



Technical Focus, Energy & Environmental Committee Meetings

December 2017
Hilton Garden Inn
2020 Jefferson Davis Hwy
Arlington, VA

MINUTES

TUES-WED, DEC 5-6

TECHNICAL FOCUS GROUP SESSION

Ajay Kasarabada, Black & Veatch Corporation, *Technical Committee Chairman*
Todd Young, HDR, *Technical Committee Co-Chairman*

The Focus Group topic is Environmental Management Systems with **Eric Hallman, Cargill Incorporated**, as the Moderator. There are a number of systems, including ISO 14001. There are several reasons to implement such a system including certification, customer or insurance requirements, data organization and retention, and sometimes compliance.

Linsey DeBell, AECOM, provided a review of ISO 14001. An Environmental Management System (EMS) refers to the overall program for managing environmental requirements and data retention. The Environmental Management Information System (EMIS) is a software tool that helps to implement an EMS. The ISO 14001 provides a standard framework that can be audited to provide a certification that the EMS is valid and in operation (i.e. not only is there a system, but it is being fully implemented).

In 2015, there were some changes to the ISO program relative to sustainability. There is also a drive to show more business value to environmental and sustainability activities. Currently certified organizations have until Sept. 2018 to get recertified under the new program. The scope of the 2015 standard is more expansive. The certification process provides for internal and external audits that verify that environmental considerations are being actively managed. Continuous improvement is a fundamental part of the entire process. The key is not to make it a "check the box" process with no real attempt to look at the real means of improvement. https://en.wikipedia.org/wiki/ISO_14000

The MIS tool provides for collection and analysis of the data as well reporting and communicating the results. The EMIS covers everything other than the financial system. There are many overlaps in the coverage. Besides the direct environmental data, there are many other systems such as safety, production data, email, and librarian functions. The most common tracking system is an Excel spread sheet. More robust systems include lower risks (improved data quality, standard tracking, and risk assessments), lower costs (less time to collect and process the data), and increased effectiveness (enabling electronic reporting, proper data submission, fewer errors, etc.). Implementation of the software is time consuming and complex. There is also a need to support and maintain a "help desk" for user support.



Selecting the software system is a project in itself. Generally these tend to be corporate programs and involve corporate decision making. A sustainable solution accommodates change in a cost effective way. It has to be fast enough and easy enough to execute within the organization. Sustainable solutions help the organization stay in compliance and prove that they are in compliance. Continuous emissions monitoring data is usually “scrubbed” before submission to the system. Records and documentation that need to be kept, but are not submitted on a routine basis, are particularly well suited to the more complex data management systems. These systems will check that the record or document has been completed, collected, and stored and is ready to be made available for an unannounced government inspector.

Each of the stakeholders of the system need to be included both for those who will benefit and those who will be burdened. Well defined requirements are critical to the successful implementation of these systems. In spite of all the planning and beta testing, there will likely be gaps. Be thoughtful in managing these gaps. There should be a balance between the solution and the cost. Of course, once the system is in place, changes to the regulations and requirements will require maintenance and update to the system.

Channele Wirman, The Energy Information Agency (EIA), provided a review of the reporting requirements for industrial CHP plants and boilers. The EIA provides substantial amounts of data for use by a wide variety of entities ranging from Congress to industry to the general public, including children’s groups. Combined Heat and Power Plants (CHP) are required to report by law on several EIA forms. These forms were developed for electric power generation plants. CHP facilities that generate more than 1 MW must use those forms.

Smaller plants and non-EGU plants can use EIA form 3, which is for coal fired plants. EIA form 923 (which has gone through a number of iterations) has been used for electric generation. CHP plants greater than 1 Mw are to use this form. EIA-860 is for annual electric generation. The form 923 requires the amount of power generation and fuel consumed on a monthly basis. If applicable, emissions control equipment characteristics and operations must be reported.

The problem for CHP plants is that each facility tends to take a different approach to allocation of the fuel to electricity and steam. The EIA now uses a uniform allocation methodology. CHP generates about 4% of the total electricity in the country. Fuel use includes coal, oil, gas, and biomass. Coal has been declining and gas has been increasing. Biomass has stayed relatively constant.

The Manufacturing Energy Consumption Survey (MECS) is done every 4 years. This is used to look at trends in energy use and the economy. There is a similar survey for commercial buildings.

GOVERNMENT AFFAIRS SESSION

Anthony Reed, Archer Daniels Midland Company, *Government Affairs Committee Chairman*

The topic for the week is tax. In addition, there is a debt deadline for Dec. 8th. There are a number of other deadlines coming due including disaster deadlines, s-chip funding, energy tax extenders, flood insurance programs, FISA authority, DACA, and Obamacare subsidies. Tax reform is not budget neutral. That means that automatic cuts would impact a number of agencies and industries. Senator McConnell has stated that there will not be a government shutdown.



Once the tax bill is done, the budget needs to be set. In the meantime, continuing resolutions will be used to keep the government running. Conferees will be appointed this week. The target is completion next week. Several law makers have been accused of sexual harassment (both Republicans and Democrats). Progress on second tier agency heads is still slow.

For the House elections in 2018, the race is a toss-up for control with the Democrats potentially leading. In the Senate, there are a lot of Democrats up for election. This means that the Senate could stay with a Republican majority. This would cause a split with a Democratic House and a Republican Senate. Infrastructure spending will go into 2018.

ENERGY SESSION

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

Jay Wrobel of DOE Advanced Manufacturing Office reported on CHP activities at DOE. The DOE has CHP Technical Assistance Partnerships to help industrial companies in the pursuit of CHP applications. The DOE also has developed some software tools for use in industry. These need to be updated (partly to run on today's PCs and partly to provide open source software). The Steam tool is scheduled to be ready by Sept. 2018.

The DOE would like to get input from industry on these updated tools. Right now, budget constraints have cut into the training that DOE used to do. They are looking at others to take on that role. The DOE also has a "Better Plants Program". This is a volunteer partnership initiative aimed at improving the energy efficiency of the company by 25%. At this point, there are over 190 Partners, including GE, Spirax, and Sarco.

The ISO 50001 Energy Management System Standard provides the structure for continuous improvement in energy use by companies. The key components are commitment, data, and value. Work with 3M and Schneider Electric provided data on the effectiveness of this program. Facilities that did not use ISO 50001 reported energy gains on the order of 10 – 11% over the test period. Facilities that did use ISO 50001 realized energy gains on the order of 19 – 20%. These are real energy savings. In Europe there are tax savings associated with ISO 50001 certification. In the US, there is no real incentive (other than energy savings).

The DOE has developed a 50001 Ready program. This program provides some training for ISO 50001 and will recognize that a company has gone through the program and state that the company is "ready" for ISO 50001. There is no certification. The ISO 50001 software and program does not have to be purchased. The program has been divided into 25 steps that train the user to understand the impacts of energy use. CIBO could be a bridge organization that can recruit teams for DOE and provide contacts with companies. The DOE web site is energy.gov/50001Ready. Jay's email is Jay.Wrobel@ee.doe.gov.

Fred Fendt, The Dow Chemical Company, noted that Dow has a Sustainability Academy of which one person is working with the 50001Ready Navigator. They are looking at the program to identify gaps in their existing energy management system. They are looking to do a pilot program in 2018. Lawrence Berkeley National Lab provides the "help desk" for the program. The TAPs work with CHP. Oak Ridge works with the Better Plants partners. UConn is going through 50001. The Hilton Hotel chain has gone through 50001 for all of its hotels worldwide.



Ann McIver, Citizens Thermal, reported on the DOE Plant Water Profiler Tool. Fred sent the tool to Ann as a result of her prior water balance presentation. The tool was developed by DOE/ORNL personnel and was designed to dig deeper into the plant water use. It seeks to identify and quantify the various input and output streams.

It consists of a series of Excel spread sheets that are linked so as to make inputs easier (i.e. only done once). The program starts with the plant information and assumes that you have a NAICS code. The next tab starts the conversation with a series of questions on water use, measurement, and discharge. This page is all yes/no questions. The next tab requires data from the plant. Many times, the figures haven't been checked and are reported to another agency for another reason. On the next tab, the inputs and outputs are tabulated and compared (ie a mass balance). The next tab begins to apply costs to the various processes and streams that utilize the water. Part 6 starts to sum up the cost of water intake and disposal, the cost of pumping, the cost of heat energy, and the cost of water treatment. When summed up, the total cost of using the water can be identified.

Subsequently, scorecards can be created to identify the potential value of water improvement or use projects and help to evaluate the full cost. The full scope of water use is covered including kitchens and restrooms, landscaping and irrigation, and other unaccounted for uses (leaks, hoses, repairs, etc.). The opportunities for CIBO members includes a full water balance and a full cost accounting for water use.

ENVIRONMENTAL COMMITTEE SESSION

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

Rich Anderson, The United States Council of Mayors reported on their view of municipal issues. Water supply is an important consideration. In particular, Waters of the US (WOTUS) can restrict the opportunities for commercial and industrial activities. The Supreme Court will decide which Court will have jurisdiction in the cases on the subject. In the meantime, the 2015 definition is being used. The EPA has gone with split decisions in the past. EPA has asked for an applicability date of 2 years after the SC decision. Waste water treatment is a major concern for cities. Cost is a secondary concern for water regulations.

There is a Senate bill on integrated planning for water issues. The House bill is a strong bill that would require EPA to evaluate the cost and impact on any water regulations. This is to avoid unfunded mandates on cities and municipalities. While this would apply to public water supplies and municipalities, industry can use the template for water regulations.

There is a report out from the National Academy of Public Administrators that has repudiated EPA's methodology of assessing costs and their impacts on local governments. The local governments are "all in" on "climate change" and are pushing on renewables. An estimate by a Stamford University study indicated that it would take \$2.3 trillion/yr every year up to 2040 to get to zero CO2 emissions in 2040. Local government spends on the order of \$120 billion/yr on water and waste water treatment.

Nearly every city and town has water and waste water treatment. That pales in comparison to trillions of dollars/yr. In Florida, roads were being raised to avoid flooding from storm surge. This has caused



certain power plants to have storm drains that don't drain. It is important to be "at the table" when the decisions to do such things are being made. Insurance issues also need to be addressed.

Carl Bozzuto, Consultant, reported on the sources of phosphates and sulfates in boiler waters and the regulatory drivers for regulations. Raw water is often treated before use in the boiler. Sodium sulfite is used as an oxygen scavenger and forms sulfates. Phosphates are used as a buffer to maintain pH within a desired level. These compounds are in the boiler water along with sodium and calcium and other minerals. Water softening substitutes sodium for calcium. This makes the material more soluble in water.

Demineralization takes out the majority of the ions, but makes a sulfate solution that must be disposed of. Phosphates, nitrates, and sulfates are part of the fertilizer complex. These encourage plant growth. In a somewhat stagnant body of water, eutrophication will occur in which plant growth takes up the oxygen from the water killing aquatic life. Eventually, the body of water fills in and becomes land.

Nutrient discharges to the waterways is the biggest problem for water pollution. That is because there are many sources of these minerals. The Clean Water Act (CWA) sets discharge limits for these compounds. There are a number of policy levels including Best Available Technology (BAT), Best Practical Technology (BPT), Best Conventional Technologies (BCT), and several others. The difficulty is that the permit writer is to use Best Professional Judgement (BPJ). EPA would like to get to Zero Liquid Discharge (ZLD). This will involve evaporating the water to leave the solid behind for disposal.

Jamal Shamas, AECOM, reported on Contaminants of Emerging Concern. These are not necessarily new chemicals but have no regulatory standard. Sometimes they have been recently "discovered" in natural streams because we can measure things better than we used to. Some may be deleterious to aquatic life and will be candidates for future regulations. Examples include phthalates, antibiotics (from discarded pills), fire retardants, insecticides, solvents, steroids, and personal care products. These may not be cancer causing, but more work is being done to look at the impacts to try to determine the need for regulations.

Public concern drives media coverage. Sometimes this is just sensationalism. However, many of these are soluble and therefore mobile. New data sometimes links the compounds to toxicological or environmental concerns. There are more pathways for these substances which may impact our operations. Currently there are about 800 substances that are regulated, with another 600 substances that are considered to be emerging. The effluent guidelines are generally more concerned with aquatic life. The Safe Drinking Water Act (SDWA) is concerned about human consumption.

The SDWA requirements are reviewed every 5 years. Once there is a limit, the limits are reviewed every 6 years. The process starts with a list of potential compounds. This is reduced to a final list. Limits are proposed and commented on. A final rule is then issued. The first lists were developed in 1998. The first round of lists produced no regulatory lists, nor did the second. The third review produced one compound for regulation.

We are in the 4th process with over 100 compounds being reviewed. Perfluorinated or polyfluorinated compounds are under review. There was a voluntary phase out of the compounds for



some uses. More scrutiny is underway. These compounds can end up in drinking water, fish and cattle, vegetables, and milk. Under the general category, there are quite a significant number of compounds. EPA has issued a health advisory for these compounds. Some states have developed limits. The current health advisory is at 70 parts/trillion.

Rob Kaufmann, Koch Companies Public Sector, provided an update on regulatory reform. Rob noted that there has been a lot of activity in this area with the new administration. There have been a number of executive orders including permit expediting, reducing regulatory costs, enforcing regulatory reform, restoring rule of law, streamlining permits, establishing discipline and accountability, and promoting energy independence and economic growth. For every new regulation, two are to be eliminated. Further, the net cost to the public for any new regulation should be zero or less. If a new rule is costly, other rules need to be modified to reduce the cost. At OMB, steps are being taken to implement the “one in, two out” directive.

For 2017, the OMB review process has insisted on holding to this mandate. No new regulations have been implemented without have pulled back or reduced two other regulations and kept the net cost to the public at zero or less. Also, there is a unified agenda of regulatory and deregulatory actions. This document was issued twice per year and was typically incomplete or inaccurate. Now, a rulemaking cannot go ahead unless it is in the agenda. The next version should be coming out in December.

There have been two reports to the White House, one by the Commerce Dept. and one by EPA. The Commerce Dept. report was dominated by environmental issues including New Source Review and Waters of the US. The EPA report on promoting energy independence was also dominated by environmental issues, the major one being air permitting issues. Thus far, 25 rules have been overturned since the start of the new administration. There are 19 roll backs in progress. There are another 8 regulations in limbo. The “sue and settle” process has been stopped. The “social cost of carbon” calculation will be reviewed and made to conform to OMB guidelines, which will reduce the resulting number.

At EPA, it will be “back to basics”. There will be a focus on the core mission. The rule of law will be observed. Process matters. There will be real “cooperative federalism”. The agency will be working with the regulated community. There will be an effort to “get the right people” in place. There will be changes to the structure of EPA Advisory Committees. People that get funds from EPA can no longer be on these committees. The EPA priority issues include the CPP, methane NSPS, NSR reform, NAAQS, Title II GHG, MATS, WOTUS adjustments, lead (Flint), fluorinated compounds, nutrients, and infrastructure.

Steve Hawkins, Environmental Resources Management, reported on Risk Management Planning and the General Duty Clause. The RMP was pulled back at the change of administration. The General Duty Clause of the Clean Air Act is a requirement of plant owners to make the public aware of any dangerous chemical, the potential for accidental release, and any hazardous substance. The facility must assess the hazards and the impacts of an accidental release.

Risk assessment and training become requirements, particularly for release scenarios. The owner must design and maintain a safe facility to prevent accidental releases. Further, the facility must minimize the consequences of accidental releases that might occur. This includes planning, coordination with local officials, training, and test exercises.



OSHA also has a General Duty Clause that is broader. However, OSHA doesn't have the resources that EPA does. In recent years, there have been joint actions by EPA and OSHA, but also EPA has been trying to argue for jurisdiction when they don't.

The last 5 years have seen an increase in the number of general duty clause cases. The focus has been on oil and gas, food and beverage, and chemical sectors. Anhydrous ammonia has been a major chemical of interest. The major issue is refrigeration systems. The criterion is 10,000 lbs.

Lisa Jaeger, Bracewell L.L.P., provided a review of the ongoing litigation issues. In the Boiler MACT cases, we are still waiting. Our two issues are the CO limit and the work practice standard for startup/shut down. The Sierra Club is fighting the surrogate issue. In the MACT/RTR case, the case is still in abeyance. For the Gas Turbine review (for the Turbine MACT), the data is being collected for review. In 2017, the RTRs have not shown a need to change the standards. The Portland Cement RTR was proposed in September. There were some negative comments on this RTR. The MATS cases are still in abeyance. They are waiting for some of the MACT decisions. The one case that was dismissed concerning jobs and the CAA is being appealed to the Supreme Court. The CPP and GHG rules are in abeyance. EPA is looking to replace the CPP rule considering the various executive orders.

On the ozone NAAQS, oral argument was held in September. The 2015 ozone NAAQS of 70 ppb is still in effect. Attainment areas have been proposed. The CSAPR Update Rule for 2008 now has a briefing schedule. Oral argument will likely be next summer. The refrigerant management rule was challenged for some compounds that were not ozone depleting substances. In another similar case, the Court sided in favor of industry. The first case is still waiting. The compliance deadline is Jan. 2018. There is a request for a 1 year extension.

The final RMP rule challenge is in abeyance. EPA has tried to stay the compliance date to Feb. 2019. The stay was challenged. The Regional Consistency Rule has been challenged by industry. The CAA requires consistency across the regions. A district court decision on the meaning of "adjacent" went against EPA. EPA tried to get around this rule on consistency. This was challenged by NEDACAP. Final briefs are due 12/22/2017. On NSR, there is a cert petition before the Supreme Court by DTE. A decision to accept the case may be made on Dec. 8th. The Electric Reliability Coordinating Council and UARG argued that NSR cannot be triggered without an actual emissions increase. DTE did not have an actual emissions increase.

On the water side, the 316(b) rule was challenged. Oral argument was held in September. No decision as yet. On the Effluent Guidelines case, EPA took some issues back. The Court allowed severance in the case. The EPA stayed the compliance date. That was challenged as well. On Waters of the US, the Supreme Court has heard oral argument in October. EPA has proposed to extend the compliance date. The final rule on coal ash provided for Subtitle D regulation.

Congress passed the WIIN Act in December 2016. This act gave EPA authority to regulate under Subtitle D if a state did not have an acceptable plan. EPA granted reconsideration and sought delay of the case. The Court ordered supplemental briefs and oral argument on the effect of the WIIN Act. Oral arguments by environmentalists stated that EPA did not have budget for enforcement and therefore could not take up enforcement. There was a citizen suit against TVA on leakage from a scrubber sludge pond. TVA claimed a permit shield protection. The lower court decided against TVA. TVA appealed to the 6th District Court.



In RCRA, there are deadline cases. North Dakota objected to a consent decree. The Court held that they had no standing because it was a deadline suit. On the definition of solid waste, the DC Circuit invalidated two key elements of the proposed definition. The implementation is somewhat up in the air as the States may have adopted the 2008 rule or the 2015 rule or both. The Hazardous Waste Generator Improvement rule challenge is still in abeyance.

The CERCLA Financial Assurance rule was to apply to the hard rock mining industry. On December 1, 2017 EPA will not issue final regulations on financial assurance for hard rock mining facilities. The environmentalists are already lining up to file suits.

There is a petition for Supreme Court review by Weyerhaeuser on habitat designations. The 5th Circuit indicated that the designations are not reviewable. This case has to do with endangered species. This parallels a decision in favor of industry on wetlands determinations under the Clean Water Act. There has been a number of cases over Obama era rules. Ultimately, the limitations of what can be overturned and when will be decided. Administrator Pruitt has stated that sue and settle will be discontinued. Intention to file a suit and intention to settle must be posted. The agency will seek input from interested parties. Any decision on fees will be handled by the Courts.

Alexandra Dunn, the Executive Director and General Counsel for the Environmental Council for the States, reported on Cooperative Federalism. Early in the new administration it was stated that the states would be given a more leadership role with the EPA being more supportive to the states. However, the EPA budget was being cut. At first this budget cut was viewed negatively. Then the states thought that perhaps this gave the states an opportunity to take the lead on the relationship between the states and the EPA. The states carry out 98% of the permit processing and 96% of the enforcement actions.

The ECOS asked the Administrator about initiating a letter that could indicate their view of what "cooperative federalism" might be. The Administrator welcomed the input. Some states have started to challenge the regions on their enforcement agenda. Under the new cooperative federalism, the region actually agreed with the state and offered to defer to the state. Similarly, permit reviews are to be limited to the legal requirements and not be used for policy preferences.