Environmental, Energy & Technical Committee Meetings

March 5-6, 2013
Radisson Hotel, Reagan National Airport
Arlington, VA
(703) 920-8600

MINUTES

TUES-WED March 5-6, 2013

TECHNICAL FOCUS GROUP SESSION

Water Impacts on Industrial Energy - **Ann McIver**, Citizens Thermal
Gary Merritt, Inter-Power/AhlCon Partners, L.P.

Bill Cunningham of the US Geological Survey gave an overview of water resources, including groundwater/surface water relationships. In the US, many of our water issues are in the West. The USGS mission and activities are related to surface water, water quality, ground water, data delivery, and water use. There is also concern about drought. The USGS is not a regulatory agency. They are the earth science arm of the US Dept. of Interior. They develop and collect information that is delivered to others to assist in decision making. The agency was formally started in 1879. In 2010, there were 3300 staff in the water area. The annual budget for this group is over $200 million. Another $100 million comes from users (cooperative programs, partnerships, etc.).

One of the major efforts is "stream-gaging". This effort provides near real time data on stream flow that is measured, sent to a satellite, and posted on the web in near real time. A snap shot of Monday's data for the US showed the central US flow data as being below the 30 year average (still under drought type conditions). Automated measurements are done with a well and transducers, taking data about every 15 minutes. These measurement wells are checked against the "flow stage" (time of year) and calibrated so that accurate data transmission is assured.

The National Water Quality Assessment Program was created in the 1980s. Nutrients remain elevated in the nation's streams. Water samples are taken on a regular basis. There is also a ground water program. There is not as much coverage for ground water. Around 1500 wells are measured daily. Another 19,000 wells are checked on some periodic basis. In addition, there is a national ground water monitoring network that allows states with water data to provide data over a portal. This program is in beta testing. The primary data is water level. There is a groundwater resources program aimed at regional groundwater availability. The principal aquifers of the US are mapped and subsequently modeled to project resource availability. There is a site USGS NWISWeb with data delivery. There is also http://waterdat.usgs.gov.

Each month there are 35 million pages being downloaded from this site on water data. Data has been compiled every 5 years since 1950 of water use. Although total water use increased from 1950 - 1980, it has slightly declined and leveled off since then. Surface water dominates this data. However, ground water use has increased at the expense of surface water. For example, homeowners are 98% supplied by groundwater today compared to 80% in 1950. The 3 largest aquifers for the country supply up to 20 billion gal/day (primarily for agriculture). Ground water use in the western states has been declining, but continues to rise in the eastern states. The US Drought monitor produces a weekly map on drought conditions in the US. The central and western US are still under severe drought conditions. Some modeling data indicates drought persistence this year. The Colorado River Basin showed data from 1914 with continued increase in water withdrawal and a trend toward reduced availability. There have been wide variations in water availability. During drought periods, more wells are drilled for groundwater. However, groundwater and surface water are a single resource.

A new circular (1376) discusses some of the relationships. The groundwater system moves very slowly. Underground water is present depending upon the structure of the rock in the area. In shallow aquifers, the water level and the stream level are often interconnected. If this connection is severed, the stream will eventually dry up. The flow in these streams is made up of run off and groundwater. In the US, the average is 52% with a range from 10% - 90%. The impact of a well to produce the ground water is to eventually depress the water table and perhaps even draw water from the stream. Stream flow depletion continues even after the pumping stops. This is due to the cone of depression surrounding the well (which has to fill in).

Tim Westin of K&L Gates LLP reported on water acquisition for industrial boilers and processes. In water use for boilers and energy production, thermal electric plants are major users. Historically, cooling water was taken in once through systems. Recirculating systems reduce the total withdrawal, but consumptive use continues to increase. DOE projects consumptive use to increase from 3.3 billion gal/day to 7.5 billion gal/day by 2030.

Water rights are a significant issue. As an example, at one combined cycle site there is a creek and a major river. The plant needs millions of gal/day and needs to figure out where to go to get the needed water. A "water right" relates to access to waterways, stream beds, withdrawal, use, drainage, management, and discharge of water. No one owns the water. There is a right of use relating to water. These rights can be thought of as, "What can I do?" and "What can someone else do to me?".

The western and eastern parts of the country generally use two different approaches, along with mixed systems. In the West, prior appropriation predominates. In the East, riparian rights doctrine is more common. Then there are state regulatory permit arrangements. Prior appropriation doctrine was adopted in the arid west. Fundamentally, the system operates on a 'first in time, first in right" basis. Elements of a "valid appropriation" include intent to appropriate water for a beneficial use, an actual diversion of water from the source, and the application of water to a beneficial use. The first withdrawal is a "senior" appropriator. Junior appropriators must curtail or cease withdrawals to allow senior appropriators the full amount of their right. The right is subject to loss for abandonment or forfeiture for non-use over some period defined in state law. Rights can be transferred, subject to a "no injury rule".

Groundwater rights fall under a different system. There are rule of capture, reasonable use, correlative rights, and prior appropriation. These systems may not match the surface water rights. There are also federal reserved water rights. The Winters Doctrine applies to Indian and non-Indian reservations. The reservation of land implies a reservation of water for present and future use. This may apply to surface water, groundwater, or both. In the East, most of the water rights are determined by "common law" (i.e. precedence). The administration of rights rests with the courts.

Not all "water" is legally the same. Different rules apply to different sources. There are surface waters, diffused surface waters, ground waters and percolating ground waters. Doctrines are often based on legal fictions rather than hydrological facts.

Riparian rights are the rights to use water on land next to surface waters (lakes, streams, ponds, etc.). if the plant owns the land next to the stream. Rights do not extend to non-contiguous land (ie if a road separates the land that is being used, it is non-contiguous). The measure of the right falls under natural flow doctrine, reasonable use doctrine, and no fixed amount. Common law rights in groundwater. The "English rule" is absolute dominion by the land owner (from the center of the earth to the stratosphere). The "American rule" of "reasonable use" for ground water (different from surface water) allows use that is not knowingly damaging to other users. Again the use applies to the land overlying the well. There is no consideration of the relationships of ground water and surface water.

Regulated riparian regimes include a permit process (above a certain quantity) that applies to a fixed amount of withdrawal for a fixed period of time. The Delaware River Basin Commission has a permit program for any surface or groundwater withdrawal over 100,00 gal/day. The primary criterion is consistency with the basin comprehensive plan. There are no prior use rights, but once a permit is obtained, others cannot interfere with the right. During periods of low flow the users all curtail to prevent deterioration of the surface water.

The Susquehanna River Basin Compact applies to withdrawals greater than 100,000 gal/day or consumptive use greater than 20,000 gal/day. There is a low flow protection policy that has a tiered approach with monthly exceeding values. The Great Lakes - St. Lawrence river Basin Water Resources Compact requires permits with a trigger level of 100,000 gal/day. There is a prohibition against taking water out of the Great Lakes and using it somewhere else (even in the same state).

There are also state and regional riparian regimes (Florida, New Jersey, Virginia, Ohio, and others). Ohio clarified there common law rules. New Jersey has common law with a strong riparian permitting system. There are special protection areas with special rules. Virginia has designated surface water and groundwater management systems. In most systems, domestic use will be given priority in allocations.

Hugh Archer of Mavickar Environmental Consultants reported on the Clean Water Act and restoring national water quality. The 1972 Amendments of the Clean Water Act were the most significant since the initial regulations in 1948. The states are the prime regulators and implementers of the programs. The goals were to eliminate the discharge of pollutants into navigable water ways by 1985 and that water quality would provide for the protection and propagation of fish, aquatic life, and wildlife by July 1983. The discharge of toxic pollutants in toxic amounts is prohibited. A "pollutant" is any constituent that exceeds the capacity of the system involved.

The 1972 amendments required an NPDES permit for any point source discharge to surface waters in the US, Best Available Technology for Municipal Wastewater, and NPDES effluent limitations based on the more stringent of technology or water quality standards. The trick is to understand the difference between what the EPA issues as guidelines and what the states require. The early emphasis was on Publicly Operated Water Treatment systems as it was felt that municipalities would not have the funds to adopt BAT.

EPA does not develop water quality standards. EPA approves the states' water quality standards. Water quality standards have to consider 3 components: existing and designated uses, numeric and narrative stream criteria, and anti-degradation requirements. There is a tri-annual review for the state standards. The EPA provides scientific/technical support, review, and approval of state standards. The EPA only promulgates standards where a state fails to satisfy certain minimum requirements. The states must review their data every two years. Minimum requirements for standards must be consistent with the uses to be protected, use designations consistent with the CWA provisions, apply sound technical and scientific methods and analysis, and have an anti-degradation policy.

An NPDES Permit typically includes effluent limitations, monitoring and reporting requirements, standards, special conditions, compliance schedules, and pre-treatment provisions. A draft permit has a 30 day limit for comments and corrections. It is critical to review every line of the permit to make sure that the permit is reasonable, as the permit agency can create "special conditions" that go beyond either existing permit levels or are new requirements. A compliance schedule only applies to new limits or new standards.

Where industrial users discharge water to Publicly Operated Water Treatment systems, the user must make sure that the POTW has adequate pre-treatment provisions and can handle the actual discharge. State water quality management plans are made up of water quality standards, bi-annual reporting, listing of surface waters that are in violation, the TMDL processing and implementation assessment, and an iterative plan that identifies critical water bodies, develops total maximum daily loads (TMDL), and compliance schedules.

The TMDL is a planning tool meant to develop and prioritize pollutant reduction goals that will improve impaired surface waters in meeting water quality standards. The level is the amount of a pollutant loading that a surface body can assimilate and still meet or maintain water quality standards. As water use is increasing, water reuse and recycle is being promoted. How we manage water use will determine how we manage growth. The TMDL consists of 3 parts: point source waste load allocations, non point source load allocations, and a margin of safety. The sum of these allocations is the TMDL. The margin of safety mostly allows for growth. Non point sources have no regulatory focus (ie mostly voluntary). In agricultural locations, the farms contribute over 70% of the nutrients, as opposed to 18% for industry. Yet all of the regulations fall on the industrial user. "Creative" solutions are needed to make any progress in these situations. The typical causes of impairment include siltation, metals, pH, nutrients, organic enrichment, flow variability, and habitat alterations. Siltation and TDS (total dissolved solids) issues usually come from mining activities and their aftermath. Production brines also contribute to TDS.

It is important to read the Tri-annual Reviews and the discharge (303 d) list. EPA has proposed guidance for TDS, including chlorides and sulfates. Such guidance needs to be scrutinized as these figures may ultimately end up in a discharge permit.

ENERGY SESSION

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

Bob Bessette gave the antitrust admonition. **Jason Philpott, Eastman Chemical Co.** is filling in for **Fred Fendt** and **Robin Ridgway**. Jason reported on the required energy assessments and tune up requirements under the Industrial Boiler MACT. There are a number of "hats" that a user might wear, including the rule interpretation, the real world, the implementation, and the EPA hats. For an existing unit, the rule applies to steam systems. One question is whether the steam turbine is part of the assessment. The boiler system and process heaters must be assessed. In addition, energy use systems accounting for 20% of the total use must be assessed.

Only systems that are primarily impacted by the boiler system need be assessed. Process heating, compressed air, machine drives, process cooling HVAC, hot ware systems, buildings, lighting, and other are mentioned in the rule. The steam turbine might come in under energy use. Purchased power is not included. Thus, 100% of the boiler system and items that account for 20% of your energy use must be assessed. Confidential business information should be considered in selecting the items to look at. The rule talks about 20% of the energy production. Hot water production needs to be considered.

The minimum amount of time required for the assessment has been graduated with the size of the facility broken down into trillion BTU/yr increments. The heat input capacity sets the timing up to a maximum of 160 hours on site. A qualified energy assessor is someone who has demonstrated capabilities to evaluate energy savings opportunities in the plant. At the moment, no certification is required. Also, it is possible to do this in house. There are ASME standards for steam systems and other equipment for which DOE has some training programs. An in house person that has taken such training qualifies and should be sufficient to document the qualifications.

The inspection should include visual inspection of the boiler, operating characteristics, inventory, review of procedures and maintenance, and review of data. The reporting requires a signed certification that the energy assessment has been done. An assessment that was done after January 1, 2008 can be used. The deadline for compliance is Jan. 2016. If the plant has an Energy Management Program that is compatible with ISO 50001, the onetime energy assessment is not required. The definition of compatible is not clarified. ISO 50001 has a flow chart that shows what must be done for an energy management system. The EPA flow chart is remarkably similar. Some different words are used, but the boxes look to be the same. DOE has adopted ISO 50001. EPA made their program under their Energy Star program.

Using our real world hat, these assessments are generally worth doing, but we don't like being told what to do. There are generally savings to be made. In a typical energy assessment, a questionnaire is sent to the site before the site visit. The assessor reviews the information prior to the site visit. The walk down looks at relatively obvious things. The operating area describes the process. Then the brainstorming session takes place. A list of opportunities is developed. From there, a very rough estimate is made on the cost. The goal of this effort is to filter out projects that don't really make sense. Potential projects should go back to the plant for review.. Projects that qualify now need more realistic cost estimates. Finally, projects that meet the 2 year payback are presented to the management. The project list does not have to be turned in to anyone. However, at some point, EPA or a permitting agency might ask for the list (for example when addressing GHG emissions). At some point, risk needs to be considered. One approach is to associate a cost with risk. In general, a high risk concept should probably not be on the list. Appropriate contingencies should be taken into account.

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 noted that the agenda has been revised as Lisa Jaeger will not be available this afternoon. The changes to the EPA protocol gases will be substituted this afternoon. The minutes from the December meeting were approved as written.

New Changes to EPA Protocol Gases – **Robert (Bob) Davis**, Air Gas Inc.

The protocol gases are needed to assure that continuous emissions monitors (CEMs) are operating as calibrated. These gases have to be accurate in order for the CEM to be measuring properly. The program has been established by the Inspector General's office of EPA. One major change has been that gas vendors have to pay for the audit of their gases. The Office of Air Programs audit is not a blind audit. The Clean Air Programs group will be conducting blind audits in the future. Certification periods have been extended and can be up to 8 years. Thus, if a cylinder has been stocked for 2 years and is now available, it can be stocked for up to 8 years without having to be recertified. The revised minimum pressure is now 100 psig. The gas can be used on the last day for the entire day. The very low NOx gas of 4.9 ppm certification has been extended from 6 months to 3 years. A number of reference gases are being added for HCl, formaldehyde, ammonia, natural gas, and zero gas. EPA has agreed that these reference gases can be reprinted rather than recertified, this should save owners money.

GHG Update –**Robert (Rob) Kaufmann**, Koch Companies Public Sector, LLC

Rob has responsibility for future issues impacting his company. At a recent planning meeting, outside sources indicated that GHG issues and NAAQS are the next major issues impacting manufacturing companies. EPA proposed a GHG NSPS for new utilities on 4/23/12 of 1000 lb CO2/Mwhr for all fuels. This rule does not cover modifications, reconstructions, or existing units. Timing of the final rule remains uncertain. EPA has indicated that it is in no hurry to propose a rule for existing sources. There is also a refinery GHG NSPS on a slow track, in spite of a consent decree. Some hints have been that such a rule would come out after utilities. After utilities and refineries might be chemicals, cement, pulp and paper, and industrial boilers.

As of Feb. 20th there have been 206 GHG PSD and 29 Title V permits submitted. Of these, 73 PSD permits with limits have been issued and no Title V permits have issued. EPA plans to issue a Step 4 Tailoring rule study around April 2015. EPA is considering permit streamlining options for smaller sources (eNGOs oppose this). Other actions under consideration are GHG Title V fees, rules for biogenic CO2, and permit associated with these. The current rule for biomass combustion has been deferred to next year.

Although a carbon tax was not discussed at the EPA CAA advisory committee meeting, Senator Barbara Boxer has already proposed a bill with a carbon tax with a 5.6%/yr escalation.

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

One of Gina McCarthy's (nominated to head EPA) key interests is PM 2.5 implementation (higher than GHGs). NAAQS requirements have been particularly onerous for PSD permit applications. For non-attainment areas, getting a permit is especially difficult. For SO2, final designations are scheduled for summer of 2013 with an attainment date of August 2018. A new ozone standard has yet to be proposed but is scheduled for 2014. Attainment dates would range from 2019 to 2036. The PM2.5 final designations are scheduled for the end of 2014 with attainment dates ranging from 2021 to 2025.

On SO2, states have been advised by EPA to add modeling as well as monitoring for designating non-attainment areas. In the new guidance, the EPA has stated that the preference now is for monitoring. However, states can use modeling, especially if insufficient monitors are available. Technical Assistance Documents (TADs) are scheduled for April to July of 2013. EPA is evaluating comments on size thresholds for sources. Sources less than 1900 tons/yr might be exempted from modeling. States can avoid non-attainment designations for modeled areas by submitting enforceable control measures and a new modeling demonstration of attainment by 2017. Sources can use actual emissions for modeling demonstrations. EPA will not be making formal attainment demonstrations until 2017 due to the need for new guidance on monitor siting. There are 30 small non-attainment designations proposed by EPA, mostly in the midwest.

The 2008 ozone rule has hit California, the I-95 corridor and some number individual areas as non-attainment. An implementation rule and guidance is in preparation. This rule will likely apply to the 2014 proposed standard. Rules and guidance, for the most part, will offer a preview or requirements for the new ozone NAAQS. For the "new" ozone rule, an integrated science assessment has recently been released. A risk, exposure, and policy assessment is expected in the May/June time frame. A proposal is scheduled for Dec. 2013 with a final rule by September 2014. The staff and CASAC has recommended a standard between 60 - 70 ppb. CASAC has also asked EPA to evaluate a standard at 55 ppb. A new NOAA study has indicated that 40 ppb of ozone is coming to the US form Asia. At 70 ppb, the bulk of the East Coast, mid-West, Great Lakes, Texas, and California. At 60 ppb, most of the country would be in non-attainment.

For PM2.5, the final rule was published on Jan. 15th, 2013. Legal challenges must be filed by Mar. 16th. The rule lowered the annual standard from 15 microgram/m3 to 12. The 24 hour standard remains at 35 microgram/m3. EPA will require states to monitor road side emissions (a de facto tightening). There is limited grand fathering of permit applications. There are measurement issues with PM2.5 (blanks, wet sources, faulty emissions factors, etc.). There have been 2 Court decisions that went against EPA. In one, the treatment of precurors calls for the consideration of SO2 and Nox as PM2.5 precursors. Ammonia and VOCs are not. Sub part 4 will require the inclusion of ammonia and VOCs.

The 2007 implementation rules have been remanded to EPA. The SILs are changing. The modeling results may disagree significantly with the monitoring results. The eNGOs can delay a permit as a result, requiring more monitoring data. EPA modeling guidance is due out shortly.

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

The limit for MACT rules on existing sources is determined by the top 12% of the best performing standards (usually with at least 30 units). EPA claims 14,100 boilers are covered by the Boiler MACT rule, of which 80% are gas fired. The definition of a hot water boiler was changed slightly. A temporary boiler is not included in the rule. For existing large (greater than 10 MMBTU/hr) units, there is an annual tune up, a onetime energy assessment, and emission standards for CO, HCl, particulates, and mercury. For dioxin and Gas 1 units (natural gas), there are no numerical emissions limits. Work practices have been proposed for startup and shut down. The compliance time frame got reset to 3 years from publication in the federal register. There is a possible 1 year extension, but you have to prove that you really need the additional time.

The achievability of CO limits was questioned. Additional data was submitted and EPA did change the proposed rule to 100 ppm at 7% O2 or 130 ppm at 3% O2. We had also suggested that work practice standards be used for industrials, similar to what was implemented for utility units (MATs rule). There is a question about whether to challenge the emission limits in favor of a work practice standard. There could be an approach to support a work practice standard for coal fired industrial boilers that would match up to MATs. With respect to the limits of detection, you must use the method detection level as the emission rate rather than zero for compliance purposes.

Fuel variability was questioned. EPA did take into account a fuel variability factor which helped mercury but not HCl. In calculating the fuel variability factors, EPA used a 50% level rather than a 90% level, which cut the estimated variability. There were also some comments on outliers, but these were not major contributors. However, they may have been part of the decision on the 50 percentile.

The liquid fuels sub categories were retained. A limited use sub category was included. An emission averaging was requested across sub categories. That was denied. We supported alternate CO CEMs based limits where numerical limits are set. The CEMs limits were retained, but averaging times were lengthened. We wanted 30 day averaging periods. Operating parameters are 30 day averages. Operating load does not have a number, but the guidance wording supports 30 days. A technical correction may be appropriate.

It was requested that minimum data availability provisions be included so that valid data is not required for every operating hour. Failure to collect required data is a deviation. Malfunctions are not counted, but the onus is on the operator to show that a data malfunction occurred. Fuel analysis for gases needed some revisions. Some of these have been incorporated. The hot water heater definition was modified. Gas 1 and Gas 2 liquid definitions were not changed. Fuel oil back up is still allowed for gas curtailment, but does not go up to the 10% that was requested. For the 30 day averaging period, start up and shut down data and monitor malfunction data are not included.

The CAA Section 112(h) allows EPA, in cases where it is not feasible to prescribe or enforce numerical limits, to propose work practice standards. In the final rule, work practice could be used, but the unit was to minimize the time during start up or shut down. The 2011 rule had a definition based on 25% load. The MATs rule stated that when steam from the boiler is used to generate electricity for sale, the unit is out of startup. Clean fuels must be used during start up. Once the unit converts to coal firing, all applicable control equipment must be on line.

In the 2013 Boiler MACT, a clean fuels definition was included which must be used during startup. Startup ends when steam is used for any purpose. Shut down begins when either no fuel is fired or steam is not used for any purpose. Emissions must be monitored during the start up and shut down processes. Equipment that would be damaged (bags and oil firing) or would not work (SCR, SNCR) on start up are exempted, but must be brought on line as appropriate considering the manufacturers recommendations. Some changes will be needed to make the rules workable. UARG provided comments on the MATs rule that could be useful. CFBs need additional time for start up. Separate rules should apply. Common stacks need to be covered. A petition for reconsideration on this part of the rule would be likely.

Amy Marshall, URS Corp. provided some analysis on BMACT costs for coal and liquid units. In the original cost analysis, it was assumed that controls would be installed rather than convert to gas. Unit replacement or switching to gas was not considered. On CO, upgrades for a 250 MMBTU/hr stoker firing biomass would be on the order of $6 million. For coal stokers, additional NOx control would likely be needed. Operating costs will also increase for tune ups, assessments, etc. The base estimate is a little over $12 billion. Biomass units made out reasonably well. Coal and liquid units would still have a major expense. A base cost of $10 million for a 250 MMBTU/hr for a new gas unit was assumed. For liquid fueled units, it is cost effective to replace the boiler with natural gas (roughly 90% of the units). For coal stokers, it also looked like it might be cheaper to replace the unit with natural gas. Coal was assumed to be $4/MMBTU delivered. Gas was $4.50/MMBTU delivered if a plant already had gas. If not, gas would be $7.50/MMBTU. This difference would make gas uneconomical. The operating costs were roughly equal, all in, for coal and gas.

At this point, roughly 60 - 70% of the coal units might switch to gas. Both new gas units and converting existing units to gas were considered. Gas price was the big impact variable. If gas costs rise for any reason, the coal units would remain competitive. A CIBO "white paper" document might be helpful in explaining the need for extra time. There is also the issue of "once in, always in" as a major source. It is a standard by standard policy. If a plant wants to reduce its emissions to become an Area Source MACT and escape major source requirements, it would have to be done by the required compliance date in 2016.

For Area Sources, the initial tune up compliance date was extended to March 2014. For low sulfur oils (<0.5%), PM standards are not required. Tune ups are every 5 years. Average time was considered to be the 30 day rolling average. For small, light oil fired boilers the tune up is due Mar. 2014 and every 5 years thereafter. No additional stack testing will be required if a test shows less than half the emission limit. One issue was considering a unit as new if a unit was switched back to oil. This has been changed to treating the unit as existing if fuel oil is considered as back up fuel.

The Non Hazardous Secondary Materials rule was amended on Feb. 7, 2013. Units that burn NHSM that are not solid waste under RCRA would be subject to the boiler rules. Traditional fuels are not solid waste. These are the fossil fuels and their derivatives, biomass, and coal materials from operating mines. In addition, scrap tires from a tire collection program, resonated wood, coal refuse from legacy piles, and dewatered pulp and paper sludges are generally not considered to be "solid wastes". There are also legitimacy criteria for a material to be considered a fuel and not a waste.

NAAQS Modeling Update – **John (Jay) Hofmann**, Trinity Consultants, Inc.

The primary focus of this update is PM2.5, but the SO2, ozone, and NOx issues are still relevant. EPA has issued guidance on the PM2.5 modeling. New versions of AERMET and AERMOD were released on Dec. 17th. There were a number of bugs that were fixed, including lower wind speeds. The minimum wind speed threshold is now 0.5 m/sec. There are options for increased turbulence. Some of these options are non-regulatory default options.

EPA released a new strategy paper for SO2 modeling. Fine particle formation in the atmosphere is very complex. Constituents typically include carbon (mostly organics), nitrates, sulfates, and crustal particles. Nitrates and sulfates result from secondary formation. The science of particulate formation is not as far along as the ozone formation. The predominance of any one major form of particulates (organic matter, elemental carbon, sulfates, and nitrates) is dependent upon local conditions.

On Jan. 22, the DC Circuit Court vacated and/or remanded sections of the EPA's PM2.5 regulations. The concept of significant monitoring concentrations (SMCs) was vacated. The significant impact levels (SILs) were remanded. A unit that is a new or modified source must determine if it is in a non-attainment area. If not, then the source must determine if its emissions are above the significant emission rates. The next step is to determine the difference between the NAAQS and the measured background levels to see if the difference is greater than the SIL. If yes, then a significant impact analysis is done to see if the source impact is above the SIL. If so, a cumulative impact analysis must be done. Thus, the SILs were not thrown out altogether. However, the SILs cannot be used to automatically get out of doing the modeling.

For the SMCs, all applicants should submit PM2.5 monitoring data whenever direct PM2.5 or any precursor is emitted in a significant amount. Representative existing network data may be used in lieu of siting new monitors for each facility. The older guidance on this is that monitors within 10 km can be utilized. EPA is now recommending 3 monitors, especially in hilly terrain. The significant emissions rates for PM2.5 is 10 ton/yr. The SERs for SO2 and Nox are 40 ton/yr. Four assessment cases were covered: both below the SER I (no analysis required), above particulate but below precursors, above precursors but below PM, and above both. To compare with the SIL, the highest 5 year average of maximum modeled 24 hours or annual PM2.5 guidance. The regional inventory should focus on the area within 10 km.

The secondary PM2.5 assessment methods is most qualitative to development an appropriate conceptual description f PM2.5. Important considerations include characterizations of current 24 hour and annual design values, seasonality and speciated composition f PM2.5, offset ratios, and overlays. Offset ratios can be proposed for precursor emissions. Rather than model all of the details, a certain amount of SO2 can be "converted" for model purposes. In this case, the model only has to deal with direct PM2.5. The precursors are treated as being inert for purposes of modeling. However, the argument for including precursors is that the reactions in the atmosphere are fast enough to form particulates. Another strategy to avoid monitoring is to install monitors.

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

EPA has proposed additional rule making due to the amount of litigation on the subject. The OSM has also proposed rulemaking. EPA has indicated that the final rule will be issued in late 2013 or early 2014. The OSM rule on using coal ash for mine land reclamation is also delayed. No legislation is currently proposed. There could be a bill introduced similar to one that passed the House last year. On the litigation side, there is a schedule suit being brought against EPA. EPA is supposed to review its rules on a 3 year basis. The leaching protocols are also part of the suit. EPA released a report that studied leaching of concrete and cement made with and without coal ash.

Environmental groups have been suing owners that have ponds or impoundments. A major settlement was reached in one case, resulting in the closure of the ash pond.

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

There are still 8 Boiler MACT cases, as well as Coal Ash, MATS, GHG rules, and CSAPR. Cases of interest include NO2 NAAQS, SO2 NAAQS, RICE MACT, Ozone NAAQS, Utility NSPS GHG, and Boiler NSPS. With the proposed final rule on Boiler MACT, new law suits have to be initiated by April 1st.

The initiation only takes a 1 page filing to indicate that a suit will be filed. On the HCl, there were data treatment issues (outliers, 50 % level). Although there are issues, we do not want to lose the gains that were made on the mercury standard. The particulate standard for new coal units is an order of magnitude too low. On the CO limits, we would like a work practice standard, but do not want to lose the improved limit. The THC alternative can be dropped from the list. On the liquid list, there were no issues that we felt strongly enough to pursue. The startup and shut down issue is important. A Petition for reconsideration will be filed. Relative to malfunction, the issue of "affirmative defense" is important.

The AF&PA is working on this issue and we are a member of that coalition. Relative to the energy assessment, there is a concern about providing information as to GHG issues (ready-made list, confidential business information, scope). Again AF&PA is working on this issue. Area Source start-up and shut-down is similar. For the energy assessment, the compliance time is a problem. On CISWI issues, the clarification of when a unit is a boiler or an incinerator is still important as a unit could be an industrial boiler under one rule and a utility boiler under another.

On the solid waste definition, the concern might be that "transfer" becomes equivalent to "discard". The likelihood is that the environmental groups will come down very heavily on this rule. There are macro issues that will be litigated. These include subcategories, floor setting, work practice standards, and compliance flexibility. The MATS litigation is proceeding and some of the issues might overlap with our MACT. While there is no time limit for administrative petitions, it is helpful to submit petitions along with any law suits. The PM CEMS has an issue that might be a technical correction. It appears that there is a requirement to certify, but no certification standard. There is also the issue of converting a coal fired boiler to gas and using that unit for averaging.

With all of these litigation cases coming before the Court, it is not likely that these will all be completed by the end of 2014. Early 2015 is a better bet. Since the compliance deadline is early 2016 and the rule is in effect, facilities will have to be making plans without the benefit of the Court decisions that will ultimately finalize the rules.

NHSM Rule - **George Faison**, US EPA

The latest issue of the rule has attempted to clarify the meaning of what is a waste and what is a fuel. A material that has been discarded is generally considered to be a waste. A material that has been discarded but reprocessed can be a fuel provided that the legitimacy criteria are followed. These criteria are managed as a commodity, meaningful heating value, and not having "contaminants" that are more than traditional comparable fuels. Specific revisions include "clean cellulosic biomass, contaminants, tire collection programs, and resonated wood. Under the legitimacy criteria, grouping is now allowed so that somewhat more variation in contaminant concentrations can be tolerated.

Certain materials are listed as "non-wastes". Once a material is on the list, new petitions for that material are not needed. A number of new requests have been received. In many cases additional data is needed to make a final determination. EPA is preparing a new categorical proposal to categorize materials as non-wastes. Many facilities are sending letters to EPA requesting confirmation or clarification of their specific material that is being used as a fuel. Clarification or determination letters are sent, but the issue is complex and the letters take some time.

There is also a petition process that will make a ruling for a specific material. One example is paper mill sludge. This material is categorized as a fuel if it is used on site. If the material is shipped off site to be used as fuel for another facility it does not fall under the categorized material. A petition would be needed in this case (unless there is a change in the rule). Either the generator or the user can apply for the petition. A secondary material that is used as a fuel on site and meets the criteria can continue to be used, but records must be kept. For existing units, the compliance dates for existing Boiler MACT or CISWI units are the key dates for compliance. However, there are requirements for declaration of which rule applies and planning, etc. for compliance with those rules. The web site is http://www.epa.gov/epawaste/define/index.htm or http://www.epa.gov/wastes/nonhaz/define/index.htm .

Next Technical Focus Group/Environmental & Energy Committee Meetings
TUESDAY & WEDNESDAY, June 11-12, 2013

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