

SAFETY POLICY DIVISION DATA REQUEST SPD-DR 012

SDG&E/SOCALGAS 2021 RAMP REPORTS- A.21-05-011/014

DATE RECEIVED: AUGUST 31, 2021

DATE RESPONDED: SEPTEMBER 3, 2021

Question 01:

Please provide a copy of the report by Integral Engineering that SoCalGas references as the source of the 3.3% value for the % Risk Addressed component of the RSE calculation for mitigation C01: Integrity Demonstration, Verification, and Monitoring Practices in the Storage Risk. Please reference tab “RSE Workpaper” in the workpaper “Final 2021 RSE Workpaper – SCG STOR – TURN DR8 Q2.7.xlsx”.

SDG&E and SoCalGas Response 01:

Attached to this data request reply is the applicable chapter from the referenced report by Integral Engineering.

Integral Engineering compiled underground storage industry failure data from publicly available sources. They were able to categorize the historical failures by system component and by threat category. In total, 92 historical failures were categorized as such. Isolating the incidents to well completions and wellheads, which are the system components assessed in the activities for the *Integrity Demonstration, Verification, and Monitoring Practices* mitigation, yields 19 failure incidents of the total 92. Further breaking down those 19 well completion and wellhead failures by threat category, 3 of the historical failures were caused by corrosion or equipment failure, which are threats addressed with the *Integrity Demonstration, Verification, and Monitoring Practices* mitigation. Therefore, using this dataset of historical failures in underground storage, 3 of the 92 incidents (or 3.3%) were failures of system components and caused by threats addressed in the *Integrity Demonstration, Verification, and Monitoring Practices* mitigation.

The three failure incident value was extracted as shown in the table below from data in the referenced Figures.

Fig 2: System Components	<i># of Incidents</i>	<i>% of Incidents</i>
Reservoir and Caprock	7	8%
Well Completions	13	14%
Wellhead	6	7%
General Facility	26	28%
Piping	37	40%
Unknown	3	3%
Total	92	

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Fig 7: Well Completion Incidents	<i># of Incidents</i>	<i>% of Incidents</i>
Corrosion	2	13%
Installation Defects	1	7%
Equipment Failure	1	7%
Well Intervention	2	13%
Incorrect Operations and Maintenance	1	7%
Weather & Outside Forces	3	20%
Unknown	3	33%
<i>Total</i>	<i>13</i>	
Fig 6: Wellhead Incidents	<i># of Incidents</i>	<i>% of Incidents</i>
Third Party Damage	1	16%
Well Intervention	1	17%
Incorrect Operations & Maintenance	1	17%
Weather & Outside Forces	1	33%
Unknown	2	17%
<i>Total</i>	<i>6</i>	
	3/92 = 3.3%	% Risk Addressed