MINUTES
207th Meeting of the Technical Committee
Embassy Suites Cincinnati-RiverCenter
Covington, Kentucky
February 11-12, 2015

Chairman Toby Frevert, Presiding

Call to Order

The 207th meeting of the ORSANCO Technical Committee was called to order by Chairman Frevert at 1:00 pm on Wednesday, February 11, 2015. Five states, four federal agencies, and three Commission advisory committees were represented (for Roster of Attendance see page 10).

Minutes of 206th Committee Meeting

ACTION: Motion passed to accept the minutes of the 206th Technical Committee meeting.

Chief Engineer's Report

Mr. Tennant congratulated staff member Travis Luncan on receiving his second Bachelors of Science degree, in Chemistry, from the University of Cincinnati. He congratulated staff member Rob Tewes for receiving a commendation from a Mariemont, Ohio school teacher for his presentation at their high school Career Day.

Jerry Schulte and Peter Tennant recently accepted an award on behalf of ORSANCO for risk communication from the Cincinnati Alliance for Chemical Safety. The water quality nutrient trading program that ORSANCO is a part of, and led by EPRI, received the 2014 US Water Prize.

He finally congratulated the biological staff for generating the pool assessment reports of their 2014 work in an expedient and high quality manner.

Report of the Biological Water Quality Subcommittee

Biological surveys were completed on four pools in 2014 (Belleville, Markland, McAlpine and Olmsted). All of these pools were assessed as meeting the aquatic life use for 305(b) reporting purposes, and the subcommittee is recommending their acceptance. Individual reports are available on each of these pools.

The subcommittee recommends including ORSANCO's macroinvertebrate index in future 305(b) assessments, beginning in 2016. However, as a result of the time lag in obtaining macroinvertebrate results, the subcommittee recommends not including 2015 biological data (including fish population data) in the 2016 305(b) assessments.

The subcommittee also considered and recommends against ORSANCO conducting future Ohio River lockchamber surveys. In addition, the subcommittee recommends completion of three pools in 2015 (Montgomery, Racine, and Myers).

ACTION: Motion passed to accept the recommendations of the biological subcommittee with the qualification that staff looks into modification of the fish index to reflect the approach taken with the macroinvertebrate index.

New Monitoring Approach for Nutrients Criteria Development

Staff completed the first year of a new monitoring approach aimed at providing data relevant to developing numeric nutrients criteria. The new approach involves collecting and analyzing continuous dissolved oxygen measurements and nutrients data at macroinvertebrate monitoring stations. Interim results of this new approach were presented and met with a positive review and little comment from the Technical Committee. Tim Henry (USEPA Reg V) suggested that staff review Minnesota Pollution Control Agency's (MPCA) recently approved numeric nutrient criteria as a possible example to follow.

Fish Tissue Contaminants

Total Hg trends study conclusions and outcomes were presented. Standardizing all fish composite data for average total length was critical to meet the objectives of the study. Three different length standardization methods were tested: Total Hg/cm average length, using only samples with average total length within 10% of the median length for each taxon, and staff calculated and analyzed residuals of average total length vs. total Hg concentration to remove all total length effects. All three methods showed some significantly increasing or decreasing trends independently, but only White Bass was shown to be significantly increasing across all three methods. Although statistically significant, the trends were small in magnitude. The background, approach, results and conclusions of this study are being finalized in a report on total Hg trends in Ohio River fish. Based on these findings, follow-up efforts should focus on: investigating why these trends are present in some taxa and not others (bioaccumulation rates?), incorporate water column and sediment Hg concentration trends, and determine post-2010 fish tissue trends.

ORSANCO's 305(b) fish tissue collection approach discussion was presented. A panel discussion was initiated to clearly define fish tissue collection guidelines for 305(b) fish consumption use for Hg. The goal of the panel discussion was to develop *a specific 305(b) sample collection protocol*, refine techniques, target taxa and size ranges to best fulfill 305(b) assessment data requirements. Our current approach is similar to what is employed by the States. State programs mainly focus on fish consumption advisories, and the data generated is also used in 305(b) reporting. ORSANCO has the flexibility to focus on 305(b) collections while having the ability to collect for advisories simultaneously. Staff will move forward with this proposed approach in 2015.

Development of Harmful Algae Bloom Response Plan

A conference call of the work group was held on January 9. The work group is continuing to work on an outline of a HAB response plan and ORSANCO's role. The work group is interested in adding some method of early warning to ORSANCO's role. A working draft will be provided at the June Technical Committee meeting.

Mercury Bioaccumulation Study Recommendations

At the previous meeting, TEC had recommended that staff conduct additional mercury bioaccumulation studies similar to an initial study. A report of an initial mercury bioaccumulation study near Hannibal, Ohio was sent out for comment. The budget allows for two additional studies which will be designed and conducted based on the initial study along with consideration of comments received. Staff presented data in an effort to generate TEC input on the selection of locations for the two follow up studies, however no consensus was developed and TEC directed staff to make a final decision.

CSO Abatement Report

Staff provided a report on the current status of the 49 Ohio River combined sewer overflow (CSO) communities, with details on each state and any changes from the previous year. Many communities appear to be making significant progress towards implementation of the nine minimum controls and also their LTCPs. Staff also provided additional information regarding frequency of CSO bypasses for

communities that had the data available. This was an informational item only and a full report was included in the agenda package.

Storm Water Abatement Report

A report on the current status of storm water (MS4) communities, with details on each state and any changes from the previous year was presented. The outcome of this presentation was that very few changes had occurred from the previous year. This was an informational item only and the report was attached in the TEC agenda materials.

Water Resources

Four draft reports developed as part of the Water Resources Initiative were presented to the Technical Committee for review and comment. These reports included: 1) Inventory of Water Resources Laws and Regulations in the Ohio River Basin, 2) Characterization of Water Use in the Ohio River Basin, 3) Inter-basin Transfers in the Ohio River Basin, and 4) Shale Gas Drilling in the Ohio River Basin. These reports were previously distributed to the Water Resources Committee and the Headwaters Resource Committee for review. Comments received will be incorporated into final draft reports which will be presented to the Commission at the June 2015 meeting for consideration of approval.

Ohio River Basin Nutrients Trading Program

On April 16th, 2015 the Ohio River Basin Trading Project will be holding its first auction for nutrient credits. This is the culmination of six years of effort from the project partners (including ORSANCO). While the credits being offered are "compliance-grade," credits sold during this auction will not be applied towards compliance with National Pollutant Discharge Elimination System permit obligations. All proceeds from the auction will go back into the project to generate additional conservation practices. The Trading Project has received the US Water Prize for 2015. An awards ceremony will be held April 13 in Washington DC. EPRI has expressed interest in ORSANCO taking over the role of the counter-signing agent. TEC suggested that staff take this issue to the Commission.

Gulf of Mexico Hypoxia Task Force

Staff provided an update on the Gulf of Mexico Hypoxia Task Force. The Task Force is writing the first report to Congress as mandated by the HABHRCA legislation. This report is due on June 30, 2015. All States on the Task Force have completed their nutrient reduction strategies and will begin implementing them. Pete Goodman noted that substantial funding needs to come from US EPA if these strategies are to be fully implemented.

Spill Model Upgrade

Staff is collaborating with representatives from USEPA, USACE, NWS, Greater Cincinnati Water Works, and the original designers of the ORSANCO spill model to improve the Commission's capabilities to predict time-of-travel of spill plumes. USEPA has committed $100,000 in FY15, with an anticipated additional $100,000 in FY16, to develop an improved spill response decision support tool. Upgrading spill modeling capabilities will be the first step in this process. Proposed model enhancements include 1) adapting the spill model to accept flow inputs from the USACE HEC-RAS model, 2) correcting minor bugs in the model, 3) improving model outputs for enhanced data sharing, and 4) expanding the geographic extent of the model to include major tributaries.

Source Water Protection

The Source Water Protection program presentation began with the introduction of Dr. Jim Goodrich, Acting Director, Water Infrastructure Protection Division for USEPA's Office of Research and Development, National Homeland Security Research Center. Dr. Goodrich has frequently attended the Commission's Water Users' Advisory Committee meetings, and it was through his participation that he learned of the Commission's need to upgrade the spill model. As such, he was able to secure funding to underwrite the spill model upgrade and develop a program wherein appropriate data sets, i.e., SARA

Title 2, AST data bases, etc, would be linked together to develop a comprehensive source water protection and water infrastructure protection model.

Dr. Goodrich addressed the Technical Committee members, outlining the role of the National Homeland Security Research Center, the modeling efforts that are underway to support drinking water infrastructure protection, and the current effort with ORSANCO to upgrade the spill model and develop the water infrastructure protection model. He stated that this would be a 2 to 3 year undertaking, paid for by USEPA and completed by USEPA contractors; no money would come to or through ORSANCO, however, ORSANCO would be a significant partner in the process.

Jerry Schulte then provided an overview of the Commission's Source Water Protection program. The essence of the program is for the Commission to provide support to the states and drinking water utilities in the development of source water protection plans. In doing so, it is necessary for staff to develop lines of communications with state and federal agencies that fall outside of the Commission family, i.e., DNR's, health departments, etc. in order to identify all of the potential contaminant sources and responsible agencies. With respect to ASTs, local fire departments seem to have the most comprehensive data available for their areas, so learning to identify and communicate with them is another challenge in the process. ORASNCO's efforts are paying dividends as Ohio and West Virginia state source water protection program managers coordinated a call through ORSANCO to discuss their calculation method for the extent to which zones of critical concern extended up their respective tributaries.

Mr. Whitteberry commented on the value the Commission has been in the joint development of the Greater Cincinnati Water Works and Northern Kentucky Water Utility Ohio River Source Water Protection Plan. He also complimented the staff on the great assistance they provided during the Duke Energy/Beckjord Power plant diesel fuel spill. Bruce encouraged the Technical committee members to continue their support for the Commission's program and leadership in the Ohio River source water protection program.

Mr. Luncan provided an overview of spills from 2014, starting with a summary of spill reports as received from the National Response Center that could affect Ohio River water quality and drinking water use. Mr. Luncan presented a monthly graph of spill reports received with the fewest received in November - 12, and the highest number received in August - 31. The total number of spill reports received in 2014 that could affect Ohio River water quality was 255, of which 76% were some form of oil, i.e., unknown, diesel, hydraulic, "fuel" and motor oil. A graph representing the longitudinal profile of the spill reports was presented with no trends discernible.

Ms. Ziolkowski provided an update on the status of the ODS renovation. Ms. Ziolkowski reported that all equipment had been purchased and installed per the program design. Two stations, Wheeling and Pittsburgh were the only two locations requiring any attention. Regarding the latter, Pittsburgh Sewer and Water Authority, who has participated since the inception of the ODS, has chosen to disengage from the ODS program. As such, staff has opened discussion with PADEP personnel to determine where a new site could be located. Until such time as a new location is identified, no ODS monitoring will be occurring on the Allegheny River. Ms. Ziolkowski then briefed the committee on the status of the ODS website and dashboard. At present, the data from the CMS 5000 GCs is available for viewing on the website. This is currently available only to Commission ODS staff. As the website is finished, water utilities as well as regulators will have access to this website and information.

Policy on Use of Data from External Sources

Ms. Ziolkowski provided and update on the status of policy on use of external data. The initial draft policy was provided to the Technical Committee members in June, 2014. A request for comments was made at that time. Comments were received and incorporated as appropriate. The policy was

presented at the October Technical Committee meeting and was broadened to apply to all assessments in addition to the 305(b) report. The policy was broadened and provided to the committee for consideration at the February, 2015 meeting with a request for the Committee to accept the final draft version.

ACTION: Motion passed to approve the policy on the use of data from external sources.

Compilation of Above-Ground Storage Tank (AST) Programs and Regulations

Following the Elk River Spill, staff had compiled a summary of the states' programs and regulations pertaining to the management of above-ground storage tanks. The conclusion was that many states do not have an established AST division. Most states use the local fire department fire code as the primary regulatory entity. Also, AST regulations are more evolved for oil based products, somewhat less for flammable/combustible tanks, less so for hazardous material tanks, and mostly nonexistent for nonhazardous liquids. Staff was requested to make this information available in report format. This was an informational item.

Report of the NPDES Subcommittee

Subcommittee Chairman Novak provided a report of the NPDES Subcommittee. The subcommittee had a conference call on January 14, 2015. Six states and USEPA Region 5 participated. The subcommittee considered the proposed 2015 revisions to the Pollution Control Standards. The mixing zone proposal may result in an increased likelihood for permit appeals due to increased inconsistencies among the states, and therefore may pose the need for States to develop consistent implementation guidance for determining when "as soon as practicable" is achieved. States believe that an averaging period is more appropriate than "not to exceed" regarding the total mercury water quality criterion. The subcommittee has recommended the use of a mixing model for new discharges of TDS or when concentrations of TDS approach 500 mg/L in the Ohio River. The subcommittee considered the proposed ammonia criteria, and Indiana indicated that it may pose a difficulty for two of its smaller sewage plants. The other states either believed it would not pose a problem or were still evaluating its potential impacts on discharges. In addition, Illinois indicated that the temperature criterion for human health could pose difficulties for one of its Ohio River discharges.

Report of the Stream Criteria Subcommittee

Ms. Selvaratnam provided the report of the Stream Criteria subcommittee. The subcommittee reviewed the proposed revisions to the Pollution Control Standards. The subcommittee is concerned that the mixing zone proposal may lead to greater interstate inconsistencies. Regarding the proposed ammonia criteria, the subcommittee suggests that the new criteria be adopted with the mussels present tables only, but that EPA's recalculation alternative be referenced (which includes the mussels absent tables). The subcommittee also discussed recreational water quality criteria, and OEPA is on schedule to adopt EPA's new criteria in 2015. Regarding bromides, they noted that a USEPA study on bromides and TTHMs formation is due out in 2015. They also noted that a joint USFWS/USGS study on chlorides in the Allegheny River is due to be released this year.

PIAC Presentation on the Human Health Temperature Criterion

Linda Yost of Environ made a presentation on behalf of the Power Industry Advisory Committee on ORSANCO's human health temperature criterion of 110 deg F. Ms. Yost pointed out that the criterion is unusual in that there are no federal thermal criteria for the protection of human health, and Wisconsin has a criterion of 120 deg F which allows for site-specific exposure considerations. In addition, it was pointed out that this human health criterion was not developed utilizing the rigor of USEPA's methodologies for human health criteria. It was also pointed out that exposure to hot water in the Ohio River is limited, that an exposure analysis was limited, and that ORSANCO did not quantify the hazard. Ms. Yost indicated that EPA guidance stresses the importance of characterizing the likelihood of harm. She concluded that ORSANCO did not assemble adequate hazard and

exposure data, that the development methodology and technical basis for the criterion is flawed, and that the criterion should be reconsidered after a thorough risk assessment.

Mountain State Carbon Variance Request

Russ Dudek with AK Steel addressed the Technical Committee regarding its subsidiary, Mountain State Carbon. Mountain State Carbon recently submitted a variance request to ORSANCO regarding the mixing zone prohibition on mercury. The company feels that they have submitted a complete and comprehensive variance application, and Mr. Dudek invited everyone to ask questions of him. He further indicated that the company feels the proposed changes to the mixing zone prohibition in the standards are a step in the right direction.

Ohio River Temperature Survey Utilizing Satellite Imagery

A river-wide study utilizing satellite data to investigate temperature conditions in the Ohio River during the summer months was presented. The study objectives were to understand the impacts of thermal discharges during the summer to the Ohio River, and determine if ORSANCO can access and interpret the data without the use of a contractor. Blue Water Satellite (BWS) had been contracted to provide ORSANCO with summer 2010 imagery and temperature data. It showed that the only aquatic life temperature violations occurred near river mile 405.7. ORSANCO staff then compared BWS data with their own interpreted downloaded data. Results showed very accurate results with the contractor. Staff then provided examples of summer 2014 data and others. Again, the only aquatic life temperature violations occurred near river mile 405.7. No human health temperature violations had occurred during either summer year (2010 and 2014). In conclusion, remote sensing is accurate to within a few degrees, ORSANCO can interpret the data themselves, the only significant area with aquatic life temperature violations occurred near river mile 405.7,and no human health violations were observed during summer 2010 and 2014. Staff wants to thank KYDOW for their assistance with obtaining and utilizing satellite data for evaluating thermal impacts on the Ohio River.

Review of Pollution Control Standards

Staff reported that the Pollution Control Standards Committee would be recommending to the Commission that a public comment period be opened to receive comments on proposals for revisions to the standards, and on a proposed variance to FirstEnergy regarding the mixing zone prohibition for mercury. Mr. Heath then summarized each of the proposals including the variance. The PCS Committee has identified a number of issues that might be addressed during the next triennial review of the standards, and Mr. Heath facilitated a prioritization exercise of those identified issues. Results will be presented to the Program and Finance Committee, the Standards Committee, and the Technical Committee at its next meeting. Finally, ORSANCO has received additional variance requests from Mountain State Carbon, Valley Converting, and the City of Toronto, Ohio POTW that the PCS Committee will be considering in the near future.

TRI Report

Mr. Tennant reported that for a number of years the Ohio River has been termed “the most polluted river” based on its number one ranking for the quantity of pollutants released to it based on data from USEPA’s toxic release inventory. In the past, ORSANCO has been reactive to press articles on the subject. However, this year ORSANCO has been proactive by developing a press release on this information prior to the release of news articles on the subject.

Member Updates and Interstate Water Quality Issues

PIACO

Betsy Mallison, PIACO Chairman, indicated that the committee was pleased that ORSANCO is being proactive on the TRI issue, and PIACO is working with staff on the press release.

Pennsylvania
Mr. Schwartz reported that PADEP has a new secretary, John Quigley, and that he will be the Commission proxy for Mr. Quigley. He indicated that the TENORM study that PADEP has been working on is now finalized and available on their website. Mr. Schwartz plans to recommend to the new PADEP administration that they sign ORSANCO's Cooperative Agreement regarding the water resources initiative.

Virginia
Mr. Newman reported that Virginia is conducting a scientific study of declining endangered mussel populations in the Clinch River watershed. They are working collectively with EPA regions 3 and 4, and Tennessee on this issue. He reported that they have one coal-fired power plant which is converting to gas and another plant that is closing. Finally, he reported that there is a PCBs TMDL occurring on the New River. They have identified two specific sources that are currently undergoing remediation.

Power Industry Advisory Committee
Mr. Reash reported that the final coal combustion byproducts rule is not going to classify these byproducts as hazardous wastes, and the industry believes the rule is reasonable. The Steam Electric effluent guidelines rule is scheduled to be issued in September. The EPA has been requesting a lot of information on current wastewater treatment technologies from industry which the industry feels is an appropriate step forward in developing the rule. An important decision in the Federal 6th Circuit Court was to uphold a Kentucky mining company's general and individual NPDES permit as a protection for the company. Finally, Mr. Reash met with David Altman recently to discuss ORSANCO advisory committees since Mr. Altman is in the process of organizing an ORSANCO Chemical Industry Advisory Committee.

United States Geological Survey
Mr. Griffin reported that they are working with state and federal fish and wildlife services in Indiana to address the Asian Carp issue in the Ohio River. They have initiated a national water census topical study to evaluate water use issues associated with unconventional oil and gas operations (fracking). They are involved in a lot of real-time nitrate monitoring, particularly in Kentucky, to evaluate the agricultural impacts on in-stream nutrients levels. They will be monitoring on the Ohio River at Greenup and Olmsted, as well as on the Licking and Green Rivers, and the data will be available on their web site. The USGS will be collecting detailed bathymetry data this summer on the Ohio River from Meldahl to Cannelton, as well as on the Licking and Kentucky rivers, to support development of the HEC-RAS model. Regarding the USGS's 2015 budget, they received a small increase to the stream gage program, but a decrease to their matching funds available for cooperative programs. They also received some monies for their Water Smart program which will include giving funds to the states to help them quantify water uses.

United States Army Corps of Engineers
Erich Emery reported that the Corps climate change report will be available in March, 2015. They are working with the states on various HAB issues in their reservoirs in Indiana, Kentucky, and Ohio. They are working independently regarding HABs in reservoirs in Pennsylvania and West Virginia. They will have the results of their remote sensing project peer-reviewed and available this summer. He finally reported that Bill Proctor is coming in to take over Debbie Lee's position.

Indiana
Ms. Selvaratnam reported that there is above ground storage tank legislation currently under consideration in Indiana and that there is discussion about registration of tanks that lie within a zone of critical concern to water utilities. Fish tissue contaminants monitoring this year will take place in Ohio River tributaries. They are working on two 316a/316b variances that impact the Ohio River. They are in the process of updating their water quality standards. All nutrient discharges in the state greater than

one MGD will be receiving an effluent limit of 1 mg/L for total phosphorus. They will also be collecting chemical and biological data both upstream and downstream of these facilities to identify future improvements resulting from the issuance of these effluent limits.

US Environmental Protection Agency

Mr. Henry reported that Region 5 recently approved Minnesota's nutrient standards. It includes a multimetric approach with numeric phosphorus limits and other response variables. If the phosphorus criterion is exceeded but the response variables are not, then the water is determined to be attaining standards. Wisconsin also has phosphorus criteria with implementation procedures to provide flexibility, including trading and adaptive management. The state is currently considering the economic impacts of requiring effluent limits for phosphorus. Mr. Henry reported that relationships between TRI data and discharge monitoring data have been studied to some extent, and that there can be significant differences. He finally reported that their Deputy Regional Administrator, Varat Mather, is retiring, and that Bob Kaplan will be taking that position.

Kentucky

Mr. Payne reported that Kentucky has received a $4.5 million grant from the USDA national water quality initiative to put in place BMPs in agricultural watersheds which will include two projects in the Kentucky River watershed and one in the Licking River watershed. They will be initiating a triennial review of their standards in the spring, 2015. They will be considering the new ammonia criteria as well as 21 segments to be listed as outstanding resource waters. They are having discussions with the Corps on cooperative efforts for monitoring in 2015. Kentucky will be focusing on monitoring in the Cumberland, Tennessee and lower Ohio basins this year. This year they will be revisiting reservoirs that had HABs issues last year, as well as visiting a few new ones. They will be working with USEPA on a gap analysis of their nutrients data for their impoundments for the purposes of developing future nutrient criteria. Lastly, hydraulic fracturing may begin more significantly in the Rogersville shale in Kentucky.

POTW Advisory Committee

Mr. Novak reported that as the incoming Chairman, he will be working on re-energizing the committee.

Water Users Advisory Committee

Mr. Whitteberry reported that the committee is addressing the issue of proprietary information as related to obtaining critical information on spills that may affect water utilities. They received the presentation on above storage tank programs and regulations which highlight the challenges in trying to identify potential pollution sources upstream of water utility intakes. They have also been considering the possibilities for calibrating the organics detection system for additional chemicals above the current capabilities.

Ohio

Mr. Butler reported that the state is working to change Ohio law regarding the oil and gas industry to make it easier to share proprietary information with public water systems. They recently passed Senate Bill 150 which is a joint effort between EPA, DNR and Agriculture related to nutrient management planning in the western basin. They are working to change their water pollution control law to be able to prosecute criminal activity under criminal statutes. They are implementing a statewide requirement for major POTWs to immediately begin monitoring for phosphorus and conduct studies to determine the costs and capabilities for meeting a 1 mg/L phosphorus effluent limitation. They are also trying to implement a ban on discharges of dredged materials to Lake Erie.

United States Coast Guard

Deputy Commander Eric Denley reported that the USCG has not approved the movement of shale gas extraction wastewater on the Ohio River. A policy letter on the issue has been published in the Federal Register and they have received thousands of comments regarding that issue. He also reported that single-skinned barges are no longer authorized to carry oil.

FY16 Program Recommendations

Mr. Heath summarized recommendations of the Technical Committee for ORSANCO's FY2016 program. They included:

- Inclusion of macroinvertebrate data into 305(b) assessments for the aquatic life use, but exclusion of 2015 biological data in the 2016 assessments due to the availability of that data.
- Assess pools with average index scores below 20 as impaired but with certain qualifications.
- Maintain the ability to incorporate targeted biological sites to address clumping of random site selection.
- Do not conduct lock chamber fish population surveys in 2015.
- Conduct biological surveys in the Montgomery, Racine and JT Myers pools of the Ohio River in 2015, and conduct pool re-visits to investigate index precision as time allows.
- Utilize continuous DO monitors to investigate *Hydrilla* and tributary impacts.
- Carry out two additional mercury bioaccumulation studies.

Next Meeting

The next meeting of the Technical Committee will be held June 17-18, 2015 at the Clifty Inn, Clifty Falls State Park, Madison, IN.

Adjournment

The 207th meeting of the ORSANCO Technical Committee was adjourned by Chairman Frevert at 11:57 am on February 12, 2015.

Approved:

Toby Frevert

Prepared by Jason Heath, P.E., BCEE with contributions from Sam Dinkins, Eben Hobbins, Jerry Schulte, Rob Tewes, Jeff Thomas, and Greg Youngstrom.
(Tape recording of proceedings available at Commission Headquarters)
PowerPoint presentations from this meeting are available on the Commission website at www.orsanco.org.

Roster of Attendance

Technical Committee

Chairman	Commissioner Toby Frevert
Illinois	Not present
Indiana	Shivi Selvaratnam
Kentucky	Randy Payne
New York	Not present
Ohio	Erin Sherer
Pennsylvania	Ron Schwartz
Virginia	Allen Newman
West Virginia	Scott Mandirola
US Army Corps of Engineers	Erich Emery
US Coast Guard	Eric Denley
US EPA	Tim Henry
US Geological Survey	Mike Griffin
POTW Advisory Committee	Alex Novak
Power Industry Advisory Committee	Rob Reash
Public Interest Advisory Committee	Betsy Mallison
Water Users Advisory Committee	Bruce Whitteberry
ORSANCO Chief Engineer	Peter Tennant
Staff Liaison	Jason Heath

Commissioners

Stuart Bruny, Craig Butler, Doug Conroe, Chuck Duritsa, Tom Easterly, George Elmaraghy, David Flannery, Toby Frevert, Peter Goodman, John Kupke, Ron Lovan, Phillip Morgan, Ron Potesta, Bruce Scott, Paul Tomes, Ross Wales (legal counsel).

Staff

Ryan Argo, Dave Bailey, Steve Braun, Lisa Cochran, Stacey Cochran, Sam Dinkins, Tracey Edmonds, Joe Gilligan, Eben Hobbins, Travis Luncan, Jerry Schulte, Adam Scott, Rob Tewes, Jeff Thomas, and Greg Youngstrom, Lila Ziolkowski

Guests

Bill Boria	PIACO
Cheri Budzynski	Shumaker, Loop & Kendrick
Pat Coyle	Duke Energy
Russ Dudek	AK Steel
Karl Gebhardt	Ohio EPA
James Goodrich	USEPA
Scott Hall	Environ
Ken Komoroski	Morgan Lewis
Joe Lapcevic	First Energy
Heather Mayfield	FORE
Paul Novak	NPDES Subcommittee Chairman
Judy Peterson	PIACO
Patrick Smith	Mountain State Carbon
Lisa Yost	Environ