Application of SAN DIEGO GAS & ELECTRIC COMPANY for authority to update its gas and electric revenue requirement and base rates effective January 1, 2016 (U 902-M)	)

Application No. 14-11-___
Exhibit No.: (SDG&E-07-WP)

WORKPAPERS TO
PREPARED DIRECT TESTIMONY
OF MARIA T. MARTINEZ
ON BEHALF OF SAN DIEGO GAS & ELECTRIC COMPANY

BEFORE THE PUBLIC UTILITIES COMMISSION

OF THE STATE OF CALIFORNIA

NOVEMBER 2014

2016 General Rate Case - APP

INDEX OF WORKPAPERS

Exhibit SDG&E-07-WP - TIMP & DIMP

Overall Summary For Exhibit No. SDG&E-07-WP

Area: **TIMP & DIMP**

Witness: **Maria T. Martinez**

	In 2013 $ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
Description	**2013**	**2014**	**2015**	**2016**
Non-Shared Services	7,409	9,981	6,265	11,484
Shared Services	0	0	0	0
Total	**7,409**	**9,981**	**6,265**	**11,484**

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez

Summary of Non-Shared Services Workpapers:

	In 2013 $ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
Description	**2013**	**2014**	**2015**	**2016**
A. TIMP	4,206	6,337	2,621	5,451
B. DIMP	3,203	3,644	3,644	6,033
Total	**7,409**	**9,981**	**6,265**	**11,484**

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: A. TIMP
Workpaper: 1TD000.000

Summary for Category: A. TIMP

	In 2013$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	196	556	211	559
Non-Labor	4,010	5,781	2,410	4,892
NSE	0	0	0	0
Total	**4,206**	**6,337**	**2,621**	**5,451**
FTE	2.5	7.0	3.0	7.0

Workpapers belonging to this Category:

1TD000.000 TIMP

Labor	196	556	211	559
Non-Labor	4,010	5,781	2,410	4,892
NSE	0	0	0	0
Total	**4,206**	**6,337**	**2,621**	**5,451**
FTE	2.5	7.0	3.0	7.0

Note: Totals may include rounding differences.

Beginning of Workpaper
1TD000.000 - TIMP

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: A. TIMP
Category-Sub 1. TIMP
Workpaper: 1TD000.000 - TIMP

Activity Description:

Primary activities focus on the development, management and support of the Pipeline Integrity Management Program (TIMP). Support activities include data collection, analysis, management, and reporting; assessment planning; integrity assessments and project management; preventive and mitigative measure analysis; technical and engineering support in areas of corrosion protection and treatment, metallurgy, pipeline materials specifications and standard operating procedures.

Forecast Explanations:

Labor - Zero-Based

The activities and operational support provided by this work group are project specific and as such are provided as a zero based forecasting methodology.

Non-Labor - Zero-Based

The activities and operational support provided by this work group are project specific and as such are provided as a zero based forecasting methodology.

NSE - Zero-Based

There are no Non-Standard Escalation expenses in this work group.

Summary of Results:

	In 2013$ (000) Incurred Costs							
	Adjusted-Recorded					Adjusted-Forecast		
Years	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Labor	209	241	266	751	196	556	211	559
Non-Labor	626	932	3,867	4,016	4,010	5,781	2,410	4,892
NSE	0	0	0	0	0	0	0	0
Total	**835**	**1,173**	**4,132**	**4,767**	**4,206**	**6,337**	**2,621**	**5,451**
FTE	2.4	2.7	3.1	7.9	2.5	7.0	3.0	7.0

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper: 1TD000.000 - TIMP

Forecast Summary:

In 2013 $(000) Incurred Costs										
Forecast Method		**Base Forecast**			**Forecast Adjustments**			**Adjusted-Forecast**		
Years		**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Labor	Zero-Based	0	0	0	556	211	559	556	211	559
Non-Labor	Zero-Based	0	0	0	5,781	2,410	4,892	5,781	2,410	4,892
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**6,337**	**2,621**	**5,451**	**6,337**	**2,621**	**5,451**
FTE	Zero-Based	0.0	0.0	0.0	7.0	3.0	7.0	7.0	3.0	7.0

Forecast Adjustment Details:

Year/Expl.	Labor	NLbr	NSE	Total	FTE	Adj Type
2014	556	5,781	0	6,337	7.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Transmission Integrity Management Program (TIMP) associated with inspection and assessments. See Supplemental workpaper 12TDxxxx.pdf for activity details.

2014 Total	**556**	**5,781**	**0**	**6,337**	**7.0**	
2015	211	2,410	0	2,621	3.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Transmission Integrity Management Program (TIMP) associated with inspection and assessments. See Supplemental workpaper 1TDxxxx.pdf for activity details.

2015 Total	**211**	**2,410**	**0**	**2,621**	**3.0**	
2016	559	4,892	0	5,451	7.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Transmission Integrity Management Program (TIMP) associated with inspection and assessments. See Supplemental workpaper 1TDxxxx.pdf for activity details.

2016 Total	**559**	**4,892**	**0**	**5,451**	**7.0**	

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper: 1TD000.000 - TIMP

Determination of Adjusted-Recorded (Incurred Costs):

	2009 ($000)	2010 ($000)	2011 ($000)	2012 ($000)	2013 ($000)
Recorded (Nominal $)*					
Labor	167	196	223	642	169
Non-Labor	567	864	3,716	3,946	4,010
NSE	0	0	0	0	0
Total	**734**	**1,060**	**3,939**	**4,588**	**4,179**
FTE	2.0	2.3	2.6	6.8	2.2
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	167	196	223	642	169
Non-Labor	567	864	3,716	3,946	4,010
NSE	0	0	0	0	0
Total	**734**	**1,060**	**3,939**	**4,588**	**4,179**
FTE	2.0	2.3	2.6	6.8	2.2
Vacation & Sick (Nominal $)					
Labor	26	31	33	93	27
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	**26**	**31**	**33**	**93**	**27**
FTE	0.3	0.4	0.4	1.1	0.4
Escalation to 2013$					
Labor	17	14	10	16	0
Non-Labor	59	68	150	70	0
NSE	0	0	0	0	0
Total	**76**	**83**	**161**	**86**	**0**
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013$)					
Labor	209	241	266	751	196
Non-Labor	626	932	3,867	4,016	4,010
NSE	0	0	0	0	0
Total	**835**	**1,173**	**4,132**	**4,767**	**4,206**
FTE	2.3	2.7	3.0	7.9	2.6

* After company-wide exclusions of Non-GRC costs
** Refer to "Detail of Adjustments to Recorded" page for line item adjustments
Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: A. TIMP
Category-Sub: 1. TIMP
Workpaper: 1TD000.000 - TIMP

Summary of Adjustments to Recorded:

In Nominal $ (000) Incurred Costs					
Years	**2009**	**2010**	**2011**	**2012**	**2013**
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

Detail of Adjustments to Recorded:

Year/Expl.	Labor	NLbr	NSE	FTE	Adj_Type	From CCtr	RefID
2009 Total	**0**	**0**	**0**	**0.0**			
2010 Total	**0**	**0**	**0**	**0.0**			
2011 Total	**0**	**0**	**0**	**0.0**			
2012 Total	**0**	**0**	**0**	**0.0**			
2013 Total	**0**	**0**	**0**	**0.0**			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 1TD000.000

SDG&E TIMP Non-Labor Support
O&M Supplemental Work Paper

Business Purpose

To be in compliance SDG&E is required under CFR Part 192 Subpart O—Gas Transmission Pipeline Integrity Management to continually identify threats to their transmission pipelines located in High Consequence Areas (HCAs), determine the risk posed by these threats, schedule and track assessments to address threats within prescribed timelines, collect information about the condition of the pipelines, take actions to minimize applicable threats and integrity concerns to reduce the risk of a pipeline failure and report findings to regulators.

The activities as prescribed by Subpart O are primarily implemented and managed by the Transmission Integrity Management Program Team. The team is composed of engineers, project managers, technical advisors, project specialist and other roles with varying degree of responsibility. The various activities managed by the TIMP team can be categorized into seven areas associated with the compliance of Subpart O.

- Threat Identification and Risk Assessment
- Baseline Assessment Plan
- Assessment
- Remediation
- Additional Preventative and Mitigative Measures
- Geographic Information System (GIS) – High Pressure Pipeline Database
- Auditing and Reporting

Physical Description & Project Justification

The O&M non-labor to support the seven areas of compliance can be grouped in the following areas:

Contracting (Consulting and Field Services): As part of the continuous improvement consulting and field services are leveraged throughout the year to provide feedback on existing processes for areas of improvement or develop new processes. Field support is needed throughout the year for additional preventative and mitigative measures for casings and facility inspections.

Data Collection (Pipe Samples, Records and Testing): As part of the traceable, verifiable and complete recommendation issued by NTSB additional records research and in some cases pipe sampling is needed to support the expectation issued by PHMSA in response to the NTSB (Advisory Bulletin 11-01, January 3, 2011).

> *The advisory states that operators relying on the review of design, construction, inspection, testing, and other related data to calculate MAOP (for gas pipelines) or MOP (for liquid pipelines) must diligently search for relevant records and ensure that the records are traceable, verifiable, and complete. If such a search and verification cannot be completed, the operator*

cannot rely on this method for calculating MAOP. The advisory also reminded operators of their responsibilities to identify pipeline integrity threats; perform rigorous risk analyses; integrate information; and identify, evaluate, and implement preventative and mitigative measures.

High Pressure Pipeline Database (Application Upgrades, Aerial Photography, Building Detection): The HPPD supports various activities within Pipeline Integrity such as High Consequence Area review, creation of the Assessment Plan to support scheduling of assessments, analysis for risk and threat and assessment analysis. An upgrade to a new version of ESRI will be required and conversion to PODS model database. As part of the of the annual High Consequence Area review new photography is purchased for change detection.

Staff Support (Training and Licenses): The TIMP team consists mainly of engineers that support critical roles such as assessment and remediation recommendations, risk and threat analysis and preventative and mitigative recommendations. The engineers throughout the year sent to courses centered on these activities and some cases obtain certifications from the National Association of Corrosion Engineers. For such as ASME or DOT training custom courses is with an emphasis on pipeline integrity and provided to the engineering team.

Forecast Methodology

The forecast methodology was developed using recent contracting rates, bids submittals and average cost for activities.

- Average hourly rate for consulting and fields services: $131
- Average cost per excavation: $45,000
- Training: $4,000 ($3,000 per course and $1,000 travel), $25,000 group in-house training
- Aerial Photography, Change Detection and Licenses for HPPD: $33,000
- Total 2016 Request: $697,536

		2016		
	SDG&E - TIMP	**Labor**	**Non-Labor**	**Total**
1	In-Line Inspection (Assessment)	48,893	4,035,164	4,084,057
2	ECDA (Assessment)	0	159,300	159,300
3	Casing Inspections (P&M)	0		0
4	Integrity Assessment	0		0
5	Data Mgt	0		0
6	Data Mgt/Compliance/GPS	0		0
7	Assessment Planning 2100-3569	97,087	697,536	97,087
8	Direct Assessment/ECDA/P&M 2100-3595	234,934		234,934
9	Other (various cost centers)	97,087		794,623
10	Ops Tech Support 2100-3909	0		0
11	Vacation & Sick	80,999	0	80,999
12		$559,000	$4,892,000	$5,451,000

In-Line Inspection (ILI)
O&M Workpaper - SDGE

Business Purpose

On December 17, 2002 the Pipeline Safety Improvement Act of 2002 (PSIA 2002) was signed into law, and subsequently 49 C.F.R. Part 192 Subpart O was published. The final rule was effective January 14, 2004. Under this rule, operators of gas transmission pipelines are required to identify the threats to their pipelines, analyze the risk posed by these threats, assess the physical condition of their pipelines and take actions to address applicable threats and integrity concerns before pipeline incidents can occur.

Physical Description

The assessment of this pipeline will be completed using In-Line Inspection (ILI) tools. The ILI tools will traverse internally along the route of the pipeline to collect information that will be used to complete the assessment of the pipeline. The tools are inserted into the pipelines by installing a temporary launcher and receiver typically installed near the time of inspection.

Following the completion of the inspection excavations to validate or remediate the inspection findings will be needed. When possible, multiple pipelines may be combined into a single run, and conversely, a single pipeline may require multiple launcher and receiver points.

Project Justification

All DOT Transmission Pipeline Integrity assessments are in response to the Federal Pipeline Safety Improvement Act of 2002 and are required to comply with the subsequent rule making. Capital repairs and replacements are constructed in accordance with 49 C.F.R. Part 192, ASME B31.8, and other codes and standards as appropriate. Assessments need to be completed on continual basis using In-Line Inspection (ILI) tools, Pressure Testing or Direct Assessment to address the identified threats on each pipeline. The assessment of transmission pipelines located in High Consequence Area (HCA) requires an assessment to be completed at a minimum every 7 years. 49 C.F.R § 192.939 establishes the requirements for determining the reassessment interval for covered pipelines but goes on to stipulate *" the maximum reassessment interval by an allowable reassessment method is seven years"*.

Forecast Methodology

The cost to assess a pipeline is forecast using the following four components:

1. Retrofit of the pipeline and capital replacement
2. Installation of launcher and receiver facilities
3. In-Line Inspection
4. Excavations & remediation

The retrofit and installation of launcher and receiver is a capitalized cost while the in-line inspection and excavation and minor repairs (components 3 and 4 above) are expense. The forecast for components 3 and 4 are covered in the O&M workpapers and testimony.

To forecast the cost of this assessment project, the methodology is using the average cost of ILI per site

and minor repairs. The methodology for capital costs is to use the average cost of installing a launcher/receiver facilities and average cost for retrofit/repairs.

Capital Component:

The cost to complete this component is based upon the average cost incurred during 2013 for the retrofit, installation launch/receiver materials of a typical project including radiography and equipment expenses and capital replacements. The resulting total average cost for capital is $1,062,415 per site.

O&M Component:

The cost to complete this component is based upon the average cost incurred during 2013 for data collection, ILI inspection and excavations required for validation and minor repairs. The resulting total average cost for O&M is $1,008,791 per ILI run.

Distribution of Labor /Non Labor:

The majority of work required to accomplish in projects is contractor work and materials which is pooled into the non-labor category. Based upon 2013 company headcount will remain fairly constant for the 2014-2016 period, we are estimating labor to be based on 2013 actual inflated each year by labor factor of 3.5%.

Based upon the methodology described above, the projected costs for ILI O&M are:

	Task	Avg Cost
1		
2	**Avg Cst per ILI Site**	**$1,008,791**

	Year 2014			
	Pipeline	**Launch (start)**	**Receive (end)**	**Miles**
3	1600	Lake Hodges	Mission Gate Station	19.89
4	1601	Escondido	Carlsbad	13.37
5	3010	Carlsbad	Santee	0
6			ILI Sites: 3	$3,026,373
7			Add'l charge for Retrofit/Repair	$0
8			Subtotal 2014 Non-Labor	$3,026,373
9			Labor 2014	$45,642
10			Total O&M 2014	$3,072,015

	Year 2015			
	Pipeline	**Launch (start)**	**Receive (end)**	**Miles**
1	3011	Governor Drive	Cross-Tie East Hwy 163	4.19
2	49-21	D Ave	4th St	0.1
3			ILI Sites: 1	$1,008,791
4			Add'l charge for Retrofit/Repair	$0
5			Subtotal 2015 Non-Labor	$1,008,791
6			Labor 2015	$47,240
7			Total O&M 2015	$1,056,031

	Year 2016			
	Pipeline	**Launch (start)**	**Receive (end)**	**Miles**
8	3600	Harvest Rd Station	Santee Station	29.86
9	49-21	D Ave	4th St	0.1
10	49-23	Sweetwater River Crossing		0.1
11	2010	Camp Elliot Station	Carlton Hills Terminal Reg Sta	7.50
12			ILI Sites: 4	$4,035,164
13			Add'l charge for Retrofit/Repair	$0
14			Subtotal 2016 Non-Labor	$4,035,164
15			Labor 2016	$48,893
16			Total O&M 2016	$4,084,057

External Corrosion Direct Assessment (ECDA)

O&M Supplemental Work Paper

Business Purpose

External Corrosion Direct Assessment (ECDA) of Department of Transportation defined transmission pipelines is conducted in accordance with the TIMP Baseline/Re- Assessment Plan to comply with requirements of CFR 49 part 192 subpart O.

Physical Description

ECDA is a process that proactively seeks to identify external corrosion defects before they grow to a size that affects the structural integrity of the inspected pipeline segment. ECDA is a four step process including

1. Pre-assessment (data collection, review evaluation)
2. Indirect inspection surveys (over line electrical surveys)
3. Direct examination digs (excavation and field inspection of pipe)
4. Post assessment (data review, verification and acceptance)

Project Justification

Assessment is mandated by regulatory requirements in CFR 49 part 192 subpart O. Assessment using ECDA is utilized for pipelines to address threats of external corrosion where ILI is not practical or feasible.

Forecast Methodology

Costs for ECDA projects are estimated based on a history of completing these type projects over the past 10 years and are assembled based on the costs for each phase/step of an ECDA project and the overall length of the pipeline assessment. Typical costs are $35,000/mile for indirect inspection (with a minimum cost of $16,000 per project), 1.79 digs per mile (with a minimum of 4 digs per project) at a cost of 45,000 per dig non-labor.

Task	Average Cost	
Line Survey	$35,000	per mile
Excavations	$45,000	Per dig
Company Labor	$30,000	Per Job

						2014
Line Number	**Miles**	**Survey Cost**	**# of Digs**	**Cost of Digs**	**Labor**	**Total Cost**
L 1602	0.85	29,750	2	90,000	30,000	$149,750
L 1603	0.64	22,400	2	90,000	30,000	$142,400
L 1604	1.66	58,100	2	90,000	30,000	$178,100
L 3012	3.82	133,700	3	135,000	30,000	$298,700
L 49-16, 18 and 21	13.80	483,000	0	0	30,000	$513,000
					Total	**$1,281,950**
					Labor	$150,000
					NonLabor	$1,131,950

						2015
Line Number	**Miles**	**Survey Cost**	**# of Digs**	**Cost of Digs**	**Labor**	**Total Cost**
L 49-13	3.67	128,450	2	90,000	30,000	$248,450
L 49-15	7.35	257,250	2	90,000	30,000	$377,250
L 49-16	0.00	0	4	180,000	30,000	$210,000
					Total	**$835,700**
					Labor	$90,000
					NonLabor	$745,700

						2016
Line Number	**Miles**	**Survey Cost**	**# of Digs**	**Cost of Digs**	**Labor**	**Total Cost**
L 49-24	1.98	69,300	2	90,000	30,000	$189,300
					Total	**$189,300**
					Labor	$30,000
					NonLabor	$159,300

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: B. DIMP
Workpaper: 1TD000.001

Summary for Category: B. DIMP

	In 2013$ (000) Incurred Costs			
	Adjusted-Recorded	Adjusted-Forecast		
	2013	2014	2015	2016
Labor	929	890	890	1,472
Non-Labor	2,275	2,754	2,754	4,561
NSE	0	0	0	0
Total	**3,204**	**3,644**	**3,644**	**6,033**
FTE	12.3	11.0	11.0	18.0

Workpapers belonging to this Category:

1TD000.001 DIMP

Labor	929	890	890	1,472
Non-Labor	2,275	2,754	2,754	4,561
NSE	0	0	0	0
Total	**3,204**	**3,644**	**3,644**	**6,033**
FTE	12.3	11.0	11.0	18.0

Note: Totals may include rounding differences.

Beginning of Workpaper
1TD000.001 - DIMP

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: B. DIMP
Category-Sub 1. DIMP
Workpaper: 1TD000.001 - DIMP

Activity Description:

This group has been organized and resourced to address the requirements of the DOT mandated Distribution Integrity Management Program (DIMP) rules set for in 49 CFR section 192, subpart P. Primarily, the activities will focus on generating and enhancing knowledge of pipeling system (location, materials, data retention, analysis, etc.); Threat identification and mitigation; evaluate, rank and address risk; Damage Prevention, Leakage prevntion and mitigation, etc.

Forecast Explanations:

Labor - Zero-Based

Due to the recent enactment of the DIMP and the evolving nature of activities performed in this category, a zero based forecast best represents the funding requirements. Specific activities and programs developed for compliance with DIMP drive the labor expense requirements.

Non-Labor - Zero-Based

Due to the recent enactment of the DIMP and the evolving nature of activities performed in this category, a zero based forecast best represents the funding requirements. Specific activities and programs developed for compliance with DIMP drive the non labor expense requirements.

NSE - Zero-Based

There are no Non-Standard Escalation expenses in this work group.

Summary of Results:

	In 2013$ (000) Incurred Costs							
	Adjusted-Recorded					Adjusted-Forecast		
Years	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Labor	704	782	1,961	1,225	929	890	890	1,472
Non-Labor	533	933	6,068	4,669	2,275	2,754	2,754	4,561
NSE	0	0	0	0	0	0	0	0
Total	**1,236**	**1,716**	**8,029**	**5,894**	**3,203**	**3,644**	**3,644**	**6,033**
FTE	8.1	11.6	28.8	16.0	12.3	11.0	11.0	18.0

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper: 1TD000.001 - DIMP

Forecast Summary:

In 2013 $(000) Incurred Costs										
Forecast Method		**Base Forecast**			**Forecast Adjustments**			**Adjusted-Forecast**		
Years		**2014**	**2015**	**2016**	**2014**	**2015**	**2016**	**2014**	**2015**	**2016**
Labor	Zero-Based	0	0	0	890	890	1,472	890	890	1,472
Non-Labor	Zero-Based	0	0	0	2,754	2,754	4,561	2,754	2,754	4,561
NSE	Zero-Based	0	0	0	0	0	0	0	0	0
Total		**0**	**0**	**0**	**3,644**	**3,644**	**6,033**	**3,644**	**3,644**	**6,033**
FTE	Zero-Based	0.0	0.0	0.0	11.0	11.0	18.0	11.0	11.0	18.0

Forecast Adjustment Details:

Year/Expl.	Labor	NLbr	NSE	Total	FTE	Adj Type
2014	890	2,754	0	3,644	11.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Distribution Integrity Management Program (DIMP) as set forth in 49 CFR Sec 192, subpart P. See Supplemental workpaper 1TDxxx for activity details

2014 Total	**890**	**2,754**	**0**	**3,644**	**11.0**	
2015	890	2,754	0	3,644	11.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Distribution Integrity Management Program (DIMP) as set forth in 49 CFR Sec 192, subpart P. See Supplemental workpaper 1TDxxx for activity details

2015 Total	**890**	**2,754**	**0**	**3,644**	**11.0**	
2016	1,472	4,561	0	6,033	18.0	1-Sided Adj

Labor (including FTE) and Non-Labor expense requirements for Distribution Integrity Management Program (DIMP) as set forth in 49 CFR Sec 192, subpart P. See Supplemental workpaper 1TDxxx for activity details.

2016 Total	**1,472**	**4,561**	**0**	**6,033**	**18.0**	

Note: Totals may include rounding differences.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper: 1TD000.001 - DIMP

Determination of Adjusted-Recorded (Incurred Costs):

	2009 ($000)	2010 ($000)	2011 ($000)	2012 ($000)	2013 ($000)
Recorded (Nominal $)*					
Labor	561	634	1,642	1,048	802
Non-Labor	482	865	5,832	4,587	2,275
NSE	0	0	0	0	0
Total	**1,044**	**1,500**	**7,474**	**5,635**	**3,076**
FTE	6.9	9.9	24.7	13.7	10.4
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	561	634	1,642	1,048	802
Non-Labor	482	865	5,832	4,587	2,275
NSE	0	0	0	0	0
Total	**1,044**	**1,500**	**7,474**	**5,635**	**3,076**
FTE	6.9	9.9	24.7	13.7	10.4
Vacation & Sick (Nominal $)					
Labor	87	101	242	152	127
Non-Labor	0	0	0	0	0
NSE	0	0	0	0	0
Total	**87**	**101**	**242**	**152**	**127**
FTE	1.2	1.7	4.1	2.2	1.8
Escalation to 2013$					
Labor	56	47	77	26	0
Non-Labor	50	68	236	82	0
NSE	0	0	0	0	0
Total	**106**	**115**	**313**	**108**	**0**
FTE	0.0	0.0	0.0	0.0	0.0
Recorded-Adjusted (Constant 2013$)					
Labor	704	782	1,961	1,225	929
Non-Labor	533	933	6,068	4,669	2,275
NSE	0	0	0	0	0
Total	**1,236**	**1,716**	**8,029**	**5,894**	**3,203**
FTE	8.1	11.6	28.8	15.9	12.2

* 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.

Area: TIMP & DIMP
Witness: Maria T. Martinez
Category: B. DIMP
Category-Sub: 1. DIMP
Workpaper: 1TD000.001 - DIMP

Summary of Adjustments to Recorded:

In Nominal $ (000) Incurred Costs					
Years	**2009**	**2010**	**2011**	**2012**	**2013**
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

Detail of Adjustments to Recorded:

Year/Expl.	Labor	NLbr	NSE	FTE	Adj_Type	From CCtr	RefID
2009 Total	**0**	**0**	**0**	**0.0**			
2010 Total	**0**	**0**	**0**	**0.0**			
2011 Total	**0**	**0**	**0**	**0.0**			
2012 Total	**0**	**0**	**0**	**0.0**			
2013 Total	**0**	**0**	**0**	**0.0**			

Note: Totals may include rounding differences.

Supplemental Workpapers for Workpaper 1TD000.001

SDG&E DIMP Non-Labor Support
O&M Supplemental Work Paper

Business Purpose

These activities are required for compliance with CFR Part 192.1001 Subpart P—Gas Distribution Pipeline Integrity Management. PHMSA purpose for DIMP is to enhance pipeline safety by having operators identify and reduce pipeline integrity risks specifically for distribution pipelines[1]. These activities are primarily implemented and managed by the Distribution Integrity Management Program Team. The team is composed of engineers, project managers, technical advisors, project specialist and other roles with varying degree of responsibility. This cost supports the company's goals of operating the system safely and with excellence by continually assessing, mitigating and reducing the system risk. The following topics and activities will be discussed in additional detail to demonstrate the reasonableness of the labor and non-labor cost.

- System Knowledge
- Threat Identification and Risk Analysis
- Programs and Activities to Address Risk
- Geographic Information System
- Compliance, Auditing and Reporting

Physical Description & Project Justification

The O&M non-labor to support the seven areas of compliance can be grouped in the following areas:

Contracting (Consulting and Field Services): As part of the continuous improvement consulting and field services are leveraged throughout the year to provide feedback on existing processes for areas of improvement or develop new processes. Field or office support needed throughout the year for additional measures.

Data Collection (Records, Data Integration, Pipe Samples, Records and Testing): As part of the traceable, verifiable and complete recommendation issued by NTSB additional records research and in some cases pipelines sampling is needed to support the expectation issued by PHMSA in response to the NTSB (Advisory Bulletin 11-01, January 3, 2011).

[1] PHMSA DIMP FAQ B.1.1 Why did PHMSA mandate integrity management requirements to distribution pipeline system? "PHMSA's regulation in part 192 have contributed to producing an admirable safety record. Nevertheless, incidents continue to occur, some of which involve significant consequences, including death and injury. It is not possible to significantly reduce high consequence pipeline incidents without reducing the likelihood of their occurrence on distribution pipelines…."

The advisory states that operators relying on the review of design, construction, inspection, testing, and other related data to calculate MAOP (for gas pipelines) or MOP (for liquid pipelines) must diligently search for relevant records and ensure that the records are traceable, verifiable, and complete. If such a search and verification cannot be completed, the operator cannot rely on this method for calculating MAOP. The advisory also reminded operators of their responsibilities to identify pipeline integrity threats; perform rigorous risk analyses; integrate information; and identify, evaluate, and implement preventative and mitigative measures.

Enterprise-GIS (Applications and Licenses): Applications and license to support data analysis to prioritize the various Program and Activities to Address Risk (PAAR).

Staff Support (Training and Licenses): The DIMP team consists mainly of engineers that support critical roles. The engineers throughout the year are sent to courses centered on DIMP fundamentals and emerging industry changes.

Emerging PAARs: SDG&E will have successfully completed the Sewer Lateral Inspection Program (SLIP) and the Gas Infrastructure Protection Programs (GIPP) by 2016. It's expected that new PAARs will be developed by 2016 to address additional system risk at similar funding levels experienced with SLIP and GIPP.

Forecast Methodology

The forecast methodology was developed using recent contracting rates, bids submittals and average cost for activities.

- Average hourly rate for consulting and fields services: $131
- Average cost per excavation: $45,000
- Training: $4,000 ($3,000 per course and $1,000 travel), $25,000 group in-house training
- Enterprise GIS: $100,000
- Emerging PAARs: $2,700,000
- Total 2016 Request: $4,561,000

	SDG&E - DIMP	Labor	Non-Labor	Total
1	GIPP	0	0	0
2	SLIP	0	0	0
3	Emerging Programs to Address Risk	270,000	2,700,000	2,970,000
4	Program Support	970,610	1,861,000	3,146,610
5	Vacation & Sick	186,391	0	186,391
6		**$1,472,000**	**$4,561,000**	**$6,033,000**

Area: TIMP & DIMP
Witness: Maria T. Martinez

Appendix A: List of Non-Shared Cost Centers

Cost Center	Sub	Description
2100-0167	000	GAS DISTRIBUTION SERVICES DIRECTOR-TIMP
2100-3419	000	GAS TRANSMISSION SPECIAL PROJECTS-TIMP
2100-3569	000	PIPELINE INTEGRITY DIRECT ASSESSMENT-TIMP
2100-3595	000	SDG&E PIPELINE INTEGRITY EVALUATIONS-TIMP
2100-3827	000	PROJ MGR - GAS INFRAS PROTECTION PRGM-TIMP
2100-3828	000	PROJ MGR - SEWER LATERAL INSPECT PRGM-TIMP
2100-3902	000	PROJ MGR - ANODLESS RISER PRGM
2100-3909	000	GIS STRATEGY & APPS TIMP/DIMP