ORA DATA REQUEST
ORA-SCG-166-CL8
SOCALGAS 2019 GRC – A.17-10-008
SOCALGAS RESPONSE
DATE RECEIVED: JULY 2, 2018
DATE RESPONDED: JULY 10, 2018

Exhibit Reference: SCG-238
SCG Witness: Karen Chan
Subject: Working Cash

On page KCC-13 of Ex. SCG-238, SoCalGas provides an alternative recommendation for revenue lag of 43.50 days, based on a six-year linear regression. SoCalGas provides a graph with the corresponding data and trendline.

1. ORA has calculated the coefficient of determination, or R-squared value, of the linear regression of this trendline as 0.0146, indicating that 1.46% of the variation in the six historical revenue lags is explained by the linear regression. ORA's calculation is depicted below. Please confirm if SoCalGas agrees that this is the coefficient of determination (R-squared value) of the linear regression depicted in the graph on page KCC-13.

SOCALGAS Response 01:

SoCalGas confirms 0.0146 is the coefficient of determination (R-squared).

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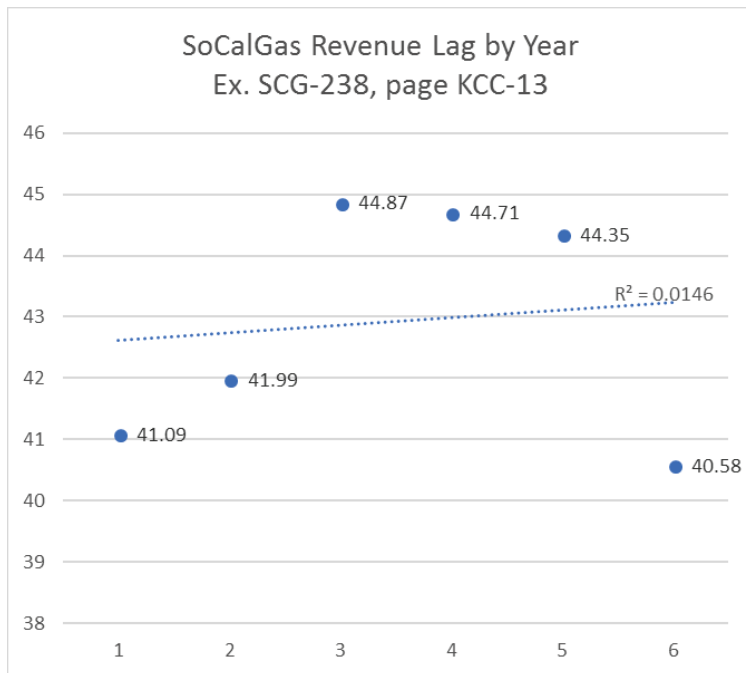**DATE RECEIVED: JULY 2, 2018**
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2. If SoCalGas does not agree that 0.0146 is the coefficient of determination, please provide the coefficient of determination as calculated by SoCalGas. Present and describe the calculation used to produce this value.

ORA's calculation of the coefficient of determination of SoCalGas's linear regression of its historical revenue lag days:

	x	y	xy	x^2	y^2
	1	41.09	41.09	1	1688.388
	2	41.99	83.98	4	1763.16
	3	44.87	134.61	9	2013.317
	4	44.71	178.84	16	1998.984
	5	44.35	221.75	25	1966.923
	6	40.58	243.48	36	1646.736
Sum	21	257.59	903.75	91	11077.51

$$Correlation = R = \frac{(6)(903.75) - (21)(257.59)}{\sqrt{[((6)(91) - 21^2)((6)(11077.51) - 257.59^2)]}} = 0.120655$$

$$Coefficient\ of\ Determination = R^2 = 0.120655^2 = 0.0146$$

SoCalGas Revenue Lag by Year
Ex. SCG-238, page KCC-13

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SOCALGAS Response 02:
Not applicable, see the answer to question 1 above.