



Representing the Interest of America's Industrial Energy Users Since 1978

Environmental, Energy & Technical Committee Meetings

December 9-10, 2008
Radisson Hotel, Reagan
National Airport
Arlington, VA
(703) 920-8600

MINUTES

TUES-WED DECEMBER 9-10, 2008

CIBO DECEMBER 2008 COMMITTEE MEETINGS

Introductions, **Bob Bessette**, Council of Industrial Boiler Owners & **Bob Corbin**, CIBO Consultant

Bob gave the antitrust admonition. Bob Corbin introduced the new member from Ametek and guests from Solios and Intrinergy. Maxine Dewbury initiated the usual "round the table" introductions. The minutes of the September meeting were approved. Bob introduced Jim Eddinger of EPA.

ENVIRONMENTAL COMMITTEE SESSION

Maxine D. Dewbury, The Procter & Gamble Company, *Environmental Committee Chairman*
Ann McIver, Citizens Thermal Energy, *Environmental Committee Vice-Chairman*

Boiler MACT - **Jim Eddinger**, EPA

Jim covered the vacated Boiler MACT status and the new Area Source MACT. A facility is a major source if it emits either 10 tons/yr of any one HAP or a total of 25 tons/yr of all HAP. Minor sources are those sources that emit less than these amounts. A boiler can be part of a major source if the overall plant is a major source. The HAP rules require the application of MACT (maximum achievable control technology). For existing units, this amounts to the average of the best 12% of operating units. For new units, a floor based upon the best technology is used. Several MACT standards were litigated. The Brick MACT was vacated due to the use of "no emission reduction" floors. The Boiler MACT was combined with the Waste Incinerator MACT (CISWI). These standards were also vacated, first on the grounds that an incinerator is a unit that burns "any solid waste". Boilers that are burning such wastes are incinerators. Removing these units from the base of the best 12% changes the level of MACT. Further, several categories had a "no emission reduction" floor, which had been vacated under the Brick MACT. As a result, an Information Collection Request (ICR) was issued to obtain needed data on HAP performance and control options. Some 3000 units were requested to supply information. At this point, most of the responses (over 2500) have been received. A preliminary analysis of the data indicated that most of the data gaps were on oil firing. A second request to fill these gaps with test data is hoped for in January. There were enough boilers responding in enough categories (coal, oil, gas, wood) to calculate a MACT floor. For the very small boilers (less than 10 MMBTU/hr), there was little data submitted. This represents a potential data gap. For oil firing, chloride and mercury data were generally missing. The number of "alternative



fuels" reported was in excess of 500 (including ground up toilet seats). The EPA Office of Solid Waste is working on a definition of solid waste and fuel, so that the two can be distinguished. Surrogates will be used again (PM for non-mercury metals, mercury for mercury, HCl for acid gases, and CO for organic HAP). MACT floor calculations should be based on control technology or lowest emissions level. In the old standard, standards will be needed for small existing units burning oil and gas. The number of subcategories is still being debated, including the possibility of only having 4 subcategories based on fuel. For the Boiler Area Source Rule Making, the schedule is now the same as for the revised Boiler MACT. For these sources, Generally Available Control Technology (GACT) can be applied. Cost can be considered. These rules will apply to small boilers in such entities as hospitals, restaurants, schools, and commercial buildings. For mercury and polycyclic organic matter (POM), major sources will still need the MACT floor. The others can use GACT. The overall schedule calls for a final rule in the Federal Register on March 30, 2010.

Rob Kaufmann provided an update on the definition of solid waste. The AF&PA had a meeting with some of the working people from EPA OSW. The rule making is on the same schedule as the new Boiler MACT. As a result, the comment period on the Advanced Notice of Proposed Rulemaking (ANPR) will be 45 days after it is released (expected the week of December 15th). This is new ground for OSW as past focus has been on hazardous waste rather than non-hazardous wastes. There are a lot of issues involved, including RCRA, waste handling, etc. The ANPR is now at OMB. There have been stark contrasts in how various EPA staff view key issues. For RCRA, the key consideration is whether or not a material has been "discarded". EPA is concerned about "legitimacy" (i.e. sham recycling or sham processing). EPA is also concerned about "toxics going along for the ride" (more specifically PVC, lead paint, and treated wood). EPA is not planning to put RCRA class C on boilers. Discarded materials can be processed to become a usable product, or fuel. The staff is thinking about a minimum BTU content (5000 BTU/lb), which is probably not workable. Whole tires and coal wastes would be treated as wastes. EPA is aware of many state "beneficial use" programs where wastes become fuels, but EPA does not view them favorably. EPA would like comments on the implications of coverage under Section 129. EPA is unlikely to propose a waste/fuels list. Broad criteria will be proposed instead. Where distinctions are unclear, there may be "case by case" applicability determinations. If so, there will likely be many "case by case" requests, given the myriad of potential fuels being burned already. One comment would be to require EPA to have a published process for evaluating these requests quickly with the results posted on the web. EPA turf battles continue. It is unclear where the new administration will come out. The ANPR will not settle many issues. The ANPR may issue shortly with 30 days for comment.

Rob also reported on a MACT Hammer meeting with the Wisconsin DNR. There is a group that thinks that Section 112 (j) is self implementing. This would mean that Part 1 filings are due on 1/27/2009, with Part 2 findings 60 days later. They were considering asking for a joint part 1/part 2 application, but will now be severed. The idea would be to get EPA to "catch up" with Wisconsin. Wisconsin is not using the NACAA limits, but rather the limits that were in the proposed rule that was vacated. Potential CISWI sources would assume that they are still boilers. Forms will be available this month. It is still not clear that the issuance of a proposed rule would let states off the hook from citizens suits (rather than a final rule). One approach might be to come up with a revision to the settlement that would allow for harmonization of the EPA schedule.

The Hospital/Medical/Infectious Waste Incinerator NSPS and Section 129 Standards - Floor Methodologies proposal has issued. The methodology was developed by RTI for EPA. The floor was "re-determined" base on recent Court decisions. The data are from initial and annual performance



tests for 57 facilities. Data from each source were averaged for each HAP to develop a single emission value. The values were ranked, MACT floor averages were calculated, and variability evaluated. Percent reduction requirements from 1997 are gone (illegal?). Two options were considered: HAP by HAP with and without sub-categorization. For new sources, the source with the lowest average test result for each HAP. Take all test runs for that source/HAP combination and calculate the standard deviation. The limit becomes the average plus 3.09 standard deviations (99.9% confidence). For the existing sources the best 12% of the data is used with test runs to calculate the average and then the limit is the average for the lowest 12% plus 3.09 standard deviations. The opacity limit was set at 2%, which is generally lower than the accuracy of the opacity meters. Concerns might be that this method will be used for the CISWI or Boiler MACT rules, as there is not similar data for these units. Further, for biomass, limits might come out to be very low (as there is no consideration about interaction between HAP or between HAP and criteria pollutants). A sign-up sheet was circulated for a conference call on the ICR data. The newest version of the database is on <http://survey.erg.com/ss/wsb.dll/s/7g8d/>.

Litigation Update - **Lisa Jaeger**, Bracewell & Giuliani, LLP

There has not been a lot of movement on our cases. The NSPS is fully briefed and we are awaiting oral argument. We don't know why this is taking so long. On the PM case, the oral argument was held. We expect a decision shortly. On the CAIR rule, the DC Circuit is considering a request to rehear the case "en banc". No decision as yet. On CAMR, the Supreme Court extended the request for "cert" on the challenge to the vacature of the rule. The ozone NAAQS case is in the process of setting the rules for number of words, etc. Briefing would take most of next year so that oral argument would likely be in early 2010.

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

Gary pointed out that OSW came out with a definition of solid waste for RCRA purposes. This is different from the definition that is in the ANPR at OMB for the Boiler MACT. Legitimate recycle and legitimate fuel provisions are not deemed hazardous wastes. Material that remains under the control of the operator is not a waste. For legitimate recycle, the products need to have value and the contents are not supposed to have higher concentrations of HAP than the original material. A presentation was distributed at the meeting.

PGVP - **Lisa Jaeger**, Bracewell & Giuliani, LLP

A proposal for protocol gas verification was issued by EPA. A number of comments were submitted. EPA has addressed a number of comments. At the moment, there are no new comments. Lisa will alert us when activity picks up.

PS-17 - **Ann McIver** - Citizens Thermal

A notice has been posted in the Federal Register on performance specifications and quality assurance requirements for continuous parameter systems (PS-17). The comment period was extended to Feb. 5, 2009. There are some key issues concerning parametric monitoring and real time measurements. The issue is how often the parametric system has to be calibrated and how



much of a shut down would be required to do the calibration. This proposed rule impacts parameter measurements that infer environmental compliance. An example would be monitoring the pH of a scrubber loop or the pressure drop on a baghouse. If the pH monitor failed, the probe might be replaced and recalibrated. However, if the baghouse had to be checked, the unit might have to be shut down. A requirement to check the calibration on a quarterly basis, would cause the need to shut down 4 times per year, which would be unreasonable. A potential response would be that we don't really need this. However, if this persists, the scope is too broad, the frequency of calibration requirements is too high, the quality of the requirements is too extensive, and some parameters are not needed.

NSR Update - **Maxine Dewbury**, The Procter & Gamble Company

Nothing has happened on the EGU emission increase rule or the fugitive emission rule. They appear to be tied up at OMB, along with a number of other proposals. At this point, anything that is put forth will be subject to review and possibly change by the new administration.

NAAQS, CAIR Update - **Maxine Dewbury**, The Procter & Gamble Company

On the ozone issue the old standard had an 85 ppb standard and Section 185 had fees for severe and extreme non-attainment areas. Units that are 80% over their baseline year owe fees amounting to \$8400/ton. The highest 2 years in the last 10 years can be used to establish the baseline, according to EPA guidance. States can elect not to use the "2 and 10" process, but the stipulated base year in the language. California has elected not to use the guidance. There is a second guidance coming out. This will be a Section 172 E guidance. Additional options will be made available. Another rulemaking will be coming out this year reclassifying subpart 1 units into subpart 2. There is an anti back sliding rulemaking that is expected in the spring. These rules are in response to court decisions. Nearly every state had some reference to the CAIR rule that was vacated. The reductions that were supposed to come from CAIR will now have to come from something else. With the new 75 ppb standard, another rulemaking will come out in the first quarter. The primary standards come up for review every 5 years. The NOx standards come up in December 2009. The remaining criteria pollutants come due during 2010, including ozone. The likely starting point will be 65 ppb, which was recommended by CASAC for the current standard. Environmental groups are suing the EPA over the current standard. Background ozone tends to be around 60 ppb, especially in urban areas (perhaps 50 ppb in the forests). With the CAIR rule vacated, many states can no longer claim to be on the "glide path" for visibility. Thus units that may have been excused from BART are now back in play. Large units are now considered to 50 MMBTU/hr rather than 250 MMBTU/hr. The NESCAUM report will provide a basis for some of the states to recommend control options. These are all being driven by non-attainment for ozone and PM2.5.

There is a new lead standard that is more stringent. The significance threshold (for increase) is 0.6 ton/yr. State methodologies typically use emission factors to estimate lead emissions. This standard comes along with the NO2 standard due for review next December. On the test method for fine particulates, the EPA proposal for including condensables in the rules required a valid test method. Method 202 had some flaws that created "particulates" in the process. The inclusion of condensables in the requirement calls for a change in the permit limits that were based on only the filterable particulates. The method is being revised. As a result of this work, there have been changes to the rule and the preamble to provide justification for changing the permit limits. The new test method will be coming out in the spring. The new method uses a dry impinger. This method will still be a short



term solution. There are two other methods that are intended to be longer term methods. The old method created "additional particulates" by having a wet impinger that rapidly dropped the temperature of the gas sample and condensed a lot of water. This allowed gases to either dissolve in or react with the water, giving a higher level of "condensable particulate".

Bob Bessette pointed out that the NESCAUM report has Appendix A and Appendix B that gives the control technologies and the assumptions that were used for costs. Bob is looking for comments in advance of a meeting with NESCAUM on Dec. 16th. This input is important as states make decisions that might be based on this report.

CO2 Regulation/Legislation - **Rob Kaufmann**, Georgia-Pacific LLC

President elect Obama considers climate change as a high priority for his administration. He has indicated in speeches that the US should be a leader in taking action. He supports a comprehensive cap and trade program with an 80% reduction in GHGs by 2050 with 100% auctions from the start. His proposal would tie cap and trade to a \$150 billion "green jobs" stimulus program. He has stated that CO2 is a "dangerous pollutant". He supports a 25% national RPS by 2025 and a RFS mandate for 60 billion gallons by 2030. EPA has issues an ANPR that considers regulating GHGs under the Clean Air Act (CAA). Industry comments were generally totally opposed to regulation of GHGs under CAA. A few trade associations did make some suggestions that Section 111 might be the best alternative of all the provisions of the CAA. NACAA supported the use of the CAA, particularly NSPS and mobile source provisions. The NRDC, Sierra Club, et al have supported the use of NSPS. They have opposed NAAQS & MACT approaches. Their comments have suggested forward looking technologies as opposed to currently available technology. California and Connecticut have suggested an immediate endangerment finding and the need for EPA to take "immediate action". While legislation is desirable, it will take too long. EPA has a "legal obligation" to act. Massachusetts has suggested that a NAAQS program could work. A number of states attorneys general (along with some mayors and state environmental agencies) have written a letter suggesting that EPA should act, that NSPS, BACT, mobile source controls, and LCFS should be implemented. They claimed that the EPA has discretion to prioritize regulatory activities.

The GHG reporting rule is still at OMB. There are still several issues. The rule was expected to come out quickly under the new administration. Promulgation is unlikely until the end of 2009. This reporting rule is not a registry requirement (although it might be a first step). A registry rule would be required for a cap and trade program.

The regional activities have picked up. The Western Climate Initiative has a program goal of a 15% GHG emission reduction (from 2005) by 2020. The emission threshold for coverage is 25,000 tonnes/yr CO2 equivalent. The program coverage is industrial sources and utilities in the first phase and transportation and nearly everything else in the second phase. Each state would estimate a 2012 emissions rate (best guess). There would then be a declining cap. States must start with at least 10% auction of allowances, increasing to 25% by 2020. At this point, provisions for a price cap or safety valve are uncertain. A post 2020 program is unclear. Each state would have to vote to adopt the program. Early reduction allowances will be available for actions take between 2008 and 2012. Banking will be allowed. Borrowing is not allowed. Offsets can be used to cover up to 49% of reductions. Biofuel combustion is considered carbon neutral. Biomass combustion will be determined on a state by state basis. Reporting is at a 10,000 tonne/yr CO2 equivalent level. Combined heat and power presents a problem to the program. Third party certification is required.



The Midwest Governors Association (MGA) accord is very similar. The World Resources Institute and the Pew Center for Climate Change have been facilitating the formulation of these programs (which helps explain the similarity). The programs build on the prior efforts.

John deRuyter reported on the Dingell Boucher bill points of regulation. Electric generators are downstream producers. Petroleum or coal based liquids are upstream. Chemicals production are downstream. Local natural gas distribution operations are midstream. Combustion devices with over 25,000 tonnes/yr are downstream. Carbon sequestration sites are downstream. The acid rain definition of EGU was proposed. Compliance years would be staggered - EGUs would be 2012 and covered industrials 2014. Some others might be out to 2017. One allowance would be submitted for each equivalent tonne of CO₂. A penalty of an additional 50% of the allowance price would be instituted. Offsets can be internal or external (with perhaps different values). Allowance allocations had 4 potential options ranging from 50% auction up to 100% auction. Anyone can buy, hold, sell, trade, or retire allowances. Unlimited borrowing with 8%/yr interest of the following year allowances. Banking is allowed. For CCS, 2 - 5% of allowances would be dedicated to developing CCS technology, of which 25% would go to the industrial sector. Early action credits would be provided those that held allowances from one of the regional programs. There was no safety valve price limit. Rather a strategic reserve of 2.665 billion allowance would be held that could be purchased at some price during an "emergency". EPA would establish and operate a registry. There would be federal preemption of state programs. Efficiency measures would get 10 - 13% of allowances. An industrial energy efficiency program would fall under DOE. Industrial plant energy efficiency certification standards would be developed. Combined heat and power would come under energy efficiency programs. The CAA would be amended to add two new titles for GHG cap and trade and GHG registry. The GHGs cannot be listed as a criteria pollutant. NSR does not apply to GHGs. Title V permits would not be required solely for GHGs.

GOVERNMENT AFFAIRS SESSION

Karen J. Neale, International Paper Company, *Government Affairs Committee Chairman*

Energy and environmental issues for the 112th Congress include a new economic recovery stimulus package (energy, infrastructure, green jobs), another energy bill, climate, homeland security--facilities, water supply and quality, and possibly superfund tax. The current Congress is in "lame duck" session, working on a U.S. auto package and holding hearings on possible measures for the stimulus package.

In the December 9th CIBO Hill visits, we learned that large cap and trade legislation appears to be difficult to move right away due to the economic downturn. More likely would be a piecemeal approach starting with renewable energy and energy efficiency. Republican Members of Congress appear to be resigned to some kind of climate legislation; also, regarding energy measures there was some opposition to a federal Renewable Portfolio Standard (RPS) with preference for individual states. Some Members from coal states fear that a cap and trade system would be a big bureaucracy that would favor natural gas over coal. Many of the past climate bills are expected to be re-introduced, including Lieberman-McCain, Bingaman-Specter, Boxer, Alexander (electric-utilities only) and Voinovich (technology). The auto company rescue package is likely this week, after which Congress will adjourn until Jan. 6th. Then, a stimulus package would be prepared with the goal of being ready for the new President's signature on Jan. 21st.



During the session, there was a great deal of discussion highlighting high-level Obama Administration appointees for energy and environment positions. One observation was that California and New Jersey, known for strong environmental activism, are likely to be highly represented in top positions, such as Carol Browner of N.J. as White House environment/energy czar and Lisa Jackson of N.J. as EPA administrator. Also, there is the White House Congressional liaison, Phil Schilero, who formerly was top staffer for Congressman Henry Waxman of CA, and the head of the White House Council on Environmental Quality, Nancy Sutley of CA. At the same time, both the House and Senate committees for environment will be headed by Members from California now that Waxman has won the chairmanship of the House Energy and Commerce Committee (defeated long-time chairman John Dingell of MI), and Senator Barbara Boxer will retain the chairmanship of the Senate Environment and Public Works Committee.

From a strategy point of view, information exchange, education of staffers, legislative input, and coalition participation are key elements of any approach to Congress and the Administration. The Obama transition team is collecting information and input in preparation for the changeover in January. In terms of CIBO's agenda, promoting combined heat and power in a timely manner and updating our position on renewable portfolio standards are the two main action items. Also discussed was a possibility of CIBO pushing for legislation that prohibits regulation of GHGs under the current Clean Air Act.

ENERGY COMMITTEE SESSION

Frederick P. Fendt, Rohm and Haas Company, *Energy Committee Chairman*
Robin Mills Ridgway, Purdue University, *Energy Committee Vice-Chairman*

Gas Market Forecast - **Kevin Petak**, ICF International

The natural gas markets are tough to call. It takes some time to bring new production on line. Once the capital has been spent, the tendency is to sell the production in order to recover capital costs. During the 90s, natural gas production that was being developed from the late 80s and early 90s came on stream. Around 2000, the supply and demand came into balance and a scarcity type market developed. In this type of market, supply disruptions (like hurricanes, crises, etc.) cause serious price spikes. Prices have since decreased significantly due to the economic recession. Prices are declining at the moment. Nevertheless, there is still a "scarcity" in the sense that supply is not really increasing. When the economy recovers, demand for gas will increase again and new supply is not available to really depress the price. Volatility demonstrates that tight supply/demand balance has been in place. In the long run, new supplies will be needed to meet demand growth. The forecast is based on a steep drop in the economy in the first quarter of next year with the economy recovering in the second half. The refiner's acquisition cost of crude (RACC) is still dropping, but is forecast to stabilize and then go back up to the mid \$60/bbl. Carbon policy could be enacted in 2010. This would provide a stimulus toward gas and away from coal. New nuclear capacity takes a long time for approvals. Net electric demand increase will likely come from natural gas in the US as a result of permitting difficulties. The growth in gas generation will probably be moderate. A lot of the increase in generation would come from gas plants that are only at modest capacity. LNG is not forecast to bring in large quantities of natural gas. Pipeline projects have not been a major problem in the supply areas. In the "congested" areas, it has been more difficult. Unconventional gas from the Rocky Mountains and the mid continent shales has been increasing. Technology has been developed to tap these shales and has been successful. With today's technology and \$6/MMBTU



gas implies 500 TCF of gas supply to be developed. Below \$5/MMBTU, drilling stops and producers don't develop adequate supply. Thus, it is not likely that there will be a return to the 1990s price level. The storage capacity in the gas pipeline makes the US somewhat attractive to capture LNG. However, relative pricing often makes the EU more attractive. Longer term pricing is expected to be on the order of \$7/MMBTU with the demand pressure from electric generation. Price volatility is likely to continue.

ANSI Steam System Assessment Standard/Guideline Development Efforts - Tony Wright, ORNL

Tony is looking for comments on the standards and guidelines that have been developed by a consensus committee headed up by ORNL. Tony worked on the DOE Best Practices Steam program for the last 10 years. There are 4 standards that have been prepared. The focus for this presentation is steam. The purpose is to provide a framework and operational steps for conducting a minimum, acceptable quality steam system assessment leading to the identification of energy and energy cost savings in industrial steam systems. The usage is intended to guide the performance of a system based assessment of a steam system to identify energy and energy cost savings opportunities and to demonstrate energy efficiency levels needed to obtain a certification for energy savings. A team was assembled: Dr. Richard Jendrucko and Dr. Greg Harrell were the principal writers. The team took about 6 months to arrive at a reasonable standard. The scope was to cover one or all of the steam systems in a facility, including process steam generation and external steam suppliers and users. The standards will be eventually issued as ANSI standards. For an on-site assessment, a team needs to be assembled and a lead identified. Adequate expertise and adequate communications are needed. Access to the key elements of the facility will be critical to the success of the assessment. Preliminary and background information needs to be assembled. During the assessment, a walk through and review with the specialists and operations personnel should be conducted. A final report and meeting will be produced. Potential energy savings ideas and projects would be identified. Some kind of rank order of these ideas would be prepared. After the standard was developed, a guidance document was prepared. The goal was to provide clarification of the standard content and requirements, suggestions on actually conducting the assessment, and identification of potential tools for use in the assessment. A "Texas pilot" assessment is underway (2 different facilities). The trial use period ends Jan. 19, 2009. There will be a public review of the draft standards. The final ANSI standard is scheduled for July or August 2009. There is a big effort going on about an energy management standard. There is an expectation of an ISO standard (15,001?). This standard would apply to how energy was managed. There is a draft report out from DOE on combined heat and power that will be sent to Congress. The document is on the DOE website. The impacts of increasing the percentage of CHP in the US are discussed.

TECHNICAL COMMITTEE SESSION

Harvie Beavers, Colmac Clarion, *Technical Committee Chairman*

Vincent M. Albanese, Fuel Tech, Inc., *Technical Committee Vice-Chairman*

ABMA Conference - **Randy Rawson**, ABMA

ABMA is planning on resurrecting their technical conference on boiler technology. With the economic crisis, this year's planned conference will likely be cancelled. One of the topics was to be biomass firing. If there are some problems on the owners' side, ABMA would consider setting up something



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on a lesser basis. CIBO is considering a 4 hour block of time either in front of, or after the committee meetings.

Next, Energy, Technical & Environmental Committee Meetings

TUESDAY & WEDNESDAY, March 3-4, 2009

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