ATTACHMENT D

INCREMENTAL COST-EFFECTIVENESS ANALYSIS

PROPOSED NEW RULE 69.5.1 – NATURAL GAS-FIRED WATER HEATERS

Health and Safety Code Section 40920.6(a) requires air pollution control districts to identify one or more potential control options that achieve at least the same benefit as the proposed rule, assess the cost-effectiveness of those options, and calculate the incremental cost-effectiveness of each identified option. Incremental cost-effectiveness is defined as the difference in control costs divided by the difference in emission reductions between two potential control options achieving the same emission reduction goal.

Proposed new Rule 69.5.1 will reduce nitrogen oxide (NOx) emissions from residential-type natural gas-fired water heaters with a rated heat input capacity of less than 75,000 Btu per hour. The rule requires the use of ultra low-NOx burners that reduce emissions by approximately 75%, or 380 tons per year, with the cost-effectiveness between $3 and $6 per pound of NOx reduced.

One other technology that will provide a higher NOx emission reduction than proposed in the new rule is a catalytic reduction process. However, catalytic reduction that requires add-on control equipment is significantly more expensive and not practicable for small water heaters that will be regulated by proposed new Rule 69.5.1. In addition, all equipment subject to proposed new Rule 69.5.1 and complying with its requirements by using ultra low-NOx burners is currently available in the marketplace.

There are no other potential control options that will achieve the same emission reduction goals and the same benefit as the proposed rule. Therefore, the incremental cost analysis requirement is not applicable to proposed new Rule 69.5.1.