

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-___

Exhibit No.: (SCG-05-WP)

WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF OMAR RIVERA
ON BEHALF OF SOUTHERN CALIFORNIA GAS COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

OCTOBER 2017



**2019 General Rate Case - APP
INDEX OF WORKPAPERS**

Exhibit SCG-05-WP - GAS SYSTEM INTEGRITY

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Exhibit SCG-05-WP - GAS SYSTEM INTEGRITY

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Overall Summary For Exhibit No. SCG-05-WP

Area:	GAS SYSTEM INTEGRITY
Witness:	Omar Rivera

Description	In 2016 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
<i>Non-Shared Services</i>	4,775	7,369	11,214	15,598
<i>Shared Services</i>	8,193	11,739	14,213	17,306
Total	12,968	19,108	25,427	32,904

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera

Summary of Non-Shared Services Workpapers:

Description	In 2016 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
A. GAS OPERATIONS STAFF & TRAINING	1,072	1,786	3,486	4,734
B. PIPELINE SAFETY & COMPLIANCE	699	799	944	2,890
C. DAMAGE PREVENTION	398	641	1,141	1,641
D. ASSET MANAGEMENT	2,086	2,763	2,503	2,503
E. GAS CONTRACTOR CONTROLS	520	1,380	3,140	3,830
Total	4,775	7,369	11,214	15,598

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000

Summary for Category: A. GAS OPERATIONS STAFF & TRAINING

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	978	1,103	1,671	2,141
Non-Labor	94	683	1,815	2,594
NSE	0	0	0	0
Total	1,072	1,786	3,486	4,735
FTE	10.8	11.6	17.8	22.9

Workpapers belonging to this Category:

2SI001.000 GAS OPERATIONS TRAINING & DEVELOPMENT

Labor	978	1,103	1,671	2,141
Non-Labor	94	683	1,815	2,594
NSE	0	0	0	0
Total	1,072	1,786	3,486	4,735
FTE	10.8	11.6	17.8	22.9

Note: Totals may include rounding differences.

Beginning of Workpaper
2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Activity Description:

The activities completed within this workgroup are categorized as Gas Operations Training and Development. Gas Operations Training and Development create future leaders through the delivery of effective/ high-quality learning experiences to operations employees throughout SoCalGas. The continued safe construction, maintenance, integrity management, replacements, and expansion of our pipeline system must be executed by approximately 2,500 Gas Transmission, Gas Distribution, and Storage employees located throughout SoCalGas' large and diverse service territory. Gas Operations Training and Development communicates and reinforces the SoCalGas safety culture and strives to instill a passion for success through interactions, such as regular dialogue, periodic dialogue sessions with frontline supervisors and employees, participation in employee seminars, ongoing refresher training, and one-on-one employee meetings. Gas Operations Training and Development also consists of Field Technical Skills Training. The Operations Field Technical Skills Training team provides Gas Transmission, Gas Distribution, and Storage with the training and services described below. These trainings and services are necessary for the Company to follow applicable laws, regulations and standards and to help maintain the safety of the workforce and the public. Also, included under Gas Operations Training and Development are activities and associated O&M expenses within the workgroup of Pipeline Maintenance Policy, which conducts a variety of operational services necessary for employees to complete their daily activities. These activities include identifying, developing, implementing, monitoring, and enhancing Company policies, procedures, tariffs, technologies, and/or reports used by Gas Transmission, Gas Distribution, and Storage.

Forecast Explanations:

Labor - 5-YR Linear

In general, Gas Operations Training and Development activity increases as levels of work and workforce attrition increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. Using a five-year average or base forecast would not appropriately account for the increase in work anticipated over the forecast period, as training activities continue to increase. Thus, to reflect these changing conditions and increase in Gas Operations Training and Development, SoCalGas is projecting that forecasted expenses for this workgroup will follow the five-year historical trend. Therefore, a five-year (2012 through 2016) linear trend funding was used to calculate the labor requested for this group.

Non-Labor - 5-YR Linear

In general, Gas Operations Training and Development activity increases as levels of work and workforce attrition increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. Using a five-year average or base forecast would not appropriately account for the increase in work anticipated over the forecast period, as training activities continue to increase. Thus, to reflect these changing conditions and increase in Gas Operations Training and Development, SoCalGas is projecting that forecasted expenses for this workgroup will follow the five-year historical trend. Therefore, a five-year (2012 through 2016) linear trend funding was used to calculate the labor requested for this group.

NSE - 5-YR Linear

NSE is not applicable to this workgroup.

Note: Totals may include rounding differences.

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		537	739	182	549	978	1,103	1,671	2,141	
Non-Labor		52	65	80	123	94	683	1,815	2,594	
NSE		0	0	0	0	0	0	0	0	
Total		589	804	261	672	1,072	1,786	3,486	4,735	
FTE		4.8	5.7	0.4	4.9	10.8	11.6	17.8	22.9	

Note: Totals may include rounding differences.

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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Linear	805	874	944	298	797	1,197	1,103	1,671	2,141
Non-Labor	5-YR Linear	125	140	154	558	1,675	2,440	683	1,815	2,594
NSE	5-YR Linear	0	0	0	0	0	0	0	0	0
Total		930	1,014	1,097	856	2,472	3,637	1,786	3,486	4,734
FTE	5-YR Linear	8.6	9.8	10.9	3.0	8.0	12.0	11.6	17.8	22.9

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	100	200	0	300	1.0	1-Sided Adj	FGALVAN20170512093940530

Explanation: RAMP Chapter 7-Workforce Planning Technical Specialist for Modernization of Training Materials - Incremental Technical Specialists Activities within the scope of technical training include revamping and redesigning current technical training. These activities are covered by other RAMP risks including Employee, Contractor, Customer & Public Safety, Catastrophic Damage Involving High-Pressure Pipeline Failure, Catastrophic Damage Involving Medium-Pressure Pipeline Failure, and Catastrophic Damage Involving Gas Infrastructure (Dig-Ins). These activities are included in the Workforce Planning risk to address the cross-cutting nature of this risk and illustrate the impact Workforce Planning has on safety across the entire organization. In addition to the activities proposed by the various RAMP risks for technical training, the Workforce Planning risk also proposes the development of a Management Technical Training program to be offered to all new front line supervisors since currently there is no formal technical training available to front line supervisors. These activities would help develop the technical skills and increase job specific procedural knowledge for employees and supervisors, thereby decreasing the rate of safetyrelated incidents. Front line supervisors oversee processes that may be hazardous to employees and/or the public; therefore, this proposed training will help minimize potential safety incidents.

Labor costs for these additional Technical Specialists will be 1 FTEs X \$100K = \$100K beginning in TY2019. Total non-labor for TY2019 is \$200K.

2017	RAMP Incremental	0	150	0	150	0.0	1-Sided Adj	FGALVAN20170512094512087
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Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety Situation City Enhancements- Constructing additional props, equipment types, working environments, and hazardous condition simulation capabilities at the skills center training facility to broaden employee exposure to real-world conditions; Increase class size and provide mobile class rooms to meet changing needs; Expand hands-on crew training as well as provide varied training locations for field representatives; Provide additional digging sites and operating conditions; Provide a strong connectivity to meet the computer activity and needs in the situation city vicinity.

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

<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>	<u>RefID</u>
2017	Other	0	21	0	21	0.0	1-Sided Adj	FGALVAN20170512094721037
Explanation:		Classroom Technology - Further enhancing the employee training experience and knowledge transfer SoCalGas' proposes to continue its modernization of classroom technology, this modernization would include enhancing audio-visual equipment, introduction of handheld devices into the classroom and leveraging virtual technology for simulated activities. The total non-labor is \$21K.						
2017	FOF-Ongoing	-2	0	0	-2	0.0	1-Sided Adj	MGONZALX20170622144731863
Explanation:		FOF Idea 1620 - This adjustment is for the benefit related to the FOF idea to remove high pressure training module from the initial Planning Associate training class and make it a follow-up elective to enhance info retention.						
2017	RAMP Incremental	200	40	0	240	2.0	1-Sided Adj	ANTROTTE20170628071559420
Explanation:		RAMP Chapter 4- Catastrophic Damage involving High-Pressure Pipeline Failure Cathodic Protection Technical Advisor - Further enhance our Cathodic Protection System. This position will provide system wide strategic direction and accountability of program implementation such as remote monitoring cathodic protection equipment and overall system compliance. Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$20K = \$40K.						
2017	FOF-Implementation	0	22	0	22	0.0	1-Sided Adj	ANTROTTE20170719105054390
Explanation:		Received transfer cost from Gas Distribution \$22k non-labor for virtual training implementation FOF idea #810						
2017	Other	0	125	0	125	0.0	1-Sided Adj	FGALVAN20170901160039183
Explanation:		Employee Collaborative Training Program-Development and implementation of a technical academic training program						
2017 Total		298	558	0	856	3.0		

2018 Other 100 5 0 105 1.0 1-Sided Adj FGALVAN20170512094819803

Note: Totals may include rounding differences.

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 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
Explanation:		<p>Incremental Locate & Mark Trainer- Historically we have seen an increase in the number of locate and mark tickets and we expect a continued increased through our continual efforts from our Public Awareness Program and Senate Bill 661(Protection of subsurface installations) that was signed in September 2016. Senate Bill 661 added enforcement to the digging law by establishing the California Underground Facilities Safe Excavation Board. The Board is authorized to take action against those parties who violate the excavation law 4216. This new bill is expected to require more excavators to notify Underground Service Alert (USA) which will add upward pressure to an already increasing USA ticket volume in California. Thus, more employees will be needed to perform locate and mark activities in order for the Company to meet increasing USA ticket demands and prevent marking delays. Other notable impacts of the Dig Safe Act of 2016 include the requirement for marking the presence of known abandoned lines and keeping abandoned line records which will increase time spent locating each ticket and create additional work for supporting activities.</p> <p>Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$5K.</p>						
2018	Other	100	5	0	105	1.0	1-Sided Adj	FGALVAN20170512094905607
Explanation:		<p>-High Pressure Technical Advisors - One Technical Advisors are required to support high pressure training. They will develop new and refine existing training modules, and will assume delivery of initial Operator Qualification technical training to managers and supervisors involved with high pressure pipeline construction. The Technical Advisor will be the responsible document owners for the various high pressure field procedures.</p> <p>Labor costs will be 1 FTE X \$100k = \$100K. Associated non-labor expense is estimated to be\$5k.</p>						
2018	Other	100	5	0	105	1.0	1-Sided Adj	FGALVAN20170512094929347
Explanation:		<p>Instructors for Formal Clerical Training - SoCalGas has identified an opportunity for enhancement is the training for employees performing clerical work within Gas Transmission, Gas Distribution and Storage, such as Distribution Operations Clerk, Work Order Control Clerk, and Leakage Clerk. Instructors are responsible for accuracy of course materials, arranging required items for class, and following up with students and their supervisors following class to identify areas of continuous improvement so that students are prepared when they return from training. Additionally, Instructors act as Subject Matter Experts while adapting course content following a change to software or the process used by employees to complete the required tasks . The work these clerical workers perform directly impacts compliance and pipeline facility records management . Therefore, having knowledgeable, highly-skilled clerks contributes to the safety and integrity of the gas system.</p> <p>Labor costs for these additional Instructors will be 1 FTE X \$100K = \$100K. Total non-labor for TY2019 is 1 FTEs X \$5,000 = \$5K.</p>						
2018	RAMP Incremental	200	500	0	700	2.0	1-Sided Adj	FGALVAN20170512095008227

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
Explanation: RAMP Chapter 7-Workforce Planning Technical Specialist for Modernization of Training Materials - Incremental Technical Specialists Activities within the scope of technical training include revamping and redesigning current technical training. These activities are covered by other RAMP risks including Employee, Contractor, Customer & Public Safety, Catastrophic Damage Involving High-Pressure Pipeline Failure, Catastrophic Damage Involving Medium-Pressure Pipeline Failure, and Catastrophic Damage Involving Gas Infrastructure (Dig-Ins). These activities are included in the Workforce Planning risk to address the cross-cutting nature of this risk and illustrate the impact Workforce Planning has on safety across the entire organization. In addition to the activities proposed by the various RAMP risks for technical training, the Workforce Planning risk also proposes the development of a Management Technical Training program to be offered to all new front line supervisors since currently there is no formal technical training available to front line supervisors. These activities would help develop the technical skills and increase job specific procedural knowledge for employees and supervisors, thereby decreasing the rate of safetyrelated incidents. Front line supervisors oversee processes that may be hazardous to employees and/or the public; therefore, this proposed training will help minimize potential safety incidents. Labor costs for these additional Technical Specialists will be 2 FTEs X \$100K = \$200K. Total non-labor 2 FTE X \$250k= \$500K.								
2018	RAMP Incremental	0	250	0	250	0.0	1-Sided Adj	FGALVAN20170512095059827
Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety Situation City Enhancements- Constructing additional props, equipment types, working environments, and hazardous condition simulation capabilities at the skills center training facility to broaden employee exposure to real-world conditions; Increase class size and provide mobile class rooms to meet changing needs; Expand hands-on crew training as well as provide varied training locations for field representatives; Provide additional digging sites and operating conditions; Provide a strong connectivity to meet the computer activity and needs in the situation city vicinity.								
2018	Other	0	250	0	250	0.0	1-Sided Adj	FGALVAN20170512095123833
Explanation: Classroom Technology - Further enhancing the employee training experience and knowledge transfer SoCalGas' proposes to continue its modernization of classroom technology, this modernization would include enhancing audio-visual equipment, introduction of handheld devices into the classroom and leveraging virtual technology for simulated activities. The total non-labor is \$250K.								
2018	Other	200	10	0	210	2.0	1-Sided Adj	FGALVAN20170512095213960
Explanation: Compliance Assurance Technical Advisor- two incremental Technical Advisors will be needed to extract information from SAP and create comprehensive data validation tools to identify missing or incorrect information. This position will work directly with region personnel (Supervisors, Compliance Technical Advisors, and Administrative Advisors) to retrieve the correct information and make the necessary changes in SAP. As trends are discovered with specific data issues, additional validation mechanisms will be implemented in Click and SAP to help reduce the number of discovered errors. Furthermore, this advisor will assist in the preparation of reports for the annual CPUC audits and will support region management during audits to respond to data requests. Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$10K.								

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

<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>	<u>RefID</u>	
2018	FOF-Ongoing	-3	0	0	-3	0.0	1-Sided Adj	MGONZALX20170622144743477	
Explanation:		FOF Idea 1620 - This adjustment is for the benefit related to the FOF idea to remove high pressure training module from the initial Planning Associate training class and make it a follow-up elective to enhance info retention.							
2018	Other	100	650	0	750	1.0	1-Sided Adj	FGALVAN20170901154112647	
Explanation:		Employee Collaborative Training Program- Development and implementation of a technical academic training program Labor costs will be 1 FTE X \$100K = \$100K.							
2018 Total		797	1,675	0	2,472	8.0			

2019	Other	200	10	0	210	2.0	1-Sided Adj	FGALVAN20170512095407590
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Explanation: Incremental Locate & Mark Trainer- Historically we have seen an increase in the number of locate and mark tickets and we expect a continued increased through our continual efforts from our Public Awareness Program and Senate Bill 661(Protection of subsurface installations) that was signed in September 2016. Senate Bill 661 added enforcement to the digging law by establishing the California Underground Facilities Safe Excavation Board. The Board is authorized to take action against those parties who violate the excavation law 4216. This new bill is expected to require more excavators to notify Underground Service Alert (USA) which will add upward pressure to an already increasing USA ticket volume in California. Thus, more employees will be needed to perform locate and mark activities in order for the Company to meet increasing USA ticket demands and prevent marking delays. Other notable impacts of the Dig Safe Act of 2016 include the requirement for marking the presence of known abandoned lines and keeping abandoned line records which will increase time spent locating each ticket and create additional work for supporting activities.

Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$5K = \$10K.

2019	Other	200	10	0	210	2.0	1-Sided Adj	FGALVAN20170512095429853
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Explanation: Incremental to support R&D Engineering studies and Policy and Procedure development for High Pressure Management

Labor costs will be 2 FTEs X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$5K = \$10K.

2019	Other	200	10	0	210	2.0	1-Sided Adj	FGALVAN20170512095455773
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Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
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 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
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Explanation: Instructors for Formal Clerical Training - SoCalGas has identified an opportunity for enhancement is the training for employees performing clerical work within Gas Transmission, Gas Distribution and Storage, such as Distribution Operations Clerk, Work Order Control Clerk, and Leakage Clerk. Instructors are responsible for accuracy of course materials, arranging required items for class, and following up with students and their supervisors following class to identify areas of continuous improvement so that students are prepared when they return from training. Additionally, Instructors act as Subject Matter Experts while adapting course content following a change to software or the process used by employees to complete the required tasks. The work these clerical workers perform directly impacts compliance and pipeline facility records management. Therefore, having knowledgeable, highly-skilled clerks contributes to the safety and integrity of the gas system. Labor costs for these additional Instructors will be 2 FTE X \$200K = \$200K. Total non-labor is 2 FTEs X \$5,000 = \$10K.

2019	RAMP Incremental	300	750	0	1,050	3.0	1-Sided Adj	FGALVAN20170512095521987
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Explanation: RAMP Chapter 7-Workforce Planning Technical Specialist for Modernization of Training Materials - Incremental Technical Specialists Activities within the scope of technical training include revamping and redesigning current technical training. These activities are covered by other RAMP risks including Employee, Contractor, Customer & Public Safety, Catastrophic Damage Involving High-Pressure Pipeline Failure, Catastrophic Damage Involving Medium-Pressure Pipeline Failure, and Catastrophic Damage Involving Gas Infrastructure (Dig-Ins). These activities are included in the Workforce Planning risk to address the cross-cutting nature of this risk and illustrate the impact Workforce Planning has on safety across the entire organization. In addition to the activities proposed by the various RAMP risks for technical training, the Workforce Planning risk also proposes the development of a Management Technical Training program to be offered to all new front line supervisors since currently there is no formal technical training available to front line supervisors. These activities would help develop the technical skills and increase job specific procedural knowledge for employees and supervisors, thereby decreasing the rate of safetyrelated incidents. Front line supervisors oversee processes that may be hazardous to employees and/or the public; therefore, this proposed training will help minimize potential safety incidents.

Labor costs for these additional Technical Specialists will be 3 FTEs X \$300K = \$300K .Total non-labor \$750k.

2019	RAMP Incremental	0	250	0	250	0.0	1-Sided Adj	FGALVAN20170512095558577
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Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety Situation City Enhancements- Constructing additional props, equipment types, working environments, and hazardous condition simulation capabilities at the skills center training facility to broaden employee exposure to real-world conditions; Increase class size and provide mobile class rooms to meet changing needs; Expand hands-on crew training as well as provide varied training locations for field representatives; Provide additional digging sites and operating conditions; Provide a strong connectivity to meet the computer activity and needs in the situation city vicinity.

2019	Other	0	500	0	500	0.0	1-Sided Adj	FGALVAN20170512095711940
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

<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>	<u>RefID</u>
Explanation:		Classroom Technology - Further enhancing the employee training experience and knowledge transfer SoCalGas' proposes to continue its modernization of classroom technology, this modernization would include enhancing audio-visual equipment, introduction of handheld devices into the classroom and leveraging virtual technology for simulated activities. The total non-labor is \$500K.						
2019	Other	200	10	0	210	2.0	1-Sided Adj	FGALVAN20170512102021000
Explanation:		Compliance Assurance Technical Advisor- two incremental Technical Advisors will be needed to extract information from SAP and create comprehensive data validation tools to identify missing or incorrect information. This position will work directly with region personnel (Supervisors, Compliance Technical Advisors, and Administrative Advisors) to retrieve the correct information and make the necessary changes in SAP. As trends are discovered with specific data issues, additional validation mechanisms will be implemented in Click and SAP to help reduce the number of discovered errors. Furthermore, this advisor will assist in the preparation of reports for the annual CPUC audits and will support region management during audits to respond to data requests. Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$10K.						
2019	FOF-Ongoing	-3	0	0	-3	0.0	1-Sided Adj	MGONZALX20170622144753947
Explanation:		FOF Idea 1620 - This adjustment is for the benefit related to the FOF idea to remove high pressure training module from the initial Planning Associate training class and make it a follow-up elective to enhance info retention.						
2019	Other	100	900	0	1,000	1.0	1-Sided Adj	FGALVAN20170901154212010
Explanation:		Employee Collaborative Training Program- Development and implementation of a technical academic training program Labor costs will be 1 FTE X \$100K = \$100K.						
2019 Total		1,197	2,440	0	3,637	12.0		

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (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
Adjustments (Nominal \$) **					
Labor	421	591	149	461	840
Non-Labor	51	64	80	123	94
NSE	0	0	0	0	0
Total	472	655	229	584	934
FTE	4.1	4.9	0.3	4.2	9.2
Recorded-Adjusted (Nominal \$)					
Labor	421	591	149	461	840
Non-Labor	51	64	80	123	94
NSE	0	0	0	0	0
Total	472	655	229	584	934
FTE	4.1	4.9	0.3	4.2	9.2
Vacation & Sick (Nominal \$)					
Labor	67	98	24	75	138
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	67	98	24	75	138
FTE	0.7	0.8	0.1	0.7	1.6
Escalation to 2016\$					
Labor	48	50	8	13	0
Non-Labor	1	1	0	0	0
NSE	0	0	0	0	0
Total	49	51	8	13	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	537	739	182	549	978
Non-Labor	52	65	80	123	94
NSE	0	0	0	0	0
Total	589	804	261	672	1,072
FTE	4.8	5.7	0.4	4.9	10.8

* 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.

Southern California Gas Company
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 Witness: Omar Rivera
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 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	421	591	149	461	840
Non-Labor	51	64	80	123	94
NSE	0	0	0	0	0
Total	472	655	229	584	934
FTE	4.1	4.9	0.3	4.2	9.2

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	174	9	0	1.5	CCTR Transf From 2200-2409.000	FGALVAN20170511112459363
Explanation: Transferring cost and FTE s from Gas Distribution to Gas Operations System Integrity.							
2012	Other	247	41	0	2.6	CCTR Transf From 2200-0614.000	FGALVAN20170512082949847
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2012 Total		421	51	0	4.1		
2013	Other	0	2	0	0.0	1-Sided Adj	FGALVAN20170719155618650
Explanation: Transfer from Gas Distribution							
2013	Other	276	11	0	2.2	CCTR Transf From 2200-2409.000	FGALVAN20170511122143233
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity.							
2013	Other	287	51	0	3.0	CCTR Transf From 2200-0614.000	FGALVAN20170512083313070
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2013	Other	28	0	0	-0.3	CCTR Transf From 2200-2501.000	FGALVAN20170512083429860
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2013	Other	0	0	0	0.0	CCTR Transf From 2200-2500.000	FGALVAN20170512083537353
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2013	Other	0	0	0	0.0	CCTR Transf From 2200-2502.000	FGALVAN20170512084459473
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2013 Total		591	64	0	4.9		

Note: Totals may include rounding differences.

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 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2014	Other	0	0	0	0.0	1-Sided Adj	FGALVAN20170719155712340
Explanation: Transfer from Gas Distribution							
2014	Other	83	6	0	0.8	CCTR Transf From 2200-2409.000	FGALVAN20170511122522413
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity.							
2014	Other	0	9	0	0.0	CCTR Transf From 2200-2500.000	FGALVAN20170512085458103
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2014	Other	59	1	0	-0.6	CCTR Transf From 2200-2501.000	FGALVAN20170512085559137
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2014	Other	1	2	0	0.0	CCTR Transf From 2200-2502.000	FGALVAN20170512085713663
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2014	Other	6	63	0	0.1	CCTR Transf From 2200-0614.000	FGALVAN20170512085845160
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2014 Total		149	80	0	0.3		
2015	Other	162	9	0	1.6	CCTR Transf From 2200-2409.000	FGALVAN20170511122905720
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity.							
2015	Other	191	78	0	1.6	CCTR Transf From 2200-0614.000	FGALVAN20170512090059437
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2015	Other	83	18	0	0.9	CCTR Transf From 2200-2500.000	FGALVAN20170512090158377
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2015	Other	19	11	0	0.1	CCTR Transf From 2200-2501.000	FGALVAN20170512090335977
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2015	Other	7	7	0	0.0	CCTR Transf From 2200-2502.000	FGALVAN20170512090653080
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2015 Total		461	123	0	4.2		
2016	Aliso	-15	0	0	-0.1	1-Sided Adj	MGONZALX20170511124052737
Explanation: Aliso Canyon Incident - Exclude cost and associated FTEs related to internal order 300775156 related to wellhead leak.							

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
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 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2016	Aliso	-37	-1	0	-0.4	1-Sided Adj	FGALVAN20170512093521353
Explanation: Aliso Canyon Incident - Exclude cost & associated FTE s 300775156 Wellhead Leak							
2016	Other	35	11	0	0.5	CCTR Transf From 2200-2501.000	FGALVAN20170512092819123
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2016	Other	2	8	0	0.0	CCTR Transf From 2200-2502.000	FGALVAN20170512092940953
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2016	Other	477	17	0	5.2	CCTR Transf From 2200-2409.000	FGALVAN20170511123205853
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity.							
2016	Other	107	35	0	1.1	CCTR Transf From 2200-0614.000	FGALVAN20170512092129853
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2016	Other	271	24	0	2.9	CCTR Transf From 2200-2500.000	FGALVAN20170512092354367
Explanation: Transferring cost from Gas Distribution to Gas Operations System Integrity							
2016 Total		840	94	0	9.2		

Note: Totals may include rounding differences.

Southern California Gas Company
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Non-Shared Service Workpapers

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Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 1

Ref ID: ANTROTTE20170628071559420

RAMP Chapter: SCG-4

Program Name: Cathodic Protection Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualification of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 2

Ref ID: FGALVAN20170512093940530

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Technical Specialist for Modernization of Training Materials

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: n/a

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 3

Ref ID: FGALVAN20170512094512087

RAMP Chapter: SCG-2

Program Name: Broaden "Situation City" Skills Training

Program Description: Expand "Situation City" training props at Pico Rivera campus - props, sheds and simulation capabilities to increase number of classes conducted per year

Risk/Mitigation:

Risk: Employee, Contractor, Customer, and Public Safety

Mitigation: Employee Skills Training

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: N/A

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 4

Ref ID: FGALVAN20170512094721037

RAMP Chapter: SCG-1

Program Name: n/a

Program Description: n/a

Risk/Mitigation:

Risk: n/a

Mitigation: Training- Technical non HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: n/a

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 5

Ref ID: MMCLARK20170512124841167

RAMP Chapter: SCG-4

Program Name: Distribution Construction Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	97	97	97
High	107	107	107

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 99

Explanation: CONVERTED 2015\$ TO 2016\$

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 6

Ref ID: MMCLARK20170512125131773

RAMP Chapter: SCG-4

Program Name: Distribution Energy Technician Distribution Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	5	5	5
High	5	5	5

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 5

Explanation: CONVERTED 2015\$ TO 2016\$

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 7

Ref ID: MMCLARK20170512130447727

RAMP Chapter: SCG-4

Program Name: Distribution Lead Construction Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	15	15	15
High	17	17	17

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 15

Explanation: CONVERTED 2015\$ TO 2016\$

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 8

Ref ID: MMCLARK20170512130810423

RAMP Chapter: SCG-4

Program Name: Distribution System Protection Specialist Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 9

Ref ID: MMCLARK20170512132302300

RAMP Chapter: SCG-4

Program Name: Distribution Lead System Protection Specialist Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: FERC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 10

Ref ID: MMCLARK20170512132522847

RAMP Chapter: SCG-10

Program Name: Distribution Construction Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	713	713	713
High	788	788	788

Funding Source: FERC

Forecast Method: Average

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 664

Explanation: CONVERTED 2015\$ TO 2016\$

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 11

Ref ID: MMCLARK20170512132730333

RAMP Chapter: SCG-10

Program Name: Distribution Energy Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: High-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	219	219	219
High	242	242	242

Funding Source: FERC

Forecast Method: Average

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 267

Explanation: CONVERTED 2015\$ TO 2016\$

Southern California Gas Company
2019 GRC - APP
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 12

Ref ID: MMCLARK20170512132917383

RAMP Chapter: SCG-10

Program Name: Distribution Lead Construction Technician Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: Medium-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	333	333	333
High	368	368	368

Funding Source: FERC

Forecast Method: Average

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 323

Explanation: CONVERTED 2015\$ TO 2016\$

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 13

Ref ID: MMCLARK20170512133118043

RAMP Chapter: SCG-10

Program Name: Distribution System Protection Specialist Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: Medium-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	87	87	87
High	97	97	97

Funding Source: FERC

Forecast Method: Average

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 99

Explanation: CONVERTED 2015\$ TO 2016\$

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 14

Ref ID: MMCLARK20170512133308170

RAMP Chapter: SCG-10

Program Name: Distribution Lead System Protection Specialist Training

Program Description: Certification and training that is required for all distribution employees to work on company assets. This is mandated by CFR 49 Part 192 Subpart N

Risk/Mitigation:

Risk: Medium-Pressure Pipeline Failure

Mitigation: Qualifications of Pipeline Personnel

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: FERC

Forecast Method: Average

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 15

Ref ID: MMCLARK20170512133916093

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Construction Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 16

Ref ID: MMCLARK20170512134116127

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Energy Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Trainin - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 17

Ref ID: MMCLARK20170512135409440

RAMP Chapter: SCG-7

Program Name: Distribution Lead Construction Technician Training

Program Description: Distribution Lead Construction Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 18

Ref ID: MMCLARK20170512140958443

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution System Protection Specialist Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 19

Ref ID: MMCLARK20170512142342363

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Lead System Protection Specialist Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 20

Ref ID: MMCLARK20170512142523530

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Construction Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 21

Ref ID: MMCLARK20170512142648947

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Energy Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 22

Ref ID: MMCLARK20170512142819230

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Lead Construction Technician Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 23

Ref ID: MMCLARK20170512142940903

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution System Protection Specialist Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Workpaper: 2SI001.000 - GAS OPERATIONS TRAINING & DEVELOPMENT

RAMP Item # 24

Ref ID: MMCLARK20170512143112940

RAMP Chapter: SCG-7

Program Name: Skills training covered by the following risks: Dig-Ins (SCG-01); Employee, Contractor, Customer an

Program Description: Distribution Lead System Protection Specialist Training

Risk/Mitigation:

Risk: Workforce Planning

Mitigation: Training - Technical non-HR

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart N

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Workpaper: 2SI002.000

Summary for Category: B. PIPELINE SAFETY & COMPLIANCE

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	655	755	800	2,719
Non-Labor	44	44	144	171
NSE	0	0	0	0
Total	699	799	944	2,890
FTE	5.5	5.5	7.4	30.4

Workpapers belonging to this Category:

2SI002.000 PIPELINE SAFETY & COMPLIANCE

Labor	655	755	800	2,719
Non-Labor	44	44	144	171
NSE	0	0	0	0
Total	699	799	944	2,890
FTE	5.5	5.5	7.4	30.4

Note: Totals may include rounding differences.

Beginning of Workpaper
2SI002.000 - PIPELINE SAFETY & COMPLIANCE

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

Activity Description:

Pipeline Safety and Compliance (PS&C) is responsible for supporting the company to meet and exceed compliance in regulatory and safety regulations. PS&C oversees a robust compliance system that demonstrates SoCalGas' commitment to pipeline safety and shapes essential enhancements for our employees, processes, and technologies. PS&C consists of multiple interconnected departments and cost centers including: Pipeline Safety & Compliance Director; Pipeline Safety and Compliance Group; Major Projects Regulatory Compliance and Controls; Pipeline Safety and Oversight; Operator Qualification; and Quality and Risk.

Forecast Explanations:

Labor - Base YR Rec

The forecast method developed for this cost category to labor expense is the base year method because this forecasting methodology serves to more accurately represent this workgroup given the significant increase in Commission oversight. However, SoCalGas anticipates increasing mitigation programs to be implemented within this group and therefore additional staffing and resources are needed.

Non-Labor - Base YR Rec

The forecast method developed for this cost category to non-labor expense is the base year method because this forecasting methodology serves to more accurately represent this workgroup given the significant increase in Commission oversight. However, SoCalGas anticipates increasing mitigation programs to be implemented within this group and therefore additional staffing and resources are needed.

NSE - Base YR Rec

NSE is not applicable to this workgroup.

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		195	277	250	344	655	756	801	2,720	
Non-Labor		2	10	42	53	44	43	143	170	
NSE		0	0	0	0	0	0	0	0	
Total		197	287	291	398	699	799	944	2,890	
FTE		1.2	2.2	1.4	2.1	5.5	5.5	7.4	30.4	

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	655	655	655	100	145	2,064	755	800	2,719
Non-Labor	Base YR Rec	44	44	44	0	100	127	44	144	171
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		699	699	699	100	245	2,191	799	944	2,890
FTE	Base YR Rec	5.5	5.5	5.5	0.0	1.9	24.9	5.5	7.4	30.4

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>	<u>RefID</u>	
2017	RAMP Incremental	100	0	0	100	0.0	1-Sided Adj	MGONZALX20170512172512050	
Explanation:		RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight							
2017 Total		100	0	0	100	0.0			
2018	RAMP Incremental	195	100	0	295	1.9	1-Sided Adj	PDOMAGAS20170512140707623	
Explanation:		RAMP Chapter 8- Records Management 2 new FTEs for Pipeline Safety & Compliacne Data Analytics Group. 2 FTEs X \$97.5K= \$195K Non-Labor is for Compliance Analytics Dashboard (\$100k)							
2018	FOF-Ongoing	-150	0	0	-150	0.0	1-Sided Adj	MGONZALX20170622145629720	
Explanation:		This adjustment is to incorporate the benefit from the FOF idea number 460 into cost center 2200-2530 that centralized quality management, combining QA&QC occurring in staff organizations to optimize activities.							
2018	RAMP Incremental	100	0	0	100	0.0	1-Sided Adj	ANTROTTE20170628065646087	
Explanation:		RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight							
2018 Total		145	100	0	245	1.9			
2019	RAMP Incremental	195	100	0	295	1.9	1-Sided Adj	PDOMAGAS20170512140027403	

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

<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>	<u>RefID</u>
Explanation: RAMP Chapter 8- Records Management 2 new FTEs for Pipeline Safety & Compliance Data Analytics Group. 2 FTEs X \$97.5K= \$195K Non-Labor is for Compliance Analytics Dashboard (\$100k)								
2019	RAMP Incremental	1,100	11	0	1,111	11.0	1-Sided Adj	PDOMAGAS20170512141450960
Explanation: RAMP Chapter 8- Records Management 11 FTEs for PMs and Managers needed to meet the cost recovery demands of ongoing regulatory filings for major programs like PSEP. Labor costs will be 11 FTE X \$100K = \$1.1 Million. Associated non-labor expense is estimated to be 11 FTE X \$1K = \$11K.								
2019	RAMP Incremental	770	11	0	781	11.0	1-Sided Adj	PDOMAGAS20170512141530913
Explanation: RAMP Chapter 8- Records Management 11 FTEs for Tech Advisors needed to meet the cost recovery demands of ongoing regulatory filings for major programs like PSEP. Labor costs will be 11 FTE X \$70K = \$770K. Associated non-labor expense is estimated to be 11 FTE X \$1K = \$11K.								
2019	Other	100	5	0	105	1.0	1-Sided Adj	PDOMAGAS20170512142250690
Explanation: Additional FTE for Admin & Director as they transition to O&M in 2019. PSEP becomes base business. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$5K.								
2019	FOF-Ongoing	-201	0	0	-201	0.0	1-Sided Adj	MGONZALX20170622145641093
Explanation: This adjustment is to incorporate the benefit from the FOF idea number 460 into cost center 2200-2530 that centralized quality management, combining QA&QC occurring in staff organizations to optimize activities.								
2019	RAMP Incremental	100	0	0	100	0.0	1-Sided Adj	ANTROTTE20170628065716307
Explanation: RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight								
2019 Total		2,064	127	0	2,191	24.9		

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	153	221	205	199	214
Non-Labor	2	10	42	45	23
NSE	0	0	0	0	0
Total	155	232	246	244	236
FTE	1.0	1.9	1.2	1.0	1.2
Adjustments (Nominal \$) **					
Labor	0	0	0	90	349
Non-Labor	0	0	0	8	21
NSE	0	0	0	0	0
Total	0	0	0	99	370
FTE	0.0	0.0	0.0	0.8	3.5
Recorded-Adjusted (Nominal \$)					
Labor	153	221	205	289	563
Non-Labor	2	10	42	53	44
NSE	0	0	0	0	0
Total	155	232	246	342	606
FTE	1.0	1.9	1.2	1.8	4.7
Vacation & Sick (Nominal \$)					
Labor	25	37	33	47	93
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	25	37	33	47	93
FTE	0.2	0.3	0.2	0.3	0.8
Escalation to 2016\$					
Labor	17	19	12	8	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	17	19	11	8	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	195	277	250	344	655
Non-Labor	2	10	42	53	44
NSE	0	0	0	0	0
Total	197	287	291	398	699
FTE	1.2	2.2	1.4	2.1	5.5

* 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.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	90	349
Non-Labor	0	0	0	8	21
NSE	0	0	0	0	0
Total	0	0	0	99	370
FTE	0.0	0.0	0.0	0.8	3.5

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	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		
2015	Other	90	8	0	0.8	CCTR Transf From 2200-2551.000	MGONZALX20170512112655413
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2530 from workpaper 2200-2551 to the correct workpaper (2200-2530 within proxy 2200-7240) where the forecast will be represented.					
2015 Total		90	8	0	0.8		
2016	Aliso	-2	-2	0	-0.1	1-Sided Adj	JJBUNTIN20170224122936487
Explanation:		This adjustment was made because this work (internal order number 300775156) was related to the Aliso Canyon Incident.					
2016	Other	351	23	0	3.6	CCTR Transf From 2200-2551.000	MGONZALX20170512113458800
Explanation:		Adjustment to manually transfer the historical expenditures in cost center 2200-2530 to proxy cost center 2200-7240 that will represent cost center 2200-2530 within the System Integrity witness area for cost center 2200-2530.					
2016 Total		349	21	0	3.5		

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

RAMP Item # 1

Ref ID: MGONZALX20170512172512050

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Base Year

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

RAMP Item # 2

Ref ID: TP1JMY20170801184507537

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Base Year

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

RAMP Item # 3

Ref ID: TP1JMY20170801184719663

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Base Year

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Workpaper: 2SI002.000 - PIPELINE SAFETY & COMPLIANCE

RAMP Item # 4

Ref ID: TP1JMY20170801184840960

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Workpaper: 2SI003.000

Summary for Category: C. DAMAGE PREVENTION

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	0	0	0	0
Non-Labor	398	641	1,141	1,641
NSE	0	0	0	0
Total	<u>398</u>	<u>641</u>	<u>1,141</u>	<u>1,641</u>
FTE	0.0	0.0	0.0	0.0

Workpapers belonging to this Category:

2SI003.000 PUBLIC AWARENESS

Labor	0	0	0	0
Non-Labor	398	641	1,141	1,641
NSE	0	0	0	0
Total	<u>398</u>	<u>641</u>	<u>1,141</u>	<u>1,641</u>
FTE	0.0	0.0	0.0	0.0

Note: Totals may include rounding differences.

Beginning of Workpaper
2SI003.000 - PUBLIC AWARENESS

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Workpaper: 2SI003.000 - PUBLIC AWARENESS

Activity Description:

SoCalGas has developed and implemented a federally-mandated Public Awareness program, as prescribed in 49 CFR 192.616. The Public Awareness program contributes to enhanced public safety by providing certain risk mitigation measures. In adopting these Public Awareness program requirements, the Pipeline and Hazardous Materials Safety Administration (PHMSA) determined that “effective public awareness programs are vital to continued safe pipeline Operations” and that “such programs are an important factor in establishing communications with affected stakeholders, providing information necessary to enhance public awareness of pipelines, and communicating stakeholder roles relative to pipeline safety.” The federal regulations directing the implementation of this program specifically require that the program include activities to educate the public, appropriate government organizations, and persons engaged in excavation-related activities regarding:

(1) Use of the one-call notification system prior to excavation and other damage prevention activities; (2) possible hazards associated with unintended releases from a gas pipeline facility; (3) Physical indications that such a release may have occurred; (4) steps that should be taken for public safety in the event of a gas pipeline release; and (5) procedures for reporting such an event.

Forecast Explanations:

Labor - 5-YR Average

Labor is not applicable to this workgroup.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded non-labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing non-labor requirements. Our damage prevention data demonstrates that when we perform public awareness activities that the number of damages decrease while the number of calls to 811(Underground Service Alert) increases, therefore we plan to increase our cost in these areas to further contribute to lowering the numbers of damages to our system while also contributing to mitigate our number one threat to our system, third party damages.

NSE - 5-YR Average

NSE is not applicable to this workgroup.

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
		2012	2013	2014	2015	2016	2017	2018	2019	
Years										
Labor	0	0	0	0	0	0	0	0		
Non-Labor	836	588	650	736	398	642	1,142	1,642		
NSE	0	0	0	0	0	0	0	0		
Total	836	588	650	736	398	642	1,142	1,642		
FTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Workpaper: 2SI003.000 - PUBLIC AWARENESS

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	0	0	0	0	0	0	0	0	0
Non-Labor	5-YR Average	641	641	641	0	500	1,000	641	1,141	1,641
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		641	641	641	0	500	1,000	641	1,141	1,641
FTE	5-YR Average	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017 Total		0	0	0	0	0.0		

2018 RAMP Incremental 0 500 0 500 0.0 1-Sided Adj ANTROTTE20170628070234070

Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins
 The Company is looking for ways to bring more awareness to 811 through additional sponsorships and partnerships across the service territory. Current public awareness efforts involve a variety of methods for educating excavators and potential excavators about the excavation laws and best practices. These methods include bill inserts, media campaigns, prevention industry memberships, sponsorships, radio advertising, internet advertising, billboard advertising, safety meetings, and more. The proposed public awareness efforts will increase the volume of current efforts and explore new creative ways to saturate the message into targeted audiences.

2018 Total		0	500	0	500	0.0		
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2019 RAMP Incremental 0 1,000 0 1,000 0.0 1-Sided Adj ANTROTTE20170628070325063

Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins
 The Company is looking for ways to bring more awareness to 811 through additional sponsorships and partnerships across the service territory. Current public awareness efforts involve a variety of methods for educating excavators and potential excavators about the excavation laws and best practices. These methods include bill inserts, media campaigns, prevention industry memberships, sponsorships, radio advertising, internet advertising, billboard advertising, safety meetings, and more. The proposed public awareness efforts will increase the volume of current efforts and explore new creative ways to saturate the message into targeted audiences.

2019 Total		0	1,000	0	1,000	0.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Workpaper: 2SI003.000 - PUBLIC AWARENESS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	813	581	646	734	398
NSE	0	0	0	0	0
Total	813	581	646	734	398
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	5	0	0
NSE	0	0	0	0	0
Total	0	0	5	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	0	0
Non-Labor	813	581	652	734	398
NSE	0	0	0	0	0
Total	813	581	652	734	398
FTE	0.0	0.0	0.0	0.0	0.0
Vacation & 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
Escalation to 2016\$					
Labor	0	0	0	0	0
Non-Labor	24	7	-2	2	0
NSE	0	0	0	0	0
Total	24	7	-2	2	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	0	0	0	0	0
Non-Labor	836	588	650	736	398
NSE	0	0	0	0	0
Total	836	588	650	736	398
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.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Workpaper: 2SI003.000 - PUBLIC AWARENESS

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	5	0	0
NSE	0	0	0	0	0
Total	0	0	5	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012 Total		0	0	0	0.0		
2013 Total		0	0	0	0.0		
2014	Other	0	5	0	0.0	CCTR Transf From 2200-0318.000	MGONZALX20161027135829307
2014 Total		0	5	0	0.0		
2015 Total		0	0	0	0.0		
2016 Total		0	0	0	0.0		

Explanation: This adjustment is being made to show expenditures related to Public Awareness (PA) in the PA workpaper 2200-2213 that were charged in the Engineering Design cost center 2200-0318. The change is due to a reorganization of the PA duties from Engineering Design to the Major Programs department.

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Workpaper: 2SI003.000 - PUBLIC AWARENESS

RAMP Item # 1

Ref ID: ANTROTTE20170628163432067

RAMP Chapter: SCG-1

Program Name: Damage Prevention Public Awareness

Program Description: Promotion of excavation safety to contractors and the public

Risk/Mitigation:

Risk: Dig-Ins

Mitigation: Public Awareness

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 397.85

Explanation:

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Workpaper: 2SI004.000

Summary for Category: D. ASSET MANAGEMENT

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	1,759	2,135	2,135	2,135
Non-Labor	328	629	369	369
NSE	0	0	0	0
Total	2,087	2,764	2,504	2,504
FTE	20.6	23.9	23.9	23.9

Workpapers belonging to this Category:

2SI004.000 ASSET MANAGEMENT

Labor	1,759	2,135	2,135	2,135
Non-Labor	328	629	369	369
NSE	0	0	0	0
Total	2,087	2,764	2,504	2,504
FTE	20.6	23.9	23.9	23.9

Note: Totals may include rounding differences.

Beginning of Workpaper
2SI004.000 - ASSET MANAGEMENT

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Workpaper: 2SI004.000 - ASSET MANAGEMENT

Activity Description:

Asset and data management requires computer-based work management systems, document management systems with integration to geographic information systems (GIS), and technical computing management and support. Part of the activity performed in this workgroup is to maintain and upgrade software applications. These application systems and the management of field hardware and mobile applications, as well as supporting activities are necessary for the safe and efficient operation and maintenance of the gas infrastructure from receipt point through the Transmission, Distribution, and Storage pipeline networks, as well as to support Customer Services.
 This category includes work performed to support computer programs and systems, as well as field hardware and mobile applications not provided by the Company's Information Technology group.

Forecast Explanations:

Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Asset Management increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Asset Management activities in the forecast years.

Non-Labor - 5-YR Average

The services provided by employees within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded non-labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing non-labor requirements. To this foundation, additional funding is necessary to meet the projected future staffing levels

NSE - 5-YR Average

NSE is not applicable to this workgroup.

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		1,840	2,217	1,491	1,867	1,759	2,135	2,135	2,135	
Non-Labor		872	327	67	189	328	629	369	369	
NSE		0	0	0	0	0	0	0	0	
Total		2,712	2,544	1,559	2,056	2,086	2,764	2,504	2,504	
FTE		20.3	24.3	17.9	21.4	20.6	23.9	23.9	23.9	

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Workpaper: 2SI004.000 - ASSET MANAGEMENT

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	1,835	1,835	1,835	300	300	300	2,135	2,135	2,135
Non-Labor	5-YR Average	357	357	357	272	12	12	629	369	369
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		2,191	2,191	2,191	572	312	312	2,763	2,503	2,503
FTE	5-YR Average	20.9	20.9	20.9	3.0	3.0	3.0	23.9	23.9	23.9

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017	RAMP Incremental	100	4	0	104	1.0	1-Sided Adj	MGONZALX20170512141545047	
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2584: One FTE to conduct SAP Production Support and compliance related work.							
		Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$4K = \$4K.							
2017	RAMP Incremental	200	8	0	208	2.0	1-Sided Adj	MGONZALX20170512164415890	
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2323: Two FTEs to conduct SAP Production Support for Transmission and Storage operations and maintenance.							
		Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$4K = \$8K.							
2017	RAMP Incremental	0	260	0	260	0.0	1-Sided Adj	ANTROTTE20170626122752640	
Explanation:		RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Non-Labor RAMP incremental added for Automated USA Ticket Prioritization, Some excavations may take priority over others because they are identified as more of risk and as such require additional response from the Company. For instance, if the excavation is within 10 feet of a high pressure facility, the Company must have a standby person at the site to watch the excavation near the facility. Currently the Company identifies ticket priorities using a manual process that may lend itself to human error. The Company is proposing to automate the prioritization process using complex algorithms based on ticket and GIS information. The prioritization will allow the Company to consistently take appropriate measures in a timely effort. This will improve identification when highpressure facilities may be involved in which case a standby would be needed.							
2017 Total		300	272	0	572	3.0			

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Workpaper: 2SI004.000 - ASSET MANAGEMENT

<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>	<u>RefID</u>
2018	RAMP Incremental	100	4	0	104	1.0	1-Sided Adj	MGONZALX20170512164511200
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2584: One FTE to conduct SAP Production Support and compliance related work. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$4K = \$4K.						
2018	RAMP Incremental	200	8	0	208	2.0	1-Sided Adj	MGONZALX20170512164555233
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2323: Two FTEs to conduct SAP Production Support for Transmission and Storage operations and maintenance. Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$4K = \$8K.						
2018 Total		300	12	0	312	3.0		
2019	RAMP Incremental	100	4	0	104	1.0	1-Sided Adj	MGONZALX20170512164529750
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2584: One FTE to conduct SAP Production Support and compliance related work. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$4K = \$4K.						
2019	RAMP Incremental	200	8	0	208	2.0	1-Sided Adj	MGONZALX20170512164607907
Explanation:		RAMP Chapter 8- Records Management RAMP Asset & Records Management - Upward pressure adjustment in cost center 2200-2323: Two FTEs to conduct SAP Production Support for Transmission and Storage operations and maintenance. Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$4K = \$8K.						
2019 Total		300	12	0	312	3.0		

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (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
Adjustments (Nominal \$) **					
Labor	1,444	1,773	1,222	1,569	1,510
Non-Labor	848	323	68	189	328
NSE	0	0	0	0	0
Total	2,292	2,096	1,290	1,757	1,837
FTE	17.4	20.8	15.3	18.3	17.6
Recorded-Adjusted (Nominal \$)					
Labor	1,444	1,773	1,222	1,569	1,510
Non-Labor	848	323	68	189	328
NSE	0	0	0	0	0
Total	2,292	2,096	1,290	1,757	1,837
FTE	17.4	20.8	15.3	18.3	17.6
Vacation & Sick (Nominal \$)					
Labor	231	295	200	254	249
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	231	295	200	254	249
FTE	2.9	3.5	2.6	3.1	3.0
Escalation to 2016\$					
Labor	164	149	69	45	0
Non-Labor	25	4	0	0	0
NSE	0	0	0	0	0
Total	189	153	69	45	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	1,840	2,217	1,491	1,867	1,759
Non-Labor	872	327	67	189	328
NSE	0	0	0	0	0
Total	2,712	2,544	1,559	2,056	2,086
FTE	20.3	24.3	17.9	21.4	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.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	1,444	1,773	1,222	1,569	1,510
Non-Labor	848	323	68	189	328
NSE	0	0	0	0	0
Total	2,292	2,096	1,290	1,757	1,837
FTE	17.4	20.8	15.3	18.3	17.6

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	0	0	0	0.0	CCTR Transf To 2200-0307.000	MGONZALX20170511110552850
Explanation: Adjustment to fix a transfer error. The error was the transfer the historical expenditures in cost center 2200-2317 from the Gas Engineering witness area to proxy cost center 2200-7211 of non labor expense of \$724,858. However, the correct amount is \$724,828.							
2012	Other	47	1	0	0.9	CCTR Transf From 2200-0307.000	MGONZALX20170511104402627
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2322 from the Gas Engineering witness area to proxy cost center 2200-7212 that will represent cost center 2200-2322 within the System Integrity witness area.							
2012	Other	792	725	0	8.9	CCTR Transf From 2200-0307.000	MGONZALX20170511104606570
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2317 from the Gas Engineering witness area to proxy cost center 2200-7211 that will represent cost center 2200-2317 within the System Integrity witness area.							
2012	Other	72	15	0	0.7	CCTR Transf From 2200-0307.000	MGONZALX20170511104741567
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2323 from the Gas Engineering witness area to proxy cost center 2200-7213 that will represent cost center 2200-2323 within the System Integrity witness area.							
2012	Other	241	26	0	3.4	CCTR Transf From 2200-0307.000	MGONZALX20170511105108097
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2324 from the Gas Engineering witness area to proxy cost center 2200-7214 that will represent cost center 2200-2324 within the System Integrity witness area.							
2012	Other	293	81	0	3.5	CCTR Transf From 2200-0307.000	MGONZALX20170511105351093
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2375 from the Gas Engineering witness area to proxy cost center 2200-7215 that will represent cost center 2200-2375 within the System Integrity witness area.							

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2012 Total		1,444	848	0	17.4		
2013	Other	225	11	0	2.8	CCTR Transf From 2200-0307.000	MGONZALX20170511112002120
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2375 from the Gas Engineering witness area to proxy cost center 2200-7215. This proxy cost center will represent cost center 2200-2375 within the System Integrity witness area.							
2013	Other	1,057	271	0	11.7	CCTR Transf From 2200-0307.000	MGONZALX20170511112122527
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2317 from the Gas Engineering witness area to proxy cost center 2200-7211. This proxy cost center will represent cost center 2200-2317 within the System Integrity witness area.							
2013	Other	47	0	0	0.8	CCTR Transf From 2200-0307.000	MGONZALX20170511112230000
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2322 from the Gas Engineering witness area to proxy cost center 2200-7212. This proxy cost center will represent cost center 2200-2322 within the System Integrity witness area.							
2013	Other	324	24	0	4.3	CCTR Transf From 2200-0307.000	MGONZALX20170511112441613
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2324 from the Gas Engineering witness area to proxy cost center 2200-7214. This proxy cost center will represent cost center 2200-2324 within the System Integrity witness area.							
2013	Other	120	17	0	1.2	CCTR Transf From 2200-0307.000	MGONZALX20170511112646960
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2323 from the Gas Engineering witness area to proxy cost center 2200-7213. This proxy cost center will represent cost center 2200-2323 within the System Integrity witness area.							
2013 Total		1,773	323	0	20.8		
2014	Other	498	18	0	6.0	CCTR Transf From 2200-0307.000	MGONZALX20170511113302040
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2323 from the Gas Engineering witness area to proxy cost center 2200-7213. This proxy cost center will represent cost center 2200-2323 within the System Integrity witness area.							
2014	Other	338	33	0	4.4	CCTR Transf From 2200-0307.000	MGONZALX20170511113406437
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2324 from the Gas Engineering witness area to proxy cost center 2200-7214. This proxy cost center will represent cost center 2200-2324 within the System Integrity witness area.							
2014	Other	337	15	0	4.0	CCTR Transf From 2200-0307.000	MGONZALX20170511114121820

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Workpaper: 2SI004.000 - ASSET MANAGEMENT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2375 from the Gas Engineering witness area to proxy cost center 2200-7215. This proxy cost center will represent cost center 2200-2375 within the System Integrity witness area.							
2014	Other	50	1	0	0.9	CCTR Transf From 2200-0307.000	MGONZALX20170511114232607
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2322 from the Gas Engineering witness area to proxy cost center 2200-7212. This proxy cost center will represent cost center 2200-2322 within the System Integrity witness area.							
2014 Total		1,222	68	0	15.3		
2015	Other	700	14	0	8.0	CCTR Transf From 2200-0307.000	MGONZALX20170511121131027
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2323 from the Gas Engineering witness area to proxy cost center 2200-7213. This proxy cost center will represent cost center 2200-2323 within the System Integrity witness area.							
2015	Other	348	144	0	4.3	CCTR Transf From 2200-0307.000	MGONZALX20170511121300230
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2324 from the Gas Engineering witness area to proxy cost center 2200-7214. This proxy cost center will represent cost center 2200-2324 within the System Integrity witness area.							
2015	Other	379	13	0	4.3	CCTR Transf From 2200-0307.000	MGONZALX20170511121413113
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2375 from the Gas Engineering witness area to proxy cost center 2200-7215. This proxy cost center will represent cost center 2200-2375 within the System Integrity witness area.							
2015	Other	54	0	0	0.9	CCTR Transf From 2200-0307.000	MGONZALX20170511121809240
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2322 from the Gas Engineering witness area to proxy cost center 2200-7212. This proxy cost center will represent cost center 2200-2322 within the System Integrity witness area.							
2015	Other	87	17	0	0.8	CCTR Transf From 2200-0307.000	MGONZALX20170511121909317
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2317 from the Gas Engineering witness area to proxy cost center 2200-7211. This proxy cost center will represent cost center 2200-2317 within the System Integrity witness area.							
2015 Total		1,569	189	0	18.3		
2016	Other	281	3	0	3.2	CCTR Transf From 2200-0307.000	MGONZALX20170511122854927
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2584 from the Gas Engineering witness area to proxy cost center 2200-7220. This proxy cost center will represent cost center 2200-2584 within the System Integrity witness area.							

Note: Totals may include rounding differences.

Southern California Gas Company
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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Workpaper: 2SI004.000 - ASSET MANAGEMENT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2016	Other	125	7	0	1.5	CCTR Transf From 2200-0307.000	MGONZALX20170511123013500
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2317 from the Gas Engineering witness area to proxy cost center 2200-7211. This proxy cost center will represent cost center 2200-2317 within the System Integrity witness area.							
2016	Other	438	14	0	4.7	CCTR Transf From 2200-0307.000	MGONZALX20170511123123643
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2323 from the Gas Engineering witness area to proxy cost center 2200-7213. This proxy cost center will represent cost center 2200-2323 within the System Integrity witness area.							
2016	Other	334	289	0	4.0	CCTR Transf From 2200-0307.000	MGONZALX20170511123220997
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2324 from the Gas Engineering witness area to proxy cost center 2200-7214. This proxy cost center will represent cost center 2200-2324 within the System Integrity witness area.							
2016	Other	278	14	0	3.3	CCTR Transf From 2200-0307.000	MGONZALX20170511123330147
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2375 from the Gas Engineering witness area to proxy cost center 2200-7215. This proxy cost center will represent cost center 2200-2375 within the System Integrity witness area.							
2016	Other	53	0	0	0.9	CCTR Transf From 2200-0307.000	MGONZALX20170511123430320
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2322 from the Gas Engineering witness area to proxy cost center 2200-7212. This proxy cost center will represent cost center 2200-2322 within the System Integrity witness area.							
2016 Total		1,510	328	0	17.6		

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

RAMP Item # 1

Ref ID: ANTROTTE20170626122752640

RAMP Chapter: SCG-1

Program Name: Automated USA Ticket Prioritization

Program Description: Automate the prioritization process using algorithms based on ticket and GIS information

Risk/Mitigation:

Risk: Dig-Ins

Mitigation: Prevention and Improvements

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

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Non-Shared Service Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

RAMP Item # 2

Ref ID: MGONZALX20170512141545047

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	7,314	8,263	9,211
High	8,262	9,337	10,412

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: In progress

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 5572

Explanation: The embedded cost was assumed to be the 2015 proxy for Operational Records.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Workpaper: 2SI004.000 - ASSET MANAGEMENT

RAMP Item # 3

Ref ID: MGONZALX20170512164415890

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Mandated

Work Type Citation: tbd

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: There are no expenditures for 2016.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000

Summary for Category: E. GAS CONTRACTOR CONTROLS

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	501	1,180	1,640	2,330
Non-Labor	20	200	1,500	1,500
NSE	0	0	0	0
Total	521	1,380	3,140	3,830
FTE	4.8	10.0	14.0	20.0

Workpapers belonging to this Category:

2SI005.000 GAS CONTRACTOR CONTROLS

Labor	501	1,180	1,640	2,330
Non-Labor	20	200	1,500	1,500
NSE	0	0	0	0
Total	521	1,380	3,140	3,830
FTE	4.8	10.0	14.0	20.0

Note: Totals may include rounding differences.

Beginning of Workpaper
2SI005.000 - GAS CONTRACTOR CONTROLS

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: E. GAS CONTRACTOR CONTROLS
Category-Sub: 1. GAS CONTRACTOR CONTROLS
Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

Activity Description:

Gas Contractor Controls collaborates with Company and industry leaders and subject matter experts to formulate and promote policy related to construction contractor safety and pipeline safety/quality oversight. To do this, they must perform the following duties:

- establish, maintain, and expand construction contractor oversight program, including safety (occupational and process), to systematically review, assess, and enhance the management practices related to contractors;
- provide written guidance on inspection of workmanship on the pipeline;
- facilitate invoice approval process via online training and invoice submittal system user support; and
- construction fraud vigilance and training.

•As prescribed in the Agreement between SoCalGas and Utility Workers Union of America(AFL-CIO) and International Chemical Workers Union Council, SoCalGas must provide semi-annual reports to the union identifying contract employees doing represented work (excluding Distribution) and a report of Gas Distribution contract employment showing the ration of company/contractor employees.

- Deliver pipeline construction fraud awareness training;
- Author and maintain Company Gas Standards, Forms, and workflows related to construction contractor oversight and associated information/records collection, including those related to California Public Utilities Code Section 141 Construction and Safety Standards; and
- Develop Safety Congress presentation/content and facilitate quarterly meetings.

Pipeline Safety Management System (PSMS)- Develop and implement a Company-wide PSMS API RP 1173, consistent with PHMSA's recommendation. "PHMSA fully supports the implementation of RP 1173 and plans to promote vigorous conformance to this voluntary standard."

Forecast Explanations:

Labor - Zero-Based

SoCalGas chose a zero-based methodology because the Gas Contractor Control department was newly created in 2015, which has no past cost history for the newly inaugurated functions. Labor is composed of Gas Contractor Controls Department management direct salaries associated with the work to support the management and execution of large construction projects.

Non-Labor - Zero-Based

The Non-Labor cost is composed of employees' expenses, employee training costs, software license fees for project management and control systems, and consulting fees.

NSE - Zero-Based

NSE is not applicable to this workgroup

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Category-Sub: 1. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		0	0	0	427	501	1,180	1,640	2,330	
Non-Labor		0	0	0	17	20	200	1,500	1,500	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	444	520	1,380	3,140	3,830	
FTE		0.0	0.0	0.0	3.9	4.8	10.0	14.0	20.0	

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Category-Sub: 1. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Zero-Based	0	0	0	1,180	1,640	2,330	1,180	1,640	2,330
Non-Labor	Zero-Based	0	0	0	200	1,500	1,500	200	1,500	1,500
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	1,380	3,140	3,830	1,380	3,140	3,830
FTE	Zero-Based	0.0	0.0	0.0	10.0	14.0	20.0	10.0	14.0	20.0

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	1,180	200	0	1,380	10.0	1-Sided Adj	MGONZALX20170512142201353

Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety
 Adjustment to cover for a total of 10 FTEs in the Contractor Controls department. Contractor selection is based upon specific Company needs and contractor qualifications. Contractor safety records are examined prior to selection. Job requirements are specified in the Company's contracts with third parties, and contractors are required to meet all legal, regulatory, and contractual requirements. Contractor work performance is monitored during the course of their work for the Company. Activities associated with contractor qualification, selection, and oversight are included in this category.

Labor costs will be 10 FTE X \$118K = \$1.180 Million. Associated non-labor expense is estimated to be 10 FTE X \$20K = \$200K.

2017 Total		1,180	200	0	1,380	10.0		
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2018	RAMP Incremental	1,640	1,500	0	3,140	14.0	1-Sided Adj	MGONZALX20170512142253430
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Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety
 Adjustment to cover for a total of 10 FTEs in the Contractor Controls department. Contractor selection is based upon specific Company needs and contractor qualifications. Contractor safety records are examined prior to selection. Job requirements are specified in the Company's contracts with third parties, and contractors are required to meet all legal, regulatory, and contractual requirements. Contractor work performance is monitored during the course of their work for the Company. Activities associated with contractor qualification, selection, and oversight are included in this category.

Labor costs will be 14 FTE X \$118K = \$1.640 Million approximately. Associated non-labor expense is estimated to be 10 FTE X \$150K = \$1.5 Million.

2018 Total		1,640	1,500	0	3,140	14.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Category-Sub: 1. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

<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>	<u>RefID</u>
2019	RAMP Incremental	2,330	1,500	0	3,830	20.0	1-Sided Adj	MGONZALX20170512142342843

Explanation: RAMP Chapter 2- Employee Contractor Customer and Public Safety
 Adjustment to cover for a total of 10 FTEs in the Contractor Controls department. Contractor selection is based upon specific Company needs and contractor qualifications. Contractor safety records are examined prior to selection. Job requirements are specified in the Company's contracts with third parties, and contractors are required to meet all legal, regulatory, and contractual requirements. Contractor work performance is monitored during the course of their work for the Company. Activities associated with contractor qualification, selection, and oversight are included in this category.

Labor costs will be 20 FTE X \$116,500 = \$2.33 Million approximately. Associated non-labor expense is estimated to be 10 FTE X \$150K = \$1.5 Million.

2019 Total		2,330	1,500	0	3,830	20.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: E. GAS CONTRACTOR CONTROLS
Category-Sub: 1. GAS CONTRACTOR CONTROLS
Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (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
Adjustments (Nominal \$) **					
Labor	0	0	0	359	430
Non-Labor	0	0	0	17	20
NSE	0	0	0	0	0
Total	0	0	0	376	449
FTE	0.0	0.0	0.0	3.3	4.1
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	359	430
Non-Labor	0	0	0	17	20
NSE	0	0	0	0	0
Total	0	0	0	376	449
FTE	0.0	0.0	0.0	3.3	4.1
Vacation & Sick (Nominal \$)					
Labor	0	0	0	58	71
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	58	71
FTE	0.0	0.0	0.0	0.6	0.7
Escalation to 2016\$					
Labor	0	0	0	10	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	10	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	0	0	0	427	501
Non-Labor	0	0	0	17	20
NSE	0	0	0	0	0
Total	0	0	0	444	520
FTE	0.0	0.0	0.0	3.9	4.8

* 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.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Category-Sub: 1. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	359	430
Non-Labor	0	0	0	17	20
NSE	0	0	0	0	0
Total	0	0	0	376	449
FTE	0.0	0.0	0.0	3.3	4.1

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	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		
2015	Other	359	17	0	3.3	CCTR Transf From 2200-2553.000	MGONZALX20170512123043930
2015 Total		359	17	0	3.3		
2016	Other	430	20	0	4.1	CCTR Transf From 2200-2553.000	MGONZALX20170512123217157
2016 Total		430	20	0	4.1		

Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2553 from the Major Projects witness area to proxy cost center 2200-7241. This proxy cost center will represent 2200-2553 within the System Integrity witness area and its forecast.

Note: Totals may include rounding differences.

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

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. GAS CONTRACTOR CONTROLS
 Category-Sub: 1. GAS CONTRACTOR CONTROLS
 Workpaper: 2SI005.000 - GAS CONTRACTOR CONTROLS

RAMP Item # 1

Ref ID: MGONZALX20170512142201353

RAMP Chapter: SCG-2

Program Name: Ongoing Inspections/Audits of Contractors

Program Description: In addition to Sempra Energy's Audit Services Department's contractor audits, there is a need for an enhanced process of onsite/in-field contractor inspections/audits at both contractor sites and Company construction offices to ensure compliance with safety and quality protocols

Risk/Mitigation:

Risk: Employee, Contractor, Customer & Public Safety

Mitigation: Contractor Management and Traffic Control

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Non-Mandated

Work Type Citation: Pending

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera

Summary of Shared Services Workpapers:

Description	In 2016 \$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
A. GAS OPERATIONS STAFF & TRAINING	846	1,364	1,364	1,364
B. PIPELINE SAFETY & COMPLIANCE	2,888	3,003	4,275	4,593
C. DAMAGE PREVENTION	816	1,563	1,613	2,383
D. ASSET MANAGEMENT	3,643	4,959	5,811	6,416
E. RECORDS MANAGEMENT	0	850	1,150	2,550
Total	8,193	11,739	14,213	17,306

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Cost Center: VARIOUS

Summary for Category: A. GAS OPERATIONS STAFF & TRAINING

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	802	1,181	1,181	1,181
Non-Labor	45	184	184	184
NSE	0	0	0	0
Total	847	1,365	1,365	1,365
FTE	6.0	10.2	10.2	9.2

Cost Centers belonging to this Category:

2200-0225.000 USS - VP GAS SYSTEM INTEGRITY

Labor	345	519	519	519
Non-Labor	17	110	110	110
NSE	0	0	0	0
Total	362	629	629	629
FTE	2.2	4.2	4.2	4.2

2200-2023.000 FIELD TECHNOLOGIES

Labor	207	379	379	379
Non-Labor	4	37	37	37
NSE	0	0	0	0
Total	211	416	416	416
FTE	2.0	3.8	3.8	2.8

2200-2144.000 GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Labor	250	283	283	283
Non-Labor	24	37	37	37
NSE	0	0	0	0
Total	274	320	320	320
FTE	1.8	2.2	2.2	2.2

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Activity Description:

Within the Gas System Integrity are the leadership and organization governance activities for cost center 2200-0225, which represent the Vice President's activities. The Vice President provides the leadership, guidance, and policies to direct the Gas System Integrity organization, which benefits both utilities. The Vice President's activities extend beyond Gas System Integrity, since the Vice President is also responsible for Pipeline Integrity. The Vice President's expenses include technical and financial support, as well as policy issuance to successfully sustain the operation and provide the vision to further the goals of the Company. The Vice President's activities also include the governance, technical, and policy support for Gas Transmission and Gas Distribution functions at both utilities, in addition to Storage for SoCalGas

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future labor expense requirements, the five-year average was chosen.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future labor expense requirements, the five-year average was chosen.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years	2012	2013	2014	2015	2016	2017	2018	2019		
Labor	815	750	352	332	345	518	518	518		
Non-Labor	106	131	211	86	17	110	110	110		
NSE	0	0	0	0	0	0	0	0		
Total	921	880	563	418	362	628	628	628		
FTE	7.8	6.9	2.0	2.2	2.2	4.2	4.2	4.2		

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	1	2	0	3	0.0	2	17	0	19	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	344	15	0	359	2.2	516	93	0	609	4.2
Total Incurred	345	17	0	362	2.2	518	110	0	628	4.2
% Allocation										
Retained	87.36%	87.36%				87.36%	87.36%			
SEU	12.64%	12.64%				12.64%	12.64%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	17	0	19	0.0	2	17	0	19	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	516	93	0	609	4.2	516	93	0	609	4.2
Total Incurred	518	110	0	628	4.2	518	110	0	628	4.2
% Allocation										
Retained	87.36%	87.36%				87.36%	87.36%			
SEU	12.64%	12.64%				12.64%	12.64%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	519	519	519	0	0	0	519	519	519
Non-Labor	5-YR Average	110	110	110	0	0	0	110	110	110
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		629	629	629	0	0	0	629	629	629
FTE	5-YR Average	4.2	4.2	4.2	0.0	0.0	0.0	4.2	4.2	4.2

<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>	<u>RefID</u>
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	341	340	312	282	296
Non-Labor	98	120	205	84	17
NSE	0	0	0	0	0
Total	439	460	517	367	313
FTE	1.8	1.7	1.9	1.9	1.9
Adjustments (Nominal \$) **					
Labor	322	278	-16	0	0
Non-Labor	3	5	1	1	0
NSE	0	0	0	0	0
Total	324	283	-15	1	0
FTE	4.9	4.2	-0.2	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	663	618	296	282	296
Non-Labor	100	126	206	85	17
NSE	0	0	0	0	0
Total	763	744	502	367	313
FTE	6.7	5.9	1.7	1.9	1.9
Vacation & Sick (Nominal \$)					
Labor	106	103	48	46	49
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	106	103	48	46	49
FTE	1.1	1.0	0.3	0.3	0.3
Escalation to 2016\$					
Labor	46	29	8	4	0
Non-Labor	6	5	5	1	0
NSE	0	0	0	0	0
Total	52	34	12	5	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	815	750	352	332	345
Non-Labor	106	131	211	86	17
NSE	0	0	0	0	0
Total	921	880	563	418	362
FTE	7.8	6.9	2.0	2.2	2.2

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-0225.000 - USS - VP GAS SYSTEM INTEGRITY

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	322	278	-16	0	0
Non-Labor	3	5	0.953	0.550	0
NSE	0	0	0	0	0
Total	324	283	-15	0.550	0
FTE	4.9	4.2	-0.2	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	322	3	0	4.9	CCTR Transf From 2200-2331.000	JJBUNTIN20161103134503767
Explanation:		This adjustment was made because the VP of System Integrity and Asset management responsibilities were moved to shared cost center 2200-0225 during a reorganization in 2014.					
2012 Total		322	3	0	4.9		
2013	Other	278	5	0	4.2	CCTR Transf From 2200-2331.000	JJBUNTIN20161103134334393
Explanation:		This adjustment was made because the VP of System Integrity and Asset management responsibilities were moved to shared cost center 2200-0225 during a reorganization in 2014.					
2013 Total		278	5	0	4.2		
2014	Other	-16	1	0	-0.2	CCTR Transf From 2200-2331.000	JJBUNTIN20161103134133940
Explanation:		This adjustment was made because the VP of System Integrity and Asset management responsibilities were moved to shared cost center 2200-0225 during a reorganization in 2014.					
2014 Total		-16	1	0	-0.2		
2015	Other	0	1	0	0.0	CCTR Transf From 2200-2331.000	JJBUNTIN20161103133956190
Explanation:		This adjustment was made because the VP of System Integrity and Asset management responsibilities were moved to shared cost center 2200-0225 during a reorganization in 2014.					
2015 Total		0	1	0	0.0		
2016 Total		0	0	0	0.0		

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2023.000 - FIELD TECHNOLOGIES

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2023.000 - FIELD TECHNOLOGIES

Activity Description:

Recorded to this cost center are the labor, employee expense, and non-labor materials and services required to research and evaluate new tools and technology that enhance or replace existing processes or tools and provide benefits in the form of improved safety. This team helps mitigate risks associated with potential failure of field technologies or the use of obsolete equipment. Field Technologies supports Field Operations by conducting tool and equipment instruction and training to help clients become proficient in the use of new and existing tools and equipment.

Forecast Explanations:

Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Field Technologies increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Field Technologies activities in the forecast years.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Field Technologies increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Field Technologies activities in the forecast years.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		351	336	296	204	207	379	379	379	
Non-Labor		33	34	34	54	4	37	37	37	
NSE		0	0	0	0	0	0	0	0	
Total		384	370	330	257	211	416	416	416	
FTE		3.5	3.3	2.9	2.0	2.0	3.8	3.8	2.8	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2023.000 - FIELD TECHNOLOGIES

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	1	0	1	0.0	0	6	0	6	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	207	3	0	210	2.0	379	31	0	410	3.8
Total Incurred	207	4	0	211	2.0	379	37	0	416	3.8
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	6	0	6	0.0	0	6	0	6	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	379	31	0	410	3.8	379	31	0	410	2.8
Total Incurred	379	37	0	416	3.8	379	37	0	416	2.8
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

Coming soon...

Cost Center Allocation Percentage for 2017

Coming soon...

Cost Center Allocation Percentage for 2018

Coming soon...

Cost Center Allocation Percentage for 2019

Coming soon...

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2023.000 - FIELD TECHNOLOGIES

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	279	279	279	100	100	100	379	379	379
Non-Labor	5-YR Average	32	32	32	5	5	5	37	37	37
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		311	311	311	105	105	105	416	416	416
FTE	5-YR Average	2.8	2.8	2.8	1.0	1.0	0.0	3.8	3.8	2.8

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017	Other	100	5	0	105	1.0	1-Sided Adj	FGALVAN20161130083508160	
Explanation:		One additional employee to support QA Operations Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$5K.							
2017 Total		100	5	0	105	1.0			
2018	Other	100	5	0	105	1.0	1-Sided Adj	FGALVAN20161130083526660	
Explanation:		One additional employee to support QA Operations Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$5K.							
2018 Total		100	5	0	105	1.0			
2019	Other	100	5	0	105	0.0	1-Sided Adj	FGALVAN20161130083540020	
Explanation:		One additional employee to support QA Operations Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$5K = \$5K.							
2019 Total		100	5	0	105	0.0			

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: A. GAS OPERATIONS STAFF & TRAINING
Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
Cost Center: 2200-2023.000 - FIELD TECHNOLOGIES

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	285	277	249	173	178
Non-Labor	31	33	34	53	4
NSE	0	0	0	0	0
Total	317	309	283	226	182
FTE	3.0	2.8	2.5	1.7	1.7
Adjustments (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
Recorded-Adjusted (Nominal \$)					
Labor	285	277	249	173	178
Non-Labor	31	33	34	53	4
NSE	0	0	0	0	0
Total	317	309	283	226	182
FTE	3.0	2.8	2.5	1.7	1.7
Vacation & Sick (Nominal \$)					
Labor	46	46	41	28	29
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	46	46	41	28	29
FTE	0.5	0.5	0.4	0.3	0.3
Escalation to 2016\$					
Labor	20	13	6	3	0
Non-Labor	2	1	1	1	0
NSE	0	0	0	0	0
Total	22	14	7	3	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	351	336	296	204	207
Non-Labor	33	34	34	54	4
NSE	0	0	0	0	0
Total	384	370	330	257	211
FTE	3.5	3.3	2.9	2.0	2.0

* 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.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2023.000 - FIELD TECHNOLOGIES

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2144.000 - GAS SYSTEM INTEGRITY STAFF &PROGRAMS

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2144.000 - GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Activity Description:

Recorded to this cost center are the salaries for the Gas System Integrity Staff & Programs Director and the Administrative Associate who support this organization. Also, recorded to this cost center are the associated employee expenses and miscellaneous supplies and materials.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future labor expense requirements, the 5 year average was chosen.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. Thus this trend is expected to continue, and as the foundation for future labor expense requirements, the 5 year average was chosen.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		350	278	250	285	250	282	282	282	
Non-Labor		33	12	23	-31	24	37	37	37	
NSE		0	0	0	0	0	0	0	0	
Total		383	290	273	254	274	319	319	319	
FTE		2.8	2.1	2.0	2.1	1.8	2.2	2.2	2.2	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2144.000 - GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	7	0	0	7	0.0	6	0	0	6	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	243	23	0	266	1.8	276	37	0	313	2.2
Total Incurred	250	23	0	273	1.8	282	37	0	319	2.2
% Allocation										
Retained	96.76%	96.76%				96.76%	96.76%			
SEU	3.24%	3.24%				3.24%	3.24%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	6	0	0	6	0.0	6	0	0	6	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	276	37	0	313	2.2	276	37	0	313	2.2
Total Incurred	282	37	0	319	2.2	282	37	0	319	2.2
% Allocation										
Retained	96.76%	96.76%				96.76%	96.76%			
SEU	3.24%	3.24%				3.24%	3.24%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

Coming soon...

Cost Center Allocation Percentage for 2017

Coming soon...

Cost Center Allocation Percentage for 2018

Coming soon...

Cost Center Allocation Percentage for 2019

Coming soon...

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2144.000 - GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	283	283	283	0	0	0	283	283	283
Non-Labor	5-YR Average	12	12	12	25	25	25	37	37	37
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		295	295	295	25	25	25	320	320	320
FTE	5-YR Average	2.2	2.2	2.2	0.0	0.0	0.0	2.2	2.2	2.2

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017	Other	0	25	0	25	0.0	1-Sided Adj	ANTROTTE20170628080955140	
Explanation:		Incremental \$25k for non-labor for Gas System Integrity Director and Admin. Non-labor expenses include Office Supplies, Mileage, Per Diems, Professional Dues, External Training, Cell Phones etc...							
2017 Total		0	25	0	25	0.0			
2018	Other	0	25	0	25	0.0	1-Sided Adj	ANTROTTE20170628081010123	
Explanation:		Incremental \$25k for non-labor for Gas System Integrity Director and Admin. Non-labor expenses include Office Supplies, Mileage, Per Diems, Professional Dues, External Training, Cell Phones etc...							
2018 Total		0	25	0	25	0.0			
2019	Other	0	25	0	25	0.0	1-Sided Adj	ANTROTTE20170628081025733	
Explanation:		Incremental \$25k for non-labor for Gas System Integrity Director and Admin. Non-labor expenses include Office Supplies, Mileage, Per Diems, Professional Dues, External Training, Cell Phones etc...							
2019 Total		0	25	0	25	0.0			

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2144.000 - GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	285	229	210	242	215
Non-Labor	615	400	669	-30	24
NSE	0	0	0	0	0
Total	900	629	879	212	238
FTE	2.4	1.8	1.7	1.8	1.5
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	-584	-388	-646	0	0
NSE	0	0	0	0	0
Total	-584	-388	-646	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	285	229	210	242	215
Non-Labor	31	12	23	-30	24
NSE	0	0	0	0	0
Total	316	241	233	212	238
FTE	2.4	1.8	1.7	1.8	1.5
Vacation & Sick (Nominal \$)					
Labor	46	38	34	39	35
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	46	38	34	39	35
FTE	0.4	0.3	0.3	0.3	0.3
Escalation to 2016\$					
Labor	20	11	5	4	0
Non-Labor	2	0	1	0	0
NSE	0	0	0	0	0
Total	22	11	6	3	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	350	278	250	285	250
Non-Labor	33	12	23	-31	24
NSE	0	0	0	0	0
Total	383	290	273	254	274
FTE	2.8	2.1	2.0	2.1	1.8

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: A. GAS OPERATIONS STAFF & TRAINING
 Category-Sub: 1. GAS OPERATIONS STAFF & TRAINING
 Cost Center: 2200-2144.000 - GAS SYSTEM INTEGRITY STAFF & PROGRAMS

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	0	0
Non-Labor	-584	-388	-646	0	0
NSE	0	0	0	0	0
Total	-584	-388	-646	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	0	-584	0	0.0	1-Sided Adj	TP1MTC20161024095152693
Explanation:		To transfer USA fees to Locate & Mark work group for complete showing of L&M expense					
2012 Total		0	-584	0	0.0		
2013	Other	0	-388	0	0.0	1-Sided Adj	TP1MTC20161024095258780
Explanation:		To transfer USA fees to Locate & Mark work group for complete showing of L&M expense					
2013 Total		0	-388	0	0.0		
2014	Other	0	-646	0	0.0	1-Sided Adj	TP1MTC20161025082044370
Explanation:		To transfer USA fees to Locate & Mark work group for complete showing of L&M expense.					
2014 Total		0	-646	0	0.0		
2015 Total		0	0	0	0.0		
2016 Total		0	0	0	0.0		

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Cost Center: VARIOUS

Summary for Category: B. PIPELINE SAFETY & COMPLIANCE

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	2,634	2,734	3,861	4,161
Non-Labor	255	270	415	433
NSE	0	0	0	0
Total	2,889	3,004	4,276	4,594
FTE	26.2	27.2	37.8	40.8

Cost Centers belonging to this Category:

2200-2344.000 OPERATOR QUALIFICATION

Labor	1,020	1,120	1,772	1,772
Non-Labor	138	153	180	180
NSE	0	0	0	0
Total	1,158	1,273	1,952	1,952
FTE	10.7	11.7	17.7	17.7

2200-2360.000 QUALITY & RISK

Labor	862	862	1,162	1,162
Non-Labor	38	38	53	53
NSE	0	0	0	0
Total	900	900	1,215	1,215
FTE	8.6	8.6	11.6	11.6

2200-2473.000 PIPELINE SAFETY & COMPLIANCE MANAGER

Labor	463	463	463	763
Non-Labor	73	73	73	91
NSE	0	0	0	0
Total	536	536	536	854
FTE	4.4	4.4	4.4	7.4

2200-2551.000 PIPELINE SAFETY OVERSIGHT

Labor	289	289	464	464
Non-Labor	6	6	109	109
NSE	0	0	0	0
Total	295	295	573	573
FTE	2.5	2.5	4.1	4.1

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2344.000 - OPERATOR QUALIFICATION

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

Activity Description:

The Operator Qualification department is responsible for scheduling qualification activities, reviewing and auditing contractor qualification programs, keeping qualification records, monitoring records for possible compliance issues, evaluating the program for any deficiencies, and making changes and enhancements to the Operator Qualification Program, as mandated by Title 49 of the Code of Federal Regulations (49 CFR Part 192, subpart N). The Operator Qualifications Program continues to evolve to better align with industry leading practices, recommendations by Commission auditors, and to comply with Senate Bill 705, which requires pipeline operators to establish a safety plan that “is consistent with leading practices in the gas industry and with federal pipeline safety statutes.” This includes adding new qualification elements or tasks, developing qualification materials, establishing an electronic record keeping process.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, as new state State regulations and enhancements are emerging and enhancements to the Operator Qualification program are recommended, additional staffing and resources are identified. These incremental costs have been identified in the forecast adjustments and added to the base year.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, as new state State regulations and enhancements are emerging and enhancements to the Operator Qualification program are recommended, additional staffing and resources are identified. These incremental costs have been identified in the forecast adjustments and added to the base year.

NSE - Base YR Rec

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		162	198	514	393	1,020	1,120	1,772	1,772	
Non-Labor		48	91	138	79	138	152	179	179	
NSE		0	0	0	0	0	0	0	0	
Total		210	289	652	472	1,158	1,272	1,951	1,951	
FTE		1.7	2.0	5.6	4.3	10.7	11.7	17.7	17.7	

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	17	1	0	18	0.1	17	1	0	18	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,003	136	0	1,139	10.6	1,103	151	0	1,254	11.6
Total Incurred	1,020	137	0	1,157	10.7	1,120	152	0	1,272	11.7
% Allocation										
Retained	86.20%	86.20%				86.20%	86.20%			
SEU	13.80%	13.80%				13.80%	13.80%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	17	1	0	18	0.1	17	1	0	18	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,755	178	0	1,933	17.6	1,755	178	0	1,933	17.6
Total Incurred	1,772	179	0	1,951	17.7	1,772	179	0	1,951	17.7
% Allocation										
Retained	86.20%	86.20%				86.20%	86.20%			
SEU	13.80%	13.80%				13.80%	13.80%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	1,020	1,020	1,020	100	752	752	1,120	1,772	1,772
Non-Labor	Base YR Rec	138	138	138	15	42	42	153	180	180
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		1,158	1,158	1,158	115	794	794	1,273	1,952	1,952
FTE	Base YR Rec	10.7	10.7	10.7	1.0	7.0	7.0	11.7	17.7	17.7

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017	FOF-Implementation	0	0	0	0	0.0	1-Sided Adj	MGONZALX20170512114421390	
Explanation:		Link to FOF idea 940. The savings are in Gas Distribution but the FoF idea and implementation is in Operator Qualification and Training.							
2017	RAMP Incremental	100	15	0	115	1.0	1-Sided Adj	MGONZALX20170512115027340	
Explanation:		RAMP Chapter 10 Medium-Pressure Pipeline Failure . Upward pressure adjustment in cost center 2200-2344 (OpQual) to centralized and enhance assessments and oversight of OpQual Program execution and Customer Service Evaluators and training evaluators. The additional FTE will also enhance the monitoring and audit of contractor's OpQual programs. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$15K = \$15K.							
2017 Total		100	15	0	115	1.0			

2018 FOF-Ongoing 0 0 0 0 0.0 1-Sided Adj MGONZALX20170512140536880

Explanation: Link to FOF idea 940. The savings are in Gas Distribution but the FoF idea and implementation is in Operator Qualification and Training.

2018 RAMP Incremental 752 42 0 794 7.0 1-Sided Adj MGONZALX20170512140703557

Explanation: RAMP Chapter 10 Medium-Pressure Pipeline Failure . Upward pressure adjustment in cost center 2200-2344 (OpQual) to centralized and enhance assessments and oversight of OpQual Program execution and Customer Service Evaluators and training evaluators. The additional FTEs will also enhance the monitoring and audit of contractor's OpQual programs.

Labor costs will be 7 FTE X \$107K = \$752K. approximately. Associated non-labor expense is estimated to be 7 FTE X \$6K = \$42K.

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

<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>	<u>RefID</u>
2018 Total		752	42	0	794	7.0		

2019 RAMP Incremental		752	42	0	794	7.0	1-Sided Adj	MGONZALX20170512135414723
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Explanation: RAMP Chapter 10 Medium-Pressure Pipeline Failure . Upward pressure adjustment in cost center 2200-2344 (OpQual) to centralized and enhance assessments and oversight of OpQual Program execution and Customer Service Evaluators and training evaluators. The additional FTEs will also enhance the monitoring and audit of contractor's OpQual programs.

Labor costs will be 7 FTE X \$107K = \$752K. approximately. Associated non-labor expense is estimated to be 7 FTE X \$6K = \$42K.

2019 FOF-Implementation		0	0	0	0	0.0	1-Sided Adj	MGONZALX20170512140401940
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Explanation: Link to FOF idea 940. The savings are in Gas Distribution but the FoF idea and implementation is in Operator Qualification and Training.

2019 Total		752	42	0	794	7.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	19	83
Non-Labor	1	1	6	6	11
NSE	0	0	0	0	0
Total	1	1	6	24	94
FTE	0.0	0.0	0.0	0.2	0.9
Adjustments (Nominal \$) **					
Labor	132	163	432	316	793
Non-Labor	44	87	129	73	126
NSE	0	0	0	0	0
Total	176	250	561	388	919
FTE	1.5	1.7	4.8	3.5	8.3
Recorded-Adjusted (Nominal \$)					
Labor	132	163	433	334	876
Non-Labor	45	88	135	78	138
NSE	0	0	0	0	0
Total	177	251	567	413	1,014
FTE	1.5	1.7	4.8	3.7	9.2
Vacation & Sick (Nominal \$)					
Labor	21	27	71	54	144
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	21	27	71	54	144
FTE	0.2	0.3	0.8	0.6	1.6
Escalation to 2016\$					
Labor	9	8	11	5	0
Non-Labor	3	4	3	1	0
NSE	0	0	0	0	0
Total	12	11	14	6	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	162	198	514	393	1,020
Non-Labor	48	91	138	79	138
NSE	0	0	0	0	0
Total	210	289	652	472	1,158
FTE	1.7	2.0	5.6	4.3	10.8

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

Summary of Adjustments to Recorded:

		In Nominal \$ (000) Incurred Costs				
Years		2012	2013	2014	2015	2016
Labor		132	163	432	316	793
Non-Labor		44	87	129	73	126
NSE		0	0	0	0	0
	Total	176	250	561	388	919
FTE		1.5	1.7	4.8	3.5	8.3

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	132	44	0	1.5	CCTR Transf From 2200-2551.000	MGONZALX20170512110108493
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.					
2012 Total		132	44	0	1.5		
2013	Other	163	87	0	1.7	CCTR Transf From 2200-2551.000	MGONZALX20170512111047980
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.					
2013 Total		163	87	0	1.7		
2014	Other	432	129	0	4.8	CCTR Transf From 2200-2551.000	MGONZALX20170512111326657
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.					
2014 Total		432	129	0	4.8		
2015	Other	316	73	0	3.5	CCTR Transf From 2200-2551.000	MGONZALX20170512112901370
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.					
2015 Total		316	73	0	3.5		
2016	Aliso	-15	0	0	-0.1	1-Sided Adj	FGALVAN20170512174958937
Explanation:		Adjustment due to Aliso					

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2016	Other	807	126	0	8.4	CCTR Transf From 2200-2551.000	MGONZALX20170512113701097
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.					
2016 Total		793	126	0	8.3		

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Cost Center: 2200-2344.000 - OPERATOR QUALIFICATION

RAMP Item # 1

Ref ID: MGONZALX20170512115027340

RAMP Chapter: SCG-10

Program Name: Operator Qualification Program
Administration and Development

Program Description: The minimum safety requirements prescribed by CFR 49 Part 192 Subpart L – Operations include locate and mark, emergency preparedness and odorization. These activities are intended to address threats as identified by PHMSA.

Risk/Mitigation:

Risk: Medium-Pressure Pipeline Failure

Mitigation: Operations

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: CFR 49 Part 192 Subpart L

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-2360.000 - QUALITY & RISK

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2360.000 - QUALITY & RISK

Activity Description:

The Quality and Risk group performs quality assurance and quality control activities for various pipeline safety and compliance activities on gas utility assets. The group provides objective assessments and thorough analyses resulting in recommendations/process improvements. Additionally, the group provides process improvement oversight to enhance discipline in process improvement activities with an emphasis on the implementation tracking, effectiveness evaluation and review of business control tracking related to the enhancement. The Quality and Risk group seeks to not only support the organization to meet regulatory requirements, but also proactively use tools and processes to enhance system safety and reliability through the implementation of continuous improvement across the business units. The Quality and Risk function has been centralized to optimize activities as part of Fueling our Future (FOF). Included in the Quality and Risk responsibilities is the implementation of data analytics. Through this expanded role, data will be gathered and analyzed to identify trends or other insights that will provide proactive information to both monitor and enhance internal processes.

Forecast Explanations:

Labor - Base YR Rec

As a foundation for future labor, base year was chosen for this group. Upward pressure adjustment were added to the base year to account for the new staff to the Quality and Risk team that was transferred as incremental FTEs to the Pipeline Safety and Compliance departments. The Quality and Risk group is being centralized to ensure compliance with all regulatory requirements and the proactive implementation of continuous improvement tools and processes that enhance system safety and reliability.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, base year was chosen because the historical costs included other groups and activities that did not represent the anticipated expense requirements. In addition, incremental adjustments to the base year were included to represent the expense requirements anticipated in test year 2019.

NSE - Base YR Rec

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		449	427	467	444	862	862	1,162	1,162	
Non-Labor		24	18	30	130	38	38	53	53	
NSE		0	0	0	0	0	0	0	0	
Total		473	445	497	574	900	900	1,215	1,215	
FTE		4.2	3.9	4.2	4.1	8.6	8.6	11.6	11.6	

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2360.000 - QUALITY & RISK

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	13	3	0	16	0.1	13	3	0	16	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	849	35	0	884	8.5	849	35	0	884	8.5
Total Incurred	862	38	0	900	8.6	862	38	0	900	8.6
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	13	3	0	16	0.1	13	3	0	16	0.1
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,149	50	0	1,199	11.5	1,149	50	0	1,199	11.5
Total Incurred	1,162	53	0	1,215	11.6	1,162	53	0	1,215	11.6
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2360.000 - QUALITY & RISK

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	862	862	862	0	300	300	862	1,162	1,162
Non-Labor	Base YR Rec	38	38	38	0	15	15	38	53	53
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		900	900	900	0	315	315	900	1,215	1,215
FTE	Base YR Rec	8.6	8.6	8.6	0.0	3.0	3.0	8.6	11.6	11.6

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017 Total		0	0	0	0	0.0		

2018 RAMP Incremental 300 15 0 315 3.0 1-Sided Adj PDOMAGAS20170512143854293

Explanation: RAMP Chapter 8-Records Management Upward pressure base adjustment to add new staff to the Quality and Risk team that was transferred to the Pipeline Safety & Compliance. SoCalGas is centralizing the Quality and Risk group ensure compliance with all regulatory requirements and the proactive implementation of continuous improvement tools and processes that enhance system safety and reliability.

Labor costs will be 3 FTEs X \$100K = \$300K. Associated non-labor expense is estimated to be 3 FTE X \$5K = \$15K.

2018 Total		300	15	0	315	3.0		
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2019 RAMP Incremental 300 15 0 315 3.0 1-Sided Adj PDOMAGAS20170512143938250

Explanation: RAMP Chapter 8-Records Management Upward pressure base adjustment to add new staff to the Quality and Risk team that was transferred to the Pipeline Safety & Compliance. SoCalGas is centralizing the Quality and Risk group ensure compliance with all regulatory requirements and the proactive implementation of continuous improvement tools and processes that enhance system safety and reliability.

Labor costs will be 3 FTEs X \$100K = \$300K. Associated non-labor expense is estimated to be 3 FTE X \$5K = \$15K.

2019 Total		300	15	0	315	3.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Cost Center: 2200-2360.000 - QUALITY & RISK

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	365	352	393	378	748
Non-Labor	22	18	29	29	38
NSE	0	0	0	0	0
Total	388	370	422	406	786
FTE	3.6	3.3	3.6	3.5	7.5
Adjustments (Nominal \$) **					
Labor	0	0	0	0	-8
Non-Labor	0	0	0	100	0
NSE	0	0	0	0	0
Total	0	0	0	100	-8
FTE	0.0	0.0	0.0	0.0	-0.1
Recorded-Adjusted (Nominal \$)					
Labor	365	352	393	378	740
Non-Labor	22	18	29	129	38
NSE	0	0	0	0	0
Total	388	370	422	506	778
FTE	3.6	3.3	3.6	3.5	7.4
Vacation & Sick (Nominal \$)					
Labor	58	59	64	61	122
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	58	59	64	61	122
FTE	0.6	0.6	0.6	0.6	1.3
Escalation to 2016\$					
Labor	25	16	10	6	0
Non-Labor	1	1	1	2	0
NSE	0	0	0	0	0
Total	27	17	11	7	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	449	427	467	444	862
Non-Labor	24	18	30	130	38
NSE	0	0	0	0	0
Total	473	445	497	574	900
FTE	4.2	3.9	4.2	4.1	8.7

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2360.000 - QUALITY & RISK

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	0	-8
Non-Labor	0	0	0	100	0
NSE	0	0	0	0	0
Total	0	0	0	100	-8
FTE	0.0	0.0	0.0	0.0	-0.1

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	-365	-22	0	-3.6	CCTR Transf To 2200-2551.000	FGALVAN20170301084805977
Explanation:		Adjustment to transfer the historical expenditures Subject to % Allocation in the Maintenance Process Group (Cost Center 2200-2360) to the Gas Engineering witness group cost center 2200-2551. These are the 2012 totals					
2012	Other	365	22	0	3.6	CCTR Transf From 2200-2551.000	MGONZALX20170512110316437
Explanation:		Adjustment to transfer the historical expenditures in cost center 2200-2360 from workpaper 2200-2551 to the correct workpaper (2200-2360) where the forecast will be represented.					
2012 Total		0	0	0	0.0		
2013 Total		0	0	0	0.0		
2014 Total		0	0	0	0.0		
2015	Other	0	100	0	0.0	CCTR Transf From 2200-2563.000	TPRER20161021113109020
Explanation:		Tsfr costs from 2HR001 2200-2563 (Strategic Initiative) 300771630 Strategic Initiative Gas Ops GUI to cost center 2200-2360.					
2015 Total		0	100	0	0.0		
2016	Aliso	-8	0	0	-0.1	1-Sided Adj	FGALVAN20170512175047123
Explanation:		Adjustment due to Aliso					
2016 Total		-8	0	0	-0.1		

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Cost Center: 2200-2360.000 - QUALITY & RISK

RAMP Item # 1

Ref ID: ANTRORTE20170628153945417

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Activity Description:

The Pipeline Safety and Compliance group serves as the primary point of contact with the Commission during Safety and Enforcement Division (SED) audits, incident reporting and investigations, construction and PSEP visits, as well as manages responses to various SED inquiries and data requests. The group leads all gas utility audits in areas related to policy, General Order 112-F and CFR 49, and provides counsel, guidance, and information to Engineering and Gas Operations groups on pipeline safety issues relative to CPUC and DOT regulations. Specific activities include representing SoCalGas and SDG&E in all interactions with SED related to natural gas operations, as well as providing direction and guidance to utility personnel to maintain compliance with DOT/CPUC pipeline regulations.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

NSE - Base YR Rec

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		0	230	304	387	463	463	463	763	
Non-Labor		0	46	52	74	73	72	72	90	
NSE		0	0	0	0	0	0	0	0	
Total		0	276	355	461	535	535	535	853	
FTE		0.0	2.1	2.9	3.9	4.4	4.4	4.4	7.4	

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	2	0	2	0.0	0	2	0	2	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	463	70	0	533	4.4	463	70	0	533	4.4
Total Incurred	463	72	0	535	4.4	463	72	0	535	4.4
% Allocation										
Retained	80.00%	80.00%				80.00%	80.00%			
SEU	20.00%	20.00%				20.00%	20.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	2	0	2	0.0	0	2	0	2	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	463	70	0	533	4.4	763	88	0	851	7.4
Total Incurred	463	72	0	535	4.4	763	90	0	853	7.4
% Allocation										
Retained	80.00%	80.00%				80.00%	80.00%			
SEU	20.00%	20.00%				20.00%	20.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations based on miles of pipe in SoCalGas vs SDGE.

Cost Center Allocation Percentage for 2017

All calculations based on miles of pipe in SoCalGas vs SDGE.

Cost Center Allocation Percentage for 2018

All calculations based on miles of pipe in SoCalGas vs SDGE.

Cost Center Allocation Percentage for 2019

All calculations based on miles of pipe in SoCalGas vs SDGE.

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	463	463	463	0	0	300	463	463	763
Non-Labor	Base YR Rec	73	73	73	0	0	18	73	73	91
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		535	535	535	0	0	318	535	535	853
FTE	Base YR Rec	4.4	4.4	4.4	0.0	0.0	3.0	4.4	4.4	7.4

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017 Total		0	0	0	0	0.0		
2018 Total		0	0	0	0	0.0		
2019	Other	300	18	0	318	3.0	1-Sided Adj	MGONZALX20161117120135290
2019 Total		300	18	0	318	3.0		

Explanation: Additional headcount needed to perform increasing number of audits & to manage simultaneous scheduled audits as prescribed by regulation.
 Labor costs will be 3 FTE X \$100K = \$300K. Associated non-labor expense is estimated to be 3 FTE X \$6K = \$18K.

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	190	255	329	397
Non-Labor	0	44	51	73	73
NSE	0	0	0	0	0
Total	0	234	306	402	470
FTE	0.0	1.8	2.5	3.3	3.8
Adjustments (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
Recorded-Adjusted (Nominal \$)					
Labor	0	190	255	329	397
Non-Labor	0	44	51	73	73
NSE	0	0	0	0	0
Total	0	234	306	402	470
FTE	0.0	1.8	2.5	3.3	3.8
Vacation & Sick (Nominal \$)					
Labor	0	32	42	53	65
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	32	42	53	65
FTE	0.0	0.3	0.4	0.6	0.6
Escalation to 2016\$					
Labor	0	9	7	5	0
Non-Labor	0	2	1	1	0
NSE	0	0	0	0	0
Total	0	11	8	6	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	0	230	304	387	463
Non-Labor	0	46	52	74	73
NSE	0	0	0	0	0
Total	0	276	355	461	535
FTE	0.0	2.1	2.9	3.9	4.4

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2473.000 - PIPELINE SAFETY & COMPLIANCE MANAGER

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Activity Description:

This cost center captures the activities and expenses associated with Pipeline Safety Oversight (2200-2551). Activities include centralized incident evaluation; compliance improvement oversight through monitoring and documenting the progress of corrective actions; and monitoring of compliance with federal and state regulatory requirements.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, base year was chosen because the historical costs included other groups and activities that did not represent the anticipated expense requirements. In addition, incremental adjustments to the base year were included to represent the expense requirements anticipated in test year 2019.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, base year was chosen because the historical costs included other groups and activities that did not represent the anticipated expense requirements. In addition, incremental adjustments to the base year were included to represent the expense requirements anticipated in test year 2019.

NSE - Base YR Rec

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		0	0	0	451	289	289	464	464	
Non-Labor		0	0	0	35	6	6	109	109	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	486	295	295	573	573	
FTE		0.0	0.0	0.0	4.5	2.5	2.5	4.1	4.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	84	4	0	88	0.7	84	4	0	88	0.7
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	205	2	0	207	1.8	205	2	0	207	1.8
Total Incurred	289	6	0	295	2.5	289	6	0	295	2.5
% Allocation										
Retained	86.17%	86.17%				86.17%	86.17%			
SEU	13.83%	13.83%				13.83%	13.83%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	84	4	0	88	0.7	84	4	0	88	0.7
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	380	105	0	485	3.4	380	105	0	485	3.4
Total Incurred	464	109	0	573	4.1	464	109	0	573	4.1
% Allocation										
Retained	86.17%	86.17%				86.17%	86.17%			
SEU	13.83%	13.83%				13.83%	13.83%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	289	289	289	0	175	175	289	464	464
Non-Labor	Base YR Rec	6	6	6	0	103	103	6	109	109
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		295	295	295	0	278	278	295	573	573
FTE	Base YR Rec	2.5	2.5	2.5	0.0	1.6	1.6	2.5	4.1	4.1

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017 Total		0	0	0	0	0.0			
2018 Other		0	100	0	100	0.0	1-Sided Adj	MGONZALX20161117115638213	
Explanation:	1st half of root Cause analysis training- Teach how to do root cause so we're consistent , implement train the trainer program, develop core curriculum, licensing fee with trainer program benefit: to ensure better effective solutions to solve problems and no longer see repeat issues								
2018 Other		175	3	0	178	1.6	1-Sided Adj	MGONZALX20161201115418897	
Explanation:	Upward pressure adjustment in shared cost center 2200-2551 to implement new staff focused on performing centralized incident analysis, enhanced tracking & management of process improvement to meet PHMSA compliance requirements, and enhanced compliance oversight. We also want to enhance our ability to administer within staff organizations & communicate our gas standards to the field. Labor costs will be 1.6 FTE X \$109,375K = \$175K. Associated non-labor expense is estimated to be 1.6 FTE X \$1,875 = \$3K.								
2018 Total		175	103	0	278	1.6			

2019 Other 175 3 0 178 1.6 1-Sided Adj MGONZALX20161201115432723

Explanation: Upward pressure adjustment in shared cost center 2200-2551 to implement new staff focused on performing centralized incident analysis, enhanced tracking & management of process improvement to meet PHMSA compliance requirements, and enhanced compliance oversight. We also want to enhance our ability to administer within staff organizations & communicate our gas standards to the field.

Labor costs will be 1.6 FTE X \$109,375K = \$175K. Associated non-labor expense is estimated to be 1.6 FTE X \$1,875 = \$3K.

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

<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>	<u>RefID</u>	
2019	Other	0	100	0	100	0.0	1-Sided Adj	PDOMAGAS20170309085037920	
Explanation:		2nd half of root cause analysis training (\$100k)- Teach how to do root cause so we're consistent , implement train the trainer program, develop core curriculum, licensing fee with trainer program benefit: to ensure better effective solutions to solve problems and no longer see repeat issues							
2019 Total		175	103	0	278	1.6			

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: B. PIPELINE SAFETY & COMPLIANCE
Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	398	366
Non-Labor	0	0	0	35	9
NSE	0	0	0	0	0
Total	0	0	0	433	376
FTE	0.0	0.0	0.0	3.9	3.4
Adjustments (Nominal \$) **					
Labor	0	0	0	-15	-119
Non-Labor	0	0	0	0	-3
NSE	0	0	0	0	0
Total	0	0	0	-15	-122
FTE	0.0	0.0	0.0	-0.1	-1.3
Recorded-Adjusted (Nominal \$)					
Labor	0	0	0	383	248
Non-Labor	0	0	0	35	6
NSE	0	0	0	0	0
Total	0	0	0	418	254
FTE	0.0	0.0	0.0	3.8	2.1
Vacation & Sick (Nominal \$)					
Labor	0	0	0	62	41
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	62	41
FTE	0.0	0.0	0.0	0.6	0.4
Escalation to 2016\$					
Labor	0	0	0	6	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	0	6	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	0	0	0	451	289
Non-Labor	0	0	0	35	6
NSE	0	0	0	0	0
Total	0	0	0	486	295
FTE	0.0	0.0	0.0	4.4	2.5

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	-15	-119
Non-Labor	0	0	0	0	-3
NSE	0	0	0	0	0
Total	0	0	0	-15	-122
FTE	0.0	0.0	0.0	-0.1	-1.3

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	365	22	0	3.6	CCTR Transf From 2200-2360.000	FGALVAN20170301084805977
Explanation: Adjustment to transfer the historical expenditures Subject to % Allocation in the Maintenance Process Group (Cost Center 2200-2360) to the Gas Engineering witness group cost center 2200-2551. These are the 2012 totals							
2012	Other	-132	-44	0	-1.5	CCTR Transf To 2200-2344.000	MGONZALX20170512110108493
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.							
2012	Other	-365	-22	0	-3.6	CCTR Transf To 2200-2360.000	MGONZALX20170512110316437
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2360 from workpaper 2200-2551 to the correct workpaper (2200-2360) where the forecast will be represented.							
2012	Other	132	44	0	1.5	CCTR Transf From 2200-0442.001	CTRINH20161122143147647
Explanation: Transfer labor and non-labor expense from 2FC004.000 CSF Support to USS 2200-2551 Pipeline Safety Oversight in order to align historical costs with the workgroup in which the activity will be forecasted							
2012 Total		0	0	0	0.0		
2013	Other	-163	-87	0	-1.7	CCTR Transf To 2200-2344.000	MGONZALX20170512111047980
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.							
2013	Other	163	87	0	1.7	CCTR Transf From 2200-0442.001	CTRINH20161122143411680
Explanation: Transfer labor and non-labor expense from 2FC004.000 CSF Support to USS 2200-2551 Pipeline Safety Oversight in order to align historical costs with the workgroup in which the activity will be forecasted							
2013 Total		0	0	0	0.0		

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2014	Other	-432	-129	0	-4.8	CCTR Transf To 2200-2344.000	MGONZALX20170512111326657
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.							
2014	Other	432	129	0	4.8	CCTR Transf From 2200-0442.001	CTRINH20161122143532543
Explanation: Transfer labor and non-labor expense from 2FC004.000 CSF Support to USS 2200-2551 Pipeline Safety Oversight in order to align historical costs with the workgroup in which the activity will be forecasted							
2014 Total		0	0	0	0.0		
2015	Other	-90	-8	0	-0.8	CCTR Transf To 2200-7240.000	MGONZALX20170512112655413
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2530 from workpaper 2200-2551 to the correct workpaper (2200-2530 within proxy 2200-7240) where the forecast will be represented.							
2015	Other	90	8	0	0.8	CCTR Transf From 2200-2530.000	MGONZALX20170309113231720
Explanation: Adjustment to transfer the historical expenditures from cost center 2200-2530 to workpaper group 2200-2551 due to the reorganization early 2017.							
2015	Other	-316	-73	0	-3.5	CCTR Transf To 2200-2344.000	MGONZALX20170512112901370
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.							
2015	Aliso	-15	0	0	-0.1	1-Sided Adj	ANTROTTE20170719100540983
Explanation: 2015 Aliso Adjustment- \$-14 960 labor/0.1 FTE							
2015	Other	316	73	0	3.5	CCTR Transf From 2200-0442.001	CTRINH20161122143741297
Explanation: Transfer labor and non-labor expense from 2FC004.000 CSF Support to USS 2200-2551 Pipeline Safety Oversight in order to align historical costs with the workgroup in which the activity will be forecasted							
2015 Total		-15	0	0	-0.1		
2016	Aliso	-50	-3	0	-0.5	1-Sided Adj	JJBUNTIN20170224120240723
Explanation: This adjustment was made because this work (internal order number 300775156) was related to the Aliso Canyon Incident.							
2016	Other	-351	-23	0	-3.6	CCTR Transf To 2200-7240.000	MGONZALX20170512113458800
Explanation: Adjustment to manually transfer the historical expenditures in cost center 2200-2530 to proxy cost center 2200-7240 that will represent cost center 2200-2530 within the System Integrity witness area for cost center 2200-2530.							

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: B. PIPELINE SAFETY & COMPLIANCE
 Category-Sub: 1. PIPELINE SAFETY & COMPLIANCE
 Cost Center: 2200-2551.000 - PIPELINE SAFETY OVERSIGHT

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2016	Other	351	23	0	3.6	CCTR Transf From 2200-2530.000	MGONZALX20170309113342210
Explanation: Adjustment to transfer the historical expenditures from cost center 2200-2530 to workpaper group 2200-2551 due to the reorganization early 2017.							
2016	Other	807	126	0	8.4	CCTR Transf From 2200-0442.001	CTRINH20170222080623900
Explanation: Transfer Labor and Non-labor expense from 2FC004 CSF Support (Cost Center 2200-0442) to USS 2200-2551 Pipeline Safety Oversight in order to align historical costs with the workgroup in which the activity will be forecasted. These historical dollars are for Operator Qualification personnel in cost center 2200-2344.							
2016	Other	-807	-126	0	-8.4	CCTR Transf To 2200-2344.000	MGONZALX20170512113701097
Explanation: Adjustment to transfer the historical expenditures in cost center 2200-2344 from workpaper 2200-2551 to the correct workpaper (2200-2344, Operator Qualification) where the forecast will be represented.							
2016	Aliso	-68	0	0	-0.8	1-Sided Adj	ANTROTTE20170628143726700
Explanation: Aliso related adjustment- \$68 197.95 for labor and 0.794 for FTE							
2016 Total		-119	-3	0	-1.3		

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Cost Center: VARIOUS

Summary for Category: C. DAMAGE PREVENTION

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	785	1,004	1,004	1,704
Non-Labor	31	559	609	679
NSE	0	0	0	0
Total	816	1,563	1,613	2,383
FTE	7.1	9.3	9.3	16.3

Cost Centers belonging to this Category:

2200-2345.000 PIPELINE SYSTEM CONSTRUCTION POLICY

Labor	671	770	770	1,470
Non-Labor	28	356	306	376
NSE	0	0	0	0
Total	699	1,126	1,076	1,846
FTE	6.2	7.4	7.4	14.4

2200-2417.000 SHARED PUBLIC AWARENESS ACTIVITIES

Labor	114	234	234	234
Non-Labor	3	203	303	303
NSE	0	0	0	0
Total	117	437	537	537
FTE	0.9	1.9	1.9	1.9

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

Activity Description:

Pipeline Systems Construction Policy focuses on the safe construction of high and medium pressure pipelines and associated systems. Currently SoCal Gas assigns one (1) FTE to its system-wide development and maintenance high pressure construction policies and practices and two (2) FTEs dedicated to the development and maintenance of medium pressure construction policies. SoCalGas is dedicated to building safe and reliable pipeline systems that meet all applicable specifications, requirements and regulations.

Forecast Explanations:

Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Pipeline System Construction Policy increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Pipeline System Construction Policy activities in the forecast years.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Pipeline System Construction Policy increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Pipeline System Construction Policy activities in the forecast years.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		767	753	576	584	671	770	770	1,470	
Non-Labor		73	52	49	102	28	356	306	376	
NSE		0	0	0	0	0	0	0	0	
Total		841	805	625	686	699	1,126	1,076	1,846	
FTE		7.8	7.4	5.3	5.4	6.2	7.4	7.4	14.4	

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	4	0	6	0.0	4	3	0	7	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	668	25	0	693	6.2	766	353	0	1,119	7.4
Total Incurred	670	29	0	699	6.2	770	356	0	1,126	7.4
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	4	3	0	7	0.0	4	3	0	7	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	766	303	0	1,069	7.4	1,466	373	0	1,839	14.4
Total Incurred	770	306	0	1,076	7.4	1,470	376	0	1,846	14.4
% Allocation										
Retained	86.25%	86.25%				86.25%	86.25%			
SEU	13.75%	13.75%				13.75%	13.75%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

Coming soon...

Cost Center Allocation Percentage for 2017

Coming soon...

Cost Center Allocation Percentage for 2018

Coming soon...

Cost Center Allocation Percentage for 2019

Coming soon...

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	670	670	670	100	100	800	770	770	1,470
Non-Labor	5-YR Average	61	61	61	295	245	315	356	306	376
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		731	731	731	395	345	1,115	1,126	1,076	1,846
FTE	5-YR Average	6.4	6.4	6.4	1.0	1.0	8.0	7.4	7.4	14.4

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	Other	0	75	0	75	0.0	1-Sided Adj	FGALVAN20161130084520850

Explanation: R&D at \$20 000 for N/L per year 2017 - One time Office Equipment Update at \$50,000 Golden Shovel Implementation at \$5,000 per year.
 The project encompasses SoCalGas' adoption of the Gold Shovel Standard. The Gold Shovel Standard is a program designed to strengthen professional contractors' commitment to safe excavation practices through incentives tied to obtaining contracts with the utility. All contractors who perform excavation activities when performing contractual work for SoCalGas will be required to be Gold Shovel Standard certified, which includes development of safe excavation policies and practices, process for acquiring employee feedback, and protection against retaliation of whistleblowers. Gold Shovel Standard membership will improve SoCalGas' insight to the excavation safety practices of the contractors it hires by allowing the utility access to information regarding damages caused by contractors working for other entities anywhere in the United States.

2017	RAMP Incremental	0	200	0	200	0.0	1-Sided Adj	MGONZALX20170512171326750
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Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Non-Labor
 The Company's proposed mitigation plan in RAMP consists of expanding some baseline activities as well as incremental programs that aim in reducing the frequency of a Dig-In. This new mitigation will allow SoCalGas to proactively manage and mitigate the likelihood of Dig-Ins. Photographs are a common practice across the industry to protect companies from liability and enhance quality of locate and mark activities. Smart devices will give the Company the capability to capture photographs of location marks at the USA ticket location. The photographs will provide additional documentation for each USA ticket thus offering quality assurance options not currently available. These additional quality audits will improve marking accuracy.

2017	RAMP Incremental	100	20	0	120	1.0	1-Sided Adj	ANTROTTE20170628075136310
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

<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>	<u>RefID</u>
Explanation:								
RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Support staff consists of one SoCalGas employee who is responsible for developing and maintaining policies, processes and procedures that guide and direct locators in properly performing their assigned tasks in compliance of Federal and State regulations. Staff is engaged daily in supporting operations by interpreting policies, tracking compliance, evaluating locate and mark tools and technologies, and providing refresher training as requested. This is a critical activity that allows the Company to meet or exceed State and Federal requirements and align with industry best practices when applicable. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$20K = \$20K.								
2017 Total		100	295	0	395	1.0		

2018 Other		0	25	0	25	0.0	1-Sided Adj	FGALVAN20161130090737947
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Explanation: R&D at \$20 000 for N/L per year 2017 - R&D Non Labor \$20K.
 Golden Shovel Implementation at \$5,000 per year.
 The project encompasses SoCalGas' adoption of the Gold Shovel Standard. The Gold Shovel Standard is a program designed to strengthen professional contractors' commitment to safe excavation practices through incentives tied to obtaining contracts with the utility. All contractors who perform excavation activities when performing contractual work for SoCalGas will be required to be Gold Shovel Standard certified, which includes development of safe excavation policies and practices, process for acquiring employee feedback, and protection against retaliation of whistleblowers. Gold Shovel Standard membership will improve SoCalGas' insight to the excavation safety practices of the contractors it hires by allowing the utility access to information regarding damages caused by contractors working for other entities anywhere in the United States.

2018 RAMP Incremental		0	200	0	200	0.0	1-Sided Adj	ANTROTTE20170626080806830
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Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Non-Labor
 The Company's proposed mitigation plan in RAMP consists of expanding some baseline activities as well as incremental programs that aim in reducing the frequency of a Dig-In. This new mitigation will allow SoCalGas to proactively manage and mitigate the likelihood of Dig-Ins. Photographs are a common practice across the industry to protect companies from liability and enhance quality of locate and mark activities. Smart devices will give the Company the capability to capture photographs of location marks at the USA ticket location. The photographs will provide additional documentation for each USA ticket thus offering quality assurance options not currently available. These additional quality audits will improve marking accuracy.

2018 RAMP Incremental		100	20	0	120	1.0	1-Sided Adj	ANTROTTE20170628075229033
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

<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>	<u>RefID</u>
Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Support staff consists of one SoCalGas employee who is responsible for developing and maintaining policies, processes and procedures that guide and direct locators in properly performing their assigned tasks in compliance of Federal and State regulations. Staff is engaged daily in supporting operations by interpreting policies, tracking compliance, evaluating locate and mark tools and technologies, and providing refresher training as requested. This is a critical activity that allows the Company to meet or exceed State and Federal requirements and align with industry best practices when applicable. Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$20K = \$20K.								
2018 Total		100	245	0	345	1.0		

2019 RAMP Incremental 800 65 0 865 8.0 1-Sided Adj FGALVAN20161130090936247

Explanation: RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins A management team is needed to analyze the excavation reporting collection and data to identify trends and develop continuous improvement action plans. The team will be specialized in targeting excavation trends needing the most attention and will have a presence in the field to meet with excavators on the jobsite and provide safe digging education. The team will also work with internal stakeholders to improve internal locate and mark activities and provide incident investigation support. One example of the team's activities will be to identify ways to prevent excavators from digging without a USA ticket since 60% of the Company's damages are due to the excavator failing to call USA. Labor costs will be 8 FTEs X \$100K = \$800K. Associated non-labor expense is estimated to be 8 FTEs X \$5K = \$40K. \$5,000 N/L for Golden Shovel Implementation Program-The project encompasses SoCalGas' adoption of the Gold Shovel Standard. The Gold Shovel Standard is a program designed to strengthen professional contractors' commitment to safe excavation practices through incentives tied to obtaining contracts with the utility. All contractors who perform excavation activities when performing contractual work for SoCalGas will be required to be Gold Shovel Standard certified, which includes development of safe excavation policies and practices, process for acquiring employee feedback, and protection against retaliation of whistleblowers. Gold Shovel Standard membership will improve SoCalGas' insight to the excavation safety practices of the contractors it hires by allowing the utility access to information regarding damages caused by contractors working for other entities anywhere in the United States. \$20,000 N/L for R&D								
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2019 RAMP Incremental 0 250 0 250 0.0 1-Sided Adj ANTROTTE20170626080849363

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

<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>	<u>RefID</u>
Explanation:	RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Non-Labor The Company's proposed mitigation plan in RAMP consists of expanding some baseline activities as well as incremental programs that aim in reducing the frequency of a Dig-In. This new mitigation will allow SoCalGas to proactively manage and mitigate the likelihood of Dig-Ins. Photographs are a common practice across the industry to protect companies from liability and enhance quality of locate and mark activities. Smart devices will give the Company the capability to capture photographs of location marks at the USA ticket location. The photographs will provide additional documentation for each USA ticket thus offering quality assurance options not currently available. These additional quality audits will improve marking accuracy.							
2019 Total		800	315	0	1,115	8.0		

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	624	621	484	497	576
Non-Labor	69	50	48	607	592
NSE	0	0	0	0	0
Total	693	671	532	1,103	1,168
FTE	6.7	6.3	4.5	4.6	5.3
Adjustments (Nominal \$) **					
Labor	0	0	0	0	0
Non-Labor	0	0	0	-506	-564
NSE	0	0	0	0	0
Total	0	0	0	-506	-564
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	624	621	484	497	576
Non-Labor	69	50	48	100	28
NSE	0	0	0	0	0
Total	693	671	532	597	604
FTE	6.7	6.3	4.5	4.6	5.3
Vacation & Sick (Nominal \$)					
Labor	100	103	79	80	95
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	100	103	79	80	95
FTE	1.1	1.1	0.8	0.8	0.9
Escalation to 2016\$					
Labor	43	29	13	7	0
Non-Labor	4	2	1	1	0
NSE	0	0	0	0	0
Total	48	31	14	9	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	767	753	576	584	671
Non-Labor	73	52	49	102	28
NSE	0	0	0	0	0
Total	841	805	625	686	699
FTE	7.8	7.4	5.3	5.4	6.2

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

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	-0.028	-506	-564
NSE	0	0	0	0	0
Total	0	0	-0.028	-506	-564
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012 Total		0	0	0	0.0		
2013 Total		0	0	0	0.0		
2014	Other	0	0	0	0.0	CCTR Transf To 2200-0005.019	JLORTIZ20161107123809380
Explanation:		Transfer cost from Gas Distribution CC 2200-2345 to Corp Center Compensation and Benefits CC 2200-0005.019.					
2014 Total		0	0	0	0.0		
2015	Other	0	-506	0	0.0	1-Sided Adj	TP1MTC20161024100552590
Explanation:		To transfer USA fees to Locate & Mark work group for complete showing of L&M expense					
2015 Total		0	-506	0	0.0		
2016	Other	0	-564	0	0.0	1-Sided Adj	TP1MTC20161024100618780
Explanation:		To transfer USA fees to Locate & Mark work group for complete showing of L&M expense					
2016 Total		0	-564	0	0.0		

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

RAMP Item # 1

Ref ID: ANTROTTE20170628075136310

RAMP Chapter: SCG-1

Program Name: Staff Support

Program Description: Staff to translate federal and state regulations into company Gas Standards

Risk/Mitigation:

Risk: Dig-Ins

Mitigation: Locate & Mark Activities

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: n/a

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Cost Center: 2200-2345.000 - PIPELINE SYSTEM CONSTRUCTION POLICY

RAMP Item # 2

Ref ID: MGONZALX20170512171326750

RAMP Chapter: SCG-1

Program Name: Locate & Mark Field Activities

Program Description: Prevention of damage to substructures due to unsafe excavation practices

Risk/Mitigation:

Risk: Catastrophic Damage Involving Third Party Dig-Ins (O&M)

Mitigation: Locate & Mark Activities

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: n/a

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Activity Description:

The activities associated with the shared service component of Public Awareness include the central management of both SoCalGas and SDG&E's Public Awareness plans. This co-operator approach offers some resource efficiencies by leveraging the knowledge to the benefit of both companies. As noted in the non-shared service discussion, the Public Awareness work group is focused on the mandates from 49 CFR 192.616, which requires the development and implementation of a public awareness program.

Forecast Explanations:

Labor - Base YR Rec

As the foundation for future labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

Non-Labor - Base YR Rec

As the foundation for future non-labor expense requirements, the base year method was selected. This forecasting methodology serves to more accurately represent this work group. However, new State regulations and enhancements are emerging and thus requiring additional staffing and resources to comply. These incremental costs have been identified and added to the base year.

NSE - Base YR Rec

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		188	-41	134	130	114	234	234	234	
Non-Labor		60	221	79	75	3	203	303	303	
NSE		0	0	0	0	0	0	0	0	
Total		248	181	214	205	117	437	537	537	
FTE		1.5	-0.3	1.0	1.0	0.8	1.9	1.9	1.9	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	114	3	0	117	0.9	234	203	0	437	1.9
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	0	0	0	0	0.0	0	0	0	0	0.0
Total Incurred	114	3	0	117	0.9	234	203	0	437	1.9
% Allocation										
Retained	73.00%	73.00%				73.00%	73.00%			
SEU	27.00%	27.00%				27.00%	27.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	234	303	0	537	1.9	234	303	0	537	1.9
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	0	0	0	0	0.0	0	0	0	0	0.0
Total Incurred	234	303	0	537	1.9	234	303	0	537	1.9
% Allocation										
Retained	73.00%	73.00%				73.00%	73.00%			
SEU	27.00%	27.00%				27.00%	27.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E stakeholders to SoCal stakeholders.

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E stakeholders to SoCal stakeholders.

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E stakeholders to SoCal stakeholders.

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E stakeholders to SoCal stakeholders.

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Base YR Rec	114	114	114	120	120	120	234	234	234
Non-Labor	Base YR Rec	3	3	3	200	300	300	203	303	303
NSE	Base YR Rec	0	0	0	0	0	0	0	0	0
Total		117	117	117	320	420	420	437	537	537
FTE	Base YR Rec	0.9	0.9	0.9	1.0	1.0	1.0	1.9	1.9	1.9

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID	
2017	RAMP Incremental	120	200	0	320	1.0	1-Sided Adj	PDOMAGAS20161202101552500	
Explanation:		RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Upward pressure adjustment to perform data analysis and collection to enhance compliance activities. Labor costs will be 1 FTE X \$120K = \$120K. Associated non-labor expense is estimated to be\$200k.							
2017 Total		120	200	0	320	1.0			
2018	RAMP Incremental	120	300	0	420	1.0	1-Sided Adj	PDOMAGAS20161202101621697	
Explanation:		RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Upward pressure adjustment to perform data analysis and collection to enhance compliance activities. Labor costs will be 1 FTE X \$120K = \$120K. Associated non-labor expense is estimated to be\$300k.							
2018 Total		120	300	0	420	1.0			
2019	RAMP Incremental	120	300	0	420	1.0	1-Sided Adj	PDOMAGAS20161202101656020	
Explanation:		RAMP Chapter 1- Catastrophic Damage involving Third Party Dig-Ins Upward pressure adjustment to perform data analysis and collection to enhance compliance activities. Labor costs will be 1 FTE X \$120K = \$120K. Associated non-labor expense is estimated to be\$300k.							
2019 Total		120	300	0	420	1.0			

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	153	-34	113	110	98
Non-Labor	56	213	78	74	3
NSE	0	0	0	0	0
Total	210	179	191	184	101
FTE	1.3	-0.3	0.9	0.9	0.7
Adjustments (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
Recorded-Adjusted (Nominal \$)					
Labor	153	-34	113	110	98
Non-Labor	56	213	78	74	3
NSE	0	0	0	0	0
Total	210	179	191	184	101
FTE	1.3	-0.3	0.9	0.9	0.7
Vacation & Sick (Nominal \$)					
Labor	25	-6	18	18	16
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	25	-6	18	18	16
FTE	0.2	0.0	0.1	0.1	0.1
Escalation to 2016\$					
Labor	11	-2	3	2	0
Non-Labor	3	9	2	1	0
NSE	0	0	0	0	0
Total	14	7	5	3	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	188	-41	134	130	114
Non-Labor	60	221	79	75	3
NSE	0	0	0	0	0
Total	248	181	214	205	117
FTE	1.5	-0.3	1.0	1.0	0.8

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: C. DAMAGE PREVENTION
 Category-Sub: 1. DAMAGE PREVENTION
 Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: C. DAMAGE PREVENTION
Category-Sub: 1. DAMAGE PREVENTION
Cost Center: 2200-2417.000 - SHARED PUBLIC AWARENESS ACTIVITIES

RAMP Item # 1

Ref ID: PDOMAGAS20161202101552500

RAMP Chapter: SCG-1

Program Name: Upgrade reporting systems

Program Description: Upgrade and integrate systems to automate pipeline damage information and reporting for improved data analysis and prevention of dig-ins

Risk/Mitigation:

Risk: Dig-Ins

Mitigation: Analysis

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 397.85

Explanation:

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Cost Center: VARIOUS

Summary for Category: D. ASSET MANAGEMENT

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	2,472	3,554	3,921	4,508
Non-Labor	1,173	1,406	1,891	1,909
NSE	0	0	0	0
Total	3,645	4,960	5,812	6,417
FTE	26.9	40.0	43.8	49.2

Cost Centers belonging to this Category:

2200-0302.000 BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Labor	184	221	271	271
Non-Labor	5	26	31	31
NSE	0	0	0	0
Total	189	247	302	302
FTE	1.9	2.6	3.1	3.1

2200-0303.000 APPLICATIONS

Labor	181	331	331	331
Non-Labor	50	148	148	148
NSE	0	0	0	0
Total	231	479	479	479
FTE	2.0	3.7	3.7	3.7

2200-0305.000 ESS PRODUCTION SUPPORT

Labor	257	534	534	534
Non-Labor	15	133	133	133
NSE	0	0	0	0
Total	272	667	667	667
FTE	1.8	5.3	5.3	5.3

2200-0306.000 WRK MGMT & DATABASES

Labor	771	875	931	1,357
Non-Labor	221	482	482	500
NSE	0	0	0	0
Total	992	1,357	1,413	1,857
FTE	8.8	9.8	10.3	13.9

2200-0308.000 CONTRACT & MAINTENANCE

Labor	0	93	93	93
Non-Labor	843	466	466	466
NSE	0	0	0	0
Total	843	559	559	559
FTE	0.0	1.1	1.1	1.1

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Cost Center: VARIOUS

In 2016\$ (000) Incurred Costs			
Adjusted-Recorded	Adjusted-Forecast		
2016	2017	2018	2019

2200-2376.000 ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Labor	1,079	1,500	1,761	1,922
Non-Labor	39	151	631	631
NSE	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total	1,118	1,651	2,392	2,553
FTE	12.4	17.5	20.3	22.1

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE
SOLUTIONS

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Activity Description:

The activities associated with this cost center include the labor and expenses associated with implementation of Systems to support Business Processes associated with Material Traceability, Materials Management, and development of departmental websites development. These expenses include the team lead, one Business Analyst, one project specialist and one Senior Business analyst. Activities managed include: compiling test script inventory for software release cycles; administration; developing business solutions related to materials management software; and developing reports, departmental websites, and other essential data deliverables to meet increased demand for customized information visualization and data analytics. The information provided by this group, along with its related activities, help support the operation and engineering groups to assess probability and consequence of asset failure. This information supports the mitigation of safety and reliability risks.

Forecast Explanations:

Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Business Process ESS Implementation and ESS Mobile Solutions increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Business Process ESS Implementation and ESS Mobile Solution activities in the forecast years.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, Business Process ESS Implementation and ESS Mobile Solutions increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund Business Process ESS Implementation and ESS Mobile Solution activities in the forecast years.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		182	140	86	265	184	221	271	271	
Non-Labor		59	7	3	30	5	25	30	30	
NSE		0	0	0	0	0	0	0	0	
Total		240	147	89	295	189	246	301	301	
FTE		2.3	1.6	1.3	3.4	1.9	2.6	3.1	3.1	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIO

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	1	0	1	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	184	4	0	188	1.9	221	25	0	246	2.6
Total Incurred	184	5	0	189	1.9	221	25	0	246	2.6
% Allocation										
Retained	89.62%	89.62%				89.62%	89.62%			
SEU	10.38%	10.38%				10.38%	10.38%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	271	30	0	301	3.1	271	30	0	301	3.1
Total Incurred	271	30	0	301	3.1	271	30	0	301	3.1
% Allocation										
Retained	89.62%	89.62%				89.62%	89.62%			
SEU	10.38%	10.38%				10.38%	10.38%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	171	171	171	50	100	100	221	271	271
Non-Labor	5-YR Average	21	21	21	5	10	10	26	31	31
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		192	192	192	55	110	110	247	302	302
FTE	5-YR Average	2.1	2.1	2.1	0.5	1.0	1.0	2.6	3.1	3.1

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	50	5	0	55	0.5	1-Sided Adj	MGONZALX20161205080608670

Explanation: RAMP Chapter 8-Records Management - Upward pressure adjustment in cost center 2200-0302, RAMP records management for Document Mngt: MyProjects PDMS, DDB and Lab Mngt. Document Management System contains work order documents, pipeline condition maintenance reports, photographic records, etc

Labor costs will be 0.5 FTE X \$100K = \$50K. Associated non-labor expense is estimated to be 0.5 FTE X \$10K = \$5K.

2017 Total		50	5	0	55	0.5		
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2018	RAMP Incremental	100	10	0	110	1.0	1-Sided Adj	MGONZALX20161205080621793
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Explanation: RAMP Chapter 8-Records Management - Upward pressure adjustment in cost center 2200-0302, RAMP records management for Document Mngt: MyProjects PDMS, DDB and Lab Mngt. Document Management System contains work order documents, pipeline condition maintenance reports, photographic records, etc

Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$10K = \$10K.

2018 Total		100	10	0	110	1.0		
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2019	RAMP Incremental	100	10	0	110	1.0	1-Sided Adj	MGONZALX20161205080634987
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

<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>	<u>RefID</u>
Explanation:								
RAMP Chapter 8-Records Management - Upward pressure adjustment in cost center 2200-0302, RAMP records management for Document Mngt: MyProjects PDMS, DDB and Lab Mngt. Document Management System contains work order documents, pipeline condition maintenance reports, photographic records, etc								
Labor costs will be 1 FTE X \$100K = \$100K. Associated non-labor expense is estimated to be 1 FTE X \$10K = \$10K.								
2019 Total		100	10	0	110	1.0		

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	148	116	72	225	167
Non-Labor	8	6	3	30	5
NSE	0	0	0	0	0
Total	155	122	75	255	172
FTE	2.0	1.4	1.1	2.9	1.7
Adjustments (Nominal \$) **					
Labor	0	0	0	0	-9
Non-Labor	48	0	0	0	0
NSE	0	0	0	0	0
Total	48	0	0	0	-9
FTE	0.0	0.0	0.0	0.0	-0.1
Recorded-Adjusted (Nominal \$)					
Labor	148	116	72	225	158
Non-Labor	55	6	3	30	5
NSE	0	0	0	0	0
Total	203	122	75	255	163
FTE	2.0	1.4	1.1	2.9	1.6
Vacation & Sick (Nominal \$)					
Labor	24	19	12	36	26
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	24	19	12	36	26
FTE	0.3	0.2	0.2	0.5	0.3
Escalation to 2016\$					
Labor	10	5	2	3	0
Non-Labor	3	0	0	0	0
NSE	0	0	0	0	0
Total	14	6	2	4	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	182	140	86	265	184
Non-Labor	59	7	3	30	5
NSE	0	0	0	0	0
Total	240	147	89	295	189
FTE	2.3	1.6	1.3	3.4	1.9

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0	0	-9
Non-Labor	48	0	0	0	0
NSE	0	0	0	0	0
Total	48	0	0	0	-9
FTE	0.0	0.0	0.0	0.0	-0.1

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	0	48	0	0.0	1-Sided Adj	MGONZALX20170309133229820
Explanation:		Adjustment to correct an error in a transfer of negative non labor expenditures (credit) of \$23,764. This adjustment correct the error.					
2012 Total		0	48	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	-9	0	0	-0.1	1-Sided Adj	ANTROTTE20170628143531317
Explanation:		Aliso related dollars- Labor \$9 170.76 and 0.149 FTEs					
2016	Other	125	7	0	1.5	CCTR Transf From 2200-2317.000	FGALVAN20170228114721530
Explanation:		Adjustment to transfer the historical expenditures in the ESS Field Force (Cost Center 2200-2317) to the Gas Engineering witness group cost center 2200-0302.					
2016	Other	53	0	0	0.9	CCTR Transf From 2200-2322.000	FGALVAN20170228130626980
Explanation:		Adjustment to transfer the historical expenditures in the ESS Governance (Cost Center 2200-2322) to the Gas Engineering witness group cost center 2200-0302.					
2016	Other	-1,510	-328	0	-17.6	CCTR Transf To 2200-0307.000	MGONZALX20170307094419010

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
Explanation: Adjustment to transfer the Non-Shared expenditures to Non-Shared cost center 2200-0307. These expenditures in cost centers (2200 - 2375, 2322, 2317, 2323, 2324, and 2584) were incorrectly transferred to Shared Services cost center 2200-0302. This adjustment is to correct the error.							
2016	Other	438	14	0	4.7	CCTR Transf From 2200-2323.000	FGALVAN20170228120157150
Explanation: Adjustment to transfer the historical expenditures in the ESS Implementation Support (Cost Center 2200-2323) to the Gas Engineering witness group cost center 2200-0302.							
2016	Other	334	289	0	4.0	CCTR Transf From 2200-2324.000	FGALVAN20170228120731117
Explanation: Adjustment to transfer the historical expenditures in the ESS Mobile App (Cost Center 2200-2324) to the Gas Engineering witness group cost center 2200-0302.							
2016	Other	278	14	0	3.3	CCTR Transf From 2200-2375.000	FGALVAN20170228121006780
Explanation: Adjustment to transfer the historical expenditures in the ESS Mobile Group (Cost Center 2200-2375) to the Gas Engineering witness group cost center 2200-0302.							
2016	Other	281	3	0	3.2	CCTR Transf From 2200-2584.000	FGALVAN20170301075709913
Explanation: Adjustment to transfer the historical expenditures in the ESS CPD Work Management System Support Group (Cost Center 2200-2584) to the Gas Engineering witness group cost center 2200-0302.							
2016 Total		-9	0	0	-0.1		

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0302.000 - BUSINESS PROCESS ESS IMPLEMENTATION AND ESS MOBILE SOLUTIONS

RAMP Item # 1

Ref ID: MGONZALX20161205080608670

RAMP Chapter: SCG-8

Program Name: Document management and communications of Gas Standards

Program Description: Involves the management of the Document Management System, including the development, publication & maintenance process of the SoCalGas & SDG&E plans to comply to pipeline safety regulations (49 CFR Parts 191-193) and CPUC General Orders 112-E, 58A & 58B in addition to the Company Operations Standards, Form Instructions, Manuals (Safety, IIPP, DIMP/TIMP, Gas Operator Safety Plan, Welding Specs, etc.)

Risk/Mitigation:

Risk: Records Management

Mitigation: Information Management System

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: Other

Forecast Method: Other

Work Type: Mandated

Work Type Citation: 49 CFR Parts 191-193 and CPUC General Orders 112-E, 58A & 58B

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-0303.000 - APPLICATIONS

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0303.000 - APPLICATIONS

Activity Description:

The Applications cost center includes expenditures for labor and non-labor expenses to support a broad range of computer programs and systems that are not provided by the Company's Information Technology group. The work included within this cost center is to manage, develop, and support specialized computer-aided drafting and design for Engineering Applications; manage and support the Gas computer-aided drafting and design and policies; manage and support hardware, file management, and back-end processes; manage help desk tickets and client support calls; manage, develop and maintain the Formal Communications Document Library & Publish Gas Standards; and develop and maintain Gas Operations Internal Websites. Expenditures covered in this cost center accounts for labor and expenses to support computer programs and systems not provided by the Company's Information Technology group. The work included within this cost center is to: manage, develop, and support specialized computer-aided drafting and design for Engineering Applications; manage and support the Gas computer-aided drafting and design policies; manage and support hardware, file management, and back-end processes; manage help desk tickets and client support calls; manage, develop and maintain the Formal Communications Document Library and publish Gas Standards; and develop and maintain Gas Operations internal websites.

Forecast Explanations:

Labor - 5-YR Average

As the foundation for future labor expense requirements, the 5 year average was chosen. This forecasting methodology serves to more accurately even out the work variations that occur.

Non-Labor - 5-YR Average

As the foundation for future non-labor expense requirements, the 5 year average was chosen. This forecasting methodology serves to more accurately even out the work variations that occur.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		268	652	509	43	181	331	331	331	
Non-Labor		346	213	93	36	50	147	147	147	
NSE		0	0	0	0	0	0	0	0	
Total		614	865	602	79	230	478	478	478	
FTE		3.0	7.4	5.7	0.5	2.0	3.7	3.7	3.7	

Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0303.000 - APPLICATIONS

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	1	0	1	0.0	1	17	0	18	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	181	49	0	230	2.0	330	130	0	460	3.7
Total Incurred	181	50	0	231	2.0	331	147	0	478	3.7
% Allocation										
Retained	91.85%	91.85%				91.85%	91.85%			
SEU	8.15%	8.15%				8.15%	8.15%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	1	17	0	18	0.0	1	17	0	18	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	330	130	0	460	3.7	330	130	0	460	3.7
Total Incurred	331	147	0	478	3.7	331	147	0	478	3.7
% Allocation										
Retained	91.85%	91.85%				91.85%	91.85%			
SEU	8.15%	8.15%				8.15%	8.15%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0303.000 - APPLICATIONS

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	331	331	331	0	0	0	331	331	331
Non-Labor	5-YR Average	148	148	148	0	0	0	148	148	148
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		478	478	478	0	0	0	478	478	478
FTE	5-YR Average	3.7	3.7	3.7	0.0	0.0	0.0	3.7	3.7	3.7

<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>	<u>RefID</u>
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Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0303.000 - APPLICATIONS

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	218	538	428	37	155
Non-Labor	326	205	91	36	50
NSE	0	0	0	0	0
Total	544	743	519	72	205
FTE	2.6	6.3	4.9	0.4	1.7
Adjustments (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
Recorded-Adjusted (Nominal \$)					
Labor	218	538	428	37	155
Non-Labor	326	205	91	36	50
NSE	0	0	0	0	0
Total	544	743	519	72	205
FTE	2.6	6.3	4.9	0.4	1.7
Vacation & Sick (Nominal \$)					
Labor	35	89	70	6	26
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	35	89	70	6	26
FTE	0.4	1.1	0.8	0.1	0.3
Escalation to 2016\$					
Labor	15	25	11	1	0
Non-Labor	20	8	2	0	0
NSE	0	0	0	0	0
Total	35	33	13	1	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	268	652	509	43	181
Non-Labor	346	213	93	36	50
NSE	0	0	0	0	0
Total	614	865	602	79	230
FTE	3.0	7.4	5.7	0.5	2.0

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0303.000 - APPLICATIONS

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

Beginning of Workpaper
2200-0305.000 - ESS PRODUCTION SUPPORT

Southern California Gas Company
2019 GRC - APP
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

Activity Description:

ESS (Enterprise Systems Solutions) organization maintains and provides support to users of business applications that are used by Gas Distribution, Gas Transmission, and Gas Storage organizations for both SCG & SDG. These applications are utilized by the organizations in support of meeting regulatory requirements.

ESS develops and maintains more than two dozen applications that are used by Gas Transmission and Gas Storage organizations. The group also provides first level support to users of several enterprise Business Application users that are developed and maintained by central IT organization. Users of business applications are supported through phone calls, emails, helpdesk ticketing system and walkups from 6:00 am to 6:00 pm during week days. The team monitors interfaces between applications, resolve program interface issues, publishes client communications (release notes, information bulletins, outage notifications, technical bulletins, interim process bulletins, applications instructions, webcasts, etc.), supports hardware used in the field (mobile devices and peripheral equipment), maintains training environments, and manages systems modifications/Change requests including software QA activities.

Forecast Explanations:

Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, ESS Production Support increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund ESS Production Support activities in the forecast years.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, ESS Production Support increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund ESS Production Support activities in the forecast years.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		814	753	201	144	257	534	534	534	
Non-Labor		-24	196	190	287	15	133	133	133	
NSE		0	0	0	0	0	0	0	0	
Total		790	949	391	431	271	667	667	667	
FTE		9.0	8.1	1.3	1.5	1.8	5.3	5.3	5.3	

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	1	1	0	2	0.0	4	31	0	35	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	256	14	0	270	1.8	530	102	0	632	5.3
Total Incurred	257	15	0	272	1.8	534	133	0	667	5.3
% Allocation										
Retained	86.69%	86.69%				86.69%	86.69%			
SEU	13.31%	13.31%				13.31%	13.31%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	4	31	0	35	0.0	4	31	0	35	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	530	102	0	632	5.3	530	102	0	632	5.3
Total Incurred	534	133	0	667	5.3	534	133	0	667	5.3
% Allocation										
Retained	86.69%	86.69%				86.69%	86.69%			
SEU	13.31%	13.31%				13.31%	13.31%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	434	434	434	100	100	100	534	534	534
Non-Labor	5-YR Average	133	133	133	0	0	0	133	133	133
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		567	567	567	100	100	100	667	667	667
FTE	5-YR Average	4.3	4.3	4.3	1.0	1.0	1.0	5.3	5.3	5.3

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	100	0	0	100	1.0	1-Sided Adj	MGONZALX20170512170359140

Explanation: RAMP Chapter 8- Records Management Records Management- 1 FTE for labor RAMP information Management System. IMS is a broad category that encompasses the various applications that support records management such as the Geographic Information System, Work Management, Document Management and Real-time Monitoring Systems. These applications provide SoCalGas system attribute information such as design, materials and construction methods, pipeline condition, past and present operations and maintenance, local environmental factors, and failure data (e.g., leaks). The IMS allows employees and contractors to assist them in performing their operational work safely and accurately.

Labor costs will be 1 FTE X \$100K = \$100K.

2017 Total		100	0	0	100	1.0		
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2018	RAMP Incremental	100	0	0	100	1.0	1-Sided Adj	ANTROTTE20170626142253773
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Explanation: RAMP Chapter 8- Records Management Records Management- 1 FTE for labor RAMP information Management System. IMS is a broad category that encompasses the various applications that support records management such as the Geographic Information System, Work Management, Document Management and Real-time Monitoring Systems. These applications provide SoCalGas system attribute information such as design, materials and construction methods, pipeline condition, past and present operations and maintenance, local environmental factors, and failure data (e.g., leaks). The IMS allows employees and contractors to assist them in performing their operational work safely and accurately.

Labor costs will be 1 FTE X \$100K = \$100K.

2018 Total		100	0	0	100	1.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

<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>	<u>RefID</u>
2019	RAMP Incremental	100	0	0	100	1.0	1-Sided Adj	ANTROTTE20170626142318080

Explanation: RAMP Chapter 8- Records Management Records Management- 1 FTE for labor RAMP information Management System. IMS is a broad category that encompasses the various applications that support records management such as the Geographic Information System, Work Management, Document Management and Real-time Monitoring Systems. These applications provide SoCalGas system attribute information such as design, materials and construction methods, pipeline condition, past and present operations and maintenance, local environmental factors, and failure data (e.g., leaks). The IMS allows employees and contractors to assist them in performing their operational work safely and accurately.

Labor costs will be 1 FTE X \$100K = \$100K.

2019 Total		100	0	0	100	1.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	662	621	169	123	220
Non-Labor	-23	189	185	283	15
NSE	0	0	0	0	0
Total	639	809	355	406	235
FTE	7.7	6.9	1.1	1.3	1.5
Adjustments (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
Recorded-Adjusted (Nominal \$)					
Labor	662	621	169	123	220
Non-Labor	-23	189	185	283	15
NSE	0	0	0	0	0
Total	639	809	355	406	235
FTE	7.7	6.9	1.1	1.3	1.5
Vacation & Sick (Nominal \$)					
Labor	106	103	28	20	36
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	106	103	28	20	36
FTE	1.3	1.2	0.2	0.2	0.3
Escalation to 2016\$					
Labor	46	29	4	2	0
Non-Labor	-1	8	4	4	0
NSE	0	0	0	0	0
Total	45	37	9	5	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	814	753	201	144	257
Non-Labor	-24	196	190	287	15
NSE	0	0	0	0	0
Total	790	949	391	431	271
FTE	9.0	8.1	1.3	1.5	1.8

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0305.000 - ESS PRODUCTION SUPPORT

RAMP Item # 1

Ref ID: MGONZALX20170512170359140

RAMP Chapter: SCG-8

Program Name: IT O&M Costs

Program Description: Costs for the ongoing O&M to maintain the systems used to store operational asset records

Risk/Mitigation:

Risk: Records Management

Mitigation: Information Management Systems

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Non-Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-0306.000 - WRK MGMT & DATABASES

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

Activity Description:

Activities associated with this cost center include the support of Work Management Systems for Measurement and Regulation (M&R), System Protection Specialists (SPS) and Work Order Tracking (WOT) applications, AutoSol Enterprise System (AES), and the MyProjects enterprise system. This cost center also supports the SDG&E Gas Technical Services Group in Miramar; specifically, the Electronic Data Management System (EDMS) and the Cathodic Protection Data Management (CPDM) applications. All of these systems are key operational systems to support field functions to verify pipeline and ancillary facilities continue to be fit for service.

Forecast Explanations:

Labor - 5-YR Linear

The 5-year linear forecast method was chosen for the labor in this group because the historical data indicate that activities and staffing levels have been consistent and this trend is expected to continue. Therefore, the most appropriate method to estimate future requirements is the 5-year linear forecast. However, new and unique work management and database development are required to comply thus additional staffing and resources are required. These incremental costs have been identified and added.

Non-Labor - 5-YR Average

As the foundation for future non-labor expense requirements, the 5 year average was chosen. This forecasting methodology serves to more accurately even out the work variations that occur.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		529	567	516	647	771	875	931	1,358	
Non-Labor		504	532	874	281	221	482	482	500	
NSE		0	0	0	0	0	0	0	0	
Total		1,033	1,099	1,389	928	991	1,357	1,413	1,858	
FTE		6.2	6.7	6.0	7.5	8.8	9.8	10.3	13.9	

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	4	0	6	0.0	2	12	0	14	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	769	217	0	986	8.8	873	470	0	1,343	9.8
Total Incurred	771	221	0	992	8.8	875	482	0	1,357	9.8
% Allocation										
Retained	86.63%	86.63%				86.63%	86.63%			
SEU	13.37%	13.37%				13.37%	13.37%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	2	12	0	14	0.0	3	12	0	15	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	929	470	0	1,399	10.3	1,355	488	0	1,843	13.9
Total Incurred	931	482	0	1,413	10.3	1,358	500	0	1,858	13.9
% Allocation										
Retained	86.63%	86.63%				86.63%	86.63%			
SEU	13.37%	13.37%				13.37%	13.37%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E meters to SoCal meters applied to specific budgeted activities (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Linear	775	831	887	100	100	470	875	931	1,357
Non-Labor	5-YR Average	482	482	482	0	0	18	482	482	500
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,257	1,314	1,370	100	100	488	1,357	1,414	1,858
FTE	5-YR Linear	8.8	9.3	9.9	1.0	1.0	4.0	9.8	10.3	13.9

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	100	0	0	100	1.0	1-Sided Adj	MGONZALX20170512170619987

Explanation: RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight.
 SoCalGas has records coordinators across the company. These record coordinators manage records and related issues, and are based within each of their respective business areas. The purpose is to give each operational area day-to-day control over records for which it has responsibility and knowledge. The record coordinators then coordinate with Financial Systems to promote and support the Company's records policies and procedures. In effect, this means that the management of operational asset records is decentralized. Sempra Energy's Audit Services (Internal Audit) group performs periodic audits to verify compliance with policies related to records management and retention. Historically, these audits have occurred approximately every three years. Lastly, SoCalGas uses physical storage space, both on-site and off-site, for records. SoCalGas manages the records storage so that it complies with SoCalGas' policies related to retention and disposal.

Labor costs will be 1 FTE X \$100K = \$100K.

2017 Total		100	0	0	100	1.0		
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2018	RAMP Incremental	100	0	0	100	1.0	1-Sided Adj	ANTROTTE20170626131541863
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

<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>	<u>RefID</u>
Explanation: RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight. SoCalGas has records coordinators across the company. These record coordinators manage records and related issues, and are based within each of their respective business areas. The purpose is to give each operational area day-to-day control over records for which it has responsibility and knowledge. The record coordinators then coordinate with Financial Systems to promote and support the Company's records policies and procedures. In effect, this means that the management of operational asset records is decentralized. Sempra Energy's Audit Services (Internal Audit) group performs periodic audits to verify compliance with policies related to records management and retention. Historically, these audits have occurred approximately every three years. Lastly, SoCalGas uses physical storage space, both on-site and off-site, for records. SoCalGas manages the records storage so that it complies with SoCalGas' policies related to retention and disposal. Labor costs will be 1 FTE X \$100K = \$100K.								
2018 Total		100	0	0	100	1.0		
2019 Other		270	18	0	288	2.0	1-Sided Adj	MGONZALX20170308215002050
Explanation: Incremental FTEs for two Technical Computing Advisors and one application Support Lead develop and implement the Engineering Data Analytics group. Labor costs will be 2 FTE X \$135K = \$270K. Associated non-labor expense is estimated to be 2 FTE X \$9K = \$18K.								
2019 RAMP Incremental		200	0	0	200	2.0	1-Sided Adj	MGONZALX20170309150818987
Explanation: RAMP Chapter 8- Records Management RAMP Records management - Operational Compliacne & Oversight. SoCalGas has records coordinators across the company. These record coordinators manage records and related issues, and are based within each of their respective business areas. The purpose is to give each operational area day-to-day control over records for which it has responsibility and knowledge. The record coordinators then coordinate with Financial Systems to promote and support the Company's records policies and procedures. In effect, this means that the management of operational asset records is decentralized. Sempra Energy's Audit Services (Internal Audit) group performs periodic audits to verify compliance with policies related to records management and retention. Historically, these audits have occurred approximately every three years. Lastly, SoCalGas uses physical storage space, both on-site and off-site, for records. SoCalGas manages the records storage so that it complies with SoCalGas' policies related to retention and disposal. Labor costs will be 2 FTE X \$100K = \$200K.								
2019 Total		470	18	0	488	4.0		

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	430	468	433	550	662
Non-Labor	476	512	854	278	221
NSE	0	0	0	0	0
Total	906	979	1,287	828	882
FTE	5.3	5.7	5.1	6.4	7.5
Adjustments (Nominal \$) **					
Labor	0	0	1	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	0	0	1	0	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	430	468	434	550	662
Non-Labor	476	512	854	278	221
NSE	0	0	0	0	0
Total	906	979	1,288	828	882
FTE	5.3	5.7	5.1	6.4	7.5
Vacation & Sick (Nominal \$)					
Labor	69	78	71	89	109
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	69	78	71	89	109
FTE	0.9	1.0	0.9	1.1	1.3
Escalation to 2016\$					
Labor	30	22	11	8	0
Non-Labor	29	21	19	3	0
NSE	0	0	0	0	0
Total	58	42	30	12	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	529	567	516	647	771
Non-Labor	504	532	874	281	221
NSE	0	0	0	0	0
Total	1,033	1,099	1,389	928	991
FTE	6.2	6.7	6.0	7.5	8.8

* 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.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	0	0	0.830	0	0
Non-Labor	0.082	0	0	0	0
NSE	0	0	0	0	0
Total	0.082	0	0.830	0	0
FTE	0.0	0.0	0.0	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	0	0	0	0.0	CCTR Transf From 2200-0304.000	MGONZALX20161109144023103

Explanation: This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions of these two cost centers have merged.

2012 Total 0 0 0 0.0

2013 Total 0 0 0 0.0

2014	Other	1	0	0	0.0	CCTR Transf From 2200-0304.000	MGONZALX20161109144232370
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Explanation: This adjustment is to transfer the historical cost from cost center 2200-0304 to cost center 2200-0306 because the activities and functions of these two cost centers have merged.

2014 Total 1 0 0 0.0

2015 Total 0 0 0 0.0

2016 Total 0 0 0 0.0

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0306.000 - WRK MGMT & DATABASES

RAMP Item # 1

Ref ID: MGONZALX20170512170619987

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Non-Mandated

Work Type Citation: N/A

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Beginning of Workpaper
2200-0308.000 - CONTRACT & MAINTENCANCE

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0308.000 - CONTRACT & MAINTENCANCE

Activity Description:

This cost center accounts for the non-labor expenses associated with software licenses and maintenance contracts for Operations Technology. Operations Technology manages, administers, and maintains hardware, software, and back-end processes that support the systems and applications of various organizations at SoCalGas and SDG&E, including Safety, Distribution, Customer Service, Environmental, Transmission and Engineering.

Forecast Explanations:

Labor - 5-YR Average

The labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

Non-Labor - 5-YR Average

The non-labor expense requirements for this cost center have been consistent over recorded historical data. This trend is expected to continue. As such the 5 year average methodology was chosen as best representing the future expense requirements.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		481	-17	0	0	0	93	93	93	
Non-Labor		329	435	389	336	843	466	466	466	
NSE		0	0	0	0	0	0	0	0	
Total		810	418	389	336	843	559	559	559	
FTE		5.8	-0.2	0.0	0.0	0.0	1.1	1.1	1.1	

Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0308.000 - CONTRACT & MAINTENCANCE

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	16	0	16	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	0	843	0	843	0.0	93	450	0	543	1.1
Total Incurred	0	843	0	843	0.0	93	466	0	559	1.1
% Allocation										
Retained	93.80%	93.80%				93.80%	93.80%			
SEU	6.20%	6.20%				6.20%	6.20%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	16	0	16	0.0	0	16	0	16	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	93	450	0	543	1.1	93	450	0	543	1.1
Total Incurred	93	466	0	559	1.1	93	466	0	559	1.1
% Allocation										
Retained	93.80%	93.80%				93.80%	93.80%			
SEU	6.20%	6.20%				6.20%	6.20%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0308.000 - CONTRACT & MAINTENCANCE

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Average	93	93	93	0	0	0	93	93	93
Non-Labor	5-YR Average	466	466	466	0	0	0	466	466	466
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		559	559	559	0	0	0	559	559	559
FTE	5-YR Average	1.1	1.1	1.1	0.0	0.0	0.0	1.1	1.1	1.1

<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>	<u>RefID</u>
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Note: Totals may include rounding differences.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-0308.000 - CONTRACT & MAINTENANCE

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	0	0	0	0	0
Non-Labor	306	418	380	332	843
NSE	0	0	0	0	0
Total	306	418	380	332	843
FTE	0.0	0.0	0.0	0.0	0.0
Adjustments (Nominal \$) **					
Labor	392	-14	0	0	0
Non-Labor	4	0	0	0	0
NSE	0	0	0	0	0
Total	396	-14	0	0	0
FTE	5.0	-0.2	0.0	0.0	0.0
Recorded-Adjusted (Nominal \$)					
Labor	392	-14	0	0	0
Non-Labor	310	418	380	332	843
NSE	0	0	0	0	0
Total	701	404	380	332	843
FTE	5.0	-0.2	0.0	0.0	0.0
Vacation & Sick (Nominal \$)					
Labor	63	-2	0	0	0
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	63	-2	0	0	0
FTE	0.8	0.0	0.0	0.0	0.0
Escalation to 2016\$					
Labor	27	-1	0	0	0
Non-Labor	19	17	8	4	0
NSE	0	0	0	0	0
Total	46	16	8	4	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	481	-17	0	0	0
Non-Labor	329	435	389	336	843
NSE	0	0	0	0	0
Total	810	418	389	336	843
FTE	5.8	-0.2	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.

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-0308.000 - CONTRACT & MAINTENCANCE

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	392	-14	0	0	0
Non-Labor	4	0	0	0	0
NSE	0	0	0	0	0
Total	396	-14	0	0	0
FTE	5.0	-0.2	0.0	0.0	0.0

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
2012	Other	392	4	0	5.0	CCTR Transf From 2200-0307.000	JJBUNTIN20161103132607593

Explanation: This adjustment was made because the Web & Database Management responsibilities were moved to shared cost center 2200-0308 during a reorganization in 2014.

2012 Total **392** **4** **0** **5.0**

2013	Other	-14	0	0	-0.2	CCTR Transf From 2200-0307.000	JJBUNTIN20161103132728813
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Explanation: This adjustment was made because the Web & Database Management responsibilities were moved to shared cost center 2200-0308 during a reorganization in 2014.

2013 Total **-14** **0** **0** **-0.2**

2014 Total **0** **0** **0** **0.0**

2015 Total **0** **0** **0** **0.0**

2016 Total **0** **0** **0** **0.0**

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: D. ASSET MANAGEMENT
Category-Sub: 1. ASSET MANAGEMENT
Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Activity Description:

The activities associated with the Gas Business and Technology Support Enterprise Geographic Information System (eGIS) and High Pressure Pipeline Database (HPPDB) include the following:

- Provide synchronization of HPPDB and eGIS
- Convert and reconcile linear asset data to geographic format and verify pipeline geometry, HCAs and class locations.
- Provide integration and applications to make GIS data, Maintenance Management data and Document Management data quickly and easily available for end users. In addition, the activities associated with the Gas Business and Technology Support DMS include the following:
 - Convert and reconcile various existing electronic and non-electronic data sources into a single robust data base in order to manage, store, preserve and deliver key documents and information.
 - Verify that documentation is linked to asset data in GIS and Maintenance Management Systems.

Furthermore, the activities associated with the Gas Business and Technology Support SAP / Maximo applications include the following:

- Verify asset data is properly classified and maintained in Maintenance Management System - MMS (Maximo, SAP) system in order to better support M&I needs
- Convert and reconcile existing data into appropriate form.
- Verify that asset data is properly recorded in the Maintenance Management system as it is changed in the field as well as verify that proper maintenance plans are established for assets.

Forecast Explanations:

Labor - 5-YR Linear

The 5-year linear forecast method was chosen for the labor in this group because the historical data indicate that activities and staffing levels have been consistent and this trend is expected to continue. Therefore, the most appropriate method to estimate future requirements is the 5-year linear forecast. However, new and unique work management and database development are required to comply thus additional staffing and resources are required. These incremental costs have been identified and added.

Non-Labor - 5-YR Average

The services provided within this workgroup fluctuate from year-to-year. For this reason, a historical five-year average of the recorded labor expenditures for the years 2012 through 2016 was determined to be most representative ongoing labor requirements. In general, eGIS increase as levels of work and workforce increase; as new programs, processes and technologies are implemented; and as regulatory or compliance requirements change. The review of the historical costs in this work category shows a generally consistent upward trend. SoCalGas used a five year (2012 through 2016) historical average trend plus incremental funding to adequately fund eGIS activities in the forecast years.

NSE - 5-YR Average

NSE is not applicable to this workgroup

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		523	927	1,136	1,423	1,079	1,501	1,761	1,922	
Non-Labor		338	135	237	6	39	151	631	631	
NSE		0	0	0	0	0	0	0	0	
Total		862	1,062	1,373	1,429	1,118	1,652	2,392	2,553	
FTE		6.0	11.1	13.6	16.7	12.5	17.5	20.3	22.1	

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	33	5	0	38	0.4	42	1	0	43	0.3
Directly Allocated	0	0	0	0	0.0	-4	0	0	-4	0.0
Subj. To % Alloc.	1,046	35	0	1,081	12.0	1,463	150	0	1,613	17.2
Total Incurred	1,079	40	0	1,119	12.4	1,501	151	0	1,652	17.5
% Allocation										
Retained	87.36%	87.36%				87.36%	87.36%			
SEU	12.64%	12.64%				12.64%	12.64%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	51	1	0	52	0.4	60	1	0	61	0.5
Directly Allocated	-6	0	0	-6	0.0	-8	0	0	-8	-0.1
Subj. To % Alloc.	1,716	630	0	2,346	19.9	1,870	630	0	2,500	21.7
Total Incurred	1,761	631	0	2,392	20.3	1,922	631	0	2,553	22.1
% Allocation										
Retained	87.36%	87.36%				87.36%	87.36%			
SEU	12.64%	12.64%				12.64%	12.64%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Pipe to SoCal Miles of Pipe (inclusive of both Dist. Main, Dist. Services, & Trans.).

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	5-YR Linear	1,500	1,661	1,822	0	100	100	1,500	1,761	1,922
Non-Labor	5-YR Average	151	151	151	0	480	480	151	631	631
NSE	5-YR Average	0	0	0	0	0	0	0	0	0
Total		1,651	1,812	1,973	0	580	580	1,651	2,392	2,553
FTE	5-YR Linear	17.5	19.3	21.1	0.0	1.0	1.0	17.5	20.3	22.1

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017 Total		0	0	0	0	0.0		

2018 RAMP Incremental 100 480 0 580 1.0 1-Sided Adj MGONZALX20170310220954513

Explanation: RAMP Chapter 8- Records Management RAMP Incremental in support of employees to collect, enter and maintain records related to operational assets.

Labor costs will be 1 FTE X \$100K = \$100K.

Aveva Software annual maintenance fee is non-labor cost.

2018 Total		100	480	0	580	1.0		
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2019 RAMP Incremental 100 480 0 580 1.0 1-Sided Adj MGONZALX20170310221012010

Explanation: RAMP Chapter 8- Records Management RAMP Incremental in support of employees to collect, enter and maintain records related to operational assets.

Labor costs will be 1 FTE X \$100K = \$100K.

Aveva Software annual maintenance fee is non-labor cost.

2019 Total		100	480	0	580	1.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (Nominal \$)*					
Labor	383	764	956	1,210	952
Non-Labor	305	129	231	6	39
NSE	0	0	0	0	0
Total	688	893	1,187	1,216	991
FTE	4.6	9.5	11.6	14.3	11.0
Adjustments (Nominal \$) **					
Labor	42	0	0	0	-25
Non-Labor	14	1	1	0	0
NSE	0	0	0	0	0
Total	56	1	1	0	-25
FTE	0.5	0.0	0.0	0.0	-0.4
Recorded-Adjusted (Nominal \$)					
Labor	426	764	956	1,210	926
Non-Labor	319	130	232	6	39
NSE	0	0	0	0	0
Total	745	894	1,187	1,216	966
FTE	5.1	9.5	11.6	14.3	10.6
Vacation & Sick (Nominal \$)					
Labor	68	127	156	196	153
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	68	127	156	196	153
FTE	0.9	1.6	2.0	2.4	1.8
Escalation to 2016\$					
Labor	30	36	25	18	0
Non-Labor	19	5	5	0	0
NSE	0	0	0	0	0
Total	49	41	30	18	0
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2016\$)					
Labor	523	927	1,136	1,423	1,079
Non-Labor	338	135	237	6	39
NSE	0	0	0	0	0
Total	862	1,062	1,373	1,429	1,118
FTE	6.0	11.1	13.6	16.7	12.4

* 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.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

Summary of Adjustments to Recorded:

In Nominal \$ (000) Incurred Costs					
Years	2012	2013	2014	2015	2016
Labor	42	-0.065	0	0	-25
Non-Labor	14	1	0.767	0.003	-0.062
NSE	0	0	0	0	0
Total	56	1	0.767	0.003	-25
FTE	0.5	0.0	0.0	0.0	-0.4

Detail of Adjustments to Recorded:

Year	Adj Group	Labor	NLbr	NSE	FTE	Adj Type	RefID
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2012	Other	42	12	0	0.5	CTTR Transf From 2100-3821.000	MGONZALX20161201080139567
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Explanation: Adjustment to move historical GIS strategy expenditures to the shared services cost center 2200-2376. Cost Center 2200-2376 encompasses the work related to GIS Strategy and App Support, and will be used to support GIS related items for both utilities.

2012	Other	0	3	0	0.0	CTTR Transf From 2200-0314.000	JJBUNTIN20161103132931397
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Explanation: This adjustment was made to transfer historical expenditures from cost center 2200-0314 to cost center 2200-2376 because the GIS responsibilities were moved to shared cost center 2200-2376 during a reorganization in 2014.

2012 Total	42	14	0	0.5
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2013	Other	-1	1	0	0.0	CTTR Transf From 2100-3821.000	MGONZALX20161201080243597
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Explanation: Adjustment to move historical GIS strategy expenditures to the shared services cost center 2200-2376. Cost Center 2200-2376 encompasses the work related to GIS Strategy and App Support, and will be used to support GIS related items for both utilities.

2013	Other	1	0	0	0.0	CTTR Transf From 2200-0314.000	JJBUNTIN20161103133024407
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Explanation: This adjustment was made because the GIS responsibilities were moved to shared cost center 2200-2376 during a reorganization in 2014.

2013 Total	0	1	0	0.0
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2014	Other	0	1	0	0.0	CTTR Transf From 2100-3821.000	MGONZALX20161201080947083
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Explanation: Adjustment to move historical GIS strategy expenditures to the shared services cost center 2200-2376. Cost Center 2200-2376 encompasses the work related to GIS Strategy and App Support, and will be used to support GIS related items for both utilities.

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
2014 Total		0	1	0	0.0		
2015	Other	0	0	0	0.0	CCTR Transf From 2100-3821.000	MGONZALX20161201081043223
Explanation:		Adjustment to move historical GIS strategy expenditures to the shared services cost center 2200-2376. Cost Center 2200-2376 encompasses the work related to GIS Strategy and App Support, and will be used to support GIS related items for both utilities.					
2015 Total		0	0	0	0.0		
2016	Aliso	-25	0	0	-0.4	1-Sided Adj	JJBUNTIN20170224115407780
Explanation:		This adjustment was made because this work (internal order number 300775156) was related to the Aliso Canyon Incident.					
2016 Total		-25	0	0	-0.4		

Note: Totals may include rounding differences.

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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: D. ASSET MANAGEMENT
 Category-Sub: 1. ASSET MANAGEMENT
 Cost Center: 2200-2376.000 - ENTERPRISE GEOGRAPHIC INFORMATION SYSTEM (EGIS)

RAMP Item # 1

Ref ID: ANTRORTE20170628141657997

RAMP Chapter: SCG-8

Program Name: Support of Employees in Designated Departments to Collect, Enter and Maintain Records Related to Ope

Program Description: Labor and non-labor costs for employees in designated departments to collect, enter and maintain records related to operational assets

Risk/Mitigation:

Risk: Records Management (O&M)

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Other

Work Type: Mandated

Work Type Citation: n/a

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation:

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000

Summary for Category: E. RECORDS MANAGEMENT

	In 2016\$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2016	2017	2018	2019
Labor	0	600	1,100	1,900
Non-Labor	0	250	50	650
NSE	0	0	0	0
Total	0	850	1,150	2,550
FTE	0.0	6.0	11.0	19.0

Cost Centers belonging to this Category:

2200-7242.000 RECORDS MANAGEMENT - from 2200-2361

Labor	0	600	1,100	1,900
Non-Labor	0	250	50	650
NSE	0	0	0	0
Total	0	850	1,150	2,550
FTE	0.0	6.0	11.0	19.0

Note: Totals may include rounding differences.

Beginning of Workpaper
2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

Southern California Gas Company
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Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

Activity Description:

Records Management provides operational oversight for records management processes in specific operational areas and would provide dedicated full-time records management over the daily tasks and activities performed. In essence, records management specialists representing each functional area in Gas Operations would serve as the 'eyes and ears' of the centralized operational records management organization and be a bridge to provide real-time feedback on continual improvement of SoCal Gas' records-related programs.

Forecast Explanations:

Labor - Zero-Based

SoCalGas chose a zero-based methodology because Records Management and Programs department was newly created in late 2016/early 2017, which has no past cost history for the newly inaugurated functions. Labor is composed of Records Management and Programs Department management and non-management direct salaries associated with the work to support the management and execution of large projects.

Non-Labor - Zero-Based

SoCalGas chose a zero-based methodology because Records Management and Programs department was newly created in late 2016/early 2017, which has no past cost history for the newly inaugurated functions. The non-labor cost is composed of employees' expenses, employee training costs, software license fees for project management and control systems, and consulting fees.

NSE - Zero-Based

NSE is not applicable to this workgroup

Summary of Results:

		In 2016\$ (000) Incurred Costs								
		Adjusted-Recorded					Adjusted-Forecast			
Years		2012	2013	2014	2015	2016	2017	2018	2019	
Labor		0	0	0	0	0	600	1,100	1,900	
Non-Labor		0	0	0	0	0	250	50	650	
NSE		0	0	0	0	0	0	0	0	
Total		0	0	0	0	0	850	1,150	2,550	
FTE		0.0	0.0	0.0	0.0	0.0	6.0	11.0	19.0	

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

Cost Center Allocations (Incurred Costs):

	2016 Adjusted-Recorded					2017 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	0	0	0	0	0.0	600	250	0	850	6.0
Total Incurred	0	0	0	0	0.0	600	250	0	850	6.0
% Allocation										
Retained	86.00%	86.00%				80.00%	80.00%			
SEU	14.00%	14.00%				20.00%	20.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

	2018 Adjusted-Forecast					2019 Adjusted-Forecast				
	Labor	Non-Labor	NSE	Total	FTE	Labor	Non-Labor	NSE	Total	FTE
Directly Retained	0	0	0	0	0.0	0	0	0	0	0.0
Directly Allocated	0	0	0	0	0.0	0	0	0	0	0.0
Subj. To % Alloc.	1,100	50	0	1,150	11.0	1,900	650	0	2,550	19.0
Total Incurred	1,100	50	0	1,150	11.0	1,900	650	0	2,550	19.0
% Allocation										
Retained	80.00%	80.00%				80.00%	80.00%			
SEU	20.00%	20.00%				20.00%	20.00%			
CORP	0.00%	0.00%				0.00%	0.00%			
Unreg	0.00%	0.00%				0.00%	0.00%			

Cost Center Allocation Percentage Drivers/Methodology:

Cost Center Allocation Percentage for 2016

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2017

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2018

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Cost Center Allocation Percentage for 2019

All calculations are based on the ratio of SDG&E Miles of Main to SoCal Miles of Main.

Note: Totals may include rounding differences.

Southern California Gas Company
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Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

Summary of Adjustments to Forecast:

In 2016 \$(000) Incurred Costs										
Forecast Method		Base Forecast			Forecast Adjustments			Adjusted-Forecast		
Years		2017	2018	2019	2017	2018	2019	2017	2018	2019
Labor	Zero-Based	0	0	0	600	1,100	1,900	600	1,100	1,900
Non-Labor	Zero-Based	0	0	0	250	50	650	250	50	650
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		0	0	0	850	1,150	2,550	850	1,150	2,550
FTE	Zero-Based	0.0	0.0	0.0	6.0	11.0	19.0	6.0	11.0	19.0

Forecast Adjustment Details:

Year	Adj Group	Labor	NLbr	NSE	Total	FTE	Adj Type	RefID
2017	RAMP Incremental	200	200	0	400	2.0	1-Sided Adj	PDOMAGAS20170512134608770

Explanation: RAMP Chapter 2- Employee Contractor Customer & Public Safety
2 FTEs for Gas Standards Governance in the Records Management & Programs Organization.

Labor costs will be 2 FTE X \$100K = \$200K. Associated non-labor expense is estimated to be 2 FTE X \$100K = \$200K contract training and software

2017	RAMP Incremental	400	50	0	450	4.0	1-Sided Adj	MGONZALX20170512135904823
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Explanation: RAMP Chapter 8- Records Management RAMP Incremental adjustment to hire 4 American Records Management Association certified employees for the Records Management group.

Labor costs will be 4 FTE X \$100K = \$400K. Associated non-labor expense is estimated to be 4 FTE X \$12,500 = \$50K.

2017 Total		600	250	0	850	6.0		
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2018	RAMP Incremental	400	0	0	400	4.0	1-Sided Adj	PDOMAGAS20170512134536350
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Explanation: RAMP Chapter 2- Employee Contractor Customer & Public Safety
2 FTEs for Gas Standards Governance in the Records Management & Programs Organization.

Labor costs will be 4 FTE X \$100K = \$400K.

2018	RAMP Incremental	700	50	0	750	7.0	1-Sided Adj	MGONZALX20170512135821227
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Explanation: RAMP Chapter 8- Records Management RAMP Incremental adjustment to hire 7 American Records Management Association certified employees for the Records Management group.

Labor costs will be 7 FTE X \$100K = \$700K. Associated non-labor expense is estimated to be 7 FTE X \$7K = \$50K approximately.

Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

<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>	<u>RefID</u>
2018 Total		1,100	50	0	1,150	11.0		

2019 RAMP Incremental 400 500 0 900 4.0 1-Sided Adj PDOMAGAS20170512134457693

Explanation: RAMP Chapter 2- Employee Contractor Customer & Public Safety
 2 FTEs for Gas Standards Governance in the Records Management & Programs Organization.

 Labor costs will be 4 FTE X \$100K = \$400K. Associated non-labor expense is estimated to be 4 FTE X \$125K = \$500K contract training and software

2019 RAMP Incremental 1,500 150 0 1,650 15.0 1-Sided Adj MGONZALX20170512140144233

Explanation: RAMP Chapter 8- Records Management RAMP Incremental adjustment to hire 15 American Records Management Association certified employees for the Records Management group.

 Labor costs will be 15 FTE X \$100K = \$1.5 million. Associated non-labor expense is estimated to be 15 FTE X \$10K = \$150K.

2019 Total		1,900	650	0	2,550	19.0		
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Note: Totals may include rounding differences.

SCG/GAS SYSTEM INTEGRITY/Exh No:SCG-05-WP/Witness: O. Rivera

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

Determination of Adjusted-Recorded (Incurred Costs):

	2012 (\$000)	2013 (\$000)	2014 (\$000)	2015 (\$000)	2016 (\$000)
Recorded (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
Adjustments (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
Recorded-Adjusted (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
Vacation & 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
Escalation to 2016\$					
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
Recorded-Adjusted (Constant 2016\$)					
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

* 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.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

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	0
NSE	0	0	0	0	0
Total	0	0	0	0	0
FTE	0.0	0.0	0.0	0.0	0.0

<u>Year</u>	<u>Adj Group</u>	<u>Labor</u>	<u>NLbr</u>	<u>NSE</u>	<u>FTE</u>	<u>Adj Type</u>	<u>RefID</u>
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Note: Totals may include rounding differences.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera
Category: E. RECORDS MANAGEMENT
Category-Sub: 1. RECORDS MANAGEMENT
Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

RAMP Item # 1

Ref ID: MGONZALX20170512135904823

RAMP Chapter: SCG-8

Program Name: Centralized Operational Records Management Department

Program Description: ARMA certified records specialists from each functional area; data analysts; quality control specialists (5 - 15 Full Time Equivalents)

Risk/Mitigation:

Risk: Records Management

Mitigation: Operational Compliance and Oversight

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Non-Mandated

Work Type Citation: TBD

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: There are no expenditures for this program in 2016.

Southern California Gas Company
2019 GRC - APP
Shared Services Workpapers

Area: GAS SYSTEM INTEGRITY
 Witness: Omar Rivera
 Category: E. RECORDS MANAGEMENT
 Category-Sub: 1. RECORDS MANAGEMENT
 Cost Center: 2200-7242.000 - RECORDS MANAGEMENT - from 2200-2361

RAMP Item # 2

Ref ID: PDOMAGAS20170512134608770

RAMP Chapter: SCG-2

Program Name: Development and management of formal gas standards, procedures and processes for Gas Distribution,

Program Description: Evaluation includes the time of the Standard Owner to complete initial review, coordinate inputs, make changes and complete processing

Risk/Mitigation:

Risk: Employee, Contractor, Customer & Public Safety

Mitigation: Policy, Procedures, Standards, and ESCMP

Forecast CPUC Cost Estimates (\$000)

	<u>2017</u>	<u>2018</u>	<u>2019</u>
Low	0	0	0
High	0	0	0

Funding Source: CPUC-GRC

Forecast Method: Zero-Based

Work Type: Non-Mandated

Work Type Citation: Pending

Historical Embedded Cost Estimates (\$000)

Embedded Costs: 0

Explanation: There are no expenditures related to this project in 2016.

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

Area: GAS SYSTEM INTEGRITY
Witness: Omar Rivera

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2200-2213	000	SCG PUBLIC AWARENESS
2200-2241	000	DIR PIPELINE SAFETY & COMPLIANCE
2200-2540	000	DIR MAJOR PROGRAMS REGULATORY COMPLIANCE
2200-7210	000	GAS OP'S TRAINING AND DEVELOPMENT - from 2200-0614
2200-7211	000	FIELD FORCE CONSTRUCTION - from 2200-2317
2200-7212	000	ESS GOVERNANCE & SERVICE IMPROVEMENT - from 2200-2322
2200-7213	000	ESS IMPLEMENTATION SUPPORT - from 2200-2323
2200-7214	000	ESS MOBILE HARDWARE & APPLICATIONS TEAM - from 2200-2324
2200-7215	000	ESS MOBILE APPS - from 2200-2375
2200-7216	000	COMPLIANCE ASSURANCE - from 2200-2409
2200-7217	000	TRAINING - OFFICE - from 2200-2500
2200-7218	000	TRAINING - TRANSMISSION/STORAGE/HP/M&R - from 2200-2501
2200-7219	000	TRAINING - WELDING - from 2200-2502
2200-7220	000	ESS CPD PROD SUPPORT - from 2200-2584
2200-7230	000	MAXIMO - from 2200-0304
2200-7231	000	WEB/DATABASE/SERVER SUPPORT - from 2200-0307
2200-7232	000	GIS SUPERVISOR - from 2200-0314
2200-7233	000	SVP OPERATIONS - from 2200-2331
2200-7240	000	QUALITY RISK & COMPLIANCE MGMT - from 2200-2530
2200-7241	000	GAS CONTRACTOR CONTROLS - from 2200-2553