Office of Inspector General

Audit Report

WATER

Ohio=s Water Quality Program

Report No. 99P00210

June 30, 1999

Inspector General Division Conducting the Review:	**Northern Audit Division**
Region Covered:	**Region 5**
Program Office Involved:	**Water Division**

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
OFFICE OF THE INSPECTOR GENERAL
NORTHERN DIVISION
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

June 30, 1999

MEMORANDUM

SUBJECT: Report No. 99P00210
Ohio=s Water Quality Program

FROM: Anthony C. Carrollo
Divisional Inspector General for Audits
Northern Division

TO: Francis X. Lyons
Regional Administrator
Region 5

Attached is the report on our review of Ohio=s Water Quality Program including Region 5 oversight. The audit was conducted as part of a nationwide review of States= water quality programs. The overall purpose was to determine whether Ohio=s program met the principal goals of the Clean Water Act.

This report contains issues that describe problems the Office of Inspector General (OIG) has identified and corrective actions Region 5 has implemented. The audit report represents the opinion of the OIG. Final determinations on matters in this audit report will be made by EPA managers in accordance with established EPA audit resolution procedures.

ACTION REQUIRED

In responding to our April 30, 1999 position papers Region 5 provided corrective actions already initiated for the issues identified in the report. Therefore, no further response is required, and we are closing the report in our tracking system. Please track all planned corrective actions in the Management Audit Tracking System. We have no objection to further release of this report to the public.

We appreciate the cooperation and assistance Region 5 and the Ohio Environmental Protection Agency provided during our audit. If you have any questions, please call Leah Nikaidoh, Audit Manager, at (513) 487-2365.

Attachment

EXECUTIVE SUMMARY

PURPOSE

This audit is one in a series of state water quality audits being conducted by the Office of Inspector General (OIG) to develop a national picture of the performance of state water quality programs. Ohio was selected as one of the states for audit because the Environmental Protection Agency (EPA) recognizes Ohio as a national leader in the development and use of biological criteria in its water quality program.

OBJECTIVES

Our overall objective was to determine whether the Ohio Environmental Protection Agency=s (OEPA) water quality program effectively protected its surface waters to sustain human health and aquatic life, and provided for both recreational and economic activities. Our specific objectives were to answer the following questions:

- Has OEPA implemented procedures to develop water quality standards that will protect the Ohio=s water quality?
- Has OEPA implemented procedures to test and assess the quality of all appropriate waters Ohio?
- Are OEPA=s reports on water quality complete, accurate, and useful for program management?
- Has Region 5 implemented effective procedures to approve Ohio water quality standards and evaluate OEPA=s water quality standards setting, testing, assessing, and reporting?

RESULTS IN BRIEF

OEPA developed water quality standards which will protect its surface waters to sustain human health and aquatic life, and provide for recreational and economic activities. Ohio is one of only two States that include numeric biological criteria in its water quality standards. The inclusion of biological criteria into Ohio=s water quality program has resulted in OEPA gaining recognition as the national leader in the development and use of biological criteria.

We found one significant water quality standard that OEPA needed to update. OEPA was not using the most current EPA recommended criteria to protect recreational uses of its water bodies.

OEPA also implemented adequate procedures to test and assess the quality of its waters. The use of biological surveys makes OEPA=s assessments more accurate than other States=. Biological surveys are valuable to a water quality program because they can often detect effects of pollutants that otherwise would not be identified with chemical tests alone. For example, OEPA found in 1995 that 50 percent of Ohio water bodies assessed with chemical tests alone and identified as not impaired, were actually impaired after biological surveys were conducted.

OEPA=s water quality reports were complete, accurate, and useful for program management.

Region 5 generally implemented effective procedures to approve Ohio water quality standards and evaluate the OEPA=s water quality standards setting, testing, assessing, and reporting, with one exception. Region 5 should have required OEPA to submit a Quality Management Plan that the Region needed to evaluate OEPA=s monitoring plan.

REGION 5 COMMENTS AND OIG EVALUATION

Region 5 agreed that OEPA needs to use the most current EPA recommended criteria to measure pathogens in its recreational surface waters. Region 5 initiated discussions with OEPA to ensure that OEPA uses the more detective E. coli and Enterococci criteria when assessing Ohio=s recreational surface waters.

Region 5 also agreed that OEPA needs to submit a Quality Management Plan and stated that corrective actions have already been implemented. In May 1999, OEPA submitted a draft Quality Management Plan to the Region, and is expected to submit a final Quality Management Plan this summer.

The corrective actions initiated by Region 5 initiated, along with OEPA=s follow-up actions, when completed, will adequately address the issues identified in this report.

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APPENDICES

Abbreviations

CFR	Code of Federal Regulations
NPDES	National Pollutant Discharge Elimination System
OEPA	Ohio Environmental Protection Agency
OIG	Office of Inspector General
TMDL	Total Maximum Daily Loads

CHAPTER 1
OEPA Developed Adequate Water Quality Standards

Has OEPA implemented procedures to develop water quality standards that will protect Ohio=s water quality?

Yes-OEPA developed adequate water quality standards. OEPA has one of the most extensive biological criteria programs in the country and is one of only two states that has adopted numeric biological criteria into its water quality standards. Because OEPA was the first state to do so, EPA recognizes OEPA as the leader among States in developing and using such criteria. OEPA also had chemical criteria for all applicable Clean Water Act priority pollutants.

There was one significant water quality standard that OEPA needs to update. OEPA is not using the most current EPA recommended criteria to protect recreational uses of its surface water bodies.

OEPA Leads The Way In Biological Criteria Program

Ohio has about 60,000 lakes, reservoirs, and rivers, and also has more than 3,300 named streams extending 44,000 miles in length. Since 1980 OEPA has been proactive in developing biological criteria in the absence of Federal biological standards. As a result, EPA recognizes OEPA as the leader among states in developing and using biological criteria. Using biological criteria expands and improves water quality standards, helps identify impairment of uses, and helps set program priorities. A primary strength of biological criteria is the detection of water quality problems that other methods may miss or underestimate. For example, in 1995, OEPA found that 50 percent of Ohio water bodies assessed with chemical tests alone and identified as not impaired were actually impaired after biological surveys were conducted.

Although nearly all states have adopted narrative biological criteria in their water quality standards, OEPA is one of only two that has adopted numeric biological criteria. OEPA adopted numeric biological criteria into its water quality standards in February 1990. Numeric biological criteria include discrete quantitative values that summarize the status of the biological community and describe the expected condition of the system for different designated water resource uses. Numeric criteria are better than narrative criteria because of the specificity with which impairments can be identified.

OEPA Developed and Adopted Criteria Where EPA Has Not

OEPA has a well-developed water quality standards program. OEPA had criteria for all the priority pollutants listed in Clean Water Act section 307(a) for which EPA had criteriaBthat is, 115 (91 percent) of 126 priority pollutants. Of the remaining 11 priority pollutants for which OEPA did not have criteria, there was no associated Federal criteria either. OEPA developed and adopted water quality criteria for more than 170 total pollutants, including 55 non-priority pollutants.

EPA Recommended Criteria Not Used

OEPA did not use the most current EPA recommended criteria for identifying bacteria in Ohio=s recreational water bodies. In 1986, EPA published its Ambient Water Quality Criteria for Bacteria, which approved E. coli and Enterococci as bacteriological indicators of harmful pathogens. EPA stated that these indicators provide a better correlation between swimming and gastrointestinal illness than the previous criteria recommended for fecal coliform bacteria. EPA also recommended that states begin the transition process to the new indicators.

Elevated bacteria levels can be hazardous to people using water for recreational activities, such as swimming or water skiing. Bacteria can cause illnesses including sore throats, ear infections, diarrhea, gastroenteritis, meningitis, and encephalitis. The Clean Water Act requires EPA to develop and publish criteria for assessing water quality based on the latest scientific knowledge. States may adopt either this criteria, or criteria that is at least as protective as EPA=s. If a state does not adopt such criteria, the Clean Water Act requires EPA to promulgate the Federal criteria for the state.

OEPA adopted the new criteria into its water quality standards in May 1990, but as of 1998 had never used the criteria to identify bacteria in Ohio=s recreational water bodies. Region 5 accepted OEPA=s use of fecal coliformBa less detective criteriaBto assess the quality of Ohio=s water bodies. As a result, water bodies with harmful contamination may have gone undetected and unreported,

and the public may have been unknowingly exposed to harmful bacteria.[1]

CONCLUSION

OEPA has a well-developed water quality standards program. In addition to having good chemical criteria in place, OEPA has one of the most extensive biological criteria programs in the country. Integrating biological criteria with traditional chemical criteria and whole effluent toxicity tests complements the relative strengths and weaknesses of each approach and provides for a more accurate measure of water quality.

Although OEPA=s water quality standards are consistent with EPA requirements, OEPA is not using the most current EPA recommended criteria, which uses E. coli and Enterococci, to measure pathogens in its recreational surface waters. OEPA should use the most current criteria to ensure that it does not miss an opportunity to best protect people against elevated bacteria levels and associated illnesses.

AGENCY COMMENTS AND ACTIONS

Region 5 agreed that OEPA needs to use the most current EPA recommended criteria to measure pathogens in its recreational surface waters. Region 5 initiated discussions with OEPA to ensure that OEPA uses the more detective E. coli and Enterococci criteria when assessing Ohio=s recreational surface waters.

[1]Based on an audit of EPA Region III=s water quality standards, dated March 31, 1999, the OIG recommended Region III take actions to correct deficiencies if States do not amend their water quality standards to include the Agency=s 1996 Ambient Water Quality Criteria for Bacteria. The Agency agreed with the OIG and stated that they will be conducting a review and analysis to verify the scientific soundness of the 1986 criteria, and initiate a Federal promulgation to impose the 1986 E.coli and /or enterococci criteria in addition to, or in place of, outdated fecal coliform criteria. Region III also stated that EPA is committed to promulgating E. Coli and enterococci into 40 CFR Part 136 prior to any Federal promulgation for a State.

OIG EVALUATION

The corrective actions Region 5 initiated, along with OEPA=s follow-up actions, when completed, will adequately address the issue identified.

CHAPTER 2
OEPA Implemented Effective Monitoring Procedures

Has OEPA implemented procedures to test and assess the quality of all waters in Ohio?

YesBThe Ohio Environmental Protection Agency (OEPA) implemented procedures to test and assess the quality of all waters in Ohio.

The combined use of biological surveys and chemical testing made OEPA=s assessments more accurate than other states=. Biological surveys are valuable to a water quality program because the surveys can often detect effects of pollutants that otherwise would not be identified with chemical and toxicity tests alone. Strong state monitoring programs enable states to better target water bodies for cleanup, protect areas that already meet water quality standards, and schedule assessment of waters of unknown quality. Such programs also help EPA evaluate whether true environmental results have been achieved.

We found that OEPA was not meeting the time frames established in its monitoring strategy. However, OEPA management acknowledged the problem and implemented procedures to lessen the impact on its monitoring program.

OEPA Uses Advanced Monitoring Techniques

According to OEPA, in 1995, 50 percent of Ohio=s rivers and streams assessed with chemical tests alone and identified as not impaired, were actually impaired after biological surveys were conducted. Data collected in biological surveys are important because of their use in directly assessing and identifying water bodies that are in need of special protection based on their biological integrity.

In addition to being a valuable tool to measure the biological integrity of a water body, biological surveys are also a key component in the objectives of the Clean Water Act. The Clean Water Act, Section 101, states that the Act=s primary objective is to Arestore and maintain the chemical, physical, and biological integrity of the nation=s waters.@ Biological surveys provide the essential third element for water quality management. Incorporating biological surveys into a fully integrated program directly protects

the biological integrity of surface waters and provides indirect protection for chemical and physical integrity.

Biological surveys involve the collecting of fish and macroinvertebrates (insects, crustaceans, snails and worms), computing various indices, and comparing the results to least impacted reference sites. The fish and macroinvertebrates collected for biological surveys inhabit the water body year-round and cannot escape the effects of water pollution. Therefore, these organisms serve as environmental monitors and can be studied to determine the long-term effects of municipal and industrial discharge, spills, habitat degradation, sedimentation and runoff from farm fields, streets, highways and yards. In contrast, chemical testing only shows the short-term conditions that exist at the time the sample is taken. Chemical testing assesses the suitability of the water body to support a healthy community, but it does not directly assess the community itself.

Although the use of biological surveys in OEPA=s water quality program has increased the accuracy of OEPA=s water monitoring process, the biological surveys do have limitations. Biological surveys can help determine what has happened in a water body, but cannot predict what will happen. Therefore, biological monitoring, when used in coordination with traditional chemical and toxicity testing, complements the relative strengths and weaknesses of each approach and provides for a more accurate measure of water quality. Biological data are a good measure of what has happened in a water body, whereas chemical and toxicity data are a better measure of what could happen in a water body.

OEPA Implemented an Adequate Monitoring Strategy

OEPA=s monitoring strategy is based on a five-year cycle; however, according to OEPA officials, they complete the cycle about every 10 years. OEPA acknowledged that it is not meeting the time frames of its monitoring strategy and are working on ways to reduce monitoring cycles to meet the five-year goal. OEPA officials stated that the main reason for the delay is resource limitations.

To lessen the impact of not meeting the five year cycle, OEPA encourages and pursues feedback from internal and external parties when creating its yearly Test Plan. OEPA creates its yearly Test

Plan to include the needs of all interested parties. OEPA considers not only waterbodies within the designated basin scheduled for review, but also specific requests from OEPA field offices, other state agencies, and the general public. Including these groups in the Test Plan process provides OEPA with assurance that, although it is not testing and assessing all water bodies in a particular basin once every five years, interested parties needs and concerns regarding Ohio-s water quality monitoring are addressed.

CHAPTER 3
OEPA=s Reports Were Complete, Accurate, and Useful

Are OEPA=s water quality reports complete, accurate, and useful for program management?

YesBThe Ohio Environmental Protection Agency=s (OEPA) water quality reports were complete, accurate, and useful for program management. OEPA=s 1996 Water Resource Inventory Report [305(b) report] and 303 (d) List of Impaired Water Bodies were prepared in compliance with EPA guidelines, and were complete, accurate, and useful to OEPA and Region 5 program managers. OEPA=s reports were based on scientific data reviewed for quality control and maintained in OEPA databases.

OEPA=S Water Quality Reports are a Useful Management Tool

Region 5 personnel verified that OEPA=s 1996 305(b) and 303(d) reports contained all required information and that the reports were useful for program management (see exhibit 1, page 12, for more detail about these reports). The Clean Water Act requires OEPA to submit a 305(b) and 303(d) report every two years. The 305(b) reporting process is the principal means by which EPA, Congress, and the public evaluate whether U.S. waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems.

OEPA and Region 5 use the information presented in the 305(b) and 303(d) reports for programmatic direction. Programmatic uses for the 305(b) and 303(d) reports include: (1) reviewing and revising permits; (2) targeting geographical areas of concern for enforcement actions; (3) evaluating specific impacts from various pollution categories; (4) being an information tool for the Congress and the public; (5) scheduling water bodies for the development of Total Maximum Daily Loads (TMDL); and, (6) being a general research tool.

OEPA gathers data and documents test results according to detailed quality assurance/quality control manuals. OEPA personnel review all data for accuracy and completeness, and enter the data into OEPA databases. OEPA also enters some of its data

into EPA databases--such as ACQUIRE, STORET, and IRIS.[2] OEPA=s water quality reports are generated from its own databases which OEPA believes are more reliable than EPA=s.

[2]ACQUIRE stands for the Aquatic Information Retrieval system and is maintained by EPA=s Office of Water. STORET stands for Storage and Retrieval of Water-Related Data and is also an Office of Water database. IRISBthe Integrated Risk Information SystemBis maintained by EPA=s Office of Research and Development.

CHAPTER 4
Region 5 Generally Provided Adequate Oversight of Ohio=s Water Quality Program

Has Region 5 implemented effective procedures to approve Ohio water quality standards and evaluate OEPA=s water quality standards setting, testing, assessing, and reporting?

YesBRegion 5 generally implemented effective procedures to approve Ohio water quality standards and evaluate the State=s water quality standards setting, testing, assessing, and reporting. Region 5 did not, however, require OEPA to submit Quality Management Plans that the Region needed to evaluate OEPA=s monitoring strategy.

Region 5 Actively Participates in OEPA=s Standards Program

Region 5 has effective procedures to approve and evaluate Ohio=s water quality standards, and placed a high priority on the oversight of state water quality standards development. Region 5 routinely communicates with OEPA personnel to discuss problems and answer questions State officials have while developing water quality criteria. These communications identify problems at an early stage and make the EPA approval process much quicker with fewer complications. Region 5 also holds monthly conference calls with the Region 5 states and, at times, Headquarters personnel to discuss pertinent issues. The conference calls typically include discussions relating to new criteria development, problems encountered, successful programs, EPA Headquarters news, etc. Cooperation between Region 5 and OEPA throughout the water quality standards setting process has resulted in a good working relationship and a good overall water quality standards program.

Region 5 Did Not Require OEPA to Submit Quality Management Plans

Region 5 did not require OEPA to submit Quality Management Plans that the Region needed to evaluate OEPA=s monitoring strategy. Quality Management Plans represent the states= intentions for conducting yearly monitoring programs and other specific testing that will be conducted throughout the year. According to 40 CFR 130.4, states are required to establish appropriate testing techniques to monitor water quality. Without the Quality Management Plans, the Region could not evaluate

OEPA=s monitoring strategy and determine if OEPA was meeting the requirements of the Clean Water Act.

In a memorandum to OEPA, dated May 29, 1996, Region 5 noted that OEPA=s Quality Assurance Program Plan[3] did not contain all the detailed information Region 5 needed for a comprehensive review of OEPA=s quality assurance program. The memorandum stated that OEPA=s plans did not include descriptions of specific tasks, sites, and special needs for planning purposes. Region 5 informed OEPA that the 1996 Quality Assurance Program Plan would be approved on the condition that the future plans include the detailed information.

Region 5's goal is to have OEPA comply with the national consensus standard, ANSI/ASQC E4-1994[4], ASpecifications and Guidelines for Environmental Data Collection and Environmental Technology programs@. The guidelines define the management and technical elements necessary to develop and implement a quality assurance system for an organization=s environmental programs. EPA refers to quality assurance plans prepared using these guidelines as Quality Management Plans. In October 1998, EPA distributed the final draft of the AEPA Requirements for Quality Management Plans@ (QA/R-2). This document formally defined EPA=s requirements for Quality Management Plans and stated that it is based on the national consensus standard, ANSI/ASQC E4-1994.

CONCLUSION

[3]In 1996, Quality Management Plans were called Quality Assurance Program Plans.

[4]ANSI/ASQC stands for the American National Standards Institute / American Society of Quality Control. The ANSI=s primary function is to facilitate the development of national standards. The group was founded in 1918 by five engineering societies and three government agencies. The institute remains a private, nonprofit organization supported by private and public sector organizations.

Region 5 generally provided adequate oversight of OEPA=s water quality program. Region 5 maintained open lines of communication with OEPA which helped identify and resolve issues timely.

Although Region 5 implemented effective procedures to approve Ohio water quality standards, Region 5 should have required OEPA to submit Quality Management Plans needed to evaluate OEPA=s monitoring strategy. Quality Management Plans are a principal means by which the Region evaluates OEPA=s monitoring strategy. Without these plans, Region 5 cannot determine if OEPA=s monitoring strategy is sufficient to meet the requirements of the Clean Water Act.

AGENCY COMMENTS AND ACTIONS

Region 5 agreed that OEPA needs to submit a Quality Management Plan and stated that corrective actions have already been implemented. In May 1999, OEPA submitted a draft Quality Management Plan to the Region, and is expected to submit a final Quality Management Plan this summer.

OIG EVALUATION

The corrective actions Region 5 initiated, along with OEPA=s follow-up actions, when completed, will adequately address the issue identified.

Background

PURPOSE

This audit was conducted as a portion of the Office of Inspector General=s (OIG) Water Quality Issue Area Plan, dated September 1997. We reviewed the State of Ohio=s water quality program primarily because EPA recognizes Ohio as the national leader in the development and use of biological criteria to assess water bodies. Strong state monitoring programs enable states to better target water bodies for cleanup, protect areas that already meet water quality standards, and schedule assessment of waters of unknown quality. Such programs also help EPA evaluate whether true environmental results have been achieved.

The objectives of this audit were to determine if:

- $ Ohio Environmental Protection Agency (OEPA) had implemented procedures to develop water quality standards that will protect Ohio=s water quality.
- $ OEPA had implemented procedures to test and assess the quality of all waters in Ohio.
- $ OEPA=s water quality reports were complete, accurate, and useful for program management.
- $ EPA Region 5 had implemented effective procedures to approve Ohio water quality standards and evaluate OEPA's water quality standards setting, testing, assessing, and reporting.

BACKGROUND

Ohio has about 60,000 lakes, reservoirs, and rivers, and also has more than 3,300 named streams extending 44,000 miles in length. To protect these water bodies for the future, the Ohio Environmental Protection Agency (OEPA) has developed water quality standards. These standards are monitored, enforced, and updated according to new technologies and developments. Ohio=s water quality standards are contained in the Ohio Administrative Code Chapter 3745-1. In accordance with the Clean Water Act,

the standards must be reviewed and revised, as necessary, at least once every three years.

The water quality standards have three main parts: (1) designated uses; (2) narrative and numeric criteria designed to attain and maintain the quality of water needed to support the designated uses; and, (3) an antidegradation policy, designed to protect the existing water quality.

There are four types of use designations in Ohio: aquatic life habitat, water supply, recreation, and state resource waters. Generally, all water bodies of any significant size have been assigned at least one designated use.

Narrative criteria require that all of Ohio=s surface waters be free from suspended solids, floating debris, oil, scum, and other materials. Numeric criteria consist of chemical criteria, whole effluent toxicity, and biological criteria.

Water quality standards ensure that our water resources will be maintained for future generations by restricting the degradation of the current water quality in the state. Antidegradation policies, as part of the standards, are designed to ensure that assigned uses for water bodies are protected and maintained.

Title 40 Code Federal Regulation (CFR) 130.4, Water Quality Monitoring, requires states to establish appropriate testing techniques to monitor water quality. The monitoring information is used to support activities to abate and control pollution, develop water quality standards, and report water quality information to the public. The regulations further require states to collect and analyze data to ensure the physical, chemical, and biological data, and quality assurance and control programs are scientifically valid.

OEPA=s Surface Water Division conducts field studies and water quality tests to determine current water quality conditions throughout the state. OEPA=s biological water quality survey

program includes the sampling of fish and invertebrate species in Ohio=s streams. Biological monitoring, when used in combination with chemical tests, is a better measure of water quality. Fish, insects, snails, worms, etc., serve as environmental monitors and are studied to determine the long-term effects of municipal and industrial effluents, spills, habitat degradation, and runoff. OEPA also monitors physical impairments to habitat, and conducts chemical monitoring.

OEPA submits a Water Resource Inventory Report [305(b) Report], and a 303(d) List of Impaired Water BodiesBwhich are required by the Clean Water ActBto EPA every two years. EPA is responsible for compiling data from all states= 305(b) Reports, summarizing them, and transmitting the summaries to Congress along with an analysis of the status of water quality nationwide. The 303(d) List of Impaired Water Bodies, a report derived from the 305(b) Report, is used to schedule water bodies for the development of total maximum daily loads (TMDL). A TMDL is the total maximum daily amount of a pollutant that can be discharged and properly absorbed without an environmental effect to a receiving body of water. The 303(d) list is also required under 40 CFR 130.7, TMDLs, which requires states to identify all impaired water bodies where existing pollution control requirements are not stringent enough to achieve the water quality standard.

The 305(b) reporting process is the principal means by which EPA, Congress, and the public evaluate whether U.S. waters meet water quality standards, the progress made in maintaining and restoring water quality, and the extent of remaining problems.

SCOPE AND METHODOLOGY

We reviewed OEPA's water quality monitoring program activities from 1994 through 1997, concentrating on the 1996 Water Quality Assessment Reports. These were the most recent reports available. Water quality reporting is on a 2-year cycle, and water quality

standards setting is on a 3-year cycle. By reviewing activities from 1994-1997, we were able to review both the most recent Water Quality Assessment Report and the latest update of Ohio=s water quality standards. For more scientifically technical water quality issues, we obtained assistance from the OIG=s Engineering and Science Staff. This assistance included: (1) a comparison of Ohio=s water quality criteria to EPA=s criteria, (2) an analysis of some monitoring data, and (3) a review of Ohio=s antidegradation policy and implementation plan.

We reviewed OEPA=s implementation of Clean Water Act requirements to establish surface water quality standards, and monitor and report on surface water quality. We did not review activities related to groundwater, state revolving funds, drinking water, or National Pollutant Discharge Elimination System (NPDES) permitting, except as related to water quality standards and monitoring.

We conducted audit work at OEPA=s Surface Water Division in Columbus, OH. We also joined OEPA staff during a site visit, in July 1998, to the Little Darby Creek, near Columbus, OH. During this site visit, we watched as OEPA staff collected a sample of fish, via electrofishing, to assess the aquatic health of that stream segment. We also conducted work in Chicago with Region 5 officials.

We reviewed OEPA and Region 5 records, policies, and procedures concerning water quality standards setting, water quality testing, assessing, and reporting. We also reviewed the following documents: OEPA=s data quality assurance plan; State/EPA agreements, workplans; Ohio=s 1996 305(b) and 303(d) reports; and, Region 5's management agreement for fiscal 1998-1999 with the Office of Water.

We performed our audit in accordance with the 1994 Government Auditing Standards issued by the Comptroller General. We conducted fieldwork from July 1998 to March 1999.

Exhibit 1
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PRIOR AUDITS

The OIG completed similar audits in Region III, Oregon, Colorado, and Missouri. The OIG issued a report entitled, ARegion III Water Quality Standards, Monitoring, and Reporting,@ on March 31, 1999. The OIG found that states in the Region generally did not use the proper criteria to protect against bacteria in water. Several states also did not have adequate water quality standards for chemicals to protect water bodies.

The OIG issued the Oregon report, entitled, AOregon=s Water Quality Program,@ on March 31, 1999. The OIG reported that generally Oregon=s water quality program, including its water quality standards and monitoring, met the goals of the Clean Water Act.

The OIG issued the Colorado report, entitled, AColorado Water Quality Standards, Monitoring, and Reporting Program,@ on March 10, 1999 (Report No. 9100093). In this report, the OIG found that Colorado needs to improve its procedures to adopt and support its water quality standards. The OIG also found that Colorado=s water quality reports varied in completeness and accuracy.

The Missouri report, entitled, AMissouri=s Water Quality Standards and Monitoring,@ was issued on March 31, 1998 (Report No. 8100080). In this report, the OIG found that Missouri did not adopt the swimmable use classification for all waters or conduct the required studies showing the use could not be achieved. The OIG also found that many of Missouri=s water quality standards were less restrictive than those required by the Clean Water Act and that controls were not in place to ensure the State=s water quality reports were complete and accurate.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF
WT-15J

MEMORANDUM

DATE: MAY 27 1999

SUBJECT: Comments on Ohio Audit

FROM: JoLynn Traub
Directory, Water Division

TO: Tony Carrollo, OIG

Thank you for the opportunity to review the draft conclusions of the audit of Ohio-s water quality standards program. Region 5 agrees with the conclusions, specifically, Ohio-s criteria for bacteriological contamination to protect recreational uses should be updated to reflect the current recommendations of the United States Environmental Protection Agency (USEPA), and the Ohio Environmental Protection Agency (Ohio EPA) should submit a Quality Management Plan (QMP). In response to the findings of the audit, Region 5 took the following steps to correct the problems identified. Region 5 initiated discussions with., Ohio EPA to update Ohio-s bacteriological criteria in its next water quality standards review. Ohio EPA is in the process of scheduling priority activities and should be able to provide a date by when work will be begun by the end of July. With respect to the QMP, Ohio has recently submitted a draft QMP to the Region, and is expected to submit a final QMP this summer.

If you have any questions, please contact me, or have your staff contact David Pfeifer of my staff. Mr Pfeifer may be reached at (312) 353-9024.

cc: Ms. Leah Nikaidoh, Audit Manager
Mr. Greg Luebbering, OIG

Note: The original response was signed by Mary P. Tyson for JoLynn Traub.

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