

Memorandum

Date: August 3, 2005

To: Pierre duVair (California Energy Commission)
Don Robinson (ICF Consulting)

From: Jennifer Pont

Subject: Comments on ICF's "Review of the API Compendium for Oil and Gas Operations in California" dated April 15, 2005.

At Pierre's request, I have reviewed the subject report and am providing several comments. While I did refer to the API Compendium during my review, I did not comprehensively study it prior to reading the ICF document. The intent of my review of the ICF document was to make sure the conclusions drawn in the report are logical. In general I found the report satisfactory and have the following comments organized by section.

Exhibit 1 – Comparison of CA and National energy data. I think I would omit the lines without data and lines with only California or only US data. Also, both the CA and national CH₄ values seem wrong. Should be pretty similar and in the 93% range...might want to check a few more sources.

California Petroleum Refining section. Please explain why the refining industry is unique compared to the rest of the US.

Section 2 Exhibit 2. I like the finer grid on industry sectors, but this is more of an inventory question rather than emission factor question...

Section 3 2nd to last paragraph. N₂O formation mechanisms are not consistent with NO_x formation mechanisms, so increases in NO emissions are not indicative of changes in N₂O emissions. N₂O is not a subset of NO_x. Appendix C states that the N₂O emission factors in the Compendium were carefully selected to avoid emission factors developed prior to 1988 based on grab sample measurements (there was a sampling artifact discovered in 1988). Since this artifact was discovered and corrected, there haven't been any changes to N₂O emission factors.

Chapter 4 "Inventory Issues Absent"...this is an inventory discussion better left in the IPIECA review document...I'll make sure I incorporate these comments.

Chapter 4 "Sources Absent"... I think there used to be an emission factor for buried NG pipelines for methane leaks that catalytically oxidize to CO₂...has this factor been debunked?

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Appendix A Evaluation Matrix.

For the combustion sources, would be useful to fill in applicable methods column.
Also, might be useful to also list which GHG you are talking about...

General concern about AP-42 factors used growing out of date...The compendium does
provide the AP-42 website advising that chapters are regularly updated...