

**Summary of Amendments to the WRAP Task 2 Report**  
July 13, 2009

<b>Amendments to Task 2 Report</b>	
1	Annotated Table 25 (Table 30 in revised report) to include summary of comments from the May 4-5 meeting and included as Appendix to the report
2	Added Table 16 to provide a listing of all Basins and types of production in each Basin
3	Explained basis for using CO <sub>2e</sub> emissions and indicated that 1) the primary GHGs from combustion sources are CO <sub>2</sub> and to a lesser degree N <sub>2</sub> O and CH <sub>4</sub> and 2) the primary GHGs from venting and fugitive sources are CH <sub>4</sub> and to a lesser degree CO <sub>2</sub>
4	In addition to rankings of significant sources, provided data on the relative quality of the data by assigning a high, medium or low ranking
5	Added qualification as to why pipeline fugitives were not considered in the ranking of sources (pages 45, 47, 62, and 68). Basically, data is not available on the infrastructure, components, mileage of the gathering pipelines. Further, information on the frequency of blow down events or other venting events along the pipeline network are not available
6	Separated the discussion of offshore sources between platforms in state waters and platforms in the outer continental shelf. Also included discussion that with the exception of 3 platforms, all platforms use onshore power (total of 16). This will impact the percentage of significant sources of power for those platforms. Platforms using onshore power will also not have processing equipment such as heaters/and reboilers
7	Added discussion of significant sources for Heavy Oil in the San Joaquin Valley. Because data did not include drilling emissions, estimates for drilling was based on oil versus gas service and the number of wells drilled in 2007
8	Added discussion of significant sources for Light Oil in the San Joaquin Valley
9	Added Table 28 and Table 29 which provides a comparison of the significant sources among basins for which data was available and for those basin which have similar activities
10	Revised Table 30 (old Table 25) listing calculation methods used in screening inventories, to address comments received in writing and discussed at the May 4-5 meeting in Denver. Among the changes were:
	Removed PEMs as a measurement method for combustion sources
	Include offshore platforms to natural gas fired turbines category
	Added CEMs as a method for measuring CH <sub>4</sub> from heaters and boilers
	Added measurement of gas volume vented using pressure drop across the choke point for well completion venting
	Clarified that volume estimated based on reservoir surface pressure, pressure tubing volume and size of stimulation for well workovers
	Added gas volume estimations using a transient pressure analysis across the orifice at the end of the vent line for well blow downs
11	Methodology discussion includes several corrections to the equations
12	Further clarifications to the discussion of "Fracing" including its frequency, activity levels, and data limitations on the activity have been added to the report
13	Added clarification that both permitted and unpermitted heaters and boilers are often fired with field gas and fuel is not as closely tracked since it is not subject to royalty payments
14	Added clarification on reporting threshold: the 25,000 tonnes CO <sub>2</sub> /yr pertains to an aggregate of combustion and fugitive emissions. If an on-shore facility exceeds 25,000 tonnes CO <sub>2</sub> /yr for combustion devices or has combustion devices with a heat capacity throughput higher than 30MMBtu/hr, it will report only under Subpart C.