

# Memo

## Ohio River Valley Water Sanitation Commission

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**Since 1948**  
*Improving Water Quality in the  
Ohio River for over 70 Years*

**DATE:** September 19, 2019

**TO:** Technical Committee

Bruno Pigott, Chairman

Scott Twait, IL

Eileen Hack, IN

Katie McKone, KY

Jeff Konsella, NY

Audrey Rush, OH

Kevin Halloran, PA

Melanie Davenport, VA

Scott Mandirola, WV

Erich Emery, USACE

CDR Molly Wike, USCG

David Pfeifer, USEPA Region 5

Mike Griffin, USGS

**Ex Officio**

Rob Reash, Chairman, PIAC

Betsy Mallison, Chairman, PIACO

Alex Novak, Chairman, POTW

Rich Cogen, WOAC

Bruce Whitteberry, Chairman, WUAC

Richard Harrison, Chief Engineer

**SUBJECT:** Announcement of 221<sup>st</sup> Technical Committee Meeting, October 8-9, 2019, Hilton Richmond Downtown, Richmond, Virginia

**FROM:** Jason Heath, P.E., BCEE

Commissioner Bruno Pigott, Technical Committee Chairman, wishes to welcome everyone to the 221<sup>st</sup> meeting of the Technical Committee, which will take place on October 8-9, 2019, at the Hilton Richmond Downtown, beginning at 1:00 PM on Tuesday, October 8, and concluding by Noon on Wednesday, October 9. Lunch will be provided on both days. Please contact Tracey Edmonds or me if you have any questions or are in need of any travel assistance.

The Technical Committee meeting will be held in conjunction with the 225<sup>th</sup> Commission meeting being held on Thursday, October 10, at the same location. Additional logistics for both meetings can be found with the agenda package for the Commission meeting.

Notes on agenda items are as follows:

**Item 1: Minutes of the 220<sup>th</sup> Technical Committee Meeting**

Draft minutes of the 220<sup>th</sup> Technical Committee meeting are attached. Chairman Pigott will ask TEC members for revisions or approval of the minutes.

**Item 2: Chief Engineer's Report**

Executive Director Richard Harrison will report on selected items.

**Item 3: Ohio River Basin Strategic Plan**

The Corps of Engineers, KY DOW, ORBA, and ORSANCO are leading an effort to develop priorities for the future of the Ohio Basin in eight general areas, including water quality and water resources being led by ORSANCO. Richard Harrison will provide a status report on the project.

**Item 4: HABs Update**

A review of the Ohio River HABs Communications Plan will be presented. An update on the US EPA RARE HABs project, which includes a continuous monitoring data system and risk characterization tool, will also be provided.

**Item 5: Source Water Protection Programs Update**

Staff will provide an overview of the ongoing activities associated with the Commission's Source Water Protection programs. This update will include status reports on the Ohio River Contaminant Source Inventory Project and the Organics Detection System (ODS) Program. Findings of the Water Users Advisory Committee's ODS Next Generation Work Group will also be reviewed and next steps in the process will be presented.

**Item 6: Ohio River Basin Loadings Analysis Project**

The Mercury Ad Hoc Committee met on August 21 to discuss the draft mercury report, quality assurance of point source data, and handling special point sources such as intermittent storm water discharges and cooling water discharges. Comments on the report have been received, and staff is currently updating mercury point source loads based on better point source data received from the states. Staff will provide a status report on the project.

**Item 7: Ohio River Water Quality Conditions**

Staff will present a report of Ohio River water quality conditions during the 2019 field season.

**Item 8: Biological Programs Update**

Staff will provide final draft results of 2018 biological pool assessments after inclusion of macroinvertebrate results. These results will be used in the next Ohio River 305b assessment. Staff will also provide updates on the field effort for the National Rivers and Streams Assessment, as well as the status of 2019 Ohio River biological pool assessments and associated activities.

**Item 9: 2020 Ohio River 305b Work Plan and Schedule**

ORSANCO completes a biennial assessment of water quality conditions and a status of use support. This is coordinated through the 305b workgroup, which is composed of mainstem states' 305b Coordinators. The next assessment is scheduled to be finalized at the June 2020 TEC/Commission meetings. A work plan and schedule will be presented.

**Item 10: Ohio River PFAS Study**

ORSANCO continues to develop its work plan for an Ohio River PFAS survey. We have received comments on the report from the states, and staff is currently updating.

**Item 11: Member Updates on Interstate Water Quality Issues**

TEC members are asked to report on water quality issues of importance to their organization.

**Item 12: Presentation by VADEQ – TBD**

**Item 13: Update on Efforts of the Ad Hoc Committee on PCS Implementation**

The ad hoc committee has been working on a process document for ORSANCO's implementation of its pollution control standards, primarily through reviews of NPDES permits for the Ohio River. An update on this effort will be provided.



**221<sup>st</sup> Technical Committee Meeting  
Hilton Richmond Downtown Hotel  
Richmond, Virginia  
October 8-9, 2019  
Beginning at 1:00 P.M. (Eastern)  
Chairman Bruno Pigott, Presiding**

## **TECHNICAL COMMITTEE MEETING AGENDA**

### **PLEDGE OF ALLEGIANCE**

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### **CHAIRMAN'S WELCOME**

- Introduction of Guests
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### **ACTION ITEMS AND COMMITTEE REPORTS**

1. Action on Minutes of 220<sup>th</sup> Technical Committee Meeting
2. Chief Engineer's Report
3. Ohio River Basin Strategic Plan
4. HABs Update
  - a. Review of Ohio River HABs Communications Plan
  - b. USEPA RARE HABs Project Update – Implementing the HABs Continuous Monitoring Data System and HABs Risk Characterization Tool
5. Source Water Protection Programs
  - a. Source Water Protection Programs Update
  - b. WUAC ODS Next Generation Workgroup Report
6. Ohio River Basin Mercury Loadings Analysis Project Update
  - a. Point Source Mercury Loading Data
  - b. Review of draft report and point source data
7. Ohio River Water Quality Conditions
8. Biological Programs Update

### **ADJOURN TUESDAY/RECONVENE WEDNESDAY**

9. 2020 Ohio River 305b Report Work Plan and Schedule
  10. Ohio River PFAS Study
    - a. Proposed Probabilistic Monitoring Locations
    - b. Development of QAPP/SOP for Sampling Procedures
    - c. Status of USGS EDI Sampling Equipment
    - d. Analytical Methods and GenX Analyses
  11. Member Updates on Interstate Water Quality Issues
  12. Presentation by VADEQ TBD
  13. Update on efforts of the Ad Hoc Committee on PCS Implementation
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### **OTHER BUSINESS**

- Comments by Guests
- Announcement of Upcoming Meetings
- Adjourn

**DRAFT MINUTES  
220<sup>th</sup> Meeting of the Technical Committee  
Radisson Hotel Cincinnati Riverfront  
Covington, Kentucky  
June 4-5, 2019**

**Chairman Bruno Pigott, Presiding**

**Call to Order**

The 220<sup>th</sup> meeting of the ORSANCO Technical Committee was called to order by Chairman Pigott at 1:00 pm on Tuesday, June 4, 2019. Six states, three federal agencies, and four Commission advisory committees were represented (for Roster of Attendance see on page 7).

**Minutes of 219<sup>th</sup> Committee Meeting**

**ACTION:** Motion passed to accept the minutes of the 219<sup>th</sup> Technical Committee meeting.

**Chief Engineer's Report**

Director Harrison reported on the Corps of Engineers-KY-Ohio River Basin Alliance (ORBA)-Planning Assistance to States project. This is a Corps led project to develop an Ohio Basin Strategic Restoration Plan. The Corps will provide \$200,000 in funding, matched with \$150,000 from Kentucky and \$50,000 in-kind match from ORSANCO. There will be a kick-off webinar on June 12, 2019 with the project scheduled to wrap up in 2020. The Ohio River Basin Restoration Strategy which will include a master plan of priorities for the Ohio River Basin, with the development of priorities in the following eight areas: Ecosystem restoration, water quality and supply, flood risk mitigation, economic issues, recreation, transportation, research and education, and resilience/adaptive management. ORSANCO will be working to develop a list of priorities for Ohio Basin water quality and water resources concerns.

**Power Plant Entrainment Survival Studies**

Rob Reash, Power Industry Advisory Committee Chairman, presented on the use of fine-mesh screens to improve fish survival rates due to fish impingement at power plant intakes. Two case studies were presented which showed that fine-mesh screens can improve fish impingement survival rates.

**HABs Update**

Staff detailed the plans to install and operate two new Harmful Algae Bloom (HAB) continuous monitoring stations on the Ohio River. Multi-sensor data sondes, which measure a suite of water quality parameters including dissolved oxygen, pH, conductivity, temperature, chlorophyll and phycocyanins, will be installed in June at the Markland and Newburgh Locks & Dams (Ohio River Miles 436.2 and 776.1 respectively). Funding for the 1-year monitoring project has been provided by the State of Indiana through a 604b grant. Staff has also applied for an additional IDEM grant to extend the project for a second year. Results from these units, along with data from two additional stations routinely operated by ORSANCO at Pike Island Locks & Dam and Meldahl Locks Dam, will be used to monitor when conditions may be favorable for HAB formation.

**CyanoHAB Risk Characterization Model for the Ohio River**

Chris Nietch with U.S. EPA reported that the objective of this project was to develop a risk characterization model for CyanoHAB on the Ohio River which has been developed based on the 2015 HAB event. The unique flow characteristics associated with the 2015 bloom were used in developing the model, which characterizes river flows in terms of similarity to the 2015 flow regime. It uses a mixed-effects binary logistic regression with a Bayesian model. A web application was also developed which could be accessed through ORSANCO's website.

## **Source Water Protection Programs**

### *Proposed DNA Tracer Study*

John Hall from the US EPA presented a proposal to conduct a tracer study on the Big Sandy and Ohio Rivers utilizing silica-encapsulated short strand DNA. This innovative technique has the potential to provide critical time-of-travel information for calibrating Ohio River water quality models, including ORSANCO's spill model. Efforts will be coordinated with state agencies to ensure proper notifications and permissions are received prior to conducting the tracer study.

### *Source Water Protection Programs Update*

A status update was provided on ORSANCO's Source Water Protection Programs. Staff has recently participated in a number of emergency response preparedness exercises and other planning activities. Jamie Tsiominas was also introduced as the newest member of the ORSANCO technical staff. Jamie will play a lead role in maintaining the ODS monitoring network. An update was also provided on Phase 2 of the Contaminant Source Inventory project which includes development of a GIS-based data management system to catalog potential contaminant threats and their associated risk to drinking water utilities.

### *Findings of the WUAC ODS Next Generation Work Group*

Bruce Whitteberry, Chair of the Water Users Advisory Committee, presented the findings of the ODS Next Generation Work Group. This effort evaluated monitoring needs and system design options for the Organics Detection System. A number of factors were evaluated including potential contaminants of concern, instrumentation options, and monitoring system design options. The Water Users Advisory Committee's recommendations provide several tiered options for the Commission to use as a replacement strategy guide which considers critical monitoring needs while being mindful of available resources to support the system. The recommended design options ranged from expanding the current system capabilities at two locations to include semi-volatile organic compounds to reducing the number of gas chromatograph mass spectrometers (GC/MS) supported by the system from nine to a minimum of four GC/MS units. A scoring matrix was also developed to aid in prioritizing GC/MS sites in the event reductions were necessary in the future.

## **Mercury Mass Balance Project**

In June 2015, an Ad Hoc Mercury Committee was established to identify the information needs regarding mercury in the Ohio River, and to recommend studies to fill those information needs. The committee identified source apportionment as a top priority to help determine the extent to which sources contribute to mercury in the Ohio River, and they recommended a study to account for point source and atmospheric contributions, while relying on existing data and studies to the extent possible.

Preliminary results were presented to TEC which raised questions about the accuracy of the point source data that was obtained from the ECHO data base. TEC members were asked to review their point source data and provide updates by the end of June, as well as comments on the draft report.

## **Ohio River PFAS Study**

ORSANCO is in the process of designing a PFAS survey of the Ohio River which will include two rounds of sampling at 20 sites. Marc Mills with US EPA provided an update on analytical methods and on the USGS's work to evaluate the EDI sampling equipment, both of which are efforts in progress. The US EPA is expected to perform the analytical work for this project.

Staff presented proposed sampling locations based on a systematic-probabilistic approach. The Technical Committee agreed on the proposed site-selection methodology, but that any sites falling within a regulatory mixing zone shall be moved further downstream. Staff will develop a list of sites with lat/long and river mile information so that states can check if any proposed sites fall within a mixing zone.

## **Association of State Drinking Water Administrators' Webinar on Spill Risk**

Steve Allgeier with the US EPA Office of Ground Water and Drinking Water provided an informative presentation on the risk of spills to drinking water sources. Mr. Allgeier detailed efforts to characterize the potential risk of acute source water contamination, reviewed newly adopted provisions of the America's Water Infrastructure Act, and discussed current efforts on the Ohio River to inventory contamination threats.

## Member Updates and Interstate Water Quality Issues

### *Pennsylvania*

Kevin Halloran reported that Pennsylvania will be conducting a large PFAS survey of public water supplies in proximity to potential sources this year. Approximately 300 sites have been identified for sampling, and details can be found on PADEP's website. PADEP's Secretary, Patrick McDonald, has been reconfirmed by the senate. PA's 2018 Integrated Report has been included on their website which includes an interactive GIS mapping tool. They are currently working on responses to comments on their proposed standards in the current triennial review. He reported that PADEP has been meeting with Shell regarding renewal of their NPDES permit for the Shell Petrochemical facility, which expires in 2020, even though the facility is still under construction. Their wastewater treatment plant is expected to come online in Spring 2020.

### *Water Users Advisory Committee*

Bruce Whitteberry reported that WUAC met a couple of weeks ago and spent a lot of time discussing the ODS renovation. Although river flows have been high, water quality conditions have been good for water supplies.

### *West Virginia*

Scott Mandirola reported the following:

#### *Water Quality Standards*

Human Health criteria updates were proposed to legislature in 2019 but did not get passed. The Legislature added additional language to the rule to assure the human health criteria updates would be back in front of the legislature in 2021.

“8.6. On or before April 1, 2020, the Secretary shall propose updates to the numeric human health criteria found in Appendix E., subsection 8.23. Organics and subsection 8.25 Phenolic Materials to be presented to the 2021 Legislative Session. The Secretary shall allow for submission of proposed human health criteria until October 1, 2019, and for public comment and agency review for an appropriate time thereafter.”

We have had two public meeting on this issue to take submissions and information on the human health calculations.

#### *Condensate tank fire due to lightning strike*

The Bens Run tank #048-00001190 had 560,000 gallons of liquid pipeline gas prior to the lightning strike. Once the fire was extinguished the tank has 18" of liquid (approximately 42,000 gallons), which was made up of water, product and firefighting foam. It is unclear the percentage of each; however, it is believed most of the product burned off and very little remains. The tank was equipped with lightning bars and grounding equipment, and Dominion plans to investigate why they were not successful in preventing the fire. The tank itself did not fail; however, the liner for the secondary containment did melt away in many areas exposing the old earthen dike. This tank was only 4 years old.

#### *Hanlin-Allied-Olin site*

Met last week with EPA and Honeywell on the site and came to an agreement in principle to reduce the current pump and treat discharge concentration by an order of magnitude.

#### *Modification of the 401 for the Nationwide 404 permit*

WV finalized the 401 Modification to the nationwide 404 permits in April and has submitted that to the USACE and EPA for approval. Three changes were made, see below.

#### 12. Utility Line Activities.

Nationwide Permit 12 West Virginia 401 Water Quality Certification Special Conditions:

- A. The Secretary of the West Virginia Department of Environmental Protection, in the Secretary's sole discretion, reserves the right to require an individual water quality certification for any of the following facilities or impacts: Individual State Water Quality Certification is required for:

- B. Individual stream crossings using wet or open-cut methods that do not isolate the excavation area must be completed in a continuous, progressive manner and within 72 hours during seasonal normal or below normal stream flow conditions. Stream crossings using the dry ditch method are exempt from the 72-hour requirement. Construction and access bridges and crossings on the Ohio River, Kanawha River, New River, Monongahela River, and the Little Kanawha River, below the confluence with the Hughes River, Section 10 rivers are also exempt from the 72-hour requirements. All stream activities shall be completed as rapidly as possible.
- L. No permanent structure authorized by this permit shall impede or prevent fish movement upstream or downstream.

### ***PIACO***

Henry Connor remarked that the discussions during the course of the meeting on new projects that ORSANCO is undertaking have been very interesting and informative, while the standards issue seems to be a balancing act for the Commission.

### ***POTW***

Alex Novak reported that the POTW Committee has been focusing on two issues, including the pollution control standards, which they submitted comments on, and perhaps more importantly, the recent ORSANCO bacteria trends analysis. Many POTW's are under federal and state consent decrees, requiring billions be spent on combined sewer overflow control, and a frequent question they face is how the controls are affecting water quality. The bacteria trends analysis helps to show some of the resulting improvements in Ohio River bacteria conditions, and it may help the public better understand the improvements.

### ***USGS***

Mike Griffin reported that Dr. Jim Riley is the new director of the USGS. Having come from NASA, he is reorganizing the USGS into twelve regions following the Dept. of Interior guidelines. The President's budget proposal included a significant cut to the USGS's budget, however a House markup proposes to bring their budget back up to 2019 levels. They have recently released a new national land cover data base which shows the last fifteen years of change. The biology sections of the Missouri and Wisconsin offices are working with Senator McConnell's office to address the Asian carp issue in Kentucky and Barkley lakes as well as in the Ohio Basin. This effort may help us better understand as the Asian carp continue to migrate upstream in the Ohio River. The USGS is working on cutting edge HABs monitoring in the Finger Lakes to measure instantaneous detections of changing water quality conditions relating to HABs. Finally, he reported that they are working with the Indiana Silver Jackets to upgrade selected Indiana monitoring sites to real-time monitoring stations.

### ***Kentucky***

Katie McKone reported the following:

- Triennial Review – filing within the next week
  - For details on what went through this triennial review, please refer to past meeting notes
- Review of Mercury Report – compiling comments from staff that reviewed document
  - Will be sending comments to ORSANCO by the end of this week
- 2018/2020 Assessments for Integrated Report
  - Testing and staging production version of database
  - Updating methodology for assessing Fish Consumption
- A Project Study Plan will be provided to ORSANCO at the end of June for the additional metals sampling that ORSANCO staff will be conducting at probabilistic sites in KY pools of the Ohio River
- Farm Bill – As mentioned yesterday, 10% of Farm Bill conservation funds (e.g. EQIP) are to be devoted to source water protection. Kentucky will be focusing these efforts to the degree we can on nutrient reduction issues
- Nutrient Reduction Strategy – EPA and USDA met with Secretary Snavely and Peter Goodmann in Baton Rouge to encourage Kentucky to ramp up its NRS efforts; concerns about EPA and states being vulnerable to anticipated litigation
  - Kentucky will complete its NRS including focusing priorities and developing nutrient reduction goals
  - Kentucky will be employing nutrient limits in larger POTWs and some industrial permits utilizing an optimization approach similar to Iowa

- Permitting – Sara Anderson has left; eliminated backlog; solidified permitting processes; recruited and trained many new competent permitting staff.
- Infrastructure – LRC Task Force to work on water infrastructure funding challenges this summer and fall. Came out of legislation drafted by cabinet past session.

### ***WOAC***

Rich Cogen reported that the committee has had a number of meeting regarding the pollution control standards and generated an editorial that has been published by a number of news outlets. Regarding the voluntary nature of the proposed standards, the committee recommends that revised standards be mandatory while allowing for reasonable exceptions that protect water quality and provide transparency. The committee also looks forward to continued involvement with the PFAS study and ODS renovation.

### ***Power Industry Advisory Committee***

Rob Reash reported that utilities are concerned about the states using EPA's revised human health criteria that incorporate national default input variables, whereas utilities would like to see flexibility in using site-specific values. USEPA Region 10 has reversed a decision which originally disapproved states' proposed human health criteria that were different from the national default values. Currently EPA has not issued effluent limitation guidelines for two waste streams, including FGD and bottom ash transport. A federal circuit court has required USEPA to vacate its definition of BAT for legacy wastewater and landfill leachate streams. He finally reported that there is a case in front of the Supreme Court regarding discharges to groundwater, which may have significant consequences regarding this issue. An interpretive memo indicates that discharges to groundwater do not require an NPDES permit.

### ***United States Army Corps of Engineers***

Erich Emery reported that his office, the Great Lakes and Ohio River Division, has responsibility for coordinating with the Canadians and for water movement through the Great Lakes, which are currently high. Their office is also responsible for flood control on the Ohio River, and they have been in continuous flood control operations for the Ohio River since December 17. This includes increased model runs to best determine how to manage the flows appropriately in the Ohio River. The Corps is also embarking on a three-year effort to develop a national water quality data base for Corps' data that will be capable of interacting with the national Water Quality Portal.

### ***Indiana***

Eileen Hack reported regarding standards that IDEM is nearing submittal of a draft metals rulemaking to USEPA. They are also working on implementation guidance for selenium, and their next project will likely be updating their human health criteria. They have been reviewing ORSANCO's mercury report and will have comments by the end of the month, as well as updated point source mercury loads. This year's probabilistic monitoring program will focus on Ohio River tributaries in Indiana. Monitoring began in April and includes E. coli at 40 sites, general chemistry and nutrients at 45 sites, algae sampling, continuous data loggers for physical parameters at 14 sites, fish community and macroinvertebrate sampling at 38 sites, and fish tissue contaminants sampling in the lower Wabash River.

### ***Ohio***

Audrey Rush reported that OEPA has put out three human health criteria rule updates, and they have kept their rules current with ORSANCO's standards. They are considering ORSANCO's ammonia criterion for public water supplies. They has received public comment on their large river nutrient criteria proposal which included a total phosphorous criterion of 0.13 mg/L which is under consideration at this time. Their MS4 general permit is up for renewal. They are also developing rules for sludge lagoons. They have redesigned their monitoring strategy using a probabilistic approach and moving away from a five-year rotating basin approach. Updates to the nutrients mass balance report will be coming out by the end of this year.

### ***United States Environmental Protection Agency***

Linda Holst reported that Region 5 has been addressing its backlog of reviewing states 303d lists. USEPA has published draft finished water MCLs for chlorite. EPA has realigned its enforcement division to include all media together. Region 5 has had a lot of retirements of staff in key positions recently. She also reported that the Water Division Director position for Region 5 has been posted.

### ***Illinois***

Scott Twait reported that John Kim has been appointed Director of the Illinois EPA. IEPA is developing a PFAS study of surface water and ground water public water supplies. They are current working on data handling of continuous monitoring data. Finally, the state legislature passed a bill regarding coal ash pond closures which requires the agency to develop rules for such closures.

### ***Chemical Industry Advisory Committee***

Russ Dudek reported that the CIAC supports alternative #2 for the proposed standards. Mountain State Carbon's wastewater plant is operating at fifty percent of its capacity. Even so, mercury in the mixing zone presents a significant challenge, even though the fish tissue criterion is being met. . In closing, he stressed the need for flexibility in the standards program that is not overly burdensome to industry.

### ***New York***

Commissioner Conroe presented a report for New York on behalf of Jeff Konsella. There will be a symposium on HABs in the Finger Lakes, and the state has designated significant resources to the HABs issue state-wide. Multiple state agencies and local politicians have varying interests in this issue. This year, the agency will establish an online GIS mapping system of the occurrence of reported HABs that will be available to the public. Over 400 lakes in the state have a HABs monitoring program, and this year they are planning to compare satellite data with actual lake monitoring data.

### **Pollution Control Standards Update**

Staff provided an overview of the status of review of the pollution control standards. In June of 2015, the Commission established an ad hoc committee to review its role in water quality standards. The ad hoc committee developed a set of five potential alternatives for its future role in standards, along with a preferred alternative and a minority report. In October, 2017, the Commission authorized its Pollution Control Standards Committee to open an initial public comment period on the five alternatives under consideration. The public comment period opened on January 10 and concluded on February 24. Staff made its normal public notifications of the public comment period and held two informational webinars. The Commission received 797 public comments that were opposed to revisions based on Alternative #2 and 17 comments in favor of Alternative #2. A second public review period was held June 26 through August 20, 2018, with a formal hearing on July 26 to receive input on specific revisions to the standards. Comments received during the second public review included: 10 comments in favor of the proposed revisions and 5,776 comments opposed to the proposed revisions.

At its February, 2019 meeting, the Commission authorized a third public review based on a proposal which would fundamentally allow the states flexibility in their permitting programs, while maintaining river-wide, uniform criteria for the protection of Ohio River designated uses. The public comment period extended from March 1 to April 15, 2019. Three public hearings were held to support the review. 4150 comments were received, 9 which were in favor of the proposal and the remainder against. Additional comments received verbally at the three hearings were all not in favor of the proposal. All comments are available on ORSANCO's website.

### **Adjournment**

The 220<sup>th</sup> meeting of the ORSANCO Technical Committee was adjourned by Chairman Pigott at 11:50 am on Wednesday, June 5, 2019.

Approved:

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Bruno Pigott

Prepared by Jason Heath, P.E., BCEE with contributions from Sam Dinkins.

(Recording of proceedings available at Commission Headquarters)

PowerPoint presentations from this meeting are available on the Commission website at [www.orsanco.org](http://www.orsanco.org).

## **Roster of Attendance**

### ***Technical Committee***

Chairman	Commissioner Bruno Pigott
Illinois	Scott Twait
Indiana	Eileen Hack
Kentucky	Katie McKone
New York	Not present
Ohio	Audrey Rush
Pennsylvania	Kevin Halloran
Virginia	Not present
West Virginia	Scott Mandirola
US Army Corps of Engineers	Erich Emery
US Environmental Protection Agency	Linda Holst
US Geological Survey	Michael Griffin
Chemical Industry Advisory Committee	Russell Dudek
Power Industry Advisory Committee	Rob Reash
Public Interest Advisory Committee	Henry Connor
Publicly Owned Wastewater Treatment Works Advisory Committee	Alex Novak
Water Users Advisory Committee	Bruce Whitteberry
Watershed Organizations Advisory Committee	Rich Cogen
NPDES Subcommittee	Brad Gavin
ORSANCO Chief Engineer	Richard Harrison
Staff Liaison	Jason Heath

### ***Commissioners/Proxies***

Stuart Bruny, Craig Butler, Doug Conroe, Charles Duritsa, George Elmaraghy, David Flannery, Toby Frevert, Peter Goodmann (proxy), John Hoopingarner, John Kupke, Ron Lovan, Scott Mandirola (proxy), Jennifer Orr-Greene (proxy), Bruno Pigott, Ron Potesta, Bruce Scott (proxy) Mike Wilson and Davitt Woodall.

### ***Staff***

Dave Bailey, Lisa Cochran, Stacey Cochran, Sam Dinkins, Richard Harrison, Jason Heath, Bridget Taylor, Jamie Tsiominas, Lila Ziolkowski.

### ***Guests***

Steve Allgeier	USEPA
Melanie Arnold	KYDOW
Robin Blakeman	WOAC
Henry Connor	PIACO
Jason Flickner	WOAC
John Hall	USEPA
John Hirschfield	Westlake Corporation
Jordan Lubetkin	National Wildlife Federation
Marc Mills	USEPA
Chris Nietch	USEPA
Randi Pokladnik	OVEC
Harry Stone	Ohio River Basin Association
Chris Tavenor	Ohio Environmental Council
Jeff Thomas	EPRI
Chandra Yungbluth	Ohio Environmental Council