Exhibit Reference:SCG-15 (PSEP)Witness:PhillipsSubject:Follow up to TURN/SCGC 001

1. For each of the Excel workbooks that were provided in response to TURN/SCGC-SEU-001, Q.3.c. and noting that each of the workbooks has a tab labeled "Environmental" that shows costs for the following categories: Environmental Services, Abatement, Water Treatment, Hazardous Materials, Mitigation, and Permit Fees, please answer the following questions:

Question 1a: Is each test segment of the pipeline expected to be separately hydrotested and then dewatered and dried before another test segment is pressure tested or are multiple test segments to be hydrotested simultaneously?

SoCalGas Response 1a:

Each project is engineered and planned individually with an execution plan best suited for the conditions, elevation changes and testing parameters needed to accomplish the test. Some projects may have multiple test segments filled and dried simultaneously, while others may not. Table below identifies whether the project will have multiple test sections. Please see individual project workpapers for the number of test sections.

Project Line Number	Response
235 West Section 1	Multiple test sections to be hydrotested simultaneously.
235 West Section 2	Multiple test sections to be hydrotested simultaneously.
235 West Section 3	Multiple test sections to be hydrotested simultaneously.
407	Each section is planned to be separately hydrotested.
1011	Each section is planned to be separately hydrotested.
2000 Chino Hills	Multiple test sections to be hydrotested simultaneously.
2000 Section E	Each section is planned to be separately hydrotested.
2000 Blythe to Cactus City	Multiple test sections to be hydrotested simultaneously.
2001 W Section C	Each section is planned to be separately hydrotested.
2001 W Section D	Each section is planned to be separately hydrotested.
2001 W Section E	Each section is planned to be separately hydrotested.
225 North	Multiple test sections to be hydrotested simultaneously.
1030	Multiple test sections to be hydrotested simultaneously.
2001 West	Each section is planned to be separately hydrotested.
2001 East	Multiple test sections to be hydrotested simultaneously.
2005	This project is a single test section.

Question 1b: If multiple test segments are to be pressure tested simultaneously, how many are expected to be pressure tested at the same time?

SoCalGas Response 1b:

As explained in response to Question 1a, each project is engineered and planned individually with an execution plan best suited for the conditions, elevation changes and testing parameters needed to accomplish the test. As summarized in the table provided in response to Question 1a, some projects may have multiple test segments filled and dried simultaneously while others may not. The table below summarizes the number of test sections to be pressure tested simultaneously for each project in the application:

Project Line Number	Response	
235 West Section 1	Varies, up to 4 segments simultaneously.	
235 West Section 2	Varies, up to 4 segments simultaneously.	
235 West Section 3	Up to 2 segments simultaneously.	
407	Not applicable.	
1011	Not applicable.	
2000 Chino Hills	Varies, up to 4 segments simultaneously.	
2000 Section E	Not applicable.	
2000 Blythe to Cactus City	Varies, up to 3 segments simultaneously.	
2001 W Section C	Not applicable.	
2001 W Section D	Not applicable.	
2001 W Section E	Not applicable.	
225 North	Varies, up to 2 segments simultaneously.	
1030	Varies, up to 4 segments simultaneously.	
2001 West	Not applicable.	
2001 East	Varies, up to 4 segments simultaneously.	
2005	Not applicable.	

Question 1c: Is the water used in the hydrotest for one test segment expected to be used in a hydrotest for another test segment?

SoCalGas Response 1c:

Yes, when it is practical to do so, is feasible from a constructability perspective (*e.g.*, elevation change) and when the tested water is anticipated to continue to meet water quality standards for the next adjacent test section.

Question 1d: If the answer to the previous question is "no," please explain why the water cannot be used to pressure test more than one test segment before it is disposed of.

SoCalGas Response 1d: Not applicable.

Question 1e: If the water is to be used in the hydrotest for more than one test segment, is there a limit to how many test segments can be tested with the water before it must be disposed of?

SoCalGas Response 1e:

Yes, and that limit will vary widely depending on project-specific conditions, including the water source, pipeline parameters and environmental conditions. For the above projects, it was assumed the water could be reused if the project contains multiple test sections. Quality testing of the water prior to filling a test section and further testing after each hydrotest will determine whether the water will be reused, treated and reused, or disposed of.

Question 1f: If the answer to the previous question is "yes," please state the limit in numerical terms or define the parameters that would establish the limit.

SoCalGas Response 1f:

See response to Question 1e above.

Question 1g: Which category listed above does the cost of purchasing the water for hydrotesting fall into?

SoCalGas Response 1g:

The cost of the water purchase is not included in any of the categories listed in the response to Question 1a above. They are included in the construction contractor cost category.

Question 1h: Which category does the cost of water disposal fall into?

SoCalGas Response 1h.

Disposal costs, including transportation, are in the Environmental - Hazardous Material category.

Question 1i: What is the cost of purchasing the water including transportation for pressure testing?

SoCalGas Response 1i:

Water Costs are estimated at \$.001/gal.

The estimated transportation cost associated with water used in hydrotesting is based on a Union.

Driver rate of \$30.62/hour and a Water Truck rate of \$24.084/hour to deliver water to the job site.

These above rates were used to estimate the cost for each project provided in the table below:

Project Line Number	Response
235 West Section 1	\$272,510
235 West Section 2	\$291,350
235 West Section 3	\$191,905
407	\$120,089
1011	\$10,251
2000 Chino Hills	\$44,020
2000 Section E	\$551,336
2000 Blythe to Cactus City	\$908,690
2001 W Section C	\$82,734
2001 W Section D	\$265,297
2001 W Section E	\$555,456
225 North	\$106,303
1030	\$265,310
2001 West	\$195,473
2001 East	\$658,550
2005	\$10,004

Question 1j: What is the cost of disposing of the water including transportation?

SoCalGas Response 1j:

The estimated cost of disposing of the water, including transportation from the job site, for each project is provided in the following table:

Project Line Number	Response
235 West Section 1	\$571,500
235 West Section 2	\$619,500
235 West Section 3	\$529,580
407	\$265,595
1011	\$26,645
2000 Chino Hills	\$602,202
2000 Section E	\$1,053,576
2000 Blythe to Cactus City	\$2,307,095
2001 W Section C	\$1,532,489
2001 W Section D	\$776,510
2001 W Section E	\$1,053,576
225 North	\$197,350
1030	\$828,900
2001 West	\$419,357
2001 East	\$1,106,620
2005	\$22,685

Question 1k: On row 12 of the tab, there is a category entitled "Abatement Days" which presents a calculation for the number of days.

- i. What is the daily cost for abatement?
- ii. Please describe fully what labor and nonlabor factors (*e.g.*, number of FTE, number of vehicles, *etc.*) that are assumed to be required for the abatement activity.

SoCalGas Response 1k:

Project Line Number	Response	Response	
235 West Section 1	\$3,530/day	3 abatement contractors and 1 industrial hygienist 11-hours per day (5.5 FTE for 252 days), 2 vehicles, per diem for 4, consumables	
235 West Section 2	\$3,532/day	3 abatement contractors and 1 industrial hygienist 11-hours per day (5.5 FTE for 136 days), 2 vehicles, per diem for 4, consumables	
235 West Section 3	\$3,559/day	3 abatement contractors and 1 industrial hygienist 11-hours per day (5.5 FTE for 49 days), 2 vehicles, per diem for 4, consumables	
407	\$3,499/day	3 abatement contractors and 1 industrial hygienist 10-hours per day (5 FTE for 8 days), 1 vehicle, per diem for 4, consumables	
1011	\$3,315/day	3 abatement contractors and 1 industrial hygienist 10-hours per day (5 FTE for 13 days), 2 vehicles, per diem for 4, consumables	
2000 Chino Hills	\$3,289/day	3 abatement contractors and 1 industrial hygienist 10-hours per day (5 FTE for 186 days), 2 vehicles, per diem for 4, consumables	
2000 Section E	\$7,765/day	6 abatement contractors and 2 industrial hygienist 12-hours per day (12 FTE for 28 days), 4 vehicles, per diem for 8, consumables	
2000 Blythe to Cactus City	\$3,800/day	3,800/day 3 abatement contractors and 1 industrial hygienist 12-hours per day (6 FTE for 224 days), 2 vehicles, per diem for 4, consumables	
2001 W Section C	\$7,797/day	6 abatement contractors and 2 industrial hygienist 12-hours per day (12 FTE for 24 days), 4 vehicles, per diem for 8, consumables	
2001 W Section D	\$7,853/day	6 abatement contractors and 2 industrial hygienist 12-hours per day (12 FTE for 52 days), 4 vehicles, per diem for 8, consumables	
2001 W Section E	\$7,765/day	7,765/day 6 abatement contractors and 2 industrial hygienist 12-hours per day (12 FTE for 28 days), 4 vehicles, per diem for 8, consumables	
225 North	\$3,406/day	3 abatement contractors and 1 industrial hygienist 10-hours per day (5 FTE for 24 days), 2 vehicles, per diem for 4, consumables	
1030	\$4,372/day	ay 3 abatement contractors and 1 industrial hygienist 12-hours per day (6 FTE for 100 days), 2 vehicles, per diem for 4, consumables	
2001 West	\$3,894/day	3 abatement contractors and 1 industrial hygienist 12-hours per day (6 FTE for 26 days), 2 vehicles, per diem for 4, consumables	
2001 East	\$3,794/day	3 abatement contractors and 1 industrial hygienist 12-hours per day (6 FTE for 60 days), 2 vehicles, per diem for 4, consumables	
2005	\$3,651/day	3 abatement contractors and 1 industrial hygienist 11-hours per day (5.5 FTE for 22 days), 2 vehicles, per diem for 4, consumables	

2. Regarding the confidential workpapers that were provided in response to TURN/SCGC-SEU-001, Q.1, please answer the following questions for each of the pressure test projects discussed on pages WP-I-A1-A150.:

Question 2a: The workpapers corresponding to the water treatment and hazardous materials section for each project (see for example page 45) refer to disposal of "pigs used to dry the pipeline post hydrostatic testing."

- i. Is the pig disposed of after each test segment is completed or is the pig used to dry more than one test segment?
- ii. If the pig is used to dry more than one test segment, please state how many test segments the pig is used to dry.
- iii. If the pig is used to dry only one test segment, please explain why it is only allowed to dry one test segment.
- iv. Please provide the cost of the pig that is used to dry the pipeline post hydrostatic testing.

SoCalGas Response 2ai:

The pig is disposed of after each test segment is completed.

SoCalGas Response 2aii:

Not applicable.

SoCalGas Response 2aiii:

Foam pigs are designed for one-time use only.

SoCalGas Response 2aiv:

The cost of consumables (including drying pigs) are included in the overall hydrotesting contracting cost and are not separately itemized.

Question 2b: Please explain in detail, how SoCalGas determined the number and nature of the environmental documents that it states in the workpapers to SCG-15 (see for example page 44) must be prepared.

SoCalGas Response 2b:

Environmental documentation requirements are required based on the unique conditions of each project, applicable regulations, agency jurisdiction, and SoCalGas internal procedures. For example, the Line 235 West Section 1 Hydrotest Project is subject to a Storm Water Pollution Prevention Plan and Notice of Intent per the Construction General Permit, which is administered by the State Water Resources Control Board due to the total construction area exceeding one acre. The project is within the Mojave Desert Air Quality Management District which regulates fugitive dust on construction projects. Therefore, a dust control plan is required for this project. The project is also located on property managed by the Bureau of Land Management, which must comply with the National Historic Preservation Act of 1966 and will require a Class III cultural resources survey report. Finally, the Worker Environmental Awareness Procedure document is an internal, Company document that is utilized on projects to ensure project personnel are aware of the unique, project-specific environmental conditions and requirements of the project.

Question 2c: Please explain in detail, how SoCalGas determined the number and nature of the preconstruction surveys that it states in the workpapers to SCG-15 (see for example page 44) must be prepared.

SoCalGas Response 2c:

Environmental preconstruction surveys are determined based on the unique conditions of each project, applicable regulations, agency jurisdictions, and SoCalGas internal procedures.

For example, Line 235 West Section 1 Hydrotest Project is subject to the Migratory Bird Treaty Act, which requires preconstruction habitat and impact assessments and nesting bird surveys to ensure compliance with the regulation. Preconstruction delineation is required to determine if any waters are subject to United States Army Corps of Engineers jurisdiction, which requires permits for impacts to those waters. SoCalGas has an existing Biological Opinion administered by the United States Fish and Wildlife Service and Bureau of Land Management which requires preconstruction surveys for sensitive wildlife species. The Bureau of Land Management requires cultural surveys before projects that are located within their jurisdiction are approved. See response to question 2b above regarding the National Historic Preservation Act.

Question 2d: Please explain in detail, how SoCalGas determined the number and nature of the construction monitors that it states in the workpapers to SCG-15 (see for example page 45) must be present.

SoCalGas Response 2d:

The number of environmental construction monitors is determined based on the unique conditions of the project, applicable regulations, agency permits, and internal procedures.

For example, to comply with the Biological Opinion administered by the United States Fish and Wildlife Service and Bureau of Land Management and not have "take" of a listed species, each construction crew for Line 235 West Section 1 Hydrotest Project is required to have two biological monitors at all time.

As defined by the United States Fish and Wildlife Service, the term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Other permits on this project such as the Storm Water Pollution Prevention Plan and Dust Control Plan require, at a minimum one additional environmental monitor for each of these permits.

Question 2e: Please explain in detail how SoCalGas has determined the number of hours of environmental contract services labor that it has stated are required in the workpapers to SCG-15 (see for example page 44).

SoCalGas Response 2e:

The number of hours of environmental contract services were determined based on the unique conditions of the project, applicable document preparation and project management tasks, preconstruction surveys, construction monitoring, project closeout activities, and the associated level of effort estimated to complete the above activities.

3. Regarding the confidential workpapers that were provided in response to TURN/SCGC-SEU-001, Q.1, please answer the following questions for each of the replacement projects discussed on pages WP-III-A1-A118.:

Question 3a: How has SoCalGas determined the amount of contaminated soil that it states in the workpapers to SCG-15 (see for example page 198) must be removed.

SoCalGas Response 3a:

The unique conditions of each project, field experience of SoCalGas environmental and construction subject matter experts (SMEs) and the scope of planned excavation activities are considered in the evaluation.

An evaluation of hazardous material regulatory data, including leaking underground storage tank cleanup, other cleanup program sites, hazardous waste facilities, military, and land disposal sites tracked through State Water Resources Control Board GeoTracker was conducted. A database search was also conducted for cleanup sites tracked through the California Department of Toxic Substance Control EnviroStor website using the same methods.

For example, the Line 85 Elk Hills to Lake Station replacement segment has petroleum lines that intersect and parallel the project. As a result, contamination is assumed along 10% of the Line 85 alignment.

Question 3b: The workpapers corresponding to the water treatment and hazardous materials section for each project (see for example page 198) refer to disposal of "pigs used to dry the pipeline post hydrostatic testing."

- i. Is the pig disposed of after each test segment is completed or is the pig used to dry more than one test segment?
- ii. If the pig is used to dry more than one test segment, please state how many test segments the pig is used to dry.
- iii. If the pig is used to dry only one test segment, please explain why it is only allowed to dry one test segment.
- iv. Please provide the cost of the pig that is used to dry the pipeline post hydrostatic testing.

SoCalGas Response 3bi:

The pig is disposed of after each test segment is completed.

SoCalGas Response 3bii:

Not applicable.

SoCalGas Response 3biii:

Foam pigs are designed for one-time use only.

SoCalGas Response 3biv:

The cost of consumables (including drying pigs) is included in the overall hydrotesting contracting cost and is not separately itemized.

Question 3c: Please explain in detail, how SoCalGas determined the number and nature of the environmental documents that it states in the workpapers to SCG-15 (see for example page 198) must be prepared.

SoCalGas Response 3c:

Environmental documents are determined to be applicable based on applicable regulations, agency jurisdiction, and/or internal procedures (see example in response to Question 2.b.).

Question 3d: Please explain in detail, how SoCalGas determined the number and nature of the preconstruction surveys that it states in the workpapers to SCG-15 (see for example page 198) must be prepared.

SoCalGas Response 3d:

See the response to Question 2c above.

Question 3e: Please explain in detail, how SoCalGas determined the number and nature of the construction monitors that it states in the workpapers to SCG-15 (see for example page 45) must be present.

SoCalGas Response 3e:

See the response to Question 2d above.

Question 3f: Please explain in detail how SoCalGas has determined the number of hours of environmental contract services labor that it has stated are required in the workpapers to SCG-15 (see for example page 197).

SoCalGas Response 3f:

See the response to Question 2e above.

4. For each of the Excel workbooks that were provided in response to TURN/SCGC-SEU-001, Q.2.c. and Q.3.c. and noting that each of the workbooks has a tab labeled "Risk Detail:"

Question 4a: Please explain the basis for the calculation of the value in column E, which is labeled the "mean cost" for each category specified?

SoCalGas Response 4a

The "Mean" figure in column E is the final output from a Monte Carlo project simulation. The process to determine the "mean" figure requires the project team, stakeholders and estimator to develop a "Min" (low case) and "Max" (high case) for each cost category. The "Min" and "Max" are determined based on the project attributes (scope, productivity, pricing and/or duration) pertinent to each cost category. Once the "Min" and "Max" are determined, the simulation is run and the resulting "Mean" value is used as the most likely cost. Project attributes by cost categories.

As an illustrative example: for a Replacement project, a key driver of costs is the estimated "productivity rate," expressed in feet per day of pipe installed. To determine this figure, the project team reviews soil conditions, working hours allowed by the permitting authorities, the number of substructures, and other major drivers for construction crew productivity. A single "most likely" figure is then determined (*e.g.*, 1,000 feet/day).

The project team then considers, based on experience, what conditions may negatively impact the scope, productivity, pricing and/or duration of activities for each cost category (*e.g.*, difficult soil conditions, unexpected substructures, shorter daily permit conditions, unidentified utilities, etc.). This is expressed as a percentage increase.

A similar exercise is performed to evaluate conditions that may positively impact the scope, productivity, pricing and/or duration of activities for each cost category. This is expressed as a percentage reduction.

Question 4b: How is the mean cost calculated for each of the categories listed in the table?

SoCalGas Response 4b:

See response to question 4a above.

Question 4c: Is the mean cost calculated from the provision percentage that is listed in column G or is the provision percentage calculated from the estimated cost and mean cost that are listed for each category in columns D and E?

SoCalGas Response 4c:

The mean is calculated by the Monte Carlo simulation described in response to question 4a.

Question 4d: Is a standard provision percentage used for each category?

SoCalGas Response 4d:

No. See the response to 4a.

4e: If the answer to the previous question is "yes," please explain how the standard provision percentage is calculated.

SoCalGas Response 4e:

Not applicable.

Question 5: With respect to the response to TURN-SCGC-003, Q.23, for each of the projects, please provide the contract cost and number of hours associated with environmental work.

SoCalGas Response 5:

SoCalGas and SDG&E cannot provide a breakout of contract labor hours because some PSEP contracts were invoiced on a time and materials basis while others were bid and invoiced for a discrete scope of work. Because some contractor invoices bill for time, it would be overly burdensome to review the thousands of invoices to estimate the portion of those costs that might be attributed solely to environmental work. Moreover, the result would be an estimate that cannot be readily validated as accurate. To the extent this request calls for such an overly burdensome review, SoCalGas objects under Rule 10.1 of the Commission's Rules of Practice and Procedure. Subject to and without waiving that objection, SoCalGas responds as follows:

Project	Environmental Cost
Line 1005	\$280,299
Line 1011	\$114,615
Line 1013	\$121,632
Line 1014	\$11,605
Line 1015	\$184,995
Line 2000W	\$2,528,628
Line 2001W-A	\$38,271
Line 2001 W-B	\$1,285,385
Line 2003	\$330,270
Line 235 W Sawtooth	\$109,623
Canyon	
Line 33-120 Section 2	\$240,290
Line 35-20-N	\$13,667
Line 36-37	\$38,396
Line 36-9-09N 2b	\$444,690
Line 36-9-09N 6a	\$148,809
Line 36-1032	\$697,271
Line 38-539	\$489,349
Line 406	\$723,088
Line 407	\$976,368
Line 45-120 S1	\$145,947
Line 45-120XO1	\$33,132

Question 6: With respect to the response to TURN-SCGC-003, Q.24, for each of the projects, please provide the contract cost and number of hours associated with environmental work.

SoCalGas Response 6:

SoCalGas and SDG&E cannot provide a breakout of contract labor hours because some PSEP contracts were invoiced on a time and materials basis while others were bid and invoiced for a discrete scope of work. Because some contractor invoices bill for time, it would be overly burdensome to review the thousands of invoices to estimate the portion of those costs that might be attributed solely to environmental work. Moreover, the result would be an estimate that cannot be readily validated as accurate. To the extent this request calls for such an overly burdensome review, SoCalGas objects under Rule 10.1 of the Commission's Rules of Practice and Procedure. Subject to and without waiving that objection, SoCalGas responds as follows:

Project	Environmental Cost
Line 42-66-1/42-66-2	\$46,387
Line 2000-A	\$2,393,710
Playa Del Rey Phases 1-2	\$0