

## MEMORANDUM

FROM: Lee Gribovicz, WRAP Air Quality Project Manager  
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SUBJECT: May 4-5, 2009 TWG Denver Meeting Minutes

### Summary

On May 4-5, 2009 the Technical Workgroup (TWG) for the Exploration & Production and Natural Gas Gathering & Processing Greenhouse Gas (GHG) Accounting Protocol project held a Project meeting at the Grand Hyatt Hotel in Denver, Colorado. The main topics of the meeting were review of the DRAFT Task 2 Significant Sources Report, and charting the path forward to completion of the Task 3 final O&G E&P Reporting Protocol. The agenda for this meeting and all materials covered are posted on the WRAP Calendar notice which can be reached via the "Meetings and Calls" link of the WRAP Project Website at:

<http://www.wrapair.org/ClimateChange/GHGProtocol/meetings.html>.

Participants attending this meeting included:

<u>Name</u>	<u>Organization</u>	<u>Name</u>	<u>Organization</u>
Mike Schneider	New Mexico Env Dept	Jill Gravender	The Climate Registry
Karin Ritter	American Petroleum Institute	Erik Schlenker-Goodrich	Western Env Law Center
Peggy Foran	The Climate Registry	Miriam Lev-On	Levon Group (for API)
Jennifer Knowlton	Yates Petroleum	Jeremy Nichols	WildEarth Guardians
Reid Smith	British Petroleum Company	Tim O'Connor	Environmental Defense Fund
Jim Tangeman	Williams Production	Coleen West	Canadian Assoc Ptrlm Prdcrs
Arun Naik	Shell O&G Company	Craig Bock	El Paso Explr & Production
Mark Nordheim	Chevron Corporation	Roger Fernandez	EPA Natural Gas Star
Krista Phillips	Canadian Assoc Ptrlm Prdcrs	Brian Ross	Nexen Inc. (for CAPP)
Suzanne Holland	Chevron Corporation	Tom Singer	Nat Resources Defense Council
Terry Snyder	Santa Barbara Co. APCD	Susan Harvey	Harvey Consulting LLC (for NRDC)
Bob Savage	Alberta Environment	Stirling Bates	British Columbia (by phone)
Steve Messner	SAIC	Amnon Bar-Ilan	Environ International
Sandra Miranda	SAIC	Alison Pollack	Environ International
Rob Greenwood	Ross & Associates	Ron Friesen	Environ International
Lydia Dobrovolny	Ross & Associates	Lee Gribovicz	WRAP
Tom Moore	WRAP		

### Meeting Details

Rob Greenwood of Ross & Associates opened the meeting and he explained that his organization was not part of the stakeholder group, but was simply contracted to facilitate the process. He explained the ground rules, which were the same as Santa Fe, with one exception. The Chatham House Rule will be invoked, which involves the concept that nothing will be recorded for direct attribution to any particular individual. The goal is to assure that all issues are fully vetted, with the goal of trying to reach common ground. He briefly went over the Agenda, and then the substance of the meeting began with some Background Updates.

## **Project Sponsors**

California noted that they currently have a GHG reporting rule in place for the 2008 emissions. They are working on a Cap & Trade program through the Western Climate Initiative. Combustion is a very important source in California's deliberations. They released a survey to get an inventory of equipment in the O&G fields with a May 20<sup>th</sup> deadline for response.

New Mexico is working on their Reporting Rule, and is looking forward to the feedback from the TWG on the Task 2 report.

TCR is ramping up efforts to support Task 3 and they are looking forward to methodology to be developed under this Protocol.

## **EPA proposed mandatory GHG reporting rule**

EPA explained what most in the room knew; that they have put out a Draft Mandatory National GHG Reporting Rule (April 10, 2009 Federal Register). It includes processing & transmission, and they are seeking comments on the O&G exploration & production sector. It was emphasized that this was a "DRAFT" rule, and EPA is sincerely interested in comments from the public.

## **Overview of Comments on the Task 2 - Technical Review of Significant Source Categories**

After these Updates the meeting then turned to the Protocol Project, and specifically the Task 2 "Technical Review of Significant Source Categories". This Task was intended to identify and prioritize a list of O&G GHG significant emission sources. A draft of this Task 2 Report was released in April, and discussed on an April 17<sup>th</sup> TWG call. Comments were to be submitted by April 27<sup>th</sup>.

To begin this topic at the meeting, the Scope of Work for this Task was reviewed, noting that it calls for the contractor to "prepare a technical review of emissions quantification methods for critical field sources identified in the background and scoping paper, specifically designed to inform and guide the process of developing mandatory reporting requirements by partner jurisdictions in the Western Climate Initiative." There were three elements to Task 2. For significant land-based and offshore GHG sources the contractors were to:

- 1) Prioritize sources for mandatory reporting, considering the magnitude of known or projected emissions.
- 2) 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.
- 3) 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 Technical Team provided a PowerPoint presentation with a High-Level Overview of comments received to date from TWG members. The presentation noted that nearly 200 comments were received. The comments fell in to several types including:

- ***insufficient data concerns*** (e.g., offshore analysis used only 2 of 27 platforms which may not be representative; several data gaps exist for equipment types and activity data for several production basins; variability exists across and within basins making it possible to only identify top 3 to 4 sources);
- ***relative source ranking*** (e.g., relative rankings of some sources such as completion venting, well blow-down and pneumatics do not appear correct; different approaches were taken, some by basin and production characteristics, others by conventional oil and conventional gas data or production type; since emission sources represent an average or blended contribution to GHG, this might skew the data);
- ***geographic domain used for ranking*** (e.g., for GHG emissions, it is not the basin that drives emissions but rather operations design and deployment; GHG emissions might have broad similarities based on resource physical properties, its quality, the age of the operating equipment, and local requirements, rather than the mere geographical location; production types, reservoir properties, maturity and depths vary widely within a basin, therefore a subdivision of basins is needed);
- ***sources not included*** (e.g., oil and gas well truck loading, and mobile sources in general; casing gas venting and casing gas migration emissions; cogeneration units (particularly for California); enhanced oil recovery (particularly for California); indirect emissions from generation of heat and steam; vented emissions from drilling rigs);
- ***comments related to methodology & measurement methods*** (e.g., several technical comments related to specific methodologies; more detail requested on specific methodologies and data sources for each basin; several questions and comments related to turbines, well completions, well venting, pneumatic devices and pumps, flares and fugitives); and
- ***other comments*** (included technical comments; clarifying questions and comments, organizational and/or editorial comments; documentation on assumptions, data sources).

It was noted that the rankings were presented in the way they were due to confidentiality concerns, data reports prepared at the Basin level, as well as variation in data completeness and quality. The next step is fixing inaccuracies and addressing technical comments. The proposed path forward to finish the Task 2 report was discussed in greater detail on the second day of the meeting.

### **Closure on Reporting Boundary**

For the next Agenda item, there was an articulation of the “oil field” operational control reporting entity concept supported at the Santa Fe meeting. The Technical Team noted that there was no “fence line” for most onshore E&P O&G operations. The existing definitions include:

- Aggregation by lease

- Aggregation according to EPA's stationary source definitions
- Aggregation by oil or gas field
- ISO 14064

The definition discussed during the Santa Fe meeting was that the boundary would be based on "field level reporting with operational control". The EPA Mandatory GHG Reporting Rule definition calls for reporting at the basin level, but this proposal has been specifically identified for comment.

To help illustrate the issue, the Technical Team displayed a number of maps which showed examples of the types of fields present in O&G basins of the western U.S. There followed a discussion on this definition of field level reporting. At the conclusion of the discussion, TWG members were polled and indicated unanimous support for the concept of field level reporting with operational control.

### **Next Steps on Reporting of Contractor Emissions**

The next item on the Agenda was discussion on reporting of contractor emissions. It was pointed out that there is no convenient industry trade group to go to for information about these O&G contractors. It was suggested that we get feedback from the TWG industry representatives on the position that contractors play in their individual companies.

Industry representatives noted that emissions from drilling and workover companies are fairly significant, but the rest of the contractor emissions are very low (well below 1%). Both the contractor team and industry representatives felt that drill rigs and workover rigs are very well characterized. It was stated that drilling emissions are almost solely liquid fueled sources, and those fuels should be fairly easily quantified – *comments are solicited on this point.*

### **Task 2 Report - Summary of Rankings for Significant CO<sub>2</sub> & CH<sub>4</sub> GHG Emission Sources**

The Technical Team gave a presentation on the rankings developed for the Task 2 report. The Technical Team was tasked to develop a list of significant source categories by basin for the 6 member states/provinces in the WCI (includes New Mexico, California, Utah, Montana, British Columbia and Manitoba). Significance was defined as those sources contributing to the top 95% of GHG emissions in a basin and basins were defined using accepted USGS basin boundary definitions (consistent with past western states inventory efforts).

The procedure for determining significant source categories used activity and equipment information obtained from a variety of sources including past inventory development efforts (e.g. WRAP, California districts) and survey data received from companies through API coordination. The data represents the aggregate of quantitative information on equipment, processes, activity, configurations from dozens of individual companies operating across the western United States. Aggregate data were used to develop screening-level inventories for each basin for which this data was available and presented as an estimate of the percentage contribution of source categories to total GHG emissions.

Limitations of the screening-level inventories included the fact that activity and equipment information could not be obtained for all basins. Where this information could not be obtained for all source categories and where a source category was considered by the technical team to be potentially significant, this was discussed in the report. Data was aggregated from many sources, including data collected confidentially through various prior WRAP inventory efforts for this sector (confidentiality requirements limited the nature of the data that could be presented in the Task 2 report).

The presentation then went through tables of significant combustion sources by region. For Combustion, compressor engines, heaters/boilers, other engines/turbines, drill & workover rigs and flaring dominated the list. For the Well Venting/Fugitive sector, completion venting, well blowdowns, pneumatics and wellhead fugitives were the primary categories found to be significant.

### **Discussion of Methods for REPORTING Combustion CO<sub>2</sub> Sources**

Discussion on the topic area of rankings and reporting was broken into first review of Combustion Sources, followed later by review of Fugitive/Venting Sources. For Combustion Sources, possible criteria in alphabetical order to evaluate methods included:

- Accurate (can be verified)
- Bias
- Contractor-supplied?
- Cost
- Feasibility (i.e., technical and practical)
- Method/measurement device availability
- Precision
- Reliability

Methodologies outlined in the Task 2 report include measurement and emissions factor-based methods. It was noted that reporting regulations developed by WCI member states/provinces may select alternative methodologies to those used in the screening-level inventories. Another consideration raised at the meeting in assessing the methodologies is the potential reporting architecture.

A shortened list of “candidate” significant combustion source categories was identified for the methodology discussion and included: wellhead/lateral compressor engines, well site heaters/boilers, flaring, drilling and workover rigs. One source that was suggested to add was turbines and other engines.

We then looked at the Methodologies from Table 25 of the April 17<sup>th</sup> Draft Task 2 report. The facilitator requested that participants look first at the Methodologies for Reciprocating Internal Combustion Engines (RICE) at wellheads and lateral compressor stations. There was a wide ranging discussion of this problem, with many (but not all) of the issues described in the following paragraphs.

It was suggested that for fuel measurement of these engines you have a declining level of accuracy, first measuring CO<sub>2</sub> directly (testing), then measuring fuel combusted with use of the heating value of fuels. There were questions about why we can't measure these individual sources, and it was noted that there is

limited metering of fuel for the devices. It was pointed out that fuel measurement accuracy varies by the instrument. It was asked who pays for the fuel at wellhead compressors, and the industry representatives said that this fuel is not really measured because it is taken before custody transfer (NGL liquids and water typically removed). Members indicated that the set of criteria for evaluating compressors includes whether to use fuel meters or not and the variability of fuel. The threshold for metering may be around 500 HP (~4 MM Btu/hr) for larger companies, but smaller companies may have higher thresholds. The EPA draft reporting rule requires metering above 250 MM Btu/hr (~30,000 HP). Run time and differential pressures yield the engine load factors for engines. Run time is generally tracked. Environmental representatives wondered whether there wasn't some other way besides a high priced flow meter that could be routinely monitored by staff in the field. Industry responded that you could do that on any one particular engine, but when you are talking about a large population of sources, that becomes more problematic. The calculation for CO<sub>2</sub> from engines shown on Page 79 of the Report requires rated design HP and Load Factor. Smaller producers probably won't really have the information to calculate that load factor parameter. A request was made for feedback on the types of monitoring that is readily available and practical in the field. Regarding metering, some suggested that tax authority could be used to quantify fuel use, but the contractors generally felt that this would be a difficult area to get useful data.

The discussion then was switched to the Flaring source category of Combustion. The Technical Team emphasized that it was extremely difficult to measure emissions from flares (no enclosed emission point limits testing options). Members noted that there are three types of flares; first those that are used on wells from post fracture workovers and new well completions. The second type is portable flares used for maintenance activities such as blowing down pressurized pipe and product vessels. These both tend to be temporary. The third type is stationary flares at permanent facilities. Others noted that incinerators are another form of flares, but they are more continuous sources, typically having very high design destruction efficiencies (around 99.7% or better) and stack exhaust amenable to testing. There was a question on the significance of flaring emissions, and industry felt that it varies significantly by geographic areas. Workover activity was described as "fracturing" a well formation with sand to provide a path for the gas to migrate to the well bore. When you first finish a "fracing" operation, you get mostly water and sand flowing back, but eventually you get some combustible gas that must be flared. A request was made for feedback on the flaring destruction efficiencies obtainable in the field. The Technical Team used 95% estimates for their calculations. There was some concern that efficiencies vary by changing operating conditions. There was a question about how operators know whether the flare is actually operating, and industry indicated that they typically have some sort of infrared or other pilot monitor. There was a question about compositional analysis of the gas that is combusted in flares, and industry explained that this varies considerably based upon the source of gas going to the flare. Regarding testing, some felt that you can't really complete in-situ testing of flares other than using Fourier Transform Infrared (FTIR) monitoring, but others noted that there were various research efforts aimed at in-situ measurement of flare emissions. The point was made that by its nature, flaring is difficult to quantify because it is by definition, an unplanned event. It was noted that flaring takes a saleable product and wastes that resource, thus industry has a strong incentive to eliminate flaring to the extent possible. Regarding metering it was noted that most flares are not metered, and for those that are the cost is very high. Ultrasonic meters are used for some offshore flares in the North Sea, but they are only good for very high flows and don't have acceptable "turn down" capability to measure lower flows.

It was noted that the conversation on Combustion only covered a small fraction of the source categories and methodologies in the table. In order for the contractors and sponsors to receive a complete feedback from TWG members, comments should be written down completely and sent to the contractors/WRAP staff for incorporation into the final table.

### **Discussion of Methods for REPORTING Fugitive/Venting CH<sub>4</sub> Emissions**

In the Task 2 report the initial list of significant Fugitive/Venting source categories included: wellhead fugitives, pneumatic devices, well blowdowns, well completion venting, condensate tanks, oil tanks and dehydrators. There were a number of suggestions to amend the list of candidate fugitive/venting sources, evolving to a discussion list including:

- fugitives
  - wellhead
  - compression
  - gathering
  - processing (sweetening, pressure relief and pigging for oil, gas and NGL operations)
- venting
  - pneumatic devices
  - pumps
- amine units
- well blowdowns
- well completion venting
- condensate tanks
- oil tanks
- dehydrators (including pumps)
- gathering systems (pipelines, etc)
- truck & vessel loading

Regarding Fugitive/Venting Sources, the question was raised as to whether some sort of quantification of the volumes involved in activities like well blowdowns could be undertaken and combined with an accounting of the number of times this activity occurs during the year. Members responded that there is a default in the API compendium for blowdown emissions, and thought that should be good enough for this type of accounting. Once again there was a wide ranging discussion on the elements required for quantifying this emission sector, and the availability of that data. Wellhead venting, well workovers and well blowdowns were the topics of major conversation. Interest was expressed in understanding the specific variables necessary for each emission calculation, and what the availability is for information on that variable. It was suggested that each question should be precisely posed, and interested parties requested to respond to the questions.

The meeting broke before this topic of Fugitive/Venting emissions was completed, but four source categories were selected for first discussion beginning Tuesday morning: compressor fugitives, pneumatic devices, tanks and gathering systems.

Tuesday's session began with a description by a TWG member of the "flashing" of VOC emissions from condensate tanks and how these emissions are calculated from process simulator computer programs (E&P Tanks is the main program used - there are others). These emissions occur when gas/liquids under pressure in the O&G production formation, are raised to the surface and the pressure on the fluid is reduced down to atmospheric levels. It was explained that they run the model at isothermic conditions at 75° F. Several spreadsheets were used to explain the situation at Wyoming's Wamsutter Field. Sponsors asked whether the parameters varied for other fields and it was acknowledged that these parameters do vary significantly. A year ago downhole pressures were running 800 psig in Wyoming's Jonah Field, which results in "huge" flashing emissions when they are brought down to atmospheric levels of around 11-14 psig. Flashing is only one of the mechanisms of VOC loss from tanks however, the other two being working and breathing losses.

We then began a discussion of pneumatic devices and pneumatic pumps. Pneumatic controls are used where power is not available, substituting pressurized natural gas to operate instruments and valves. Instrument controls are the largest source of VOC emissions from this category. There are "high bleed" pneumatic controllers, which can be replaced by "low bleed" devices for better emission control. The rate of high bleed is about 650-830 cubic feet per day, per device. There are in the range of 3-9 devices per well site. There were questions about how difficult it is to measure this emission rate, and industry said this is possible to make routine measurements only with use of large manpower and equipment costs. There were questions on the capacity of smaller companies to compile a component count of their pneumatic equipment. This is a "challenging" task considering the magnitude of wells and the large amount of manpower required. One company representative noted that they had plans to replace pneumatic devices with electric operated equipment, but their electric rates recently jumped dramatically forcing them to put these replacement plans on hold.

We then began a discussion of compressor fugitives. Compressor dry and wet seals, compressor fugitive emissions and compressor wet seal degassing vents are sources identified in the EPA's GHG Reporting Rule. It was mentioned that in the Natural Gas Star program reported that over 50% of the fugitive emissions from components are from compressors, but it was clarified that the emissions from oil production are much lower than those from natural gas compressors. There was mixed response from industry on whether they are measuring emissions from compressor fugitives. Forward Looking Infrared (FLIR) thermal imaging cameras work to help quantify these sources, and some companies have done surveys to help identify the location of their leaks. There was wide ranging discussion on various aspects of what industry can do to measure and quantify these compressor emissions.

The WRAP had compiled some questions for follow up. Regarding Combustion Source Methodology the questions revolved around 1) un-metered heaters & boilers, 2) determination of fuel consumption and 3) determination of run time. Regarding Fugitives the question revolved around 1) estimating well completion emissions, 2) estimating emissions from workovers, 3) estimating venting from liquids and unloading and 4) component count data collection. These questions will be E-Mailed to TWG members to seek help in compiling answers. The WRAP also suggested that we need to clarify the definitions for wellfield terminology. The beginnings of a glossary for these terms will be also sent to the TWG for response as to the most universal and acceptable definitions to use within this GHG Protocol Project.

## **Task 2 Wrap-Up Discussion**

The WRAP Project Manager had compiled a table of comments, with comparisons on how these comments related to the actual Scope for the Task 2 Report. It was stated that the rankings for Significant Sources in the report were based on the data currently available and won't be changed. But it was emphasized that there will be an attempt to make it clear exactly what went into making the rankings. Thus the "Methodology" section of the report will be supplemented with additional information. The emission data that went in to the rankings will itself be rated with a qualitative scale (A-F) to help evaluation.

It was noted that Mobile Sources and Contractor Emissions were not included in the rankings. Regarding ***Contracted Activities*** a listing was made of areas of concern including:

- Construction (liquid fueled such as well pads, drilling, pits installing equipment, building and foundations)
- Well Operations (CO<sub>2</sub> & CH<sub>4</sub> emissions)
  - Combustion (not typically counted by direct operators)
  - Vented (typically counted by direct operators, even if contractor activity)
  - Drilling, Completions, Re-Completions (account for 1.5 - 5.5% of emissions)
- Contractor Vehicles (numerically large, liquid fueled)

It was suggested that seismic operations and off site imported electricity are areas that need to be examined to find out where they fit in. The question was raised as to "how much room there is to make revisions to Task 2." The Project Manager needs to sit down with the Technical Team to see what things could be done to address the concerns and questions of the TWG. The gaps in the Task 2 report are "structural" in nature in that they result from lack of availability of data.

It was also suggested that the report should at least be expanded to incorporate drilling emissions. As a primary purpose of Task 2 was to have methodologies incorporated to inform the Sponsors on their implementation of regulation of significant sources, concern was expressed that Task 2 will be accepted with these deficiencies. But it was reiterated that there are limits in resources to fill these gaps. Sponsors suggested that the issue needs to be resolved within the Steering Committee.

An observation about accuracy in the context of GHG reporting was made. Defaulting to conservative estimates when accuracy is low – although conventionally used for other regulated air pollutants – does not work well in the context of reporting within the context of a cap and trade system. Overestimates in this context may place too many emissions in the baseline and reduces the actual effectiveness of trading activity - essentially that the calculus for selecting methods may be different under cap and trade than under traditional regulatory programs – *clarification and comments are solicited on this point.*

There was some suggestion to compress and revise the report, with another TWG conference call on the revision prior to finalizing it.

## **TWG Perspectives on Proposed Steering Committee GHG Reporting Rule Comment Letter**

The Steering Committee had discussed attempting to identify common ground among the various perspectives of the TWG membership that might inform the Sponsors' Organizations (New Mexico & California State Air Agencies, and The Climate Registry) in forming comments to submit to EPA on this GHG Rule Proposal. It was concluded that the TWG can't really submit comments directly, as this committee isn't really an "organization". But it was felt that the expertise of the TWG should be utilized in helping direct the evolution of the Rule. The initial list of potential topics for comment included 1) definition of a facility, 2) scope of reporting, 3) emission measurement approaches and 4) emission data reporting.

It was noted that such a summary may also help in the development of comments from the TWG representatives' individual organizations as well. Given the fact that the TWG is already deeply immersed in the O&G GHG issue, this represents a rather unique opportunity to tap the experience from the wide variety of representatives on the TWG. It was made very clear that any opinions expressed could be taken for what they are worth, and can be ignored at the discretion of the commentors.

Some comment was given by various O&G industry representatives to be compiled and summarized by Ross & Associates.

### **Path Forward for Task 3 - Voluntary Reporting and Verification Protocol Preparation**

The Technical Team discussed the Task 3 outline. The outline of the proposed Task 3 Protocol is broken into 4 Parts, with 23 Chapters as follows:

**PART I: INTRODUCTION** – This section will provide a description of the types of organizations that are required to use the Upstream O&G protocol in conjunction with TCR's General Reporting Protocol to meet reporting requirements.

#### **PART II: DETERMINING WHAT YOU SHOULD REPORT**

- Chapter 1: Introduction
- Chapter 2: Geographic Boundaries
- Chapter 3: Gases to Be Reported
- Chapter 4: Organizational Boundaries
- Chapter 5: Operational Boundaries
- Chapter 6: Facility-Level Reporting
- Chapter 7: Establishing and Updating the Base Year
- Chapter 8: Transitional Reporting (*Optional*)
- Chapter 9: Historical Reporting (*Optional*)

#### **PART III: QUANTIFYING YOUR EMISSIONS**

- Chapter 10: Introduction to Quantifying Your Emissions

- Chapter 11: Simplified Estimation Methods
- Chapter 12: Direct Emissions from Stationary Combustion
- Chapter 13: Direct Emissions from Mobile Combustion
- Chapter 14: Indirect Emissions from Electricity Use
- Chapter 15: Indirect Emissions from Imported Steam, District Heating, Cooling, and Electricity from a Combined Heat and Power Plant
- Chapter 16: Direct Fugitive Emissions from the Use of Refrigeration and Air Conditioning Equipment
- Chapter 17: Completing Your Annual Emissions Report
- Chapter 18: Reporting Your Data Using CRIS
- Chapter 19: Third-Party Verification
- Chapter 20: Public Emission Reports
- Chapter 21: Fugitive Emissions
- Chapter 22: Vented Emissions
- Chapter 23: Flaring Emissions
- Chapter 24: Oil Sands and Oil Shale Specific Sources

This outline will be reviewed by TWG members, and the Technical Team will produce an initial draft of the Task 3 Protocol in early June. There will be calls to present the draft, and calls or a meeting in July to review and approve the draft. TCR will begin their review in late July and produce a public draft by late summer. The TCR public review process for adoption of the Protocol begins in late August or September, leading to a TWG meeting for review of the comments in October. TCR expects to present the Final Protocol to their Board after the first of the year.

This draft schedule was discussed late on the second day, but since quite a number of participants had already departed, the WRAP Project Manager committed to sending a follow-up proposal out to the TWG shortly after the meeting.