



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

# Environmental, Energy & Technical Committee Meetings

**June 11-12, 2013**  
**Radisson Hotel, Reagan**  
**National Airport**  
**Arlington, VA**  
**(703) 920-8600**

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## MINUTES

**TUES-WED June 11-12, 2013**

### **TECHNICAL FOCUS GROUP SESSION**

Water Impacts on Industrial Energy - Gary Merritt, Inter-Power/AhlCon Partners, L.P.

**Greg Nadeau** of WorleyParsons Goup Inc. reported on Power Plant Water Regulations. New rules were reported out last Friday. The Clean Water Act is the major regulation responsible for water quality in the US. Wastewater regulations are in Title 40. The Effluent Limitations Guidelines are in parts 405 through 471. Part 423 applies specifically to Steam Electric Generating Units. This part was originally finalized in 1982. Environmental groups have been after EPA to revise these regulations, particularly in light of recent air regulations.

A new lexicon of acronyms are part of the Water Act. BPT is best practical technology. BCT is best conventional technology. BAT is best available technology. For point sources, there is a daily max and monthly average limit. For total suspended solids (TSS), the limit is 100 ppm daily and 30 ppm monthly average. There are effluent limit guidelines (ELGs) that are specific to each industry. New Source Performance Standards are defined in Part 306 and are effluent standards based on BAT. There are also pretreatment standards for new sources. These apply to effluents that are sent to a publicly owned water treatment facility. These are designed to avoid simple pass through to the public facility. There are also pretreatment standards for existing units.

Best Conventional Technology is defined in Section 304. Cost can be considered for BCT. Best Practical Technology is also in Section 304. Currently available effluent limitations for conventional, toxic, and non-conventional substances are identified. The age of the equipment and facilities, the process employed, and cost is considered for BPT. Best Available Technology can also consider cost, process changes, age of facility, and other environmental impacts. There are also priority pollutants, non-conventional pollutants, and conventional pollutants. Indirect discharges are those that go to another publicly owned treatment facility.

EPA has offered 4 preferred alternatives for part 423. The options differ in the number of waste streams covered, the size of the units controlled, and the stringency of the controls. There are different levels of cost and reductions for each alternative. The new regulations look at the type of fossil fuel, nuclear fuel, fuel derived from fossil fuels, gas turbines, and the steam cycle that is part of a combined cycle. The preamble states that it does not apply to industries that make power for their own use in manufacturing goods. However, since the states actually issue the permits, these guidelines tend to be applied to industrial units as well.



The primary impact of the new rules will be to coal fired plants. For flue gas desulfurization units FGD, there are limits on selenium, mercury, arsenic, and nitrite/nitrate limits prior to any kind of re-use, co-mingling, or discharge. The implication here is that blowdown from a wet scrubber can no longer go to a cooling tower without some kind of treatment. Water can no longer be discharged from flue gas mercury control ash waste water. Water can no longer be discharged from fly ash or bottom ash transport water. Some options would allow bottom ash transport water to be ponded provided that it meets the new BPT limits.

For new sources, BAT would be required for selenium from FGD systems (biological removal) and for arsenic and mercury (chemical treatment). The proposed limits in microgram/L for arsenic are 8 daily and 6 month average. There are similar limits for selenium. The proposed rules are intended to push the facility towards zero liquid discharge (ZLD). BAT now includes anaerobic waste water treatment systems.

The new rules also require active management of surface water impoundments and landfill leachates in NPDES permits. These rules refer to Mine Safety rules (MSHA). The goal is to avoid an incident like the TVA impoundment failure. There are major changes to sample collection and analysis. The mercury testing is extremely difficult to carry out. Trained personnel, excellent QA/QC, appropriately sensitive equipment, and proven sampling systems will be required. The proposed rule making was signed April 19, 2013. The 60 day comment period commences on publishing in the federal register. The rule must be finalized by July of 2014. The rules must be incorporated into NPDES permits by July 2017. These rules are effluent guidelines. States can always make permit requirements that are more stringent. There are also effluent limits that are applicable to particular streams or waterways.

**Bryan Hansen** and **Jason Rysavy** of Burns and McDonnell reported on Physical Equipment Technology. Waste streams in the current rule include low volume water, fly ash and bottom ash sluice water, coal pile runoff, cooling tower blowdown, and metal cleaning wastes. The revised rules include FGD systems, mercury control systems, and leachate. The new limits have ppb limits on arsenic and selenium and ppt (parts per trillion) limits on mercury. Reduction requirements will be in the range of 98 - 99.9% levels. Contaminant sources include conveyor/plant wash down, fly ash and bottom ash systems, transport water, scrubber systems, mercury control systems, cooling towers, and wastewater streams.

For suspended solids, clarification is a typical treatment process. Clarification relies on gravity settling to separate solids from water. Chemicals can be added to increase the rate of settling. Settling ponds rely on clarification. A clarifier is a specially designed tank that concentrates the solids in the bottom and allows clear water to overflow a way for potential further treatment or use. High rate clarification utilizes a micro sand to enhance the flocculation of the solids and increase the rate of settling. These tanks tend to be rectangular with segmented regions. The advantage to this system is the lower plan area. The disadvantage is the power requirement and sand replacement. Filtration can be used to reduce suspended solids. Sand, coal, and granular activated carbon are typical filtration media. These systems are relatively simple to operate with a relatively small foot print. A periodic back wash is needed to clean the media. This water has to be treated at some point. Dissolved air flotation involves saturating water with air.

The water is then pumped to a tank. As the air bubbles are released from the water, they float up and take suspended solids with them. The froth is then skimmed from the water. Metal ions can



be removed by adsorption. Metals can be adsorbed onto hydrous ferric oxide (HFO). This material is coated on sand. In a tank, air is used to lift the sand and mix it with the water stream. The metal ions are removed from the water. High chlorides will inhibit mercury adsorption. There is a concentrated waste stream that needs further processing. This appears to be a polishing step. The process can remove up to 90% of aluminum, chromium, and mercury. The arsenic and selenium were on the order of 60% and 40% respectively. Copper and lead reductions were on the order of 10%. Metal hydroxide precipitation can be used as these hydroxides are relatively insoluble.. However, large quantities of lime or caustic are needed to provide the hydroxide ions. A sludge is produced which needs to be treated.

Metal sulfides are even less soluble than hydroxides. Again, an alkali material is needed in addition to an organo-sulfide. A metal sulfide precipitates and is removed in a clarifier. The sludge goes to a sludge tank for de-watering, leaving a dry cake. The water from this step is recycled. The advantage of this process is that the low concentrations can be achieved. The metal sulfide cake is stable. The disadvantages are that a large volume of sludge is generated, high capital and operating costs, and a large foot print. Nitrate/nitrite removal is relatively low. Ion exchange can be used to get very low levels of dissolved solids. Both metal ions and non-metal ions can be removed with proper treatment. The advantages of this system are proven technology, high removals, and relatively inexpensive equipment. The disadvantages are the high resin cost, relatively high regeneration costs, and the need for pre-treatment for organics and certain other compounds which will interfere with the ion exchange process. Reverse osmosis utilizes pressure to overcome the natural osmotic pressure the results from having dissolved salts in water.

Reverse osmosis can get good reductions of heavy metals. Semi-Permeable membranes can be wrapped into tubes. The water to be treated is on the inside of the tube under pressure. The treated water goes through the membrane and is very clean water. A brine results that has to be further treated. Thermal evaporative systems include evaporative ponds, falling film evaporators, spray dryers, and thermal/mechanical vapor compression equipment. The advantages are the elimination of a liquid stream and dry disposal of solids. The disadvantages are cost and complexity. Drying beds can be used for drying sludge. The foot print tends to be large, but the solids are then dry.

Filter presses can be used to dewater a sludge. In a belt filter press, the belt eventually goes between two rollers to squeeze the final water out of the solids. The technology is proven with a relatively low capital cost, but has a large footprint and the cake is not as dry as from a centrifuge. In a plate and frame filter press, the filter is held on a skeleton for frame. A plate is pressed onto the filter to squeeze the water out of the solids. High solids concentrations can be achieved, but this is a batch process that has a large foot print. Centrifuges can be used to get high throughput and thus a smaller footprint. The disadvantages are high energy use and high capital cost. Specialized maintenance is usually required. Thus, there are a lot options for water treatment, but it is likely that more than one process will be required to meet the more stringent guidelines.

**John Schubert** of HDR Engineering, Inc. reported on biological equipment technology. These treatments are aimed at ammonia, organics, nitrates, and selenium. Biological treatment uses micro-organisms to remove these materials from the water. Micro-organisms need to respire, eat, and reproduce. Biological treatment essentially provides a home for the organisms that uses the contaminants as food and energy for cell growth.



Biological treatment started in the 1800s for sewage treatment. In 1914, activated sludge was developed. The Clean Water Act of 1972 mandated the removal of carbonaceous materials from water effluents. One of the treatments is aerobic biological treatment. Oxygen plus organics plus aerobic bacteria plus nutrients will produce CO<sub>2</sub>, ammonia, water, and bacterial cells. These bacterial cells take more oxygen to get broken down to CO<sub>2</sub>, water, and ammonia. The ammonia and the nitrites are further oxidized by bacteria to eventually form nitrates and water.

The net reactions require pH adjustment and CO<sub>3</sub>/HCO<sub>3</sub> alkalinity as a source of carbon for the bacteria. For those plants with ammonia addition for NO<sub>x</sub> control, the FGD system will pick up ammonia slip. The scrubber water will then need the bacteria that is specific to ammonia and nitrites before the water can be discharged or co-mingled with other water streams. The oxygen can be supplied to these systems by aeration tanks, fixed film reactors, and trickling filters. Buoyant packing can be added to aeration tanks in order to increase available surface area for reaction with oxygen. Membrane bioreactors trap air in tanks as well as the suspended solids in order to minimize the total volume of the system.

Selenium is now in the proposed regulations. It exists as elemental selenium, selenides, selenites, and selenates. There are also organic selenium compounds. Selenium is analogous to sulfur (sulfur, sulfides, sulfites, and sulfates). Biological treatment for selenium has been used in the past and will likely be required to meet the proposed limits. For nitrates, an anoxic biological treatment is required. The nitrates and/or nitrites will provide the oxygen required for the bacteria. An organic material is needed for the "food" to make the CO<sub>2</sub> and water. Selenium can be treated in a similar manner. Solid selenium is the product, which must be filtered from the water. Materials can be plotted against the oxidation reduction potential of the water stream. High oxygen provides an oxic environment. Modest oxygen is aerobic. Lack of oxygen is anoxic. Strong reduction is anaerobic.

The GEABMet process treats FGD effluents for selenium. The sludge stream is filtered to remove suspended solids. Nutrients are added and mixed with the feed stream to go to the reactor vessels which have the micro-organisms. A system for AEP reduced selenium from 2500 ppb to 25 ppb, which was the NPDES limit in 2012. Landfill ponds were used to settle the product solids. Another site used this system for surface runoff at a large surface mine. The design limit for discharge was 5 ppb from a starting level of less than 100 ppb.

The Degremont IBIO process is a suspended growth system. It uses two bioreactors at different oxidation reduction potential. Nitrate and selenium removal was targeted at the Conemaugh plant. Envirogen Bio Se Removal uses a fluidized bed reactor. Sand is used as kind of a substrate. The bacteria grows on the sand. The sand is fluidized to promote reactions. The heavy bacteria and product selenium slough off and fall to the bottom for removal. Passive systems can also potentially be used. Recycle materials such as wood chips, saw dust, and other biomass can be used for the carbon requirements. Large ponds can then be used for the reactors. These take up considerable space. The process performance of these for selenium has yet to be demonstrated and documented. The similarity to sulfur implies that some sulfides are formed. Metal sulfides are insoluble, so this could be a side benefit.

## **ENERGY SESSION**

**Frederick (Fred) P. Fendt, The Dow Chemical Company, Energy Committee Chairman**



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## **Robin Mills Ridgway, Purdue University, Energy Committee Vice-Chairman**

Energy Committee - **Jason Philpott**, Eastman Chemical Company

**Bob Bessette** gave the antitrust admonition. **Candy Marriott** introduced the guest and new members. **John Hughes** of ELCON reported on the FERC Fastrack permitting Activity NOPR. ELCON provides comments and information to FERC in order to get more reasonable rule makings. Last year, an Executive Order was issued to promote more combined heat and power in the US. At the end of last year, Congress passed a bill related to energy issues.

In January, FERC issued a Notice of Proposed Rulemaking (NOPR). The background on small generator connections to the grid came about in a 2006 settlement agreement. Last year, the Solar Energy Industry Association filed a request with the FERC seeking to re-open the 2006 agreement in order to promote more solar energy. A lengthy process of approvals was deemed to be holding up the deployment of solar energy systems. The dividing line for the fast track process was asked to be raised to 5 Mw from 2 Mw. A further requirement was the requirement to provide an upgrade to the transmission system to accommodate small plant. A request was made that the small plant developer could hire their own transmission system engineers for evaluate the need for the transmission upgrade.

ELCON decided that its members could benefit from these reforms and has supported these reforms. They have also proposed that larger sized units should be able to seek fast track approval if the Executive Order promoting CHP is to succeed. ELCON is trying to expand interest in this issue. CIBO has signed on to the support letter. The US DOE has issued a letter asking for volunteers to assist in a study that would identify the barriers to greater deployment of CHP and energy efficiency. The results of this study would be a report to Congress as required by the bill that was passed late last year. Issues surrounding internal generation and use of steam and electricity are exit fees, back up power, NERC reliability requirements, and PSD requirements (because internal generation and emissions go up at the plant in spite of the overall net reduction of emissions).

**Jason Philpott** reported on the Energy Audit requirements under Boiler MACT. The scope of the energy assessment includes the boiler system(s) and the process heater(s). In addition, the energy use system tied to the boiler system is covered under the assessment requirements. This applies only to the steam that is generated on site. Purchased power is not counted.

The smallest designation for Major source units is a combined heat input capacity of less than 0.3 trillion BTU/yr. Note that this is capacity not actual use. The energy assessment for such a plant would involve 8 onsite hours maximum for the assessment. The energy use system must account for 50% of the boiler's energy use. If no system accounts for more than 50% of the boiler energy use, than only the boiler is in the assessment. In the question to EPA (Q. 71), the EPA provided this answer. The definition of an energy use system may be segmented by the production area or energy uses area as the most logical segment.

For large systems (greater than 1 trillion BTU/yr), the energy use system must account for 20% of the boiler energy use. This energy use system definition should be identified and well documented. The actual energy audit report does not go to EPA. The only thing that goes to EPA is a statement that the energy audit was carried out and the results could be made available upon



request. Most likely, energy use percentages should likely be based on actual usage. This interprets the words "energy production" as actual production.

For a medium sized system, the energy use system must account for 33% of the boiler energy use. There is some confusion on the inclusion of process heaters in the smaller categories with regard to energy system inclusion. It was noted that there may be some guidance in the preamble for some of these questions. In any case, whatever choices are made need to be justified and well documented.

There is always the option to include enough equipment to come up to the minimum in order to reduce the risk of a negative audit. It is also possible to check with the regulator first and get some agreement ahead of the audit. Energy production is stated to include steam, hot water, process heat, and electricity. A steam boiler that uses a back pressure turbine to make some electricity and the rest steam could be interpreted to violate the first law by adding the primary steam flow and then the electric production. The correct approach is to sum the steam flow after the turbine and the electric generation. The easiest approach is to just use the total boiler steam flow.

**John C. deRuyter** reported on the CHP policy position and position statement. The DOE study is intended to identify barriers to the deployment of CHP and energy efficiency approaches. The study will result in a report to Congress. Of the people present that looked at CHP in the last 6 months, essentially none were going ahead. John indicated that there are often 2 major barriers, one being costs (including back up, fees, etc. as well as capital) and the other being that companies are reluctant to spend capital money on such equipment. A sign up sheet was sent around for those that would like to participate in the discussion on CHP.

## ENVIRONMENTAL COMMITTEE SESSION

**Maxine D. Dewbury**, The Procter & Gamble Company, Environmental Committee Chairman  
**Robert (Rob) Kaufmann**, Koch Companies Public Sector, LLC, Environmental Committee, Vice-Chairman

**Maxine D. Dewbury** requested approval of the minutes from the last meeting. **Lisa Jaeger** gave the antitrust admonition. The minutes from the last meeting were approved as written.

Boiler MACT Slate of Rules - **John C. deRuyter**, E.I. DuPont de Nemours & Co.

**John C. deRuyter** noted that **Jason Philpott's** presentation noted that the EPA has published the Questions & Answers related to BMACT on their web site. **Lisa Jaeger** noted that a Q&A document is not legally binding. It represents EPA's interpretation of its rule. If EPA were to change its interpretation, it would be required to explain why it changed the interpretation. From a legal point of view, the most binding is a regulation, followed by a guidance document, followed by a policy statement, and then a Q&A document. If a legal position is needed, a letter from EPA should be requested. Lisa also pointed out that there are issues that will be litigated. There is also the reconsideration process and the subsequent technical amendments that will result. Some of these issues are likely to remain uncertain. It was pointed out that these particular questions were reviewed by the Enforcement Office, which at least helps with the interpretation.



**John C. deRuyter** presented the issues from the industry and the eNGOs in the reconsideration. From industry, the big issue is the startup and shut down rules. For startup we need more flexibility on clean fuels, the definition of the end of startup is unworkable, the need to include process heaters, and the requirement to add ESP's once start up is done, which is a safety problem. The shutdown definition also needs to be revised to begin when no steam or heat is being supplied for a useful purpose and end when no steam or heat is being supplied and when no fuel is being fed to the unit. The operating load should be a 30 day average. Industry asked for a work practice standard for CO to be similar to the utility rule. Industry indicated that any exceedance should not be considered a violation. Earth Justice objected to the changed CO limits (too high), that CO is not a surrogate for organic HAPs, that the limits in the final rule are not really MACT. They also claim that the limited use exemption and work practice standards are not appropriate.

On the petitions that went to the court, industry filed on startup and shut down, the methodology on the floors and the limits, the energy assessment, the provisions relating to Gas 1 and Gas 2 with no liquid firing, the PM CPMS, and the rule applicability of this rule to utility gas fired units (since they are not covered by MATS). The Louisiana Environmental Action Network claims that the rule is illegal, that standards were not set for PCBs, POMs, and hexachlorobenzene, the floor standards are less than required by law, best sources were not used, actual emissions to identify best performing units and then using something else, hypothetical percentiles, source emissions levels adjusted, variability at 3 times, no affirmative defense, and the use of 30 day averaging.

The Area Source rule had similar industry comments. The Sierra Club objected to input based GACT for oil, the limited use boiler subcategory, the exemption for PM emissions test, the 5 year tune up cycle, the weakened fuel sampling requirement, and the mercury fuel analysis and subsequent lack of requirement.

On petitions for Area Source, the startup and shut down and the energy assessment were on the industry list. LEAN objected to the subcategories, no urban HAP, not reflecting MACT, not using the best performers, wrong basis for floors, CO not a surrogate, against GACT, against work practice standards, and no affirmative defense.

For CISWI, industry requested an extended startup period, especially for kilns. The HCl limits did not address detection limits. There are differences between the BMACT biomass units and the CISWI biomass units. The cement industry objected to the lower PM limits, the start up and shut down limits, and inappropriate modification trigger date, and record keeping requirements. There was also an objection to the requirement for an opacity monitor as there was no opacity limit. There were no reconsideration issues from eNGOs on CISWI. The petitions for review by industry include startup and shut down, work practice standards, floor methods, and the 6 month period after ceasing to burn waste. LEAN objected to the subcategories, no standards for all HAP, standards were less stringent than floor requirements, not using best performers, no affirmative defense, no work practice standards, and allowing for parameter monitoring instead of emissions. For petitions, industry requested modifications to the definition of waste, the definition of processed is too stringent, LEAN objected to most of the rule including equating burning a material with recycling, all of the material exclusions, floor limits, and processing of wastes.

**Lisa Jaeger** pointed out that challenging a rule involves both reconsideration requests and petitions to the court. The next step is to get schedules for the court cases. There are many MACT



cases, some with similar issues. There are 4 major cases before the courts. The Boiler MACT cases have all been consolidated into the original US Sugar v EPA from 2011. The next event is any dispositive motions. Then EPA has to create a certified index. Then there will be motions to govern in August.

CIBO is involved in both sides of the case, as are most parties. The reason is to support items that we want to keep and to object to those that we want to object. Administration reconsideration is pending. If EPA comes up with a reconsideration fix prior to a court briefing, one side may request that the issue be removed from the case while the other side will add the fix to their complaint.

The Area Source suits have been consolidated into ACC v EPA, again, from 2011. A similar situation exists with a similar time frame, except that the Area Source Rule compliance date is March 2014.

For the CISWI case, the various cases have been consolidated in the AF&PA v EPA from 2011. There is a similar schedule. However, CIBO was an intervenor in the new case, but was a petitioner on the older case. CIBO can choose to remain a petitioner.

The solid waste cases are consolidated with the Waste Management v EPA case from 2011. In this case, the motions to govern are due in July. This could change. There is no reconsideration pending. CIBO is an intervenor and can also be a petitioner.

On the judicial side, anything and everything can be challenged. On the reconsideration side, EPA can choose what to reconsider and what to reject. It can also decide what it wants to litigate. For Boiler MACT, it is likely that EPA will consider startup, shutdown, 30 day average load, clarification items, liquid fuel use with Gas 1 and Gas 2, and notice and comment issues for PM., Hg, and CO, limited use units, work practice standards, and capacity factors. Issues that end up in litigation will likely be SU/SD work practice, CO work practice, CO surrogates, PM CPMS, limited use exceptions, standards and floors, urban HAP, and energy assessments.

For Area Source MACT, EPA will likely look at startup, shut down, and notice and comment issues. Issues that are likely to go to litigation include energy assessments, subcategories, standards/floors, CO surrogacy, work practice standards, and compliance alternatives. For CISWI, EPA will likely look at the interpretation of "modification", CEMS requirements on start up, and notice and comment issues. Issues for litigation include startup/shut down work practice, 2010 new source date, non-waste record keeping, the 6 month rule for ceasing waste burning, and the actual standards. For the waste definition there are no reconsideration issues and all issues will be litigated. There will be some court decisions that will occur on other MACTs before these cases will either be briefed or be decided. MACT, Area Source, and CISWI are basically air rules.

The definition of solid waste is not an air rule, but a RCRA rule. Here it is fairly common to have a more complicated rule since a substance can be a waste in some circumstances and not a waste in other circumstances. This puts the waste definition in a different light. This issue might be more of a problem for EPA than the air rules. There does not appear to be a reason for the court to vacate this rule. If there are problems, there could be some remanding of issues back to EPA for either clarification for reconsideration, but that would leave the basic rule in place. A court decision might be available by January 2015. Other MACTs include Sewage Sludge Incineration, MATS, Portland Cement, chromium electroplating, RICE, Pulp and Paper, Brick, and Ceramic Kilns.





**Kathryn Penry** of Bracewell & Guiliani L.L.C. provided some information on the B&G extranet for the MACT issues. This link requires a username and password. The link is:

<https://extranet.bgllp.com/sites/MACT-litigation/default.aspx>

The site has folders for each of the MACT cases. The information is loaded as PDF files. These include all for requests, comments, petitions, etc. In this way, specific information about these cases, can be obtained directly without having to search the federal register or the court digest. There is also a calendar with filing requirements and any court dates that are known.

Water Rule Implications for Industrial Facilities - **Greg Nadeau**, WorleyParsons Group, Inc.

**Greg Nadeau** noted that the recently issued water rules are intended for electric utilities, or more specifically, plants that generate and sell electricity to the grid. However, some industrial plants generate electricity for internal use or both internal and external use. Further, states can adopt these limits for any steam generating plant.

The elements that are of most concern are selenium, mercury, and arsenic. There are new limits for total suspended solids, nitrates/nitrites, and heavy metals. EPA is now insisting on point of source treatment. No co-mingling of water streams would be allowed under these rules without treatment at the source. Thus, FGD blowdown or scrubber sludge would need to be treated before the water could be sent to the cooling tower. For plants that discharge to a publicly owned treatment plants, the discharge would essentially have to be cleaner than the water in that plant.

Besides FGD systems, fly ash transport water, bottom ash transport water, mercury control system water, leachate, run off, and metal cleaning. Some of these streams will need biological treatment. The EPA is pushing towards zero discharge limits (ZDL). Sample and analysis methods are critical to compliance. Low level mercury testing is very difficult (ppt levels). Leachate from coal combustion residuals (ash) and CCR (ash) surface impoundments will need to be managed and treated.

New inspection requirements will appear in NPDES permits. Mine Safety (MSHA) requirements for impoundments and dams will be applied to existing ash ponds and impoundments. EPA wants to eventually close wet landfills and ponds. These treatment plants are not simple to operate. Trained personnel will be required. Costs will increase. These include energy, chemicals, labor, permits, fees, health/safety, training, solids disposal, and maintenance.

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

As noted, states tend to regulate ash disposal regardless of source. This would include industrial as well as utilities. Environmental groups have focused on individual litigation of ash disposal sites. The brunt of the new rules falls on coal. The EPA is pushing to eliminate wet handling of ash. On the legislative side, a new bill has been introduced (HR 2218). This bill proposes to strengthen state programs. It ensures that ash disposal sites are subject to enforceable rules and regulations. The rule is under subtitle D of the RCRA law (ie non-hazardous). The bill establishes a floor for state regulation of coal ash disposal. This bill applies to both utilities and industrials. Thus,



the effluent limitation guidelines just issued by EPA would essentially apply to industrials. It would be wise to comment on the effluent guidelines as well as the legislation itself.

Impoundment safety would be improved by establishing integrity requirements, certification and inspection requirements, ground water monitoring requirements, and closure requirements. Unlined surface impoundments would need to be lined. The legislation gives EPA the authority to enforce the standards if the state program does not. Beneficial use of coal ash is preserved in the bill. In general, the bill is fairly consistent with our prior comments.

#### 316 B Update - **Ann McIver**, Citizens Thermal

The rule is going through the approval process right now. There is no mandate for closed cycle operation or cooling towers. Impingement is still an issue, but EEI has recommended an alternative approach. There is still an opportunity for de minimis exception. EPA is carrying out a "willingness to pay" survey. The cycles of concentration calculation issue is being reviewed. Cooling ponds that are considered to be "waters of the US" are not considered to be part of a closed cycle system. There is a deadline for the final approval of June 27th. The regions are currently pressuring the states for more stringent requirements while the rule is under the approval process. The rule applies to withdrawals of 2 million gallons/day. This level applies to all of the pumping capacity including any redundant pumps. The 316 A part of the rule deals with thermal variances. The regions are pressing the states to redo the older studies that justified the variances.

#### NAAQS Update - **Robert (Rob) Kaufmann**, Koch Companies Public Sector, LLC

The CASAC has recommended that the ozone standard be set between 60 and 70 ppb. The current standard is 75 ppb. A Risk Assessment and a Policy Assessment is due in June. A new rule is expected to go final by Sept. 2014. On the PM<sub>2.5</sub>, the primary annual standard was revised to 12 micrograms/m<sup>3</sup>. New near road monitors have been added to the monitoring system which will show increases in the ambient concentrations, effectively reducing the standard. An implementation rule is being revised. There are NSR issues as well as "unmonitored" areas analysis. For NO<sub>2</sub>, there are currently no areas that do not meet the standard. However, there are permitting issues due to the need for PSD requirements.

The 2008 NAAQS ozone implementation rule has been issued. SIPs are due mid 2015. EPA designations for non-attainment were issued last year. Petitions for reconsideration have been denied. The expected final implementation rule is expected in early 2014. EPA is proposing that emissions reductions from other proposed or promulgated rules in the SIPs. EPA is proposing to allow all areas to substitute NO<sub>x</sub> control for VOC control to meet the 15% inventory reduction in the first 6 years after designation. Canada has just lowered their ambient standards for ozone and PM<sub>2.5</sub> to levels below the US. It was pointed out that transport of PM and ozone from other areas are starting to be claimed. Exceptional events are also being considered. These include fires, storms, and other events that impact these concentrations.

With the implementation of the new standards, the EPA required additional air modeling to determine potential impacts. However, the models were not intended for 1 hour standards and the level of detail that is required to make these model predictions more accurate. The local terrain



description, including natural and man made obstacles (buildings, hills, etc.) is often not representative. The levels are now so close to background levels that little flexibility is available. The inclusion of nearby units and background levels results in double counting. The models are very conservative. Thus, if the background level is 11 and the limit is 12, the model will tend to over predict concentrations and will generally calculate that a project would cause the area to be over the limit.

There have been a lot of meetings with EPA. The air office has started to understand the problem. EPA has issued guidance on monitoring vs. modeling. Some fixes to the models have been implemented (low wind, buildings, downwash, etc.). The ratio of NO<sub>2</sub> to NO can be adjusted using data. A number of guidance documents are out for review. These improvements are helpful, but not really enough. The model process can be broken down into inputs, algorithms, and outputs. While there have been tweaks to the algorithms, most of the problems are with the inputs. There are biases to the input and measuring techniques. State inventories are inaccurate. The measurement of fugitive emissions are difficult and generally over estimated. The PM<sub>2.5</sub>/PM<sub>10</sub> surrogacy policy should be re-instated. Preconstruction monitors could reduce the double counting issue. Post construction monitoring could be substituted for modeling. Projects are being held up over this issue. One member project has had a modeling issue for 5 years.

#### GHG NSPS Update - **Robert (Rob) Kaufmann**, Koch Companies Public Sector, LLC

EPA proposed an NSPS standard for GHGs over a year ago. There were a substantial number of comments. EPA has put off any decisions on the rule pending confirmation of the new administrator. The rule was advertized as "fuel neutral". However, the proposed level was such that only a new gas turbine combined cycle plant could meet the rules. Various groups have objected on legal grounds as fuel specific limits have been issued in the past. The utility industry has claimed the EPA missed the finalization deadline for the rule and must re-issue the rule and take comments again. On the permitting side, 241 PSD and 29 permit applications have been submitted. Of these, 87 have been issued. EPA has indicated that they would be lowering the threshold for permit requirements under the Tailoring Rule. Most of the approvals have been for EGUs or oil and gas companies. With a lower threshold the number of permit applications would increase markedly, making the permit process more cumbersome. EPA is collecting more data on this issue. Under consideration is streamlining for smaller permit applications. Environmental groups are opposed to streamlining. Originally, 10 states were given FIPs for GHG permitting. Only 3 states are still under a FIP.

#### Regulatory and Litigation Update - **Lisa Jaeger**, Bracewell & Guiliani L.L.P.

Pending cases include the 2008 ozone NAAQS, PM NAAQS, Coal Ash, FERC small generator, 316(b) Cooling Water Intake, SSM SIP, GHG SIPs, CSAPR, GHG Rules, and E15 Rules. The 2008 ozone NAAQS is long overdue for decision. The problem is that EPA "ignored" the CASAC recommendation for a lower ozone standard. The court is apparently having a difficult time with a decision. On PM NAAQS, there are only industry petitioners. There is a schedule for a July briefing. The Coal Ash suit has been summary briefed. A hearing is set for July 2013. The court could set a schedule for EPA coal ash rulemaking. The FERC small generator interconnection NOPR would help small generators to connect to the grid. ELCON has supplied comments. CIBO has agreed with their



comments. CIBO has also commented on the 316 (b) rules. On the start up, shut down, and malfunction (SSM) SIP issue requires states to consider SSM in their SIPs. SSM SIPs are due 18 months from Sept. 26th, 2013. Comments have been filed. Law suits are likely. The GHG SIP issue was kicked off by Texas. There were two parallel cases. There is a states rights issue on these cases. The courts could also say something about GHGs. The CSAPR vacature has been appealed to the Supreme Court. The Supreme Court has not decided whether to hear the appeal or not. The Supreme Court is scheduled to recess for the summer shortly. The Supreme Court may decide on some of these petitions before recess. In addition, there are 9 petitions pending on the GHG rules. There are also petitions on the E15 rules. With so many petitions, the Supreme Court will likely only take an issue that would apply across various government agencies. The two most likely issues are the EPA's interpretation of "absurd results" that led to the Tailoring Rule and the E15 decision. In the latter case, EPA allowed the standard for gasoline additive for ethanol could be raised from 10% to 15%. This decision was based on the petitioners not having standing. The standing issue is split in the circuit courts around the country and would be especially applicable to the Supreme Court.

Related issues include "sue and settle", Congressional activity, and post permit withdrawal. The "sue and settlement" issue comes about when a petitioner notifies an agency that they intend to sue. Once the notice is served, there is a 60 day period before a law suit can be filed. During this period, the petitioner can work with the agency to resolve the issue. The agreements that might be made under such discussions are essentially "locked in", such that affected parties do not have an opportunity to provide input and comments to such a settlement. States are becoming involved in objecting to this "settle behind closed doors". For example, the Northeast states filed an NOI on methane emissions. Thirteen other states have objected to any settlement without their participation. Congress has asked EPA to post these notices. Bills have been introduced in both the House and Senate. Letters have been sent to EPA. There is a law suit on the water side (Mingo Logan Coal v EPA). The issue is the withdrawal of a permit that was issued some years back. EPA has the authority for post permit withdrawal under the Clean Water Act "whenever" discharges are determined to have adverse impacts. The case was remanded to determine whether the withdrawal was arbitrary and capricious.

Government Affairs - **Anthony Reed**, Archer Daniels Midland Company

Last week the House Committee on Energy and Environment marked up the Coal Ash bill. The bill goes to full committee next week. The goal is to get bipartisan support. The target is for the last week of June for vote. The issue is the Senate. There has been an offer to attach the bill to the farm bill. The Senate passed their farm bill last week. The attachment would get the bill into Conference committee. Otherwise, the Senate will wait for the House to pass their bill. A Senate version will then be introduced with, hopefully, bipartisan support. On the energy efficiency side, the Shaheen Portman bill could be introduced after the activity on the immigration bill. Gina McCarthy's confirmation is still outstanding. Prof. Moniz was approved 97 - 0 for Secretary of Energy. There does seem to be a little more willingness in the Congress to come to some common ground in recent legislation. The jobs issue is still a hot button in Washington. Any data or cost information with jobs implications would be helpful in discussions with Congressional staff.

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



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