

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-21)
Date Requested: July 21, 2016
Date Responded: August 5, 2016**

PRELIMINARY STATEMENT

1. These responses and objections are made without prejudice to, and are not a waiver of, SDG&E and SoCalGas' right to rely on other facts or documents in these proceedings.
2. By making the accompanying responses and objections to these requests for data, SDG&E and SoCalGas does not waive, and hereby expressly reserves, its right to assert any and all objections as to the admissibility of such responses into evidence in this action, or in any other proceedings, on any and all grounds including, but not limited to, competency, relevancy, materiality, and privilege. Further, SDG&E and SoCalGas makes the responses and objections herein without in any way implying that it considers the requests, and responses to the requests, to be relevant or material to the subject matter of this action.
3. SDG&E and SoCalGas will produce responses only to the extent that such response is based upon personal knowledge or documents in the possession, custody, or control of SDG&E and SoCalGas. SDG&E and SoCalGas possession, custody, or control does not include any constructive possession that may be conferred by SDG&E or SoCalGas' right or power to compel the production of documents or information from third parties or to request their production from other divisions of the Commission.
4. A response stating an objection shall not be deemed or construed that there are, in fact, responsive information or documents which may be applicable to the data request, or that SDG&E and SoCalGas acquiesces in the characterization of the premise, conduct or activities contained in the data request, or definitions and/or instructions applicable to the data request.
5. SDG&E and SoCalGas objects to the production of documents or information protected by the attorney-client communication privilege or the attorney work product doctrine.
6. SDG&E and SoCalGas expressly reserve the right to supplement, clarify, revise, or correct any or all of the responses and objections herein, and to assert additional objections or privileges, in one or more subsequent supplemental response(s).
7. SDG&E and SoCalGas will make available for inspection at their offices any responsive documents. Alternatively, SDG&E and SoCalGas will produce copies of the documents. SDG&E and SoCalGas will Bates-number such documents only if SDG&E and SoCalGas deem it necessary to ensure proper identification of the source of such documents.
8. Publicly available information and documents including, but not limited to, newspaper clippings, court papers, and materials available on the Internet, will not be produced.

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9. SDG&E and SoCalGas object to any assertion that the data requests are continuing in nature and will respond only upon the information and documents available after a reasonably diligent search on the date of its responses. However, SDG&E and SoCalGas will supplement its answers to include information acquired after serving its responses to the Data Requests if it obtains information upon the basis of which it learns that its response was incorrect or incomplete when made.
10. In accordance with the CPUC's Discovery: Custom And Practice Guidelines, SDG&E and SoCalGas will endeavor to respond to ORA's data requests by the identified response date or within 10 business days. If it cannot do so, it will so inform ORA.
11. SDG&E and SoCalGas object to any ORA contact of SDG&E and SoCalGas officers or employees, who are represented by counsel. ORA may seek to contact such persons only through counsel.
12. SDG&E and SoCalGas objects to ORA's instruction to send copies of responses to entities other than ORA.

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QUESTION 1:

In Attachment A PSRP, specifically Attachment XII at p. 2 of the above regarding the Moreno Compressor Station PSRP Report, the Report states “Emission and water fees and permitting were developed based on annual reports from 2012 to 2015.” The Report further states “The table below summarizes the data for emission and water fees and permitting. The data is averaged to get an annual cost for emission fees of approximately \$81K.” Table 2 of the Report shows a 4-year average indicated as “Total Fees” of \$80,968.

- a. Please confirm that “Total Fees” refer to the average annual cost for emission and water fees and permitting as described in the above quoted statement. If not, please clarify what “Total Fees” refer to.
- b. Please provide the titles of and copies of the “annual reports from 2012 to 2015” described in the above quoted statement. Are these annual reports submitted to the California PUC or the Air Resources Board or some other entity as official compliance submissions?
- c. Please clarify whether these fees are stated in nominal dollars.
- d. Please state whether the annual reports are publicly available documents.

RESPONSE 1:

- a. “Total Fees” refer to average annual costs for emissions and water permit fees.
- b. Summary 2015 Permit Costs report contains the total amounts paid for emission and water permitting fees from 2012 through 2015. These reports are internal reports and are not submitted to the Commission, California Air Resources Board or other entities as official compliance reports. Please see the attached report.
- c. Fees stated are in nominal dollars.
- d. The annual report, Summary 2015 Permit Costs is an internal report and not publicly available.

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QUESTION 2:

Continuing with Attachment XII at p. 2, the Report states “Actuals were obtained for both labor and non-labor costs for the operations and maintenance of Moreno from 2012 to 2015. These costs were averaged to get an annual cost for operations and maintenance.” Table 3 of the Report shows an overall 4-year average of \$2,613,907.

- a. Please identify and provide the documents from which the “actuals” referenced above were obtained.
- b. Please explain how the overall average amount of \$2,613,907 shown in Table 3 was calculated. Please confirm that the labor average is \$1,354,393; the non-labor average is \$1,475,385; and that both together would typically result in an overall average of \$2,829,778.
- c. Please confirm that the labor costs and non-labor costs developed from the O&M costs exclude fuel costs.
- d. Please confirm whether there are any other costs besides fuel costs that are included in the O&M cost category that would be considered variable, that is, vary as a function of the amount gas put through the transmission lines.
- e. Please clarify whether these O&M costs are stated in nominal dollars.

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RESPONSE 2:

- a. The “actuals” referenced were obtained from the historical recorded O&M expense for Moreno Station 2012 through 2015. Please refer to the attachment.
- b. In preparing the response to this question, SDG&E and SoCalGas discovered an inadvertent error in the overall average amount provided in Table 3. The correct overall average is \$2,829,778 and the table will be updated.
- c. Labor and non-labor costs developed from O&M costs exclude fuel costs.
- d. Fuel use, nitrous oxide (NOx) emission, and greenhouse gas (GHG) Cap & Trade credits can be considered “variable” costs but are more directly a function of engine operations not necessarily gas put through the transmission line. We estimated a decrease in non-labor O&M costs with a decrease in engine operations at Moreno Compressor station; however, there is no analysis that identifies non-labor O&M components that vary with engine/compressor operations. At a high level, non-labor O&M does not appear to vary as a function of engine operations. A comparison of non-labor O&M by year in Table 3 with fuel use by year in Table 4 does not show that O&M varied with fuel use / engine operations. The table below compares non-labor O&M and fuel usage by year.

| Year | 2012 | 2013 | 2014 | 2015 |
|---------------------|---------|---------|---------|---------|
| Non-labor O&M (\$k) | \$1,441 | \$1,541 | \$1,553 | \$1,367 |
| Fuel (dekatherms) | 664,860 | 522,234 | 254,395 | 336,091 |

- e. O&M costs are in nominal dollars

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QUESTION 3:

Continuing with Attachment XII at p.3, the Report states “Fuel usage at the compressor station for years 2012 – 2015 was provided to determine an annual fuel cost. Fuel usage was given in MMSCF (Million Standard Cubic Feet) and then converted to dekatherms. Based on the CMEGroup Globex Futures, the average price per dekatherm for the California border in 2021 will be \$3.23.” Table 4 of the Report shows a 4-year average of 444,395 dekatherms in fuel usage. The Report further states “Based on this price applied to the average annual fuel usage, an annual fuel cost of \$1.4M was developed.” In addition, the above subject Cost Effectiveness Analysis (CEA) includes fuel cost savings in Table 7 at p.31 of the CEA. The estimated annual cost savings result from assuming reduced operations at Moreno Compressor Station for the Proposed project.

- a. Please clarify whether the annual fuel usage for 2012-2015 stated in MMSCF and shown in Table 4 are based on historic recorded fuel usage for Moreno. If not, please explain what these fuel usage numbers given in MMSCF represent.
- b. Please describe the calculation conversion of MMSCF numbers into dekatherm numbers used.
- c. Please clarify whether the Moreno compressor station fuel is utilized to deliver interstate and intrastate gas supplies from the various receipt points to storage fields, local transmission or distribution system for delivery to end–use customers. If not, then please explain your response.
- d. SoCalGas’ Schedule G-BTS states “Customers transporting gas over the backbone transmission system shall deliver each day for each billing period at the receipt point an additional in-kind quantity of natural gas equal to a percent of the total quantity delivered at the receipt point.” Please explain whether this statement means that customers are responsible for providing an “in-kind quantity of natural gas” for purposes of transporting over the SoCalGas backbone transmission system. If not, then please explain your response.
- e. Based on your response to items (c) and (d) above, please explain whether the fuel usage at the compressor station should be appropriately treated as an avoided cost of SoCalGas and considered as part of annual savings related to the assumed reduced operations at Moreno compressor station.

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RESPONSE 3:

- a. Yes, this is the historic recorded fuel usage for Moreno.
- b. Convert millions of standard cubic feet (MMSCF) to British thermal units (BTU), then BTUs to decatherms

BTU = 1034 1 MMBTU equals 1 dekatherm or 1,000,000 BTUs= 1 Decatherm
Example: Table 4, 2012: 643 MMSCF*1034 BTU= 644,862,000,000 BTUs
644,862,000,000/1,000,000 = 644,860 Decatherms (approximately)

- c. The Moreno Compressor Station is part of the integrated SoCalGas/SDG&E backbone transmission system and accordingly contributes to providing all of the services associated with delivering gas through the backbone transmission system.

The Moreno Compressor Station fuel is used to power the Moreno gas compressors. The purpose of the Moreno Compressor Station is to increase the pressure of flowing gas supply from Transmission Lines 2000, 2001, and 5000 into Transmission Lines 6900, 1027 and 1028 that move gas south to the SDG&E system at Rainbow. The primary source of gas supply to Moreno is from the El Paso Natural Gas (EPNG) system at Ehrenberg and all of the gas moving south out of Moreno is transported through transmission and distribution mains for delivery to customers on the SoCalGas and SDG&E systems.

- d. Backbone Transportation Service (BTS) customers are responsible for providing an in-kind quantity of gas to cover SoCalGas and SDG&E transmission fuel requirements.
- e. Fuel usage at the Moreno Compressor Station is an avoided cost / cost savings for customers transporting gas and should be considered as part of annual savings related to the assumed reduced operations at Moreno Compressor Station.

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QUESTION 4:

Attachment XII at p. 3 states “Based on the average yearly NOx emissions from 2012 to 2015, an annual NOx emissions usage of 139,338 lbs. was determined.” The Attachment at p. 3 further states that SDG&E’s 2015/2016 initial allocation of 96,626 will decline yearly to 56,333 lbs by 2022. Table 5 shows an estimated average amount of total NOx emissions of 139,338 lbs. Further, an average cost of \$14 per lb. is forecasted and this results in an annual cost of \$1.16 M for NOx RECLAIM credit purchases.

- a. Please confirm that the \$1.16 M estimated annual cost is based on the assumption of 83,000 lbs of NOx credits to be purchased, a beginning allocation of 56,333 lbs. and the \$14 per lb forecast.
- b. Please explain the situations under which the annual NOx emissions usage could differ from those assumed in Attachment XII.
- c. Have the Applicants done any sensitivity test for different levels of annual NOx emissions usage and/or estimated average cost per lb. that would be different from those assumed above? If so, please provide the sensitivity test including results and any change in assumptions tested. If not, please explain the reason for not doing a sensitivity test.

RESPONSE 4:

- a. The \$1.16M is the estimated average annual cost of NOx purchased based on the assumption of 83,000 lbs. of NOx credits would be purchased, given a beginning allocation of 56,333 lbs. and a \$14 per lb forecast price.
- b. NOx emissions are produced by engine combustion and will vary with hours of engine operations and which engines operate. As can be seen in comparing fuel usage in Table 4 and NOx emissions in Table 5, NOx emissions rise and fall based on fuel usage / engine operations.
- c. No sensitivity tests were completed for different levels of annual NOx emissions usage and/or estimated average cost per pound. SDG&E/SoCalGas did not conduct a sensitivity analysis on annual NOx emissions and/or the estimate average cost per pound because emission reductions and cost savings at Moreno are additional benefits resulting from the Proposed Project and are not elements of the Proposed Project’s primary purpose and need.

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QUESTION 5:

Attachment XII at p. 5 states “The pricing used to determine annual costs for GHG emissions depends on the number of years considered for life of asset.” Three different yearly costs for each timeline (i.e., 20 years, 30 years, and 31+ years) were shown as well as three levelized prices of \$26, \$41, and \$52 for each timeline, respectively.

- a. Please explain which specific timeline (for example 31+ years) was assumed for purposes of the CEA study and confirm whether that specific timeline is the basis of all the assumptions for the CEA study.
- b. Please provide the discount rate used for purposes of the calculation of the levelized prices shown and state the basis that supports that assumption.

RESPONSE 5:

- a. Please see page 30 of the Cost-Effectiveness Analysis (CEA). This is based on 31+ year timeline.
- b. Please refer to the Prepared Direct Testimony of Neil Navin, Attachment A, Attachment XII reference 2. SDG&E and SoCalGas utilized the referenced levelized prices from a third party report, Synapse’s 2015 Carbon Dioxide Price Forecast dated March 3, 2015.

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QUESTION 6:

Attachment XII at p. 6 provides Table 7 showing Annual Capital Spend for Moreno and states that the capital spending was based on “annual reports” from 2011 to 2015.

- a. Please provide the “annual reports” referenced in the question. Please fully describe the referenced “annual reports”, including the purpose of the annual reports, who prepares them and the entity who receives these annual reports.
- b. Please clarify whether these capital spending costs are stated in nominal dollars.

RESPONSE 6:

- a. The report on annual capital spending is attached. This report is prepared by SoCalGas and SDG&E personnel familiar with the subject matter for internal purposes, as well as providing input to the Moreno Compressor Station PSRP Report.
- b. Capital spending costs are stated in nominal dollars.

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(DATA REQUEST ORA-21)
Date Requested: July 21, 2016
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QUESTION 7:

In order to answer this next set of questions, please bear in mind the following three references to SoCalGas/SDG&E materials.

Reference 1: In Response to ORA-16 Question 1, Sempra states that:

A further benefit of the Proposed Project that is referenced in the Application is the reduced need for operating the Moreno Compressor Station if the Proposed Project (or certain other Alternatives) is constructed. Reducing operations at the Moreno Compressor Station results in lower nitrogen oxide and greenhouse gas emissions

Reference 2: Attachment XII at p. 6 provides Table 8 and states, “based on the determination that the Proposed Project will allow a reduction in Moreno operations by either 80%, the “low case” or 95%, the “high case.”

Reference 3: Table 8 shows a box chart for “% of Compressor Station Operation Reduction” for the low case and high case for the 36” line. As further explained in Attachment XII to explain Table 8, “Under the Proposed Project, the Moreno Station would then function minimally as a safeguard to serve SDG&E’s service territory during extreme or unplanned capacity interruption scenarios.”

- a. Please fully explain the meaning of “reduced need for operating the Moreno Compressor Station,” whether this means operating Moreno at lesser number of hours, or reducing some other operating parameter for Moreno and the pipeline, or something else.
- b. Please explain the underlying operating assumptions that served as basis of the determination that would allow an 80% reduction in Moreno operations.
- c. Please explain the underlying operating assumptions that served as basis of the determination that would allow a 95% reduction in Moreno operations.
- d. Between the high case and the low case, please clarify which case was used for purposes of the CEA study and state those reasons that support its selection for the CEA.
- e. Would the reduction in Moreno operations described above occur only if the Proposed Project became operational?
- f. If not, would the reduction in Moreno operations described occur if any of the other alternative projects identified in the PEA or CEA became operational? If so, which ones?
- g. Please fully explain the meaning of the descriptive statement above, which states: “the Moreno Station would then function minimally as a safeguard to serve SDG&E’s service territory during extreme or unplanned capacity interruption scenarios.” Please describe what functioning minimally would assume.
- h. Please explain whether the 80% or 95% reduction in Moreno Station operations means the same thing as the words, “function minimally”, in the above statement.

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(DATA REQUEST ORA-21)**

**Date Requested: July 21, 2016
Date Responded: August 5, 2016**

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- i. Please clarify whether the Applicants need to assume the occurrence of an extreme or unplanned capacity interruption scenarios in order for the Moreno Station to “function minimally” or is it automatically the case that the Moreno Station would “function minimally” when the Proposed Project gets built regardless of the occurrence of an extreme or unplanned capacity interruption.

RESPONSE 7:

- a. Construction of the proposed 36-inch pipeline will result in increased capacity and improved flow characteristics of the transmission system lessening the need to run the Moreno Compressor Station. “Reduced need for operating the Moreno Compressor Station,” means the compressors will not be required to operate at current levels (2012-2015).
- b. Construction of the proposed 36-inch pipeline will result in increased capacity and improved flow characteristics of the transmission system lessening the need to run the Moreno Compressor Station. Operational experience and professional judgement were used to determine the 80% reduction in operations, a low case for reduced operation at Moreno Compression Station.
- c. Construction of the proposed 36-inch pipeline will result in increased capacity and improved flow characteristics of the transmission system lessening the need to run the Moreno Compressor Station. Operational experience and professional judgement were used to determine the 95% reduction in operations, a high case for reduced operation at Moreno Compression Station.
- d. The high case was used for the purposes of the CEA. Operational experience and professional judgement were used to determine the potential reduction in operations at Moreno ranging from 80% to 95% that could result from the construction of the proposed 36-inch pipeline. Construction of the proposed project would result in increased capacity and improved flow characteristics of the transmission system that would decrease the need to run the Moreno Compressor Station. SDG&E and SoCalGas would expect a variation in the reduction in operations from year to year, however, over multiple years, SDG&E and SoCalGas would expect that potential issues that could arise, such as system constraints related to third party damages, pipeline outages and other routine maintenance, would result in the higher case (95% reduction in Moreno use), given current system requirements.
- e. A reduction in Moreno operations described above occurs when the Proposed Project becomes operational.

**SAN DIEGO GAS & ELECTRIC COMPANY
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PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)**

(A.15-09-013)

(DATA REQUEST ORA-21)

Date Requested: July 21, 2016

Date Responded: August 5, 2016

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- f. Reductions in Moreno operations described would also occur in differing degrees if other alternative projects identified in the Proponent's Environmental Assessment (PEA) or CEA became operational, including: CEA Alternatives C4 through C7, E/F, I, J1 through J3, and K and PEA Alternatives in Chapter 5, Table 5-1 excluding the No Project Alternative.
 - g. The Moreno Compressor Station would be operated as necessary to ensure the downstream pipeline system pressures and flow are optimized to serve downstream customer demands including providing SDG&E the ability to meet rapid changes in customer gas demands. Compression operations would also still be needed during times where system constraints related to third-party damages, pipeline outages, and other routine maintenance warrants it.
 - h. Inclusive and in the context of the responses to 7.a. and 7.c. above; yes.
 - i. As explained in the response to 7.a. and 7.g. above, the Moreno Compressor Station would be operated as necessary to ensure the downstream pipeline system pressures and flow are optimized to serve downstream customer demands including providing SDG&E the ability to meet rapid changes in customer gas demands. Compression operations would also still be needed during times where system constraints related to third-party damages, pipeline outages, and other routine maintenance warrants it. Included with this, the Moreno Station will operate as a safe guard when the Proposed Project gets built in the event of an occurrence of an extreme or unplanned capacity interruption.

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(DATA REQUEST ORA-21)
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QUESTION 8:

Continuing with the cost savings of reduced operations of the Compressor Station, Attachment XII at p.7 states "It is assumed that the following cost segments have a direct relationship to the level (by percentage) of compressor station operations: Fuel, NOx Purchases & Sales, and GHG Cap & Trade Costs." An example is provided: "If the compressor station will need to run at 20% of its typical usage due to an unplanned capacity interruption, the annual costs for the above 3 cost segments will be reduced by 80%. . . .The other costs either remain unchanged or have been reduced based on recommendations made by Operations' engineering judgment: Emission Fees, O&M Labor, O&M Non-Labor, and Capital Spending."

Specifically, Attachment XII at p. 7 states that it is assumed that:

- annual costs for emission fees/permitting will remain unchanged due to the need of maintaining permitting for the Compressor Station;
- labor costs will remain unchanged due to the need for the station to be maintained as required to meet permitting and compliance requirements independent of hours of operation per year (where the station must be in a constant state of readiness and immediately operable; and
- non-Labor costs will be reduced by \$300,000 (or 20% of annual cost average)

According to Attachment XII at p.7, the O&M labor cost is \$1,354,393, while the O&M Non-Labor cost is given as \$1,180,308.

- a. Please describe what is described to be a "typical usage" in the above statement.
- b. Based on the above example of running at 20% of "typical usage" and a corresponding 80% reduction in the above 3 cost segments, then please provide the full range of assumed reductions in the above 3 cost segments corresponding to different levels of compressor station operations such as 10%, 30%, 40%, 50%, 60%, 70%, 80%, and 90% of typical usage.
- c. Please explain why it would be reasonable to assume that labor costs remain unchanged when the Compressor Station has reduced operations. Does this mean no change in manhours despite reduced operations at the Compressor Station?
- d. Please explain how your response to item (c) above would be consistent with the Moreno Station functioning minimally under the Proposed Project.
- e. Please provide the basis for the \$300,000 reduction in non-Labor costs.
- f. As described above, on page 7, of Attachment XII, O&M labor cost is given as \$1,354,393 while the O&M Non-Labor cost is given as \$1,180,308. However, on page 2 of Attachment XII, the average O&M Labor cost is given as \$1,354,393 while the O&M non-Labor cost is given as \$1,475,385. Please explain the reason for the difference in the stated O&M non-Labor costs.

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RESPONSE 8:

- a. "Typical usage" in the above statement refers to the average annual operations based on 2012 through 2015.
- b. The reductions in the above 3 cost segments corresponding to different levels of compressor station operations such as 10%, 30%, 40%, 50%, 60%, 70%, 80%, and 90% of typical usage is as follows:
- Annual costs for emission and water permit fees remain unchanged.
 - Labor costs remain unchanged.
 - Non Labor costs: Cost savings would range from \$300K at 10% of compressor station operations to no savings at 90% of compressor station operations. As stated in response 2 d. above, SDG&E and SoCalGas estimated a decrease in non-labor O&M costs with a decrease in engine operations at Moreno Compressor Station; however, there is no analysis that identifies non-labor O&M components that vary with engine/compressor operations.
- c. SDG&E and SoCalGas must maintain the station in a ready state to be able to come on-line in the event of an occurrence of an extreme, unplanned capacity interruption or to meet rapid changes in customer gas demands. The Moreno Compressor Station consists of sophisticated engines, compressors, emission systems, control systems and axillary equipment and facilities. The compressor station equipment requires SDG&E to maintain highly trained and specialized personnel that cannot be found on short notice or skill levels maintained on a part time basis in other operating areas of SDG&E.
- As set forth in the historical labor costs in the Prepared Direct Testimony of Neil Navin, Attachment XII, Table 3, labor cost did not vary from year to year even though compression requirements as identified by fuel usage and emissions did fluctuate.
- d. See response 8 c.
- e. Operational experience and professional judgement was used to determine a 20% reduction (approximately \$300,000) per year in non-labor O&M costs at Moreno Compressor Station however, as stated in response 2 d. above, there is no analysis that identifies non-labor O&M components that vary with engine/compressor operations. At a high level, non-labor O&M does not appear to vary as a function of engine operations.
- f. The Non-Labor \$1,180,308 and labor \$1,354,393 figures stated on page 8 are the projected O&M costs upon completion of the Proposed Project. The non-labor O&M figure is the projected average annual non-labor O&M requirement for Moreno Compressor Station and reflects a 20% (approximately \$300K annual savings) decrease from historic average annual non-labor O&M of \$1,475,285 identified in Table 3 on page 3.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
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QUESTION 9:

Attachment XII on page 7 states, “It is expected that fuel use and costs will have a direct relationship to the percentage of reduction in operations. For 95% reduction in operations, fuel will have an annual cost of \$72K (or 5% of annual average cost) and for 80% reduction in operations, fuel will have an annual cost of \$287K (or 20% of annual average cost).”

- a. Please clarify whether the “95% reduction in operations” refers to a 95% reduction in operating hours for Moreno, or reducing some other operating parameter for Moreno such that Moreno is running at 5% of typical usage.
- b. Similar to item (a) above, please clarify the 80% reduction in operations.
- c. Please confirm that the given \$72K and \$287K annual fuel cost are based on the assumed \$3.23 average price per dekatherm for the California border in 2021 and the annual average dekatherms of 444,495 provided on page 3 of Attachment XII. If this is not the case, please provide the price per dekatherm and annual amount of dekatherms assumed to come up with these numbers, and explain the basis for these prices and amounts.

RESPONSE 9:

- a. “95% reduction in operations” refers to a 95% reduction in average engine/compressor operations (2012-2015) for Moreno Compressor Station.
- b. The 80% reduction in operations refers to an 80% reduction in average engine/compressor operations (2012-2015) for Moreno Compressor Station.
- c. The \$72K and \$287K annual fuel cost estimates in Table 9 are based on the assumed \$3.23 average price per dekatherm for the California border in 2021 and 95% reduction and 80% reduction respectively of the annual average fuel use in dekatherms of 444,495 provided on page 3 of Attachment XII.

**SAN DIEGO GAS & ELECTRIC COMPANY
SOUTHERN CALIFORNIA GAS COMPANY
PIPELINE SAFETY & RELIABILITY PROJECT (PSRP)
(A.15-09-013)
(DATA REQUEST ORA-21)
Date Requested: July 21, 2016
Date Responded: August 5, 2016**

QUESTION 10:

Attachment XII on page 8 regarding NOx sales states “For 95% reduction in operations, approximately 7,000 lbs of NOx emissions will be used. That leaves a remainder of about 49,000 lbs of NOx emissions that can be sold (based on a beginning allocation of 56,333 lbs.) This results in approximately \$399K per year of NOx emission sales.”

- a. Please provide the basis for the assumed beginning allocation of 56,333 pounds.
- b. According to ORA’s calculations, 5% of 56,333 pounds = approximately 2,800 pounds of NOx emissions being used; not the 7,000 lbs of NOx emissions identified in the quote above. Please explain why a 95% reduction results in 7,000 pounds of NOx emissions; not 2,800.
- c. Please provide the source of information that prices NOx in order to support the calculation that NOx emissions sales would be approximately \$399K per year.

RESPONSE 10:

- a. Please refer to the attached SCAQMD letter: Reductions / Adjustments to Your NOx RECLAIM Trading Credit (RTC) Holdings form Compliance Years 2016 and Beyond that identifies the 56,333 pounds allocation.
- b. The average annual total NOx emissions for Moreno Compressor Station are 139,338 lbs as identified in Table 5 on page 4. A 95% reduction results in approximately 7,000 lbs of average annual emissions.

The 56,333 pounds are the 2021 allocation and not the average annual emissions.

- c. Average annual emissions calculated are 139,338 lbs. An 80% reduction results in 27,868 lbs of average annual emissions. The difference between allocation and emission is 28,465 lbs. The resulting cost, using \$14 per pound, is approximately \$399,000 in NOx emissions sales.