

OHIO RIVER VALLEY WATER SANITATION COMMISSION

MINUTES
195th Meeting of the Technical Committee
February 8, 2011
Hyatt Regency Hotel
Cincinnati, Ohio

Chairman Toby Frevert Presiding

(Note: Power Point presentations from this meeting can be found on the ORSANCO web site: www.orsanco.org)

Call to Order

The 195th meeting of the ORSANCO Technical Committee was called to order by Chairman Frevert at 10:00 am EST on Tuesday, February 8, 2011. Seven states, three federal agencies and three Commission advisory committees were represented. (For Roster of Attendance, see page 11.)

Minutes of 194th Committee Meeting

ACTION: Motion by Mr. Sovic, second by Ms. Gilinsky and carried, that the minutes of the October 11-12, 2010 meeting of the Technical committee (distributed by email on January 20, 2011) be adopted.

Chief Engineer's Report

Mr. Vicory reported on a number of items:

TRI Reporting – In comments on proposed revisions to the Commission Standards, environmental groups stated that the Ohio River receives more toxic discharges than any river in the country, with an annual total of over 30 million pounds. Staff looked into the matter and found that the source of that statement was the US EPA Toxic Release Inventory. Review of the information found that over 90 percent of the “toxics” released to the Ohio were nitrate compounds, and that over 90 percent of those compounds were released by one facility. Ohio River samples collected downstream of that facility did not indicate any nitrate concentrations that approached or exceeded the stream criterion.

Pool Reports – Mr. Vicory called attention to recently published reports on biological studies of four Ohio River pools. The reports are also available on the ORSANCO web site.

Fish Consumption Web Site – The main stem states have agreed to a common protocol for issuance of consumption advisories for Ohio River fish. A special web site has been developed to provide information on fish consumption, including both the benefits of eating fish and the cautions to be taken in preparation and limiting consumption of certain species.

Spill Reporting – the US Coast Guard still does not recognize ORSANCO as a government agency and will not share complete information on spills. The Coast Guard, however, is resuming active participation on the Technical Committee.

Water Technology Innovation Cluster – US EPA is working to designate the Cincinnati area as a water technology innovation cluster. Mr. Vicory has been asked to chair a steering committee made up of public and private sector participants.

Professional Development – Mr. Vicory informed the Committee that staff member Jason Heath had recently earned his professional engineer registration.

ORSANCO Pollution Control Standards – 2010 Review

Mr. Tennant briefed the Committee on the revisions to the ORSANCO Pollution Control Standards that were adopted by the Commission in October as well as the remaining issues from that review. Those issues are consideration of a 500 mg/L criterion for total dissolved solids and the need for a separate document on the process for considering variances.

Report of the NPDES Subcommittee

Mr. Tennant presented the report of the NPDES Subcommittee in the absence of Chairman Paul Novak. The Subcommittee met by conference call on December 8. The Subcommittee first addressed the remaining issues from the Standards review. The Subcommittee agreed that the issues regarding total dissolved solids should be addressed before the proposed criterion is adopted. The Subcommittee also agreed to work with staff on the process document for variance requests. Current variance processes used by the states will be compiled to determine how the Commission's process can best be coordinated with the states. It was agreed that active participation by the EPA Regions is needed in this effort.

The Subcommittee reviewed a questionnaire to be used to obtain information on states' permit development procedures as part of an effort to identify differences among the states. Permits for FGD scrubber wastes are being used as the test case for this evaluation.

The Subcommittee had previously considered several options for the implementation of the ammonia criterion which applies at drinking water intakes. Additional information had been requested, including assessment of in stream ammonia data and the amount of monitoring for ammonia at drinking water intakes. That information was presented on this call, and the Subcommittee agreed that no additional permit requirements would be necessary at this time, but that the situation should be periodically revisited.

The Subcommittee heard a presentation by Ohio EPA on the agency's experience with water quality trading. The information presented will provide valuable background for permit writers in other states as they consider participation in the developing Ohio River Basin trading program.

Total Dissolved Solids

Mr. Braun presented a summary of available data on dissolved solids (specific conductance) on the Ohio River. The data indicate that current levels are well below the proposed criterion and that concentrations vary inversely with river flow. There did not appear to be any seasonal effect on the data.

Mr. Sovic took exception to a statement in the report of the Pollution Control Standards Committee that additional consideration of issues raised over the proposed criterion for total dissolved solids would be necessary before Commission action could be recommended. He stated that the concerns had been adequately addressed and that the Commission should act on the proposal at its upcoming meeting.

ACTION: Motion by Mr. Schwartz, second by Mr. Sovic and carried (Mr. Elmaraghy voting against), that the Technical Committee recommend that the Commission adopt the 500 mg/L criterion for total dissolved solids as was proposed at the October meeting.

ORSANCO Pollution Control Standards – Upcoming Review

Mr. Tennant outlined the process for the next review of the Commission Standards and presented a list of issues expected to be addressed. The Committee agreed with the list of issues but also suggested that criteria for iron should be considered. In addition, the Standards document should be reviewed as a whole to see if it could be better organized.

Mercury Studies

Rob Reash presented results of the latest Ohio River fish tissue sampling sponsored by the power industry. The number of species sampled was increased to four. Mercury levels in the largest individuals of the drum species collected exceeded the 0.3 mg/kg criterion; all other samples met the criterion.

Mr. Thomas presented results of sampling by ORSANCO as well as efforts to reconcile the seeming differences in analytical results from the two laboratories involved. Sampling by ORSANCO indicated more frequent and widespread exceedances of the criterion. Staff efforts to resolve the discrepancies in results will continue.

Marty Risch of USGS presented results of a cooperative effort with ORSANCO to monitor selected sites for ambient levels of total recoverable and methyl mercury. Those results indicate that mercury concentrations are highest when river flow and suspended solids are high.

Ohio River Water Quality Assessment

Mr. Heath reported that the 305(b) work group was unable to reach agreement on all aspects of the 2010 Ohio River water quality assessment. The issues involved support of aquatic life (primarily due to iron concentrations) and fish consumption (due to mercury results). In looking ahead to the 2012 assessment, Mr. Heath indicated that the same issues would arise again. Mr. Heath also raised concerns over the decrease in available data on bacteria due to the cessation of funding for the longitudinal surveys.

The aquatic life issue is driven by the assessment approach. Three states utilize an independent application approach, under which a use is considered impaired by any indicator, whereas three states use weight of evidence approaches in which all available indicators are considered collectively. In this instance, data for iron indicate exceedance of water quality criteria for aquatic life protection, but biological data do not indicate any impairment.

ACTION: Motion by Mr. Payne, second by Ms. Gilinsky and carried, that ORSANCO utilize a weight of evidence approach in the 2012 assessment of Ohio River water quality conditions.

It was agreed that staff should present approaches to the mercury and bacteria issues at the next meeting of the Technical Committee.

ORSANCO Program Prioritization for FY2012

Mr. Tennant presented a report on the prioritization of ORSANCO programs. At its October meeting, the Committee adopted an approach to be used in a prioritization exercise. Technical Committee members completed the exercise and staff compiled the results. The program ratings fell into three groups: programs to continue at current levels of effort, programs to receive lower levels of effort, and programs to receive increased effort. The Committee discussed the results, and offered additional guidance on those programs for which increased efforts were indicated.

Develop biological and numerical nutrient criteria for the Ohio River

- Complete development of macroinvertebrate criteria.
- Proceed with development of mussel and periphyton criteria.
- Work with the Nutrient Criteria Work Group to develop an alternative approach to nutrient criteria development.

Data Evaluation and Distribution

- Improve access to metadata for Commission monitoring results.
- Improve presentation of water quality information to the general public.

Algae/nutrient monitoring

- Improve monitoring when critical conditions occur.

Investigate derivation of current and new water quality criteria

- Complete investigation of criteria that have been in the ORSANCO Standards for a number of years.
- Continue to track developments regarding ammonia, mercury and selenium.

Special studies to identify sources of water quality problems

- Continue current studies of mercury and total dissolved solids.
- Initiate studies of bromides and iron.
- Compile state TMDLs for pathogens on Ohio River tributaries.

Other Program Recommendations

- Proposals to conduct monitoring of waters at state line crossings and to identify instances where ORSANCO's large river monitoring capabilities might be useful should be considered in the review of the ORSANCO Monitoring Strategy.
- Staff should coordinate development of a basinwide assessment (using data from the EPA National Aquatic Resource Surveys) with efforts by US EPA to assess those data. Staff should present an approach to conducting the basinwide assessment, together with an assessment of resource needs to carry this out.

ACTION: Motion by Mr. Sovic, second by Ms. Willhite and carried, that the Technical Committee adopt the program recommendations for use in the ORSANCO program plan for fiscal year 2012.

Nutrients

Mr. Youngstrom reported on several nutrient related issues. The Commission continues to participate on the Gulf of Mexico Hypoxia Task Force. Recent task force activity involves the consideration of interim measures to track progress toward reduction of the hypoxic zone.

Progress toward development of numerical criteria for nutrients for the Ohio River continues to be elusive.

The Commission is working with a group of collaborators under the leadership of the Electric Power Research Institute (EPRI) to develop an interstate water quality trading program for the Ohio River Basin. Several potential pilot trades have been identified. In the coming months, members of the project team will be meeting with state agency personnel in the states where trades are most likely to occur in order to brief the agencies on the program and to identify the way forward.

Member Reports

Kentucky

Mr. Payne reported on monitoring activities that the Division of Water will carry out in the upcoming year. The emphasis will be on the Green and Tradewater River Basin Management Unit. Probabilistic Biosurveys will utilize the fish community as an indicator. This effort will continue through one complete five year cycle (2010 – 2014) in an effort to calibrate the KIBI. Kentucky will begin monitoring wetlands and will initiate use of macroinvertebrate community indicators for streams dominated by spring flows.

Mr. Payne reported that two fish species – the Kentucky arrow darter and the Cumberland darter – are candidates for endangered species protection. Two mussel species found in the Ohio River and its tributaries in Kentucky are also candidate endangered species.

Mr. Payne reported that the draft anti-degradation regulation has been updated in an attempt to address deficiencies identified by US EPA. A public hearing on the revised draft will be held in Frankfort on February 24. The Division of Water is also holding a workshop on stormwater and TMDLs for MS4 permittees.

Virginia

Ms. Gilinsky reported on the recent completion of four TMDLs in the coal fields region; parameters of concern were total dissolved solids and total suspended solids. Virginia is participating in the wetlands portion of the National Aquatic Resource Studies and is working on development of nutrient criteria for wadeable streams.

Illinois

Ms. Willhite reported that Illinois EPA has been working on nutrient criteria for wadeable streams for over six years. The state currently has phosphorus criteria in place for lakes as well as nitrate criteria for water supply protection. Illinois is pursuing other approaches to nutrient management. At a stakeholder workshop held in the fall, nutrient stewardship plans were discussed with agricultural groups.

Ohio

Mr. Elmaraghy reported on current issues and Ohio River facilities status. He began with an update on the Grand Lake St. Marys situation. Demonstrations projects involving alum dosing have yielded encouraging results, but further study is needed to determine the potential for treatment of the entire lake. The lake has been designated as a watershed in distress under rules adopted by the state in December; this designation will mean tighter controls on manure application. Projects are also underway to reduce nutrient loading to tributaries to the lake and to evaluate the performance of aerators in the lake.

Mr. Elmaraghy next spoke about nutrient standards. Ohio EPA and US EPA are discussing implementation of the proposed Ohio standards. A compromise is being considered which would base action on a Trophic Index Criterion.

Mr. Elmaraghy next addressed Ohio EPA's general permit for mining. US EPA has raised concerns that the general permit does not limit total dissolved solids. Ohio EPA is currently working on aquatic life criteria for chloride and sulfate and believes that these criteria will provide adequate protection. Data on current sampling of mine ponds will be presented to US EPA in February.

Mr. Elmaraghy next reported that Ohio EPA is in the process of adopting a Multi Sector General Permit for industrial storm water. The draft Ohio permit mirrors the federal multi sector general permit except that it does not include petroleum bulk stations and terminals, marinas and coal surface mines – all of which are covered by specific general permits – nor does it include active landfills, which must have individual permits, nor initial coverage for sand and gravel operations (although renewals may be eligible for coverage). The comment period just closed on a general permit for pesticide application.

Mr. Elmaraghy reported on several new developments including the use of “tickets” in the enforcement program, the ability to renew permits for discharges in non-compliance, and the 401 certification program for wetlands.

Mr. Elmaraghy then presented facility reports, beginning with **Meigs County** where **Southern Ohio Coal Company** is planning to construct a pipeline to convey treated effluent from closed Mine 31 AMD treatment facility directly to the Ohio River to meet an NPDES compliance schedule to address water quality concerns in Leading Creek due to very high TDS in discharge (8500 ppm). Outfall would include diffuser.

In **Scioto County**, Ohio EPA met with representatives of **Sunoco** (formerly Aristech) about a proposal to stop operation of salt recovery system and treat salt generating waste stream in a biological treatment system. This would result in raised levels of TDS (sodium sulfates) in the discharge (about 900 ppm increase). Application for NPDES modification will be submitted and antidegradation will apply. This approach would save considerable money and reduce carbon footprint (less energy costs).

In **Adams County**, a draft permit for the **DP&L Stuart** facility is pending. US EPA issued an interim objection letter to the draft permit based on 316(a) variance and thermal load limit. The objection was that the record does not satisfy requirements to support the existing thermal variance in accordance with CWA 316(a). US EPA indicated that if they issue NPDES permit, proposed thermal limits would be appropriate water quality standards for Little Three Mile Creek. DP&L Stuart has requested a public hearing on US EPA's objection letter. US EPA has not yet scheduled the hearing.

Pennsylvania

Mr. Schwartz began with an update on Pennsylvania DEP's efforts to control Total Dissolved Solids (TDS). Chapter 95 regulations were finalized in the August 21 PA Bulletin limiting TDS and Sulfate at 500 mg/L and 250 mg/L respectively. Limits are specific to Oil and Gas Wastewater. Other wastewaters are limited at 2000 mg/L, but are eligible for variances. Three plants are now up and running to recycle Frac water. Two of the plants - one in Masontown (Shallenberger) and one in New Stanton (RES) - provide no removal of TDS and do not

discharge, they just “clean it” through conventional means and recycle it to next Frac use. A plant in Williamsport, however, does treat for TDS. PA DEP is developing a permitting approach for POTWs to discourage accepting brine - WET testing, monitoring, studies, etc. - and is also promoting reuse of acid mine drainage.

Recent monitoring of Dunkard Creek did not show any golden algae.

Pennsylvania’s 2010 303(d) list includes impairment of the Monongahela River for sulfates but not for TDS. Other streams in the watershed were listed for TDS, including Dunkard Creek and the Stoneycreek River. Over 190 miles of streams in Southwest Pennsylvania are now listed as impaired by TDS.

Mr. Schwartz then reported on sources of bromide, including blowdown from scrubbers at power plants, oil and gas wastes, and mine discharges. Elevated bromide levels in the rivers have contributed to violations of the Maximum Contaminant Level for Trihalomethanes (THMs) at four water utilities in Southwest Pennsylvania: Breckenridge and South Buffalo on the Allegheny River, Midland on the Ohio River, and Beaver Falls on the Beaver River. Beaver Falls has seen a decrease in THM formation since switching to chloramines for disinfection.

Mr. Schwartz next presented information on water withdrawals from the Ohio River and its tributaries in Pennsylvania. A total of 2.42 billion gallons are withdrawn each day. The majority is used for cooling water at power plants and municipal use, and is returned to the rivers. Water withdrawn for gas well development is not returned to the rivers and is considered a consumptive use.

Mr. Schwartz concluded with information on the cleanup of an abandoned hospital in Jeanette, Pennsylvania which resulted in recovery of several pounds of mercury.

Water Users Advisory Committee

Mr. Wang reported on increases in bromide levels at Ohio River water utilities. Cincinnati, for example, usually saw levels of 100 ug/L, but in 2010 the concentration increased to 400 ug/L. The Committee recommends that the Commission undertake a study of Ohio River bromide levels. The Committee also recommends that the Commission pursue the purchase of an ion chromatograph which would allow analyses for bromides and nutrients.

Corps of Engineers

Ms. Lee informed the Committee that the Corps has established a Minerals Extraction Team to bring together its expertise in that area. She reported that studies of methyl mercury formation at reservoirs are being carried out with USGS. She also expressed the Corps’ interest in water quality trading.

The Division is developing a Monitoring Plan to coordinate the activities in all the Districts. A water quality workshop involving all of the Districts will be held in November.

The Ohio River Basin Comprehensive Report is now in its second phase. The next meeting of the Ohio River Basin Alliance will take place in Indianapolis on March 14-16.

The Corps is conducting a Great Lakes/Mississippi River Basin transfer study focusing on the movement of exotic species between the two systems. The study is anticipated to be a five year effort.

Development of the Ohio River Community Model has been completed. The model will now be used by the Corps and the National Weather Service to forecast flows.

Dam safety continues to be a major subject. Progress has been made in the rehabilitation of the Wolf Creek dam. The Nashville District is re-engaging with USGS in flow gauging. Construction of the Olmsted Dam is progressing; upstream projects are being managed to optimize conditions for construction when possible.

POTW Advisory Committee

Mr. Apgar reported that his Committee had provided input to US EPA Region 5 on the bacteria TMDL for the Ohio River. His Committee also supports the position taken by the Technical Committee regarding weight of evidence approaches to water quality assessment.

Mr. Apgar reported on a Nutrient Summit held by the National Association of Clean Water Agencies and an emerging position, supported by the US Conference of Mayors, that expenditures for wastewater treatment need to be tied to environmental improvements.

Power Industry Advisory Committee

Mr. Reash reported that new EPA guidelines for the steam electric power industry are expected in mid 2012; the guidelines will include a definition of Best Available Treatment for FGD discharges.

US EPA is expected to issue a proposed rule under Section 316(b) early in 2011. The rule may call for seasonal cooling towers on inland waters. Other EPA rules that will affect the power industry include RCRA rules for coal combustion byproducts and Clean Air Act regulations.

Mr. Reash concluded by noting that the fish studies on the Ohio River sponsored by the power industry have identified 100 different species.

USGS

Mr. Guertal informed the Committee of recent USGS publications from the National Water Quality Assessment program; the publications are available on the agency web site.

Indiana

Ms. Selvaratnam reported on sewer construction in ***Mt. Vernon*** and ***Madison***. The Madison facility has experienced violations of its copper limits. Indiana DEM is working on nutrient criteria for lakes and reservoirs; the criteria will limit phosphorus and chlorophyll a. IDEM is working with USGS on nutrient criteria for rivers and streams. Work is also underway on a Diatom index. Draft Anti-degradation language for the Indiana water quality standards is being revised.

West Virginia

Mr. Sovic began with an update on groundwater contamination in the Kenova Peninsula. The Risk Assessment for the Tri State Terminal property was submitted in the third quarter of 2010; it has been reviewed and comments have been submitted to Marathon. A conference call was held in the fourth quarter of 2010 to clarify agency comments on the supplemental work plan for the West Virginia Terminal property, and to emphasize concerns regarding deficiencies in the plan. A revised site assessment for the KT property was approved in December. Product recovery continues in all portions of the site.

Mr. Sovic next provided an update on the *Marathon* Ohio River pipes site. Marathon has committed to installing a large diameter recovery well. The cleanup standard is to be defined as a 5.0 ug/L level for benzene.

In the municipal arena, SRF loans were awarded for the following:

- *Wheeling* \$8.3 million for CSO elimination
- *New Haven* \$3.2 million for WWTP improvements
- *Huntington* \$2.6 million for sewer system improvements

Loan closings are anticipated soon on two new projects for sewer system improvements in *Wellsburg* and *Ceredo*.

Updates on Long Term Control Plans:

Benwood – An Administrative Order requires submission of the plan by July 16, 2011.

Follansbee and *Point Pleasant* – Updated plans for both communities were approved in October. Implementation schedules are now being addressed.

Kenova – Funding is in process for a major separation project.

McMechen and *Wheeling* – plans are targeted for approval by July, 2011.

Mr. Sovic next addressed developments regarding oil and gas. A total of 393 permits were issued for Marcellus drilling operations in West Virginia in 2010, of which 378 were for new wells. New legislation regarding drilling was proposed in January.

Mr. Sovic next reported on mining activities. US EPA made its final determination pursuant to Section 404C of the Clean Water Act effective January 13, 2011 revoking the permit for *Arch Coal's* Spruce #1 mine, one of the largest mountaintop removal projects ever authorized in West Virginia. The determination was based on findings that the discharge of dredged or fill material would have resulted in unacceptable effects on wildlife. Principal pollutants leading to those effects would be Total Dissolved Solids and Selenium.

Mr. Sovic then provided an update on the Dunkard Creek fish kill. *Consol Coal* is operating under an extension of DEP's April 23, 2010 order pending final resolution of a WV DEP/US EPA/DOJ action to recover fish damages and resolve permit violations. No golden algae were detected this past summer due to the orders regulating releases from the mines involved.

Regarding interstate initiatives, Mr. Sovic reported that West Virginia is working with Pennsylvania to resolve releases from the joint permit associated with *First Energy's* Little Blue River Ash Impoundment. Springs that discharge to an unnamed tributary to the Ohio River have been impacted with high levels of sulfate and chloride; the tributary enters the Ohio east of Chester, WV. First Energy has submitted plans to collect the contaminated spring water by the end of April, 2011.

Mr. Sovic reported continued progress in supporting the Big Sandy River Basin Coalition. Stream monitoring resulting from the Ashland project to collect and treat direct discharges revealed that fecal coliform levels now meet water quality standards; this will allow removal of 2.8 miles of stream from the state's 303(d) list for 2012. Funding has been secured for a preliminary engineering report for a wastewater system to serve 150 homes in the Crumpler area as well as design for decentralized wastewater treatment for two additional clusters of homes.

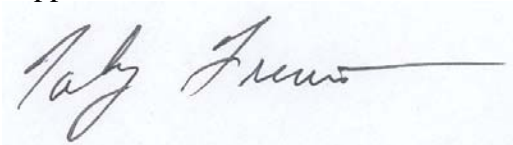
Next Meeting

The next meeting of the Technical Committee will be held on June 7-8, 2011 in Pittsburgh, Pennsylvania.

Adjournment

The 195th meeting of the ORSANCO Technical Committee was adjourned at 6:00 pm EST on Tuesday, February 8, 2011.

Approved:

A handwritten signature in black ink, appearing to read "Toby Frevert", is written over a light blue rectangular background. The signature is cursive and includes a long horizontal flourish extending to the right.

Toby Frevert, Chairman

Prepared by Peter A. Tennant, PE

(Tape recording of proceedings available at Commission Headquarters)

PowerPoint presentations from this meeting are available on the Commission web site at www.orsanco.org.

Roster of Attendance

Technical Committee

Chairman	Commissioner Toby Frevert
Illinois	Marcia Willhite
Indiana	Shivi Selvaratnam
Kentucky	Randy Payne
New York	No representative
Ohio	George Elmaraghy
Pennsylvania	Ron Schwartz
Virginia	Ellen Gilinsky
West Virginia	Randy Sovic
Federal (US EPA)	No representative
US Coast Guard	Andrew Tucci
US Corps of Engineers	Deborah Lee
US Geological Survey	Bill Guertal
ORSANCO Chief Engineer	Alan H. Vicory, Jr.
Chemical Industry Committee	No representative
POTW Advisory Committee	Mike Apgar
Power Industry Advisory Committee	Rob Reash
Public Interest Advisory Committee	No representative
Water Users Advisory Committee	Jack Wang
Staff Liaison	Peter Tennant

Commissioners

Stuart Bruny, Doug Conroe, Tom Easterly, Jeff Eger, David Flannery, Toby Frevert, Ken Komoroski, Phil Morgan, Scott Nally, Greg Phillips, Lee Servatius, Paul Tomes, Bob Wayland

Staff

Dave Bailey, Steve Braun, Sam Dinkins, Tracey Edmonds, Joe Gilligan, Jason Heath, Eben Hobbins, Jeanne Ison, Jeff Thomas, Jerry Schulte, Greg Youngstrom

Guests

Jason Flickner	Kentucky Waterways Alliance
Ross Wales	Commission Legal Counsel
Erich Emery	US Army Corp of Engineers