BUREAU OF THE ENVIRONMENT
ENVIRONMENTAL QUALITY BOARD
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MINUTES
WEST VIRGINIA ENVIRONMENTAL QUALITY BOARD
JUNE 25, 1999

I. General

The West Virginia Environmental Quality Board ("the Board") met on June 25, 1999, at 9:00 a.m. The meeting was held at 1615 Washington Street, E., Charleston, West Virginia. This meeting was audio-taped. The sign-in sheet and agenda are attached to the back of these minutes as Attachments 9 and 10. Edward M. Snyder, Chair of the Environmental Quality Board called the meeting to order.

Board members present were:

Edward Snyder, Chair
Charles Jenkins
~~David Samuel~~
Betsy Dulin

Staff members present were:

Libby Chatfield, Technical Advisor
Becky Charles, Legal Counsel
Ann Holstein, Administrative Secretary

II. 46 CSR 1, Requirements Governing Water Quality Standards

A. Antidegradation Implementation

The Board discussed two recent developments on this issue: a letter from USEPA Region

3 dated June 22 (attachment 1) addressing the lack of implementation procedures; and a Notice of Intent to Sue USEPA filed by the West Virginia Rivers Coalition (attachment 2), and others, challenging EPAs failure to act on the lack of antidegradation implementation procedures in the state. Bob Koroncai and Mary Kuo, from the Region 3 USEPA office in Philadelphia, joined the Board via teleconference.

Bob Koroncai addressed the Board regarding EPAs position on the status of the antidegradation implementation procedures in the rule. He indicated that the agency had conditionally approved the antidegradation policy in 1995, provided that implementation procedures were developed within one year.

He stated that Region 3 will refer this issue to Administrator Browner. He explained that the Regional Administrator does not have the authority to disapprove anything but new or existing provisions in the rule. He indicated that EPA would like to see some action by the Board by April 2000.

After discussion of several options, Betsy Dulin made a motion that Ms Chatfield make changes to the existing antidegradation implementation procedures based on committee response to the comments received last summer that are functional in nature and that the Board convene an emergency meeting by conference call on Monday afternoon at 3:30 to discuss those revisions pursuant to filing a public notice of a hearing on June 30. Bob Jenkins seconded the motion which carried by unanimous vote. Bob Jenkins moved that if the revisions are satisfactory that the Board put the rule out for filing to meet the August 6 deadline for consideration in the 2000 session. Betsy Dulin seconded the motion which carried by unanimous vote.

The Board discussed a letter dated June 16, 1999, from the WV Municipal Water Quality Association (attachment 3) in which that organization requested to be included on the antidegradation stakeholder group. They cited, among other things, the lack of a representative of local government on the stakeholder group. After discussion of the letter, Bob Jenkins made a motion to include the WVMWQA on the stakeholder group. The motion was seconded by Betsy Dulin and carried by unanimous vote of the members present.

B. Weirton Steel Variance

The Board discussed a letter from Weirton Steel requesting amendments to the variance from water quality standards (attachment 4). In that letter they requested retaining existing retention of the variance limits for iron, lead, total phenolic materials, temperature and proposed alternate, more stringent criteria for cyanide, zinc and fluoride. Ms. Chatfield discussed a conference call which had been held last week with Weirton Steel representatives, EPA and DEP. Further suggestions were made by DEP in a letter dated June 23, 1999 (attachment 5) which Weirton Steel indicated they had no objection to the proposals in that letter.

After discussion of the issues, Bob Jenkins moved that the Board go out to public notice

on the language proposed in the letter from DEP June 23, 1999, hold a public hearing on July 29, 1999 and file the proposed changes by August 6, 1999 for consideration in the 2000 legislative session. The motion was seconded by Betsy Dulin and carried by unanimous vote.

The Board also tentatively scheduled a conference call on August 2 for final decisions on the antidegradation implementation changes as well a the Weirton Steel variance.

C. EPA letters of June 8 and June 22, 1999

The Board discussed the contents of two letters they have received from USEPA. A letter dated June 8, 1999 identified provisions in the rule which had been disapproved prior to the most recent triennial review. A letter dated June 22, 1999 reviewed the Board's most recent triennial review revisions. That letter identified approvals and disapprovals of those changes.

The Board discussed options for addressing the disapprovals outlined in the two letters. Bob Jenkins suggested that Libby Chatfield prepare a summary of the disapproved items outlined in the two rules. That summary is to include EPAs comments on each parameter addressed in both letters, and recommendations for board action. Ms. Chatfield agreed to complete the summary by the August meeting for the Board's consideration.

Rick Herd addressed EPAs disapproval of the selenium criterion in the Allegheny Power variance on Fly Ash Run in section 7.2.d.8.1 of the standards. He indicated that the company continues to work with EPA to resolve that agency's concerns about the alternate selenium value.

May 27th and June 10 letters from EPA. Ms Chatfield explained that Region 3 is compiling a docket of WQS documents for each state. The list of documents for WV is included in these letters. Ms. Chatfield reported that after discussion with Chairman Snyder, she responded to EPAs letters indicating that the list was appropriate. Randy Sovic suggested that 47 CSR 11 might be included. Ms. Chatfield said she would talk to Mary Kuo of Region 3 EPA about this.

D. Public A Use category

The Board reviewed a draft Notice of Hearing (attachment 6) on the options for consideration for revising the Public A use category application. They discussed the draft notice and scheduling a public meeting or hearing on the issue. After that discussion, Bob Jenkins moved to approve the publication of the notice as an Advanced Notice of Proposed Rulemaking scheduling a public meeting on July 15th, at 7:00 pm. Betsy Dulin seconded and motion carried by unanimous vote.

The Board discussed the issue of the public taking drinking water directly from streams. The Board recommended that Libby Chatfield contact the State Geological Survey in Morgantown for more information.

E. Aluminum

The Board reviewed a memorandum (attachment 7) outlining recommendations made by a group assigned to review information about aluminum toxicity. The memorandum indicated agreement by all the group members that in certain stream conditions, aluminum is toxic to aquatic life. The group further agreed to a finding that a review of the aluminum criterion by EPA, considering a number of environmental factors, is needed.

The Board also discussed EPAs recent disapproval of the Board's removal of the chronic aquatic life criterion from the standards during the last triennial review. Ms. Chatfield indicated that she would include a discussion of this issue in the memorandum summarizing EPAs disapprovals which she is to prepare for the August meeting. That discussion will address one of EPAs recommendations that a conversion factor/translator for aluminum be adopted.

F. Iron

Mike Brown distributed a document from Ohio EPA (attachment 8) addressing that state's removal of the aquatic life iron criteria during their last triennial review. To date, Mr. Brown indicated that Region 5 EPA has not objected to the state's action.

III. Administrative matters

A. Minutes

Bob Jenkins moved that the minutes from the board meeting held on May 17 and 18, 1999, be approved as proposed. The motion was seconded by Betsy Dulin and carried by unanimous vote.

B. Clerk Hiring

The Board discussed options for testing the applicants for the clerk position. Division of Personnel offers two tests which may be applicable, one for secretarial positions and one for paralegal positions. The Board agreed that the secretarial test may more appropriately evaluate the skills needed.

The Board reviewed the resumes of applicants for the clerk position and chose 11 candidates for further consideration.

C. July meeting agenda

The Board agreed to schedule discussion of the Kempco remining variance at 8:30 AM on July 15 1999.

IV. Appeals

A. Trus-Joist MacMillan - Appeal No. 99-01-EQB

The Board approved the consent order presented by the parties in this case.

Bob Jenkins made a motion to adjourn the meeting. ~~Dave Samuel~~ Betsy Dulin seconded the motion and the Chair adjourned the meeting.

We hereby certify that the foregoing is a true and correct record of the proceedings of the meeting held on June 25, 1999, by the West Virginia Environmental Quality Board.

Submitted this 15th day of July, 1999.

Approved by the Board as submitted on _____.
Approved by the Board as amended on 7/15/99.

Libby Chatfield
Technical Advisor

Becky Charles
Legal Counsel

Ann Holstein
Administrative Secretary

Attachment 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
1650 Arch Street
Philadelphia, Pennsylvania 19103-2029

JUN 22 1999

Dr. Edward M. Snyder, Chairman
Environmental Quality Board
1615 Washington Street, East
Charleston, WV 25311-2126

Dear Dr. Snyder:

Revisions to the West Virginia Requirements Governing Water Quality Standards were submitted to the Environmental Protection Agency (EPA) on July 7, 1998, pursuant to Section 303(c)(1) of the Clean Water Act (CWA) and 40 CFR §131.20(a). These revisions were approved by the State Legislature on April 2, 1998 and became effective on July 1, 1998 following certification by the State Attorney General. The complete 1998 triennial review package was received by EPA on July 14, 1998.

In accordance with Section 303(c)(2)(A) of the CWA and 40 CFR §131.21, EPA has identified and reviewed the West Virginia Water Quality Standards which are new and revised from the 1995 Triennial Review. The purpose of this letter is to advise the state of the results of our review. The state has made significant improvements to the water quality standards, namely supporting the majority of site-specific criteria, variances and designated use revisions found in Section 7.2.d with scientifically defensible justifications. As a result of these actions, EPA is removing the disapproval of Section 7.2.d from 1995, with the exception of the variance and use exclusion for Bluestone Lake at Section 7.2.d.32.1. Enclosure 1 provides a complete list of all new and revised standards that EPA is approving.

EPA has identified eight new or revised water quality standards from the 1998 Triennial Review which are being disapproved. The following is a list of specific sections of the standards which EPA has determined to be inconsistent with CWA and Federal water quality standards regulations at 40 CFR §131:

1. Exceptions to the Applicability of Water Quality Standards (Section 7.2.c.4)[1];

2. Site-specific criteria (Section 7.2.d.8.1 (Selenium Only));

3. Specific Water Quality Criteria (Appendix E, Section 8.1 (Aluminum));

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[1] Section 7.2.c.4 was previously disapproved on November 9, 1995.

4. Specific Water Quality Criteria (Appendix E, Section 8.17.1 (Effluent limitation relief for manganese));

5. Specific Water Quality Criteria (Appendix E, Section 8.22 (chloroform));

6. Specific Water Quality Criteria (Appendix E, Section 8.22 (1,1,2,2-tetrachloroethane));

7. Specific Water Quality Criteria (Appendix E, Section 8.24 (phenol));

8. Specific Water Quality Criteria (Appendix E, Section 8.24 (phenolic materials)).

Enclosure 2 of this letter contains a detailed discussion and rationale of EPA's objections to these provisions which includes the regulatory basis for our disapproval and changes which must be made to ensure consistency with the requirements of the CWA. In accordance with Section 303(c)(3) of the CWA, West Virginia has 90 days from the date of this letter to revise the disapproved standards to provide consistency with the CWA and EPA implementing regulations. If, after that time, the state has not revised these provisions, the Administrator will promptly prepare and publish proposed Federal water quality standards, pursuant to Section 303(c)(4)(A) of CWA, to supersede the disapproved sections.

EPA is also identifying water quality standards that have been previously disapproved for which the state has not revised the standard to provide consistency with the CWA and EPA's implementing regulations. Enclosure 3 provides a comprehensive list of these previously disapproved standards as well as a short discussion regarding the rationale for disapproval and changes which must be made to ensure consistency with the requirements of the CWA. These outstanding disapprovals are also identified in our June 8, 1999 letter regarding the resolution of all outstanding disapproved standards. EPA believes that it is essential to resolve these outstanding disapprovals on or before April 1, 2000. EPA has described the necessary actions to resolve each of these outstanding disapprovals and hopes that the state can resolve these inconsistencies to avoid a Federal promulgation.

In addition, EPA conditionally approved West Virginia's antidegradation policy on November 9, 1995 based upon the understanding that the state would develop implementation methods within one year. West Virginia has yet to identify implementation methods for its antidegradation policy. Accordingly, EPA is today notifying West Virginia that unless West Virginia promptly develops and adopts antidegradation methods that adequately support its antidegradation policy, Region III will recommend that the Administrator exercise her discretionary authority under Section 303(c)(4)(B) of the Act to identify implementation methods for West Virginia's antidegradation policy. Enclosure 4 of this letter contains a more-detailed rationale and description of our recommendation to the Administrator.

We look forward to continuing the cooperative partnership with the state to resolve our concerns and ensure that the Water Quality Standards are protective of the waters of West Virginia. If you have any questions concerning this letter, please contact me, or have your staff contact Mr. Ray George at (304) 234-0234.

Sincerely,

W. Michael McCabe
Regional Administrator

Enclosures (4)

Enclosure 1

ENVIRONMENTAL PROTECTION AGENCY, REGION III
WEST VIRGINIA REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
APPROVAL OF NEW AND REVISED ITEMS
1998 TRIENNIAL REVIEW

Section Approved	Description of Revision	EPA Rationale
Definitions, 2.11	Provides clarification that point and nonpoint source impacts are not considered natural or naturally-occurring.	The revised definition for natural or naturally-occurring is consistent with EPA policy memorandum of November 5, 1997, *Establishing site-specific aquatic life criteria equal to natural background.*
Mixing Zones, 5.2.d	Provides protection of threatened and endangered species.	Section is consistent with draft *Memorandum of Agreement between the Environmental Protection Agency, Fish and Wildlife Service and the National Marine Fisheries Service regarding Enhanced Coordination under the Clean Water Act and the Endangered Species Act (EPA-823-F-98-019)* as well as guidance from the *Water Quality Standards (WQS) Handbook (EPA-823-B-94-005a).*
Mixing Zones, 5.2.h.6	Provides that no Mixing Zones shall be allowed within ½ mile of a public water supply intake.	Section is consistent with *Technical Support Document for Water Quality-based Toxics Control(EPA/505/2-90-001)* recommendations and EPA policy.
Water Use Categories, 6.3	Removed Category B3 designated use, small non-fishable streams.	EPA and FWS recommended this to ensure that Category B3 streams received the same protection as Category B1[1] streams.
Water Use Categories, 6.3.a	Revised definition to allow for broader application of warmwater fisheries use.	Based on recommendations from FWS to clarify use designation and provide adequate protection of aquatic life.

Section Approved	Description of Revision	EPA Rationale
West Virginia Waters, 7.2.b	1) Revised section by adding the word "numeric" to clarify that numeric water quality standards apply at all times when flow is greater than 7Q10. 2) Added language which allows the exception listed at Section 7.2.c.5 (see language under 7.2.c.5 below).	1) Revision adding the word "numeric" was removed during the January 1999 Legislative Session. Therefore, this revision is no longer applicable. 2) The language allowing the exception at Section 7.2.c.5 describes how WV applies its narrative criteria at flows less than 7Q10 for this specific waterbody. The methodology is consistent with EPA guidance from the *WQS Handbook*.
West Virginia Waters, 7.2.c.3	Added language which states that all requirements of the State's Mixing Zone Policy (Section 5) shall apply to mixing zones.	EPA concurs with WV's Mixing Zone Policy and finds this section is consistent with EPA mixing zone guidance.
West Virginia Waters, 7.2.c.5	Provides an exception for the Upper Blackwater when flow is less than 7Q10 by specifying the method to establish applicable criteria.	Identifies method for implementing narrative criteria at flows less than 7Q10. The method described in the standards is consistent with guidance from the *WQS Handbook*. West Virginia should note that EPA has review and approval authority over any changes, including low flow policies, to the water quality standards pursuant to 40 CFR §131.13 and §131.20(c).
West Virginia Waters, 7.2.d.B.a *	Removed site-specific criteria for Buzzard Run.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.

Section Approved	Description of Revision	EPA Rationale
West Virginia Waters, 7.2.d.6.1	Added language placing a time restriction on a site-specific thermal criterion based on development of CWA Section 316(a) variance.	Revision establishes a schedule for completion of CWA Section 316(a) thermal variance in a timely manner. Section 316(a) variance has been completed and submitted according to schedule. EPA is currently reviewing the variance request.
West Virginia Waters, 7.2.d.G.b *	Removed site-specific criteria on an unnamed tributary of Monongahela River.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
West Virginia Waters, 7.2.d.8.1	Provides site-specific criteria on Daugherty Run (iron, manganese, and aluminum only).	Consistent with EPA *Water Quality Standards Handbook, Appendix L, Interim Guidance on Determination and Use of Water-Effect Ratios for Metals*. (Refer to WQS variance file for approval information.)
West Virginia Waters, 7.2.d.16.1	Removed site-specific criteria for arsenic.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
West Virginia Waters, 7.2.d.P.b * (7.2.d.16.2 **)	Removed site-specific criteria for Weirton Steel on Harmon Creek and replaced with a short term socio-economic variance.	Reviewed by EPA HQ and Region III and approved.
West Virginia Waters 7.2.d.P.c *	Removed site-specific criteria on Cow Creek.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.

Section Approved	Description of Revision	EPA Rationale
West Virginia Waters, 7.2.d.20.2 ** (7.2.d.T.b *)	Removed use exclusion and site-specific criteria for arsenic on Little Scary Creek.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
West Virginia Waters, 7.2.d.T.c *	Removed site-specific criteria on Ward Hollow.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
West Virginia Waters, 7.2.d.20.3 ** (7.2.d.T.d *)	Added language placing a time restriction on a site-specific thermal criterion based on development of CWA Section 316(a) variance.	CWA Section 316(a) thermal variance was approved prior to time deadline. Thermal effluent limitations based on variance will be incorporated into NPDES permit for facility (see variance file).
West Virginia Waters, 7.2.d.CC.a *	Removed site-specific criterion on Laurel Creek.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
West Virginia Waters, 7.2.d.DD.a *	Removed use exclusion and site-specific criteria on East Fork, Greenbrier River.	The site-specific criteria are no longer necessary or were not supported. The State's water quality standards, including criteria, consistent with the Clean Water Act now apply.
Specific Water Quality Criteria, 8.5	Added implementation procedures for parameters with water quality criteria which are lower than the detection limit.	Allows characterization of pollutants for which water quality standards are below current detection levels. Methods consistent with current EPA science.

Section Approved	Description of Revision	EPA Rationale
Appendix E, 8.15.1 *	Removed an effluent limitation for iron.	Deleted language describing procedures to calculate specific individual NPDES permit limits. Removal of this section is consistent with EPA recommendations.
Appendix E, 8.17	Removed chronic aquatic life criterion for manganese.	EPA does not currently have a chronic aquatic life criterion for manganese pursuant to CWA Section 304(a).
Appendix E, 8.19	Removed chronic aquatic life nickel criterion for B2 waters and replaced with chronic aquatic life criterion formula from Quality Criteria for Water-1986 (Gold Book) (See appendix E, 8.19.1 below).	Updating the chronic nickel criterion to provide consistency with *Quality Criteria for Water-1986* is consistent with EPA recommendations. (See Appendix E, 8.19.1 below)
Appendix E, 8.19.1	Applied aquatic life chronic criterion formula to B2 waters from *Quality Criteria for Water-1986.*	Revision is consistent with *Quality Criteria for Water-1986* recommendations.
Appendix E, 8.22	Removed chronic aquatic life criterion for Aldrin.	EPA does not currently have a chronic aquatic life criterion for Aldrin pursuant to CWA Section 304(a).
Appendix E, 8.24	Adopted the human health criterion for phenol for Category A waters.	Criterion adopted by West Virginia is more stringent than EPA's human health water quality criterion for phenol pursuant to CWA Section 304(a).

Section Approved	Description of Revision	EPA Rationale
Appendix E, 8.31	Removed human health criteria for Total Residual Chlorine (Chlorine) for Category A (public water supply) and Category C (water contact recreation) uses.	EPA does not currently have human health water quality criteria for total residual chlorine pursuant to CWA Section 304(a).
Appendix F	Added procedures for calculating instream concentrations of BCCs from fish tissue.	EPA assisted in development to calculate limits for parameters below detection levels to ensure consistency with EPA guidance and policy.

* - refers to site reference from 1995 Water Quality Standards. If site was deleted, it does not appear in the 1998 Water Quality Standards.

** - refers to site reference from 1998 Water Quality Standards. Site may also have appeared in the 1995 Water Quality Standards.

[1] Category B1-Warm Water Fishery Streams

Enclosure 2

ENVIRONMENTAL PROTECTION AGENCY, REGION III
WEST VIRGINIA REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
DISAPPROVAL RATIONALE ON NEW AND REVISED STANDARDS
1998 TRIENNIAL REVIEW

1) 46-1-7-West Virginia Waters, Section 7.2.c.4

EPA originally disapproved this section on November 9, 1995. Our rationale found that Section 7.2.c.4 automatically establishes site-specific criteria equivalent to background without (1) a demonstration that designated and existing uses are protected, (2) providing a procedure to ensure that natural background concentrations are determined accurately and reproducibly, (3) providing an opportunity for public review and comment on those criteria adjustments, and (4) limiting the natural background policy to aquatic life. In an effort to address our disapproval, West Virginia made modifications to this section during this triennial review, however, these revisions were not sufficient to allow EPA to remove the disapproval.

Section 7.2.c.4 is not consistent with the Federal regulation at 40 CFR §131.11(a) which requires states to adopt water quality criteria that protect the designated use. The regulation further states that the criteria be based on sound scientific rationale and contain sufficient parameters or constituents to protect the designated use.

EPA recommends that West Virginia develop and adopt into the water quality standards a natural background policy consistent with EPA policy. The following provisions are needed to provide consistency with EPA policy:

- West Virginia must indicate how it will determine that existing and designated uses are protected when establishing site-specific criteria equivalent to natural background.

- The state needs to establish a binding procedure which describes the methods that will be used to establish natural background concentrations. These procedures need to be specific enough to establish natural background concentrations accurately and reproducibly.

- The procedure must contain a provision that development of the resulting background-based site-specific criteria will involve public participation consistent with Federal and state requirements and must be available so that citizens can readily determine the water quality criteria applicable to specific water bodies.

- The procedure must indicate that such natural background determinations are applicable to aquatic life criteria only and are prohibited for human health criteria.

- The policy should be developed in cooperation with FWS so that it takes into consideration impacts to threatened and endangered species.

In order to address our disapproval, the state should develop and adopt into the water quality standards a natural background policy consistent with EPA policy. Alternatively, the state could remove this provision from its water quality standards. If West Virginia does not develop and adopt into the water quality standards a natural background policy consistent with EPA policy within 90 days, EPA will promulgate a replacement standard for this provision of West Virginia's water quality standards.

2) 46-1-7-West Virginia Waters, Section 7.2.d.8.1

EPA has reviewed the supporting documentation submitted by the Great Lakes Environment Center, for the site-specific criteria requested for Fly Ash Run and an unnamed tributary. Allegheny Power requested alternate criteria for iron, manganese, aluminum, and selenium for the Albright Power Station Ash Disposal Site located near Albright, WV. EPA reviewed the rationale for alternate criteria limitations for iron and manganese and approved these criteria in a previous letter. In addition, we have concluded our review of the Water Effect Ratio Determination for aluminum and Site-specific Criteria Request for selenium. EPA has found the supporting rationale sufficient to approve the site-specific criterion for aluminum. However, the site-specific criterion for selenium has not been adequately supported and EPA is disapproving this site-specific criterion request. EPA did not agree with GLEC's conclusion that bioaccumulation is not occurring at this site. There are also serious reservations regarding the procedure and method used to develop this site-specific criterion. Adopting water quality criteria which are not based on sound scientific rationale is inconsistent with federal regulations at 40 CFR §131.11(a).

In order to address our disapproval, the site-specific criterion value of 15.24 μg/l for selenium for the unnamed tributary must be removed from the water quality standards. West Virginia must replace the site-specific criterion with the applicable West Virginia water quality criteria for selenium found at 46-CSR-1-8.1, Appendix E, 8.26, or with a water quality criterion that is scientifically defensible. If the state does not make this change within 90 days of the date of this letter, EPA will promulgate and remove the site-specific criterion for selenium applicable to the unnamed tributary and replace it with the applicable aquatic life criterion.

3) 46-1-8-Specific Water Quality Criteria, Appendix E, Section 8.1

West Virginia removed the aquatic life chronic criterion for aluminum during the 1998 triennial review of its water quality standards. The Environmental Quality Board (EQB) has stated that there are data that support the existence of healthy populations of aquatic life, despite relatively high background concentrations of aluminum in the state. The Board chose to address

concerns raised by EPA and others over deletion of the chronic aluminum criteria by collecting instream aluminum data and conducting surveys of aquatic life in streams throughout the state in order to assess the impact of these aluminum concentrations on the aquatic life. Despite urges from EPA against moving forward without scientifically justifiable supporting documentation, the Board proceeded with the removal of the criteria prior to the completion of this study.

The Federal regulation at 40 CFR §131.11(a) requires states to adopt water quality criteria that protect the designated use. The regulation further states that the criteria be based on sound scientific rationale and contain sufficient parameters or constituents to protect the designated use. Section 304(a)(1) of the CWA requires EPA to recommend water quality criteria that consist of scientific information regarding concentrations of specific chemicals or levels of parameters in water that protect aquatic life and human health. EPA's recommended aquatic life criterion for aluminum is 87μg/l. Since West Virginia has not provided EPA with a scientific rationale to support the removal of the aquatic life chronic criterion for aluminum, EPA is disapproving this revision to the water quality standards. In order to address our disapproval, EPA recommends one of the following options:

- Adopt the EPA recommended chronic aquatic life aluminum criterion of 87μg/l pursuant to CWA Section 304(a); or

- Adopt an alternate chronic aluminum water quality criterion that is scientifically defensible.

In addition, the state could develop a procedure to use a translator to implement its narrative standards. If the state chose to use a translator to implement its narrative, the state would need to provide EPA with an explanation of how the translator would be implemented. In addition, EPA would like to work closely with West Virginia to ensure that the translator procedure would satisfy all the requirements of the CWA and result in the imposition of appropriate numeric effluent limits. If the state does not adopt one of the options listed above within 90 days from the date of this letter, EPA will promulgate a Federal chronic water quality criterion for aluminum.

4) 46-1-8-Specific Water Quality Criteria, Section 8.17.1

The language of Section 8.17.1 of Appendix E allows relief from effluent guideline limitations for manganese in Category A waters. Federal regulations at 40 CFR §122.44(a) require dischargers to comply with Effluent Guideline Limitations, including effluent limitations for manganese in Category A waters. EPA is disapproving on the grounds that this provision allows inappropriate relief from Effluent Guideline Limitations. In addition, the provision at Section 8.17.1 gives the applicant, not the Board, authority to remove Category A uses. In contrast, West Virginia Code 22B-3-4 states that the EQB, through the state-described

reclassification procedure, is the body that can remove or reclassify waters. Our disapproval of this water quality standard is based on these inconsistencies with Federal and state regulations.

The state may choose to reclassify those specific Class A waters, if the state believes that such waters were previously incorrectly classified. However, such an action must be carried out according to procedures and methodologies that are consistent with Federal and state guidance for removing and reclassifying waters.

EPA recommends that WV remove this standard from its water quality standards. The state also could clarify that this provision does not present the problems identified by EPA. If the state does not make this change or clarification within 90 days of the date of this letter, EPA will promulgate a replacement standard for this provision of West Virginia's water quality standards.

5) 46-1-8-Specific Water Quality Criteria, Appendix E, 8.22

West Virginia revised this section of its water quality standards by replacing the former chronic criterion for chloroform of 15.7μg/l with 1,240 μg/l. In addition, the state adopted an acute criterion for chloroform of 28,900μg/l. In adopting these criteria, West Virginia used the lowest observed adverse effect levels (LOAEL). According to the *Technical Support Document for Water Quality-based Toxics Control* (EPA/505/2-90-001), a LOAEL is the lowest concentration of an effluent or toxicant that results in statistically significant adverse health effects as observed in chronic or subchronic human epidemiology studies or animal exposure. EPA never intended the LOAEL values to be used as actual water quality criteria. Therefore, the acute and chronic criteria, as adopted by West Virginia, are not the EPA criteria recommendations pursuant to CWA Section 304(a). In addition, the CWA states that water quality criteria must be based on sound scientific rationale and contain sufficient parameters or constituents to protect the designated use. EPA is disapproving this provision of West Virginia's water quality standards because West Virginia did not provide a scientifically defensible rationale that shows that its newly adopted criteria are protective of aquatic life.

The objective of the CWA is to restore and maintain the chemical, physical, and biological integrity of the Nation's waters. Under Section 304(a) of the CWA, water quality criteria are defined as scientific information regarding concentrations of specific chemicals or levels of parameters in water to protect aquatic life and human health. Water Quality Criteria for aquatic life are implemented through the use of criteria continuous concentrations (CCC) and criteria maximum concentrations (CMC) which represent the highest instream concentration of a toxicant or an effluent to which organisms can be exposed indefinitely without causing an

unacceptable effect for the CCC or exposed for a brief period of time without causing an acute effect for the CMC. A water quality criteria based on achieving pollutant levels in a waterbody for which adverse effects have been observed in toxicity tests cannot be relied on to restore or maintain the integrity of the nation's waters.

In order to address our disapproval, West Virginia must remove the LOAEL-based criteria for chloroform. If West Virginia still wants to adopt aquatic life criteria for chloroform, the state needs to use a scientifically defensible methodology to support the criteria. If West Virginia does not remove its current criteria for chloroform or replace them by using a scientifically defensible methodology within 90 days of the date of this letter, EPA will promulgate replacement aquatic life criteria for chloroform.

6) 46-1-8-Specific Water Quality Criteria, Appendix E, 8.22

West Virginia replaced the existing chronic criterion for 1,1,2,2-tetrachloroethane of 10.7μg/l with 2,400μg/l. As with chloroform, in adopting this criterion, West Virginia used the lowest observed adverse effect level (LOAEL) for 1,1,2,2-tetrachloroethane.

Adopting the LOAELs, as demonstrated by toxicity testing, as the applicable chronic water quality criteria for 1,1,2,2-tetrachloroethane is not consistent with 40 CFR §131.11, which requires states to adopt those water quality criteria that protect the designated use. In addition, these criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. EPA is, therefore, disapproving this revision to the water quality standards.

In order to address our disapproval, West Virginia must remove the LOAEL-based chronic criterion for 1,1,2,2-tetrachloroethane. If West Virginia still wants to adopt an aquatic life chronic criteria for 1,1,2,2-tetrachloroethane, the state needs to use a scientifically defensible methodology to support the criterion. If West Virginia does not remove its current chronic criterion for 1,1,2,2-tetrachloroethane or replace it by using a scientifically defensible methodology within 90 days of the date of this letter, EPA will promulgate a replacement aquatic life chronic criterion for 1,1,2,2-tetrachloroethane.

7) 46-1-8-Specific Water Quality Criteria, Appendix E, 8.24

In an effort to ensure consistency with 40 CFR §131.11, West Virginia adopted an acute water quality criterion value for phenol of 10,200μg/l and a chronic water quality criterion value

for phenol of 2,560μg/l[1]. As with chloroform and 1,1,2,2-tetrachloroethane, in adopting these criteria for phenol, West Virginia used the lowest observed adverse effect level (LOAEL).

Adopting the LOAELs, as demonstrated by toxicity testing, as the applicable acute and chronic water quality criteria for phenol is not consistent with 40 CFR §131.11, which requires states to adopt those water quality criteria what protect the designated use. In addition, these criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the designated use. EPA is therefore, disapproving this revision to the water quality standards.

In order to address our disapproval, West Virginia must remove the LOAEL-based criteria for phenol. If West Virginia still wants to adopt criteria for phenol, the state needs to use a scientifically defensible methodology to support the criteria. If West Virginia does not remove these criteria for phenol or replace them by using a scientifically defensible methodology within 90 days of the date of this letter, EPA will promulgate replacement criteria for phenol.

8) 46-1-8-Specific Water Quality Criteria, Section 8.24

The Environmental Quality Board decided to remove the "Phenolic Materials" criterion due to a lack of information regarding the existing criteria values despite suggestions from the West Virginia Office of Water Resources (OWR) to retain the "phenolic materials" criteria because of how the criteria were implemented. Through the phenolic materials criterion, West Virginia's Division of Environmental Protection (DEP) would analyze the need for water quality-based effluent limitations for any phenolic compounds or substances in permits and impose those effluent limitations, if necessary. The revision effectively removes water quality criteria for the following phenolic parameters, which are priority pollutants under Section 307(a) of CWA: 1) 2-chlorophenol; 2) 2,4-dichlorophenol; 3) 2,4-dimethylphenol; 4) 2,4-dinitrophenol; 5) 2-nitrophenol; 6) 4-nitrophenol; 7) 3-methyl-4-chlorophenol; 8) pentachlorophenol and; 9) 2,4,6-trichlorophenol. Section 303(c)(2)(B) of the CWA requires states to adopt numeric criteria for such priority pollutants if the discharge or presence could reasonably be expected to interfere with designated uses. Unless West Virginia can demonstrate that the discharge or presence of such pollutants in West Virginia waters does not reasonably interfere with designated uses, West Virginia must adopt numeric criteria.

Federal regulations at 40 CFR §131.11(a) require states to adopt those water quality criteria that protect the designated use. Furthermore, those criteria must be based on sound scientific rationale and must contain sufficient parameters or constituents to protect the

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[1]West Virginia's Category A human health water quality criterion of 3.5mg/l is more stringent than EPA's CWA Section 304(a) recommendation of 21mg/l. To be consistent with Section 510 of the CWA, which preserves the right for states to adopt criteria that is more stringent then EPA's recommended criteria, EPA is not disapproving West Virginia's Category A human health criterion for phenol of 3.5mg/l.

designated uses. Pursuant to this regulation, West Virginia must adopt water quality criteria for the nine previously mentioned criteria consistent with EPA recommendations from the December 10, 1998 *Federal Register* notice for *National Recommended Water Quality Criteria*. Alternately, West Virginia may adopt other scientifically defensible water quality criteria for those nine phenolic compounds, providing that the state give adequate scientific justification for the alternate criteria.

Enclosure 3

ENVIRONMENTAL PROTECTION AGENCY, REGION III
WEST VIRGINIA REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
PREVIOUSLY DISAPPROVED WV WATER QUALITY STANDARDS

1) 46-1-7-West Virginia Waters, Section 7.2.d.32.1

In our January 10, 1994 letter, EPA disapproved all of the variances and site-specific criteria in Section 46-1-7.2.d because West Virginia did not provide scientific justifications for these variances and criteria. Consequently, West Virginia provided adequate scientific justifications for all variances and site-specific criteria identified in Section 46-1-7.2.d, with the exception of a use exclusion and a site-specific temperature criterion for Bluestone Lake.

The use exclusion for Bluestone Lake is not consistent with the substantive requirements for variances, as required by 40 CFR §131.10. Furthermore, as required by CFR §131.11, all criteria, including site-specific criteria, should be based on sound scientific rationale and appropriate procedures. West Virginia has failed to provide adequate supporting data for the use exclusion and site-specific criterion for Bluestone Lake at Section 7.2.d.32.1. EPA has continually requested supporting documentation for this variance and site-specific criterion from the Environmental Quality Board (EQB) for the past 2 years. EQB has indicated that no evidence exists to support a use exclusion and a site-specific temperature criterion for Bluestone Lake.

Pursuant to our June 8, 1999 letter on the resolution of West Virginia's outstanding disapproved standards, EPA is initiating rulemaking efforts on this outstanding disapproved standard. EPA expects that West Virginia will completely resolve this standard as well as all of its other outstanding disapproved standards no later than April 1, 2000, in order to avoid a federal promulgation. To resolve this particular standard, West Virginia should remove the use exclusion and adopt the recommended Section 304(a) water quality temperature criterion at Bluestone Lake, or provide EPA with adequate scientific justification for the use exclusion and site-specific temperature criterion for Bluestone Lake.

2) 46-1-8-Specific Water Quality Criteria, Tri-valent Chromium

In our January 10, 1994 letter, EPA disapproved Appendix E of West Virginia's Water Quality Standards for, among other reasons, an absence of adequate aquatic life acute criteria. As a result, by March 10, 1995, West Virginia adopted acute aquatic life criteria for the pollutants listed at CWA Section 307(a) for which EPA has issued Section 304(a) recommended criteria, with the exception of tri-valent chromium. In our November 9, 1995 letter, EPA further notified West Virginia that it should adopt the acute and chronic criteria for tri-valent chromium

recommended by CWA Section 304(a) or develop and submit a scientifically defensible rationale that explains why aquatic life criteria for tri-valent chromium are not needed. To date, West Virginia has not provided such a rationale to EPA. West Virginia's standards currently do not include aquatic life criteria for tri-valent chromium. Section 303(c)(2)(B) of the CWA requires West Virginia to adopt numeric criteria for tri-valent chromium if the discharge or presence may reasonably interfere with designated uses.

Federal regulation at 40 CFR §131.11(a)(2) requires that States review water quality data and information on discharges to identify specific water bodies where toxic pollutants may be adversely affecting water quality or the attainment of the designated water use or where the levels of toxic pollutants are at a level to warrant concern, and must adopt criteria for such toxic pollutants applicable to the water body sufficient to protect the designated use. Furthermore, as required by 40 CFR§131.11(a) the State must adopt those criteria necessary to protect the designated use.

Pursuant to our June 8, 1999 letter on the resolution of West Virginia's outstanding disapproved standards, EPA is initiating rulemaking efforts on this outstanding disapproved standard. EPA expects that West Virginia will completely resolve this standard as well as all of its other outstanding disapproved standards no later than April 1, 2000, in order to avoid a federal promulgation. To resolve this particular standard, West Virginia must adopt EPA's recommended 304(a) aquatic life criteria for tri-valent chromium or provide an adequate scientific rationale that explains why these criteria are not needed.

3) Specific Water Quality Criteria, Section 8.15

West Virginia's aquatic life chronic criterion for iron was disapproved by EPA on January 10, 1994 because EPA believed that this criterion did not provide adequate protection to aquatic life and because West Virginia did not provide a scientifically defensible rationale to support the criterion. Furthermore, West Virginia's aquatic life chronic criterion for iron is not consistent with EPA's recommended 304(a) recommended criteria. EPA required West Virginia to adopt EPA's recommended 304(a) criterion aquatic life chronic criterion for iron or provide a scientifically defensible rationale to support West Virginia's aquatic life chronic criterion for iron of 1.5 mg/l. To date, West Virginia has neither adopted EPA's recommended 304(a) aquatic life chronic criterion for iron nor provided a rationale to support its chronic criterion for iron of 1.5 mg/l.

Pursuant to our June 8, 1999 letter on the resolution of West Virginia's outstanding disapproved standards, EPA is initiating rulemaking efforts on this outstanding disapproved standard. EPA expects that West Virginia will completely resolve this standard as well as all of its other outstanding disapproved standards no later than April 1, 2000, in order to avoid a federal

promulgation. To resolve this particular standard, West Virginia may adopt EPA's recommended 304(a) aquatic life chronic criterion for iron, or provide a scientifically defensible rationale to support West Virginia's chronic criterion for iron of 1.5 mg/l, or adopt another criterion based on a scientifically defensible rationale.

4) Specific Water Quality Criteria, Section 8.15

In our January 10, 1994 letter, EPA disapproved West Virginia's human health criterion for iron for Category A waters (public water supplies) because this criterion did not provide adequate protection to human health and because West Virginia did not provide a scientifically defensible rationale to support the criterion. Furthermore, West Virginia's human health criterion for iron for Category A waters is not consistent with EPA's recommended 304(a) recommended of 0.3mg/l. EPA required West Virginia to adopt EPA's recommended 304(a) criterion human health chronic criterion for iron or provide a scientifically defensible rationale to support West Virginia's human health criterion for iron of 1.5 mg/l. To date, West Virginia has neither adopted EPA's recommended 304(a) criterion for iron nor provided a rationale to support its human health criterion for iron of 1.5 mg/l for Category A waters.

Pursuant to our June 8, 1999 letter on the resolution of West Virginia's outstanding disapproved standards, EPA is initiating rulemaking efforts on this outstanding disapproved standard. EPA expects that West Virginia will completely resolve this standard as well as all of its other outstanding disapproved standards no later than April 1, 2000, in order to avoid a federal promulgation. To resolve this particular standard, West Virginia may adopt EPA's recommended 304(a) human health criterion for iron, or provide a scientifically defensible rationale to support West Virginia's human health criterion for iron of 1.5 mg/l for Category A waters, or adopt another criterion based on a scientifically defensible rationale.

5) Specific Water Quality Criteria, Section 8.22.1

In our November 9, 1995 letter, EPA disapproved this section of West Virginia's water quality standards, because it could be interpreted to require that alternative criteria be developed when the applicable criteria for certain organic chemicals are less than the practicable laboratory quantification level (PQL). EPA believes that West Virginia did not intend this provision to make such a requirement, but instead that West Virginia intended this provision only to provide for ambient monitoring of pollutants whose criteria were below the PQL. However, the intent of the provision is not entirely clear, and EPA recommends that West Virginia provide a written statement verifying that the provision does not establish for alternative criteria to be developed in instances when the criteria are less than the PQL. Upon written clarification on this topic, EPA will no longer consider this standard disapproved.

6) Specific Water Quality Criteria, Section 8.22.2

West Virginia adopted this fish body burden provision into its water quality standards to verify that discharge concentrations do not exceed applicable criteria in instances when such criteria are below the PQL. EPA encourages states to adopt such methodologies to verify discharge concentrations in such instances, and approves of fish body burden analyses as an appropriate tool for verifying discharge concentrations in such instances. However, EPA disapproved this particular revision (Appendix E, 8.22.2) in our November 9, 1995 letter because the risk levels that West Virginia prescribed for the fish body burden did not provide adequate protection to aquatic life, nor did West Virginia provide a scientifically defensible rationale to support these risk levels.

The risk levels that West Virginia uses in Section 8.22.2 for its fish body burden are significantly greater than the risk levels of 10^{-6} that West Virginia recommends in Section 8.2 "Criteria for Toxicants" of its water quality standards:

Parameter	WV Risk Level for Fish Body Burden	WV Risk Level in Section 8.2
Chlordane	1.25×10^{-4}	10^{-6}
DDT	3.3×10^{-6}	10^{-6}
Dieldrin	4.3×10^{-3}	10^{-6}
Toxaphene	1×10^{-4}	10^{-6}
PCB	2×10^{-3}	10^{-6}
Dioxin	1×10^{-4}	10^{-6}

To date, West Virginia has not provided a methodology to show that the risk levels that it is using for fish body burden are scientifically defensible. Therefore, EPA continues to disapprove this provision because West Virginia's fish body burden risk levels do not provide adequate protection to aquatic life and because West Virginia has not provided a scientifically defensible rationale to support these risk levels.

Pursuant to our June 8, 1999 letter on the resolution of West Virginia's outstanding disapproved standards, EPA is initiating rulemaking efforts on this outstanding disapproved standard. EPA expects that West Virginia will completely resolve this standard as well as all of its other outstanding disapproved standards no later than April 1, 2000, in order to avoid a federal promulgation. To resolve this particular standard, West Virginia should adopt fish body burden risk levels that are consistent with the risk levels that are in Section 8.2, "Criteria for Toxicants," of its standards, or provide a scientific justification for its current risk levels for fish body burden.

Enclosure 4

ENVIRONMENTAL PROTECTION AGENCY, REGION III
WEST VIRGINIA REQUIREMENTS GOVERNING WATER QUALITY STANDARDS
FOR WHICH EPA REGION III IS MAKING AN ADMINISTRATIVE FINDING

1) 46-1-4-Anti-Degradation Policy

As part of its 1995 water quality standards revision, West Virginia adopted an anti-degradation policy. In order to identify implementation methods for this policy, the Environmental Quality Board (EQB) formed a state antidegradation committee, consisting of members from the Office of Mining and Reclamation, Division of Natural Resources, Office of Water Resources, and EQB. The committee identified and proposed its implementation methods at a public hearing on July 20, 1998, with the intent of submitting these methods in August of 1998 to the Legislature Review Rulemaking Committee for consideration during the 1999 West Virginia Legislative Session. At the public hearing on July 20, 1998, the committee presented and accepted comments on the implementation methods. EQB received significant negative comment from industry which prompted EQB to remove the implementation methods from legislative consideration in 1999, in order to address the comments from industry. EPA Region III sent a letter to EQB on July 28, 1998 urging them to submit the implementation methods for legislative consideration and warned EQB that federally-developed methods for implementing West Virginia's antidegradation policy would be put in place if the implementation methods were withdrawn from legislative consideration. Instead, EQB withdrew the methods from legislative consideration and asked the committee to include other stakeholders, primarily from industry. It is unclear when and in what form West Virginia will identify the implementation methods for its antidegradation policy. West Virginia has yet to communicate a definitive plan and schedule to promptly resolve this deficiency.

Although West Virginia has adopted an antidegradation policy, West Virginia has not developed implementation methods for its antidegradation policy, thereby failing to comply fully with 40 CFR §131.12(a), which states that "The State shall develop and adopt a statewide antidegradation policy and identify the methods for implementing such policy." In order to fully comply with the CWA and EPA regulations, West Virginia must promptly develop implementation methods that are consistent with its adopted antidegradation policy. EPA was satisfied (excluding minor modifications) with the proposed implementation methods that the committee developed and presented at the public hearing on July 20, 1998, and recommends that West Virginia identify these methods as its antidegradation implementation methods. Alternatively, West Virginia could identify other implementation methods that are consistent with the state's policy. EPA Region III approved in 1995 West Virginia's antidegradation policy conditional on the state's adoption of antidegradation implementation methods. EPA is today notifying West Virginia that unless West Virginia promptly develops and adopts antidegradation methods that adequately support its antidegradation policy, Region III will recommend that the

Administrator exercise her discretionary authority under Section 303(c)(4)(B) of the Act to identify implementation methods for West Virginia's antidegradation policy.

The Federal regulation at 40 CRF §131.21 gives the Regional Administrator the authority to approve or disapprove new or revised water quality standards. West Virginia's antidegradation policy was such a new or revised water quality standard that EPA Region III approved in 1995. However, the Regional Administrator has not been delegated the authority to make CWA §303(c)(4)(B) determinations with respect to the need for new or revised water quality standards. The absence of implementation methods does not fall into the category of new or revised water quality standards that the Regional Administrator has authority to approve or disapprove. Only the Administrator has the authority to make a formal statutory determination regarding the need for a new or revised water quality standard under the CWA.

Attachment 2

LAW OFFICES

MICHAEL and KUPEC
228 COURT STREET
CLARKSBURG, WEST VIRGINIA, 26301

JOSEPH T. MICHAEL
OF COUNSEL
THOMAS W. KUPEC
THOMAS R. MICHAEL

OFFICE 304-623-6673
FAX 304-623-1027
Tom.Michael@northnap.citynet.net

May 28, 1999

CERTIFIED MAIL
RETURN RECEIPT REQUESTED
NO.

Carol Browner, Administrator
1101
USEPA Headquarters
401 M Street, S.W.
Washington, DC 20460

Re: NOTICE OF INTENT TO SUE
Clean Water Act - Implementation of Anti-degradation Standards

Dear Administrator Browner:

This letter is submitted as a formal Notice of Intent to Sue under Section 505(b)(2) of the Clean Water Act, 33 U.S.C §1365(b)(2).

Parties. This Notice of Intent to Sue is submitted on behalf of the following:

West Virginia Rivers Coalition, Inc.
801 North Randolph Avenue
Elkins, WV 26241

West Virginia Highlands Conservancy, Inc.
Post Office Box 306
Charleston, WV 25321

West Virginia Citizen Action Group
1324 Virginia Street, East
Charleston, WV 25301

West Virginia Council of Trout Unlimited
180 Oriole Road
Fraziers Bottom, WV 25082

Francis D. Slider
Rt. 1, Box 163-A2
Middlebourne, WV 26149

James L. Matheson
Post Office Box 69
Yellow Spring, WV 26865

Provision of the Act violated by the Administrator. Section 303(c) of the Clean Water Act, 33 U.S.C. §1313(c).

Statement of Facts. The State of West Virginia has promulgated an anti-degradation policy as part of its water quality standards pursuant to 40 C.F.R. §131.12. However, the State has persistently failed to promulgate an implementation policy.

On November 9, 1995, the EPA notified the State that approval of the anti-degradation policy was conditional on development of implementation procedures. EPA requested compliance within one year. (Copy of November 9, 1995, letter from W. Michael McCabe to Dr. David E. Samuel attached).

On July 28, 1998, EPA notified the State that if implementation procedures were not presented to the 1999 session of the West Virginia Legislature, then EPA would be compelled to put in place Federally developed implementation methods for West Virginia. (Copy of July 28, 1998, letter from Thomas J. Maslany to Dr. Edward Snyder attached).

Applicable Law. Whenever a State submits a water quality standard which is not approved by the Administrator, the Administrator shall notify the State what changes are required to meet the requirements of the Act. If the State does not adopt said changes within 90 days, the Administrator has a mandatory duty to promulgate a water quality standard for the State. Section 303(c) of the Clean Water Act, 33 U.S.C. §1313(c); 40 CFR §131.22(a).

The Clean Water Act explicitly recognizes that the Section 303 water quality standards include an anti-degradation policy. 33 U.S.C. §1313(d)(4)(B). Regulations promulgated by EPA require States to identify methods for implementing a statewide anti-degradation policy. 40 CFR §131.12(a). *See* PUD No. 1 of Jefferson County v. Washington Dep't of Ecology, 511 U.S. 700, 705, 718, 114 S.Ct. 1900 (1994).

Conclusion. West Virginia is in noncompliance with the Clean Water Act and Regulations for its failure to promulgate implementing regulations for anti-degradation. West Virginia failed to fulfill the conditions for approval of its anti-degradation policy within one year of November 9, 1995, as required by the EPA. This failure by the State triggered the mandatory duty of the

Tom

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION III
841 Chestnut Building
Philadelphia, Pennsylvania 19107-4431

Dr. David E. Samuel, Chairman
West Virginia State Water Resources Board
615 E. Washington St.
Charleston, WV 25311

NOV 0 9 1995

Dear Dr. Samuel:

On August 11, 1995, the U. S. Environmental Protection Agency (EPA) received West Virginia's revised Requirements Governing Water Quality Standards, which was passed on March 10, 1995, and became effective on August 18, 1995. Pursuant to 40 CFR §131.21 and Section 303(c)(3) of the Clean Water Act (CWA), EPA has reviewed the revised West Virginia Water Quality Standards. Previously, EPA had disapproved the August 25, 1993, version of the State's Water Quality Standards, and we also provided comprehensive comments on an earlier draft of the current version. Elizabeth Chatfield is to be commended for the significant effort that has gone into correcting EPA's disapproval items and addressing our comments thus far.

Although the purpose of this letter is to remove our disapproval from various portions of standards, some of these sections are being approved only conditionally, and other portions remain disapproved. The enclosure accompanying this letter will identify the revisions that can be made to remove our disapproval and other modifications and clarifications we feel are necessary to meet Federal requirements for water quality standards. A summary of our major comments is as follows:

§ 46-1-4 Antidegradation Policy

We are pleased to note that West Virginia has adopted a policy which addresses EPA's concerns. Therefore, EPA's disapproval of the antidegradation policy is removed. EPA's approval is conditional upon the State's development of antidegradation implementation procedures which adequately support the State's policy. EPA requests that West Virginia complete these procedures with the next year.

§ 46-1-5 Mixing Zones

West Virginia has adopted a Mixing Zone Policy that satisfies most of EPA's concerns. Therefore, EPA is removing our objection to the State's Mixing Zone Policy. There are some additional concerns that need to be addressed, and these concerns are specified in Enclosure 1.

will determine if the regulations are approvable. If the State fails to comply with the provisions of the conditional approval, EPA will notify the State that the subject regulation will be disapproved.

The enclosed document also includes some recommended revisions, which the State is strongly encouraged to consider. Without these revisions, the State will be limited in its ability to implement the standards in National Pollutant Discharge Elimination System (NPDES) permits.

EPA anticipates that within the next year, the Board will be taking actions to address our disapproval items and recommendations. We are suggesting that, simultaneously, West Virginia address the goals of the FY'94-96 triennium so that the State can fulfill the requirements of the Clean Water Act, which states at Section 303(c)(1), "...[A] State...shall from time to time (but at least once each three year period beginning with the date of enactment of the Federal Water Pollution Control Act Amendments of 1972) hold public hearings for the purpose of reviewing applicable water quality standards and, as appropriate, modifying and adopting standards." In order to meet the requirements for the FY'94-96 triennium, we recommend that the State review the requirements we have included as Enclosure 2 and make appropriate modifications to their water quality standards for their next public hearing.

Once again, we recognize the significant effort that has gone into revising West Virginia's Water Quality Standards to meet Federal requirements. EPA remains committed to assisting the State in a cooperative effort to resolve outstanding issues. If you any questions concerning this letter, please do not hesitate to contact this office, or Dr. Alvin Morris, Director of EPA Region III's Water Protection Division, at (215) 597-9410.

Sincerely,

W. Michael McCabe
Regional Administrator

Enclosures

In closing, we urge the Board to adhere to the Federal conditional approval and recommend the procedures for consideration during the 1999 legislative session so they may be officially adopted. If you have any questions or concerns regarding this matter, please contact me or Robert Koroncai at 215-814-5730.

Sincerely,

Thomas J. Maslany, Director
Water Protection Division

Attachment 3

WEST VIRGINIA MUNICIPAL WATER QUALITY ASSOCIATION
P. O. BOX 3780
CHARLESTON, WEST VIRGINIA 25337

June 16, 1999

Dr. Edward M. Snyder
Chairman
Environmental Quality Board
1615 Washington Street, East
Suite 301
Charleston, West Virginia 23511

Re: Membership on the Antidegradation Work Group

Dear Dr. Snyder:

I am writing on behalf of the West Virginia Municipal Water Quality Association (the AMWQA≅) concerning the Board's recent action in creating an antidegradation work group. We understand the purpose of the Work Group is to review the Board's proposed antidegradation implementation procedures.

While we understand the desire on the part of the Board to keep the size of the Work Group to a manageable number, our members were very surprised to learn that there are no local government representatives among the seven work group members. You may recall that last December our organization made a presentation to the Board during its December 17 meeting. At that time we requested the opportunity to be represented on the Work Group. We based our request on the fact that we had invested considerable time and effort reviewing the proposed antidegradation procedures and submitting our comments for the Board's consideration. Quite frankly, we believe we have a good bit of unique insight and technical expertise in this area that we can bring to the table.

We find the omission of a local government representative particularly troublesome given the fact that both the State and federal government will be represented.

Implementation of the antidegradation program will lead to either restrictions on new and expanded permits in stream segments, depending upon existing water quality and remaining assimilative capacity, to outright prohibitions on new or increased discharges for Tier III waters. These impacts will directly affect local government land use planning more than any other level of government and more than any other stakeholder groups among the regulated community.

Our hope is that you will add an eighth seat to the work group for a municipal representative. Representatives of our Association will be meeting next week with representatives of the Municipal League and Rural Water Association. We are confident that we will be able to identify a single representative on behalf of all three organizations, to occupy the municipal seat on the Work Group.

If the Board is not inclined to add a seat, we respectfully request the substitution of a local government representative in lieu of the representative of the U.S. Fish and Wildlife Service or the State nonpoint source representative. Again, we believe the greatest impact and responsibility for

Telephone: (304) 344-8603 Facsimile: (304) 344-8604

government representative in lieu of the representative of the U.S. Fish and Wildlife Service or the State nonpoint source representative. Again, we believe the greatest impact and responsibility for implementing the antidegradation program will come at the local government level in West Virginia. While we welcome and value the inclusion of representatives of the federal government, we believe their responsibilities and authority is secondary to that of local governments in this area. That said, we, of course, would welcome their participation on an advisory basis. Alternatively, we believe a local government representative should replace the proposed state non-point source agency representative. This would give one seat for each level of government (federal, state, and local). Moreover, we do not believe the antidegradation rules will have any direct impact on all but a minor number of nonpoint sources in the state - at least for the foreseeable future. Accordingly, we believe one state representative should be able to represent both point and non-point source agencies.

We also must express concern over the inclusion of the West Virginia Rivers Coalition on the Work Group. We understand that they have recently filed a 60-day notice of intent to sue with EPA over EPA's failure to promulgate antidegradation implementation procedures for West Virginia. We believe this act should disqualify them from participating in the Work Group, particularly in a primary role. Their threatened litigation may well chill any meaningful discussion of implementation issues and concerns by the other participants. Moreover, we wonder whether they have a conflict of interest in that should the Work Group quickly decide on a set of implementation procedures, it may undermine their litigation to the extent the State's procedures can be adopted before their litigation proceeds significantly or is resolved.

While we are concerned over the inclusion of the Rivers Coalition given their recent action, we do not suggest that the Board add our group in place of an environmental stakeholder. Instead, we hope the Board will identify another environmental organization that is knowledgeable about antidegradation issues but which is not involved with the threatened litigation, to take the Rivers Coalition's seat.

On behalf of our members and local governments statewide, we appreciate your consideration of our request. We look forward to your response at your earliest convenience. In the meantime, please call (304/425-9599) if you have any questions.

Sincerely,

Michael E. Saffel
President

cc: Ms. Libby Chatfield
MWQA Board of Directors
Mr. Paul Calamita

Attachment 4

WEIRTON
STEEL CORPORATION

Mark Vignovic
Manager, Environmental Control
Phone (304) 797-4276
Fax (304) 797-2391

June 21, 1999

via FACSIMILE

Elizabeth M. Chatfield
Technical Advisor
Environmental Quality Board
1615 Washington Street, East Suite 301
Charleston, West Virginia 25311

Re: **Harmon Creek Water Quality Standards**

Dear Ms. Chatfield:

I am writing to follow-up on our recent discussions regarding the water quality standards for Harmon Creek and a modification of the existing water quality variance. As you know, other circumstances have continued to develop such that a variance is just as important to WSC today as it was two years ago, if not more so.

Weirton Steel Corporation ("WSC") discharges treated wastewater into Harmon Creek, via Outlet 004, 2.2 miles upstream of the point where Harmon Creek flows into the Ohio River. Two years ago, the Environmental Quality Board adopted a socio-economic variance for this stretch of Harmon Creek (see attached). By its terms, the variance expires on June 29, 2000, unless further action is taken by the Board. This variance was codified at Section 7.2.d.16.2 and:

1. Exempted Harmon Creek from the Category A designation;

2. Imposed site-specific effluent limitations for Free Cyanide, Lead, Total Phenolic Materials, Zinc, Iron, Fluoride, and Temperature;

3. Required WSC to submit semi-annual summaries of water quality of the Outlet 004; and

4. Required WSC to submit on or before May 30, 1999 a report summarizing the Outlet 004 water quality, proposals for appropriate reductions in the limitations, and an engineering analysis of potential alternatives for further reductions (the "Summary Report").

WSC submitted the semi-annual summaries and the Summary Report on May 30, 1999 as required by the variance.

At the time that the Board approved this variance in 1997, it was very clear that the Board wanted to see improvements made in the quality of WSC's discharge to Harmon Creek and progress made toward the goal of meeting water quality standards in the future. The Summary Report documents the progress that WSC has made toward improving the water quality of the Outlet 004 discharge and shows that the directive of the Board has been met. Although a variance is still necessary, WSC is able to suggest that the site-specific limitations should be reduced for several of the parameters.

We believe that the criteria for granting a socio-economic variance are perhaps more clearly demonstrated today than they were in 1997. WSC is caught in the economic crisis that hit the domestic steel industry last year. Economic indicators suggest that the crisis may be abating, but WSC's current financial position is not as good as it was in 1997.

In addition, the United States Environmental Protection Agency ("EPA") recently indicated that it intends to comply with a court-mandated deadline to propose revisions to the Effluent Limitation Guidelines for the Iron and Steel Subcategory ("ELGs") by October 2000, and to finalize revisions to the ELGs by April 2002. We do not believe that it would be appropriate to require WSC to make significant capital improvements to comply with statewide water quality criteria at Harmon Creek, only to face the specter of different, potentially duplicative and/or inconsistent capital improvements that may be mandated by the ELGs.

Given the timing of the due date for the Summary Report and the Legislative Rule cycle, we believe that it is important for the Board to address the variance this summer. We therefore request that the Board consider revising Section 7.2.d.16.2 to provide as follows:

> Except that a socio-economic variance shall apply to that segment of Harmon Creek (0-97) from its confluence with the Ohio River to a point 2.2 miles upstream, which shall not have water use Category A designation, and which shall have the following instream criteria: Free Cyanide, 6.9 ug/l, Daily Maximum; Lead 14 ug/l, Daily Maximum; Total Phenolic Materials 10 ug/l, Daily Maximum; Zinc 181 ug/l, Daily Maximum; Temperature 100° F (monitored per Footnote 12 of the permit); Iron 4.0 mg/l, Monthly Average and 8.0 mg/l, Daily Maximum (monitored per Footnote 12 of the permit); Fluoride 3.1 mg/l, Daily Maximum (monitored per Footnote 12 of the permit). Provided, however, that the criteria for Free Cyanide, Lead, Total Phenolic Materials, Zinc, Temperature, and Iron described above shall not apply, and instead the state-wide criteria for these

parameters shall apply, unless: Weirton Steel Corporation (1) submits to the Office of Water Resources on or before March 1, 2000 a report setting forth the water quality of the discharge from Outlet 004 for these parameters during the period from May 1, 1999 to February 1, 2000; (2) offers proposals for any appropriate reductions in the above excepted levels; (3) provides an engineering analysis of potential alternatives for reducing further the concentrations of said parameters in the discharge toward achieving statewide criteria; and (4) submits to the Office of Water Resources on a semi-annual basis commencing on December 31, 1999, summary reports on the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation during the prior six (6) months to improve the quality of said discharge. These exceptions shall be in effect until action by the EQB to revise such exceptions or until June 29, 2001, whichever comes first.

Thank you for your consideration in this matter. Please do not hesitate to call me at 304-797-4276 if you have any questions or if you desire additional information.

Sincerely,

Mark Vignovic
Manager, Environmental Control

MV/tlf

cc: Barbara Taylor (WVDEP)
Mary Kuo (U.S. EPA)

Attachment 5

Office of Water Resources
1201 Greenbrier Street
Charleston, WV 25311-1088
Telephone 304-558-0375
Fax 304-558-5903

West Virginia Division of Environmental Protection

Cecil H. Underwood
Governor

Michael P. Miano
Director

June 23, 1999

Elizabeth M. Chatfield
Technical Advisor
Environmental Quality Board
1615 Washington Street, East
Suite 301
Charleston, West Virginia 25311

RE: Harmon Creek Water Quality Standards

Dear Ms. Chatfield:

The OWR is in receipt of and has reviewed Weirton Steel's recent proposal of 6/21/99 for extension to the existing deadline in 46 CSR 1-7.2.d.16.2 relating to variance values for Harmon Creek.

The OWR supports the reduction in variance values offered based upon the application of the statistical analysis of the previous year's data and changes made to the treatment scheme.

The OWR also concurs with the change in Weirton's previous extension request date submitted in their 6/10/99 proposal of 12/31/2002 to 6/29/2001 to coincide with the next scheduled EQB Triennial Review of Water Quality Standards.

However, as the OWR continues to be concerned over the fate of and existing impacts to Harmon Creek as a result of Weirton Steel's discharge we urge that measures be continued to address, to the degree practical, any upgrades to treatment processes as well as reuse of various wastewater streams over the ensuing time extension period.

For these reasons, the OWR suggest the following revisions and additions to the proposed language:

Except that a socio-economic variance shall apply to that segment of Harmon Creek (0-97) from its confluence with the Ohio River to a point 2.2 miles upstream, which shall not have water use Category A designation, and which shall have the following instream criteria: Free Cyanide, 6.9 ug/l, Daily Maximum; Lead 14 ug/l, Daily Maximum; Total Phenolic Materials 10 ug/l, Daily Maximum; Zinc 181 ug/l, Daily Maximum; Temperature 100° F (monitored per Footnote 12 of the permit); Iron 4.0 mg/l, Monthly Average and 8.0 mg/l, Daily Maximum (monitored per Footnote 12 of the permit); Fluoride 3.1 mg/l, Daily Maximum (monitored per Footnote 12 of the permit). Provided, however, that the criteria for Free Cyanide, Lead, Total Phenolic Materials, Zinc, Temperature, and Iron described above shall not apply, and instead the state-wide criteria for these parameters shall apply, unless: Weirton Steel Corporation (1) submits to the Office of Water Resources on or before March 1, 2000 a report setting forth the water quality of the discharge from Outlet 004 for these parameters during the period from May 1, 1999 to

February 1, 2000; (2) offers further proposals for any appropriate reductions in the above excepted levels; (3) provides ~~an~~ any appropriate additional engineering analysis of potential alternatives for reducing further the concentrations of said parameters in the discharge toward achieving statewide criteria; and (4) continues to submit to the Office of Water Resources on a semi-annual basis commencing on December 31, 1999, summary reports on the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation during the prior six (6) months to improve the quality of said discharge. Additionally Weirton Steel must determine the water quality of Harmon Creek both immediately upstream of and below the discharge of outlet 004 at the Con Rail Bridge by sampling for Flow, pH, Free Cyanide, Total and Dissolved Lead, Total Phenolic Materials, Total and Dissolved Zinc, Iron, Fluoride, Temperature and Hardness on at least a monthly basis and submit the results to the Office of Water Resources with the semi-annual report commencing December 31, 1999. These exceptions shall be in effect until action by the EQB to revise such exceptions or until June 29, 2001, whichever comes first.

The OWR appreciates the opportunity to provide input and comments to this and other issues before the EQB.

Should you have any questions, please call Mr. Randy Sovic at 558-0375.

Very truly yours,

Barbara S. Taylor
Chief

BST:rsr
cc: EPA Region III
Mary Kuo

Office of Water Resources
1201 Greenbrier Street
Charleston, WV 25311-1088
Telephone 304-558-0375
Fax 304-558-5903

West Virginia Division of Environmental Protection

Cecil H. Underwood
Governor

Michael P. Miano
Director

OFFICE OF WATER RESOURCES

FAX COVERSHEET

TO: Libby Chatfield

PHONE NO: _____ FAX NO: 558-4116

FROM: Randy Sovic DATE: 6/24/99

PHONE NO: 558-0375 FAX NO: (304) 558-5903

COMMENTS: Original is in the mail

_____ PAGES (INCLUDING COVER SHEET) _____ CHECKHERE IF ORIGINAL WILL BE MAILED

Attachment 7

ENVIRONMENTAL QUALITY BOARD

1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126

Telephone: (304) 558-4002
Fax: (304) 558-4116

Telephone: 1-800-480-4598
E-Mail: clerk@mail.wvnet.edu

MEMORANDUM

TO: **Board Members**
FROM: **Libby Chatfield**
DATE: **June 22, 1999**
RE: **Aluminum meeting**

I met with Mike Brown, Jennie Henthorn (by telephone), Mary Kuo (by telephone) Ray Menendez, Dan Ramsey and Randy Sovic on June 18th at 10:00. The purpose of the meeting was to continue discussions from our April 19th meeting regarding research by Dr. Bill Sharpe and others on aluminum toxicity in certain fish species in streams in the northeast. (see attached memorandum for summary of April.)

Regarding its review and discussion of the publications identified by Dr. Sharpe the group agreed to the following finding:

- In certain streams in the state which have low buffering capacity and relatively low pH, monomeric aluminum is toxic to aquatic life.

Regarding general discussions of EPAs national aquatic life criteria for aluminum, the group agreed to the following finding:

- The national criterion for aluminum should be reevaluated to reflect the role of other environmental factors, including, but not limited to pH, hardness and calcium.

These findings constitute the group's response to Board's request for a review of Dr. Sharpe's research on aluminum with regard to the aquatic life criteria for aluminum in the standards.

Also at the meeting, Mary Kuo provided an update of EPAs position on the use of an acid soluble test method for metals, including aluminum. Ms. Kuo reported that EPAs Cincinnati laboratory is currently working on a protocol for acid soluble testing.

Attachment 6

DRAFT

PUBLIC NOTICE
(date)

The Environmental Quality Board is hereby providing notice that it is considering changes to Section 6 of the Water Quality Standards Rule - 46 CSR 1. That section establishes use categories for the waters of the state. The changes being contemplated would affect the designation of waters for use as public water supplies (category A.) Currently, that designation applies to all waters of the state except where that use designation has been formally removed (see section 7.2.d, et seq.)

During the 1998 legislative session, language was included in HB 2533 which directed the Board to review the designation of category A waters and revise the water quality standards rule accordingly, by October, 1999. In respons to that directive, the Board is considering the following options for designation of waters as Category A, public drinking water supply waters:

1. Retain existing designation of Public A waters.

As stated above, the current interpretation of section 6 is that the all waters of the state are designated as category A, public drinking water supply. This application of the use designation assures the protection of all waters for existing or potential use as drinking water. Adoption of this option will require a clarification to section 6.2 of the rule stating that this use category applies to all waters of the state, unless the use is specifically removed pursuant to the provisions in section 6.1.d for removing designated uses.

2. Use of protective zones to be designated according to the Source Water Assessment and Protection Program (SWAPP) developed by the West Virginia Bureau for Public Health.

The West Virginia SWAPP was developed pursuant to amendments to the federal Safe Drinking Water Act in 1996 requiring states to assess, preserve and protect waters which are used to supply water for the state's public drinking water supply systems and to provide a long term availability of an abundant supply of safe water in sufficient quantity for present and future citizens of West Virginia. West Virginia submitted a plan to USEPA in February, 1999 which outlines how it intends to comply with the federal requirements.

One of the elements of the in the plan is the delineation of two zones above drinking water intakes: a broad Watershed Delineation Area (WSDA) and a more localized Zone of Critical Concern (ZCC). According to the SWAP, the ZCC "will be a corridor along the streams, lakes and reservoirs within the WSDA that warrants a more detailed inventory and management due to its proximity to the source water and to the susceptibility to potential contaminants." The Bureau for Public Health intends to complete the delineations of the ZCCs by (date).

The Board is considering changing the current application of the Public A use designation to limit the designation of Category A waters to the areas delineated as ZCCs once they are

delineated by the Bureau for Public Health.

This option would require a change in the rule to clarify that the current Category A designation will be retained until such time as the delineations are completed. After the delineations are complete, an additional amendment would be required which would remove the Category A use from all portions of streams other than those sections delineated as ZCCs.

3. Provide for the removal of the Public A use category as needed during the NPDES permitting process.

This option would authorize the Office of Water Resources to review the Public A use designation of a stream during the NPDES permit review process. If the agency determines, after review of appropriate criteria, that the stream is not currently being used as a drinking water source and that it is unlikely to be used for that purpose in the future, they could remove of the Public A use category from the appropriate stretch of the stream. This use removal would be memorialized in the NPDES permit and would be subject to the notice and comment requirements applicable to such permits.

This option would require an amendment to the rule clarifying that the existing designation will be retained for all waters and providing an exception authorizing the DEP to remove the use during the NPDES permitting process. The amendment would include an outline of the criteria to be used to determine that the use removal is appropriate, and ensuring that the appropriate public notice and comment opportunities are made available regarding the removal of the use. Provisions for amending the rule after the permit activity is completed may be required as well.

4. Apply the use designation for a distance five miles upstream of existing water supply intakes.

Comments received during the last two triennial reviews of the water quality standards rule have suggested that the public A use category should be limited to five mile zones above existing drinking water intakes.

This option would require an amendment to the rule clarifying that the existing designation would be removed from all portions of the stream except within the zone five miles above existing drinking water intakes. This option would also require clarification of the definition of drinking water intakes.

A public hearing is scheduled for July 15th at 7:00 PM to hear comments from the public on the options described in this notice. The hearing will be held at the Board Office at 1615 Washington St. East, Charleston, WV. Comments will be accepted orally and in writing, written comments are encouraged for the accuracy of the record.

ENVIRONMENTAL QUALITY BOARD

1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126

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Telephone: 1-800-480-4598
E-Mail: clerk@mail.wvnet.edu

MEMORANDUM

TO: **Board Members**
FROM: **Libby Chatfield**
DATE: **April 28, 1999**
RE: **Aluminum meeting**

I met with Jennie Henthorn, Ray Menendez, Dan Ramsey, Mike Arcuri, Mary Kuo (Region 3 EPA, via telephone) and Dr. Bill Sharpe (via telephone) on April 19th at 10:00. The purpose of the meeting was to discuss research conducted by Dr. Sharpe and others on the impact of aluminum on fish in streams in Pennsylvania and New York. I had received from Dr. Sharpe, and distributed to those in attendance, papers published in several journals which reported results of research conducted on blacknose dace, sculpins and brook trout regarding aluminum sensitivity.

Using the results of this research as his basis, Dr. Sharpe provided some recommendations for instream values for aluminum which he believes would ensure protection of fish species. He stated that his work supports the 87 ug/l value (up to 100 ug/l) as a chronic value and 200-250 ug/l as an acute value. He recommended using a .1 micron filter to measure the dissolved portion aluminum which is the toxic form (inorganic monomeric aluminum).

There was discussion of the areas of the state where the stream pH would warrant this protection. Dr. Sharpe indicated that in Pennsylvania, they have found that areas where over 30% of the bedrock is Pottsville-Allegheny bedrock limestone, problems generally occur. Ray Menendez stated that in WV, the streams most affected are coldwater streams in the mountains down to Nicholas and Fayette Counties.

Measurement of the aluminum concentration was discussed. Jennie Henthorn indicated that EPAs criterion document for aluminum recommends using an acid soluble concentration, but has provided no recommended methodology for states to use. In the absence of the acid soluble method, the criteria document recommends total recoverable. Section 8 in our rule provides for a total measurement. Mary Kuo said that she would talk with Region 3 and Headquarters to determine the status of EPAs position on the acid soluble methodology and report back to the group.

Mary Kuo indicated that EPA is not currently actively reviewing the aluminum criteria. They are generally supportive of the Boards efforts to collect data and conduct a statewide review of the issue. She indicated that she would report on this meeting at the next staff meeting and provide any responses to this group when we next meet.

The group tentatively agreed to meet via conference call on May 3rd.

OhioEPA
State of Ohio
Environmental Protection Agency

Fact Sheet

Water Quality Standards Review: Changes in the Iron Criterion

April 1999

What are water quality standards?

Water quality standards are state regulations or rules that protect lakes, rivers, streams and other surface water bodies from pollution. The rules are in Chapter 3745-1 of the Ohio Administrative Code (OAC). These rules contain: beneficial use designations such as warmwater aquatic life habitat, public water supply and primary contact recreation; numeric levels and narrative statements (water quality criteria) protective of the use designations; and procedures for applying the water quality criteria to wastewater dischargers.

Is iron in the environment a problem?

Iron in high concentrations imparts taste, odor and color problems in drinking water supplies. In rare circumstances iron can exert toxic effects on aquatic life; in most situations other environmental factors act to change or bind iron into nontoxic forms. High iron concentrations found in some coal regions of the state can create extensive deposits on stream beds. This impacts aquatic life and is an aesthetic concern.

What is the current criterion for iron and what is it based on?

Prior to adoption of the Great Lakes Water Quality Initiative Guidance (GLI) in October 1997, the rules contained a statewide iron criterion of 1 mg/l. This value was based upon recommendations published by USEPA in 1972. In the October 1997 rules the numeric criterion for iron was replaced by narrative criterion development procedures for the Lake Erie drainage basin; the 1 mg/l criterion continued to be listed for the Ohio River drainage basin.

Why are revisions to the iron criteria being considered?

Until recently the iron criterion was rarely an issue in NPDES permits. For many years the Agency assessed the need for imposing iron limits using a different protocol as compared to the protocol for highly toxic "priority pollutant" chemicals. The protocol for iron recognized the occurrence of frequent, naturally occurring excursions above the iron standard in many Ohio streams. As a result, water quality based iron limits were not typically included in the majority of NPDES permits. Iron limits were placed in NPDES permits based upon technology guidelines.

Changes in Ohio regulations made in October 1997 as part of the GLI eliminated the flexibility that previously existed. The new rules require limits whenever there is a reasonable potential to cause or contribute to a water quality criterion exceedence. Using this protocol and the current iron criterion, a great many NPDES permits in the Ohio River basin would require a limit for iron. The Agency has undertaken an assessment of the iron criterion because: 1) its justification is over 25 years old; 2) existing data suggest the criterion should be revised; and 3) regulating under the existing rules could significantly impact treatment costs for the regulated community.

What type of criteria review was conducted?

Ohio EPA had initially conducted a review of the aquatic life criterion for iron based on laboratory toxicological data. This method was not pursued further because laboratory generated data do not accurately represent the toxicity of iron in surface water bodies. An alternative approach described below was then investigated. Only aquatic life protection has been evaluated; the Agency believes the existing iron criteria associated with the Public Water Supply and Agricultural Water Supply uses are appropriate.

What was learned from an empirical study of iron concentrations and stream biological performance?

Ohio EPA environmental scientists examined a very large existing data base of ambient iron concentrations and measurements of aquatic life condition (i.e., the biological criteria in Ohio's water

quality standards rules). Statistical and empirical methods were used to arrive at threshold iron concentrations believed to be protective of aquatic life based on regional reference site conditions. Regional reference sites reflect least impacted conditions in Ohio streams and have healthy biological communities. Ambient iron concentrations have been measured at these sites for a number of years. Suggested criteria were chosen based on the upper bound of iron concentrations expected at reference sites with healthy biological communities. Details of the review were presented in "Iron criteria for the protection of aquatic life in Ohio rivers and streams" Ohio EPA, October 1998.

What were the conclusions of the criteria review?

The technical review supports the premise that the existing iron criterion is conservative and that healthy aquatic communities exist in concentrations above the current criterion. The Agency has decided not to pursue adoption of these empirically derived criterion at the present time. Comments from interested parties on the documented cited above factored into this decision. Further technical development and peer review of this approach will be sought over time.

What rule revisions are being proposed and why?

The 1 mg/l iron criterion applicable within the Ohio River basin is proposed for deletion. This proposed change is found in Table 34-1 in rule 3745-1-34. Our review has concluded that there are inadequate data to support the current criterion or to develop a valid alternative numerical value. This action will make the regulation of iron in the Ohio River drainage basin consistent with the Lake Erie basin.

How will the Agency regulate iron if this proposal is adopted?

Iron is a commonly occurring constituent of many industrial process wastewaters, especially coal mining and processing, iron and steel manufacturing and metal fabricating. It is also present in the backwash waters of water treatment plants and, in lesser amounts, in domestic sewage. For reasons explained above, iron water quality based effluent limits are not typical. Thus, regulation of iron in NPDES permits will not change radically. Past water quality based permit limits for iron will remain in effect in those permits that contain such limits until the permit is renewed. Permits will continue to contain technology based numbers where applicable.

What if a source needs iron limitations to correct obvious pollution problems and technology limits don't apply or are inadequate?

In this situation the Agency has the ability to place appropriate limits in the permit under the narrative "free from" provisions of the WQS (OAC 3745-1-04). Such limits would be determined on a case-by-case basis using appropriate scientific information available at the time of the action.

What is the rule-making schedule?

A public hearing is scheduled at the Ohio EPA central office, 122 South Front St., Columbus at 3:00 pm and 7:00 pm on Tuesday, June 8, 1999. The purpose of the public hearing is to give interested persons the opportunity to present oral or written comments on the proposed rules. The public comment period closes on June 10, 1999.

For more information or to comment on the rules:

Contact Chris Skalski at (614) 644-2144. Comments should be sent to Chris Skalski, Ohio EPA DSW, P.O. Box 1049, Columbus, OH 43216-1049 (E-mail: chris.skalski@epa.state.oh.us).