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Tom Moore
Coordinator, Western Regional Air Partnership (WRAP)
Air Quality Program Manager, Western Governors' Association
c/o Cooperative Institute for Research in the Atmosphere
Colorado State University
1375 Campus Delivery
Fort Collins, CO 80523-1375
Phone: (970) 491-8837
Fax: (970) 491-8598

Re: Oil & Gas Greenhouse Gas Emissions Accounting Protocol
Task 1 Report: Background and Scoping Paper
Task 2 Report: Significant Source Categories and Estimation Methodologies

Dear Mr. Moore,

This letter provides a brief, high-level summary of the Natural Resource Defense Council (NRDC), Western Environmental Law Center, and Wild Earth Guardian's comments on the Task 1 and Task 2 Reports. A more detailed set of comments will be provided following the May 4-5, 2009 meeting in Denver after we have had an opportunity to meet with group, share our concerns and better understand the way forward. Overall, we are very concerned that this project is near completion, yet the Task 1 & Task 2 Reports are not close to yielding a useable Greenhouse Gas (GHG) emission estimating protocol. While we would like to continue to work with WRAP to bring this project to a successful conclusion, we are becoming increasingly concerned that the project outcome may not be one we can support. This letter shares some of our major concerns and recommends potential solutions. We are hopeful that we can discuss these concerns with WRAP Technical Work Group (TWG) and develop a way forward at our upcoming meeting in Denver on May 4-5, 2009.

We hope to secure a useable GHG emission reporting protocol that catalyzes development of a more thorough, higher quality emission inventory than currently exists. Development of this protocol is of particular importance in the Interior West, where oil and gas exploration and production is a major and

growing but still poorly quantified source of GHG emissions¹. As the WRAP has noted, there remains uncertainty with regards to the magnitude of GHG emissions, as well as the methodologies for estimating emissions from certain sources related to the oil and gas exploration and production sector. However, we are concerned that, rather than taking advantage of this protocol development to address uncertainty and fill in information gaps, the WRAP may be using uncertainty as a rationale to limit its recommendations. This is of particular concern with regards to the Task 2 draft report, which cites uncertainty and insufficient information as reason to avoid addressing GHGs from a number of potentially significant sources. If this is indeed the case, WRAP has it precisely backwards: the very focus of this protocol should be to enhance the robustness of existing information, not perpetuate shortcomings in data and methodologies.

Above all, it is our utmost hope that the GHG estimation protocol helps set the platform for future GHG reductions. In many regards, the WRAP is on track. However, we are concerned that the WRAP may be limiting its focus in the protocol development to potentially exclude, or at least deemphasize, sources where cost-effective opportunities exist to curb GHG emissions. For instance, pneumatic devices and pumps may comprise a smaller percentage of GHGs than other sources in some areas, yet may present opportunities for extremely cost-effective GHG reductions. Given the ultimate goal at hand, the WRAP should ensure that sources receive priority attention where cost-effective opportunities to reduce GHGs are known to exist, so that any future reduction program can be assured of success.

Again, we look forward to discussing these issues at the May 4-5 meeting in Denver and charting an acceptable path forward to developing active and robust estimates that are ultimately the most useful to securing effective and lasting reductions in GHGs. Our more specific concerns follow:

1. GHG Source Category List is Incomplete and Needs Refinement

While the Task 1 GHG Source Category List² was improved from the first draft, it is still not complete. A number of important sources such as well work equipment, open pits, straddle plants, imported electricity, *etc.* are missing. Missing sources were documented in our earlier comments on Task 1. Additionally, the Task 1 GHG Source Category List³ needs to be refined to a manageable list with clear, consistent nomenclature. For example, there are redundant sources, called by different names (e.g. “gas well condensate tanks” vs. “condensate tanks”, and “gas well venting” vs. “completion venting” vs. “well blowdowns,” *etc.*) We are troubled that this project is near completion, yet, a firm, manageable source list, using consistent nomenclature, is still lacking.

Recommendation: The Contractor (SAIC and Environ) should provide a firm, manageable source list, using consistent nomenclature at the Denver meeting. All sources of oil and gas GHG emissions should be included.

2. Task 2 Emission Calculations (p.39-64) are Incomplete

¹ Between 2000 and 2008, 91,783 new oil and natural gas wells were drilled in Colorado, Montana, New Mexico, Utah, and Wyoming. <http://www.ewg.org/reports/oilandgaswellcounts>. These new wells joined the 93,754 wells which had already been drilled between 1980 and 1999. *Id.* In the next 15-20 years, we anticipate an additional 118,000 federal (not counting private and state) wells across the region. <http://wilderness.org/files/Well-Count-Overview-October-2006.pdf>.

² Task 1 Report at pages 26-29

³ Task 1 Report at pages 26-29

Many GHG Source Categories identified in the Task 1 Report⁴ are not included in the Task 2 emission estimates. For example, Task 2 emission estimates⁵ do not include mobile sources, contractor emissions (except rigs), amine units, construction equipment, and well work, among other categories. Additionally, it is not clear what information was actually collected and included in the estimates for venting and fugitive emissions. We have compiled an attached an Excel spreadsheet summarizing the large number of data gaps.

The Task 1 Report identified emission source categories and potential emission computation methods by specific types of GHG emissions (CH₄, CO₂, N₂O, HFCs, SF₆, and PFCs), yet, Task 2 emission calculations do not provide a transparent understanding of each pollutant's contribution to the total.

It is unclear which emission computation methods were actually used to compute basin level emissions in the Task 2 Report. A list of computation methods is provided in the Task 2 report at pages 75-115, but it is not clear which methods were actually used. Additionally, the quality of the data input and the emission calculation method used is unknown to the reader.

It is not meaningful to create a pie chart to rank the top 95% emission sources when major source categories are missing. All source categories must be computed and included in the pie chart before any accurate ranking process can start. Amine units provide a case-in-point, where the emission estimates on pages 39-64 of the Task 2 Report do not include an emission estimate for amine units, despite the Contractors conclusion that amine units are an important emission source in several basins.⁶ Since the Task 2 pie charts⁷ do not include 100% of the emissions – and it is entirely unclear what total emissions actually are – the top 95% emissions cannot be accurately estimated. Additionally, we caution about ranking emissions and excluding source categories using percentages of total emissions, because a small percentage of emissions in a prolific basin could be more “significant” than a large percentage in a less prolific basin. The absolute magnitude of emissions should be listed and understood for each basin. Furthermore, many small emission sources may aggregate into cumulatively large sources of emissions, or may provide a viable emission reduction target. Source categories should not be excluded unless the total emissions prove to be insignificant *and* there is no opportunity for potential emission reduction opportunities.

It appears that the analysis was limited to data already available from previous criteria air pollutant emission estimates, with little additional data collection. Emission estimates for most basins are missing. The Task 2 Report at Table 1 (p.6) lists the basins to be included in the emission estimating analysis, and these basins are described in further detail on pages 10-38; however, the emission calculations at pages 39-64 do not include computations for most basins.

We are very concerned that the Task 2 emission estimates will lead to erroneous conclusions. For example, completion venting in the San Juan Basin (including tight gas sands) is estimated as “significant” (18%); whereas, as the overall tight gas sand calculation concludes completion venting is “insignificant” (1%).

Recommendation: The Contractor should provide a complete emission estimate, including all source categories listed in the Task 1 Report. For sources with limited data, engineering judgment should be used (and noted) to determine if the source should be ruled out as a *de minimis* source or

⁴ Task 1 Report at pages 26-29

⁵ Task 2 Report at pages 39-64

⁶ Task 2 Report at pages 56, 59, and 62.

⁷ Task 2 Report at pages 39-64

whether additional data must be collected to improve emission estimating capability. No source category should be eliminated without firm data or defensible engineering judgment to verify it is truly a *de minimis* source, either individually or in aggregate. Furthermore, all emissions sources that are initially deemed a *de minimis* source should be screened against available GHG emissions reduction technologies to determine whether they should nonetheless be included as a source category for purposes of the protocol.

3. Task 2 Objectives Were Not Met

The first Task 2 Report objective was to “*prioritize sources for mandatory reporting, considering the magnitude of known or projected emissions.*” Most of the report was focused on computing a 95% materiality threshold, by basin for New Mexico, Utah, Montana, California, and Canada. Data is missing for most of the basins. Limited data was available for the basins computed. Data for many source types was missing.

The second Task 2 Report objective was to “*evaluate existing GHG accounting strategies and available data and emission factors. Discuss limitations inherent in currently available accounting methodologies, emission factors and data, focusing on the largest GHG sources.*”

Table 25 provides a summary of screening level computations. A variety of methods and data sources are listed. The table is titled San Juan Basin, and appears to be limited to this basin. It is not clear what methods were used for other basins. This table does not provide any confirmation or recommendation about what method(s) will actually be used in the protocol (this is deferred to Task 3). Pages 75-115 provide some additional insight on the protocol direction for some source categories, but as described above and in the attached spreadsheet analysis, emission calculation methods are omitted for a number of source categories.

The third Task 2 Report objective was to “*identify current methodological deficiencies for these high-priority sources; propose and discuss high-tier alternative sampling and/or analytical methodologies designed to address these deficiencies and improve emissions data quality.*”

The goal of this task was to reduce uncertainty. Since this work is not complete uncertainty and methods for improving data quality are still lacking. This task was deferred to Task 3.

Overall, we are very concerned that the Task 1 & Task 2 Reports have not advanced our understanding of GHG emissions from oil & gas exploration and production as intended and will not result in a useable Greenhouse Gas (GHG) emission estimating protocol that can be implemented. It is our understanding that the mandatory protocol methods would be developed in Task 2. This important work should be completed before moving to Task 3.

Recommendation: Complete the original Task 2 scope of work before moving to Task 3.

4. Were data needs identified in Task 1 met for the Task 2 Report?

At our last meeting in Santa Fe, it was agreed that there are site specific testing, vendor data, and monitoring data available for permitted sources. There was general consensus that the best data should be used. However, for unpermitted sources, industry generally argued they either don't collect the data now or don't have an economical way to do so in the future. There were a number of questions about the magnitude and availability of data for mobile sources and contractor emissions.

Project Sponsors (NMED and CARB) requested industry to provide greater detail on data availability, including a list of emission sources and what data is currently captured. API recommended that industry funnel all this data through API to provide confidentiality. It was not clear in the Task 2 Report if this data was provided for unpermitted sources or included in the calculations. It appears as though the Contractor still lacks access to detailed data.

Recommendation: The Contractor should provide a summary of the data obtained from industry since the Santa Fe meeting and explain how this additional data was used to improve the emission estimates, and where additional data is still needed.

Please contact Tom Singer at (505) 989-7925 if you have any questions on these comments before the May 4-5, 2009 meeting in Denver.

Sincerely,

Tom Singer
National Resource Defense Council

Jeremy Nichols
Wild Earth Guardians

Erik Schlenker-Goodrich
Western Environmental Law Center

File: WRAP O&G GHG Protocol Development 2008-2009