

CIBO 32nd Annual Meeting

October 20 – 22, 2010
Williamsburg, Virginia

I. Operations Session Opening Remarks – John C. deRuyter, E. I. DuPont de Nemours & Co.

John introduced the new members and guests in attendance. The usual round the table introductions were done. John pointed out that this meeting provides an opportunity for the membership to help shape the direction of CIBO for the coming year. This year, the theme is working together for energy, environmental, and economic survival, growth, and sustainability. The trend for additional regulations continues unabated. The number and volume of new regulations has increased by more than 30% in recent years. CIBO is uniquely positioned to help members address these energy and environmental issues. The combination of active members (owners), associate members (suppliers), university members (owners), and now the small business members (owners), provides a unique cross section of membership that can bring focus to these issues. The staff continues to perform well. The financial condition is stable. There will be no dues increase for next year. However, there will be a need for contributions to the special projects fund as there will be a major effort on Industrial Boiler MACT and other regulations during the next year.

II. Membership – Robert (Bob) Corbin, CIBO Member Services Consultant, Candler Marriott, CIBO and Denis Oravec, Automation Applications Inc, LLC

Bob pointed out that membership pursuit is a full time job and is everyone's job. Several years ago we reached 100 members. The challenge is to retain members and grow by staying relevant in a constantly changing environment. Candy reported that we now have 114 members. We gained 17 new members while losing 4 members (3 associates and 1 university). We also have 5 new members for 2011 already. Bob pointed out that we continue to use our recruiting process and our retention process. Our retention rate was 96% last year compared with our benchmark measure of 88%. We started Focus Group meetings, as suggested by the membership, and will continue those into next year. There will be a session on Friday to prioritize topics for next year. We implemented the Small Business marketing plan and have our first small business member.

Denis presented the 2011 membership plan. The challenge of the coming years is sustaining membership in view of the changing landscape. There are severe economic pressures due to the slow recovery in the economy. The number of new environmental regulations is at an all time high. Energy security and cost volatility adds to the pressure. Natural gas boilers are at risk of coming under significant regulations. There is continued regulatory pressure on the use of any solid fuels. Potential member growth areas can come from owners that are newly impacted by the new rules. We have implemented the small business classification to attract some of those potential members. We are also

looking at owners that can no longer afford the more expensive organizations in their budgets. CIBO membership can offer a less expensive alternative. We will continue to advance the CIBO position in energy and technical areas. Our technical strengths, brought to us by our membership, represent a great resource for our members. In maintaining our communication and promotional activities we will continue to emphasize the benefits of CIBO membership. Recruiting and retention processes will continue. The Focus Group meetings will continue. Input from the membership on prospective candidates will be solicited.

Bob Corbin presented the results from the annual survey for 2010. Every August, a survey is sent to the membership. The results are posted on the CIBO web site. This year we had 44 respondents. While this level is above average, we would like to see more members responding to the survey. The number one benefit identified by the survey is keeping up to date on the ever changing regulatory, legislative, and policy issues. Networking and technical help is the next cited benefit. This has been consistent for the last 3 years. The top technical issues now include carbon management, along with energy efficiency. Things that could be added include round table sessions and bench marking.

III. CIBO Litigation Activities – Lisa Jaeger, Bracewell & Giuliani, LLP

Lisa reported on the on-going litigation, up coming litigation, and the outlook. Realistically, everything that EPA is working on will end up being litigated. The first case is the on-going NAAQS/NSPS. In *New York v EPA*, CIBO supported the EPA in the 2006 rule. Oral argument had been scheduled. However, with the change of administration, EPA took back the rule and is re-writing it. The GHG portion was severed from this case in view of *Mass v EPA*. In 2006, the EPA stated that it did not have authority to issue NSPS for GHGs. The court agreed and severed the issue. The environmentalists have asked the courts to put the GHG issue back in the NSPS case. The court rejected the request. The environmentalists sent a letter to EPA threatening to file a motion in court to compel EPA to issue an NSPS standard for GHGs if no such standard was produced by Sept. 15. This date has come and gone. It is likely that further litigation on this subject will ensue.

The Ozone NAAQS came about in 2008. CIBO supported the EPA selection of 75 ppb as the ambient standard for ozone. The court order put the rule in abeyance until Nov. 1, 2010. With the elections coming up, it is likely that the new rule will come out Nov. 3, 2010. There has been a lot of Congressional activity on this rule. More litigation can be expected.

The SO₂ NAAQS standard proposed a 1 hour ambient standard and has promoted modeling, as opposed to monitoring for compliance. In this case, CIBO has joined a coalition opposed to this rule. Reconsideration/Clarification petitions have been filed. These have not been addressed as yet. The EPA has asked the court to extend the briefing schedule to January to provide time for this. There is a June 11 state attainment

designation deadline. There could be a stay of the deadline. That would beg the question for a stay of the rule.

The HMIWI MACT rule was challenged by the Medical Waste Institute. CIBO is in a Manufacturers' Coalition as an Amicus. Final briefs were taken on Sept. 17. Oral argument is scheduled for Nov. 16. This rule is important in that the methodology of setting the MACT floor will be at stake.

The PSD Johnson Memo was challenged by the Sierra Club. The case is in abeyance. EPA has redone its interpretive memo. CIBO was in a coalition supporting EPA. Overall there are now at least 5 cases related to GHGs. A number of organizations and legal foundations have challenged these rules. The issues in these cases overlap. These include mandatory reporting, endangerment finding, PSD interpretive rule, light duty vehicle rule, and tailoring rule. The DC Circuit Court will likely try to sort out the key issues and combine or separate as appropriate. There is a case before the Supreme Court claiming that GHG emissions were a nuisance to downstream states and that an abatement plan is required. There is also a petition that a 3rd party can sue another party over GHG emissions.

Going forward there are 6 potential cases with inputs required by the middle of next year. These include the Portland Cement MACT, Boiler MACT, definition of solid waste, CISWI, Transport Rule, and combustion byproducts. There is a lot of activity. Participation will be decided at the Quarterly Meetings.

IV. Treasurer's Report – Carl Bozzuto, ALSTOM Power

The organization cleared a small surplus (\$ 4 K) last year. We have budgeted for a very small surplus this year (\$2 K). The financial position is stable. Membership is growing. Attendance at this year's meetings has been good. There will be no dues increase. The additional litigation activity has caused a need for more funds for the special projects fund. The membership should expect more begging letters from the President.

V. President's Report – Bob Bessette, CIBO President

Bob pointed out that this is the first time, since he came to CIBO 15 years ago, that the survival of many industrial plants has come into question with the confluence of a soft economy, a heavy regulatory load, attacks by environmental groups, and a general anti business environment. CIBO continues its efforts to support the industrial base where energy, environmental, and economic issues come together. The staff has been great in getting things done. The conferences have been very successful this year.

VI. Nominating Committee – Chris Keuleman, International Paper

Nominees for the Board of Directors this year include Scott Darling of Alcoa (existing Board member) and Jay Hofmann (new member) of Trinity Consultants, Inc.. It was

moved, seconded, and voted to accept Scott and Jay on the Board.

VII. Annual Meeting Open Session – John C. deRuyter, E.I DuPont de Nemours & Co.

John opened the session with the first panel discussion on Assessing Business Risk in a New Political Environment. The panel consisted of Rich Galen (Mullings.com), Scott Segal (Bracewell & Giuliani, LLP), and Susan Dudley (George Washington University). Rich Galen made his forecast that the Republicans would probably take the House of Representatives, but the Democrats would likely retain control of the Senate. Many races are neck and neck and too close to call. Scott Segal gave his views on some of the key players in the election. There will be lessons to be learned from the election regardless of the accuracy of the forecasts. The Tea Party Movement represents a sea change in public attitudes. The lessons may include that “smaller government is better” and that “costs matter”. The movement is based on a “distrust of elites”. This movement sees “cap and trade” as a means to increase government overreach and to redistribute the wealth of the country. For the House Energy and Commerce Committee, the current chair is Mr. Waxman. If the House goes Republican, Mr. Waxman would step down. Joe Barton was the former Chairman. However, Fred Upton is the potential for chair. The staff would more likely be the experienced staff from Mr. Barton’s time as Chair. On the Senate side, the Environment and Public Works Committee could see some change if Barbara Boxer loses her Senate seat. Senator Carper could become the chair. If the Republicans take control, Jim Inhofe would become the chair. With regard to the Administration, there was an article in the NY Times about “Obama 2.0”. To that end, the President has issued a letter to the DOE, EPA, Dept. of Labor, and Dept of Commerce directing them to assist manufacturers in becoming “internationally competitive”. Never the less, Lisa Jackson has expressed her desire to head EPA for 8 years. She has stated that two key issues must be reflected in all that EPA does. These are climate change and environmental justice. Professor Susan Dudley reported on the federal regulatory development process. The foundation of the system is the 1946 regulatory procedure act. This act set up the public commentary process in order to be “transparent and accountable to the public”. The process starts with authorizing legislation. Twice per year, the agencies must publish their agendas. Draft proposals are created. There is executive review, including SBREFA and OIRA (Office of Information and Regulatory Affairs). There is a public comment period. Revisions are made. There is an OIRA review and then a final rule is published. Subsequently, there could be Congressional review or judicial review (law suits). Agencies have different cultures. Interagency review provides an opportunity for input relatively early in the process. This is where the small business administration could weigh in. The work load has increased. There have been 36 EPA significant regulations in the first 18 months for this administration compared to 16 significant regulations in the first 18 months for the prior administration. Review times have been shortened. This is partly due to the workload and partly due to the number of court ordered deadlines. OIRA looks for the need for regulation, the alternatives, the problems with assumptions, costs, effectiveness, benefits, the quality of the supporting information, unintended consequences, and distributional effects. The Office of Management and Budget falls under OIRA. While these meetings have to be

scheduled and short, other agencies and administration officials can be contacted more informally. The comment period is key to setting the record. The agency is supposed to consider the comments and respond. A revised rule is then proposed and another interagency review is held. Once this review is completed the rule can be published in the federal register. At this point, the Congressional Review Act of 1996 allows Congress to disapprove of a rule. This has been invoked only once. Finally, there is judicial review, which is implemented by law suits. While this process has increased the transparency of rulemaking to some extent, there are issues. Agencies tend to have tunnel vision about their particular issues. Congress is not really accountable for the rules. They can pass rather sweeping legislation without figuring out how it would work. The agency then has to come up with the rules to make it workable. One proposal has been to modify the Congressional Review Act to make it a requirement that Congress review and approve any significant rule making (as opposed to optional review). Another proposal is to create an agency budget for cost impacts on the public as a result of the rulemaking.

VIII. Energy, Environmental, and Economic Survival – John C. deRuyter, E.I DuPont de Nemours & Co.

The panel consisted of John Paul (ACCCE), Gene Trisko (UMWA), and Don van der Vaart (NC DENR - Division of Air Quality). John Paul is the North Region Vice President of the American Coalition for Clean Coal Electricity. This organization supports “clean coal technology”. The original organization represented the rail companies and coal companies. There are now electric utility companies as well. Their mission is to preserve coal as an option for the generation of electricity. They are concerned about the anticipated Utility Boiler MACT, now due in March 2011. The utilities burned 994 million tons of coal in 2010, while the industrial sector burned 44 million tons. Another 20 million tons of metallurgical coal was used for steel making. The current coal fleet has a nameplate capacity of 337 GW, or nearly 1/3 of generating capacity. This fleet provides nearly 50% of all electricity generated in the US. The EPA Acid Rain program and the NO_x SIP call allowed for emissions trading, which concentrates controls on the largest and most efficient units. Older, smaller units survived by over controlling the larger units. Many of these older units are at risk if the Utility Boiler MACT is similar to the Industrial Boiler MACT. Even if these units could comply, the 3 year compliance deadline would be difficult, if not impossible, to meet. Credit Suisse estimates that some 60 GW will be retired as a result. In the near term, natural gas is being counted upon to replace this generation. However, the cost of gas is higher than coal. The 2011 delivered utility cost of coal is forecast to average \$2.19/MMBTU. The estimate for natural gas is \$5.24/MMBTU. Industrials purchase about 24% of the electricity produced. Utilities and Industrials can cooperate in trying to bring about a more reasonable rule in a more reasonable time frame. Gene Trisko has represented the United Mine Workers on a number of environmental issues for about 30 years, starting with the acid rain debate. He gave a labor view of the potential Utility Boiler MACT. Coal is among the most job intensive of electric energy supplies, including long supply chains. The UMWA has had preliminary discussions with EPA

staff. The unions want to work with EPA to minimize adverse impacts on jobs. The Hatfield's Ferry Coal Plant in PA had 451 automobiles in the parking lot more or less round the clock, representing the people working at the power plant. In addition, the mining, rail, and barge operations represent a lot of jobs. There are approximately 1,000 utility coal units in the DOE/NETL database. The projections are that nearly 200 GW out of 325 GW will have scrubbers in the coming years, which would leave over 100 GW unscrubbed. A screening study identified a number of units from 25 – 400 Mw that are more than 40 years old and without scrubbers. These units provide 15 – 25 % of the MWhrs generated. There are 433 coal units representing 56 GW with an average age of 52 years. Not all of these units will shut down. However, this was only a screening study. Gas and renewables were selected as likely replacement fuels. The estimated direct job losses were 54,000 jobs with an estimated 250,000 indirect jobs at risk. Credit Suisse came out with 60 GW at risk. Other studies have arrived at similar figures.

Approaches to reduce this impact include maximum use of sub categorization, reasonable averaging times, plant wide averaging, time extensions beyond 36 months, incentives for new advanced coal generation, and cooperation amongst the interested parties. Don van der Vaart, NC DENR - Division of Air Quality, gave some observations on dealing with regulations. Those involved include companies, state regulators, EPA, and environmental groups. Within companies, there are different entities that have different agendas. Corporate level management is very concerned about share price. In house environmental staff are overworked and have to cover too much ground. Internal counsel has too many different aspects of law to handle and are looking for the outside counsel and outside consultants to help them. Outside counsel has to operate in several different locations, and therefore tends to cite the "letter of the law". Regulators are not experienced in manufacturing. The need for a permit is usually established when a company need is identified. A project gets approved to build a facility as a result. The permitting agency realizes this. The facility needs the project. The agency does not. Environmentalists sue often. The EPA has paid over \$4 billion in attorney fees in the last 5 years. The Clean Air Act allows these suits and provides that EPA must pay the fees in the event that they lose. With limited budgets, companies tend to focus on the larger issues. This allows many smaller issues to get through unopposed. The EPA is in an activist position with an enormously increased budget. Industry strategy should establish Corporate Environmental Management as the expert taking the hard positions. The plant should be the more conciliatory group. More applications with more capacity than needed should be submitted. While Boiler MACT has taken most of the headlines, the SO₂ NAAQS is a major issue. The state is seeing small units at the 30,000 lb/hr level that cannot model out. The Tailoring Rule is another area that causes problems. Other issues coming up are Regional Haze, Environmental Justice, and Air Quality Management Programs. Make use of the Freedom of Information Act for your state DEP and Attorney General. Make comments on other plant permit applications. In response to one of the questions, it was pointed out that there is risk associated with the Tailoring Rule for a plant that emits 250 ton/yr of GHGs that does not go through PSD (on the grounds that the limit was 75,000 ton/yr). If the EPA loses that law suit on the Tailoring Rule and the limit goes back to 250 ton/yr, the plant could be in violation.

IX. EPA Update – Bob Wayland, EPA and Kevin Bromberg, SBA Office of Advocacy.

Bob Wayland gave an update on upcoming air regulations. These rules all stem from the new NAAQS. EPA's near term plans on these NAAQS include the ozone standard, now likely in Nov. The NO₂ implementation milestones run out to about 2021 or 2022. The SO₂ milestones run out to July 2017. The ozone attainment dates are heading for late 2017 for moderate areas. The power sector is looking at the Tailoring Rule, the Transport Rule, the NSPS, the Utility MACT, and the finalization of these rules in 2011. GHGs will not be done on the MACT time frame, but will likely get done. It is likely that there will be overlapping comment periods. The Transport Rule has SO₂ and NO_x reductions and, in some cases, ozone reductions. There are 4 separate control regions. The Transport Rule allows intra-state trading, but has limited interstate trading. This was in response to the court ruling that EPA did not take into account one state's emissions impact on another. SO₂ emissions have been reduced substantially over the years as well as NO_x emissions. The new rule achieves emissions reductions beyond the CAIR rule while addressing the court requirements. The integration of power sector regulations includes energy efficiency, timing matters, and health benefits. The integrated utility strategy provides a vision to build new units in the US that are clean and efficient, using state of the art pollution control equipment. Putting these together will help companies make sound business decisions in the context of environmental regulations that will be coming in the next 10 – 15 years. In addition to the Transport Rule, the Utility MACT, NSPS, and Water Issues need to be integrated. The Utility Boiler MACT rule needs to be finalized by November 2011. The Utility MACT will be similar to the Industrial MACT. The rule will be source specific. There will be no trading beyond the fence line. There will be a strict adherence to the language in the CAA. All HAPs need to be addressed. Limits will likely be set for the 5 pollutants that are in the Industrial Boiler MACT. The data needs are being supplemented with the ICR. The results are on the EPA website. On the NSPS, the standards will be revised only for new units and only for SO₂, NO_x, and particulates. GHGs will not be addressed as yet. Industrial Boiler MACT covers 13,500 units. The total capital cost was estimated at \$9.5 billion with annualized costs of \$3 billion. Job losses were estimated at 8,000. The EPA is aware of the estimates provided by the AF&PA, CIBO, and others about costs and job losses. Both of these organizations have provided detailed data to EPA and EPA will rerun their models to analyze the impacts. Comments that have been received include many on biomass boilers, the health based standards, and variability. The energy assessment and the impacts on NO_x were also major comment areas. EPA has recognized that optimizing both NO_x and CO is inconsistent with minimizing CO. The final rule will have to address these concerns and will likely have changes.

Kevin Bromberg of the SBA noted that the number of ads and reports about jobs and regulations has increased during the last year. Some of this is due to the elections. The interagency review process will start in November. Right now, the deadline for the rule is January 2011. With such a large rule with large impact, this does not allow enough time for interagency review. The SBA has suggested that 4 – 8 additional months are needed. There will be a SBREFA Panel for this rule. The panel will include OMB, EPA and SBA Advocacy. There will also be a panel for Utility MACT. Interagency Review is carried out under EX 12866. The SBA supports the use of the HBCA. The limits should be set

for a real boiler, not a mythical boiler (i.e. the best 12%, not the best of the best). The variability in boilers due to fuels, operations, designs, and testing needs to be considered. Work practices should be established for all gas fuels, as well as smaller boilers. The HBCA option is clearly allowed under the law (112(d)(4)). EPA is not allowed to use the benefits of SO₂ and particulates to discredit the HBCA. Limits vary rather dramatically with different statistical approaches. For GACT, the annual energy assessment requirement is overkill. A broad definition of fuel should be applied. Too many secondary materials could become wastes. This designation will only serve to put combustible fuels in land fills. Other recommendations include no energy audits, increased sub categorization (limited use boilers), and emissions averaging. A rule is needed, but not one that destroys so many jobs.

X. Energy Availability – John Anderson, ELCON

The conventional wisdom is that no new federal energy legislation will be enacted and signed into law in 2010. The House passed cap and trade bill is dead for this year. The calendar is very full with must pass bills including appropriations, defense, taxes, small business, etc. The possible exception is cyber security. This issue has received greater attention since the alleged cyber attack on the Iranian nuclear reactor. In the new Congress, the Democrats will want to continue to pursue the same objectives. Energy efficiency will gain in importance. The Republicans will advocate reduced oil imports, nuclear power, and, perhaps energy efficiency. The Republicans will not likely support cap and trade. There are many issues that will impact electric utilities and, subsequently, their customers (i.e. industrials). The FERC is pushing very hard to make green energy policies “friendly”. Renewables tend to be expensive and are intermittent sources. EPA is moving aggressively on many clean air issues. FERC appears to be pushing hard for new high voltage transmission lines. Ostensibly these lines will transmit distant generation (primarily wind) to load centers. This transmission would be expensive and raises the issue of “who benefits? and who pays?”. PJM proposed and FERC approved a postage stamp method of allocating costs for extra high voltage lines. In August 2009, the 7th Circuit Court over turned the approval, saying that it violates the “beneficiary pays” concept. The dissenting judge provided an argument that suggested that transmission reliability needs to be taken into account, even with a “beneficiary pays” approach. Energy storage concepts have received more attention due to the intermittent nature of renewable sources. FERC issued a Notice of Inquiry (NOI) on storage. ELCON commented that storage should be a part of generic commission policy on “resource neutrality”. On demand response, FERC initiated a NOPR that proposed paying the full marginal price (the same as generators) for reducing demand at peak periods. ELCON supported the proposal. The supply side has strongly opposed this proposal. Reliability is an issue. The NERC Rules and Procedures apply to those facilities that are on the compliance register. There are penalties for non-compliance (on the order of \$1 million/day). Performance metrics are being issued for ISO/RTOs to attempt to assure that these organizations operate in a manner beneficial to customers. The reach of NERC and FERC should stop at the meter. There has been a lot of talk about the “smart grid”/smart meters, etc. One recent estimate by utilities gave the cost of such a system to be on the order of \$1 trillion. EPA has proposed 42 “significant” regulations in the last

18 months. EPA is developing broad plans for GHG regulations. Utilities will be impacted by NSR, Utility Boiler MACT, Coal Ash, etc. NERC has recently raised concern that pending EPA rules will significantly impact planning reserve margins (cooling water rules, coal combustion byproducts, transport rule, Utility MACT, etc.). The Business Roundtable has proposed to Congress that they take away EPA's authority for 2 years (similar to the Rockefeller proposal of a 2 year moratorium on GHGs). The election results may remind Washington that compromise is needed. Recent reports from several different "think tanks" set forth two premises: (1) America will make little progress on energy issues as so little is spent on this sector and (2) alternatives are expensive. A number of suggestions were put forth. A recent court decision from the 7th Circuit Court gives some cause for hope. In the decision, the Court stated that the Clean Air Act does not authorize the imposition of sanctions for conduct that complies with a SIP that EPA has approved. Thus, EPA cannot enforce any pollution control requirements not included in an approved SIP. This raises the question of the SIP/FIP flap over the PSD permit requirements for GHGs in January.

XI. The Art of Communication in the New World – Robert Stowers, College of William and Mary

Communication is important as it impacts us every day. It is essential as it creates a mutual understanding between people. Mutual understanding is the key. What makes effective communication difficult are the barriers. Physical barriers include marked out territories, closed doors, noise, temperature, and distance. Perceptual barriers come about because we all see the world differently. Communication involves getting the other party to see what you see. Emotional barriers include fear, mistrust, and suspicion. Language issues include expressions, buzz-words, lingo, and jargon, not just internationally different languages. For communication, it is not so important what we know, but what the other person knows. Gender issues arise as men and women have different speech patterns. In the brain, the man's speech is located on the left side of the brain. Women's speech is located in both hemispheres in two specific locations. Women mix logic and emotion from both sides of the brain. Men are left brain thinkers. Cultural issues involve behavioral and custom patterns that define a group. There are generational issues including builders (veterans), boomers, busters (Gen X), bridgers (Gen Y), and net generation Z. There will be new generation (alpha) for those born after 2010. Communication has changed. Nuances have been lost. Body language has become less important. Technology has had the greatest influence on communication. Communication breakdowns are bound to happen. We crave community, but our schedules don't permit it.

XII. Government Affairs – Anthony Reed, Archer Daniels Midland Company; Karen Neale, Hummingbird Strategies; and Lisa Jaeger, Bracewell & Giuliani, LLP

Anthony Reed started the session with a rundown on the potential election impacts. Control of Congress is in play for this election. Four major political reports have forecast that the Republicans will gain control of the House. The Senate is more difficult, but the

Republicans are expected to gain in the Senate as well. If Republicans take the House, there will be a lot of legislation for show in the first 100 days. Without a change of leadership in the Senate, many of these will not become law. There will be a lot of oversight and investigation. The potential for gridlock is significant. Healthcare, the economy, jobs, and the tea party are major issues. The House Energy and Commerce Committee is run by Henry Waxman with Mr. Markey heading the Energy subcommittee. The non coastal representatives only make up 39%. With Republican leadership, the Chairmanship would be between Mr. Upton and Mr. Shimkus. The number of non coastal representatives rises to 52%. One of the approaches that the Republicans might take is to “defund” certain initiatives. This is due to the budget power of the House. The make up of the various committees will change to reflect the percentages of Republicans and Democrats in the two chambers. Thus, even if the Republicans do not take control of the Senate, there will be more Republican Senators on the various committees. Cap and trade legislation will not likely come forth in the new Congress, but energy bills will be forthcoming. EPA will continue and, perhaps, increase the regulatory activity, especially if Congress falls into gridlock. CIBO issues have included the Industrial Boiler MACT, RCRA Coal Ash, and the NAAQS. The big issue has been the Industrial Boiler MACT. Besides the usual Hill visits and meetings, a Hill briefing was done on the IHS/CIBO jobs report. EPA has indicated that they will re-examine their cost estimates based on this information and re-run their economic evaluations in view of this report. The RCRA Coal Ash concern centers on the potential treatment of coal ash as a “hazardous waste”. CIBO has requested RCRA subtitle D treatment (non-hazardous). Hill visits and Congressional letters have been organized. On the NAAQS, the issue is somewhat newer. Coalition efforts are just beginning. On the climate side, CIBO has weighed in on the definition of an EGU (particularly for cogeneration), renewable biomass definition, global competitiveness, and clean coal technology (preserving coal as a fuel via CCS, etc.). Going forward, the Government Affairs Committee requested input on prioritizing these issues for the next year or two. Industrial Boiler MACT, RCRA Coal Ash, and GHG Regulation continue to have high potential impacts on the membership. Renewable energy standards and NAAQS are also important. The Clean Air Transport Rule, Clean Coal, and Climate Adaptation will continue to warrant attention. Adaptation is being recognized as a consideration to deal with potential climate change in the future. The other “heads up” is on Environmental Justice, which has been identified by the EPA Administrator as a key goal for the future. One way or another, there will be a lot of new members of Congress and they will need to be educated on these issues.

XIII. Environmental Issues Panel – Rob Kaufmann, Koch Companies Public Sector, LLC

The panel consisted of John deRuyter (E.I. DuPont de Nemours & Co.), Robert Fraser (AECOM), Gary Merritt (InterPower/AhlCon Partners, L.P.), and Rob Kaufmann (Koch Companies Public Sector, LLC). John started off with a review of the presentation that was made to EPA at Research Triangle Park (at their request) on the IHS study. The key features of the presentation were the CIBO issues, the cost estimates, and the economic modeling. The issues were that work practices for gas were good and should be

expanded, the Health Based Compliance Alternative (HBCA) is necessary, there are data errors that need to be corrected, more subcategories should be used, many of the emission rates are not achievable over the load range, variability needs to be accounted for, and cost estimates are too low. As a result, regulated entities have no assurance that they can come into compliance. The final rule can be crafted to correct these deficiencies, account for the variability, maintain unit operability, save jobs, and still meet environmental requirements. For the study, the rule was evaluated “as proposed”. The first scenario identified the costs for the rule as proposed for units larger than 10 MMBTU/hr.

Scenario 2 used the HBCA to reduce the numbers of scrubbers required if this alternative was available. Scenario 3 added emissions limits to Scenario 1 for natural gas. The cost estimate was done using the database of units. Only capital costs were considered (not operating costs). The estimates were based on published reports, specific project costs, EPA reports and Fact Sheets, and actual BACT and BART analyses done for permit applications. Median costs were used rather than extremes. For Scenarios 1 and 2 about 1600 boilers and 200 process heaters were evaluated. Many units had some form of controls already. These were identified and no cost was added for that particular control (i.e. if a baghouse was already on the unit, no cost was estimated for adding a baghouse). This analysis was done for all of the units. In total, the EPA estimate (based on 1998 cost figures from the EPA utility database) was \$9.5 billion, while the URS estimate was \$20.7 billion. For Scenario 3, the cost goes up to \$39.3 billion. The differences start with EPA’s use of the outdated Control Cost Manual. Further, EPA did not really do a unit by unit estimate. EPA assumed only 155 units would need mercury control, as many units already had a fabric filter. However, most of the units in the database that had fabric filters failed to meet the standard. For dioxins/furans, the EPA assumed most units would not need activated carbon injection for controls. This is logically inconsistent. Most units don’t meet the standards. IHS Global used the IMPLAN model to do the economic analysis. A worst case scenario was used to estimate the potential number of jobs at risk. This approach was taken to avoid trying to figure out which companies could perhaps absorb some of the costs and which companies would go out of business. The jobs analysis estimated the number of direct jobs, indirect jobs, and reduced jobs. EPA commented that the study was limited in scope. This was acknowledged from the beginning. However, EPA didn’t understand that plant capital appropriations are done at the plant level, not at a gross economy wide level. This was an eye opener for EPA. Another EPA comment was that the study did not look at potential job increases from suppliers of equipment or from added O&M. If a unit shuts down, it does not buy any new equipment. Added O&M costs only lead to an increased likelihood that a unit will shut down. There were a number of questions as to how the capital costs were used in the model. The CIBO spread sheet had already been made available for EPA to use (they just didn’t know it). They have the IMPLAN model and will be looking at how to incorporate the CIBO data into their modeling. The difficulty is that EPA still has the deadline of Jan. 14th, 2011 for finalizing the rule. This deadline does not allow enough time for a thorough analysis.

Bob Fraser reported on the proposed NAAQS standards. Although Bob is not a dispersion modeler, his company does have such individuals. They speak a different language. During a permit application, the modelers work with the engineers in an

attempt to arrive at a system that can meet the requirements. The Clean Air Act requires EPA to revisit the NAAQS standards every 5 years. The EPA must determine which areas of the US attain, or do not attain, the standards. If an area meets the standard, the EPA is concerned about the area falling out of compliance and must prevent significant deterioration (PSD). For areas that are not in attainment, states must provide implementation plans (SIPs) that are designed to bring the area into attainment. This administration has issued new NAAQS for fine particulates, SO₂, NO_x, and ozone as well as proposed new standards for CO and very fine particulates. The new standards have been set very low. The historical modeling tools are too crude for the needed precision. Modeling predicts thousands of existing violations where none have been observed. Yet EPA is proposing to rely more heavily on monitoring. Monitored background data is not available. The significant impact levels (SILs) are set too low as they are no longer practical. Even trivial sources exceed the SILs. The interim standard has been set a 4% of the NAAQS standard. Emergency diesel generators have triggered the SIL levels in modeling. This result puts a source into a modeling domain that includes other plants in the area. Contributing 4% to someone else's problem is now your problem. These modeling exercises can become very large. Thus, even if a unit is not proposing a modification or expansion, it could come under someone else's modeling domain. If so, the units contribution will be assessed and the unit may be required to add controls. A local tavern has two fireplaces that consume one armload of wood in an hour. This would translate to 0.175 MMBTU/hr for each fireplace. AP-42 guidelines would provide emissions estimates for wood fired fuels. Good engineering practice would require a much higher chimney for these fireplaces. The modeling results show NAAQS violations on the main street by a factor of more than two. For NO₂, there is limited data. The 1 hour standard cumulative modeling domain would require finding all of the units within an 83 km radius that would contribute to NO₂ ambient concentrations. For SO₂, the tavern would have relatively little SO₂ emissions, as wood is a low sulfur fuel. However, the blacksmith shop nearby uses coal. If this unit is modeled, the tavern would have to be included and could contribute to the impact and thus require controls. Gary Merritt reported on the coal combustion byproduct rule. There are several proposals include subtitle C, subtitle C – special waste, subtitle D, and subtitle D prime. EPA may also be proposing to modify CERCLA to declare coal ash as a hazardous waste. The preamble says that the proposed rule excludes industrial units. EPA wants a federally enforceable rule. Subtitle D is left to the states. The EPA claims that the states have not done this properly. On the other hand, EPA had not proposed any rule, so the states filled the gap. The basic comment is that industry prefers subtitle D. The final rule must be clear on exclusion and applicability. Even if a facility is excluded by this rule, the states will likely include industrial units in their plans. Further, even if industrial units are excluded under subtitle C, EPA plans to regulate industrial units at a future time. If subtitle C is already in place for EGUs, then it would be hard to avoid subtitle C for industrials. There has been no evidence of leaching problems from coal ash. This would call into question a classification of hazardous waste. One alternative approach would be to use the leaching test to determine if the ash should be classified as a non hazardous waste. If so, appropriate lined ponds, impoundments, and land fills can be utilized under existing rules. If the test warrants treatment as a hazardous waste, then subtitle C would prevail. One of the issues surrounding the sub Title C approach is “stigma”. Industry is

concerned that tagging ash as a hazardous waste would virtually eliminate beneficial use of the ash, as no one would want to utilize a hazardous waste in their process. Further, there are issues associated with sites that have been using the ash. If ash is hazardous, the existing soil or wall board or highway would have to be cleaned up. There are also liability issues. An initial draft of CIBO comments will be out next week.

Rob Kaufmann reported on GHG permitting developments. In January, some stationary sources will have to get PSD permits for GHGs. There could be significant delays or even a construction ban as states try to address this new program. The tailoring rule raised the significance threshold to 75,000 tons/yr. The major source criterion was raised to 100,000 ton/yr. Regulation of smaller sources can be deferred up to 6 years. Even at this level, the PSD workload at the states will be more than doubled. Initially, sources that are already subject to PSD for criteria pollutants are in the PSD program for GHGs. By July, any facility that qualifies as a major source or PSD level would be subject to the rule. If there is a final PSD permit by Jan. 2, the permit does not have to be re-opened. EPA requested that states report on their capabilities to implement a GHG PSD. In response, 13 states indicated that they were not ready to implement a program. EPA has stated that it will issue a FIP for such states. EPA plans to finalize the rulemaking on December 1. EPA will issue a SIP call on Dec. 22 for those states. Until a FIP is in place or a SIP revision is approved, states will not be able to issue PSD permits. There is also some litigation risk, as the rule is being litigated. If EPA loses the tailoring rule, the 100 ton/250 ton/yr thresholds will apply. Facilities that did not apply for a PSD permit as they were less than 75,000 ton/yr could have a liability at the lower thresholds. The permit process requires top down BACT. BACT for GHGs is not defined. EPA plans to update the RACT/BAC/LAER Clearinghouse. GHG BACT guidance is now at OMB. There will be short comment period after the OMB review. EPA will only take comment on the technical aspects of the proposed guidance. Energy efficiency projects must be quantifiable, verifiable, and enforceable in order to get offset credits. Cost effectiveness thresholds are not yet established. Projects required by Industrial Boiler MACT could increase GHG emissions. This could present a problem for GHG BACT.

XIV. Energy Session – Fred Fendt (The Dow Chemical Company), Fred Cleveland (Eastman Chemical Company), and Scott Darling (Alcoa, Inc.)

Fred Cleveland pointed out that overseas competition is one of their primary concerns, as well as the cost of growing and doing business in the US. On a daily basis, Title V compliance, CEMS, CAIR reporting, and budgets consume attention. For strategic planning, all of the regulations that are coming along make this difficult. The uncertainty of it all is the chief concern. It is difficult to request capital funds for projects that may or may not solve the problem. The capital budget is generally broken down by site and product. Every dollar spent on compliance is a dollar that is not available for investment in the business. Now, the risks are much higher. The costs are not known completely (since litigation may change the rule). Compliance is not assured. Asking management to commit vast sums of scarce capital to comply with a rule that perhaps can't be met and is a moving target tends to drive management to think about moving production elsewhere.

Fred Fendt summarized some of the trends on the energy side from his experience and some of the issues on energy efficiency from DOE programs. Some 30 years ago, plants were looking at building new processes for new products. This kind of ended in the 80s and 20 years ago, better operations was the major influence. In recent years, “shut down compliance” has become the focus. DOE has been working on a certification program for energy efficiency. The goal was to provide a means for certifying energy audits that could be done to identify and promote energy efficiency projects. Four assessment standards were developed that are now ASME standards and guidelines have been developed for each. Using these standards, a facility can then perform an energy assessment and then apply for a certification. There is now an ISO standard (50001) that can provide an independent evaluation that the assessment was carried out in conformance with the standard. There are also self certification and audit type certification (i.e. documents sent to a 3rd party to check). In the last 6 months, DOE has reorganized somewhat. DOE wants to license the certification process to certain firms that can certify audits and retain control of the process. This may be the result of the EPA proposing to require energy audits for MACT and GACT.

Scott did a parody on “Jeopardy” with a variety of environmental questions. Alcoa has spent \$250 million for new scrubbers on their pulverized coal fired boilers. In the modeling studies, these units have to run at 98% SO₂ removal 98% of the time in order not to trigger the SO₂ SIL. The number of Al smelters in 1980 was 33 and is now 8. Some of those are expected to shut down.

XV. Technical Committee Issues – Bob Corbin (CIBO), Jay Hofmann (Trinity Consultants, Inc.), Vince Albanese (Fuel Tech, Inc.)

Bob noted that we started the Focus Group meetings last year and held sessions in 2009 and 3 sessions so far in 2010. A list has been developed with potential topics for sessions for next year. On the list with multiple suggestions were advanced technologies, BMACT costs and compliance, fuel analysis, total boiler water systems, and continuous emissions monitoring. One of the suggestions was going through a case study on one of the DOE energy assessments. Another issue was the beneficial use of fly ash, particularly in those cases where activated carbon is needed for mercury and dioxin/furan reduction. Fuel uprating may be another topic. Back end optimization may have a wider variety of applications in the industrial sector. Another possibility might be the issue of contaminants in the gas stream that impact the performance of some of the control technologies. A suggestion might be a brainstorming on how efficiency might be worked into BACT effectively.

Jay gave an update on the recent changes to the Texas State Implementation Plan (SIP). Recently, EPA disapproved a number of portions of the Texas SIP. In Texas, the actual data for NO₂ on an annual average basis is well below the old standard of 53 ppb. Most of the numbers are in the teens and below. On a one hour basis, there are a few areas that are in the 52-65 ppb level. For the 8 hour standard, the Dallas Fort Worth area came out above the standard at 84 ppb. Houston showed figures that would be in attainment.

Texas had a unique program for HRVOC emissions from 4 key industrial sources (fugitives, flares, process vent, and cooling towers). Controls on these sources provided for most of the reductions in the Houston area.

Vince Albanese talked about some practical issues about GHG control technologies. First of all, there is no such thing as CCS. There are carbon capture technologies and there are sequestration issues. The pollution control equipment suppliers are working on capture technology. Sequestration has a lot of regulatory, legal, and liability issues that need to be addressed that are not technical issues. With regard to commercial availability, a commercial demonstration has to be at the 200 – 300 Mw level and capturing the majority of the CO₂. Commercial availability will be when there are 6 – 8 commercial demonstrations in operation. NSR has been a barrier to efficiency improvements to operating units. Plants that would use capture technologies need to provide maximum control of SO₂ and NO_x. Heat transfer will have to be optimized. Adequate transformer area and switchyard capacity needs to be provided. Optimizing cooling systems, condenser vacuum, and access to all heat recovery units needs to be provided. All aspects of efficiency need to be maximized. Space needs to be allocated.