



## Technical Focus, Energy & Environmental Committee Meetings

December 2015  
Crystal City Marriott  
Arlington, VA

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# MINUTES

### TUES-WED December 8-9, 2015

#### TECHNICAL FOCUS GROUP SESSION

**Jason Philpott, Eastman Chemical Company,**

Technical Committee Chairman

The topic for this Focus Group meeting is Continuous (CEMS) and the regulatory development electronic be relying more heavily on CEMS data for both

Emissions Monitoring Systems reporting requirements. EPA will compliance and rule making.

**Jeff Cleland of Cargill, Inc.,** reported on the Daily Life perspective. As with any piece of equipment, CEMS complicated and have certain vulnerability. Some power shut off, calibration issues, and other mechanical emissions were noted as being lower than was determined that there was a fitting problem. At welding being done near the sample line. The sample problems with the data.

of CEMS from an owner's will fail occasionally. CEMS are examples include inadvertent failures. At one plant, the SO<sub>2</sub> normal. After trouble shooting, it another unit, there was some line was damaged leading to

The Data Acquisition System (DAS) is where all of the data is stored and calculated. There can be issues with different DAS systems or different updates. Programmed set points (permit limits) need to be checked and reflect the most recent requirements. Equations and tunable information need to be set up correctly, particularly for the fuel actually being burned. IT problems include compatibility issues with internal company computers, patches and updates, automatic reboots, and system crashes. EPA guidance requires 95% instrument uptime.

There are some potential alternatives to account for downtime, but these are often confusing. CEMS are complicated. Experience is very important. Operators, instrument technicians, and boiler/environmental staff generally have an understanding of the system. Staff turnover can upset that status. Calibrations and drift checks can be done internally or with outside contractors. These activities can be daily or weekly. There are audits for calibration gas and instrument checks. There are quarterly reporting requirements. Contractors can be used for this activity to meet the EPA requirements for electronic reporting.

On a day to day basis daily drift checks, calibrations, operator care, QA/QC plans, and DAS verification are carried out. Cargill, Inc. is attempting to standardize their approach to these activities. A small team was assembled to review the various activities and failure modes to provide potential back up approaches as well as more permanent fixes. Standardization of the QA/QC plan is valuable for EPA audits. Written Standard Operating Procedures (SOPs) are also helpful for operations and maintenance. Each instrument should have a log book for tracking daily



activity. Checklists are helpful in assuring that all the desired activities are carried out. System shelters can influence the readings (temperature changes, air conditions, etc.) A system shelter with appropriate HVAC should be provided. CEMS are complex systems that require constant attention.

**Dan Todd of Air Quality Services, LLC**, gave the suppliers perspective for the care and maintenance of CEMS. These systems are set in the framework of EPA monitoring regulations. These can be very tedious. They are not all located in one place. For Boiler MACT, there are 2 pages of requirements that reference nearly 20 different sections of the Code of Federal Regulations (CFR). Somebody, somewhere needs to know the details and where to get the required information. Most likely, these people are not the ones that routinely maintain the systems.

Rule changes are published in the federal register. This document is not common reading material for plant operators or maintenance personnel. All instrumentation at a plant serves some useful purpose. However, CEMS data carries legal requirements as well as process requirements. On a daily basis the zero span and calibration checks provide the first line of defense against problems with the system. The data can be reviewed for quality assurance, particularly to see any trends in the system operation. Some systems have weekly requirements such as mercury sorbent trap changes. On a quarterly basis, the cylinder gas audits are done. Systems need to be ready. Correct procedures for Q/A need to be confirmed. Even weather conditions can influence the results. Scheduled maintenance is often carried out. Reports need to be prepared. It is important to know who gets the data and reports.

On an annual basis, the RATA tests (routine accuracy test audits) need to be done. Calibration gas inventory is another activity that needs attention. The system cannot afford to run out of calibration gas. An inventory and order system is needed to assure that adequate supplies are maintained. Spare parts represents a similar situation. Internal CEM reports are helpful in addition to the required compliance reports. Drifts, trends, and deterioration need to be identified and analyzed to determine if some problem is developing ahead of the scheduled repair or replacement cycle.

The skill set needed for this type of work includes a knowledge of the instrumentation, the ability to access the locations and handle the equipment, strong communication skills, and enough experience and capability to comprehend the implications for the regulations. These requirements typically indicate the need for more than one individual. Someone needs to know the regulations involved, the certification requirements, the instrument ranges, and the calibration gas ranges, ongoing QA, required QA testing, and missing data substitution (Part 75). There are requirements associated with changing a component in a system.

Whether these activities are done internally or with contractors, the logistics and expectations need to be understood. Routine data hand offs need to be identified and confirmed. The types of information and the frequency need to be spelled out. Contact personnel need to be identified. Procedures for problem handling need to be identified. Someone needs to be in charge of confirming which regulations apply and tracking any regulatory changes. A regulatory "fix" typically doesn't attract the attention of the industry as a new rule. Special data requests also need to be handled.

**Joe Macak of Mostardi Platt**, reported on compliance concerns with monitoring data and emissions calculations. Compliance data must be accurate, complete, and readily available. Data sources and maintenance records must be available. A QA/QC plan must be prepared and updated. This plan will be the first item requested during a site inspection. The plan must be followed besides being



written. EPA wants permit conditions that force facilities to demonstrate continuous emission compliance. These requirements include emissions monitoring, emissions calculations, plant operating data, and control equipment operation. A facility "responsible official" must sign off on data validity and compliance status.

Care should be taken in the permit writing to avoid "over specifying" the operation. A heat input limit could be an absolute number, in which case, that number can never be exceeded. Alternatively, a nominal heat input rate can be stated which provides some flexibility. Sometimes the permit conditions make no sense, but were agreed to in an effort to get the construction permit. Then when operations come around, there is a problem. Unintended consequences of problems with data quality can lead to problems at other facilities around the state.

If an inspector finds a problem with data quality or record keeping, the information is shared with other EPA offices, which then becomes part of a "hit list" for things to look for at other sites. Ultimately, EPA can send out data requests (Section 114) that need to be complied with. Regulators are much more knowledgeable of permit requirements and inspections are becoming much more specific. There was a problem with a thermal oxidizer at a food industry plant on ethanol emissions. As a result, a "114" letter went to all the bakeries and food processing plants in the region requesting data. Data can be requested for the past 5 years. Old data may have quality issues including missing charts in the files, illegible plots, data gaps, and undocumented excursions.

Manual compliance records typically have data problems. With fewer coal units, regulators are looking harder at natural gas plants. With modern computer technology and data acquisition, a lot more data is available. With more data, there is more to go wrong. The validity of rolling averages is a typical example. Variations on what constitutes an "operating day" can result in different average values. Heat input hourly values may be needed. Regulators are asking for data files, calculations, methodology, and accuracy. Heat input can be determined by measuring the gas flow rate and using the heating value of the gas. If the heating value was input as a "typical" value rather than a measured value, the data accuracy can be questioned.

Start up and shut down emissions are attracting more surveillance. There are no longer blanket exemptions. One minute CEMS and DCS data are being requested. CEMS are often "over range" during startups. The range on the CEMS needs to be adjusted to read properly. There are also annual limits, towards which start up and shut down emissions accumulate. During a shutdown at one plant, the CO monitor maxed out for several hours. Part of the problem was that the range was not adjusted and part of the problem was improper calibration gas. However, with the reading maxed out, the actual value was unknown and the inspector picked up on this leading to additional questions and requests.

Biomass gasification plants often have single feed supply with two reactors but one common stack. In such cases, it is difficult to establish which unit was the cause of the problem when a problem occurs. Steam flow can sometimes be correlated with fuel flow for these units, but the relative accuracy is around +/- 15%, which is outside of the Part 75 required limits. During compliance testing for one unit, the other unit must be shut down in order to isolate emissions from the unit being tested. Any initial cost savings from a common stack and fuel handling have been lost as a result of compliance problems.



Predictive Emissions Monitoring Systems (PEMS) are allowed for certain units for NO<sub>x</sub> emissions. The systems are acceptable as long as the plant instrumentation remains calibrated. Retuning and retesting may be required if any significant adjustments are made. Moisture based on oxygen monitoring is subject to some instrument uncertainty. The CO measurement can be corrected using the in situ oxygen measurement (wet basis) to 3% O<sub>2</sub> on a dry basis. However, if instrument uncertainty is taken into account, the calculated number can get to a level that exceeds the permit limit. The EPA calculation for NO<sub>x</sub> on a lb/MMBTU basis uses factors for fuel and conversion from ppm to lbs. of NO<sub>2</sub>. The dry basis fuel factor can be adjusted from the EPA default by using the fuel analysis.

The EPA default is typically “conservative” leading to a higher calculated NO<sub>x</sub> level. There is also instrumentation accuracy, calibration gas accuracy, fuel flow meter, fuel heating value, gas stratification, equipment degradation, CEMS equipment performance, and units of the emissions standard (number of decimal places). Data uncertainty can impact the annual emissions output. If the output is lower, due to error or accuracy, this does not cause a problem. If the output comes out higher, this could cause a problem meeting the annual limit. Generally, 10 - 12% higher than average should be considered when the permit is being written. Data has to be nearly perfect. If it is not, dig into it. Permit conditions should make sense and account for variability. The time to check this is when the permit is being requested. It is much more difficult to go back “after the fact” and try to get a permit change.

**Brent Fitzgerald of Trinity Consultants, Inc.**, reported on Compliance Monitoring Data Gone Bad. Once data has been collected, software is used to distill the data into information that can be used to demonstrate compliance or to provide real time data to the operator. A data acquisition system (DAS) or data acquisition & handling system (DAHS). Typical emissions requirements are in lb/hr, ton/day, lb/yr, ppm, lb/MMBTU, lb/MWhr, or per cent. Typical measurements are in ppm, mg/liter, or lb/scf. So to get lb/hr from ppm the following equation applies:

$$\text{lb/hr} = \text{ppm} * \text{ideal gas constant} * \text{wet exhaust} * (100 - \% \text{ moisture})$$

To get lb/MMBTU from ppm the following equation applies:

$$\text{lb/MMBTU} = \text{ppm} * \text{ideal gas constant} * \text{Fd factor} * \text{oxygen correction}$$

Data is often taken in one minute intervals. This has to be converted into 15 minute intervals, which is then converted into 1 hour periods. All data is included except for CEMS maintenance/repair times, CEMS system failure, or daily zero & span calibration drift tests. There is also an hourly data validity check. This requires at least one valid data point in each 15 minute interval.

There are procedures in each of the subparts for Part 60, 63, and part 75. Part 75 has missing data substitution procedures. System problems include triggers/alarms, form of the standard, multi range analyzer, incorrect calculations and oxygen correction and erroneous data. The trigger alarm problem involves the daily limit of one value but the exceedance alarm value is slightly higher. The units may be different. The daily limit may be in tons/day, but the alarm is set at lb/day. Again, the system limit may have been set too high. The form of the standard may be a lb/MMBTU limit except during start up and shut down.



If the DAS includes data during start up and shut down, it will report an exceedance of the daily limit. Analyzers often have two ranges, one for lower limits and one for higher limits. The potential errors include not performing daily calibration checks for both ranges, reliance on high range measurements, and not correctly toggling the measurements for high range and low range operation (say start up and then normal operation).

Fuel factors are particularly important for solid fuels. Using the wrong fuel factor can cause incorrect emissions reporting. The fuel factor should be corrected for actual fuel analysis. This factor comes in when the limit is in lb/MMBTU. The oxygen correction is based on 20.9% oxygen by volume in air. Mixing up dry (larger) and wet (smaller) oxygen concentration will cause over or under reporting problems.

Sometimes software contains an arbitrary cap when the oxygen level approaches that of air. In this case, the reading defaults to a number, such as 2 lb/MMBTU. Part 75 allows a diluent cap of 5% CO<sub>2</sub> or 14% O<sub>2</sub>, which can be used in the calculations. Incorrectly including data can also lead to higher reported emissions. These include reporting data during calibration checks, system failures, and maintenance or repair times. It is a good idea to request a summary of the data validation rules, equations, averages, and reports. Each algorithm and data source should be checked. An external review can be performed.

## **GOVERNMENT AFFAIRS SESSION**

**Anthony Reed, Archer Daniels Midland Co.,** *Government Affairs Committee Chairman*

Congress is trying to wrap up for the year. Budget bills are the top priority. **Curtis (Curt) Beaulieu** of **Bracewell & Giuliani LLP**, pointed out that Congress typically waits until the last minute to take care of some of these funding issues. There is a customs bill that needs approval. There are some tax credit provisions that are up for renewal. There are several small business incentives that are being proposed to be permanent. Some of the tax credits are also being proposed for phase out over some period of time. Since next year is an election year, there is also a lot of posturing for political purposes. These items are not likely to be included in whatever spending bills get passed before year end. For next year, the only item that absolutely needs to get passed is reauthorization of the FAA. With that back drop, there is more likelihood of an energy bill being passed (but not necessarily signed) next year.

**John Lee** of **Bracewell & Giuliani LLP**, reported on the COP21 activities on climate change. The goal of this conference is to come up with some kind of agreement to limit warming to 2 C above pre-industrial levels by 2100. A draft was put forth this weekend, but no real substantive issues were agreed upon. One contentious issue is the funding to do this. The developed countries want a combination of public and private funds, including the developing countries. The developing countries would like the developed countries to carry most of the funding burden. There has also been a call for reducing the target to 1.5 C from some developing countries and environmental groups. There is no real means for this group to come up with a "legally binding" agreement. However, verification of achieving the targets could be a means for public pressure. The US has pledged \$3 billion to a "Green Fund". A final document will be issued over the next weekend.

The coal combustion residual rider was not on the transportation bill. It is still possible that it could be included in the omnibus bill, but the probability is not high. Next year, the major issues are likely to be foreign policy, the economy, and energy (which includes environmental issues).





**Jeffrey (Jeff) Holmstead of Bracewell & Giuliani LLP**, pointed out that while the industrials are not immediately impacted by the Clean Power Plan and, perhaps, the COP21 agreements, their time will come. The UN Framework Convention started out in 1992 at the Rio meetings. Even then, the developing world was looking for wealth transfer to pay for these issues. About 18 months ago, the US and China reached an agreement whereby the US would reduce its CO2 emissions by 26 - 28% from 2005 by 2025 and the Chinese emissions would peak in 2030 and reduce thereafter.

The source of the 26% was never really identified. This target will be very difficult, if not impossible, to achieve. This is more about showing "leadership" and setting "ambitious" goals, rather than a concrete plan that can actually achieve the goals. There is no real enforcement mechanism, as there was none for the Kyoto agreement (although some countries did and some didn't). There will likely be some kind of agreement which will be stated to be "the most important agreement of our time". The targets will be aspirational and the parties will agree to meeting again in 5 years. Regarding the Clean Power Plan, the application is aimed at utilities.

However, if EPA is successful in pushing this plan, industrials are likely to be the next target. Never the less, the legal challenges to the Plan are significant and there is likely to be some changes brought about by the Courts. A new Republican could easily overturn the plan. The legal stretch on the actual authority provided by the Clean Air Act is so great, that the Supreme Court is not likely to allow this to stand. From a cynical point of view, the hope is that at least some states will continue to require some of these actions even if the regulation is struck down. The basic mechanism to meet the Clean Power Plan is that a power plant will eventually have to pay someone else to reduce CO2 emissions. This mechanism is not part of the Clean Air Act.

One state has prepared a state plan using only heat rate improvement. They expect that EPA will reject the plan. Then they will go to the 4th Circuit Court rather than the DC Circuit Court to get a decision. The EPA has offered the states the choice of a mass based plan or a rate based plan. EPA favors the mass based plan with a cap and trade type system. However, they do not have the authority to impose a cap and trade system. Thus, they have put in a cumbersome system for the rate based plan, leaving the mass based plan more simplified. If the states then chose the mass based plan with cap and trade, the goal of a broader mass based plan can be achieved without EPA imposing it directly.

## **ENERGY SESSION**

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

**Paul Scheihing** of the **US DOE**, is the lead of the Superior Energy Program at DOE. The Superior Energy Performance program includes a voluntary certification program for energy efficiency. One of the issues is the level of attention given to energy efficiency at the highest levels of management in our companies. When energy prices are high, efficiency measures move up in priority. When energy prices are low (or some other crisis occurs), efficiency measures decline in priority. DOE is wanting to move energy efficiency into a more long term activity that will provide steady improvements, as opposed to a project based approach.

ISO 50001 is now an international standard that draws on best practices around the world in energy activities. Superior Energy Performance is ISO 50001 plus deeper sustained savings, credible 3rd



party verification, and national recognition. The utility industry has taken up the strategic energy management continuum. This builds on foundation programs, such as the Energy Star Program. The ISO 50001 is the next level built on that. Then the Superior Energy Program builds on top of the ISO certification. SEP certification requires industrial facilities and commercial buildings to achieve 3% efficiency improvement over a 5 year period that is verified by a 3rd party. On the order of a dozen companies have achieved recognition at about 30 plants.

Participants indicated that having a target number that gets verified has helped improve the credibility of energy savings programs. A 2015 study of 10 facilities showed a 12% reduction in energy costs within 15 months of starting the program with an average of \$430,000 in savings with little or no additional expenditure. The average quarterly energy savings were around 11%. In one plant, during the energy cost increases of the early 2000s, internally generated energy savings amounted to 30%. The first SEP program was recognized in 2012 for a 7% savings. The second round was recognized in 2015 and achieved nearly 18% savings. At a relatively small plant, a 16% energy savings was achieved during their 3 year period. There is also a certified practitioner program to help facilities implement these programs. They are now participating in a pilot program to implement SEP across all of the facilities in a company. With this program, each plant doesn't have to be sampled. Rather a random selection of plants within a company would be audited.

The program is moving into hospitals and universities. Water and wastewater plants are also being looked at. There is a North America Energy Management Program, including Canada, US, and Mexico, to foster the cooperation amongst the participants in training, energy/cost savings, ISO 50001, verified energy savings, and international recognition. There will be 3 workshops covering 2.5 days each over an 18 month period. At the end of the process, there will be readiness review that will get the participant ready for certification.

## **ENVIRONMENTAL COMMITTEE SESSION**

**Stephen (Steve) Gossett, Eastman Chemical Company**, Environmental Committee Chairman  
**Robert (Rob) Kaufmann, Koch Companies Public Sector, LLC**, Environmental Committee, Vice-Chairman

**Mary Martin** of the **US Chamber of Commerce**, reported on the Chamber's view of the Clean Power Plan. According to EPA, when the final plan is fully in place in 2030, it will cut emissions from existing power plants by 32%. The building block approach included a 2.1 - 4.3% improvement in heat rate, conversion to cleaner fuels, and an increase in renewable energy generation. The contribution from renewable energy would grow to 28% by 2030. The energy efficiency block was removed in the final rule. Improved efficiency can be used to reduce emissions, but it is not part of the rule. Nuclear may be considered under building block 3. Initial state SIPs are due Sept. 6, 2016, with the possibility of up to a 2 year extension. However, something has to be filed in order to request an extension. Final state plans would be due Sept. 6, 2018.

The interim compliance period would begin in 2022 and the final compliance date is in 2030. A blanket emissions rate was stated in the rule, but there is the option to choose a mass based system. Under the final plan, the center of the country takes the biggest hit. (Red states vs blue states?) If states do not file a plan, the EPA will issue a Federal Implementation Plan (FIP).

The NERA CPP Analysis estimates that the costs associated with implementing the CPP include electric rate increases of 11 - 14%/yr from 2022 - 2033. The energy sector expenditures would range



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from \$220 - 292 billion. These costs do not include additional T&D costs or pipeline costs. Losses to consumers range between \$64 - 79 billion.

On the state side, 27 states are suing EPA over the CPP. There are also suits by the Chamber and NAM, as well as the mining association and UARG. It is fully expected that these suits will end up in the Supreme Court. Industry has requested a stay of the rule on the basis of irreparable harm.

The model FIP has both a rate based plan and a mass based plan. EPA has not stated which one they will pick, but the mass based plan appears to be favored. Once EPA selects an approach, they have said they will stick with it. The comment period on the proposed FIP is Jan. 21st, 2016. Also included is some additional credits for renewables in low income families using solar or wind. Comments on this portion are to be sent to a different site with a different deadline.

Another issue is the social cost of carbon. A lot of comments have been submitted on this issue. The concept was developed by an Interagency Working Group of 13 Federal agencies in response to a court order to include the benefits of reducing carbon emissions in a Dept. of Transportation ruling. OMB finally did a comment period in September 2014. OMB put out a blog post on the comments, but no changes were made. Thus far, for most of the regulations, the energy savings were sufficient to justify the benefits without the social cost of carbon. This cost is still calculated and reported as required by the court order.

The Chamber is also promoting reform in the rule making processes. The Regulatory Accountability Act passed the House in 2015.

**John (Jay) Hofmann of Trinity Consultants, Inc.**, provided an update on the NAAQS requirements. On the SO<sub>2</sub> data requirements rule (DRR), states now have to provide a list of facilities that will be evaluated. States can decide to model or monitor and must report to EPA by July, 2016. New monitors must be operational by January, 2017. Modeling sites need to be ready by the middle of January, 2017. Some states are pushing for plan approvals ahead of the deadlines.

Companies with plants in different states may face different requirements. There will be a 6 month period between January and July of next year where the states will haggle with the EPA over which plants would have monitors and which would be modeled. EPA has indicated that model emission rates will not be part of rulemaking for precursors for particulates. Currently there are only a handful of SO<sub>2</sub> non-attainment areas. From a plant point of view, if the models show attainment, it would probably be advisable to accept the model results, since the designation would come sooner and the plant would gain some certainty. If the model results do not show attainment, monitoring may be advisable, since the models are typically conservative. It also takes 3 years of monitoring data to make a determination.

The PM<sub>2.5</sub> NAAQS standard is 12 micrograms/m<sup>3</sup>. Last year, the administrator signed final area designations. Moderate area SIPs are due in October 2106. Serious area SIPS are due later. The concentrations have been going down. The number of non-attainment areas appears to be small. The 2008 ozone standard of 75 ppb has just gotten their designations this year. The basic areas are California, the I-95 corridor, the Great Lakes, and Houston. The final implementation rule provides a template for compliance with the 2015 standard (now 70 ppb). A non-attainment area must conduct a new RACT analysis. NO<sub>x</sub> reductions cannot be substituted for VOC reductions.





With regard to NSR, some inter-precursor offsetting might be considered. The implementation rule for the 2015 standard has not been issued. With the 2015 standard, there are some additional areas in the southwest that will be included. EPA expects that by 2025, there will only be a few non-attainment areas for ozone (partly due to “co-benefits” of coal plant shutdowns from other rules).

The exceptional events rule was modified whereby violations might be caused by some kind of exceptional event (high background concentration, wild fires, volcanoes, monitor failures, etc.). The CAA includes 4 requirements: impacted air quality, the event was not reasonably controllable or preventable, the event was caused by human activity, and the event was a “one of kind” activity. There is a comment period on the proposed amendments. EPA intends to finalize these rules by October, 2016. Presumably a state could claim that an area would be attainment, but for this exceptional event. For the new ozone standard, initial designations will be made in 2017. Attainment plans would be due by 2020. EPA has provided grand fathering for PSD permits that are essentially complete by October 2015.

**Scott Darling of Alcoa, Inc.**, reported that the MOG study is continuing. The goal is to identify the contribution from industry (compared to transportation and utilities). Some preliminary information will be available early next year.

**Robin Mills Ridgway of Purdue University**, reported on the proposed changes to the RCRA rules. EPA published its proposal in the federal register on Sept. 25, 2015. Comments are due by December 24, 2015. The update is supposed to make the rules easier to understand, facilitate better compliance, and close certain gaps. The rule will be reorganized. There will be changes to labeling and reporting. According to EPA, the main issue is that generators fail to make correct hazardous waste determinations.

Noncompliance rates range from 10 - 30%. Reasons vary from not understanding RCRA to not being aware of RCRA. Current regulations clearly require maintaining documentation that a waste is hazardous. The determination must start with looking at the exemptions. The waste then has to be tested. If the waste is determined to be hazardous, all of the documentation and reporting rules apply. The waste must be determined at the point of generation. Thus, a chemical lab might have to have each lab technician determine that residual acetone is a hazardous waste and must be labeled and reported accordingly. The labeling requirement does not require generators to state the hazards associated with the hazardous waste.

EPA proposes to add extensive label information to the label. Since many lab chemical wastes are very small quantity samples, the information does not fit on the label. The campus program handles 30,000 items from 5,500 researchers. The researcher submits a pickup request, which is entered into a database. The pickup request form is processed by an appropriate chemist. Technicians go to each location to pick up the waste. The waste is then processed at a central facility that is permitted.

**Gary Merritt of Inter-Power/AhlCon Partners, L.P.**, reported on the status for water and ash rules. The coal combustion residuals litigation status will be updated by Lisa in the morning session. The bill that passed the House is still in limbo. The water quality standards get reviewed every 3 years. The water quality standards are set by the states considering the EPA's effluent guidelines. The triennial review is currently underway. In the meantime, EPA has issued new guidelines for certain compounds. Human health criteria apply to water that could be used for



drinking. EPA changed 94 standards this year. Approaches to establishing water quality standards related to impacts on aquatic life for chlorides and sulfates. These need to be reviewed as they will impact water discharge standards, not just potable water standards. Since these changes are "guidelines" they are not published as "rule making". Gary sent the following web links to the EPA site where such information can be obtained.

<http://www.epa.gov/standards-water-body-health>

<http://www.epa.gov/standards-water-body-health/what-are-water-quality-standards>

<http://www.epa.gov/wqc/national-recommended-water-quality-criteria>

<http://www.epa.gov/wgs-tech/final-rulemaking-update-national-water-quality-standards-regulation>

**Ann McIver of Citizens Thermal**, reported that the WOTUS rule has now been stayed by the Courts nationwide. The Army Corps web site is up and available. The Corps has made determinations on the applicability of proposed rule. Another rule that is "under the radar" covers water that is transferred. The water transfer rule applies to water that is transferred from one basin to another. If water is transferred within a water basin, a permit is not required. If it is determined that the transferred water goes to another basin, there may be permit requirements.

**Maxine Dewbury** of The Procter & Gamble Co., The Montreal Protocol led to the phase out of freon type refrigerants (CFCs) that were implicated to the hole in the ozone layer in the upper atmosphere. The replacement refrigerants (HFCs) can be GHGs in some cases. Leak limits are being proposed or tightened for these compounds. If the leak amount is exceeded, the appliance would need to be retired or mothballed. Comments on the proposals are due. Good record keeping is needed to make sure the leak location is properly documented and not attributed to the same piece of equipment. The proposal is that a unit cannot lose more than 75% of its full load charge in a 2 year period. A request for extension on the comment period has been filed. NRDC filed a petition to EPA to accelerate the phase out of these refrigerants on Oct. 6.

**Robert (Bob) Bessette, CIBO**, gave an update on the MACT database. The information from the non CIBO members has been compiled. The CIBO member information is still to be sorted and analyzed. The preliminary information comes from 156 boilers that responded to the survey requests. Of these boilers, 131 boilers are still in operation and 25 have been shut down, or about 16%. About 4% of the units were PC, 7.5% FBC, 2.5% packaged boilers, 13% stoker. The rest were gas and liquid fueled units. In response to a question about having added control devices, 92.5% indicated no controls were added. Some added O2 trim or other plant controls. Regarding changes to operations, 79% reported no changes, 6% indicated a new boiler, and 5% indicated fuel changes. Over 86% did not request a one year extension, while 11% indicated that they did request an extension. This information will be combined with the data collected from the CIBO members to provide a more complete picture of what has happened to the original universe of 1700 solid fueled industrial boilers.

**John C. deRuyter, E.I. DuPont de Nemours & Company**, reported on the Boiler MACT compliance concerns relative to the reconsideration changes.

**Amy Marshall, AECOM Environment**, January 13, 2016 is the initial compliance date. The unit has 180 days to demonstrate compliance and 60 days to submit the NOCS. The submittal will not be in the electronic reporting system. The 1st compliance report is due Jan. 31, 2017. There were 3 main issues for reconsideration: start up/shut down, the 130 ppm CO, and the PM CPMS



requirements. There were also various technical corrections. The malfunction affirmative defense was removed from the rule. There was no change to the 130 ppm CO standard. EPA has added the concept of "useful thermal energy". Startup ends when any useful thermal energy is supplied. Once the unit starts to fire fuels that are not "clean fuels" emissions must be vented to the stack and all emissions controls systems must be in operation, except for those systems that have restrictions.

Useful thermal energy means energy that meets the minimum operating temperature, flow, and/or pressure to any use system that uses energy provided by the affected boiler. Under the first option, no start up/shut down plan is required. The second option defines start up as 4 hours after the production of useful thermal energy. With this definition, all control equipment must be in service within the 4 hours. PM controls must be engaged within one hour. Additional record keeping requirements include hourly data for all of the operating parameters of the boiler and the emissions control equipment. Clean dry biomass, other Gas 1 fuels, and fuels that meet the emission limits via fuel analysis are now considered clean fuels that must be used on start up.

For CO CEMS, the 30 day rolling average is calculated on a once a day basis over 720 hours of operation. For other CMS, the same approach can be used or the average of all valid hours over the past 30 days calculated once per day. The concentrations in the rule are all based on 3% O<sub>2</sub> dry. However, for fluid bed units that calcine limestone, the EPA wants the values corrected for the CO<sub>2</sub> driven off from the limestone, which dilutes the flue gas.

There are a substantial number of monitoring clarifications. As an example, the pH monitor does not have to be calibrated daily, but must be cleaned daily. For energy assessments, the unit is exempt from the assessment if the unit is using ISO 50001 or Energy Star or equivalent energy management programs. Malfunctions are still not addressed in the rule. For CEMS, the definition of "out of control" period is different in Part 60 and Part 63. A set of questions for additional clarifications or fixes is being prepared. Some of the reporting requirements for Gas1 units have been reduced.

**Lisa Jaeger, Bracewell & Giuliani, LLP**, pointed out that any parts of the reconsideration rule that are to be contested must be filed with the DC Circuit Court by Jan. 20th, 2016. Any such petition should claim either illegal or irrational basis. If the eNGOs file petitions, there is one month to file as intervenors against these groups.

**Lisa Jaeger, Bracewell & Giuliani, LLP**, gave the litigation update. The Boiler MACT and Reconsideration issues were covered first. The oral arguments were held on Dec. 3rd for the 3 Boiler MACT cases (Major Source, Area Source, and CISWI). On the NHSM rule, the rule was upheld with essentially no changes. The eNGO petition for rehearing was denied. EPA is working on 2 materials (construction/demolition wood, railroad ties, and other treated wood) to finalize the rule. Those two issues could still end up in litigation depending on how EPA finalizes the rule.

The panel for oral argument was different from the NHSM panel. The eNGOs objected, but the Court went with the new panel while allowing some information from the NHSM case. The industry arguments came first. Malfunctions were the first topic. One question was about enforcement. EPA argued case by case treatment. Industry argued for a work practice standard. EPA stated that they did not have the data to provide standards for malfunctions. The panel challenged EPA on this point.

The next topic was the pollutant by pollutant treatment for best performers. Industry claimed that this requirement was irrational. This was the "Franken Boiler Argument". The Court asked about "best"



vs “best overall” in the CAA. One question related to mutually incompatible control. EPA claimed deference in ambiguous interpretation. One question was whether a source can be best on one pollutant but fail on another. The environmental intervenor suggested that the Court did not need to make a decision because the CAA was clear.

The energy assessment requirement was argued to be “beyond the boiler” scope and thus illegal. The Court asked EPA about the limits to what EPA could look at. The environmental intervenors had no argument. Small remote incinerators (mostly in Alaska) data was not included in the best performers but now are subject to the rule. These units had not been regulated in the past, so little or no representative data was available. The intervenors had no argument. The record keeping requirements were challenged as an illegal penalty. The CO limit was challenged as arbitrary and should be replaced by a work practice standard. The MATS rule provided a work practice standard for CO. The Court questioned the relevance of the MATS rule. The environmental intervenors noted that the focus should be the regulated HAP and not the CO. Since it is feasible to control HAP, a work practice standard is not needed.

The environmental petitioners challenged the use of the UPL. EPA argued that the UPL was a real average of best performers under the worst foreseeable circumstances. The Court had no questions. The industry intervenors had no arguments. The eNGOs argued that the best performers were excluded from the floor in certain categories. EPA defended their sub categories. Industry had no arguments.

The eNGOs challenged CO as an illegal surrogate. There were a lot of questions about the data. EPA stated that the chemistry is known and that there is a correlation down to 130 ppm. Data was cited. The eNGOs challenged the exemption of some categories of CISWI units. EPA claimed that there was no final agency action and that some of these units still need to be considered. Industry had no arguments. The eNGOs challenged that EPA should have set “beyond the floor standards” for CISWI. EPA stated that such standards had to consider cost, which was ignored by the eNGOs. There were no questions or further arguments.

The eNGOs argued against Section 112(c) 6 application to liquid fueled units for mercury. EPA argued against it. EPA stated that liquid fuels were not delisted from the Section, but merely exempted from MACT. There were no questions or intervenors. The GACT standards were challenged, as some subcategories did not have controls specified. Again there were no questions or industry intervenors. The Title V exemption for Synthetic Minors as illegal. It was noted that there were 92,000 sources with area source boilers. EPA stated that the size of the boilers was not the key issue, but the type of facility. Most of the information resides with the state.

In other litigation, the Supreme Court ruled that cost must be considered in rule making for HAPs. The MATs case was sent back to the DC Circuit Court and the rule sent back to EPA. Oral argument was held on Dec, 4th about whether the rule should be vacated while EPA works on the rule changes. EPA told the Court that they would reissue the rule by April 2016 and requested a remand of the rule, which would leave the MATS rule in place until the new rule is issued. The other two MATS case are still in abeyance (4 hour start up exemption and waste coal cases). There are a number of startup/shutdown/malfunction cases. There are motions to consolidate these cases.

On the Clean Water Act 316 (b) rule, industry groups have petitioned on the following issues: the threshold is too low, the intake structure requirements lack authority, the roles for the Fish & Wildlife



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Service and other agencies lack authority, and data collections issues on smaller intake systems. Briefing was to start in November. River keeper filed a motion to stay the briefing schedule.

On Waters of the US (WOTUS), a number of law suits have been filed in several district and circuit courts. The 6th Circuit Court issued a nationwide injunction against the rule. A number of jurisdictional issues have arisen. The Supreme Court will likely have to rule on the jurisdictional issues. The new Effluent Limitation Guidelines will be challenged after the 120 day period from publication. Industry issues include applicability, isolation of waste water streams, reclassification of low volume waste sources, daily loads as permit conditions, and record deficiency.

For the Coal Ash rule, briefing is expected in early 2016. Industry issues include inactive surface impoundments, closure of unlined impoundments, release response, mandatory safety assessments, definitions, qualifications for "alternative closure", and consideration of cost.

On the CSAPR rule update, comments are due by Jan. 19th, 2016. The revised rule proposes to use Federal Implementation Plans (FIPs) for 23 states to address ozone transport issues with respect to the 2008 ozone NAAQs (75 ppb). The ozone season would be expanded and emissions budgets updated for the 23 states. The focus is on the utility sector, as EPA has determined that the potential emissions reductions from the industrial sector in these states was minimal.

EPA has issued a document entitled, "Assessment of Non-EGU NOx Emission Controls, Cost of Controls, and Time for Compliance" that will require comments. EPA decided not to look at source categories with estimated costs greater than \$3,300/ton. EPA did identify potential sources for improvement including gas turbines, gas fired engines, and process heaters, as well as other industrial manufacturing processes.

**Next Technical Focus Group/Environmental & Energy Committee Meetings**

**TUESDAY & WEDNESDAY, March 22-23, 2016**

**Please note the location change for the March Meetings Only**

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