

Environmental, Energy & Technical Committee Meetings

June 12-13, 2012 Radisson Hotel, Reagan National Airport Arlington, VA (703) 920-8600

MINUTES

TUES-WED June 12-13, 2012

Technical Focus Group Session

Air Dispersion Modeling - **Jay Hofmann**, Trinity Consultants, Inc.

The usual "round the table" introductions were done. The speakers are all national experts with their respective companies and have dealt with actual applications and issues that have come about as a result of the new NAAQS requirements for compliance dispersion modeling in order to obtain permits.

Overview of 1 hour NO2 and SO2 NAAQS, PM2.5 Issues - Gale Hoffnagle, TRC Environmental

The Guideline on Air Quality Models is the standard mandated by the 1977 Amendments to the Clean Air Act. The Guideline is codified under 40CFR Part 51, Appendix W. The Guidance is intended for PSD permitting. Since the adoption of AERMOD, the EPA has insisted on its use within 50 km of the source. CALPUFF is used beyond 50 km, but is under attack by EPA.

The models are not that accurate. Guideline modeling is not allowed to be adjusted or calibrated model comparisons. For example, BART modeling requires CALPUFF to be used in a specific, conservative way. BART modeling does not consider comparison to actual data. The new NAAQS levels are now close to background levels. The move to a 1 hour standard has effectively lowered the standard by a factor of 6.6. Compliance with the new standard is determined by 98% of the days over a 3 year period. This means that each day with a concentration over 100 ppb counts as an exceedance day. The 8th day in any one year is a violation for that year. The 24th exceedance day in 3 years constitutes non-attainment. The Guidance assumes that all of the emissions are NO2. The second tier assumes that the NO2/NOx ratio is 0.8. The 3rd tier assumes that the rato is 0.5, but case by case determinations are required. Actual stack measurements of the ratio are one of the most important measurements that can be made for modeling purposes.

For No2, the interim Significant Impact Limit (SIL) is 4 ppb. If a new PSD model comes under the SIL, no further modeling is needed. Determining the "background" concentration is difficult. EPA is providing a new version of AERMOD (11059) which it says will calculate the 8th highest concentration in a year, a variable background function, the ability to enter ozone concentrations, correct bugs in the NO2 calculation methods, PM2.5 model guidance implementation, and revisions to urban stability calculations. The SO2 NAAQS are now 7.7 times more restrictive. The new standard is at 99% over 3 years. The interim SIL is 3ppb. The EPA 10th Modeling Conference was held in March. There were many negative comments from the public. If emissions and meteorology are correct, the annual average can be calculated within about 20%. However, the hour by hour calculation is only accurate

to within a factor of 2 and not at the same place at the same time. Comparisons to measured data are always useful to the public, but are not accepted by EPA (but almost always accepted by the Courts).

The use of bright line standards conflicts with the realities of modeling. Modeling for PM2.5 is more difficult. There are academic models (CAMx or CMAQ), but these are not accepted for PSD by EPA. The new version of CALPUFF is not recognized by EPA. Modeling is expensive and time consuming, especially when dealing with huge data files.

Low Wind Speed Issues and Emissions Variability - Robert (Bob) Paine, AECOM Environment

While there are a number of issues associated with AERMOD, this presentation will focus on low wind speed conditions, along with complications in terrain and gentle slope situations. For low wind speeds, the model formulation causes underestimates of the turbulent mixing in stable conditions. The result is a very compact modeled plume. Vertical profiling results in possible underestimates of wind speed increase with height. Plume travel time is assumed to be perfectly straight (and level), leading to distances that were physically impossible.

A study team looked at two cases. First pass results were high by a factor of 6 and 20 for the two. Corrections to the turbulence in AERMET processing and a doubling of the horizontal plume spread in AERMOD brought the over predictions down to a factor of 2. The results were documented and the database provided to EPA in 2010. The EPA has acknowledged the results, but has not acted upon them. Sub hourly meteorological data is now routinely available, particularly from airports. Sonic wind speed measurements now record very low wind speeds. In low wind conditions, the winds can go in several directions during an hour. AERMINUTE has been enhanced under EPRI funding. Sub-hourly periods are user specified (from 30 minutes to 2 minutes). Effectively, the modeled plume is spread out by sending it into different directions during the hour.

AERMOD is designed to "penalize" the use of single level (10 meter) meteorological data. Actual measurements near the plume level will override these effects and reduce model over predictions. Modeling continuous operations for intermittent sources is of concern, particularly for a probabilistic NAAQS. Emission rate variability also causes some problems. Large variations are possible over the course of the year. For these sources, assuming a fixed peak 1 hour emission rate on a continuous basis will result in unrealistic modeled results. A better approach is to assume a prescribed distribution of emission rates. A new processor (EMVAP) uses a probability function of emissions rates instead of just one value. EPRI is developing this approach. Preliminary results from 3 different power plants showed that the finer the emissions data was "sliced", the closer the predicted results were to the actual results. In all cases, the use of EMVAP resulted in predictions much closer to actual. The EMVAP, along with other modules, will be released by EPRI by the end of Summer 2012.

Building Downwash Guidance Changes/Use of NO2 Tiered Methods and PM2.5 - **Tony Schroeder**, Trinity Consultants, Inc.

The design criteria for AERMOD included reasonable concentration estimates with minimal discontinuities, user friendly, essential physical processes, and accommodation of changes with ease. The new NAAQS have required changes. Building downwash results from the inability of air to flow through the building. Turbulence is generated by the air having to move up, over, and around

the building. The "Good Engineering Practice Height" of a stack is one that is supposed to avoid building downwash effects. The EPA formula height is the sum of the building height above the base of the stack and 1.5 times the lesser of the building height or the projected building width. The GEP height is the greater of the EPA formula height or 65 meters. EPA does not allow credit for stack heights above GEP in dispersion modeling.

The new AERMOD now considers downwash effects for all stack heights. The problem with this change is that a stack that was modeled with an earlier version will calculate a lower ground level concentration. Simply by changing the model version, the predicted concentration will change (upward). If a new permit is required, or a new modeling exercise is required, for any reason, the new version will now show that the stack is out of compliance with the original permitted level. The NOx vs NO2 issue has become more important with the 1 hour standard.

The Tier 1 method assumes 100% NO2. The Tier 2 method originally assumed 0.75 NO2, but recent guidance has suggested 0.8. Tier 3 has two methods that attempt to calculate the conversion of NO to NO2 in the atmosphere and needs the starting level of NO and NO2, the background ozone concentration, and the equilibrium downwind ratio. The default in stack ratio is 0.5 (very conservative). Most boilers have an in stack ratio of 0.05 - 0.1. The default equilibrium ratio is 0.9. The lower the in stack ratio, the lower the calculated value at the fence line. Low ambient ozone concentrations will also result in a lower NO2 concentration.

Another issue is the "order of magnitude" dilemma. As the standards have been reduced close to background levels, the differential between the standard and the background has been reduced by an order of magnitude. This leaves very little room for any increases from emissions. On particulate modeling, a 4 tiered approach may be needed. This is due to the formation of PM2.5 in the atmosphere from vaporous compounds that condense out as particulates. No PM2.5 compliance demonstration is required if PM2.5 emissions are less than 10 ton/yr and NOx and SO2 emissions are less than 40 ton/yr. Direct PM2.5 modeling is required when PM2.5 emissions are greater than 10 ton/yr, but SO2 and NOx emissions are less than 40 ton/yr. Direct modeling and precursor impact will be required when PM2.5 emissions are greater than 10 ton/yr and SO2 and NOx emissions are greater than 40 ton/yr. A special case results when PM2.5 is less than 10 ton/yr and precursor impact is not required, but SO2 and Nox is greater than 40 ton/yr.

Challenges in Modelling Compliance for New NAAQS - Tyler Fox, US EPA

Tyler provided some materials that were prepared after the 10th Conference on Modeling in March. EPA issued a guidance memo for the new 1 hour NAAQS on March 1, 2012. Models are not perfect. However, they can be improved so that the models can come closer to reality. Appendix W provides a means for adapting the models to actual conditions. The new standards have put more scrutiny on the models. The "overly conservative" nature of the models have often been blamed for some of the problems encountered with permitting.

New guidance is needed to reconsider past practices, which often entail overly conservative approaches. EPA will provide conservative defaults, but actual information specific to the source will always improve the results. For NO2, EPA has stated that Appendix W does apply and provides a 3 tiered approach. Evaluations of some of the Tier 3 models are available on the SCRAM website. For SO2, the 3 year averaging time does not preempt or alter Appendix W requirement to use 5 years of weather data or at least 1 year of site specific data. There were 17 field study databases that were

used to evaluate the model. While the current models can be demonstrated to predict within a factor of 2. The goal is to get within 20 - 30%. The latest version of AERMOD has shown comparison to actual data that has greatly improved the prediction levels over previous models.

The PM2.5 Permit Modeling Guidance has still not been issued. CALPUFF was promulgated in 2003 for distances from 50 - 200 km with a 300 km maximum. It is not approved for chemistry, but may be used for visibility. BART allows the use of CALPUFF, but does not confer status as an EPA "preferred model". Case by case approval as an alternative model can be requested based on the criteria given in Section 3.2 of Appendix W. Additional work will be done with the Federal Land Managers to work on their issues such as single source ozone and visibility and deposition. Current action items on AERMOD include minimum wind speed threshold, low wind and down wash issues, updates for NO/NO2 ratio, and work with Tier 2 and Tier 3 procedures. EPA work with the Federal Land Managers on CALPUFF to produce a formally released updated model code and documentation. Flexibility on the existing guidance will require continued work with co-regulators and stakeholders.

ENERGY COMMITTEE SESSION

Frederick (Fred) P. Fendt, The Dow Chemical Company, Energy Committee Chairman Robin Mills Ridgway, Purdue University, Energy Committee Vice-Chairman

Introductions - Bob Corbin, CIBO

Bob introduced the new members and guest members for today's meeting. The round the table introductions were done. The usual anti trust admonition was given

New DOE Indsutrial Energy Efficiency Efforts - Katrina Pielli, US DOE

The DOE has a Boiler MACT Assistance program. Combined heat and power (CHP), or cogeneration, is an important energy source that provides benefits for US Industry and benefits for the country. About 8% of US generating capacity comes from cogeneration with roughly 12% of the annual generation. While compliance with the Industrial Boiler MACT seems fairly straight forward for natural gas fired plants, the limits for coal and oil fired units are extremely difficult, both technically and economically. DOE currently provides technical information and assistance, market development, and education on CHP, Waste Heat to Power, and District Energy options through its 8 regional Clean Energy Application Centers. DOE is supplementing this ongoing effort by providing site specific technical and cost information on clean energy compliance strategies. The program is being piloted in Ohio and will be rolled out nationally when the EPA rule making process is complete. From the EPA ICR database, there are at least 753 facilities that might benefit from CHP. Site specific "decision trees" will be generated that will include facility info, site financial data, contact info, boiler unit data, compliance requirements, CHP as an alternative, comparative costs, CHP payback. and available financial options. The PUC of Ohio has expressed interest in the program as a potential response to MACT as well as grid reliability. The DOE web page on Boiler MACT Technical Assistance is:

http://www1.eere.energy.gov/manufacturing/distrubutedenergy/boilermact.html

The DOE also has a program called Better Buildings, Better Plants. The goal is to make commercial and industrial buildings 20% more efficient by 2020 and to save more than \$40 billion annually for US organizations. Over 65 public, private, and non-profit organizations have joined the program representing over 300 manufacturing plants. The DOE has evolved its industrial partnership program to align it with the Better Buildings Challenge and provide greater integration across the industrial and commercial sectors. The web site is as follows:

http://www1.eere.energy.cov/manufacturing/tech_deployment/betterplants/index.html

Update on US CEEM and ANSI Activity - Frederick (Fred) P. Fendt, The Dow Chemical Company

The US Council for Energy Efficient Manufacturing (US CEEM) is a voluntary partnership with a mission to enable US industry to achieve global leadership in energy efficiency while maintaining competitiveness and reducing GHG emissions. There are currently 14 manufacturing companies and 6 non-manufacturing partners including the DOE, EPA, Dept of Commerce, and ANSI. The Superior Energy Performance (SEP) program uses ISO 50001 as the foundational tool for energy management. It establishes a tiered program the provides an entry point for companies at all levels of experience with energy management. The program requires some level of actual energy efficiency improvement. The US CEEM has an executive committee and a technical committee (working group). There is also an outreach and communications committee (working group). Activities include the launch of SEP, development of ASME standards, establishing methodologies for measuring energy intensity baselines, development of verification protocols, and supporting the development of Certified Practitioners. More information on US CEEM is available at www.usceem.org.

Marginal Heat Rate - Carl Bozzuto, ALSTOM Power, Inc.

Carl explained the concept of marginal heat rate to be used in thinking about efficiency and cogeneration. The concept is based up the idea that an industrial plant needs steam for process use in any case. The incremental amount of fuel that is needed to make steam at higher steam conditions is relatively small since most of the fuel is used to boil the water to make steam.

ENVIRONMENTAL COMMITTEE SESSION

Maxine D. Dewbury, The Procter & Gamble Company, Environmental Committee Chairman **Robert (Rob) Kaufmann**, Koch Companies Public Sector, LLC, Environmental Committee, Vice-Chairman

Environmental Committee - Maxine D. Dewbury, The Procter & Gamble Company

The minutes from the last meeting were approved. Maxine and Lisa Jaeger will combine to make presentations until the other speakers arrive.

Boiler MACT Current Cases - Lisa Jaeger, Bracewell & Guiliani L.L.P.

There are 4 cases that have been held in abeyance pending the issuance of a final rule by EPA. There is a completion case claiming that EPA did not complete its obligations under 112(c)(6) of the Clean Air Act. Oral arguments will be held on Sept. 12, 2012. The final reconsidered rules were sent to OMB on May 18. It is expected to be in the federal register in July, 2012. Petitions for additional

law suits would be due by Sept., 2012. Issues from the existing law suits will remain in play. Any new law suits will be in addition, although some may be combined. The completion case will likely be decided by early 2013. The Boiler MACT decisions are likely in 2014. Since the rule was first issued in 2011, the compliance date is 2014, with a possible 1 year extension to 2015. If there is a modification to the compliance date in view of the new proposal, it could possibly be 2015 with a 1 year extension to 2016.

Key Issues Activity - Lisa Jaeger, Bracewell & Guiliani L.L.P.

Once the rules come out, key issues will need to be summarized and distributed quickly. The Bracewell & Guiliani L.L.P. extra net will have the EPA version when it comes out. For each issue, someone will be assigned to review the new rule and provide a summary on the impact. The list of topics include the floors and the standards, the specific aspects of the definition of fuel, compliance obligations and dates, achievability, start up/shut down, area source, energy assessments, curtailments, emissions averaging, monitoring and testing, work practice standards, and costs. For the definition of solid waste, there are legitimacy rules, additional fuels, and contained gases. An email work group will be created via sign up to turn this around quickly when the rule comes out. There are a handful of specific issues that have been communicated to EPA and OMB.

Area Source Requirements - Maxine D. Dewbury, The Procter & Gamble Company

The Area Source rules apply to all units that are not major sources. The existing source area source rules have been modified for solid fuel units. The compliance dates can be an issue. March 21, 2012 was the compliance date for tune ups for units subject to a work practice standard. By July 19th, the notification is due. Compliance dates may be changed in the reproposal.

CISWI Definitions - **Maxine D. Dewbury**, The Procter & Gamble Company

The rule defines traditional fuels as opposed to materials that might be considered a waste. If a material has been discarded, it can be processed to make it back into a fuel. This material has to meet the legitimacy criteria which includes heating value, value as a commodity, and low in contaminants. The last criteria has been defined as having a level of contaminants that is comparable to traditional fuels which the combustion unit is designed to burn. If any solid waste is burned at any unit at a facility, then the facility comes under CISWI rather than industrial boilers. With 189 HAPs, there would be a requirement of 196,000 self determinations about these criteria.

No one wants to be second guessed by EPA at some point in the future. Ingredients can also be burned, but there are 4 legitimacy criteria that must be met. Originally contained gas was defined as gas that was in a container when it was combusted. That has been changed. Gases that are in pipes could be considered to be contained. Changes that are expected where EPA has clarified certain definitions, a proposed petition process for alternate fuels, state managed scrap tires and resinated wood have been determined to be fuels, grouping of contaminants, and proposing biomass residuals and coal residuals as "traditional fuels".

MACT Floor Data - Amy Marshall, URS Corporation

It looks like there will be some changes anticipated from the figures that we saw in December and March. For mercury and HCl, all solid fuel units were lumped together. It looks like they will be using

a fuel variability factor and a separation of coal and biomass. Solid fuel mercury for existing units will rise from 3.4 lb/trillion BTU to 5.7 lb/trillion BTU. The new source limits did not appear to change much. Three new units made it into the floor calculations. Because these unit go to a common stack, the variability factor was reduced. For HCl, 6 units were added to the floor. These units lowered the calculation, but the variability factor brought the levels about back up to the prior level. The PM levels were bundled for coal, but not for biomass. This actually helped the stoker units, which reduced the total cost. The CO levels for fluid bed and stokers are still vary low (25 ppm and 19 ppm) For PC the level appears to have increased to 60 ppm (from 9). With the possible changes to the stack gas numbers, the cost estimate could down from \$14.3 billion to \$12.8 billion (of which \$5.3 billion is for coal units). If work practice standards were used for CO, these costs would be further reduced.

EPA Meeting – J.A. (Fred) Cleveland, Eastman Chemical Company

The meeting started with the good parts of work practices for gas and dioxin/furans along with the 30 day averages. The bad parts were everything else. For liquid fuel units, why not declare low sulfur distillate fuel as MACT and be done. For solid fuels, the EPA has the authority to use fuel variability in setting standards and did not do so. Only 1% of the units can meet the standards as written, which is not really acceptable. EPA cost estimates are low. Duct injection is not a silver bullet. Scrubbers and other equipment will be needed to meet the standard. For CO, why not adopt work practice standards for Industrial units as was done for Utility units. Emissions averaging was allowed for other MACT rules and should be allowed for industrials. For Boiler MACT and CISWI, sources should be allowed to be a boiler when not burning solid waste. For the definition of solid waste, more materials need to be classified as fuels (ie pulp and paper residuals). There is a need for an efficient, streamlined petition process for fuels.

On Area Source, the "no action" letter was disappointing. EPA's closing statement was the need to get a rule out and to craft a rule that would survive judicial review. The MACT Floor memo showed that some units get better treatment and some get worse. The question was why this memo went out ahead of the rule. One reason would be to defuse the industry response when the rule actually comes out. As there are still meetings with OMB underway, and the final rule is not out yet, there is still some opportunity to make a pitch to OMB about areas of concern. Some companies have scheduled meetings with OMB to make their case. Issues for OMB include achievability for liquid units, achievability for solid units, the CO issue, start up/shut down, CISWI (including fuel definition), and Area Source issues.

GHG Regulations - Maxine D. Dewbury, The Procter & Gamble Company

The EPA was supposed to modify the Tailoring Rule, thus lowering the threshold. However, in March, the EPA proposed to keep the threshold at 100,000 ton/yr. This level reportedly covers 67% of GHG emissions. In order to get the next 3%, the threshold would have to be reduced to 50,000 ton/yr. Some "streamlining" proposals were made including the use of Plant Applicability Limits (PAL) and Synthetic Minor classification. With the proposal for GHG NSPS, there is a risk that the threshold would revert back to 100/250 ton/yr for CO2(e). There is an industry group filing comments. A sign up sheet for "me too" comments will be sent around. States are beginning to pick up on this issue. The Tailoring is subject to a court case, the outcome of which is uncertain. If a plant is over the 100,000 ton/yr, Title V permit applications are due July 1, 2012. Plants have to determine their potential to emit.

NAAQS Update - Steve Lomax, Koch Companies Public Sector

The PM2.5 and 1 hour SO2 and 1 hour NO2 NAAQS pose significant challenges for permitting due to overly conservative implementation requirements. Ozone and PM2.5 standards are likely to be tightened. Secondary factors are now to be considered. The designations for the 75 ppb ozone standard were issued in April. There are 46 non-attainment areas. There were only 3 new areas. EPA has committed to evaluate ozone (and secondary PM2.5) impacts via PSD permits. EPA is planning a proposed rule on ozone in October 2013. The CASAC recommendation is 60 - 70 ppb. A level of 60 ppb would put most of the US in non-attainment. The Court requires EPA to propose a PM2.5 rule by June 14, 2012. The annual standard will likely be reduced from 15 microgram/m3 to 11 - 13 micrograms/m3. Condensable PM is now included for PM10 and PM2.5 emissions inventories, permitting, and standards.

For SO2, EPA requires SIPs by June 2013. The proposed guidance indicated that only areas with monitors and modeling would be considered to be in attainment. This was later designated as "non binding guidance". EPA subsequently suspended the modeling/monitoring approach in April. NGOs favor conservative modeling for all sources above a certain threshold (greater than 3000 ton/yr). For NO2, additional monitors are needed near major roadways and large cities. The next review is due in 2015. There is also litigation on the NO2 standard. Oral arguments were held in February. Ambient air monitoring is likely to become more important, particularly for SO2 attainment. These may be privately owned in order to demonstrate comliance.

Utility MACT and CSAPR – William (Bill) C. Campbell, III, AECOM Environment

There have been no changes to the technical aspects of Utility MACT (MATS) and CSAPR. Litigation still continues. States that had CAIR in their SIP plans are planning to substitute CSAPR for CAIR. CSAPR does not allow "opt in" provisions, so that will impact those that opted in under CAIR. CAIR is still in effect until CSAPR is finalized later this year.

Litigation Update - Lisa Jaeger, Bracewell & Guiliani L.L.P.

The MATS litigation started with White Stallion vs EPA. The case was docketed on Feb. 16th. Petitioners include 40 industry/trade groups, 21 states, and others. Intervenors (supporting EPA) are 18 states, 4 cities, and a number of environmental groups. New source developers have moved to sever new source issues and expedite the case as many need to start construction by April, 2013. The developers have to show irreparable harm and substantial damages. The motion has been fully briefed. There has also been a motion to separate NSPS issues from MATS. There is another old NSPS law suit that is in abeyance. Industry has suggested that the NSPS issues also be held in abeyance.

The PC MACT case is in abeyance until the rule is issued (in June). The NSPS GHG Cases include power plants and refineries. A proposed rule for utility GHGs was issued in April. Comments are due June 25th. The main NSPS case is still in abeyance. A project in Texas has already filed a case on the grounds that the proposed rule starts the clock for compliance deadline. On ozone, the briefing schedule runs through the summer. The PM2.5 rule remand calls for EPA to sign a revised proposal by June 7, 2012. There are still 4 GHG cases awaiting decision, as well as SO2, CSAPR, NO2, and ozone.

COMS QA Issues - Ann McIver, Citizens Thermal

In the comments that were submitted, EPA was asked to clarify federally enforceable standards for opacity monitors. Quarterly reporting was noted as burdensome. The zero alignment proposal was deemed unnecessary. Clarification of implementation language was requested. Comment efforts require both the identification of the problem and suggestions for fixing the problem.

RCRA Ash - Gary Merritt, Inter Power/AhlCon Partners L.P.

A sample letter was distributed to support the inclusion of provisions to declare coal combustion residue a non hazardous waste. There is a House bill that has passed. A companion bill is in the Senate. The focus of comments has primarily come from the utility industry and the coal industry. A major claim has been that classification under sub-Title C (hazardous) would basically kill all recycling and beneficial use. Under sub-Title D, the States would have jurisdiction. The States refer to coal combustion byproducts, regardless of the generation source. The States have regulatory programs in place and have been addressing these issues for more than 40 years. Industrials support a sub Title D regulatory approach that includes beneficial uses. EPA should have an oversight role. Congress should be strongly encouraged to support the amendment to the Transportation bill regarding the management of coal ash. The rationale has been that many bridges and highways have concrete that contains recycled ash. The Transportation bill is currently in conference. If coal ash becomes hazardous, many operational issues arise such as ash handling systems, baghouses (hazardous waste storage facility), ESPs, maintenance, etc. Comments should be sent to Lisa by Monday.

Government Affairs - Karen Neale, Hummingbird Strategies LLC

The Senate transportation bill currently has bi-partisan support. However, there is concern about adding "riders" to the Transportation bill. The emphasis has been the beneficial use of coal ash. It should also be pointed out that many older sites would become hazardous waste sites if coal ash becomes classified as a hazardous waste (ie universities). The industrial case is that the cost of manufacturing will increase with these costs to the point where plants become uncompetitive. Even the coal pile could become a hazardous waste storage facility. The main points are the increase in costs, the loss of beneficial use, the hazardous storage facility issue, the transportation of hazardous waste, and the available capacity of hazardous waste storage facilities. Certain recyclers have filed law suits against EPA to require classification under sub Title D.

The Senate bill on Boiler MACT is still floating around looking for a home as an attachment to a bill that "needs to pass". On the last attempt, there were 52 votes for the legislation, but a procedural move put the requirement at 60 votes. It is not clear that another "must sign" bill will come up in time.

> Next Technical Focus Group/Environmental & Energy Committee Meetings TUESDAY & WEDNESDAY, September 11-12, 2012

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