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Technical Focus, Energy & Environmental Committee Meetings

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M I N U T E S

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TECHNICAL FOCUS GROUP SESSION

Mike Zebell, Environmental Resources Management, *Technical Committee Chairman*
Todd Young, HDR, *Technical Committee Co-Chairman*

The topic for this Focus Group is *Integrating Energy and Environmental Systems for Implementing Sustainability*. There are two main systems provided by the International Standards Organization (ISO). ISO 50001 applies to Energy. ISO 14001 applies to Environmental. These provide protocols for certification that certain procedures and standards are being followed by an organization.

One major driver for "sustainability" has been the climate change issue. Currently, this is being driven by public pressure. There are 17 elements of sustainable development. The reported changes in climate activity are being attributed to human activity. Weather events are being attributed to climate changes. There are numerous law suits charging companies with knowingly increasing GHG emissions which are deemed to be climate forcing. Regardless of the current regulations relative to GHGs, public perception and public pressure continue to push companies towards "doing something" about climate change through third party certification.

This certification can simplify communications concerning corporate commitment to managing internal costs and risks. The Carbon Disclosure Project, Global Reporting Initiative, and the Dow Jones Sustainability Index provide a framework for reporting such data and information to investors and the public. For the Carbon Disclosure Project, 827 investor groups are requesting data from the project for reporting purposes. Thus, business risks are growing as the potential for litigation and financial impacts caused by negative perceptions on sustainability and climate issues.

The Carbon Disclosure Project gives a letter grade (A through F) that readers can readily see. Having a basic system with reporting provides roughly a C grade. Additional targets and commitments help to improve the grade. Goals include emissions reductions, science based targets, internal carbon prices, renewable energy use, low carbon products and services, and value chain engagement.

The science based target initiative started in June, 2015. Some 355 companies have formally joined. Over 3 companies are reported to be joining each week. Over 70 companies have

approved targets. Energy efficiency, energy substitution, and market approaches are being identified for potential targeted goals.

There is a task force on Climate Related Financial Disclosures, which can be related to Sustainability Accounting Standards. Questionnaires have been developed for 4 industrial sectors including the energy sector (coal, oil and gas, and utilities). The potential impacts on companies are the cost of capital and access to capital, as well as law suits. Bob Bessette noted that coal companies cannot get traditional loans from banks and must find other means of obtaining financing for their projects, which is more costly.

Mike Zebell, Environmental Resources Management, reported on the ISO 50001 for **Jim Haried, Environmental Resources Management,** who was ill and could not attend. The US DOE promotes the use of ISO 50001. For the Industrial Boiler MACT Energy Assessment requirement, the US EPA considered those companies that were ISO 50001 certified to have satisfied that requirement. The system is intended to reduce overall energy costs and reduce GHG emissions. The implementation of the management system is similar to any process. The major difference is that an external audit is used to confirm that the standards are being followed and that management is committed to continuous improvement.

The certification provides immediate communication to the outside world that the company is "serious" about energy management (and control). Mike has done over 50 energy assessments for Boiler MACT compliance. Most companies had some kind of energy management program. Had they chosen to implement ISO 50001, they could have avoided the cost of the Boiler MACT audit.

In many cases, there are global causes for ISO certification. Many EU countries require ISO certification. Companies with EU operations, tend to apply the standards across their operations. Targets (or key performance indicators, KPIs) will need some kind of measurement or metering system in order to be able to pass an audit that will confirm the attainment of the target.

Continuous improvement is a key goal. This requires monitoring, measurement, and verification of target attainment and new goal setting. Training and operational control are additional aspects of the system. Institutional knowledge (ie experience) can have a significant impact on operations. Knowledge management can be an important part of maintaining good operations. At one office complex, a 30% energy savings was realized through the implementation of ISO 50001.

Andy Polzin, Barr Engineering Company, reported on implementation and lessons learned of ISO 14001 Environmental Management Systems. The ISO standards are all based on the same management practices and principles that promote good management systems. The ISO 14001 standard was first issued in 1996. Implementation was somewhat slow in the US.

The US already had a well-defined regulatory system for environmental compliance. With limited data on the benefits of applying the ISO standard, it was difficult to assess the benefits of implementation. The auto industry drove the major implementation by requiring their suppliers to be ISO certified.

A management system is a set of inter-related elements of an organization that provides for setting and attaining objectives for good performance. ISO is moving towards standardizing the platform for all of their standards so that integration of the standards will be easier. The "context" of the organization should consider the needs and expectations of all relevant interested parties. Compliance obligations are broader than regulatory obligations. These might include issues such as noise, traffic, detectable odors, etc. Leadership received additional focus in the 2015 version of the ISO standard.

As transparency and accountability are receiving more attention, management leadership becomes more of a necessity. An environmental policy statement is required. Planning generally takes the most time. Consideration, analysis, and identification of risks, opportunities, environmental aspects, and compliance obligations is done in the planning stage. Then objectives can be set and the means to achieve them identified. An organization must provide support (ie resources) for the attainment of the objectives and obligations. Internal and external communications need to be managed. Documented information needs to be managed. Processes will be needed to meet the requirements. Emergency response needs to be considered and prepared for.

Performance evaluation requires monitoring and measuring the environmental performance. Periodic internal audits of performance should be carried out. Top management should periodically review suitability, adequacy, and effectiveness of the EMS. This performance evaluation phase is also a time consuming part of the process. Ultimately, performance improvement is needed. This includes not just non-conformances but also continuous improvements.

Jay Wrobel, DOE, reported on the DOE's North American Supply Chain program. The DOE Technical Assistance Partnerships (TAPs) are up and running again. These partnerships are available to help promote CHP installations. They provide end user engagement, stakeholder engagement, and technical services. The web site is www.energy.gov/chp. DOE is developing a catalogue of packaged CHP systems for smaller sized applications. The compliance to the standard. It has most of the nuts and bolts of the program, but without the external audits and requirements.

Data collected by DOE from companies that have used ISO 50001 showed that these companies attained an average 4.5% improvement/yr in energy efficiency. Other company data showed energy efficiency improvements that were double those divisions that did not have ISO 50001. The DOE goal is to realize the benefits software tools to provide a suite of resources to support continuous improvement. The plan is to support enterprise or multi-facility adoption.

The DOE will recognize the organization as being "50001 ready". The 3 major steps to become 50001 ready include the start of implementation, the analysis of energy reductions, and the 50001 ready recognition. The 50001 Ready Navigator is an online tool that companies can use directly to go through the 25 tasks that lead to the culmination of recognition. With the Navigator, it is possible to go through this entirely by the plant itself.

Companies that are already doing something with regard to energy management are already part way done. This tool allows them to bring this work together into a full system so that

continuous improvement can be identified and implemented. There is an internal audit, but no external audit. This approach allows the plant to maintain its confidential business information. There is no listing of companies that are 50001 certified. The DOE will maintain a list of companies that are participating in this program so that they can be recognized.

There are currently 550 companies that are in the system. There is a web page at www.energy.gov/50001Ready. The navigator can be reviewed. After that, the interested party can sign up and get started. Canada and Mexico are adopting 50001 Ready. The Commission for Environmental Cooperation is looking to develop a pilot program to work with companies that have facilities throughout North America. The program is called the North American Supply Chain Energy Management Program.

The "ask" is for a company to work within this program for a year. Part of the program involves training, which costs $20 K. The CEC will pay for most of this cost and charge only $7.5 K per facility for the training. The idea is to get an OEM to involve its supply chain in the total program. DOE currently has 3 companies involved and is looking for a couple more companies to become involved.

DOE also has a Superior Energy Performance (SEP) program. There is a web page at www.energy.gov/ISOSEP. The ISO certification states that the facility has an energy management system. The SEP program verifies the savings achieved through the 50001 system. The next version of this program hopes to streamline the verification process. There is also a scorecard system that has silver, gold, and platinum levels for additional activities that are done by the facility. A point scoring system is used to accumulate points leading to the various levels of achievement. All of these programs are self-attested. DOE does not police the programs, but only recognizes facilities that use the system.

ENERGY SESSION

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

Denis Oravec, AAI-JMP Engineering
Robert (Bob) Corbin, CIBO Member Consultants

Bob Corbin introduced Montrose Environmental as one of our new members. Neundorfer and The Steam Expert are two companies that are guests at this quarter's meeting. Bob initiated the "round the table" introductions.

Denis Oravec noted that the Membership Committee looks to retain existing members and attract new members. During our membership meeting, it was pointed out that at the present time, the regulatory situation has hit a bit of a lull with the new administration. That doesn't mean that our members don't have any issues. It is just that no one big issue like Boiler MACT is in front of us. Issues include energy efficiency, CHP, fuel flexibility, water, GHGs, and permitting. Citizen and eNGO activity is on the increase. Denis requested help in fleshing out these issues from the members.

Denis was asked to substitute for **Fred Fendt, The Dow Chemical Company** on the Energy Accounting Drivers and Actions for Sustainability. Dow has announced that they will be part of a program to develop accounting standards to report activity relative to energy and environmental issues. Sustainability Standards has a web site at FSB.TCFD.org.

One of the key issues will be data integrity that will be needed to assure that the data is accurate. The TCFD has recommended a period of 2 years to prepare for these reports. About 250 companies have signed on to this organization. About 2/3 of the companies are financial organizations that analyze, evaluate, and rate our companies. On the manufacturing side, the chemical companies and the auto companies are significantly involved. In addition to standards for reporting, there will likely be metrics and targets. An example might be the percentage of products that are low carbon. A baseline year will be proposed. This baseline may not be the one that we are currently using. One issue is intensity as opposed to absolute emissions for things like GHGs.

Higher Logic Update – **Monica Vale, Higher Logic**

Monica started with the sign-in to the Higher Logic Site on the CIBO web page.
< http://community.cibo.org/home >. She was able to walk the members through accessing communities, setting preferences and notifications, uploading information, participating in community discussions, posting questions and finding information on the site on how to do all of it via the "Help/FAQs" under the participate tab:
< http://community.cibo.org/participate/faq >. She indicated that we have updated the CIBO Members site access with all members having access to the "Members Only" Website. These members have the ability to enter the CIBO Community site to adjust participation. Some members have been prepopulated into CIBO existing committee communities. If you are not part of a community and would like to be, a simple check mark may be all that it will take. As we move further into this year CIBO is planning to migrate its basic email committee notification activity to the interactive CIBO Community platform. Because this is a highly secure system, With multiple levels of security, someone must have a CIBO Members Only Login ID and password. At that point a person can be granted access to the CIBO Communities, a totally separate secure system. On your first venture into the CIBO community system, you will have to "Read" and agree to the "Community Rules & Etiquette and privacy Guidelines. While the Communities are self-policing, Community Administrators (leaders) and Staff Administrators have oversite and ultimate control.

ENVIRONMENTAL COMMITTEE SESSION

Chuck Hallier, Cargill Incorporated, *Environmental Committee Chairman*
Amy Marshall, AECOM, *Environmental Committee, Vice-Chairman*

Rob Kaufmann, Koch Companies Public Sectors, reported on the status of the Clean Power Plan. There have been a number of meetings in the last few months on the CPP. It is one of the top priority issues for EPA and the Administrator, Scott Pruitt.

The original CPP represented a wholesale change as to how EPA approached Section 111(d) standards of the Clean Air Act. While no exact number exists, virtually all players

concede that electric costs would go up. Another issue may be a patch work approach by the states towards GHGs without some federal program. The Supreme Court stayed the original rule that was challenged by 150 litigants. President Trump issued an executive order one year ago that pulled the plan for review. The DC Circuit Court stayed the companion rule on new sources.

The EPA issued a proposal to repeal the CPP. An Advanced Notice of Potential Rule Making on a potential rule was issued in December, requesting comments from the public. The big legal issue was that the CCP was directed at the entire grid with fuel use being controlled by the EPA. The administration expects litigation on any repeal rule. The potential for a replacement rule would likely be early next year. There would likely be more litigation on that rule. There is a lot of uncertainty going forward. However, there is a lot of international pressure for GHG regulations. EPA is taking comments on a replacement rule and the states roles and responsibilities. Remaining useful life of an emission unit enters into the cost of a unit rule and costs should be taken into account. Another issue is the Best System of Emissions Reduction (BSER). EPA is trying to prepare a list of technologies that might qualify for BSER. Also, energy efficiency improvements can trigger New Source Review (NSR), which is undesirable. Another problem is the difficulty of monitoring heat rate improvements. States are split on these issues. The eNGOs are appalled at the whole process. The 111(b) rule for new sources are also stayed. Without an NSPS, the 111(d) rule can't exist.

Amy Marshall, AECOM and **Mike Remsberg, Trinity Consultants**, **Inc.,** provided an update NSR reform. NSR reform has been listed as one of EPA's top priorities in response to comments from the public. Ozone and NAAQS implementation is also on their list. Other issues include MATS, Mid-term GHG for autos, and oil and gas methane emissions. EPA is being very careful about how they are writing any memos concerning NSR.

EPA has been issuing monthly guidance letters. On the DTE case, actual data should control the position. Once in/always in has been reversed. The Air Office wants to take over applicability determinations. PSD applicability needs to be made easier. A web based system updating the 1990 "puzzle book" is an aspirational goal.

NSR reform was looked at in 2002. There were a few items that did not get through or were rejected. These may be brought back. Industry requests include ambient air issues, modeling reform, PAL implementation, actual to potential actual, aggregation, and pre-permit activities. For the ambient air issue, it is the definition of "ambient air" that is the problem. There are 40 years of EPA guidance on the definition. The recent definition is equivalent to the position that if a person anywhere has the potential to come in contact with this air, even illegally, then that air can be considered ambient air. This determines what air has to be modeled. Receptors should not be required for those areas that the public is not expected to occupy for the complete averaging period (rail lines, roadways, waterways, etc.).

On modeling reform, there are layer upon layer of conservatism. Thus, the current approach over estimates the ground level concentrations. Probabilistic risk assessment can be used to overcome some of these issues. Background levels are also a problem. Intermittent sources (less than 500 hours) should be exempt. PM emissions also give problems due to

measuring issues. NO/NO2 ratios should be utilized. Modeling improvements should be implemented more frequently. The reflection problem is not being addressed.

Plant wide applicability limits could apply to pollutant specific emissions at a major source, provided the source has done emissions reductions other than shut downs. The idea was to be able to make changes within the plant without triggering other emissions rules, like NSR, as long as the PAL is not exceeded. There are variations within the states. The PAL can be reopened at any time, although the renewal time is 10 years. The PAL provisions have survived legal review. Thus, additional guidance to bring more certainty and clarity to the process would be desirable.

Mike Remsberg, Trinity Consultants, **Inc.,** reported on some of the other issues. Applicability is determined by a set of equations which looks to determine the net emissions increase (NEI). The definition of projected emissions is critical. The 2017 Pruitt Memo indicates that EPA will not initiate enforcement actions if the projection turns out to be wrong. Another memo was issued today on project emissions accounting. This memo states that project related reductions can be taken into account in the first step when looking at an overall projected emission increase (or decrease). These reductions do not have to be permitted. In the case of hybrid test situations (a new unit and a retrofit), the same rules apply.

A future memo will address aggregation. However, it is left up to the applicant to define the project, not EPA. Source aggregation has been an issue as EPA has pushed to include more facilities into the source definition. Of particular interest is the issue of adjacency. EPA wanted to include facilities that were not physically adjacent, but were "connected" in some way. A court decision called that into question. Other issues and options include physical causation and legal causation. More memos are expected on this subject.

Pre-permit activities apply to what work can be done before a permit is issued. The issue is what counts as the beginning of "actual construction". Foundations come to mind. More effort is expected on this area. EPA has focused on the 6 major issues, but then "everything else" comes into play.

Bob Bessette, CIBO, pointed out that EPA is asking for stories that can help support some of these positions and show how they would have reduced emissions if they were in place. For example, a switch to natural gas from coal at a small plant would convert the plant from a major source to a minor source. However, in the past, the source would still be a major source under the "once in/always in" policy. It was pointed out that in the 1990s, some plants did make some conversions, but missed the date. These units were still designated as major sources. EPA will need to set up some rule making on these issues to provide regulations that cannot easily be overturned.

Jake Tyner, US Chamber of Commerce, provided an update on the Waters of the US (WOTUS) rule, as well as NPDES permits for indirect discharges.

The Chamber has been working on WOTUS for a couple of years. There is also the EPA "conduit theory" for indirect discharge. The President has also proposed some revisions to the Clean Water Act. The WOTUS rule had been put on hold as a result of jurisdiction issues

in the lower courts. In the spring of 2017, the federal agencies solicited inputs from state and local leaders on a new WOTUS definition.

Over the summer, the agencies proposed to repeal the proposed rule and recodify the existing regulations. In November, the agencies proposed to add an applicability date to the proposed 2015 rule. The Supreme Court ruled that challenges to the 2015 rule must go through federal district courts. This decision created some issues with the circuit court stay. The applicability date provides 2 years prior to enforcement, which would put off any enforcement until 2020. A new proposed rule is expected this spring.

The Chamber submitted comments supporting the repeal of the 2015 rule and the recodification of the existing rules, as well as the applicability date. A new proposal is expected in the next month or two. The Chamber is part of a legal challenge to the existing rule in one of the district courts.

On the "conduit theory", the Chamber has been involved for about one year. In a case in Hawaii, a point of source discharge of some material into a well and over time, the material migrated through ground water into the Pacific Ocean. A circuit court ruling upheld that a federal permit should be required for such discharges. There is also a law suit involving TVA, for which the Chamber has filed an amicus brief.

The EPA has requested comments on its previous statements regarding the CWA and the applicability of NPDES permits. The public was polled on issues related to the CWA. Over 71% stated that EPA should work with Congress and local business owners to draft a new rule. Over half say water quality should be regulated at the state and local level. There is middle ground and voters have indicated that they want it.

WOTUS is too broad, complicated, and overreach and Americans deserve better. In the meantime, the administration unveiled its legislative and regulatory priorities for strengthening America's infrastructure. One of the goals is to streamline the permit process by putting the responsibility for decision making under one agency (the Army Corps of Engineers). There is a Waters Advocacy Coalition (WAC) with a web site at www.watersadvocacy.org.

Scott Darling, Alcoa Corp., provided an update on Midwest Ozone Group (MOG) activities. There has not been a lot of activity on ozone attainment. However, EPA has been more receptive to listening to some of the issues brought up by MOG. This includes recognizing the contributions from existing controls, wild fire contributions, and international emissions. High Energy Demand Days in the Northeast have been primarily responsible for high ozone days (and not the mid-West).

Exceptional events such as wildfires in Canada contributed to ozone concentrations on those days. International emissions from both Canada and Mexico also add to the background levels. When these contributions are taken into account in the models, nearly all regions would be in attainment. EPA has started to deny Section 126 petitions (emissions from a plant in another state causes your state to miss attainment). EPA has been charged by the courts to issue attainment and non-attainment decisions.

On the modeling side, there are some issues areas with significant land/water interface. Also, the updated EPA 2014 modeling platform now has 2016 EGU data that would show the impact of MATS on reduced emissions. EPA is starting to listen.

Gary Merritt, Inter-Power/AhlCon Partners, L.P., provided an update on coal combustion residuals (flyash, etc.). EPA has come out with a proposed rule making on March 1, 2018. The proposed rule addresses issues that were remanded back to EPA from prior law suits.

There are 4 changes to address these issues. The states can have a program for CCRs which EPA can approve. There are some additional technical proposals which probably should be commented on. There is a website with the prepublication draft. https://www.gpo.gov/fdsys/pkg/FR-2018-03-15/pdf/2018-04941.pdf

The draft has not gotten into the federal register. The proposals do not change the Section D determination. The federal rule only applies to EGUs. However, states can include industrials. Ground water monitoring requirements can become an issue. The discharge limits proposed under NPDES impact ash handling and scrubber sludge. These are under review, but still in play. There is also the issue of direct hydrologic connection to surface water for CWA applicability.

Mike Zebell, Environmental Resources Management, reported on citizen enforcement activities. There is no repository that collects information on citizen law suits. The Clean Air Act has provisions that allow a citizen to bring a law suit against a facility for a violation. The citizen must be adversely affected by the violation. Any credible evidence can be used. Title V reports and visible observations can be a source of information. The burden is then shifted to the defendant source to prove that the evidence is not credible.

An eNGO group can look at actual emissions data from the EPA reporting systems. This information is then shared with other groups. The data is analyzed for possible violations. The citizen can give notice. The facility has 60 days to reply. The citizen can file suit (and a press release). Then there is pressure for a settlement. EPA is encouraging communities to put up sensors to monitor air quality in their area. Nuisance suits can be brought where either the public or individual is unreasonably denied a right (use of land, medical, etc.). The typical remedy is some kind of financial damages. Since any citizen has a right to sue, even complete compliance with all emissions standards does not prevent the potential for a law suit.

Rob Kaufmann, Koch Companies Public Sector and **Amy Marshall, AECOM,** were asked to run through **Lisa Jaeger's, Bracewell LLP,** slides as Lisa came down with the flu. In Boiler MACT, the remanded issues are still at EPA. The 130 ppm CO standard and the work practice standard are awaiting a court decision. On area sources, there are a number of cases on SSM and affirmative defense still to be decided. On the MATS rule the work practice standard is still to be decided. One MATS issue is that the justification of the benefits for the rule were primarily based on the co-benefits from PM2.5 and not the very modest benefits from mercury reductions.

On Brick MACT, oral argument was held in November. Issues include no major source in the brick industry, acid gases as carcinogens, and the UPL. In a question for Lisa, the UPL was addressed for small sample sources. Is this not settled for the larger source samples?

The risk technology review (RTR) issue arises from the Wool Fiberglass Manufacturing RTR which expanded the scope of analysis. A leather finishing RTR was issued yesterday. In 2017, there were 6 RTRs. In the phosphoric acid RTR, they did find the risk. However, EPA brought up mercury. There was not much data and the industry did not want to generate more data. EPA then issued a standard for mercury. In the pulp mills RTR, there is a citizen suit based on Environmental Justice. The request is that EPA should set emissions standards for each HAP and also should evaluate health risks to the person most exposed.

The nutritional yeast RTR is in abeyance. There are 4 more scheduled RTRs by August, including ethylene production. There are a total of 33 RTRs that must be done by 2020. On the ferroalloys MACT there is a recon pending. The MACT mandates a digital camera opacity technique for compliance.

The stationary combustion turbine RTR has a court ordered final rule date of March 2020. Work on the rule has been asking about SSM. The rule currently is only at full load. At low load, some HAP will increase. The concern is that EPA will take the full load standard and apply it to all loads. With the increase of renewables on the grid, turbines will be forced to run at more frequent load changes. The EPA has issued a memo that withdrew the "once in/always in" policy. EPA is looking to propose a rule making this policy more permanent. The eNGOs oppose the new policy. They would have to sue by March 26th. In the ozone NAAQS, a court decision went against a region for applying the 2015 standard and revoking the 1997 and 2008 standards. The issue was allowing states to choose a baseline and avoiding anti-backsliding provisions. In Murray v EPA, NAAQS are in effect, but EPA delayed state designations. There is a House bill to delay the 2015 standard to 2025. There is also a bipartisan ozone compliance bill in the Senate.

On CSAPR, there is a law suit that challenges the modeling and basis for the rule. On the refrigerant management rule, EPA wanted to apply a section of the CAA for ozone depleting substances to GHGs as well. Industry has opposed.

On HFC substitution rule, the court remanded the rule back to EPA. On the regional consistency rule, EPA rules are supposed to be nationally consistent. EPA lost the first time. They have tried another proposal to allow regional rules and are in court again.

On NSR, the DTE Energy suit was denied certification. NSR cannot be triggered without an emissions increase. On the test methods proposed rule, technical changes to some test methods have been proposed. Comments have been submitted.

On the 316(b) rule, a court decision is pending. The effluent discharge guidelines and CCR material was covered previously. A favorable decision was obtained on the definition of solid waste. There are still some additional issues for clarification.

The executive order to reduce 2 regulations for every new regulation proposed was challenged. The case was dismissed on the basis of "no standing". More positions at EPA

have been filled. The deputy general counsel is still open. The office of chemical safety and pollution prevention is still open. The chair of the council on environmental quality is vacant.