) + avg non-labor of \$0.5K per FTE.								
2019 Other		-96	-1	0	-97	-1.0	1-Sided Adj	TNGUYEN20170310085800400		
Explanation:	Reduction of 1 Project Manager supporting the Lead Optimization project in 2018. 2016 Base year numbers reflect 12 months for this position (\$95.7k in Labor and 1.0 FTEs). An adjustment of -\$95.7k and 1 FTES has been made to remove this position in 2018 and 2019 forecasted years. "). An adjustment of -\$95.7k			
2019 FOF-Ongo	bing	-2,528	-18	0	-2,546	-34.6	1-Sided Adj	TNGUYEN20170310101505523		
Explanation:	volume -4	467,828 re	duction in	call volu	me from 20)16 level b	by adding/impro	Initiatives to reduce CSR call ving functionality to the IVR educe repeat calls.		
2019 Other		1,118	8	0	1,126	15.3	1-Sided Adj	TNGUYEN20170310102219547		
Explanation:	LOS - Ad	ljustment fo	or labor to	increase	in CSR LC	DS from 5	3.5% in 2019 to	60% in 2019.		
2019 Other		575	4	0	579	8.0	1-Sided Adj	TNGUYEN20170310102454020		
Explanation:	Meter Gro	owth - Incr	ease in C	SR Call v	olume bas	ed on me	ter growth for 20	019 is 110,871 calls.		
2019 FOF-Ongo	bing	212	2	0	214	2.9	1-Sided Adj	TNGUYEN20170310111823320		
Explanation:	orders. C the differe with the c	Currently, C ential to as order so CS d day of th	CCC gets i k for this i SR asks fo	this info f nfo on th or the pho	or a subse e rest of th one numbe	t of entere e entered r that the	ed orders only orders. Note: customer can b	at" phone # on all entered - so the incremental cost is "Reached at" is associated e contacted on the increase the overall AHT by		
2019 RAMP Inc	remental	1,438	11	0	1,449	19.7	1-Sided Adj	TNGUYEN20170310152534977		

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin

Area: Witness: Category: Category-Sub: Workpaper:	Mich A. C 1. C	OFFICE OF nael H. Baldv S - Office Op CC - Operati 0000.000 - C	vin perations ions					
Year Adj Gre	oup	Labor I	NLbr	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
Explanation:	facility ac is to prov	ccess proces	ses supp al time fo	orting lea r CSR to	akage sur collect/ve	vey and in rify e-mail	spection of abo addresses and	itigation would improve oveground pipeline. The cost I mobile phone numbers from Increase in overall AHT of 15
2019 FOF-Ongo	bing	-383	-3	0	-386	-5.3	1-Sided Adj	TNGUYEN20170507211132473
Explanation:	achieve t	hrough incre	easing pro	oductivity	by expan	iding the w	orkforce mana	initiative. Efficiencies gement process to include all value modules.
2019 RAMP Inc	remental	25	0	0	25	0.0	1-Sided Adj	TNGUYEN20170627142140353
Explanation:	RAMP - I	ncrease CS	R call vol	lume for I	Emergenc	y calls 683	3 in 2019	
2019 Total		-269	-2	0	-271	-3.6		

CS - OFFICE OPERATIONS
Michael H. Baldwin
A. CS - Office Operations
1. CCC - Operations
200000.000 - CCC - Operations

Determination of Adjusted-Recorded (Incurred Costs):

····,···	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	26,986	26,475	25,827	25,987	27,521
Non-Labor	368	348	410	327	425
NSE	0	0	0	0	0
Total	27,354	26,823	26,237	26,315	27,947
FTE	394.7	378.7	359.5	351.9	358.9
djustments (Nominal \$) **					
Labor	0	14	0	-52	-1,940
Non-Labor	0	0	0	0	-77
NSE	0	0	0	0	0
Total	0	14	0	-52	-2,017
FTE	0.0	0.2	0.0	-0.6	-23.8
Recorded-Adjusted (Nomin	al \$)				
Labor	26,986	26,489	25,827	25,936	25,581
Non-Labor	368	348	410	327	349
NSE	0	0	0	0	0
Total	27,354	26,837	26,237	26,263	25,930
FTE	394.7	378.9	359.5	351.3	335.1
acation & Sick (Nominal \$)				
Labor	4,320	4,402	4,215	4,196	4,213
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	4,320	4,402	4,215	4,196	4,213
FTE	65.5	64.0	60.3	59.0	56.7
Escalation to 2016\$					
Labor	3,074	2,233	1,462	738	0
Non-Labor	11	4	-1	1	0
NSE	0	0	0	0	0
Total	3,084	2,237	1,460	739	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Consta	ant 2016\$)				
Labor	34,380	33,124	31,504	30,870	29,794
Non-Labor	379	352	408	328	349
NSE	0	0	0	0	0
Total	34,758	33,476	31,913	31,198	30,143
FTE	460.2	442.9	419.8	410.3	391.8

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs							
	Years	2012	2013	2014	2015	2016	
Labor	-	0	14	0	-52	-1,940	
Non-Labor		0	0	0	0	-77	
NSE		0	0	0	0	0	
	Total	0	14	0	-52	-2,017	
FTE		0.0	0.2	0.0	-0.6	-23.8	

Detail of Adjustments to Recorded:

Year	<u>Adj</u>	Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adi Type</u>	<u>ReflD</u>
2012 Tota	al		0	0	0	0.0		
2013	Oth	ner	6	0	0	0.1	CCTR Transf From 2200-0413.000	KHART20161013115447457
Explanation: Transfer Call Center CSR labor from the Process Improvement organization 2200-0413 in WP 2HR003 to the Call Center workpaper group 2OO000. 111 CSRs at San Dimas (\$5,668 and 0.08 FTE to 2200-0407) and 166 CSRs at Redlands (\$8,341 and 0.12 FTE to 2200-0411) attended the 1.5 hour class to improve High Bill Investigation call handling skills.							8 FTE to 2200-0407) and	
2013	Oth	ner	8	0	0	0.1	CCTR Transf From 2200-0413.000	KHART20161013115535303
Explanati	ion:	Call Cent 166 CSR	ter workpa	aper grou ands (\$8,	ıp 200 ,341 an	000.	Process Improvement organization 2200 111 CSRs at San Dimas (\$5,668 and 0.08 2 FTE to 2200-0411) attended the 1.5 hou	8 FTE to 2200-0407) and
2013 Tota	al		14	0	0	0.2		
2014 Tota	al		0	0	0	0.0		
2015	Alis	50	-52	0	0	-0.6	1-Sided Adj	TNGUYEN20161203213104280
Explanati	ion:	Aliso Re	move Alis	o Canyo	n CCC	Mgt la	abor expenses charged to the CCC. 2015	
2015 Tota	al		-52	0	0	-0.6		
2016	Alis	50	-1,940	-77	0	23.8	1-Sided Adj	TNGUYEN20161203212621500
Explanati	ion:	200000.	.000 Rem	ove Aliso	o exper	nses		

Area:	CS - OFFICE OPER	ATIONS						
Witness:	Michael H. Baldwin	Aichael H. Baldwin						
Category:	A. CS - Office Opera	A. CS - Office Operations						
Category-Sub:	1. CCC - Operations	1. CCC - Operations						
Workpaper:	200000.000 - CCC	- Operations						
<u>Year Adj Grou</u>	ip <u>Labor NLbr</u>	<u>NSE</u> <u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>				
2016 Total	-1,940 -77	0 .23.8						

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 1

Ref ID: TNGUYEN20170310135748300

RAMP Chapter: SCG-2

Program Name: Update customer information for access purposes

Program Description: Update customer information for access purposes (supporting leak survey, above ground pipeline & inspection etc

Risk/Mitigation:

Risk: Employee Contractor, Contractor and Public Safety

Mitigation: Safety Communication and Public Awareness

Forecast CPUC Cost Estimates (\$000)				
	2017	<u>2018</u>	2019	
Low	962	962	962	
High	1,176	1,176	1,176	
Funding Source: CPUC-GRC				
Forecast Method: Zero-Based				
Work Type: Non-Mandated				
Work Type Citation: non mandated				

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 2

Ref ID: TNGUYEN20170511095735020

RAMP Chapter: SCG-2

Program Name: CSR Training

Program Description: CSR - 4 training includes a segment for handling Emergency Orders

Risk/Mitigation:

Risk: Formal Training

Mitigation: CSR - 4 training includes a segment for handling Emergency Orders

Forecast CPUC Cost Estimates (\$000)				
	<u>2017</u>	2018	2019	
Low	53	53	50	
High	69	69	69	
Funding Source: CPUC-GRC				
Forecast Method: Base Year				
Work Type: Non-Mandated				
Work Type Citation: CSR Training				

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 55

Explanation: used 2015 \$

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 3

Ref ID: TNGUYEN20170511143913317

RAMP Chapter: SCG-2

Program Name: CSR Training

Program Description: CSR - 4 training includes a segment for handling Emergency Orders - Instructor

Risk/Mitigation:

Risk: Employee, Contractor, Customer and Public Safety

Mitigation: 2.A.2

Forecast CPUC Cost Estimates (\$000)			
	2017	<u>2018</u>	2019
Low	7	7	7
High	9	9	9
Funding Source: CPUC-GRC			
Forecast Method: Base Year			
Work Type: Non-Mandated			
Work Type Citation: RAMP			

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 8

Explanation: used 2015 \$

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 4

Ref ID: TNGUYEN20170511144530677

RAMP Chapter: SCG-2

Program Name: CSR Training

Program Description: CSR - 2 includes a segment for understanding proper ergonomics'. - Student

Risk/Mitigation:

Risk: Employee, Contractor, Customer and Public Safety

Mitigation: 2.A.3

Forecast CPUC Cost Estimates (\$000)			
	2017	<u>2018</u>	2019
Low	1	1	1
High	2	2	2
Funding Source: CPUC-GRC			
Forecast Method: Base Year			
Work Type: Non-Mandated			
Work Type Citation: RAMP			

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 1

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 5

Ref ID: TNGUYEN20170511145057737

RAMP Chapter: SCG-2

Program Name: CSR Training

Program Description: CSR - 2 includes a segment for understanding proper ergonomics'. - Instructor

Risk/Mitigation:

Risk: Employee, Contractor, Customer and Public Saftey

Mitigation: CSR - 2 includes a segment for understanding proper ergonomics'. - Instructor

Forecast CPUC Cost Estimates (\$000	<u>))</u>		
	2017	2018	2019
Low	4	4	3
High	5	5	5
Funding Source: CPUC-GRC			
Forecast Method: Base Year			
Work Type: Non-Mandated			
Work Type Citation: RAMP			

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 4

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 6

Ref ID: TNGUYEN20170511150909333

RAMP Chapter: SCG-2

Program Name: Quality Observations of CSR

Program Description: QA employee's review call types to determine if CSR's are responding correctly.

Risk/Mitigation:

Risk: #6 Quality Assurance

Mitigation: Quality Observations of CSR

Forecast CPUC Cost Estimates (\$000)			
	2017	2018	<u>2019</u>
Low	21	21	21
High	26	26	26
Funding Source: CPUC-GRC			
Forecast Method: Base Year			
Work Type: Non-Mandated			
Work Type Citation: RAMP			

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 22

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 7

Ref ID: TNGUYEN20170512103338190

RAMP Chapter: SCG-2

Program Name: CCC - Dedicated Safety positon to support CCC

Program Description: The CCC has one employee dedicated to safety related issues for the two call center locations. Each Contact Center location also has two supervisors that specialize in safety related issues. There is a desire to form Safety Committee's at each of the two locations as well. The safety advisor is also responsible for training supervisors how to use the Safety Incident Management System (SIMS).

Risk/Mitigation:			
Risk: Safety committee			
Mitigation: CCC - Safety			
Forecast CPUC Cost Estimates (\$00	0)		
-orecasi or oo oost Estimates (300	<u>_2017</u>	2018	2019
Low	124	124	124
High	151	151	151
Funding Source: CPUC-GRC			
Forecast Method: Base Year			
Work Type: Non-Mandated			

Work Type Citation: RAMP

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 137

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. CCC - Operations
Workpaper:	200000.000 - CCC - Operations

RAMP Item # 8

Ref ID: TNGUYEN20170512104423827

RAMP Chapter: SCG-2

Program Name: Leak order processing

Program Description: A leak order will produce an emergency order. Training for handling an emergency order is handled in CSR - 4 training. Costs associated with A1-A3 leak orders are included, as well as Telco costs.

Risk/Mitigation:

Risk: #13 Leaks & RV Orders

Mitigation: Customer Contact Center and field response to reported gas leaks

Forecast CPUC Cost Estimates (\$000)									
	2017	<u>2018</u>	2019						
Low	762	770	777						
High	931	941	950						
Funding Source: CPUC-GRC									
Forecast Method: Base Year									
Work Type: Non-Mandated									
Work Type Citation: RAMP									

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 830

Supplemental Workpapers for Workpaper 200000.000

Customer Contact Center Operations 200000.000 - Call Volume Supplemental Workpaper 1

Workgroup 200000 - Customer Contact Center Operations Supplemental Call Volume Forecast	Workpaper 1-	1	
		recast	
	CSR	IVR	Total
2016 Transaction Volume	5,294,765	3,856,089	9,150,854
2016 Active Meters 2016 Calls Per Active Meter = Row 14/Row 16	5,700,917 0.93	5,700,917 0.68	5,700,917 1.61
2017	5 704 044	5 704 04 4	5 704 044
2017 Active Meters	5,731,814	5,731,814	5,731,814
Transaction volume with meter growth = Row 17 * Row 20 2017 CSR Calls Above Base Year for Meter Growth = Row 22 - Row 14	5,323,461	3,876,988	9,200,448
- Row 24 2017 CSR RAMP Calls Above Base Year for forecasted increase in	28,471		28,471
Emergency Calls	225		225
FOF Ideas	(132,350)	26,199	(106,151)
2017 Transaction Forecast = Row 22 + Row 27	5,191,111	3,903,187	9,094,297
2018 2018 Active Meters	5,774,426	5,774,426	5,774,426
Transaction volume with meter growth = Row 17 * Row 31 2018 CSR Calls Above Base Year for Meter Growth = Row 22 - Row 14	5,363,037	3,905,811	9,268,848
- Row 35 2018 CSR RAMP Calls Above Base Year for forecasted increase in	67,819		67,819
Emergency Calls	453		453
Advanced Meter Reductions	(29,407)		(29,407)
FOF Ideas	(189,134)	50,036	(139,098)
2018 Transaction Forecast = Row 33 + Row 37 + Row 39	5,144,496	3,955,847	9,100,343
2019 2019 Active Meters	5,820,293	5,820,293	5,820,293
Transaction volume with meter growth = Row 17 * Row 43 2019 CSR Calls Above Base Year for Meter Growth = Row 45 - Row 14	5,405,636	3,936,835	9,342,471
- Row 47 2019 CSR RAMP Calls Above Base Year for forecasted increase in	110,188		110,188
Emergency Calls	683		683
Advanced Meter Reductions	(29,679)		(29,679)
Self Service Reductions	(467,828)	75,054	(392,774)
2018 Transaction Forecast = Row 45 + Row 49 + Row 51	4,908,129	4,011,889	8,920,018

Customer Contact Center Operations 200000.000 - Labor Dollars Adjustments Supplemental Workpaper 2

Workgroup 200000 - Customer Contact Center Opera Labor Dollars Adjustments for CSR Call Volume Chan		1-2	
Calls Answered per CSR FTE 2016 CSR Calls Answered 2016 CSR FTEs Calls per FTE = Row 9/Row 10	5,294,765 <u>392</u> 13,524		
Dollars Based on 2016 Average Hourly Labor Rate Hours in Year 2017 Hours in Year 2018 & 2019			\$ 35 2080 2088
Year Description	Calls	FTES = Column C/13,524	Dollars = Column D * E13*E14 (2017) or E15 (2018 & 2019)
Meter Growth = Cell B23 CCC Operation 2017 200000.000 Supplemental Workpaper Meter Growth Related to RAMP = Cell B CCC Operations 200000.000	1-1 28,471	2.11	153,259
2017 Supplemental Workpaper 1-1 FOF Call Volume Reductions Cell B27 CCC Operations 200000.000	225	0.02	1,211
2017 Supplemental Workpaper 1-1 Meter Growth = Cell B34 CCC Operation	(132,350) ns	(9.80)	(713,440)
2018 200000.000 Supplemental Workpaper Meter Growth Related to RAMP = Cell B CCC Operations 200000.000		5.01	366,475
2018 Supplemental Workpaper 1-1 FOF Call Volume Reductions Cell B39 CCC Operations 200000.000	453	0.03	2,448
2018 Supplemental Workpaper 1-1 Decrease in Billing Calls due to Advance Meter Cell B37 CCC Operations	(189,134) ed	(13.99)	(1,022,389)
2018 2OO000.000 Supplemental Workpaper Meter Growth = Cell B46 CCC Operation	(/ /	(2.2)	(159,314)
2019 200000.000 Supplemental Workpaper Meter Growth Related to RAMP = Cell B CCC Operations 200000.000	1-1 110,188	8.15	595,427
2019 Supplemental Workpaper 1-1 FOF Call Volume Reductions Cell B51 CCC Operations 200000.000	683	0.05	3,691
2019 Supplemental Workpaper 1-1 Decrease in Billing Calls due to Advance	(467,828) ed	(34.6)	(2,528,015)
2019 Meter	(29,679)	(2.2)	(160,045)

Beginning of Workpaper 200001.000 - CCC - Support

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	2. CCC - Support
Workpaper:	200001.000 - CCC - Support

Activity Description:

Customer Contact Center (CCC) Support cost center activities include developing CSR call volume forecasts; scheduling part time CSRs; managing LOS real time performance; developing CCC technology strategy and collaborating with Information Technology to ensure the technology supports operations objectives; training and quality assurance; policy and procedures support; planning and analysis functions and clerical functions; responding to customer written request/inquiries; following up on all California Public Utilities Commission (CPUC) telephone referrals and informal and formal CPUC complaints; providing clerical support; conducting data and trend analysis, IVR and CSR telephone expenses; and annual technology expenses.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project CCC Support O&M costs. The base year is appropriate because 2016 represents the most recent recorded labor and non-labor costs. Adjustments for full year staffing and investments to support operational efficiency were added to the base year to represent forecasted expenses in the test year.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project CCC-Support O&M costs. Base year is appropriate because 2016 represents the most recent recorded labor and non-labor costs. Adjustments for full year staffing and investments to support operational efficiency were added to the base year to represent forecasted expenses in the test year. The non-labor primarily consists of annual software maintenance and Telecommunications costs.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

	In 2016\$ (000) Incurred Costs											
		Adju	isted-Recor	Ad	Adjusted-Forecast							
Years	2012	2012 2013 2014 2015 2016					2018	2019				
Labor	5,393	5,796	5,397	4,929	4,760	5,522	5,753	5,742				
Non-Labor	3,819	3,734	3,328	2,942	3,022	3,066	3,254	3,282				
NSE	0	0	0	0	0	0	0	0				
Total	9,213	9,530	8,725	7,871	7,782	8,588	9,007	9,024				
FTE	65.1	67.5	63.9	60.1	55.6	64.0	66.1	65.9				

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. CCC - Support
Workpaper:	200001.000 - CCC - Support

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs											
Forecas	t Method	hod Base Forecast			Forec	ast Adjust	tments	Adjusted-Forecast				
Years	s	2017	2017 2018 2019			2017 2018 2019			2018	2019		
Labor	Base YR Rec	4,760	4,760	4,760	762	993	982	5,522	5,753	5,742		
Non-Labor	Base YR Rec	3,022	3,022	3,022	44	232	260	3,066	3,254	3,282		
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0		
Tota	al	7,782	7,782	7,782	806	1,225	1,242	8,588	9,007	9,024		
FTE	Base YR Rec	55.6	55.6	55.6	8.3	10.4	10.2	63.9	66.0	65.8		

Forecast Adjustment Details:

<u>Year</u> <u>Adj G</u>	<u>oup</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Other		341	0	0	341	3.6	1-Sided Adj	TNGUYEN20170310102645193
Explanation:	mitigatic been ex	on, which req cluded from	uired a re GRC hist	eprioritiza orical re	ation of cor corded cos	npany res ts used in	ources. The lab preparation of	ort during the Aliso leak or provided for that effort has forecasts. In order to or TY2019 is needed.
2017 Other		0	-9	0	-9	0.0	1-Sided Adj	TNGUYEN20161205091432093
Explanation:		e in telecom						up telephone line that is no
2017 Other		0	1	0	1	0.0	1-Sided Adj	TNGUYEN20161205091545760
Explanation:		er Experienc or completec	-	•	for CCC s	Interactiv	e Voice Record	ing to send confirmation
2017 Other		0	47	0	47	0.0	1-Sided Adj	TNGUYEN20170310102929150
Explanation:	CSRs ca contract	an find need	ed inform	ation qui	ickly which	would im	prove their prod	s in OnLine Help, so the uctivity. There will be a /hour at 520 hours = \$46.8k
2017 Other		52	1	0	53	0.6	1-Sided Adj	TNGUYEN20170310103028897
Explanation:	-		•	•		•	erk training. Thi 6k average non-	s position will start in June -labor per FTE.
2017 Other		82	1	0	83	1.0	1-Sided Adj	TNGUYEN20170310103332440
Explanation:	2017. T 6 - mid-ı	his would br ange) labor,	ing the st \$1.2k no	affing to n-labor a	8 Special I and 1.0 FT	nvestigati E has bee	on clerks. An a n made to refle	4/7 will be added in June djustment of \$82.3k (Grade ct full year staffing levels in forecasted years.

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin

Area: Witness: Category: Category-Sub: Workpaper:	Michae A. CS - 2. CCC	H. Baldy Office O - Suppor	perations							
Year Adj G	<u>oup</u>	Labor	NLbr I	<u>ISE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID		
2017 Other		102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310103518150		
Explanation:	and	An adjus	tment of \$					er position (\$11.9k in Labor as been made to reflect full		
2017 Other		75	1	0	76	0.8	1-Sided Adj	TNGUYEN20170310103829960		
Explanation:		d 0.17 FT	Es). An ac					nent Advisor position (\$15k en made to reflect full year		
2017 Other		70	1	0	71	0.9	1-Sided Adj	TNGUYEN20170310103937920		
Explanation:		-						sition (\$10k in Labor and t full year staffing levels in		
2017 Other		11	0	0	11	0.1	1-Sided Adj	TNGUYEN20170310104222467		
Explanation:		15.2k in l	_abor and	0.9 FTE	Es), retired E	Dec 1. Ar		Specialty Services Manager \$10.5k and 0.01 FTE has		
2017 Other		29	0	0	29	0.3	1-Sided Adj	TNGUYEN20170310104907383		
Explanation:		-						\$40.9k in Labor and 0.63 year staffing levels in		
2017 Total		762	44	0	806	8.3				
2018 Other		341	0	0	341	3.6	1-Sided Adj	TNGUYEN20170310102707723		
Explanation:	mitigation, v been excluc	Some management employees in this workgroup provided customer support during the Aliso leak mitigation, which required a reprioritization of company resources. The labor provided for that effort has been excluded from GRC historical recorded costs used in preparation of forecasts. In order to adequately resume routine operations, \$341,000 over the forecast base for TY2019 is needed								

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 30 of 140

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE Michael H. Ba A. CS - Office 2. CCC - Supp 200001.000 -	Idwin Operations port	8						
<u>Year</u> <u>Adj Gr</u>	oup Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID		
2018 Other	0	12	0	12	0.0	1-Sided Adj	TNGUYEN20161205091449283		
Explanation:	Increase in telecor from an increase ir				o an incre	ease of a backu	p telephone line as a result		
2018 Other	0	1	0	1	0.0	1-Sided Adj	TNGUYEN20161205091553260		
Explanation:	Customer Experier emails for complet	-	•	for CCC s I	nteractiv	e Voice Record	ing to send confirmation		
2018 Other	102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310102819647		
Explanation:	technology implem	ented in 20 ce will be a	017 to ide	entify areas	to focus	on to improve C	s and Desktop Tagging SR performance and \$101.9K annual) + avg		
2018 Other	0	47	0	47	0.0	1-Sided Adj	TNGUYEN20170310102943887		
Explanation:	CSRs can find nee	ded inform tion for 6 m	ation qui	ckly, which	would im	prove their proc	in OnLine Help, so the luctivity. There will be a /hour at 520 hours = \$46.8k		
2018 Other	89	1	0	90	1.0	1-Sided Adj	TNGUYEN20170310103055197		
Explanation:	Training Specialist 2017. This positio	•	•	-		•	s position will start in June labor per FTE.		
2018 Other	85	1	0	86	0.8	1-Sided Adj	TNGUYEN20170310103206707		
Explanation:	Performance Advisor for Coach the Coach training for Management and Represented Employees. This position will support supervisor coaching to improve CSR productivity and Customer Experience. This position will be filled in March 2018 and will be an AD2 (\$101.9k annual labor) + avg non-labor of \$1.16k per FTE.								
2018 Other	165	2	0	167	2.0	1-Sided Adj	TNGUYEN20170310103358040		
Explanation:	2017. This would	bring the s or, \$1.2k nc	taffing to on-labor a	8 Special I and 1.0 FTE	nvestigat S has be	ion clerks. An a en made to refl	4/7 will be added in June adjustment of \$82.3k (Grade ect full year staffing levels in forecasted years.		
2018 Other	102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310103703250		

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 31 of 140

Area: Witness: Category: Category-Sub: Workpaper:	Micha A. CS 2. CC	DFFICE OP el H. Baldw - Office Op C - Support 01.000 - CC	in erations					
Year Adj Gro				NSE	Total	FTE	Adj_Type	RefID
Explanation:	2016 Base and 0.1 FTEs).	year numb	ers reflection of \$1	ct 1.25 r	months of (CCC Tech	nology Manage	er position (\$11.9k in Labor is been made to reflect full
2018 Other		75	1	0	76	0.8	1-Sided Adj	TNGUYEN20170310103841980
Explanation:	2016 Base year numbers reflect 2 months of CCC Performance Measurement Advisor position (\$15k in Labor and 0.17 FTEs). An adjustment of \$73.4k and 0.83 x FTE has been made to reflect full year staffing levels in forecast years.							
2018 Other		70	1	0	71	0.9	1-Sided Adj	TNGUYEN20170310103950077
Explanation:		-						osition (\$10k in Labor and ot full year staffing levels in
2018 Other		11	0	0	11	0.1	1-Sided Adj	TNGUYEN20170310104235133
Explanation:	2016 Base year numbers reflect 11 months of CCC Operations Support & Specialty Services Manager position (\$115.2k in Labor and 0.9 FTEs), retired Dec 1. An adjustment of \$10.5k and 0.01 FTE has been made to reflect full year staffing levels in forecast years.							
2018 Other		29	0	0	29	0.3	1-Sided Adj	TNGUYEN20170310104929953
Explanation:	2016 Base year numbers reflect 8 months of LOS Administrator position (\$40.9k in Labor and 0.63 FTEs). An adjustment of \$29k and 0.33 FTES has been made to reflect full year staffing levels in forecast years.							
2018 FOF-Ongo	bing	-76	-1	0	-77	-1.1	1-Sided Adj	TNGUYEN20170310105732523
Explanation:	FOF - Increase productivity for Clerical group by using formal Lean Six Sigma methods to optimize processes.							
2018 Other		0	25	0	25	0.0	1-Sided Adj	TNGUYEN20170310105957133
Explanation:	Annual ma	intenance f	ee for ne	w Desk	top tagging	g software	implemented in	n 2017.
2018 Other		0	51	0	51	0.0	1-Sided Adj	TNGUYEN20170310110031040
Explanation:	Annual ma 2017.	intenance f	ee for ne	w Intera	actions Ana	alytics (Sp	eech Analytics)	software implemented in

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 32 of 140

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE Michael H. Ba A. CS - Office 2. CCC - Sup 2OO001.000	aldwin 9 Operatior port	IS						
Year Adj Gr	oup Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID		
2018 Other	0	31	0	31	0.0	1-Sided Adj	TNGUYEN20170310110102880		
Explanation:	Annual maintenance fee for new WFM (Work Force Management) software implemented in 2017.								
2018 Other	0	60	0	60	0.0	1-Sided Adj	TNGUYEN20170310110250490		
Explanation:	Implementation of new SharePoint Online Help software.								
2018 Other	0	-3	0	-3	0.0	1-Sided Adj	TNGUYEN20170310110614920		
Explanation:	AM - Reduction in telco related to corrected bills.								
2018 RAMP Inc	remental 0	1	0	1	0.0	1-Sided Adj	TNGUYEN20170627142747357		
Explanation:	RAMP - Change in telco due to incremental Emergency Calls for RAMP.								
2018 Total	993	232	0	1,225	10.4				
2019 Other Explanation:	341 0 0 341 3.6 1-Sided Adj TNGUYEN20170310102721490 Some management employees in this workgroup provided customer support during the Aliso leak mitigation, which required a reprioritization of company resources. The labor provided for that effort has been excluded from GRC historical recorded costs used in preparation of forecasts. In order to adequately resume routine operations, \$341,000 over the forecast base for TY2019 is needed								
2019 Other	0	-19	0	-19	0.0	1-Sided Adj	TNGUYEN20161205091508320		
Explanation:	Decrease in telecommunication carrier costs due to a reduction of a backup telephone line that is no longer required as a result from reduction in call volume and AHT.								
2019 Other	102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310102852743		
Explanation:	A CCC Advisor position to support and manage the new Speech Analytics and Desktop Tagging technology implemented in 2017 to identify areas to focus on to improve CSR performance and customer experience will be added in 2017. This position will be an AD2 (\$101.9K annual) + avg non-labor of \$1.16K per FTE.								
2019 Other	89	1	0	90	1.0	1-Sided Adj	TNGUYEN20170310103114273		
Explanation:	Training Specialist for Billing and Special Investigation Clerk training. This position will start in June 2017. This position will be an SA5 (\$88.7k annual) + \$1.16k average non-labor per FTE.								
2019 Other	102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310103245993		
Explanation:	This position will s	upport sup	pervisor co	baching to i	improve C	SR productivity	Represented Employees. and Customer Experience. al labor) + avg non-labor of		

Area: Witness:		OFFICE OF el H. Baldw		NS				
Category:	A. CS - Office Operations							
Category-Sub:	2. CCC - Support							
Workpaper:	200001.000 - CCC - Support							
Year Adj Gro	oup	Labor M	<u>ILbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2019 Other		165	2	0	167	2.0	1-Sided Adj	TNGUYEN20170310103421660
Explanation:	Two Special Investigations Clerks to be handle escalated complaints/requests 24/7 will be added in June 2017. This would bring the staffing to 8 Special Investigation clerks. An adjustment of \$82.3k (Grade 6 - mid-range) labor, \$1.2k non-labor and 1.0 FTES has been made to reflect full year staffing levels in 2017 and \$164.6k in labor, \$2.3k non-labor and 2 FTEs in 2018 and 2019 forecasted years.							
2019 Other		102	1	0	103	1.0	1-Sided Adj	TNGUYEN20170310103715980
Explanation:	2016 Base and	year numb	pers refle	ct 1.25 ı	months of C	CC Tech	nology Manage	er position (\$11.9k in Labor
	0.1 FTEs). An adjustment of \$102.4k labor, \$1k non-labor and 0.9 FTES has been made to reflect full year staffing levels in forecast years.							
2019 Other		75	1	0	76	0.8	1-Sided Adj	TNGUYEN20170310103854640
Explanation:	2016 Base year numbers reflect 2 months of CCC Performance Measurement Advisor position (\$15k in Labor and 0.17 FTEs). An adjustment of \$73.4k and 0.83 x FTE has been made to reflect full year staffing levels in forecast years.							
2019 Other		70	1	0	71	0.9	1-Sided Adj	TNGUYEN20170310104003543
Explanation:	2016 Base year numbers reflect 1.5 months of CCC Training Specialist position (\$10k in Labor and 0.13 FTEs). An adjustment of \$70k and 0.87 FTES has been made to reflect full year staffing levels in forecast years.							
2019 Other		11	0	0	11	0.1	1-Sided Adj	TNGUYEN20170310104247770
Explanation:	2016 Base year numbers reflect 11 months of CCC Operations Support & Specialty Services Manager position (\$115.2k in Labor and 0.9 FTEs), retired Dec 1. An adjustment of \$10.5k and 0.01 FTES has been made to reflect full year staffing levels in forecast years.							
2019 Other		29	0	0	29	0.3	1-Sided Adj	TNGUYEN20170310104943153
Explanation:	2016 Base year numbers reflect 8 months of LOS Administrator position (\$40.9k in Labor and 0.63 FTEs). An adjustment of \$29k and 0.33 FTES has been made to reflect full year staffing levels in forecast years.							
2019 FOF-Ongo	bing	-104	-2	0	-106	-1.5	1-Sided Adj	TNGUYEN20170310105917790
Explanation:	FOF - Incre processes	-	ctivity for	Clerica	l group by ι	ising form	nal Lean Six Sig	gma methods to optimize

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 34 of 140

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE OPERATIONS Michael H. Baldwin A. CS - Office Operations 2. CCC - Support 2OO001.000 - CCC - Support							
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2019 Other		0	25	0	25	0.0	1-Sided Adj	TNGUYEN20170310110006260
Explanation:	Annual ma	intenanc	e fee for i	new Desk	top tagging	g software	implemented in	ı 2017.
2019 Other		0	51	0	51	0.0	1-Sided Adj	TNGUYEN20170310110040960
Explanation:	Annual ma 2017.	intenanc	e fee for i	new Inter	actions Ana	alytics (Sp	eech Analytics)	software implemented in
2019 Other		0	31	0	31	0.0	1-Sided Adj	TNGUYEN20170310110112350
Explanation:	Annual ma	intenanc	e fee for i	new WFM	1 (Work For	ce Manag	gement) softwar	e implemented in 2017.
2019 Other		0	1	0	1	0.0	1-Sided Adj	TNGUYEN20170310110205197
Explanation:	Customer Experience Project - Set up for CCC s Interactive Voice Recording to send confirmation emails for completed transaction.							
2019 Other		0	-3	0	-3	0.0	1-Sided Adj	TNGUYEN20170310110624860
Explanation:	AM - Redu	ction in te	elco relat	ed to corr	ected bills			
2019 Other		0	167	0	167	0.0	1-Sided Adj	TNGUYEN20170310110700180
Explanation:				•	• .	•	• • •	nsition specific to Bill ver the CSR facing tool
2019 RAMP Inc	remental	0	1	0	1	0.0	1-Sided Adj	TNGUYEN20170627142822280
Explanation: RAMP - Change in telco due to incremental Emergency Calls for RAMP.								
2019 Total		982	260	0	1,242	10.2		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. CCC - Support
Workpaper:	200001.000 - CCC - Support

Determination of Adjusted-Recorded (Incurred Costs):

······	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	4,143	4,441	4,329	4,213	4,437
Non-Labor	3,382	3,090	3,338	2,934	4,750
NSE	0	0	0	0	0
Total	7,525	7,531	7,667	7,147	9,187
FTE	54.9	56.8	53.8	50.6	51.4
djustments (Nominal \$) **	*				
Labor	91	193	96	-72	-350
Non-Labor	330	598	1	0	-1,728
NSE	0	0	0	0	0
Total	421	792	96	-72	-2,078
FTE	0.9	0.9	0.9	0.8	-3.8
Recorded-Adjusted (Nomir	nal \$)				
Labor	4,233	4,635	4,424	4,141	4,087
Non-Labor	3,712	3,688	3,339	2,934	3,022
NSE	0	0	0	0	0
Total	7,945	8,323	7,763	7,075	7,109
FTE	55.8	57.7	54.7	51.4	47.6
acation & Sick (Nominal S	\$)				
Labor	678	770	722	670	673
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	678	770	722	670	673
FTE	9.3	9.8	9.2	8.6	8.1
scalation to 2016\$					
Labor	482	391	250	118	0
Non-Labor	107	46	-11	8	0
NSE	0	0	0	0	0
Total	589	437	239	125	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	ant 2016\$)				
Labor	5,393	5,796	5,397	4,929	4,760
Non-Labor	3,819	3,734	3,328	2,942	3,022
NSE	0	0	0	0	0
Total	9,213	9,530	8,725	7,871	7,782
FTE	65.1	67.5	63.9	60.0	55.7

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. CCC - Support
Workpaper:	200001.000 - CCC - Support

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs						
	Years	2012	2013	2014	2015	2016
Labor		91	193	96	-72	-350
Non-Labor		330	598	0.630	0	-1,728
NSE		0	0	0	0	0
	Total –	421	792	96	-72	-2,078
FTE		0.9	0.9	0.9	0.8	-3.8

Detail of Adjustments to Recorded:

<u>Year Adj</u>	<u>Group L</u>	.abor	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	<u>RefID</u>
2012 Of	her	0	-103	0	0.0	1-Sided Adj	TNGUYEN20161128150844067
Explanation:	2012 to 201 second invo	3. The pice for	fee was r \$25,282 =	eprese = \$136	ented ,972 1	ortion of the Oracle Right Now Software F on two invoices; one invoice for \$111,690 total amount invoiced, divided by the 11/20 month x 12 months of 2013 = \$102,726.	+ a
2012 Of	her	0	41	0	0.0	CCTR Transf From 2200-2094.000	TNGUYEN20161201104631597
Explanation:						C: 2200-2094 to 2200-0404 o Customer Contact Center	
2012 Of	her	0	494	0	0.0	CCTR Transf From 2200-2094.000	TNGUYEN20161201105123647
Explanation:	Various con	sultant	s; (Accent	ture Ll	.P, Er	00-2094 to CC: 2200-0404 workpaper (20 mest & Young, Camack Consulting etc.,) s stomer Contact Center	,
2012 Of	her	0	-103	0	0.0	1-Sided Adj	TNGUYEN20161203204545587
Explanation:	 Oracle Right Now Software Cost element: 2200-0404 This adjustment is to move a prorated portion of the Oracle Right Now Software Fee from 2012 to 2013. The fee was represented on two invoices; one invoice for \$111,690 + a second invoice for \$25,282 = \$136,972 total amount invoiced, divided by the 11/20/12 – 4/1/14 period of16 months= \$8,561 per month x 12 months of 2013 = \$102,726. 						
2012 Of	her	91	1	0	0.9	CCTR Transf To 2200-0165.000	TNGUYEN20161204104335203
Explanation:	the Contino	us Impr	rovement	organi	zatior	O001. Historical data for cost center 2200 n in 2015. A QA Supervisor postion orgina sition must be transfered back to the CCC	ally charged to 2200-0165
2012 Total		91	330	0	0.9		

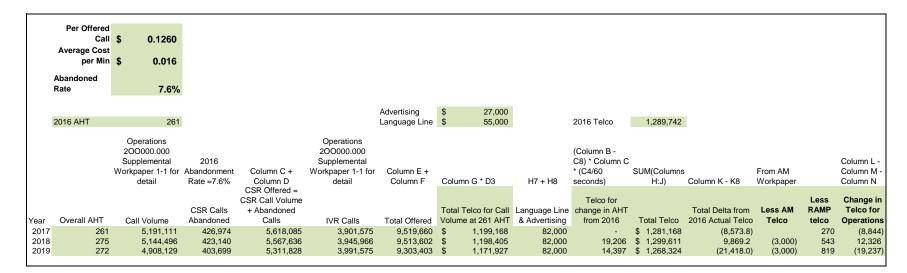
Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. CCC - Support
Workpaper:	200001.000 - CCC - Support

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2013	Other	0	103	0	0.0 1-Sided Adj		TNGUYEN20161128151221707
Explanati	2012 to 2 second in	2013. The f nvoice for \$	^f ee was re \$25,282 =	preser \$136,9	nted on two invoices 972 total amount inv	cle Right Now Softwar ; one invoice for \$111,6 oiced, divided by the 1 ths of 2013 = \$102,726	690 + a 1/20/12 –
2013	Other	0	539	0	0.0 CCTR Transf F	From 2200-2094.000	TNGUYEN20161201105917067
Explanati	Various o	consultants	; (Accenti	ure LLI		· · · ·	er 2OO001.) CCC Technology tc.,) supporting the Single
2013	Other	103	0	0	0.0 1-Sided Adj		TNGUYEN20161203205442700
Explanati	Software 2012 to 2 second ir	nvoice for S	ee was re 25,282 =	preser \$136,9	nted on two invoices 972 total amount inv	e a prorated portion of ; one invoice for \$111,6 oiced, divided by the 1 ths of 2013 = \$102,726	690 + a 1/20/12 –
2013	Other	0	-1	0	0.0 1-Sided Adj		TNGUYEN20161203210037330
Explanati		Tickets pur Isewhere fo		or the li	nland Empire Econo	mic Partnership event.	Amounts for this type are
2013	Other	90	0	0	0.9 CCTR Transf	o 2200-0165.000	TNGUYEN20161204104752823
Explanati	the Conti	nous Impr	ovement o	organiz	ation in 2015. A QA		200-0165 was transferred to ginally charged to 2200-0165 CC.
2013	Other	0	-43	0	0.0 CCTR Transf	o 2100-0019.000	TNGUYEN20161205163028967
Explanati	200001	CCC-Supp	port to cos	t cente		enter 2200-0404 in wo a paper group 1OO007	
2013 Tota	l	193	598	0	0.9		
2014	Other	96	1	0	0.9 CCTR Transf	o 2200-0165.000	TNGUYEN20161204104906610
Explanati	Continou	s Improvei	ment orga	nizatio	n in 2015. A QA Su		00-0165 was transferred to the Illy charged to 2200-0165 CC.
2014 Tota	ıl	96	1	0	0.9		

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE Michael H. Ba A. CS - Office 2. CCC - Sup 200001.000	aldwin e Operatio oport	ns			
<u>Year Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2015 Aliso	-72	0	0	0.8 1-Sided Adj		TNGUYEN20161203213221373
Explanation: Alisc	Remove Alise	o Canyon	CCC N	lgt labor expenses	charged to the CCC. 2015	
2015 Total	-72	0	0	0.8		
2016 Aliso	-350 -1	1,728	0 -	3.8 1-Sided Adj		TNGUYEN20161203212042813
Explanation: 200	001.000 Rem	ove Aliso r	elated	expense		
2016 Total	-350 -1	1,728	0 ·	-3.8		

Supplemental Workpapers for Workpaper 200001.000

Customer Contact Center Support 200001.000 - Telecommunication Supplemental Workpaper 1



Beginning of Workpaper 200002.000 - Branch Offices

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	3. Branch Offices
Workpaper:	200002.000 - Branch Offices

Activity Description:

Labor and non-labor costs associated with Branch Office and Authorized Pay Location expenses, covering the cost of providing payment collection and other services to those customers who prefer to make payments, place service requests, and seek information in person.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Branch Office O&M costs. This method is appropriate because the base year reflects estimated costs to sustain branch office operations at current service levels. Although branch office transaction volumes are declining at some locations, branch offices are staffed at optimal levels to provide service during current operating hours, and labor costs are not projected to decline.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Branch Office O&M costs. This method is appropriate because the base year reflects estimated costs to sustain branch office operations at current service levels. Although branch office transaction volumes are declining at some locations, branch offices are staffed at optimal levels to provide service during current operating hours. The majority of non-labor expenses are also fixed and not sensitive to transaction volume reductions.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

[In 2016\$ (000) Incurred Costs											
		Adju	isted-Recor	ded		Adjusted-Forecast						
Years	2012	2013	2014	2015	2016	2017	2018	2019				
Labor	8,891	9,011	9,076	9,053	8,989	8,796	8,796	9,323				
Non-Labor	2,766	2,568	2,838	2,576	2,602	2,559	2,559	2,689				
NSE	0	0	0	0	0	0	0	0				
Total	11,657	11,580	11,914	11,628	11,592	11,355	11,355	12,012				
FTE	127.1	128.7	130.4	129.7	129.1	124.7	124.7	125.7				

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	3. Branch Offices
Workpaper:	200002.000 - Branch Offices

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs										
Forecast	t Method	Bas	Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years	6	2017	2018	2019	2017	2018	2019	2017	2018	2019	
Labor	Base YR Rec	8,989	8,989	8,989	-194	-194	333	8,795	8,795	9,322	
Non-Labor	Base YR Rec	2,602	2,602	2,602	-43	-43	87	2,559	2,559	2,689	
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0	
Tota	I	11,592	11,592	11,592	-237	-237	420	11,355	11,355	12,012	
FTE	Base YR Rec	129.1	129.1	129.1	-4.4	-4.4	-3.4	124.7	124.7	125.7	

Forecast Adjustment Details:

<u>Year</u> Adj	Group	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Other		-97	-25	0	-122	-1.9	1-Sided Adj	TNGUYEN20161205144446337
Explanation:	effective		. Net Sav	ings resu	ulted from a	•		f Bellflower Branch Office Idditional costs of APL's
2017 Other		-97	-14	0	-111	-1.9	1-Sided Adj	TNGUYEN20161205145733713
Explanation:	effective		. Net Sav	ings resu	ulted from a			f Monrovia Branch Office dditional costs of APL's
2017 Other		-97	-4	0	-101	-1.9	1-Sided Adj	TNGUYEN20161205155526717
Explanation:	Office eff	• •	1/2016. N	et Savin	gs resulted	•		f Santa Monica Branch et by additional costs of
2017 Other		95	0	0	95	1.3	1-Sided Adj	TNGUYEN20161205160204310
Explanation:	provided forecasts	The Aliso Canyon natural gas leak incident required reprioritization of company resources. The labor provided for that project has been excluded from GRC historical recorded costs used in preparation of forecasts. This forecast adjustment is necessary for the adequate resumption of routine operations for branch office project manager and advisor to oversee of APLs.						
2017 Other		2	0	0	2	0.0	1-Sided Adj	TNGUYEN20170510140406970
Explanation:	-	Adjustment for labor necessary for return to normal operations, branch cashier after temporary deployment to mitigate Aliso leak.						
2017 Total		-194	-43	0	-237	-4.4		

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 44 of 140

Area: Witness:	CS - OFFICE Michael H. Ba		ONS					
Category:	A. CS - Office Operations							
Category-Sub:	3. Branch Off	ices						
Workpaper:	200002.000	- Branch O	ffices					
Year Adj Gro	oup Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID	
2018 Other	-97	-25	0	-122	-1.9	1-Sided Adj	TNGUYEN20161205160949317	
Explanation:		16. Net Sav	vings resu	-	-		f Bellflower Branch Office dditional costs of APL's	
2018 Other	-97	-14	0	-111	-1.9	1-Sided Adj	TNGUYEN20161205161032790	
Explanation:		16. Net Sav	vings resu	-	-		f Monrovia Branch Office dditional costs of APL's	
2018 Other	-97	-4	0	-101	-1.9	1-Sided Adj	TNGUYEN20161205161111287	
Explanation:	Regulatory Requirements/ Compliance. Full-year impact due to closure of Santa Monica Branch Office effective 11/01/2016. Net Savings resulted from avoided costs off-set by additional costs of APL's vendor's fees for migrating customers.							
2018 Other	95	0	0	95	1.3	1-Sided Adj	TNGUYEN20161205161148063	
Explanation:	provided for that p	roject has t recast adju	been excl stment is	uded from necessary	GRC hist for the ac	orical recorded lequate resump	pany resources. The labor costs used in preparation of tion of routine operations for	
2018 Other	2	0	0	2	0.0	1-Sided Adj	TNGUYEN20170510140429453	
Explanation:	Adjustment for lab deployment to mit		•	ırn to norm	nal operati	ons, branch cas	shier after temporary	
2018 Total	-194	-43	0	-237	-4.4			
2019 Other	377	0	0	377	0.0	1-Sided Adj	TNGUYEN20161205000329113	
Explanation:	accessibility issue	Adjustment for ADA branch compliance items to include; identify and correct remaining or emergent accessibility issues (e.g.; door pressures, cost to survey a large chain of stores that had previously self-certified, and others). Design and printing of bold large font brochures.						
2019 Other	-97	-25	0	-122	-1.9	1-Sided Adj	TNGUYEN20161205161906877	
Explanation:	Regulatory Requir effective 11/01/20 vendor's fees for r	16. Net Sav	vings resu	-			of Bellflower Branch Office dditional costs of APL's	
2019 Other	-97	-14	0	-111	-1.9	1-Sided Adj	TNGUYEN20161205162030600	

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 45 of 140

A										
Area: Witness:	CS - OFFICE OPERATIONS Michael H. Baldwin									
Category:	A. CS - Office	•	5							
Category-Sub:	3. Branch Offic									
Workpaper:	200002.000 -	Branch Of	fices							
Year Adj Gro	oup <u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	<u>RefID</u>			
Explanation:	• • •	6. Net Sav	ings resu	lted from a	•		f Monrovia Branch Office Idditional costs of APL's			
2019 Other	-97	-4	0	-101	-1.9	1-Sided Adj	TNGUYEN20161205162102257			
Explanation:	Regulatory Requirements/ Compliance. Full-year impact due to closure of Santa Monica Branch Office effective 11/01/2016. Net Savings resulted from avoided costs off-set by additional costs of APL's vendor's fees for migrating customers.									
2019 Other	95	0	0	95	1.3	1-Sided Adj	TNGUYEN20161205162147627			
Explanation:	provided for that pro	oject has b cast adjus	een excl stment is	uded from necessary	GRC hist for the ac	orical recorded dequate resump	pany resources. The labor costs used in preparation of ption of routine operations for			
2019 Other	150	130	0	280	1.0	1-Sided Adj	TNGUYEN20170308094316063			
Explanation:	Adjustment for ADA coordinator. ADA coordinator position will support ADA compliance throughout territory. Associated non-labor costs includes; attending ADA conferences, county fairs and participate in disabled organizational events.									
2019 Other	2	0	0	2	0.0	1-Sided Adj	TNGUYEN20170510140449703			
Explanation:	Adjustment for labo deployment to mitig		•	ırn to norm	nal operati	ions, branch cas	shier after temporary			
2019 Total	333	87	0	420	-3.4					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	3. Branch Offices
Workpaper:	200002.000 - Branch Offices

Determination of Adjusted-Recorded (Incurred Costs):

,,	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	6,979	7,206	7,441	7,606	7,815
Non-Labor	2,688	2,537	2,847	2,569	2,602
NSE	0	0	0	0	0
Total	9,667	9,743	10,288	10,175	10,417
FTE	109.0	110.1	111.7	111.0	111.5
djustments (Nominal \$) *	*				
Labor	0	0	0	0	-97
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	-97
FTE	0.0	0.0	0.0	0.0	-1.1
ecorded-Adjusted (Nomir	nal \$)				
Labor	6,979	7,206	7,441	7,606	7,718
Non-Labor	2,688	2,537	2,847	2,569	2,602
NSE	0	0	0	0	0
Total	9,667	9,743	10,288	10,175	10,320
FTE	109.0	110.1	111.7	111.0	110.4
acation & Sick (Nominal S	\$)				
Labor	1,117	1,198	1,214	1,231	1,271
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	1,117	1,198	1,214	1,231	1,271
FTE	18.1	18.6	18.7	18.7	18.7
scalation to 2016\$					
Labor	795	607	421	216	0
Non-Labor	78	32	-9	7	0
NSE	0	0	0	0	0
Total	873	639	412	223	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	ant 2016\$)				
Labor	8,891	9,011	9,076	9,053	8,989
Non-Labor	2,766	2,568	2,838	2,576	2,602
NSE	0	0	0	0	0
Total	11,657	11,580	11,914	11,628	11,592
FTE	127.1	128.7	130.4	129.7	129.1

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

CS - OFFICE OPERATIONS
Michael H. Baldwin
A. CS - Office Operations
3. Branch Offices
200002.000 - Branch Offices

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years	Years 2012 2013 2014 2015 2016							
Labor		0	0	0	0	-97			
Non-Labor		0	0	0	0	-0.035			
NSE		0	0	0	0	0			
	Total	0	0	0	0	-97			
FTE		0.0	0.0	0.0	0.0	-1.1			

Detail of Adjustments to Recorded:

Year /	Adj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	RefID
2012 Total		0	0	0	0.0		
2013 Total		0	0	0	0.0		
2014 Total		0	0	0	0.0		
2015 Total		0	0	0	0.0		
2016	Aliso	0	0	0	0.0	1-Sided Adj	TNGUYEN20170226145523173
Explanatio	n: Aliso - C in Feb 20		405 No d	Iollar ad	djustm	ent \$2 012 was charged to Aliso in erro	r in Nov 16 but was reversed
2016	Aliso	-27	0	0	-0.4	1-Sided Adj	TNGUYEN20161203221513617
Explanatio	n: Aliso Ali	iso Canyor	n Inciden	t - Excl	ude c	osts & associated FTEs - 300775156, W	Vellhead Leak
2016	Aliso	-16	0	0	-0.2	1-Sided Adj	TNGUYEN20161203221654210
Explanatio	n: Aliso Ali	iso Canyor	n Inciden	t - Excl	ude c	osts & associated FTEs - 300775156, W	Vellhead Leak
2016	Aliso	-52	0	0	-0.5	1-Sided Adj	TNGUYEN20161203221808523
Explanatio	n: Aliso Ali	iso Canyor	n Inciden	t - Excl	ude c	osts & associated FTEs - 300775156, W	Vellhead Leak
2016	Aliso	-2	0	0	0.0	1-Sided Adj	TNGUYEN20170510140531373
Explanatio	n: Aliso - S	upporting A	Aliso inci	dent			
2016 Total		-97	0	0	-1.1		

Beginning of Workpaper 200003.000 - Billing Services

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	4. Billing Services
Workpaper:	200003.000 - Billing Services

Activity Description:

Billing Services is responsible for calculating bills and maintaining accurate customer account information. Billing Services at SoCalGas consists of two distinct organizations: (1) billing for residential and small commercial and industrial customers ("Mass Market Billing"); and (2) billing for large commercial and industrial customers ("Major Market Billing"). Customer billing expenses cover the cost of calculating customers' bills and maintaining accurate customer account information. The department is responsible for following up on customer account inquiries and reviewing suspicious transactions identified by our CIS system.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Billing O&M costs. The Base Year represents the most recent recorded labor and non-labor costs. Adjustments to reflect full year staffing levels were then made to the Base Year to represent forecasted expenses in the test year.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Billing O&M costs. The Base Year represents the most recent recorded O&M costs. These non-labor expenses primarily consist of office supplies, office furniture, headsets and travel expenses.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

]				In 2016\$ (00	0) Incurred (Costs		
		Adju	isted-Recor	ded		Ad	justed-Fore	cast
Years	2012	2013	2014	2015	2016	2017	2018	2019
Labor	7,832	7,257	6,692	6,868	6,632	6,567	6,083	6,216
Non-Labor	265	100	130	109	335	50	49	49
NSE	0	0	0	0	0	0	0	0
Total	8,097	7,356	6,822	6,977	6,968	6,617	6,132	6,265
FTE	90.2	82.6	76.5	76.7	73.8	72.9	69.2	69.1

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	4. Billing Services
Workpaper:	200003.000 - Billing Services

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs												
Forecast	t Method	Base Forecast			Forec	Forecast Adjustments			Adjusted-Forecast				
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019			
Labor	Base YR Rec	6,632	6,632	6,632	-65	-549	-416	6,567	6,083	6,216			
Non-Labor	Base YR Rec	335	335	335	-286	-287	-287	49	48	48			
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0			
Total		6,968	6,968	6,968	-351	-836	-703	6,617	6,132	6,265			
FTE	Base YR Rec	73.8	73.8	73.8	-0.9	-4.6	-4.7	72.9	69.2	69.1			

Forecast Adjustment Details:

Torecas	orecast Aujustment Details.											
<u>Year</u>	<u>Adj Gro</u>	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID			
2017 Of	ther		40	0	0	40	0.5	1-Sided Adj	TNGUYEN20161205092038727			
Explana	ation:					sary for ret			after temporary deployment			
2017 Of	ther		-3	0	0	-3	0.0	1-Sided Adj	TNGUYEN20161205092327337			
Explana	ation:	2200-0349 2 PSI - Standardize CIS read info window to remove complexity for above standard pressurre accounts billing on a fixed pressure factors. Assume implementation in 3rd quarter 2017 and realizing 3 months of cost savings.										
2017 Of	ther		25	0	0	25	0.3	1-Sided Adj	TNGUYEN20161205092651883			
Explana	ation:		2200-0348 Meter/System Growth New account set up; additional reads will fail edit parameters. 2012-2016 avg/txns per meter used to project additional work volume.									
2017 Of	ther		0	-217	0	-217	0.0	1-Sided Adj	TNGUYEN20161205092721540			
Explana	ation:							labor to addres	s billing back log. An ger needed.			
2017 Of	ther		37	0	0	37	0.4	1-Sided Adj	TNGUYEN20161205092757667			
Explana	ation:					sary for ret			after temporary deployment			
2017 Of	ther		18	0	0	18	0.2	1-Sided Adj	TNGUYEN20161205093720650			
Explana	ation:	Compliand	e Svc Adv	isor salar	y (\$69k). An adj	•	f a Contracts and and .2 FTE has been made			
2017 01	ther		12	0	0	12	0.1	1-Sided Adj	TNGUYEN20161205094152030			

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 51 of 140

Area:	CS - (OFFICE OF	PERATIO	NS				
Witness:	Micha	el H. Baldw	/in					
Category:	A. CS	- Office Op	perations					
Category-Sub:	4. Bill	ing Service	S					
Workpaper:	2000	03.000 - Bi	lling Serv	rices				
Year Adj Gro	oup	Labor M	NLbr	NSE	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID
Explanation:	Advisor sa		and .9 FT	E). An		-		a Major Markets Billing Svc been made to reflect full
2017 Other		-16	0	0	-16	-0.2	1-Sided Adj	TNGUYEN20161205094238877
Explanation:	Analyst II		k and .2 F	TE) wh		-		Major Markets Billing ore retiring that will be
2017 FOF-Ongo	bing	-158	-68	0	-226	-2.0	1-Sided Adj	TNGUYEN20170615215826790
Explanation:	tion: FOF Grp4 Idea# 40 Mass Mkts - Cost efficiencies related to Fueling our Future initiative. Reduce cost by using lower cost and more productive contract workers for seasonal peaks of work in Billing department.							
2017 FOF-Ongo	bing	-20	0	0	-20	-0.2	1-Sided Adj	TNGUYEN20170310192027303
Explanation:	FOF Grp4 idea# 80 Mass Mkt - Cost efficiencies related to Fueling our Future initiative. Decrease in cost by reducing the number of items entering the Billing work queue by identifying and addressing errors in paperwork from other departments.							
2017 FOF-Ongo	bing	0	-1	0	-1	0.0	1-Sided Adj	TNGUYEN20170615221559300
Explanation:		ge and prin	-				•	uture initiative. Reduce II, approval packages
2017 Total		-65	-286	0	-351	-0.9		
2018 Other		40	0	0	40	0.5	1-Sided Adj	TNGUYEN20161205092219480
Explanation:		-			sary for retu versee billin		-	after temporary deployment
2018 Other		-3	0	0	-3	0.0	1-Sided Adj	TNGUYEN20161205092427620
Explanation:	2200-0349 2 PSI - Standardize CIS read info window to remove complexity for above standard pressurre accounts billing on a fixed pressure factors. Assume implementation in 3rd quarter 2017 and realizing 3 months of cost savings.							
2018 Other		-8	0	0	-8	0.0	1-Sided Adj	TNGUYEN20161205092447180
Explanation:	pressurre		lling on a	fixed pr	essure fact			y for above standard ation in 3rd quarter 2017 and

Area: Witness: Category: Category-Sub: Workpaper:	Micha A. CS 4. Billi	el H. Bal - Office ing Servi	Operations					
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2018 Other		25	0	0	25	0.3	1-Sided Adj	TNGUYEN20161205092840557
Explanation:			-			-	lditional reads w ork volume.	vill fail edit parameters.
2018 Other		0	-217	0	-217	0.0	1-Sided Adj	TNGUYEN20161205092902620
Explanation:			-				r labor to addres non-labor no lon	ss billing back log. An nger needed.
2018 Other		37	0	0	37	0.4	1-Sided Adj	TNGUYEN20161205092928163
Explanation:		-			sary for ret versee billir			after temporary deployment
2018 Other		18	0	0	18	0.2	1-Sided Adj	TNGUYEN20161205093819040
Explanation:	2200-0226 2016 Base Year numbers include approximately 10 months of a Contracts and Compliance Svc Advisor salary (\$69k and .8 FTE). An adjustment of \$18k and .2 FTE has been made to reflect full year staffing levels in forecast years							
2018 Other		12	0	0	12	0.1	1-Sided Adj	TNGUYEN20161205094448667
Explanation:	Advisor sa	lary (\$90		ΓE). An			-	a Major Markets Billing Svc been made to reflect full
2018 Other		-16	0	0	-16	-0.2	1-Sided Adj	TNGUYEN20161205094527070
Explanation:	Analyst II s	salary (\$*		FTE) wh			•	Major Markets Billing ore retiring that will be
2018 FOF-Ongo	ing	-158	-68	0	-226	-2.0	1-Sided Adj	TNGUYEN20170615215806510
Explanation:	-	wer cost					-	uture initiative. Reduce cost aks of work in Billing
2018 FOF-Ongo	ing	0	-2	0	-2	0.0	1-Sided Adj	TNGUYEN20170307130951670
Explanation:	-	ge and p	-				-	Future initiative. Reduce al, approval packages
2018 FOF-Ongo	ing	-18	0	0	-18	-0.1	1-Sided Adj	TNGUYEN20170307131823930
Explanation:	-		-		t efficiencie service for r		-	uture initiative. Decrease

Area: Witness:	CS - OFFI Michael H.	CE OPERA Baldwin	TIONS								
Category:	A. CS - Off	A. CS - Office Operations									
Category-Sub:	4. Billing S	ervices									
Workpaper:	200003.0	00 - Billing	Services								
Year Adj Gro	oup Lat	oor <u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID				
2018 Other	-4	0	0 0	-40	0.2	1-Sided Adj	TNGUYEN20170310112950523				
Explanation:				-			l Ledger Billing Team rk queue and other projects				
2018 FOF-Ongc	oing -8	1	0 0	-81	-1.0	1-Sided Adj	TNGUYEN20170310192545300				
Explanation:	-	g the numb	er of items	entering the		-	Future initiative. Decrease in lentifying and addressing				
2018 FOF-Ongc	ing -27	8	0 0	-278	-2.0	1-Sided Adj	TNGUYEN20170310192717493				
Explanation:	FOF Grp4 Idea with lower level					-	uture initiative. Reduce cost				
2018 FOF-Ongc	ing -7	9	0 0	-79	-1.0	1-Sided Adj	TNGUYEN20170615223242950				
Explanation:	-					-	uture initiative. Reduce cost resented office groups.				
2018 Total	-54	9 -28	7 0	-836	-4.6						
2019 Other	13	3	0 0	133	0.3	1-Sided Adj	TNGUYEN20161205000556043				
Explanation:		-		-			ded into 3 years, noting 1/3 omation process.				
2019 Other	4	.0	0 0	40	0.5	1-Sided Adj	TNGUYEN20161205092229540				
Explanation:	2200-2028 Adju to mitigate Aliso			•		•	after temporary deployment				
2019 Other	-	.3	0 0	-3	0.0	1-Sided Adj	TNGUYEN20161205092515460				
Explanation:		unts billing	on a fixed p				y for above standard ation in 3rd quarter 2017 and				
2019 Other	-	8	0 0	-8	0.0	1-Sided Adj	TNGUYEN20161205092537710				
Explanation:		unts billing	on a fixed p	ressure fac		-	y for above standard ation in 3rd quarter 2017 and				
2019 Other	2	5	0 0	25	0.3	1-Sided Adj	TNGUYEN20161205093016133				

Area:	CS -	OFFICE OF	PERATIO	NS						
Witness:	Micha	ael H. Baldv	vin							
Category:	A. CS	A. CS - Office Operations								
Category-Sub:	4. Bill	ling Service	S							
Workpaper:	2000	003.000 - B	illing Serv	vices						
Year Adj Gro	oup	Labor I	NLbr	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID		
Explanation:		-					lditional reads v ork volume.	vill fail edit parameters.		
2019 Other		0	-217	0	-217	0.0	1-Sided Adj	TNGUYEN20161205093043997		
Explanation:			-				labor to address non-labor no lor	s billing back log. An nger needed.		
2019 Other		37	0	0	37	0.4	1-Sided Adj	TNGUYEN20161205093112870		
Explanation:		8 Adjustme e Aliso leak.			-		-	after temporary deployment		
2019 Other		18	0	0	18	0.2	1-Sided Adj	TNGUYEN20161205093946557		
Explanation:	2200-0226 2016 Base Year numbers include approximately 10 months of a Contracts and Compliance Svc Advisor salary (\$69k and .8 FTE). An adjustment of \$18k and .2 FTE has been made to reflect full year staffing levels in forecast years									
2019 Other		12	0	0	12	0.1	1-Sided Adj	TNGUYEN20161205094610590		
Explanation:	Advisor sa		and .9 FT	E). An			-	a Major Markets Billing Svc been made to reflect full		
2019 Other		-16	0	0	-16	-0.2	1-Sided Adj	TNGUYEN20161205094638273		
Explanation:	Analyst II		k and .2 F	FTE) wh			•	Major Markets Billing ore retiring that will be		
2019 FOF-Ongo	bing	0	-2	0	-2	0.0	1-Sided Adj	TNGUYEN20170307131025530		
Explanation:		ige and prin						Future initiative. Reduce al, approval packages		
2019 FOF-Ongo	bing	-18	0	0	-18	-0.1	1-Sided Adj	TNGUYEN20170307131927363		
Explanation:	-	Idea# 71 Ited calls by	-				-	Future initiative. Decrease		
2019 Other		-40	0	0	-40	-0.2	1-Sided Adj	TNGUYEN20170310113009930		
Explanation:					-			Il Ledger Billing Team < queue and other projects		
2019 FOF-Ongo	bing	-158	-68	0	-226	-2.0	1-Sided Adj	TNGUYEN20170615215936820		

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 55 of 140

Area: Witness: Category: Category-Sub: Workpaper:	Micha A. CS 4. Billi	DFFICE OI el H. Baldy - Office O ing Service 03.000 - B	win perations es					
<u>Year</u> <u>Adj Gro</u> Explanation:	FOF Grp4	Idea# 40 - ower cost a	Mass Mk				•	<u>RefID</u> uture initiative. Reduce cost aks of work in Billing
2019 FOF-Ongo	ing	-81	0	0	-81	-1.0	1-Sided Adj	TNGUYEN20170310192626417
Explanation:		ducing the	number of	f items e	entering the		•	uture initiative. Decrease in entifying and addressing
2019 FOF-Ongo	ing	-278	0	0	-278	-2.0	1-Sided Adj	TNGUYEN20170310192734850
Explanation:	-						to Fueling our F r transactions.	uture initiative. Reduce cost
2019 FOF-Ongo	ing	-79	0	0	-79	-1.0	1-Sided Adj	TNGUYEN20170615223258247
Explanation:							•	ture initiative. Reduce cost esented office groups.
2019 Total		-416	-287	0	-703	-4.7		

CS - OFFICE OPERATIONS
Michael H. Baldwin
A. CS - Office Operations
4. Billing Services
200003.000 - Billing Services

Determination of Adjusted-Recorded (Incurred Costs):

,	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	6,148	5,803	5,486	5,769	5,791
Non-Labor	258	98	130	108	348
NSE	0	0	0	0	0
Total	6,405	5,902	5,616	5,877	6,140
FTE	77.3	70.7	65.5	65.7	64.2
djustments (Nominal \$) *	*				
Labor	0	0	0	2	-97
Non-Labor	0	0	0	0	-13
NSE	0	0	0	0	0
Total	0	0	0	2	-110
FTE	0.0	0.0	0.0	0.0	-1.1
ecorded-Adjusted (Nomir	nal \$)				
Labor	6,148	5,803	5,486	5,771	5,695
Non-Labor	258	98	130	108	335
NSE	0	0	0	0	0
Total	6,405	5,902	5,616	5,879	6,030
FTE	77.3	70.7	65.5	65.7	63.1
acation & Sick (Nominal S	\$)				
Labor	984	964	895	934	938
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	984	964	895	934	938
FTE	12.8	11.9	11.0	11.0	10.7
scalation to 2016\$					
Labor	700	489	311	164	0
Non-Labor	7	1	0	0	0
NSE	0	0	0	0	0
Total	708	490	310	164	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	7,832	7,257	6,692	6,868	6,632
Non-Labor	265	100	130	109	335
NSE	0	0	0	0	0
Total	8,097	7,356	6,822	6,977	6,968
FTE	90.1	82.6	76.5	76.7	73.8

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	4. Billing Services
Workpaper:	200003.000 - Billing Services

Summary of Adjustments to Recorded:

	In Nominal \$ (000) Incurred Costs										
Years 2012 2013 2014 2015 20											
Labor	-	0	0	0	2	-97					
Non-Labor		0	0	0	0	-13					
NSE		0	0	0	0	0					
	Total	0	0	0	2	-110					
FTE		0.0	0.0	0.0	0.0	-1.1					

Detail of Adjustments to Recorded:

Year	<u>Adj</u>	Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2012 Tota	al		0	0	0	0.0		
2013 Tota	al		0	0	0	0.0		
2014 Tota	al		0	0	0	0.0		
2015	Alis	0	2	0	0	0.0	1-Sided Adj	TNGUYEN20161128134717083
Explanati	ion:	Aliso CC credits	: 2200-02	26 cost	elemer	nt 611	0020 To remove labor cost for Aliso Ca	yon (I/O 300775156) 2015
2015 Tota	al		2	0	0	0.0		
2016	Alis	0	-40	-1	0	-0.5	1-Sided Adj	TNGUYEN20170215141122213
Explanati	ion:	200003.	000 - CC:	2200-20)28 Re	movir	ng Aliso related cost	
2016	Alis	0	-20	0	0	-0.2	1-Sided Adj	TNGUYEN20161128140307610
Explanati	ion:	Aliso CC debits	:2200-022	26 cost e	elemen	t 6110	0020 To remove labor costs for Aliso Ca	anyon (I/O 300775156) 2016
2016	Alis	0	-37	-12	0	-0.4	1-Sided Adj	TNGUYEN20161204213156337
Explanati	ion:	200003.	000 - CC:	2200-03	848 Ali	so - R	emove Aliso Canyon related costs	

Beginning of Workpaper 200004.000 - Credit and Collections

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	5. Credit & Collections
Workpaper:	200004.000 - Credit and Collections

Activity Description:

Credit and collections expenses include the cost of establishing and implementing policies and procedures to ensure authorized collections-related tariff rules are followed and collection activity is effectively performed.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Office Credit and Collections O&M costs. 2016 represents the most recent recorded labor and non-labor costs. Adjustments for full year staffing were added to the base year to represent forecasted expenses in the test year.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Office Credit and Collections O&M costs. 2016 represents the most recent recorded labor and non-labor costs. The non-labor expenses primarily consist of collection agency fees and credit reporting agency fees.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

Г	In 2016\$ (000) Incurred Costs										
		Adjı	isted-Recor		Adjusted-Forecast						
Years	2012	2013	2014	2015	2016	2017	2018	2019			
Labor	3,140	3,070	3,172	3,046	2,966	3,002	2,844	2,844			
Non-Labor	885	1,086	1,052	1,093	1,255	1,256	1,256	1,256			
NSE	0	0	0	0	0	0	4	0			
Total	4,024	4,156	4,224	4,139	4,221	4,258	4,104	4,100			
FTE	38.4	37.2	38.3	37.0	36.1	36.5	34.1	34.5			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	5. Credit & Collections
Workpaper:	200004.000 - Credit and Collections

Summary of Adjustments to Forecast:

			In 201	6 \$(000) l	ncurred Co	sts				
Forecast	Forecast Method Base Forecast			st	Forec	ast Adjust	tments	Adjusted-Forecast		
Years	s	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	2,966	2,966	2,966	37	-121	-121	3,003	2,845	2,845
Non-Labor	Base YR Rec	1,255	1,255	1,255	0	0	0	1,255	1,255	1,255
NSE	Base YR Rec	0	0	0	0	4	0	0	4	0
Tota	d	4,221	4,221	4,221	37	-117	-121	4,258	4,104	4,100
FTE	Base YR Rec	36.1	36.1	36.1	0.4	-2.0	-1.6	36.5	34.1	34.5

Forecast Adjustment Details:

Forecast A	ajustment De	talis:						
<u>Year</u> <u>Ac</u>	dj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Othe	r	37	0	0	37	0.4	1-Sided Adj	TNGUYEN20170306072603690
Explanatio	-	nent for labor ary deployme		•		nal operati	ons in support o	of data analytics after
2017 Total		37	0	0	37	0.4		
2019 Othe	-			4				
2018 Other		37	0	4	41	0.0	1-Sided Adj	TNGUYEN20170306072626077
Explanatio	-	nent for labor ary deployme		•		nal operati	ons in support o	of data analytics after
2018 FOF-	Ongoing	-158	0	0	-158	-2.0	1-Sided Adj	TNGUYEN20170615223348840
Explanatio		•					•	uture initiative. Reduce cost resented office groups.
2018 Total		-121	0	4	-117	-2.0		
0040 0#	_			0				
2019 Othe	r	37	0	0	37	0.4	1-Sided Adj	TNGUYEN20170306072642500
Explanatio	-	nent for labor ary deployme		•		nal operati	ons in support o	of data analytics after
2019 FOF-	Ongoing	-158	0	0	-158	-2.0	1-Sided Adj	TNGUYEN20170615223403473
Explanatio		•					•	uture initiative. Reduce cost esented office groups.
2019 Total		-121	0	0	-121	-1.6		

Note: Totals may include rounding differences.

SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	5. Credit & Collections
Workpaper:	200004.000 - Credit and Collections

Determination of Adjusted-Recorded (Incurred Costs):

·····,····	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	2,464	2,455	2,601	2,559	2,583
Non-Labor	860	1,073	1,055	1,091	1,255
NSE	0	0	0	0	0
Total	3,324	3,528	3,656	3,649	3,838
FTE	32.9	31.8	32.8	31.7	31.3
djustments (Nominal \$) *	*				
Labor	0	0	0	0	-37
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	-37
FTE	0.0	0.0	0.0	0.0	-0.4
ecorded-Adjusted (Nomir	nal \$)				
Labor	2,464	2,455	2,601	2,559	2,546
Non-Labor	860	1,073	1,055	1,091	1,255
NSE	0	0	0	0	0
Total	3,324	3,528	3,656	3,649	3,801
FTE	32.9	31.8	32.8	31.7	30.9
acation & Sick (Nominal S	\$)				
Labor	395	408	424	414	419
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	395	408	424	414	419
FTE	5.5	5.4	5.5	5.3	5.2
scalation to 2016\$					
Labor	281	207	147	73	0
Non-Labor	25	13	-3	3	0
NSE	0	0	0	0	0
Total	306	220	144	76	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	3,140	3,070	3,172	3,046	2,966
Non-Labor	885	1,086	1,052	1,093	1,255
NSE	0	0	0	0	0
Total	4,024	4,156	4,224	4,139	4,221
FTE	38.4	37.2	38.3	37.0	36.1

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	5. Credit & Collections
Workpaper:	200004.000 - Credit and Collections

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs											
Years <u>2012</u> <u>2013</u> <u>2014</u> <u>2015</u> <u>20</u>											
Labor		0	0	0	0	-37					
Non-Labor		0	0	0	0	0					
NSE		0	0	0	0	0					
	Total	0	0	0	0	-37					
FTE		0.0	0.0	0.0	0.0	-0.4					

Detail of Adjustments to Recorded:

Year Adj	<u>Group Lab</u>	or <u>NLbr</u>	<u>NSE</u>	FTE	Adj Type	RefID
2012 Total		0 0	0	0.0		
2013 Total		0 0	0	0.0		
2014 Total		0 0	0	0.0		
2014 10(8)		0 0	0	0.0		
2015 Total		0 0	0	0.0		
2016 Alis	o -3	7 0	0	-0.4 1-Sided Adj		TNGUYEN20170214160242783
Explanation:	400004.000 - STANDARD S	•			nd associated FTE's. I/O	# 300775156 (AC -
2016 Total	-3	7 0	0	-0.4		

Beginning of Workpaper 200004.001 - Credit and Collections Postage

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	6. Credit and Collections Postage
Workpaper:	200004.001 - Credit and Collections Postage

Activity Description:

Credit and Collections postage expenses cover the cost of mailing collection notices.

Forecast Explanations:

Labor - Base YR Rec

N/A

Non-Labor - Base YR Rec

N/A

NSE - Base YR Rec

The forecast method developed for this cost category is Base YR. This method is most appropriate because the base year recorded postage is an accurate representation of current postage expense and activity.

Summary of Results:

Γ	In 2016\$ (000) Incurred Costs										
		Adju	isted-Recor	Ad	Adjusted-Forecast						
Years	2012	2013	2014	2015	2016	2017	2018	2019			
Labor	0	0	0	0	0	0	0	0			
Non-Labor	0	0	0	0	0	0	0	0			
NSE	2,019	1,923	1,044	1,049	995	995	995	995			
Total	2,019	1,923	1,044	1,049	995	995	995	995			
FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	6. Credit and Collections Postage
Workpaper:	200004.001 - Credit and Collections Postage

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs											
Forecast Method Base Forecast Forecast Adjustments Adjusted-Forecast										ast		
Years	S	2017	2018	2019	2017	2018	2019	2017	2018	2019		
Labor	Base YR Rec	0	0	0	0	0	0	0	0	0		
Non-Labor	Base YR Rec	0	0	0	0	0	0	0	0	0		
NSE	Base YR Rec	995	995	995	0	0	0	995	995	995		
Total		995	995	995	0	0	0	995	995	995		
FTE	Base YR Rec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Year	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
				NOL				<u></u>

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	6. Credit and Collections Postage
Workpaper:	200004.001 - Credit and Collections Postage

Determination of Adjusted-Recorded (Incurred Costs):

·····	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	1,963	1,899	1,049	1,046	995
NSE	0	0	0	0	0
Total	1,963	1,899	1,049	1,046	995
FTE	0.0	0.0	0.0	0.0	0.0
djustments (Nominal \$) *'	*				
Labor	0	0	0	0	0
Non-Labor	-1,963	-1,899	-1,049	-1,046	-995
NSE	1,963	1,899	1,047	1,046	995
Total	0	0	-1	0	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Nomir	nal \$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	1,963	1,899	1,047	1,046	995
Total	1,963	1,899	1,047	1,046	995
FTE	0.0	0.0	0.0	0.0	0.0
acation & Sick (Nominal S	\$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
scalation to 2016\$					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	57	24	-3	3	0
Total	57	24	-3	3	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	2,019	1,923	1,044	1,049	995
Total	2,019	1,923	1,044	1,049	995
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	6. Credit and Collections Postage
Workpaper:	200004.001 - Credit and Collections Postage

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years 2012 2013 2014 2015								
Labor		0	0	0	0	0			
Non-Labor		-1,963	-1,899	-1,049	-1,046	-995			
NSE		1,963	1,899	1,047	1,046	995			
	Total	0	0	-1	0	0			
FTE		0.0	0.0	0.0	0.0	0.0			

Detail of Adjustments to Recorded:

Year	<u>Adj</u>	<u>Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	RefID
2012	Oth	ier	0	-1,963	0	0.0	1-Sided Adj	TNGUYEN20161102133636650
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith no standard escalation	
2012	Oth	ner	0	0	1,963	0.0	1-Sided Adj	TNGUYEN20161102133753483
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith non standard escalation.	
2012 Tot	al		0	-1,963	1,963	0.0		
2013	Oth	ier	0	-1,899	0	0.0	1-Sided Adj	TNGUYEN20161103081607217
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith non standard escalation	
2013	Oth	ier	0	0	1,899	0.0	1-Sided Adj	TNGUYEN20161103081652457
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith non standard escalation.	
2013 Tot	al		0	-1,899	1,899	0.0		
2014	Oth	ner	0	-1,047	0	0.0	1-Sided Adj	TNGUYEN20161103081807783
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith non standard escalation.	
2014	Oth	ier	0	0	1,047	0.0	1-Sided Adj	TNGUYEN20161103081902013
Explanat	ion:	Aligning hi	istory to	o forecast	ing post	age w	vith non standard escalation.	
2014	Oth	er	0	-1	0	0.0	1-Sided Adj	TNGUYEN20161128090714400
Explanation: Cost Element 6220450 Exclusion for Refundable IO 300767610 - Residential OIR Disconnect Memo Account								2 Disconnect Memo
2014 Tot	al		0	-1,049	1,047	0.0		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	6. Credit and Collections Postage
Workpaper:	200004.001 - Credit and Collections Postage

<u>Year Adj</u>	Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj T</u>	уре	<u>RefID</u>
2015 Of	ther	0	-1,046	0	0.0 1	-Sided Adj	TNGUYEN2016	1128091439707
Explanation: Cost Element 6220450 Aligning history to forecasting postage with non standard escalation								
2015 Of	ther	0	0	1,046	0.0 1	-Sided Adj	TNGUYEN2016	1128091554740
Explanation:	Cost Eler	ment 622	20450 Ali <u>ç</u>	gning his	tory to	forecasting postage with n	on standard escalation.	
2015 Total		0	-1,046	1,046	0.0			
2016 Of	ther	0	-995	995	0.0 1	-Sided Adj	TNGUYEN2017	0214160000190
Explanation:			nsfer to NS I escalatio		non-lat	bor cost element 6220450.	Aligning history to forecasting	j postage
2016 Total		0	-995	995	0.0			

Supplemental Workpapers for Workpaper 200004.001

Credit and Collections Postage 200004.001 Supplemental Workpaper 1

	Collection	Postage	Cost per			
	Notices	Expenditure	unit			
2014 actual	2,573,318	\$ 1,060,960	\$ 0.412			
2015 actual	2,481,773	\$ 1,042,176	\$ 0.420			
2016 actual	2,380,764	\$ 983,846	\$ 0.413			
2017 volume of n	otices forecaste	ed between 201	.5 & 2016 \	/olur	nes.	
				I	Forecast	Notes:
2017 forecast	2,410,000		\$ 0.413	\$	995,330	assume no rate increase in 2017 from 2016 rate
2018 forecast	2,410,000		\$ 0.413	\$	995,330	assume no rate increase in 2018 from 2017 rate; 2018 volume of notices same as 2017
2019 forecast	2,410,000		\$ 0.413	\$	995,330	assume no rate increase in 2019 from 2018 rate; 2019 volume of notices same as 2018

Beginning of Workpaper 200005.000 - Remittance Processing

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	7. Remittance Processing
Workpaper:	200005.000 - Remittance Processing

Activity Description:

Remittance Processing provides printing and inserting services for customer bills, notices, letters and other customer correspondence as well as management support for payment processing activities. Expenses include the labor costs associated with these activities as well as non-labor costs for paper stock, bill forms, envelopes, stationery items, printer and inserter machine maintenance and associated consumable supplies.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Remittance Processing O&M costs. These costs are driven by the volumes of bills, notices and payments which are impacted by customer growth as well as customer choice of billing and payment channels. For these reasons, the Base Year 2016 is used as basis to forecast TY2019, plus adjustments for cost increases and savings from these activities.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Remittance Processing O&M costs. These costs are driven by the volumes of bills, notices and payments which are impacted by customer growth as well as customer choice of billing and payment channels. For these reasons, the Base Year 2016 is used as basis to forecast TY2019, plus adjustments for cost increases and savings from these activities.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

[In 2016\$ (000) Incurred Costs												
		Adju	isted-Recor	Adjusted-Forecast									
Years	2012	2013	2014	2015	2016	2017	2018	2019					
Labor	2,041	2,016	1,872	1,897	1,579	1,680	1,680	1,680					
Non-Labor	5,082	4,631	4,020	4,107	3,349	3,121	2,534	2,313					
NSE	0	0	0	0	0	0	0	0					
Total	7,123	6,647	5,892	6,004	4,928	4,801	4,214	3,993					
FTE	26.0	25.7	24.0	24.6	20.6	21.8	21.8	21.8					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	7. Remittance Processing
Workpaper:	200005.000 - Remittance Processing

Summary of Adjustments to Forecast:

			In 201	6 \$(000) Ir	ncurred Co	sts				
Forecast	t Method	Bas	se Foreca	st	Forec	ast Adjust	tments	Adjus	ted-Forec	ast
Years	6	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	1,579	1,579	1,579	102	102	102	1,681	1,681	1,681
Non-Labor	Base YR Rec	3,349	3,349	3,349	-228	-815	-1,036	3,121	2,534	2,313
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Tota	I	4,928	4,928	4,928	-126	-713	-934	4,802	4,215	3,994
FTE	Base YR Rec	20.6	20.6	20.6	1.2	1.2	1.2	21.8	21.8	21.8

Forecast Adjustment Details:

Year Adj Gro		Labor	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj Type	RefID
2017 Other		0	13	0	13	0.0	1-Sided Adj	TNGUYEN20161205164916307
	Due du estivit						,	
Explanation:	Productivit	y Ennance	ements ve	endorsi	ees for cor	isolidator	e-Bills delivered	1
2017 Other		0	-44	0	-44	0.0	1-Sided Adj	TNGUYEN20161205164941003
Explanation:	Productivit	y Enhance	ements Sa	avings fr	om combin	ed electro	onic bills	
2017 Other		22	0	0	22	0.5	1-Sided Adj	TNGUYEN20161205165017220
Explanation:	Adjustmen electronic			5		•	· • •	analytical activities and
2017 Other		80	0	0	80	0.7	1-Sided Adj	TNGUYEN20161205165052630
Explanation:	Adjustmen	its for full-	/ear, impa	act of 8 n	nonths for t	he vacan	cy position filled	I since September 2016
2017 FOF-Ongo	ing	0	-77	0	-77	0.0	1-Sided Adj	TNGUYEN20170510130217247
Explanation:						0	r Future initiative billing reducing	e. Enable CSRs to enroll printing cost.
2017 FOF-Ongo	ing	0	-120	0	-120	0.0	1-Sided Adj	TNGUYEN20170719132837380
Explanation:	FOF - Gro reduce cor	•		nageme	nt. Cost ef	ficiencies	related to Fueli	ng our Future initiative to
2017 Total		102	-228	0	-126	1.2		
2018 Other		0	31	0	31	0.0	1-Sided Adj	TNGUYEN20161205165131623
Explanation:	Productivit	y Enhance	ements Ve	endor s f	ees for cor	solidator	e-Bills delivered	ł

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 74 of 140

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFIC Michael H. A. CS - Offi 7. Remittan 200005.00	Baldwin ce Operatio ce Processi	ns ng	ssing			
Year Adj Gro	oup Lab	or <u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2018 Other	() -90	0	-90	0.0	1-Sided Adj	TNGUYEN20161205165156197
Explanation:	Productivity Enh	ancements	Savings f	rom combii	ned electro	onic bills	
2018 Other	22	2 0	0	22	0.5	1-Sided Adj	TNGUYEN20161205165232757
Explanation:	Adjustment for la electronic billing		•		•		analytical activities and
2018 Other	80) 0	0	80	0.7	1-Sided Adj	TNGUYEN20161205165329597
Explanation:	Adjustments for	full-year im	pact of 8 r	nonths for	the vacand	y position filled	since September 2016.
2018 FOF-Ongo	oing () -524	0	-524	0.0	1-Sided Adj	TNGUYEN20170719132906830
Explanation:	FOF - Group #1 reduce contract		lanageme	ent. Cost ef	ficiencies I	related to Fuelir	ng our Future initiative to
2018 FOF-Ongo	oing () -232	0	-232	0.0	1-Sided Adj	TNGUYEN20170510130145730
Explanation:	FOF Grp4 Idea customers into N				•		. Enable CSRs to enroll printing cost.
2018 Total	102	2 -815	0	-713	1.2		
2019 Other	() 49	0	49	0.0	1-Sided Adj	TNGUYEN20161205165433373
Explanation:	Productivity Enh	ancements	Vendor s	fees for co	nsolidator	e-Bills delivered	ť
2019 Other	() -138	0	-138	0.0	1-Sided Adj	TNGUYEN20161205165459477
Explanation:	Productivity Enh	ancements	Savings f	rom combi	ned electro	onic bills	
2019 Other	22	2 0	0	22	0.5	1-Sided Adj	TNGUYEN20161205165532323
Explanation:	Adjustment for la electronic billing		-				analytical activities and
2019 Other	80) 0	0	80	0.7	1-Sided Adj	TNGUYEN20161205165600540
Explanation:	Adjustments for	full-year im	pact of 8 r	nonths for	the vacand	y position filled	since September 2016.
2019 FOF-Ongo	ing (-536	0	-536	0.0	1-Sided Adj	TNGUYEN20170719132954643
Explanation:	FOF - Group #1 reduce spend.	01 Supply N	lanageme	ent. Cost ef	ficiencies I	related to Fuelir	ng our Future initiative to

Area: Witness: Category: Category-Sub: Workpaper:	Michae A. CS 7. Ren	el H. Balo - Office (nittance I	DPERATIC dwin Dperations Processing Remittanc	5 g	sing			
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2019 FOF-Ongo	ing	0	-349	0	-349	0.0	1-Sided Adj	TNGUYEN20170310160815423
Explanation:							ır Future initiativ billing reducing	e. Enable CSRs to enroll printing cost.
2019 Other		0	2	0	2	0.0	1-Sided Adj	TNGUYEN20170310195115740
Explanation:	ADA - Larg 2020 (300		•	•	idor. Est.15	0 x \$15/la	arge font print ir	n 2019 = \$2,250. Est print in
2019 FOF-Ongc	ing	0	-35	0	-35	0.0	1-Sided Adj	TNGUYEN20170615212829383
Explanation:						•		Reduce printing cost by paperless billing enrollment
2019 FOF-Ongc	ing	0	-26	0	-26	0.0	1-Sided Adj	TNGUYEN20170615213120997
Explanation:		paperles	s billing b			•		e. Reduce printing cost by illing once the customer
2019 FOF-Ongc	ing	0	-3	0	-3	0.0	1-Sided Adj	TNGUYEN20170615215235100
Explanation:		adoption	of paperle	ess billing	g. Addition	•		Reduce printing cost by ure by posting paperless
2019 Total		102	-1,036	0	-934	1.2		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	7. Remittance Processing
Workpaper:	200005.000 - Remittance Processing

Determination of Adjusted-Recorded (Incurred Costs):

•	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	1,602	1,612	1,535	1,593	1,378
Non-Labor	5,363	4,150	4,033	4,097	3,349
NSE	0	0	0	0	0
Total	6,966	5,762	5,568	5,690	4,727
FTE	22.2	21.9	20.5	21.1	18.1
djustments (Nominal \$) **					
Labor	0	0	0	0	-22
Non-Labor	-424	424	0	0	0
NSE	0	0	0	0	0
Total	-424	424	0	0	-22
FTE	0.0	0.0	0.0	0.0	-0.5
ecorded-Adjusted (Nomina	il \$)				
Labor	1,602	1,612	1,535	1,593	1,355
Non-Labor	4,939	4,574	4,033	4,097	3,349
NSE	0	0	0	0	0
Total	6,541	6,186	5,568	5,690	4,704
FTE	22.2	21.9	20.5	21.1	17.6
acation & Sick (Nominal \$)					
Labor	257	268	250	258	223
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	257	268	250	258	223
FTE	3.7	3.7	3.4	3.5	3.0
scalation to 2016\$					
Labor	182	136	87	45	0
Non-Labor	143	57	-13	11	0
NSE	0	0	0	0	0
Total	325	193	74	56	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Constan	nt 2016\$)				
Labor	2,041	2,016	1,872	1,897	1,579
Non-Labor	5,082	4,631	4,020	4,107	3,349
NSE	0	0	0	0	0
Total	7,123	6,647	5,892	6,004	4,928
FTE	25.9	25.6	23.9	24.6	20.6

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	7. Remittance Processing
Workpaper:	200005.000 - Remittance Processing

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs											
	Years	2012	2013	2014	2015	2016					
Labor		0	0	0	0	-22					
Non-Labor		-424	424	0	0	0					
NSE		0	0	0	0	0					
	Total	-424	424	0	0	-22					
FTE		0.0	0.0	0.0	0.0	-0.5					

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Adj Gr</u>	oup <u>Lab</u>	<u>or</u> <u>N</u>	<u>ILbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	ReflD
2012	Other		0 -4	424	0	0.0	1-Sided Adj	TNGUYEN20161101120634153
Explanat		-					2013 and 2-year average is (\$951,501.29 with annual expenses for toner \$424,390	-
2012 Tota	al		0 -	424	0	0.0		
2013	Other		0 4	424	0	0.0	1-Sided Adj	TNGUYEN20161101121038790
Explanat		-					013 and 2-year average is (\$951,501.29 + with annual expenses for toner \$424,390	
2013 Tota	al		0	424	0	0.0		
2014 Tota	al		0	0	0	0.0		
2015 Tota	al		0	0	0	0.0		
2016	Aliso	-2	2	0	0	-0.5	1-Sided Adj	TNGUYEN20161203221938570
Explanat	ion: A	liso Aliso Ca	nyon l	ncident	- Excl	ude c	osts & associated FTEs - 300775156, We	Ilhead Leak
2016 Tota	al	-2	2	0	0	-0.5		

Beginning of Workpaper 200005.001 - Remittance Processing Postage

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	8. Remittance Processing Postage
Workpaper:	200005.001 - Remittance Processing Postage

Activity Description:

This cost center group is used to track postage costs associated with mailing of the SCG's customer bills, notices, letters, and customer correspondence.

Forecast Explanations:

Labor - Base YR Rec

N/A

Non-Labor - Base YR Rec

N/A

NSE - Base YR Rec

A Base Year forecasting methodology was applied to project Remittance Processing Postage O&M costs. Postage for bill delivery includes postage for paper bills and notices mailed through the United States Postal Service (USPS). The postage expense depends on postage rates which are determined by the USPS and the volume of paper bills and notices which are impacted by customer growth as well as electronic bill adoption levels. For these reasons, a Base Year is used as the basis to forecast Test Year 2019, plus adjustments for postage rate changes for paper bills and notices mailed through USPS and savings from paperless billing (My Account) and electronic bill delivery to customers' home banking websites.

Summary of Results:

				n 2016\$ (00	0) Incurred (Costs		
		Adju	sted-Recor	Adjusted-Forecast				
Years	2012	2013	2014	2015	2016	2017	2018	2019
Labor	0	0	0	0	0	0	0	0
Non-Labor	0	0	0	0	0	0	0	0
NSE	18,232	17,739	17,959	17,727	17,011	16,340	15,087	13,812
Total	18,232	17,739	17,959	17,727	17,011	16,340	15,087	13,812
FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	8. Remittance Processing Postage
Workpaper:	200005.001 - Remittance Processing Postage

Summary of Adjustments to Forecast:

			In 201	6 \$(000) li	ncurred Co	sts				
Forecast	t Method	Ba	se Foreca	st	Forec	ast Adjust	tments	Adjus	ted-Forec	ast
Years	5	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	0	0	0	0	0	0	0	0	0
Non-Labor	Base YR Rec	0	0	0	0	0	0	0	0	0
NSE	Base YR Rec	17,011	17,011	17,011	-671	-1,924	-3,199	16,340	15,087	13,812
Tota	I	17,011	17,011	17,011	-671	-1,924	-3,199	16,340	15,087	13,812
FTE	Base YR Rec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Forecast Adjustment Details:

Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2017 Other		0	0	180	180	0.0	1-Sided Adj	TNGUYEN20161205165937100
Explanation:	Meter Gro	wth - Post	age requ	ired due	to meter gr	owth.		
2017 Other		0	0	-156	-156	0.0	1-Sided Adj	TNGUYEN20161205170008340
Explanation:	Rate Incre	ase - Post	age requ	ired due	to rate cha	nge.		
2017 Other		0	0	61	61	0.0	1-Sided Adj	TNGUYEN20161205170059670
Explanation:	Productivit	ty Enhance	ements -	Postage	savings fro	om combir	ned electronic b	ills due to rate change.
2017 FOF-Ongo	ing	0	0	-96	-96	0.0	1-Sided Adj	TNGUYEN20170310161716163
Explanation:		ut Home E	nergy Gı			•		e. Reduce postage cost by tronically rather than printing
2017 FOF-Ongo	ing	0	0	-660	-660	0.0	1-Sided Adj	TNGUYEN20170509151149463
Explanation:						•	Future initiative. billing reducing	Enable CSRs to enroll postage cost.
2017 Total		0	0	-671	-671	0.0		
2018 Other		0	0	417	417	0.0	1-Sided Adj	TNGUYEN20161205170236450
Explanation:	Meter Gro	wth Posta	ige requi	red due t	o growth.			
2018 Other		0	0	-157	-157	0.0	1-Sided Adj	TNGUYEN20161205170302490
Explanation:	Rate Incre	ase Posta	age requi	red due t	o rate char	nge.		

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin

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Area: Witness: Category: Category-Sub: Workpaper:	Micha A. CS 8. Rer	el H. Bal - Office nittance	Operatior Processir	ns ng Posta	ge essing Posta	ge		
Year Adj Gro	<u>up</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2018 Other		0	0	64	64	0.0	1-Sided Adj	TNGUYEN20161205170659573
Explanation:	Productivit	y Enhan	cement F	Postage	savings from	combine	d electronic bills	s due to rate change.
2018 FOF-Ongoi	ng	0	0	-192	-192	0.0	1-Sided Adj	TNGUYEN20170310161804320
Explanation:		t Home	Energy G			•		e. Reduce postage cost by tronically rather than printing
2018 FOF-Ongoi	ng	0	0	-2,056	-2,056	0.0	1-Sided Adj	TNGUYEN20170509151059120
Explanation:						•	Future initiative. billing reducing	Enable CSRs to enroll postage cost.
2018 Total		0	0	-1,924	-1,924	0.0		
2019 Other		0	0	67	67	0.0	1-Sided Adj	TNGUYEN20161205170359510
Explanation:	Productivit	y Enhan	cements -	- Postag	e savings fro	m combir	ned electronic bi	ills due to rate change.
2019 Other		0	0	504	504	0.0	1-Sided Adj	TNGUYEN20161205170419950
Explanation:	Adjustmen	ts Home	Energy	Guide - ι	used to be pa	aid by CC	2200-2355 I/O	300629920
2019 Other		0	0	670	670	0.0	1-Sided Adj	TNGUYEN20161205170759647
Explanation:	Meter Grov	vth Post	tage requ	ired due	to growth			
2019 Other		0	0	-158	-158	0.0	1-Sided Adj	TNGUYEN20161205170819890
Explanation:	Rate Increa	ase Pos	tage requ	ired due	to rate incre	ase		
2019 FOF-Ongoi	ng	0	0	-3,103	-3,103	0.0	1-Sided Adj	TNGUYEN20170310161210240
Explanation:	•					•	Future initiative billing reducing	 Enable CSRs to enroll postage cost.
2019 FOF-Ongoi	ng	0	0	-192	-192	0.0	1-Sided Adj	TNGUYEN20170310161845290
Explanation:	-	t Home	Energy G			-		e. Reduce postage cost by tronically rather than printing
2019 FOF-Ongoi	ing	0	0	-377	-377	0.0	1-Sided Adj	TNGUYEN20170615212239817
Explanation:	-					-		Reduce postage cost with ease customer adoption.

Area: Witness: Category: Category-Sub: Workpaper:	Micha A. CS 8. Rer	el H. Balo - Office (nittance I	Operation Processin	s g Posta	ge essing Postag	je		
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2019 FOF-Ongo	ing	0	0	-350	-350	0.0	1-Sided Adj	TNGUYEN20170615212731210
Explanation:								Reduce cost by increasing billing enrollment process.
2019 FOF-Ongo	ing	0	0	-238	-238	0.0	1-Sided Adj	TNGUYEN20170615213154213
Explanation:		paperles	s billing b			•		Reduce printing cost by illing once the customer
2019 FOF-Ongo	ing	0	0	-22	-22	0.0	1-Sided Adj	TNGUYEN20170615215211297
Explanation:		f paperle	ss billing.			•		Reduce cost by increasing ing paperless billing video
2019 Total		0	0	-3,199	-3,199	0.0		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	8. Remittance Processing Postage
Workpaper:	200005.001 - Remittance Processing Postage

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	16,469	17,248	18,010	17,865	16,937
NSE	0	0	0	0	0
Total	16,469	17,248	18,010	17,865	16,937
FTE	0.0	0.0	0.0	0.0	0.0
djustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	-16,469	-17,248	-18,010	-17,865	-16,937
NSE	17,720	17,521	18,019	17,681	17,011
Total	1,251	274	8	-185	74
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nomina	al \$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	17,720	17,521	18,019	17,681	17,011
Total	17,720	17,521	18,019	17,681	17,011
FTE	0.0	0.0	0.0	0.0	0.0
acation & Sick (Nominal \$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0
scalation to 2016\$					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	512	218	-59	46	0
Total	512	218	-59	46	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2016\$)				
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	0
NSE	18,232	17,739	17,959	17,727	17,011
Total	18,232	17,739	17,959	17,727	17,011
FTE	0.0	0.0	0.0	0.0	0.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	8. Remittance Processing Postage
Workpaper:	200005.001 - Remittance Processing Postage

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years	2012	2013	2014	2015	2016			
Labor		0	0	0	0	0			
Non-Labor		-16,469	-17,248	-18,010	-17,865	-16,937			
NSE		17,720	17,521	18,019	17,681	17,011			
	Total	1,251	274	8	-185	74			
FTE		0.0	0.0	0.0	0.0	0.0			

Detail of Adjustments to Recorded:

Year	<u>Adj</u>	Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>		<u>Adj Type</u>	RefID
2012	Oth	ner	0	1,251	0	0.0	1-Sided Adj		TNGUYEN20161024081553853
Explanat	ion:	To true-u	p postag	le exper	ises from	prefu	ind account		
2012	Oth	ner	0	0	17,720	0.0	1-Sided Adj		TNGUYEN20161024114333093
Explanat	ion:	To move	postage	expens	es to NSI	Ξ			
2012	Oth	ner	0 -	17,720	0	0.0	1-Sided Adj		TNGUYEN20161024114442263
Explanat	ion:	To move	postage	expens	es to NSI	Ξ			
2012 Tota	al		0 -	16,469	17,720	0.0			
2013	Oth	ner	0	274	0	0.0	1-Sided Adj		TNGUYEN20161026094545687
Explanat	ion:	To true-u	p postag	le exper	ises				
2013	Oth	ner	0 -	17,521	0	0.0	1-Sided Adj		TNGUYEN20161026095015060
Explanat	ion:	To move	postage	expens	es to NSI	Ξ			
2013	Oth	ner	0	0	17,521	0.0	1-Sided Adj		TNGUYEN20161026095101670
Explanat	ion:	To move	postage	expens	es to NSI	Ξ			
2013 Tota	al		0 -	17,248	17,521	0.0			
2014	Oth	ner	0	8	0	0.0	1-Sided Adj		TNGUYEN20161026095218593
Explanat	ion:	To true-u	p postag	le exper	ises				
2014	Oth	ner	0 -	18,019	0	0.0	1-Sided Adj		TNGUYEN20161026095311470
Explanat	ion:	To move	postage	expens	es to NSI	Ξ			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	8. Remittance Processing Postage
Workpaper:	200005.001 - Remittance Processing Postage

<u>Year</u>	<u>Adj</u>	Group	<u>Labor</u>	<u>NLb</u>	<u>NSE</u>	<u>FT</u>	E	<u>Adj Type</u>	<u>RefID</u>
2014	Oth	er	0	0	18,019	0.0	1-Sided Adj		TNGUYEN20161026095345737
Explanat	tion:	To move	postage	expens	es to NSE				
2014 Tot	tal		0 -	18,010	18,019	0.0			
2015	Oth	er	0	-185	0	0.0	1-Sided Adj		TNGUYEN20161026142236490
Explanat	tion:	To true u	ip postag	e exper	ises				
2015	Oth	er	0 -1	17,681	0	0.0	1-Sided Adj		TNGUYEN20161026142336090
Explanat	tion:	To move	postage	expens	es to NSE				
2015	Oth	er	0	0	17,681	0.0	1-Sided Adj		TNGUYEN20161026142413170
Explanat	tion:	To move	postage	expens	es to NSE				
2015 Tot	tal		0 -	17,865	17,681	0.0			
2016	Oth	ier	0	74	0	0.0	1-Sided Adj		TNGUYEN20170214170848843
Explanat	tion:	200005.	.001 True	e up po	stage exp	ense	S		
2016	Oth	er	0 -1	17,011	0	0.0	1-Sided Adj		TNGUYEN20161026144101183
Explanat	tion:	To move	postage	expens	es to NSE				
2016	Oth	er	0	0	17,011	0.0	1-Sided Adj		TNGUYEN20161026144134483
Explanat	tion:	To move	postage	expens	es to NSE	-			
2016 Tot	tal		0 -	16,937	17,011	0.0			

Supplemental Workpapers for Workpaper 200005.001

1 - Actual Actual Actual Actual Actual Forest		C D	F	G	Н	1	J	К	L	М
2 2012 2013 2014 2015 2016 2017 2018 2019 1 Total Active Metters 5,576,355 5,606,113 5,683,161 5,667,128 5,700,917 5,731,814 5,774,426 5,820,293 10 Bills & Letters 10 Bills & Letters 76,127 74,427 74,983 70,706 66,6489 62,364 42,236,74 42,236,75 44,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,780,702 21,129,20 21,297,703 31,245,297 62,312,372 20,317,427 21,247,827 42,383,276 44,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,676,022 41,780,702 21,782,702 21,782,702 21,782,703 70,713,14 21,782,703 70,766 66,489 62,316,42 52,324 70,60 66,489 62,316,42 52,316,42 52,316,42 52,316,42 52,317,42 12,42 12,42,412 12,42,412 12,42,412 12,42,412	6	0							_	
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21 1.986,415 1,810,033 1,263,109 1,962,379 1,432,409 22 23 23 24 25 25 25 26 26 27 27 27 27 28 28 28 28 29 20 21 12 20 21 20 21 20 21 20 21 12 20 21 12 20 21 12 20 21 12 20 21 12 20 21 12 20 21 20 21 20 21 20 21 20 21 20 21 20 21	19									
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Ja Total Bills Per Meter 12.03 12.00 12.04 12.02 12.04 12.06 12.08 12.10 35 Letters Per Meter 0.01		Total	12.04	12.01	12.05	12.03	12.05	12.07	12.09	12.11
35 Steters Per Meter 0.01 0.01 0.01 0.01 0.01 0.01 0.01 0.01 37 10 Postal Rate 2016 2017 2018 2019 12 11 Postal Rate 2016 2017 2018 2019 12 12 11 Postal Rate S0.404 \$0.408 \$0.478 \$0.378			10.00	40.00		10.00		10.05	40.00	10.10
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17 2016 2017 2018 2019 42 Billing Letters Paper Bills Average rate \$0.404 \$0.408 \$0.408 \$0.408 43 Bayer Bills Average rate \$0.380 \$0.378		Letters Per Meter	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Indel 2016 2017 2018 2019 14 Postal Rate 2016 2017 2018 2019 143 Billing Letters Paper Bills Average rate \$0.404 \$0.408 \$0.408 \$0.408 145 My Account Suppressed Bills Average rate \$0.380 \$0.378 \$0.376 \$0.378			0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
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52 Billing Letters \$28,312 \$29,173 \$30,098 \$30,851 \$28,582 \$27,128 \$25,445 \$23,747 53 My Account Suppressed Bills \$17,691,450 \$17,492,112 \$17,988,451 \$17,649,701 \$16,982,603 \$16,509,688 \$16,152,224 \$15,796,508 56 My Account Suppressed Bills \$4,973,940 \$5,765,878 \$6,580,423 \$7,464,454 \$7,881,072 \$8,363,175 \$8,927,378 \$9,504,306 56 Consolidator e-Bills Delivered \$21,6599 \$1,076,198 \$1,195,325 \$1,240,220 \$1,256,643 \$1,287,812 \$1,320,043 57 Sub-Total Postage \$23,610,301 \$24,363,361 \$25,794,297 \$26,379,687 \$26,132,477 \$26,132,477 \$26,132,87,812 \$1,320,043 58 Bills Delivered by Channel - Percentage of Total Bills and Letters 66 67 \$9,38 67.0% 65.0% 63.1% 61.2% 59.3% 68 Bills Delivered by Channel - Percentage of Total Bills and Letters 69 67.0% 65.0% 63.1% 61.2% 59.3%		Postage								
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57 Sub-Total Postage \$23,610,301 \$24,363,361 \$25,794,297 \$26,379,687 \$26,132,477 \$26,156,634 \$26,392,859 \$26,644,604 58 63 64 Bills Delivered by Channel - Percentage of Total Bills and Letters 58 58 58 58 58 58 58 58 58 58 58 58 58 58 58 58 58 57 59.3% 67.0% 65.0% 63.1% 61.2% 59.3% 59.3% 59.3% 58 59.3% 53.1% 61.2% 59.3% 59.3% 58 59.3% 53.1% 61.2% 59.3% 59.3% 58 59.3% 53.5% 28.3% 30.1% 32.0% 33.8% 35.7% 59.3% 50.5% 100%	54									
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63 64 Bills Delivered by Channel - Percentage of Total Bills and Letters 65 66 Billing Letters 0.1%		Sub-Total Postage	\$23,010,30I	<i>324,303,301</i>	şz5,/94,29/	\$20,3/9,08/	<i>320,132,477</i>	<i>720,130,034</i>	ə20,392,859	३∠0,044,00 4
64 Bills Delivered by Channel - Percentage of Total Bills and Letters 65 66 67 70 70 70 70 77 77 74 Bills Delivered by Channel - Percentage of Total Bills and Letters 0.1% 0.1% 69.8% 67.0% 69.8% 67.0% 65.0% 63.1% 65.0% 63.1% 65.0% 63.1% 63.1% 63.1% 63.1% 63.1% 61.2% 59.3% 63.1% 63.2% 63.1% 63.2% 63.1% 63.1% 61.2% 59.3% 63.1% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 63.1% 61.2% 59.3% 61.2% 59.3% 61.2% 59.3% 61.2% 59.3% 61.2% 59.3% 61.2% 59.3% 61.2% 51.2% 61.2% 51.2% 61.2% 61.2% 51.5% 61.2% 51.5% 61.2% 61.2% 51.5% 61.2% 61.2% 61.2% 51.5% 61.2% 61.2% 51.5% 61.2% 61.2% 51.5% 61.2% 61.2% 51.5% 61.2%	58 63									
65 Billing Letters 0.1%		Bills Delivered by Channel - Percentage	of Total Bills and L	etters						
66 07 Billing Letters Paper Bills My Account Suppressed Bills 21.2% 0.1% <td>65</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	65			-						
67 Paper Bills 74.8% 71.6% 69.8% 67.0% 65.0% 63.1% 61.2% 59.3% 68 My Account Suppressed Bills 21.2% 23.8% 25.5% 28.3% 30.1% 32.0% 33.8% 35.7% 69 Consolidator e-Bills Delivered 3.9% 4.4% 4.6% 4.7% 4.8% 4.9% 5.0% 70 Total 100%	66	Billing Letters	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
69 70 Consolidator e-Bills Delivered Total 3.9% 4.4% 4.6% 4.7% 4.7% 4.8% 4.9% 5.0% 70 Total 100%	67									
Total Total 100% <	68									
71 72 Note: Total may include rounding differences. 73 73 74 74 75 Less Suppressed and eBills 6 Additional FOF Postage Benefits (\$5,890,539) (\$6,842,076) (\$7,775,748) (\$8,699,135) (\$9,619,818) (\$10,215,190) (\$10,824,349) 76 Additional FOF Postage Benefits (\$17,719,762 \$17,521,285 \$18,018,549 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255	69									
72 Note: Total may include rounding differences. 73 74 74 75 75 Less Suppressed and eBills (\$5,890,539) (\$6,842,076) (\$7,775,748) (\$8,699,135) (\$9,121,292) (\$9,619,818) (\$10,215,190) (\$10,824,349) 76 Additional FOF Postage Benefits (\$17,719,762 \$17,719,762 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255		Total	100%	100%	100%	100%	100%	100%	100%	100%
73 74 74		Nieto, Totol may include according 100								
74 75 Less Suppressed and eBills (\$5,890,539) (\$6,842,076) (\$7,775,748) (\$8,699,135) (\$9,121,292) (\$9,619,818) (\$10,215,190) (\$10,824,349) 76 Additional FOF Postage Benefits (\$17,719,762 \$17,719,725 \$18,018,549 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255		Note: Lotal may include rounding differ	ences.							
75 Less Suppressed and eBills (\$5,890,539) (\$6,842,076) (\$7,775,748) (\$8,699,135) (\$9,121,292) (\$9,619,818) (\$10,215,190) (\$10,824,349) 76 Additional FOF Postage Benefits (\$17,719,762 \$17,719,762 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255										
76 Additional FOF Postage Benefits (\$197,000) (\$1,091,000) (\$2,008,000) 77 Net Postage Expenses \$17,719,762 \$17,521,285 \$18,018,549 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255		Less Suppressed and eBills	(\$5,890,539)	(\$6,842.076)	(\$7,775,748)	(\$8,699,135)	(\$9,121,292)	(\$9,619,818)	(\$10,215,190)	(\$10,824,349)
77 Net Postage Expenses \$17,719,762 \$17,521,285 \$18,018,549 \$17,680,552 \$17,011,185 \$16,339,816 \$15,086,669 \$13,812,255			(\$5,656,555)	(\$5,5,2,2,5,0)	(\$7,7.5,7.40)	(\$5,555,255)	(\$5,121,252)			
			\$17 <u>,</u> 719,762	\$17,521,285	\$18,018,549	\$17,680,552	\$17,011,185			
	78			ties to Adjustee	d-Recorded (nomin	al) workpaper		ties to	forecast in 2016 (\$	000)

	V	W X	Y	Z	AA	ALA AD	AE	AF	AG
75	V		· ·	2					70
76									
77									
	Break-down =>	Incremental Postage Required	Im	pact Due to Growth			Impact	Due to Rate incre	ase
79		0	2017	2018	2019		2017	2018	2019
80		Bills and Billing Letters	2017	2010	2010	_		2010	2025
81		Volume	473,374	625,263	666,320)	69,192,166	69,817,429	70,483,749
82		Year-over-Year	\$179,780	\$237,500	\$253,102		-\$155,623	-\$1,275	-\$1,357
83		To the base year of 2016	\$179,780	\$417,280	\$670,382		(\$155,623)	(\$156,898)	(\$158,255)
84									
85									
86									
87	Break-down =>	Incremental Postage Savings	Im	pact Due to Growth			Impact	Due to Rate incre	ase
88 89			2017	2018	2019		2017	2018	2019
		Combined Electronic Bills							
90		Volume	1,471,490	1,575,059	1,611,529		25,449,254	27,024,313	28,635,842
91		Year-over-Year	(\$559,166)	(\$598,522)	(\$612,381	.)	\$60,640	\$3,150	\$3,222
92		To the base year of 2016	(\$559 <i>,</i> 166)	(\$1,157,688)	(\$1,770,069	<mark>))</mark>	\$60,640	\$63,790	\$67,012
93									
94									
95									
	Break-down =>	Incremental Postage - Net	Im	pact Due to Growth			Impact	Due to Rate increa	ase
97			2017	2018	2019	_	2017	2018	2019
98									
99		Year-over-Year	(\$379,386)	(\$361,022)	(\$359,279	·	-\$94,983	\$1,875	\$1,865
100		To the base year of 2016	(\$379 <i>,</i> 386)	(\$740,408)	(\$1,099,687	<mark>')</mark>	(\$94,983)	(\$93,108)	(\$91,243)
101									

Remittance Processing Postage 200005.001 Supplemental Workpaper 1 page 2 of 2

		E	ff. Aug Actual	Actual	Actual	Actual	Forecast	Forecast	Forecast
		Year	2013	2014	2015	2016	2017	2018	
WPG 1	2OO005.001 Postage								
	1a	Volume	27078	242600	465547	638235	841954	1045673	1249392
	1b	Increment		215522	222947	172688	203719	203719	203719
	1c	Postal rate	\$0.384	\$0.405	\$0.413	\$0.403	\$0.403	-	
	1d	Increment					\$0.000	\$0.000	\$0.000
	1e	Postage	\$10,398	\$98,367	\$192,125	\$257,126		\$421,406	\$503,505
	1f	Increment		\$87,969	\$93,759	\$65,000	\$82,182 *2200-2355 AM	\$82,099 *2200-2355 AM	\$82,099 ** 2200-0678 CRP

Remittance Processing Postage - HEG 200005.001 Supplemental Workpaper 2

Beginning of Workpaper 200006.000 - Customer Service Other Office Ops and Technology

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

Activity Description:

Customer Service Other Office Ops and Technology is comprised of the following groups:

The Vice President of Customer Services provides oversight and leadership for all Customer Services activities including executive support as well costs associated with a summer internship program.

Customer Operations Technology ("COT") provides business systems support including: Business requirements definition, analysis and prioritization; Quality assurance, user acceptance and regression testing of applications; Responding to and coordinating with IT on system issues; Compiling and publishing system change release notes; Administering user access and privileges to customer applications; and Facilitating internal requests for data from customer systems.

Customer Data Privacy and Energy Data Sharing develops and manages the programs for protecting customer information and sharing energy use data. As a steward of sensitive customer information, the company is focused on developing capabilities (including people, processes and technologies) to safeguard and advocate for customer privacy while meeting Federal and State privacy obligations as well as industry-accepted best practices. SoCalGas has a dedicated program manager and system administrator dedicated to these activities.

Customer Service Technology Project Management develops and manages the governance and standards for customer service technology projects, and monitors and reports on project status. Including the following activities: Project identification, prioritization and approval; Business case development; risk and issue tracking; Cross project dependency identification and management; Schedule and budget tracking; Change control; Project close-out and transition to ongoing business support; and Consolidated project status reporting.

Forecast Explanations:

Labor - Base YR Rec

A base year forecasting methodology was applied to project Customer Services Other Office Ops and Technology O&M costs. The base year method is appropriate because it reflects the growing level of support required as the number of technology projects increases. It also reflects the increased support required as the number and complexity of customer technology applications has grown. These costs are not reflected in historical averages, but are planned to continue in the forecast years.

Non-Labor - Base YR Rec

A base year forecasting methodology was applied to project Customer Services Other Office Ops and Technology O&M costs. The base year method is appropriate because it reflects the growing level of support required as the number of technology projects increases. It also reflects the increased support required as the number and complexity of customer technology applications has grown. These costs are not reflected in historical averages, but are planned to continue in the forecast years.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

Summary of Results:

		In 2016\$ (000) Incurred Costs									
		Adju	isted-Recor		Adjusted-Forecast						
Years	2012 2013		2014	2015	2016	2017	2018	2019			
Labor	2,040	2,287	2,479	2,190	1,909	2,783	2,873	2,973			
Non-Labor	657	130	656	236	155	221	206	206			
NSE	0	0	0	0	0	0	0	0			
Total	2,697	2,417	3,135	2,426	2,065	3,004	3,079	3,179			
FTE	18.9	20.1	23.1	21.4	19.9	28.7	29.7	30.7			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs											
Forecast	t Method	Bas	se Foreca	st	Forec	ast Adjust	tments	Adjusted-Forecast				
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019		
Labor	Base YR Rec	1,909	1,909	1,909	874	964	1,064	2,783	2,873	2,973		
Non-Labor	Base YR Rec	155	155	155	66	51	51	221	206	206		
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0		
Total		2,065	2,065	2,065	940	1,015	1,115	3,005	3,080	3,180		
FTE	Base YR Rec	19.9	19.9	19.9	8.8	9.8	10.8	28.7	29.7	30.7		

Forecast Adjustment Details:

Torceus	orecast Adjustment Details.								
<u>Year</u>	<u>Adj Gro</u>	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 O	ther		50	0	0	50	0.5	1-Sided Adj	TNGUYEN20161205175435150
Explana	ation:	Expenses f assignmen				•	ons as bu	siness systems	analyst after temporary
2017 Of	ther		90	0	0	90	1.0	1-Sided Adj	TNGUYEN20161205175459867
Explana	ation:	Customer I	Privacy Bu	usiness S	ystems /	Analyst. La	bor Increi	mental SA5 leve	el Mid point of 2016 MRR
2017 Ot	ther		0	15	0	15	0.0	1-Sided Adj	TNGUYEN20161205175712563
Explana	ation:	Privacy Ins all opening			2016 N	on Labor N	/landated	Privacy Notices	s included as a bill insert in
2017 Of	ther		0	75	0	75	0.0	1-Sided Adj	TNGUYEN20161205175850907
Explana	ation:		•		•		• •		on Labor Mandated completed every GRC
2017 Of	ther		64	0	0	64	0.7	1-Sided Adj	TNGUYEN20161205180712720
Explana	ation:		•				•	ions support CI ent mitigation.	S Data Governance and
2017 O	ther		22	0	0	22	0.2	1-Sided Adj	TNGUYEN20161205180802823
Explana	ation:	manageme	ent, goveri acancy, Ja	nance an	d deliver	y		adjustments for I2) = \$21.5k.	r increase in project
2017 Of	ther		46	0	0	46	0.6	1-Sided Adj	TNGUYEN20161205180909973

Area:	CS - OFFICE	OPERATIO	ONS						
Witness:	Michael H. Ba	aldwin							
Category:	A. CS - Office Operations								
Category-Sub:	9. CS - Other	Ops							
Workpaper:	200006.000	- Customer	Service	Other Office	e Ops and	d Technology			
Year Adj Gro	oup Labor	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID		
Explanation:	COT - CIS PMO F vacancy, March - SA4 level.			-			ect support 7 month		
2017 Other	58	0	0	58	0.5	1-Sided Adj	TNGUYEN20161205181004677		
Explanation:		ns support f	or CIS. S	Supervisor F	Role - Fin		acancies in technology and s/Remittance 6 month		
2017 Other	74	0	0	74	0.8	1-Sided Adj	TNGUYEN20161205181130867		
Explanation:		-					acancies in technology and 5. Add 10mo x (88.7/12) =		
2017 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205181214730		
Explanation:	COT- CIS increme and iinterfaces as	-					vanced Meter-CIS processes Advisor level.		
2017 Other	129	0	0	129	1.0	1-Sided Adj	TNGUYEN20161205181252617		
Explanation:	COT- CIS Data Ge analysis support F		and Anal	ytics Super	visor. Lab	or adjustment f	or expected increase in data		
2017 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205181334560		
Explanation:	COT - CIS Data G	overnance	and Ana	lytics Analy	st O&M I	_abor Incremen	tal, Technical Advisor level.		
2017 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205181413177		
Explanation:	COT- CIS Data G	overnance a	and Anal	ytics Analys	st O&M I	_abor Incremer	ntal, Technical Advisor level.		
2017 Other	29	0	0	29	0.4	1-Sided Adj	TNGUYEN20161205183659130		
Explanation:	Customer Service Three of five inter			-	PT Summ	er Interns 2 we	eks program (June-August).		
2017 Other	6	0	0	6	0.1	1-Sided Adj	TNGUYEN20161205183803547		
Explanation:	Incremental adjus	tment for su	pport of	intern progi	am				
2017 Other	0	-24	0	-24	0.0	1-Sided Adj	TNGUYEN20161205183842400		
Explanation:	Discontinue Marke	et Research	and CE	S Quarterly	surveys.				

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE Michael H. Ba A. CS - Office 9. CS - Other 200006.000	ldwin Operation Ops	s	Other Offic	e Ops and	d Technology	
Year Adj Gr	oup Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
2017 Total	874	66	0	940	8.8		
2018 Other	50	0	0	50	0.5	1-Sided Adj	TNGUYEN20161205175940947
Explanation:	Expenses forecast assignment to sup			-	ons as bu	siness systems	analyst after temporary
2018 Other	90	0	0	90	1.0	1-Sided Adj	TNGUYEN20161205180000473
Explanation:	Customer Privacy	Business S	Systems A	Analyst, inc	remental	labor adjustmer	nt at SA5 level.
2018 Other	90	0	0	90	1.0	1-Sided Adj	TNGUYEN20161205180054847
Explanation:	COT- Privacy E-Se	ervices Bu	siness Sy	stems Ana	lyst. Labo	or Incremental S	SA5 level.
2018 Other	0	75	0	75	0.0	1-Sided Adj	TNGUYEN20161205180135050
Explanation:	COT - Privacy Tri- Non Labor Mandated indeper GRC cycle		-		-	-	data to be completed every
2018 Other	64	0	0	64	0.7	1-Sided Adj	TNGUYEN20161205181545240
Explanation:	COT- CIS Expense Analytics after tem						S Data Governance and
2018 Other	22	0	0	22	0.2	1-Sided Adj	TNGUYEN20161205181625693
Explanation:	COT - CIS PMO P management, gov 2 month vacancy, PM3 level.	ernance ar	nd deliver	y		-	increase in project
2018 Other	46	0	0	46	0.6	1-Sided Adj	TNGUYEN20161205181702157
Explanation:	COT - CIS PMO F support 7 month v SA4 level.	• •				-	for increase in project = \$51.7K
2018 Other	58	0	0	58	0.5	1-Sided Adj	TNGUYEN20161205181738540
Explanation:		ns support	for CIS. S	Supervisor	Role - Fin		acancies in technology and s/Remittance 6 month

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 96 of 140

Area: Witness: Category: Category-Sub:	CS - OFFICE Michael H. Ba A. CS - Office 9. CS - Other	aldwin e Operation Ops	S				
Workpaper: Year Adj Gro	200006.000 Dup Labor		r Service	Other Offic	e Ops and <u>FTE</u>	d Technology	RefID
2018 Other	74	0	0	74	0.8	1-Sided Adj	TNGUYEN20161205182015063
Explanation:							acancies in technology and 6. Add 10mo x (88.7/12) =
2018 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205182212740
Explanation:	COT- CIS increme and iinterfaces as			•			vanced Meter-CIS processes dvisor level.
2018 Other	129	0	0	129	1.0	1-Sided Adj	TNGUYEN20161205182251663
Explanation:	COT - CIS Data (expected increase			• •		&M Labor, Incre	emental adjustment for
2018 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205182531197
Explanation:	COT- CIS Data G	overnance	and Ana	lytics Analy	st O&M L	_abor Incremer	ntal, Technical Advisor level.
2018 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205182623420
Explanation:	COT - CIS Data G	overnance	and Ana	alytics Analy	yst Techn	ical Advisor leve	el.
2018 Other	29	0	0	29	0.4	1-Sided Adj	TNGUYEN20161205183916120
Explanation:	Customer Service Three of five inter			-		er Interns 2 we	eks program (June-August).
2018 Other	6	0	0	6	0.1	1-Sided Adj	TNGUYEN20161205183944370
Explanation:	Incremental adjus	tment for s	upport of	intern prog	Iram		
2018 Other	0	-24	0	-24	0.0	1-Sided Adj	TNGUYEN20161205184004663
Explanation:	Discontinue Marke	et Researcl	h and CE	S Quarterly	y surveys		
2018 Total	964	51	0	1,015	9.8		
2019 Other	50	0	0	50	0.5	1-Sided Adj	TNGUYEN20161205180218863
Explanation:	Expenses forecas assignment to sup				ons as bus	siness systems	analyst after temporary
2019 Other	90	0	0	90	1.0	1-Sided Adj	TNGUYEN20161205180240000
Explanation:	Customer Privacy	Business S	Systems	Analyst. La	abor Increi	mental SA5 leve	el.

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE Michael H. Ba A. CS - Office 9. CS - Other 200006.000	aldwin Operation Ops	s	Other Office	e Ops an	d Technology		
Year Adj Gro	oup Labor	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID	
2019 Other	90	0	0	90	1.0	1-Sided Adj	TNGUYEN20161205180303367	
Explanation:	COT- Privacy eSe	rvices Busi	iness Sys	stems Analy	st. Labo	r Incremental SA	A5 level.	
2019 Other	100	0	0	100	1.0	1-Sided Adj	TNGUYEN20161205180345193	
Explanation:	COT - Privacy En Incemental SA5 le		-	-	Iministrat	or - O&M Labo	r,	
2019 Other	0	75	0	75	0.0	1-Sided Adj	TNGUYEN20161205180409443	
Explanation:	Tri-Annual Privacy Mandated indeper GRC cycle		-	-			data to be completed every	
2019 Other	64	0	0	64	0.7	1-Sided Adj	TNGUYEN20161205182754820	
Explanation:	COT- CIS Expens Analytics after terr				-		S Data Governance and	
2019 Other	22	0	0	22	0.2	1-Sided Adj	TNGUYEN20161205182902100	
Explanation:	COT- CIS PMO P management, gov 2 month vacancy, PM3 level.	ernance ar	nd deliver	ту		-	increase in project	
2019 Other	46	0	0	46	0.6	1-Sided Adj	TNGUYEN20161205182946600	
Explanation:	COT - CIS PMO F support. 7 month SA4 level.					-	or increase in project 51.7K	
2019 Other	58	0	0	58	0.5	1-Sided Adj	TNGUYEN20161205183022743	
Explanation:	COT- CIS incremental adjustment for expected increase and back-fill of vacancies in technology and business operations support for CIS. Supervisor Role - Finance/Collections/Remittance 6 month vacancy, July - Dec 2016. Add 6mo x (\$116.9/12) = \$58.4 ST5 level.							
2019 Other	74	0	0	74	0.8	1-Sided Adj	TNGUYEN20161205183148930	
Explanation:		-					acancies in technology and 6. Add 10mo x (88.7/12) =	
2019 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205183228217	

Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 98 of 140

Area: Witness: Category: Category-Sub: Workpaper:	CS - OFFICE (Michael H. Bal A. CS - Office 9. CS - Other (200006.000 -	dwin Operations Ops	3	Other Office	e Ops an	d Technoloay	
Year Adj Gro		NLbr	NSE	Total	FTE	Adj_Type	RefID
Explanation:		ntal adjustr	ment for	expected in	crease in	support for Adv	vanced Meter-CIS processes
2019 Other	129	0	0	129	1.0	1-Sided Adj	TNGUYEN20161205183300743
Explanation:	COT- CIS Data Go increase in data an PM3 level.			lytics Super	visor Lab	oor, Incremental	adjustment for expected
2019 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205183337697
Explanation:	COT- CIS Data Go	vernance a	and Anal	ytics Analys	st O&M I	Labor Incremer	ntal, Technical Advisor level.
2019 Other	102	0	0	102	1.0	1-Sided Adj	TNGUYEN20161205183412807
Explanation:	COT- CIS Data Go	vernance a	and Anal	ytics Analys	st O&M I	Labor Incremer	ntal, Technical Advisor level.
2019 Other	29	0	0	29	0.4	1-Sided Adj	TNGUYEN20161205184029260
Explanation:	Customer Service S Three of five intern			-	PT Summ	er Interns 2 we	eks program (June-August).
2019 Other	6	0	0	6	0.1	1-Sided Adj	TNGUYEN20161205184056387
Explanation:	Incremental adjustr	ment for su	pport of	intern progr	am		
2019 Other	0	-24	0	-24	0.0	1-Sided Adj	TNGUYEN20161205184109807
Explanation:	Discontinue Market	t Research	and CE	S Quarterly	surveys		
2019 Total	1,064	51	0	1,115	10.8		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

Determination of Adjusted-Recorded (Incurred Costs):

	a-Recorded (Incurred Cos 2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	1,601	1,829	2,032	1,846	1,770
Non-Labor	1,174	667	804	265	1,727
NSE	0	0	0	0	0
Total	2,775	2,496	2,836	2,112	3,497
FTE	16.2	17.2	19.7	18.4	17.8
djustments (Nominal \$) *	*				
Labor	0	0	0	-6	-130
Non-Labor	-535	-539	-146	-30	-1,572
NSE	0	0	0	0	0
Total	-535	-539	-146	-36	-1,702
FTE	0.0	0.0	0.0	-0.1	-0.8
Recorded-Adjusted (Nomir	nal \$)				
Labor	1,601	1,829	2,032	1,840	1,639
Non-Labor	639	128	658	235	155
NSE	0	0	0	0	0
Total	2,240	1,957	2,691	2,075	1,795
FTE	16.2	17.2	19.7	18.3	17.0
acation & Sick (Nominal S	\$)				
Labor	256	304	332	298	270
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	256	304	332	298	270
FTE	2.7	2.9	3.3	3.1	2.9
scalation to 2016\$					
Labor	182	154	115	52	0
Non-Labor	18	2	-2	1	0
NSE	0	0	0	0	0
Total	201	156	113	53	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	2,040	2,287	2,479	2,190	1,909
Non-Labor	657	130	656	236	155
NSE	0	0	0	0	0
Total	2,697	2,417	3,135	2,426	2,065
FTE	18.9	20.1	23.0	21.4	19.9

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
Years 2012 2013 2014 2015 2016									
Labor		0	0	0	-6	-130			
Non-Labor		-535	-539	-146	-30	-1,572			
NSE		0	0	0	0	0			
	Total	-535	-539	-146	-36	-1,702			
FTE		0.0	0.0	0.0	-0.1	-0.8			

Detail of Adjustments to Recorded:

Year	Adj (<u>Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2012	Oth	er	0	-41	0	0.0	CCTR Transf To 2200-0404.000	TNGUYEN20161201104631597
Explanation: Cost element 6220002 Transfer from CC: 2200-2094 to 2200-0404 Click - Fox invoice for \$41,250 transfer to Customer Contact Center								
2012	Oth	er	0	-494	0	0.0	CCTR Transf To 2200-0404.000	TNGUYEN20161201105123647
Explanation: Cost element 6220600 Transfer CC: 2200-2094 to CC: 2200-0404 workpaper (200001.) CCC Technology Various consultants; (Accenture LLP, Ernest & Young, Camack Consulting etc.,) supporting the IVR, Data Roadmap and Order Tracker for the Customer Contact Center								
2012 Total	I		0	-535	0	0.0		
2013	Oth	er	0	-539	0	0.0	CCTR Transf To 2200-0404.000	TNGUYEN20161201105917067
2013 Explanatio		Cost eleme Various co	ent: 6220 onsultant	0600 Tra s; (Accei	ansfer \$ nture LL	CC: .P, Er	CCTR Transf To 2200-0404.000 200-2094 to CC: 2200-0404 (workpap nest & Young & Camack Consulting e contact Center.	er 200001.) CCC Technology
	on:	Cost eleme Various co	ent: 6220 onsultant	0600 Tra s; (Accei	ansfer \$ nture LL	CC: .P, Er	200-2094 to CC: 2200-0404 (workpap nest & Young & Camack Consulting e	er 200001.) CCC Technology
Explanatio	on:	Cost eleme Various co	ent: 6220 onsultant ′iew proje	0600 Tra s; (Accei ect at the	ansfer \$ nture LL e Custor	CC: P, Er mer C	200-2094 to CC: 2200-0404 (workpap nest & Young & Camack Consulting e	er 200001.) CCC Technology
Explanatio	on:	Cost eleme Various co Desktop V	ent: 6220 onsultant ′iew proje	0600 Tra s; (Accei ect at the	ansfer \$ nture LL e Custor	CC: . .P, Er mer C 0.0	200-2094 to CC: 2200-0404 (workpap nest & Young & Camack Consulting e	er 200001.) CCC Technology
Explanatio	on: I Oth	Cost eleme Various co Desktop V er	ent: 6220 onsultant 'iew proje 0 0 to cost o	0600 Tra s; (Accented at the -539 -47 center / v	ansfer \$ nture LL Custor 0	CC: P, Er ner C 0.0	200-2094 to CC: 2200-0404 (workpap nest & Young & Camack Consulting e contact Center.	er 200001.) CCC Technology tc.,) supporting the Single TNGUYEN20161202091046490

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	9. CS - Other Ops
Workpaper:	200006.000 - Customer Service Other Office Ops and Technology

<u>Year</u>	<u>Adj</u>	Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	RefID
Explanat	ion:	"GROW Utility Pa	' Initiative - artners of A Environme	merica a		r grou	p 2FC004.000 cost element: 6230380	
2014	Oth	er	0	0	0	0.0 C	CCTR Transf To 2200-2543.000	TNGUYEN20161202091502087
Explanat	ion:	"GROW	\$ to cost c Initiative -3 e Travel ar	0075803	3	r grou	p 2FC004.000 cost element: 6130010	
2014	Oth	ier	0	0	0	0.0 C	CCTR Transf To 2200-2543.000	TNGUYEN20161202091654710
Explanat	ion:	"GROW	\$ to cost c Initiative - : Expenses	30075803		r grou	p 2FC004.000 cost element: 6220060	
2014	Oth	ier	0	0	0	0.0 C	CCTR Transf To 2200-2543.000	TNGUYEN20161202091837367
Explanat	tion:	"GROW	\$ to cost c Initiative - 3 ne expense	30075803		r grou	p 2FC004.000 cost element: 6320002	
2014	Oth	ier	0	-49	0	0.0 C	CCTR Transf To 2200-2543.000	TNGUYEN20161202092129510
Explanat	ion:		\$ to cost c nitiative - T			-	p 2FC004.000 cost element: 6230380 0758033)
2014	Oth	er	0	0	0	0.0 C	CCTR Transf To 2200-2543.000	TNGUYEN20161202104646323
Explanat	ion:		\$ to cost c Initiative - 3			-	p 2FC004.000 cost element 6340000 djmt"	
2014 Tota	al		0	-146	0	0.0		
2015	Oth	ier	0	-30	0	0.0 1	-Sided Adj	TNGUYEN20161201112513673
Explanat	ion:						diture was charged to O&M should belo IO# 300764787	ng in Refundable program:
2015	Alis	60	0	0	0	0.0 1	-Sided Adj	TNGUYEN20161202085715020
Explanat	ion:	Aliso - re	emove Aliso	o Canyon	related	costs	cost element; 6130012, 6130015, 61	30050, 6213085

Area: Witness: Category: Category-Sub Workpaper:									
<u>Year Ad</u>	ij Group L	abor	<u>NLbr</u>	NSE	FT	E	Adj Type	RefID	
	liso	0	0	0		 1-Sided Adj		TNGUYEN20161202085911333	
Explanation:	Aliso - Re 6110020	move Ali	so Canyor	relat	ed co	sts. Cost element:			
2015 A	liso	-6	0	0	-0.1	1-Sided Adj		TNGUYEN20161202090407223	
Explanation:	Aliso - Re 6110020,			relate	ed co	sts cost elements:			
2015 Total		-6	-30	0	-0.1				
2016 A	liso	-2	0	0	0.0	1-Sided Adj		TNGUYEN20161201113308880	
Explanation:	Aliso - ren	noving Al	liso Canyo	n rela	ted co	osts. cost element: 61	10080		
2016 A	liso	-48	0	0	-0.6	1-Sided Adj		TNGUYEN20161201113505440	
Explanation:	Aliso - Re	move Ali	so Canyor	relate	ed co	sts cost element: 611	10020		
2016 A	liso	-44	-331	0	0.4	1-Sided Adj		TNGUYEN20161201113602847	
Explanation:	Aliso - CC	220-203	86 remove	Aliso	Cany	on related costs cost	center 6110020.		
2016 A	liso	-1	0	0	0.0	1-Sided Adj		TNGUYEN20161201113743130	
Explanation:	Aliso - ren	nove Alis	o Canyon	relate	d cos	sts cost element 6110	020		
2016 A	liso	-18	0	0	-0.3	1-Sided Adj		TNGUYEN20161201113854877	
Explanation:	Aliso - ren	noved Ali	iso related	costs	cost	t element 6110020			
2016 A	liso	0 -	1,241	0	0.0	1-Sided Adj		TNGUYEN20161201191706213	
Explanation:	6130012,	6130014	, 6130015	, 6130	0020,		6213030, 6213085, 6	5130010, 6130011, 5213180, 6220040, 6220060, 5221070, 6230600, 6320002,	

2016 Aliso -17 0 0 -0.3 1-Sided Adj TNGUYEN20161201191907363 Aliso - Remove Aliso Canyon related cost. cost element: 6110020, 6110030, 6110171, 6110181 **Explanation:** 2016 Total -130 -1,572 0 -0.8

Note: Totals may include rounding differences.

Beginning of Workpaper 200007.000 - Measurement Data Ops (MDO)

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	10. Meas Data Ops (MDO)
Workpaper:	200007.000 - Measurement Data Ops (MDO)

Activity Description:

The Measurement Data Operations (MDO) group monitors and maintains accurate and timely measurement reporting for approximately 1,289 large gas volume meters equipped with electronic measurement devices collected by the Measurement Collection System (MCS). The MDO group provides support to key departments on the processing and reporting of measurement and gas quality data pertaining to customers, suppliers, and storage operations.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project MDO O&M costs. The Base Year represents the most recent recorded labor and non-labor costs. Adjustments to reflect full year staffing levels were then made to the Base Year to represent forecasted expenses in the test year.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project MDO O&M costs. The Base Year represents the most current recorded O&M costs. Adjustments to reduce telecommunication costs associated with MDO measurement equipment utilizing Advanced Meter technology were then made to the Base Year to represent forecasted expenses in the test year.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

Γ	In 2016\$ (000) Incurred Costs												
		Adju	Adjusted-Forecast										
Years	2012	2013	2014	2015	2016	2017	2018	2019					
Labor	998	938	894	858	812	925	925	925					
Non-Labor	480	583	534	488	501	423	159	117					
NSE	0	0	0	0	0	0	0	0					
Total	1,478	1,521	1,429	1,346	1,314	1,348	1,084	1,042					
FTE	12.4	11.4	11.0	10.6	9.9	11.5	11.5	11.5					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	10. Meas Data Ops (MDO)
Workpaper:	200007.000 - Measurement Data Ops (MDO)

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs												
Forecast	t Method	Bas	se Foreca	st	Forec	ast Adjust	tments	Adjusted-Forecast				
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019		
Labor	Base YR Rec	812	812	812	113	113	113	925	925	925		
Non-Labor	Base YR Rec	501	501	501	-78	-342	-384	423	159	117		
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0		
Tota	I	1,314	1,314	1,314	35	-229	-271	1,349	1,085	1,043		
FTE	Base YR Rec	9.9	9.9	9.9	1.6	1.6	1.6	11.5	11.5	11.5		

Forecast Adjustment Details:

<u>Year</u> <u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Other	113	0	0	113	1.6	1-Sided Adj	TNGUYEN20161205121037410

Explanation: 2016 Base

2016 Base Year numbers include approximately 4 months of a Gas Measurement Analyst-5 salary (\$27k and .3 FTE). An adjustment of \$52k and .7 FTE has been made to reflect full year staffing levels in forecast years.

2016 Base Year numbers include approximately 3 months of a Gas Measurement Analyst-5 salary (\$21k and .3 FTE). An adjustment of \$53k and .7 FTE has been made to reflect full year staffing levels in forecast years.

2016 Base Year numbers include approximately 9 months of a Gas Measurement Analyst-5 salary (\$57k and .8 FTE). An adjustment of \$17k and .2 FTE has been made to reflect full year staffing levels in forecast years.

2016 Base Year numbers include approximately 10 months of a Administrative Clerk-3 salary (\$58k and .8 FTE). An adjustment of \$11k and .2 FTE has been made to reflect full year staffing levels in forecast years.

2016 Base Year numbers include approximately (\$21k and .2 FTE) in overtime charges. An adjustment to remove the overtime (\$21k and .2 FTE) has been made as a result of our full year staffing level adjustments.

2017 Other		0	-78	0	-78	0.0	1-Sided Adj	TNGUYEN20161205121103510	
Explanation: Reduction in telecommunication cost associated with measurement equipment for Non-Core customers utilizing Advanced Meter technology.									
2017 Total		113	-78	0	35	1.6			

2018 Other	113	0	0	113	1.6	1-Sided Adj	TNGUYEN20161205121133300
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Note: Totals may include rounding differences. SCG/CS - OFFICE OPERATIONS/Exh No:SCG-19-WP-R/Witness: M. Baldwin Page 106 of 140

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	10. Meas Data Ops (MDO)
Workpaper:	200007.000 - Measurement Data Ops (MDO)

<u>Year</u>	Adj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
Explana	(; 16 16 2 (; 16 2 2 3 6 5 17 10 10 10 10 10 10 10 10 10 10 10 10 10	\$27k and .3 FTE). evels in forecast ye deasurement Anal o reflect full year s 016 Base Year nu \$57k and .8 FTE). evels in forecast ye 016 Base Year nu nd .8 FTE). An ac orecast years. 016 Base Year nu djustment to remot taffing level adjust	An adjust ears. 2016 yst-5 salar taffing leve imbers incl An adjust ears. imbers incl djustment o	ment of § Base Ye y (\$21k a els in fore ude appr ment of \$ ude appr of \$11k a	\$52k and .7 ear number and .3 FTE) ecast years. roximately 9 \$17k and .2 roximately 1 nd .2 FTE h	FTE has s include An adju months FTE has 0 months as been \$21k and	been made to approximately i istment of \$53k of a Gas Measu been made to s of a Administr made to reflect	urement Analyst-5 salary reflect full year staffing 3 months of a Gas and .7 FTE has been made urement Analyst-5 salary reflect full year staffing ative Clerk-3 salary (\$58k full year staffing levels in rtime charges. An a result of our full year
2018 O	other	0	-342	0	-342	0.0	1-Sided Adj	TNGUYEN20161205121149487
Explana		Reduction in teleco ustomers utilizing				vith meas	surement equip	ment for Non-Core
2018 To	otal	113	-342	0	-229	1.6		
2019 O Explana	ation: 2 (; 6 6 1 1	\$27k and .3 FTE). evels in forecast ye leasurement Anal o reflect full year s 016 Base Year nu \$57k and .8 FTE). evels in forecast ye 016 Base Year nu	An adjust ears. 2016 yst-5 salar taffing leve mbers incl An adjust ears. mbers incl	ment of \$ Base Ye y (\$21k a els in fore ude appr ment of \$ ude appr	\$52k and .7 ear number and .3 FTE) cast years. roximately 9 \$17k and .2	FTE has s include An adju months FTE has 0 months	been made to approximately istment of \$53k of a Gas Measu been made to s of a Administr	TNGUYEN20161205121214383 urement Analyst-5 salary reflect full year staffing 3 months of a Gas and .7 FTE has been made urement Analyst-5 salary reflect full year staffing ative Clerk-3 salary (\$58k full year staffing levels in
2019 O	a		ve the ove		• •			rtime charges. An a result of our full year TNGUYEN20161205121229270

Area:	CS - C	FFICE O	PERATIO	ONS				
Witness:	Michae	el H. Bald	win					
Category:	A. CS	- Office O	peration	S				
Category-Sub:	10. Me	eas Data (Ops (MD	0)				
Workpaper:	20000	07.000 - N	leasurer	nent Data	Ops (MD	D)		
Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	Adj_Type	RefID
Explanation:	Reduction customers					with meas	surement equipmer	nt for Non-Core
2019 Total		113	-384	0	-271	1.6		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	10. Meas Data Ops (MDO)
Workpaper:	200007.000 - Measurement Data Ops (MDO)

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
corded (Nominal \$)*					
Labor	783	750	733	721	697
Non-Labor	467	576	523	500	491
NSE	0	0	0	0	0
Total	1,250	1,326	1,256	1,220	1,188
FTE	10.7	9.7	9.4	9.0	8.5
djustments (Nominal \$) *	*				
Labor	0	0	0	0	0
Non-Labor	0	0	13	-13	11
NSE	0	0	0	0	0
Total	0	0	13	-13	11
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Nomin	nal \$)				
Labor	783	750	733	721	697
Non-Labor	467	576	536	487	501
NSE	0	0	0	0	0
Total	1,250	1,326	1,269	1,207	1,199
FTE	10.7	9.7	9.4	9.0	8.5
acation & Sick (Nominal	\$)				
Labor	125	125	120	117	115
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	125	125	120	117	115
FTE	1.8	1.6	1.6	1.5	1.4
scalation to 2016\$					
Labor	89	63	41	20	0
Non-Labor	13	7	-2	1	0
NSE	0	0	0	0	0
Total	103	70	40	22	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	998	938	894	858	812
Non-Labor	480	583	534	488	501
NSE	0	0	0	0	0
Total	1,478	1,521	1,429	1,346	1,314
FTE	12.5	11.3	11.0	10.5	9.9

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	10. Meas Data Ops (MDO)
Workpaper:	200007.000 - Measurement Data Ops (MDO)

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs									
	Years	2012	2013	2014	2015	2016			
Labor	-	0	0	0	0	0			
Non-Labor		0	0	13	-13	11			
NSE		0	0	0	0	0			
	Total [–]	0	0	13	-13	11			
FTE		0.0	0.0	0.0	0.0	0.0			

Detail of Adjustments to Recorded:

<u>Year A</u>	dj Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	RefID
2012 Total		0	0	0	0.0		
2013 Total		0	0	0	0.0		
2014 (Other	0	13	0	0.0	1-Sided Adj	TNGUYEN20161102083815033
Explanation		non-labor e payment.		sociate	d with	MDO collection software expense	e from 2015 to 2014 due to a delay
2014 Total		0	13	0	0.0		
2015 0	Other	0	-13	0	0.0	1-Sided Adj	TNGUYEN20161018125456683
Explanation		non-labor e payment.		sociate	d with	MDO collection software expense	e from 2015 to 2014 due to a delay
2015 Total		0	-13	0	0.0		
2016 0	Other	0	11	0	0.0	1-Sided Adj	TNGUYEN20161128132918727
Explanation	agreeme remainde	nt. This is er paid in 2 I \$14,204.	a one-t 017. Al	ime defe so, 201	erral \ 7 will	Adjustment to reflect the total contr where only a portion of the invoice show an overstatement due to this t) - \$3,551.05 (Oct\Nov 2016 partia	will be paid in 2016 with the sone-time deferral of payment.
2016 Total		0	11	0	0.0		

Supplemental Workpapers for Workpaper 200007.000

MDO Telemetry Cost Adjustments 8/10/2017 GRC Work Paper Group: 200007.000 - Meas Da	ita C	ps (MD	O)													
Telecommunications Costs Due to Utilizing A	dva	nced N	lete	r Techi	nolo	gy										
In 2016\$ (000) Incurred Costs																
				Adju	ustec	l-Reco	rded					Adj	uste	d-Fored	cast	
		2012	2	2013	2	014	2	015	2	016	2	2017	2	2018	2	2019
MDO Telecommunications Cost	\$	461	\$	569	\$	523	\$	467	\$	483	\$	405	\$	141	\$	99
Percent Decrease due to Utilizing AM Technology	/											-16%		-65%		-30%
*Decrease in Telecommunication Dollars \$ (78) \$ (264) \$ (42)																
Total Dollars Below Base Year \$ (78) \$ (342) \$ (384)																
*Reduction in telecommunications cost are associ	ated	with m	easu	irement	equ	ipment	for N	/IDO ut	ilizinę	g Adva	ncec	Meter	tech	nology.		

Measured Data Ops 200007.000 - Telemetry Cost Supplemental Workpaper 1

Southern California Gas Company 2019 GRC - REVISED Non-Shared Service Workpapers

Area: CS - OFFICE OPERATIONS

Witness: Michael H. Baldwin

Summary of Shared Services Workpapers:

	In 2016 \$ (000) Incurred Costs								
	Adjusted- Recorded	Adjusted-Forecast							
Description	2016	2017	2018	2019					
A. CS - Office Operations	5,403	5,511	5,492	5,492					
Total	5,403	5,511	5,492	5,492					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Cost Center:	VARIOUS

Summary for Category: A. CS - Office Operations

	In 2016\$ (000) Incurred Costs											
	Adjusted-Recorded	Adjusted-Forecast										
	2016	2017	2018	2019								
Labor	4,089	4,204	4,204	4,204								
Non-Labor	1,309	1,302	1,283	1,283								
NSE	5	5	5	5								
Total	5,403	5,511	5,492	5,492								
FTE	52.3	53.4	53.4	53.4								

Cost Centers belonging to this Category:

2200-0354.000 MAJOR M	ARKET CREDIT and CO	LLECTIONS		
Labor	1,285	1,307	1,307	1,307
Non-Labor	323	316	297	297
NSE	0	0	0	0
Total	1,608	1,623	1,604	1,604
FTE	13.4	13.5	13.5	13.5
2200-0355.000 PAYMENT	PROCESSING			
Labor	2,496	2,521	2,521	2,521
Non-Labor	985	985	985	985
NSE	5	5	5	5
Total	3,486	3,511	3,511	3,511
FTE	36.0	36.4	36.4	36.4
2200-2247.000 MANAGE	R OF REMITTANCE PRO	CESSING		
Labor	308	376	376	376
Non-Labor	1	1	1	1
NSE	0	0	0	0
Total	309	377	377	377
FTE	2.9	3.5	3.5	3.5

Beginning of Workpaper 2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Activity Description:

The Major Market Credit & Collections (MMCC) group is responsible for the credit analysis and collection follow up on large Commercial and Industrial customers and other third party entities at both SCG and SDG&E.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Major Market Credit & Collections O&M costs. The Base Year represents the most recent recorded labor and non-labor costs. Adjustments for full year staffing levels were then made to the Base Year to represent forecasted expenses in the test year.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Major Market Credit & Collections O&M costs. The Base Year represents the most recent recorded O&M costs.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

		In 2016\$ (000) Incurred Costs											
		Adju	isted-Recor	Ad	justed-Fored	cast							
Years	2012	2013	2014	2015	2016	2017	2018	2019					
Labor	1,278	1,229	1,126	1,193	1,285	1,307	1,307	1,307					
Non-Labor	382	318	323	324	323	316	297	297					
NSE	0	0	0	0	0	0	0	0					
Total	1,660	1,547	1,449	1,517	1,608	1,623	1,604	1,604					
FTE	13.6	13.4	12.6	12.7	13.4	13.5	13.5	13.5					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Cost Center Allocations (Incurred Costs):

		2016 Adjus	sted-Reco	rded		2017 Adjı	usted-Fore	cast		
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	1	0	3	0.0	2	1	0	3	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,283	322	0	1,605	13.4	1,305	315	0	1,620	13.5
Total Incurred	1,285	323	0	1,608	13.4	1,307	316	0	1,623	13.5
% Allocation										
Retained	50.77%	50.77%				57.76%	57.76%			
SEU	49.23%	49.23%				42.24%	42.24%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			
		2018 Adjus	sted-Fore	cast			2019 Adjı	usted-Fore	cast	

		•				Non-LaborNSETotalFTE1030.0					
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE	
Directly Retained	2	1	0	3	0.0	2	1	0	3	0.0	
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0	
Subj. To % Alloc.	1,305	296	0	1,601	13.5	1,305	296	0	1,601	13.5	
Total Incurred	1,307	297	0	1,604	13.5	1,307	297	0	1,604	13.5	
% Allocation											
Retained	57.76%	57.76%				57.76%	57.76%				
SEU	42.24%	42.24%				42.24%	42.24%				
CORP	0.00%	0.00%				0.00%	0.00%				
Unreg	0.00%	0.00%				0.00%	0.00%				

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

The MMCC group is responsible for the credit analysis and collection follow-up on large commercial and industrial customers and other third party entities. Therefore, our primary driver to direct shared service dollars was an allocation based on the number of hours required to complete the credit analysis of various companies / entities for SCG and SDG&E. For 2014 through 2016, we used historical activity from December 1, 2012 through November 30, 2013. This activity represented an allocation of 50.77% (SCG) and 49.23% (SDG&E) based on the total hours worked on SCG and SDG&E credit analyses within this timeframe.

Cost Center Allocation Percentage for 2017

The MMCC group is responsible for the credit analysis and collection follow-up on large commercial and industrial customers and other third party entities. Therefore, our primary driver to direct shared service dollars was an allocation based on the number of hours required to complete the credit analysis of various companies / entities for SCG and SDG&E. For 2017 through 2019, we used historical activity from December 1, 2015 through November 30, 2016. This activity represented an allocation of 57.76% (SCG) and 42.24% (SDG&E) based on the total hours worked on SCG and SDG&E credit analyses within this timeframe.

Cost Center Allocation Percentage for 2018

The MMCC group is responsible for the credit analysis and collection follow-up on large commercial and industrial customers and other third party entities. Therefore, our primary driver to direct shared service dollars was an allocation based on the number of hours required to complete the credit analysis of various companies / entities for SCG and SDG&E. For 2017 through 2019, we used historical activity from December 1, 2015 through November 30, 2016. This activity represented an allocation of 57.76% (SCG) and 42.24% (SDG&E) based on the total hours worked on SCG and SDG&E credit analyses within this timeframe.

Cost Center Allocation Percentage for 2019

The MMCC group is responsible for the credit analysis and collection follow-up on large commercial and industrial customers and other third party entities. Therefore, our primary driver to direct shared service dollars was an allocation based on the number of hours required to complete the credit analysis of various companies / entities for SCG and SDG&E. For 2017 through 2019, we used historical activity from December 1, 2015 through November 30, 2016. This activity represented an allocation of 57.76% (SCG) and 42.24% (SDG&E) based on the total hours worked on SCG and SDG&E credit analyses within this timeframe.

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs												
Forecas	t Method	Bas	se Foreca	st	Forec	ast Adjust	ments	Adjusted-Forecast					
Years	5	2017 2018 2019			2017	2018	2019	2017	2018	2019			
Labor	Base YR Rec	1,285	1,285	1,285	22	22	22	1,307	1,307	1,307			
Non-Labor	Base YR Rec	323	323	323	-7	-26	-26	316	297	297			
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0			
Tota	I	1,608	1,608	1,608	15	-4	-4	1,623	1,604	1,604			
FTE	Base YR Rec	13.4	13.4	13.4	0.1	0.1	0.1	13.5	13.5	13.5			

Forecast Adjustment Details:

years.

<u>Year</u> Adj Gr	oup <u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Other	32	0	0	32	0.3	1-Sided Adj	TNGUYEN20161205143535593
Explanation:	(refundable program Base Year numbers	n) by a Maj include ap	or Mark oproxima	ets Credit 8 ately 10 mo	Collection the of A	ons Administrati dministrative As	ution Riser Integrity Project ve Associate in 2016. 2016 sociate salary (\$42k and .8 ar staffing levels in forecast

2016 Base Year numbers include approximately 11 months of a Sr. Credit and Collections Analyst salary (\$79k and .9 FTE). An adjustment of \$23k and .1 FTE has been made to reflect full year staffing levels in forecast years.

2017 FOF-Ongoing	0	-6	0	-6	0.0	1-Sided Adj	TNGUYEN20170831093559930
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Explanation: FOF Grp4 Idea# 53 Major Mkts - Cost efficiencies related to Fueling our Future initiative. Reduction in cost by reducing the number of credit information agencies we subscribe to without creating additional risk to timeliness.

2017 FOF-Ongoing -10 -1 0 -11 -0.2 1-Sided Adj TNGUYEN20170831093722950

Explanation: FOF Grp4 Idea# 62 Major Mkts - Cost efficiencies related to Fueling our Future initiative. Reduce cost by accepting e-signatures instead of ink signatures for credit review packages by routing packages electronically.

2017 Total	22	-7	0	15	0.1		
2018 Other	22	0	0	20	0.0		
	32	0	0	32	0.3	1-Slaed Adj	TNGUYEN20161205143630593

Area: Witness: Category: Category-St Cost Center	Mi A. ub: 1.	S - OFFICE C ichael H. Balc CS - Office C Major Market 200-0354.000	lwin Operations : Credit &	Collection		and COL	LECTIONS	
Year Ad	j Group	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj_Type</u>	RefID
Explanation	 Explanation: To account for approximately 2 months of temporary support of the Distribution Riser Integrity Project (refundable program) by a Major Markets Credit & Collections Administrative Associate in 2016. 20 Base Year numbers include approximately 10 months of Administrative Associate salary (\$42k and FTE). An adjustment of \$10k and .2 FTE has been made to reflect full year staffing levels in forecan years. 2016 Base Year numbers include approximately 11 months of a Sr. Credit and Collections Analyst salary (\$79k and .9 FTE). An adjustment of \$23k and .1 FTE has been made to reflect full year staffing levels in forecan staffing levels in forecast years. 							
2018 FOF-0	Ongoing	0	-25	0	-25	0.0	1-Sided Adj	TNGUYEN20170831093621337
Explanatior	cost by		-				-	uture initiative. Reduction in to without creating additional
2018 FOF-0	Ongoing	-10	-1	0	-11	-0.2	1-Sided Adj	TNGUYEN20170831093740650
Explanation	by acc		-				-	uture initiative. Reduce cost ages by routing packages
2018 Total		22	-26	0	-4	0.1		
2019 Other		32	0	0	32	0.3	1-Sided Adj	TNGUYEN20161205143756037
Explanation	(refund Base Y FTE). years. 2016 E	lable program ⁄ear numbers An adjustmer Base Year nur	n) by a Ma include a nt of \$10k mbers incl	jor Marke pproxima and .2 F ⁻ ude appr	ets Credit & ately 10 mc TE has been oximately	& Collection onths of A en made f 11 month	ons Administrat dministrative As to reflect full yea s of a Sr. Credit	oution Riser Integrity Project ive Associate in 2016. 2016 ssociate salary (\$42k and .8 ar staffing levels in forecast t and Collections Analyst
	-	(\$79k and .9 g levels in fore		-	ent of \$23k	and .1 F	TE has been m	ade to reflect full year
2019 FOF-(Ongoing	0	-25	0	-25	0.0	1-Sided Adj	TNGUYEN20170831093636020
Explanatior	cost by							uture initiative. Reduction in to without creating additional
2019 FOF-0	Ongoing	-10	-1	0	-11	-0.2	1-Sided Adj	TNGUYEN20170831093759790
Explanation	by acc							uture initiative. Reduce cost ages by routing packages

<u>RefID</u>

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS
Year Adj Group	<u>Labor NLbr NSE Total FTE Adj_Type</u>

-26

22

0

-4

0.1

2019 Total

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*	· · ·				· · ·
Labor	1,039	1,014	947	1,014	1,103
Non-Labor	360	306	316	320	156
NSE	0	0	0	0	0
Total	1,399	1,319	1,263	1,334	1,259
FTE	11.7	11.5	10.8	10.9	11.5
djustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	0	167
NSE	0	0	0	0	0
Total	0	0	0	0	167
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Nomina	al \$)				
Labor	1,039	1,014	947	1,014	1,103
Non-Labor	360	306	316	320	323
NSE	0	0	0	0	0
Total	1,399	1,319	1,263	1,334	1,426
FTE	11.7	11.5	10.8	10.9	11.5
acation & Sick (Nominal \$))				
Labor	166	168	155	164	182
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	166	168	155	164	182
FTE	1.9	1.9	1.8	1.8	1.9
scalation to 2016\$					
Labor	72	47	25	15	0
Non-Labor	22	12	7	4	0
NSE	0	0	0	0	0
Total	94	60	32	19	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	nt 2016\$)				
Labor	1,278	1,229	1,126	1,193	1,285
Non-Labor	382	318	323	324	323
NSE	0	0	0	0	0
Total	1,660	1,547	1,449	1,517	1,608
FTE	13.6	13.4	12.6	12.7	13.4

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	1. Major Market Credit & Collections
Cost Center:	2200-0354.000 - MAJOR MARKET CREDIT and COLLECTIONS

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs										
	Years	2012	2013	2014	2015	2016				
Labor		0	0	0	0	0				
Non-Labor		0	0	0	0	167				
NSE		0	0	0	0	0				
	Total	0	0	0	0	167				
FTE		0.0	0.0	0.0	0.0	0.0				

Detail of Adjustments to Recorded:

Year	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	Adj Type	RefID			
2012 Tota	al	0	0	0	0.0					
2013 Tota	al	0	0	0	0.0					
2014 Tota	al	0	0	0	0.0					
2015 Tota	al	0	0	0	0.0					
2016	Other	0	167	0	0.0	1-Sided Adj	TNGUYEN20161203203427937			
Explanation: Cost element 6220580 Adjustment to reflect the total contract values for our credit reporting services (Moody's, S&P). Beginning in December 2016, we moved from annual payments made at the beginning of these 1yr contracts to installment payments where only the first of four quarterly installment payments were reflected in 2016. [MDYs \$122,419 (total contract cost) - \$30,605 (December 2016 1st installment payment) = \$91,814 (2016 adjustment)] [S&P \$100,000 (total contract cost) - \$25,000 (December 2016 1st installment payment) = \$75,000 (2016 adjustment)]										
2016 Tota	al	0	167	0	0.0					

Beginning of Workpaper 2200-0355.000 - PAYMENT PROCESSING

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Activity Description:

Payment Processing expenses cover the cost of processing payments mailed to SoCalGas through the USPS as well as electronic payments received through home banking, electronic data interchange, wire transfers and electronic pay programs, including direct debit, pay-by-phone, and My Account. Additional functions performed by Payment Processing include handling returned checks, investigating payments received without associated account information, processing of all miscellaneous non-gas revenues (e.g., oil lease revenues) and responding to payment inquiries from banking institutions and authorized payment locations.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Payment Processing O&M costs. The costs fluctuated from 2012 through 2015. However, 2016 cost levels were below historical averages and a good representation for the forecast because they are in-line with the workgroup's TY 2019 estimated labor and non-labor expenses with no changes anticipated.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Payment Processing O&M costs. The costs fluctuated from 2012 through 2015. However, 2016 cost levels were below historical averages and a good representation for the forecast because they are in-line with the workgroup's TY 2019 estimated labor and non-labor expenses with no changes anticipated.

NSE - Base YR Rec

The Base Year 2016 forecast was used based on anticipated volumes.

Summary of Results:

		In 2016\$ (000) Incurred Costs											
		Adju	sted-Recor	Adjusted-Forecast									
Years	2012	2013	2014	2015	2016	2017	2018	2019					
Labor	3,167	2,849	2,560	2,501	2,496	2,520	2,520	2,520					
Non-Labor	903	928	929	519	985	984	984	984					
NSE	5	4	5	5	5	5	5	5					
Total	4,075	3,781	3,494	3,025	3,486	3,509	3,509	3,509					
FTE	46.3	42.8	38.1	36.2	36.0	36.3	36.3	36.3					

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Cost Center Allocations (Incurred Costs):

		2016 Adjus	sted-Reco	rded	2017 Adjusted-Forecast					
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	30	9	0	39	0.4	30	9	0	39	0.4
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	2,465	975	5	3,445	35.5	2,490	975	5	3,470	35.9
Total Incurred	2,495	984	5	3,484	35.9	2,520	984	5	3,509	36.3
% Allocation										
Retained	50.00%	50.00%				50.00%	50.00%			
SEU	50.00%	50.00%				50.00%	50.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

		2018 Adju	sted-Fore	cast	2019 Adjusted-Forecast					
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	30	9	0	39	0.4	30	9	0	39	0.4
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	2,490	975	5	3,470	35.9	2,490	975	5	3,470	35.9
Total Incurred	2,520	984	5	3,509	36.3	2,520	984	5	3,509	36.3
% Allocation										
Retained	50.00%	50.00%				50.00%	50.00%			
SEU	50.00%	50.00%				50.00%	50.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

Based on the total payments processed for each company the allocation percentage is derived, and applied to the direct costs posted to this cost center. Annually, the allocation percentage is updated with data reported at year-end. Annual updates for 2016 reflect Year-end 2013 data.

Cost Center Allocation Percentage for 2017

Based on the total payments processed for each company the allocation percentage is derived, and applied to the direct costs posted to this cost center. Annual percentage applies to any given year is based on year-end volume of 2016.

Cost Center Allocation Percentage for 2018

Based on the total payments processed for each company the allocation percentage is derived, and applied to the direct costs posted to this cost center. Annual percentage applies to any given year is based on year-end volume of 2016.

Cost Center Allocation Percentage for 2019

Based on the total payments processed for each company the allocation percentage is derived, and applied to the direct costs posted to this cost center. Annual percentage applies to any given year is based on year-end volume of 2016.

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs									
Forecas	Forecast Method Base Forecast				Forecast Adjustments			Adjusted-Forecast		
Years	8	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	2,496	2,496	2,496	25	25	25	2,521	2,521	2,521
Non-Labor	Base YR Rec	985	985	985	0	0	0	985	985	985
NSE	Base YR Rec	5	5	5	0	0	0	5	5	5
Tota	I	3,486	3,486	3,486	25	25	25	3,511	3,511	3,511
FTE	Base YR Rec	36.0	36.0	36.0	0.4	0.4	0.4	36.4	36.4	36.4

Forecast Adjustment Details:

lolodaet	najaotii	lent Details							
Year /	Adj Grou	<u>qı</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>Total</u>	<u>FTE</u>	<u>Adj Type</u>	RefID
2017 Oth	ier		25	0	0	25	0.4	1-Sided Adj	TNGUYEN20161205171240967
Explanati		Adjustment temporary					nal operati	ons in support o	of Payment Processing after
2017 Tota	al		25	0	0	25	0.4		
2018 Oth	er		25	0	0	25	0.4	1-Sided Adj	TNGUYEN20161205171313443
Explanati		Adjustment temporary					nal operati	ons in support o	of Payment Processing after
2018 Tota	al		25	0	0	25	0.4		
2019 Oth	er		25	0	0	25	0.4	1-Sided Adj	TNGUYEN20161205171344810
Explanati		Adjustment temporary			•		nal operati	ons in support o	of Payment Processing after
2019 Tota	al		25	0	0	25	0.4		

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Determination of Adjusted-Recorded (Incurred Costs):

·····	a-Recorded (Incurred Cos 2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
corded (Nominal \$)*					
Labor	2,576	2,348	2,153	2,126	2,168
Non-Labor	857	896	914	518	999
NSE	0	0	0	0	0
Total	3,432	3,245	3,066	2,644	3,167
FTE	39.7	36.6	32.6	31.0	31.2
djustments (Nominal \$) *	*				
Labor	0	0	0	0	-25
Non-Labor	-5	-4	-5	-5	-14
NSE	5	4	5	5	5
Total	0	0	0	0	-34
FTE	0.0	0.0	0.0	0.0	-0.4
ecorded-Adjusted (Nomi	nal \$)				
Labor	2,576	2,348	2,153	2,126	2,143
Non-Labor	852	892	909	512	985
NSE	5	4	5	5	5
Total	3,432	3,245	3,066	2,644	3,133
FTE	39.7	36.6	32.6	31.0	30.8
acation & Sick (Nominal	\$)				
Labor	412	390	351	344	353
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	412	390	351	344	353
FTE	6.6	6.2	5.5	5.2	5.2
scalation to 2016\$					
Labor	179	110	56	31	0
Non-Labor	51	36	20	6	0
NSE	0	0	0	0	0
Total	231	146	76	38	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Const	tant 2016\$)				
Labor	3,167	2,849	2,560	2,501	2,496
Non-Labor	903	928	929	519	985
NSE	5	4	5	5	5
Total	4,075	3,781	3,494	3,025	3,486
FTE	46.3	42.8	38.1	36.2	36.0

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	2. PAYMENT PROCESSING
Cost Center:	2200-0355.000 - PAYMENT PROCESSING

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs							
Years 2012 2013 2014 2015 2016							
Labor		0	0	0	0	-25	
Non-Labor		-5	-4	-5	-5	-14	
NSE		5	4	5	5	5	
	Total	0	0	0	0	-34	
FTE		0.0	0.0	0.0	0.0	-0.4	

Detail of Adjustments to Recorded:

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u> <u>FTE</u>	Adj Type	RefID
2012	Other	0	-5	5 0.0 1-Side	ed Adj	TNGUYEN20161203214946927
Explanati	on: Transfe	r to NSE froi	m non-la	abor 6220450 To m	nove postage expenses to	NSE
2012 Tota	al	0	-5	5 0.0		
2013	Other	0	-4	4 0.0 1-Side	ed Adj	TNGUYEN20161203215118290
Explanati	on: Transfe	r to NSE froi	m non-la	abor 6220450 To m	nove postage expenses to	NSE
2013 Tota	al	0	-4	4 0.0		
2014	Other	0	-5	5 0.0 1-Side	ed Adj	TNGUYEN20161203215303740
Explanati	on: Transfe	r to NSE froi	m non-la	abor 6220450 To m	nove postage expenses to	NSE
2014 Tota	al	0	-5	5 0.0		
2015	Other	0	-5	5 0.0 1-Side	ed Adj	TNGUYEN20161203215429567
Explanati	on: Transfe	r to NSE froi	m non-la	abor 6220450 To m	nove postage expenses to	NSE
2015 Tota	al	0	-5	5 0.0		
2016	Other	0	-5	5 0.0 1-Side	ed Adj	TNGUYEN20161203215545003
Explanati	on: Transfe	r to NSE froi	m non-la	abor 6220450 To m	nove postage expenses to	NSE
2016	Aliso	-25	-8	0 -0.4 1-Side	ed Adj	TNGUYEN20161203222131913
Explanati	ion: Aliso A	liso Canyon	Inciden	t - Exclude costs &	associated FTEs - 30077	5156, Wellhead Leak

Area:	CS - OFFICE OPERATIONS		
Witness:	Michael H. Baldwin		
Category:	A. CS - Office Operations		
Category-Sub:	2. PAYMENT PROCESSING		
Cost Center:	2200-0355.000 - PAYMENT PROCESSING		
<u>Year Adj Grou</u>	ip <u>Labor NLbr NSE FTE</u>	<u>Adj Type</u>	<u>RefID</u>

Note: Totals may include rounding differences.

2016 Total

-25

-14

5 -0.4

Beginning of Workpaper 2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub	3. MANAGER OF REMITTANCE PROCESSING
Cost Center:	2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Activity Description:

This cost center is used to track labor and non-labor expenditures associated with researching, advisory, and strategic planning services provided to both SCG and SDG&E by the Manager of Remittance Processing and supporting staff.

Forecast Explanations:

Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Manager of Remittance Processing O&M costs. 2016 cost levels were similar historical averages and a good representation for the forecast because they are in-line with the workgroup's TY 2019 estimated labor and non-labor expenses with no changes anticipated.

Non-Labor - Base YR Rec

A Base Year forecasting methodology was applied to project Manager of Remittance Processing O&M costs. 2016 cost levels were similar historical averages and a good representation for the forecast because they are in-line with the workgroup's TY 2019 estimated labor and non-labor expenses with no changes anticipated.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

In 2016\$ (000) Incurred Costs Adjusted-Recorded Adjusted-Forecast Years 2012 2013 2014 2015 2016 2017 2018 2019 452 503 520 308 376 376 376 444 Labor Non-Labor 3 0 0 1 1 1 1 1 NSE 0 0 0 0 0 0 0 0 455 444 503 377 377 377 521 309 Total FTE 4.5 4.3 5.1 5.1 2.8 3.5 3.5 3.5

Summary of Results:

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	3. MANAGER OF REMITTANCE PROCESSING
Cost Center:	2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Cost Center Allocations (Incurred Costs):

		2016 Adju	sted-Reco	orded	2017 Adjusted-Forecast					
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	79	0	0	79	0.5	79	0	0	79	0.5
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	229	1	0	230	2.4	297	1	0	298	3.0
Total Incurred	308	1	0	309	2.9	376	1	0	377	3.5
% Allocation										
Retained	75.87%	75.87%				75.87%	75.87%			
SEU	24.13%	24.13%				24.13%	24.13%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			
		2018 Adju	sted-Fore	cast		2019 Adju	sted-Fore	cast		
	Labor	Non-Labor	NSE	Total	ETE	Labor	Non-Labor	NSE	Total	ETE

	-					-				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	79	0	0	79	0.5	79	0	0	79	0.5
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	297	1	0	298	3.0	297	1	0	298	3.0
Total Incurred	376	1	0	377	3.5	376	1	0	377	3.5
% Allocation										
Retained	75.87%	75.87%				75.87%	75.87%			
SEU	24.13%	24.13%				24.13%	24.13%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	3. MANAGER OF REMITTANCE PROCESSING
Cost Center:	2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

This cost center is used to track expenditures Labor and Non-Labor, associated with managerial, advisory, and strategic planning services provided to both SCG and SDG&E by the Manager of Remittance Processing and Supporting Staff. Posting to this cost center will include the Manager of Remittance Processing, the Project Manager, the Business Advisor, the Business Systems Analyst, and the Administrative Assistant, whose services encompass Customer Data Distribution, Customer Remittance Processing, and the Branch Offices, including Authorized Payment Locations. Based on volumes reported as of Year-End 2013.

Cost Center Allocation Percentage for 2017

This cost center is used to track expenditures Labor and Non-Labor, associated with managerial, advisory, and strategic planning services provided to both SCG and SDG&E by the Manager of Remittance Processing and Supporting Staff. Posting to this cost center will include the Manager of Remittance Processing, the Project Manager, the Business Advisor, the Business Systems Analyst, and the Administrative Assistant, whose services encompass Customer Data Distribution, Customer Remittance Processing, and the Branch Offices, including Authorized Payment Locations. Annual percentage applies to any given year is based on year-end volume of 2016.

Cost Center Allocation Percentage for 2018

This cost center is used to track expenditures Labor and Non-Labor, associated with managerial, advisory, and strategic planning services provided to both SCG and SDG&E by the Manager of Remittance Processing and Supporting Staff. Posting to this cost center will include the Manager of Remittance Processing, the Project Manager, the Business Advisor, the Business Systems Analyst, and the Administrative Assistant, whose services encompass Customer Data Distribution, Customer Remittance Processing, and the Branch Offices, including Authorized Payment Locations. Annual percentage applies to any given year is based on year-end volume of 2016.

Cost Center Allocation Percentage for 2019

This cost center is used to track expenditures Labor and Non-Labor, associated with managerial, advisory, and strategic planning services provided to both SCG and SDG&E by the Manager of Remittance Processing and Supporting Staff. Posting to this cost center will include the Manager of Remittance Processing, the Project Manager, the Business Advisor, the Business Systems Analyst, and the Administrative Assistant, whose services encompass Customer Data Distribution, Customer Remittance Processing, and the Branch Offices, including Authorized Payment Locations. Annual percentage applies to any given year is based on year-end volume of 2016.

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
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Category-Sub:	3. MANAGER OF REMITTANCE PROCESSING
Cost Center:	2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Summary of Adjustments to Forecast:

	In 2016 \$(000) Incurred Costs									
Forecast Method Base Forecast			st	Forecast Adjustments			Adjusted-Forecast			
Years	6	2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	308	308	308	68	68	68	376	376	376
Non-Labor	Base YR Rec	1	1	1	0	0	0	1	1	1
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		309	309	309	68	68	68	377	377	377
FTE	Base YR Rec	2.9	2.9	2.9	0.6	0.6	0.6	3.5	3.5	3.5

Forecast Adjustment Details:

Year Adj Gro	oup	<u>Labor</u>	<u>NLbr</u>	NSE	<u>Total</u>	<u>FTE</u>	Adj Type	RefID
2017 Other		68	0	0	68	0.6	1-Sided Adj	TNGUYEN20161205171601060
Explanation:	Adjustment overseeing		-			•	•	f Remittance Processing
2017 Total		68	0	0	68	0.6		
2018 Other		68	0	0	68	0.6	1-Sided Adj	TNGUYEN20161205171645110
Explanation:	Adjustment overseeing		-			•		f Remittance Processing
2018 Total		68	0	0	68	0.6		
2019 Other		68	0	0	68	0.6	1-Sided Adj	TNGUYEN20161205171713923
Explanation:	Adjustment overseeing		-			•		f Remittance Processing
2019 Total		68	0	0	68	0.6		

Area:	CS - OFFICE OPERATIONS
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Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
ecorded (Nominal \$)*					
Labor	367	366	423	443	332
Non-Labor	3	0	0	1	1
NSE	0	0	0	0	0
Total	370	366	423	444	334
FTE	3.8	3.6	4.3	4.4	2.9
djustments (Nominal \$) **					
Labor	0	0	0	-1	-68
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	-1	-68
FTE	0.0	0.0	0.0	0.0	-0.4
ecorded-Adjusted (Nomin	al \$)				
Labor	367	366	423	442	264
Non-Labor	3	0	0	1	1
NSE	0	0	0	0	0
Total	370	366	423	443	266
FTE	3.8	3.6	4.3	4.4	2.5
acation & Sick (Nominal \$	5)				
Labor	59	61	69	72	44
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	59	61	69	72	44
FTE	0.6	0.6	0.7	0.7	0.4
scalation to 2016\$					
Labor	26	17	11	6	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	26	17	11	6	0
FTE	0.0	0.0	0.0	0.0	0.0
ecorded-Adjusted (Consta	ant 2016\$)				
Labor	452	444	503	520	308
Non-Labor	3	0	0	1	1
NSE	0	0	0	0	0
Total	455	444	503	521	309
FTE	4.4	4.2	5.0	5.1	2.9

* After company-wide exclusions of Non-GRC costs

** Refer to "Detail of Adjustments to Recorded" page for line item adjustments *Note: Totals may include rounding differences.*

Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin
Category:	A. CS - Office Operations
Category-Sub:	3. MANAGER OF REMITTANCE PROCESSING
Cost Center:	2200-2247.000 - MANAGER OF REMITTANCE PROCESSING

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs								
	Years 2012 2013 2014 2015 2016							
Labor		0	0	0	-0.728	-68		
Non-Labor		0	0	0	0	0		
NSE		0	0	0	0	0		
	Total –	0	0	0	-0.728	-68		
FTE		0.0	0.0	0.0	0.0	-0.4		

Detail of Adjustments to Recorded:

<u>Year Adj Group</u>	Labor N	<u>Numeral Name</u>	<u>SE F1</u>	E <u>Adi Type</u>	<u>RefID</u>
2012 Total	0	0	0 0	0	
2013 Total	0	0	0 0	0	
2014 Total	0	0	0 0	0	
2015 Aliso	-1	0	0 0	0 1-Sided Adj	TNGUYEN20161203221110103
Explanation: Aliso A	liso Canyon I	ncident - E	Exclude	costs & associated FTEs - 300775156, We	ellhead Leak
2015 Total	-1	0	0 0	0	
2016 Aliso	-68	0	0 -0	4 1-Sided Adj	TNGUYEN20161203222251837
Explanation: Aliso A	liso Canyon I	ncident - E	Exclude	costs & associated FTEs - 300775156, We	ellhead Leak
2016 Total	-68	0	0 -0	4	

CS - OFFICE OPERATIONS Area: Michael H. Baldwin Witness:

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2200-0164	000	OUTBOUND DIALING & CUST CORR (SCG)
2200-0226	000	SOCAL GAS CUSTOMER OPERATIONS DIRECTOR
2200-0227	000	MAJOR MARKETS BILLING-NORTH
2200-0228	000	SCG MEASUREMENT DATA OPERATIONS MANAGER
2200-0340	000	SCG CREDIT & COLLECTIONS - ADJ
2200-0344	000	CS TRAINING & DEVELOPMENT MANAGER
2200-0347	000	UNCOLLECTIBLES - CORE
2200-0348	000	CUSTOMER BILLING SERVICES
2200-0349	000	SPECIAL BILLING C&I
2200-0350	000	SOCALGAS CREDIT & COLLECTIONS MGR
2200-0351	000	MASS MARKET CREDIT & COLLECTION SERVICES
2200-0352	000	MASS MARKET CREDIT & COLLECTION PROJECTS
2200-0401	000	CUSTOMER CONTACT CENTER DIRECTOR
2200-0403	000	LOS MANAGEMENT (LOS)
2200-0404	000	CCC TECHNOLOGY
2200-0405	000	BRANCH OFC AREA 7
2200-0406	000	COMMERCIAL & INDUSTRIAL
2200-0407	000	CCC SITE MANAGER SAN DIMAS
2200-0408	000	HIGH BILL INVESTIGATION
2200-0409	000	RESIDENTIAL MARKETING
2200-0410	000	SPECIAL INVESTIGATIONS
2200-0411	000	CCC SITE MANAGER REDLANDS
2200-0412	000	CENTRALIZED SET DESKS
2200-0414	000	AUTHORIZED PYMNT AGENCIES
2200-0415	000	BRANCH OFC AREA 8
2200-0416	000	BRANCH OFC AREA 1
2200-0417	000	BRANCH OFC AREA 2
2200-0418	000	BRANCH OFC AREA 3
2200-0419	000	BRANCH OFC AREA 4
2200-0420	000	BRANCH OFC AREA 5
2200-0421	000	BRANCH OFC AREA 6
2200-0678	000	DATA DISTRIBUTION
2200-1214	000	CCC SPECIAL SERVICES MANAGER
2200-1341	000	CARE PORTION OF DATA DISTRIBUTION
2200-1370	000	QUALITY ASSURANCE (SCG)
2200-1371	000	CUSTOMER CONTACT MULTILINGUAL SUPPORT
2200-1372	000	CCC OPS SUPPORT (SCG)
2200-2026	000	BILL PRESENTMENT & PAYMENT CHANNEL
2200-2027	000	CUSTOMER OPERATIONS TECHNOLOGY MANAGER
2200-2028	000	MGR CUSTOMER OPERATIONS SUPPORT
2200-2050	000	BRANCH OFFICE OPERATIONS MGR - SCG
2200-2088	000	AUTHORIZED PAYMENT LOCATIONS -SCG
2200-2094	000	CUSTOMER OPERATIONS VP
2200-2140	000	CUSTOMER SERVICES SVP & STAFF
2200-2154	000	CCC RESOURCE AND SERVICE LEVEL MANAGER
		800//

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Area:	CS - OFFICE OPERATIONS
Witness:	Michael H. Baldwin

Appendix A: List of Non-Shared Cost Centers

Cost Center	<u>Sub</u>	Description
2200-2156	000	CCC OPERATIONS SUPPORT MANAGER
2200-2196	000	BRANCH OFC REGIONAL SUPERVISOR 2
2200-2199	000	REMITTANCE PROCESSING SUPPORT
2200-2239	000	DATA DISTRIBUTION LETTERS
2200-2240	000	SR VP CUSTSRVC/INNOVATION/BUS STRATEGY
2200-2306	000	CUST OPS TECH PROJECT MANAGER – SCG
2200-2330	000	MANAGER OF REMITTANCE PROCESSING SCG
2200-2520	000	ESERVICE BUSINESS TECH SUPPORT
2200-2521	000	BILLING, CARE & MR BUSINESS TECH SUPPORT
2200-2522	000	CCC, FINANCE & CREDIT BUSINESS TECH SUPP
2200-2523	000	CUST PROGRAMS BUSINESS TECH SUPPORT
2200-2534	000	DATA PRIVACY - CS TECH OPS
2200-2598	000	COMMUNITY LIAISON PROJECT SUPPORT
2200-2606	000	PLANNING & PROJECT
2200-2610	000	CUSTOMER CONTACT CENTER TECHNOLOGY MGR