1. Has Southern California Gas Company ("SCG") conducted any studies to evaluate the appropriateness, accuracy, cost or effectiveness of technologies to quantify the methane/natural gas leaking from its natural gas system? If so please provide an explanation and description of the study and appropriate documentation of what was done, and the costs associated with quantification of leaks.

SoCalGas Response:

SoCalGas routinely funds collaborative research development and demonstration projects related to methane/natural gas leak management technologies. Currently, SoCalGas is partnering on research programs on leak quantification technology that are under non-disclosure agreements. Current emissions quantification studies are being managed by NYSEARCH. Furthermore, SoCalGas has partnered with EDF and Washington State University on the recent distribution study that provided updated emission rates for meter and regulator stations as well as underground pipelines and tracer studies to validate the quantification technology and methods utilized in that study. Finally, SoCalGas has participated in the EDF Mapping Project and as part of that project is conducting a study to verify the accuracy of the relative sizing of EDF's quantification algorithm which will be shared with EDF once completed.

2. Has SCG actually implemented technologies to quantify the methane/natural gas leaking from individual components in its natural gas system? If so please provide an explanation and description of the technology and appropriate documentation of what was done, and the costs associated with quantification of leaks.

SoCalGas Response:

SoCalGas has implemented technologies to quantify the methane/natural gas leaking from individual components in its natural gas system, namely using high-flow samplers. However, SoCalGas as mentioned in our response to Question 1 continues to be engaged in collaborative research to develop methane quantification technologies. Also as stated in our response to EDF-SCG-DR-01 Question 2, "Plans to quantify emissions will be more clearly delineated once the CPUC adopts rules and procedures in Phase 2 of the Rulemaking 15-01-008, including requirements for quantification."

3. Has SCG hired or contracted with a third party to conduct studies or implement technologies to quantify the methane/natural gas leaking from individual components or pipes anywhere in the natural gas system? If so please provide an explanation and appropriate documentation of what was done and the costs associated with the technology and contacts.

SoCalGas Response:

Yes, SoCalGas has contracted with a third party to conduct leak survey studies as part of the annual mandatory Green House Gas reporting as required by Subpart W. Note that Subpart W requirements only apply to specific facilities in the system and not the entire natural gas system. Appropriate documentation can be provided upon request when additional time is provided.

SoCalGas has not hired or contracted with a third party to implement technologies to quantify the methane/natural gas leaks from individual components or pipes from the natural gas system. However, SoCalGas has participated in studies such as CARB-GTI study to develop leak rate factors for various systems facilities that also involve quantification of a sample of certain types of system leaks.

4. Please explain and provide the appropriate documentation showing to what extent the technical and supervisory personnel at SCG coordinate with San Diego Gas and Electric Company about leak prevention, detection, and repair best practices, methods used or any other sharing of information about addressing leaks.

SoCalGas Response:

Gas Engineering and System Integrity is a shared service for SDG&E. Technical and supervisory personnel at SoCalGas manage all policies and procedures related to leak prevention, detection, and repair.