

WEST VIRGINIA
SECRETARY OF STATE

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

Form #3

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OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

NOTICE OF AGENCY APPROVAL OF A PROPOSED RULE
AND
FILING WITH THE LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

AGENCY: Environmental Quality Board TITLE NUMBER: 46

CITE AUTHORITY 22B-3-4

AMENDMENT TO AN EXISTING RULE: YES NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: 1

TITLE OF RULE BEING AMENDED: _____

REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: _____

TITLE OF RULE BEING PROPOSED: _____

THE ABOVE PROPOSED LEGISLATIVE RULE HAVING GONE TO A PUBLIC HEARING OR A PUBLIC COMMENT PERIOD IS HEREBY APPROVED BY THE PROMULGATING AGENCY FOR FILING WITH THE SECRETARY OF STATE AND THE LEGISLATIVE RULE MAKING REVIEW COMMITTEE FOR THEIR REVIEW.



Authorized Signature

\$14.20 w/out comments

\$36.40 w/comments

WEST VIRGINIA
ENVIRONMENTAL QUALITY BOARD

46 CSR 1
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

PROPOSED RULE
FILED AUGUST 3, 1998

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BUREAU OF ENVIRONMENT
10 McJunkin Road
Nitro, WV 25143-2506

CECIL H. UNDERWOOD
GOVERNOR

MICHAEL P. MIANO
COMMISSIONER

August 3, 1998

Ms. Judy Cooper
Director
Administrative Law Division
Capitol Complex
Charleston, WV 25305

RE: 46CSR1 - "Requirements Governing Water Quality Standards"

Dear Ms. Cooper:

This is to advise that I am giving approval to file the above-referenced rule with your office and the Legislative Rulemaking Review Committee as an agency-approved rule.

Your cooperation in this regard is very much appreciated. If you have any questions or require additional information, please feel free to contact Libby Chatfield at 558-4002.

Sincerely yours,


Michael P. Miano
Commissioner

MPM:cc

Attachment

cc: Libby Chatfield
Environmental Quality Board

QUESTIONNAIRE

(Please include a copy of this form with each filing of your rule: Notice of Public Hearing or Comment Period; Proposed Rule, and if needed, Emergency and Modified Rule.)

DATE: August 3, 1998

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM:(Agency Name, Address & Phone No.) Environmental Quality Board

1615 Washington Street, East - Room 301

Charleston, WV 25311-2126

LEGISLATIVE RULE TITLE: Requirements Governing Water Quality Standards

1. Authorizing statute(s) citation 46 CSR 1

2. a. Date filed in State Register with Notice of Hearing or Public Comment Period:
Filed with Secretary of State's office on June 18, 1998

b. What other notice, including advertising, did you give of the hearing?
Legal Advertisement in the Charleston Newspapers on July 1, 1998 and July 15, 1998. Press release released to other Newspaper publications on July 1, 1998

c. Date of Public Hearing(s) *or* Public Comment Period ended:
Public Hearing was held on July 20, 1998 and the Comment Period ended July 21, 1998

d. Attach list of persons who appeared at hearing, comments received, amendments, reasons for amendments.

Attached X No comments received _____

e. Date you filed in State Register the agency approved proposed Legislative Rule following public hearing: (be exact)

 August 3, 1998

f. **Name, title, address and phone/fax/e-mail numbers** of agency person(s) to received all *written correspondence* regarding this rule: (Please type)

 Elizabeth Chatfield, Technical Advisor, Environmental Quality Board, 1615

 Washington Street, East, Charleston, WV 25311-2126. Phone 304/558-4002

 Fax 304/558-4116 E-Mail chatfe@mail.wvnet.edu

g. **IF DIFFERENT FROM ITEM "f",** please give **Name, title, address and phone number(s)** of agency person(s) who wrote and/or has responsibility for the contents of this rule: (Please type)

3. If the statute under which you promulgated the submitted rules requires certain findings and determination to be made as a condition precedent to their promulgation:

a. Give the date upon which you filed in the State Register a notice of the time and place of a hearing for the taking of evidence and a general description of the issues to be decided.

 N/A

b. Date of hearing or comment period:

c.

On what date did you file in the State Register the findings and determinations required together with the reasons therefor?

d.

Attach findings and determinations and reasons:

Attached

46 CSR 1
Requirements Governing Water Quality Standards
August 3, 1998

Summary of Proposed Changes

The proposed amendments to the water quality standards rule provide for the conversion of existing aquatic life criteria for metals from total concentrations to dissolved concentrations. The proposal further provides for translation from the dissolved criteria to effluent limits based on total concentrations. Specifically, the following new provisions are included:

- new language in section 8.1.b, stating that compliance with aquatic life water quality criteria expressed as dissolved metal shall be determined based on dissolved metals concentrations
- new language providing for the conversion of existing total metals aquatic life criteria to dissolved concentrations through conversion factors developed by USEPA
- an appendix listing EPAs conversion factors for arsenic, cadmium, chromium (VI), copper, lead, nickel, silver and zinc
- adoption of USEPAs guidance document entitled "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion" dated June 1996, for use in developing permit limit based on dissolved metal water quality criteria
- adoption of new language for each affected criterion in Appendix E which reflects the change from total to dissolved metals concentrations.

46 CSR 1
Requirements Governing Water Quality Standards
August 3, 1998

Statement of Circumstances Requiring Proposed Amendments

During the last triennial review of this rule several parties provided comments regarding the use of total metals concentrations for reporting compliance with numeric criteria for metals. Currently, total or total recoverable concentrations are used in implementing metals criteria. However, USEPA has recommended that States use dissolved metals concentrations for this purpose, because the dissolved concentration better represents the bioavailable portion of the metal in the water.

To respond to the comments received during the triennial review, the Board convened a committee, consisting of representatives from the Offices of Water Resources and Mining and Reclamation of the Division of Environmental Protection, WV Division of Natural Resources, WV Chamber of Commerce and the WV Environmental Council. The committee also received input from USEPA, US Fish and Wildlife Service and interested industries.

The proposed language reflects the committee's recommendation to the Board to adopt USEPA's recommendations and guidance regarding the use of dissolved concentrations in developing permit limits for discharges of metals.

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: **REQUIREMENTS GOVERNING WATER QUALITY STANDARDS**

Type of Rule: X Legislative Interpretive Procedural

Agency **ENVIRONMENTAL QUALITY BOARD**

Address **1615 WASHINGTON STREET, EAST - ROOM 301**
CHARLESTON, WEST VIRGINIA 25311-2126

1. Effect of Proposed Rule

	ANNUAL FISCAL YEAR				
	INCREASE	DECREASE	CURRENT	NEXT	THEREAFTER
ESTIMATED TOTAL COST	\$	\$	\$	\$	\$
PERSONAL SERVICES					
CURRENT EXPENSE					
REPAIRS & ALTERNATIONS					
EQUIPMENT					
OTHER					

2. Explanation of above estimates:

N/A

3. Objectives of these rules:

TO ADOPT NEW REPORTING CONCENTRATIONS FOR METALS CRITERIA.

Rule Title: **REQUIREMENTS GOVERNING WATER QUALITY**
 STANDARDS

4. Explanation of Overall Economic Impact of Proposed Rule.
- A. Economic Impact on State Government.
 ONLY MINOR IMPACT EXPECTED.
- B. Economic Impact on Political Subdivisions; Specific Industries; Specific groups
 of Citizens.
 CHANGES TO THE METALS PROVISIONS ARE EXPECTED TO
 RESULT IN CHANGES IN EFFLUENT LIMITS RESULTING IN COST
 SAVINGS TO AFFECTED DISCHARGERS.
- C. Economic Impact on Citizens/Public at Large.
 NONE ANTICIPATED.

Date: August 3, 1998

Signature of Agency Head or Authorized Representative

Ann L. Holstein

FILED

AUG 3 3 29 PM '98

OFFICE OF WEST VIRGINIA
SECRETARY OF STATE

**TITLE 46
LEGISLATIVE RULES
ENVIRONMENTAL QUALITY BOARD**

**SERIES 1
REQUIREMENTS GOVERNING WATER
QUALITY STANDARDS**

§46-1-1. General.

1.1. Scope. -- These rules establish requirements governing the discharge or deposit of sewage, industrial wastes and other wastes into the waters of the State and establish water quality standards for the waters of the State standing or flowing over the surface of the State. It is declared to be the public policy of the State of West Virginia to maintain reasonable standards of purity and quality of the water of the State consistent with (1) public health and public enjoyment thereof; (2) the propagation and protection of animal, bird, fish, and other aquatic and plant life; and (3) the expansion of employment opportunities, maintenance and expansion of agriculture and the provision of a permanent foundation for healthy industrial development. (See W. Va. Code § 22-11-2.)

1.2. Authority. -- W. Va. Code §22B-3-4

1.3. Filing Date. --

1.4. Effective Date. --

§46-1-2. Definitions.

The following definitions in addition to those set forth in W. Va. Code §22-11-3, shall apply to these rules unless otherwise specified herein, or unless the context in which used clearly requires a different meaning:

2.1. "Board" is the Environmental Quality Board.

2.2. "Chief" is the Chief of the Office of Water Resources of the West Virginia Division of Environmental Protection.

2.3. "Conventional treatment" is the treatment of water as approved by the State Health Department to assure that the water is safe for human consumption.

2.4. "Cumulative" means a pollutant which increases in concentration in an organism by successive additions at different times or in different ways (bio-accumulation).

2.5. "Designated uses" are those uses specified in water quality standards for each water body or segment whether or not they are being attained. (See section 6.2.)

2.6. "Dissolved metal" is operationally defined as that portion of metal which passes through a 0.45 micron filter

2.6 7. "Existing uses" are those uses actually attained in a water body on or after November 28, 1975, whether or not they are included in the water quality standards.

2.7 8. The "Federal Act" means the Clean Water Act (also known as the Federal Water Pollution Control Act) Public Law 92-500, as amended by Public Law 100-4, 33 U.S.C. 1251, et seq.

2.8 9. "High quality waters": are those waters whose quality is equal to or better than the minimum levels necessary to achieve the national water quality goal uses.

2.9 10. "Intermittent streams" are streams which have no flow during sustained periods of no precipitation and which do not support aquatic life whose life history requires residence in flowing waters for a continuous period of at least six (6) months.

2.10 11. "Outstanding national resource waters" are those whose unique character, ecological or recreational value or pristine nature constitutes a valuable national or State resource.

2.11 12. "Natural" or "naturally occurring" values or "natural temperature" shall mean for all of the waters of the State:

2.11 12a. Those water quality values which exist unaffected by -- or unaffected as a consequence of -- any water use by any person; and

2.11 12b. Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance from any point source or non-point source.

2.12 13. "Non-point source" shall mean any source other than a point source from which pollutants may reach the waters of the State.

2.13 14. "Persistent" shall mean a pollutant and its transformation products which under natural conditions degrade slowly in an aquatic environment.

~~2.14~~ 15. "Point source" shall mean any discernible, confined and discrete conveyance, including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

~~2.15~~ 16. "Representative important species of aquatic life" shall mean those species of aquatic life whose protection and propagation will assure the sustained presence of a balanced aquatic community. Such species are representative in the sense that maintenance of water quality criteria will assure both the natural completion of the species' life cycles and the overall protection and sustained propagation of the balanced aquatic community.

~~2.16~~ 17. The "State Act" or "State Law" shall mean the West Virginia Water Pollution Control Act, W. Va. Code §22-11-1.

~~2.17~~ 18. "Total recoverable" refers to the digestion procedure for certain heavy metals as referenced in 40 CFR 136, as amended June 15, 1990, Guidelines Establishing Test Procedures for the Analysis of Pollutants Under the Clean Water Act.

~~2.18~~ 19. "Trout waters" are streams or stream segments which sustain year-round trout populations. Excluded are those streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.

~~2.19~~ 20. "Water quality criteria" shall mean levels of parameters or stream conditions that are required to be maintained by these regulations. Criteria may be expressed as a constituent concentration, levels, or narrative statement, representing a quality of water that supports a designated use or uses.

~~2.20~~ 21. "Water quality standards" means the combination of water uses to be protected and the water quality criteria to be maintained by these rules.

~~2.21~~ 22. "Wetlands" are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas.

~~2.22~~ 23. "Wet weather streams" are streams that flow only in direct response to precipitation or whose channels are at all times above the water table.

§46-1-3. Conditions Not Allowable In State Waters.

3.1. Certain characteristics of sewage, industrial wastes and other wastes cause pollution and are objectionable in all waters of the State. Therefore, the Environmental Quality Board does hereby proclaim that the following general conditions are not to be allowed in any of the waters of the State.

3.2. No sewage, industrial wastes or other wastes present in any of the waters of the State shall cause therein or materially contribute to any of the following conditions thereof:

3.2.a. Distinctly visible floating or settleable solids, suspended solids, scum, foam or oily slicks;

3.2.b. Deposits or sludge banks on the bottom;

3.2.c. Odors in the vicinity of the waters;

3.2.d. Taste or odor that would adversely affect the designated uses of the affected waters;

3.2.e. Materials in concentrations which are harmful, hazardous or toxic to man, animal or aquatic life;

3.2.f. Distinctly visible color;

3.2.g. Concentrations of bacteria which may impair or interfere with the designated uses of the affected waters;

3.2.h. Requiring an unreasonable degree of treatment for the production of potable water by modern water treatment processes as commonly employed; and

3.2.i. Any other condition, including radiological exposure, which adversely alters the integrity of the waters of the State including wetlands; no significant adverse impact to the chemical, physical, hydrologic, or biological components of aquatic ecosystems shall be allowed.

§46-1-4. Anti-Degradation Policy.

4.1. It is the policy of the State of West Virginia the waters of the state shall be maintained and protected as follows:

4.1.a. Existing water uses and the level of water quality necessary to protect the

existing uses shall be maintained and protected. Existing uses are those uses actually attained in the water body on or after November 28, 1975, whether or not they are included as designated uses within these water quality standards.

4.1.b. The existing high quality waters of the State must be maintained at their existing high quality unless it is determined after satisfaction of the intergovernmental coordination of the State's continuing planning process and opportunity for public comment and hearing that allowing lower water quality is necessary to accommodate important economic or social development in the area in which the waters are located. If limited degradation is allowed, it shall not result in injury or interference with existing stream water uses or in violation of State or Federal water quality criteria that describe the base levels necessary to sustain the national water quality goal uses of protection and propagation of fish, shellfish and wildlife and recreating in and on the water.

In addition, the Board and the chief shall assure that all new and existing point sources shall achieve the highest established statutory and regulatory requirements applicable to them and shall assure the achievement of cost-effective and reasonable best management practices for non-point source control.

4.1.b.1. High quality waters are those waters meeting the definition at section ~~2-8~~ 2.9 herein.

4.1.b.2. High quality waters include but are not limited to the following:

4.1.b.2.A. Streams designated by the West Virginia Legislature under the West Virginia Natural Stream Preservation Act, pursuant to W. Va. Code Section 22-13-5; and

4.1.b.2.B. Streams listed in West Virginia High Quality Streams, Fifth Edition, prepared by the Wildlife Resources Division, Department of Natural Resources (1986).

4.1.b.2.C. Streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.

4.1.c. In waters which constitute a water of special concern no activities which result in the reduction of ambient water quality shall be allowed. Waters of special concern include:

4.1.c.1. All Federally designated rivers under the "Wild and Scenic Rivers Act" Public Law 95-542 as amended, 16 U.S.C. 1271, et seq .

4.1.c.2. All naturally reproducing trout streams.

4.1.c.3. All streams and other bodies of water in State and National Forests and Recreation Areas.

4.1.c.4. National Rivers. "National Parks and Recreation Act of 1978." Public Law 95-625, as amended, 16 U.S.C.1, et seq.

4.1.d. In all cases, waters which constitute an outstanding national resource shall be maintained and protected and improved where necessary. Outstanding national resource waters include, but are not limited to, all streams and rivers within the boundaries of Wilderness Areas designated by The Wilderness Act (16 U.S.C. 1131 et seq.) within the State.

Additional waters may be nominated for inclusion in that category by any interested party or by the Board on its own initiative. To designate a nominated water as an outstanding national resource water, the Board shall follow the public notice and hearing provisions as provided in 46 C.S.R. 6.

4.1.e. All applicable requirements of Section 316 (a) of the Federal Act shall apply to modifications of the temperature water quality criteria provided for in these rules.

§46-1-5. Mixing Zones.

5.1. In the permit review and planning process or upon the request of a permit applicant or permittee, the chief may establish on a case-by-case basis an appropriate mixing zone.

5.2. The following guidelines and conditions are applicable to all mixing zones:

5.2.a. The chief will assign, on a case-by-case basis, definable geometric limits for mixing zones for a discharge or a pollutant or pollutants within a discharge. Applicable limits shall include, but may not be limited to, the linear distances from the point of discharge, surface area involvement, volume of receiving water, and shall take into account other nearby mixing zones. Mixing zones shall take into account the mixing conditions in the receiving stream (i.e: whether complete or incomplete mixing conditions exist). Mixing zones will not be allowed until applicable limits are assigned by the chief in accordance with this section.

5.2.b. Concentrations of pollutants which exceed the acute criteria for protection of aquatic life set forth in Appendix E shall not exist at any point within an assigned mixing zone or in the discharge itself unless a zone of initial dilution is assigned. A zone of initial dilution may be assigned on a case-by-case basis at the discretion of the chief. The zone of initial dilution is the area within the mixing zone where initial dilution of the effluent with the receiving water occurs, and where the concentration of the effluent will be its greatest in the water column. Where a zone of initial dilution is assigned by the Chief, the size of the zone shall be determined using one of the four alternatives outlined in Section 4.3.3 of EPA's Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001 PB91-127415, March 1991).

Concentrations of pollutants shall not exceed the acute criteria at the edge of the assigned zone of initial dilution. Chronic criteria for the protection of aquatic life may be exceeded within the mixing zone but shall be met at the edge of the assigned mixing zone.

5.2.c. Concentrations of pollutants which exceed the criteria for the protection of human health set forth in Appendix E shall not be allowed at any point unless a mixing zone has been assigned by the Chief after consultation with the Commissioner of the West Virginia Bureau of Public Health. Human health criteria may be exceeded within an assigned mixing zone, but shall be met at the edge of the assigned mixing zone. Mixing zones for human health criteria shall be sized to prevent significant human health risks and shall be developed using reasonable assumptions about exposure pathways. In assessing the potential human health risks of establishing a mixing zone upstream from a drinking water intake, the Chief shall consider the cumulative effects of multiple discharges and mixing zones on the drinking water intake. No mixing zone for human health criteria shall be established on a stream which has a seven (7) day, ten (10) year return frequency of 5 cfs or less.

5.2.d. Mixing zones, including zones of initial dilution, shall not interfere with fish spawning or nursery areas or fish migration routes; shall not overlap public water supply intakes or bathing areas; cause lethality to or preclude the free passage of fish or other aquatic life; nor harm any threatened or endangered species, as listed in the Federal Endangered Species Act.

5.2.e. The mixing zone shall not exceed one-third (1/3) of the width of the receiving stream, and in no case shall the mixing zone exceed one-half (1/2) of the cross-sectional area of the receiving stream.

5.2.f. In lakes and other surface impoundments, the volume of a mixing zone shall not affect in excess of ten (10) percent of the volume of that portion of the receiving waters available for mixing.

5.2.g. A mixing zone shall be limited to an area or volume which will not adversely alter the existing or designated uses of the receiving water, nor be so large as to adversely affect the integrity of the water body.

5.2.h. Mixing zones shall not:

5.2.h.1. Be used for, or considered as, a substitute for technology-based requirements of the Clean Water Act and other applicable State and Federal laws.

5.2.h.2. Extend downstream at any time a distance more than five times the width of the receiving watercourse at the point of discharge.

5.2.h.3. Cause or contribute to any of the conditions prohibited in Section

46-1-3.

5.2.h.4. Be granted where instream waste concentration of a discharge is greater than 80%.

5.2.h.5. Overlap one another.

5.2.h.6. Overlap any ½ mile zone described in section 7.2.a.2 herein.

5.2.i. In the case of thermal discharges, a successful demonstration conducted under Section 316(a) of the Clean Water Act shall constitute compliance with all provisions of this section.

5.2.j. The Chief may waive the requirements of subsections (e) and (h)(B) above if a discharger provides an acceptable demonstration of:

5.2.j.1. Information defining the actual boundaries of the mixing zone in question; and

5.2.j.2. Information and data proving no violation of subsection (d) and (g) above by the mixing zone in question.

5.2.k. Upon implementation of a mixing zone in a permit, the permittee shall provide documentation that demonstrates to the satisfaction of the Chief that the mixing zone is in compliance with the provisions outlined in subsections (b),(c),(e) and (h)(B).

5.2.l. In order to facilitate a determination or assessment of a mixing zone pursuant to this section, the chief may require a permit applicant or permittee to submit such information as deemed necessary.

§46-1-6. Water Use Categories.

6.1. These rules establish general Water Use Categories and Water Quality Standards for the waters of the State. Unless otherwise designated by these rules, at a minimum all waters of the State are designated for the Propagation and maintenance of Fish and Other Aquatic Life (Category B) and for Water Contact Recreation (Category C) consistent with Clean Water Act goals. Incidental utilization for whatever purpose may or may not constitute a justification for assignment of a water use category to a particular stream segment.

6.1.a. Waste assimilation and transport are not recognized as designated uses. The classification of the waters must take into consideration the use and value of water for public water supplies, protection and propagation of fish, shellfish and wildlife, recreation in and on the

water, agricultural, industrial and other purposes including navigation.

Subcategories of a use may be adopted and appropriate criteria set to reflect varying needs of such subcategories of uses, for example to differentiate between trout water and other waters.

6.1.b. At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under Sections 301 (b) and 306 of the Federal Clean Water Act and use of cost-effective and reasonable best management practices for non-point source control. Seasonal uses may be adopted as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria will be adjusted to reflect the seasonal uses; however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season. A designated use which is not an existing use may be removed, or subcategories of a use may be established if it can be demonstrated that attaining the designated use is not feasible because:

6.1.b.1. Application of effluent limitations for existing sources more stringent than those required pursuant to Section 301 (b) and Section 306 of the Federal Act in order to attain the existing designated use would result in substantial and widespread adverse economic and social impact; or

6.1.b.2. Naturally-occurring pollutant concentrations prevent the attainment of the use; or

6.1.b.3. Natural, ephemeral, intermittent or low flow conditions of water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges to enable uses to be met; or

6.1.b.4. Human-caused conditions or sources of pollution prevent the attainment of the use and cannot be remedied or would cause more environmental damage to correct than to leave in place; or

6.1.b.5. Dams, diversions or other types of hydrologic modifications preclude the attainment of the use, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in the attainment of the use; or

6.1.b.6. Physical conditions related to the natural features of the water body, such as the lack of a proper substrate, cover, flow, depth, pools, riffles, and the like, unrelated to water quality, preclude attainment of aquatic life protection uses.

6.1.c. The State shall take into consideration the quality of downstream waters and shall assure that its water quality standards provide for the attainment of the water quality standards of downstream waters.

6.1.d. In establishing a less restrictive use or uses, or subcategory of use or uses, and the water quality criteria based upon such uses, the Board shall follow the requirements for revision of water quality standards as required by W. Va. Code §22B-3-4 and Section 303 of the Federal Act and the regulations thereunder. Any revision of water quality standards shall be made with the concurrence of EPA. The Board's administrative procedural regulations for applying for less restrictive uses or criteria shall be followed.

6.2. Category A -- Water Supply, Public. -- This category is used to describe waters which, after conventional treatment, are used for human consumption. This category includes streams on which the following are located:

6.2.a. All community domestic water supply systems;

6.2.b. All non-community domestic water supply systems, (i.e. hospitals, schools, etc.);

6.2.c. All private domestic water systems;

6.2.d. All other surface water intakes where the water is used for human consumption. (See Appendix B for partial listing of category A waters; see section 7.2.a.B. for additional requirements for category A waters.)

6.3. Category B -- Propagation and maintenance of fish and other aquatic life. -- This category includes:

6.3.a. Category B1 -- Warm water fishery streams. -- Streams or stream segments which contain populations composed of all warm water aquatic life.

6.3.b. Category B2 -- Trout Waters. -- As defined in Section ~~2.18~~ 2.19 (See Appendix A for a representative list.)

6.3.c. Category B4 -- Wetlands. -- As defined in section ~~2.21~~ 2.22; certain numeric stream criteria may not be appropriate for application to wetlands (see Appendix E).

6.4. Category C -- Water contact recreation. -- This category includes swimming, fishing, water skiing and certain types of pleasure boating such as sailing in very small craft and outboard motor boats. See Appendix D for a representative list of category C waters.

6.5. Category D. -- Agriculture and wildlife uses.

6.5.a. Category D1 -- Irrigation. -- This category includes all stream segments used for irrigation.

6.5.b. Category D2 -- Livestock watering. -- This category includes all stream segments used for livestock watering.

6.5.c. Category D3 -- Wildlife. -- This category includes all stream segments and wetlands used by wildlife.

6.6. Category E -- Water supply industrial, water transport, cooling and power. -- This category includes cooling water, industrial water supply, power production, commercial and pleasure vessel activity, except those small craft included in Category C.

6.6.a. Category E1 -- Water Transport. -- This category includes all stream segments modified for water transport and having permanently maintained navigation aides.

6.6.b. Category E2 -- Cooling Water. -- This category includes all stream segments having one (1) or more users for industrial cooling.

6.6.c. Category E3 -- Power production. -- This category includes all stream segments extending from a point 500 feet upstream from the intake to a point one half (½) mile below the wastewater discharge point. (See Appendix C for representative list.)

6.6.d. Category E4 -- Industrial. -- This category is used to describe all stream segments with one (1) or more industrial users. It does not include water for cooling.

§46-1-7. West Virginia Waters.

7.1. Major River Basins and their Alphanumeric System. All streams and their tributaries in West Virginia shall be individually identified using an alphanumeric system as identified in the "Key to West Virginia Stream Systems and Major Tributaries" (1956) as published by the Conservation Commission of West Virginia and revised by the West Virginia Department of Natural Resources, Division of Wildlife (1985).

7.1.a. J - James River Basin. All tributaries to the West Virginia - Virginia State line.

7.1.b. P - Potomac River Basin. All tributaries of the main stem of the Potomac River to the West Virginia - Maryland - Virginia State line to the confluence of the North Branch and the South Branch of the Potomac River and all tributaries arising in West Virginia excluding the major tributaries hereinafter designated:

7.1.b.1. S - Shenandoah River and all its tributaries arising in West Virginia to the West Virginia - Virginia State line.

7.1.b.2. PC - Cacapon River and all its tributaries.

7.1.b.3. PSB - South Branch and all its tributaries.

7.1.b.4. PNB - North Branch and all tributaries to the North Branch arising in West Virginia.

7.1.c. M - Monongahela River Basin. The Monongahela River Basin main stem and all its tributaries excluding the following major tributaries which are designated as follows:

7.1.c.1. MC - Cheat River and all its tributaries except those listed below:

7.1.c.1.A. MCB - Blackwater River and all its tributaries.

7.1.c.2. MW - West Fork River and all its tributaries.

7.1.c.3. MT - Tygart River and all its tributaries except those listed below:

7.1.c.3.A. MTB - Buckhannon River and all its tributaries.

7.1.c.3.B. MTM - Middle Fork River and all its tributaries.

7.1.c.4. MY - Youghigheny River and all its tributaries to the West Virginia - Maryland State line.

7.1.d. O Zone 1 - Ohio River - Main Stem. The main stem of the Ohio River from the Ohio - Pennsylvania - West Virginia State line to the Ohio - Kentucky - West Virginia State line.

7.1.e. O Zone 2 - Ohio River - Tributaries. All tributaries of the Ohio River excluding the following major tributaries:

7.1.e.1. LK - Little Kanawha River. The Little Kanawha River and all its tributaries excluding the following major tributary which is designated as follows:

7.1.e.1.A. LKH - Hughes River and all its tributaries.

7.1.e.2. K - Kanawha River Zone 1. The main stem of the Kanawha River from mile point 0, at its confluence with the Ohio River, to mile point 72 near Diamond, West Virginia.

7.1.e.3. K - Kanawha River Zone 2. The main stem of the Kanawha River from mile point 72 near Diamond, West Virginia and all its tributaries from mile point 0 to the headwaters excluding the following major tributaries which are designated as follows:

7.1.e.3.A. KP - Pocatalico River and all its tributaries.

7.1.e.3.B. KC - Coal River and all its tributaries.

7.1.e.3.C. KE - Elk River and all its tributaries.

7.1.e.3.D. KG - Gauley River. The Gauley River and all its tributaries excluding the following major tributaries which are designated as follows:

7.1.e.3.D.1. KG-19 - Meadow River and all its tributaries.

7.1.e.3.D.2. KG-34 - Cherry River and all its tributaries.

7.1.e.3.D.3. KGC - Cranberry River and all its tributaries.

7.1.e.3.D.4. KGW - Williams River and all its tributaries.

7.1.e.3.E. KN - New River. The New River from its confluence with the Gauley River to the Virginia - West Virginia State line and all tributaries excluding the following major tributaries which are designated as follows:

7.1.e.3.E.1. KNG - Greenbrier River and all its tributaries.

7.1.e.3.E.2. KNB - Bluestone River and all its tributaries.

7.1.e.3.E.3. KN-60 - East River and all its tributaries.

7.1.e.3.E.4. K(L)-81-(1) - Bluestone Lake.

7.1.e.4. OG - Guyandotte River. The Guyandotte River and all its tributaries excluding the following major tributary which is designated as follows:

7.1.e.4.1. OGM - Mud River and all its tributaries.

7.1.e.5. BS - Big Sandy River. The Big Sandy River to the Kentucky - Virginia - West Virginia State lines and all its tributaries arising in West Virginia excluding the following major tributary which is designated as follows:

7.1.e.5.1 BST - Tug Fork and all its tributaries.

7.2. Applicability of Water Quality Standards. The following shall apply at all times unless a specific exception is granted in this section:

7.2.a. Water Use Categories as described in Section 6.

7.2.a.1. Based on meeting those Section 6 definitions, tributaries or stream segments may be classified for one or more Water Use Categories. When more than one use exists, they shall be protected by criteria for the use category requiring the most stringent protection.

7.2.a.2. Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of one half (½) mile or to the headwater, must be protected by prohibiting the discharge of any pollutants in excess of the concentrations designated for this Water Use Category in Section 8. In addition, within that one half (½) mile zone, the Chief may establish for any discharge, effluent limitations for the protection of human health that require additional removal of pollutants than would otherwise be provided by this rule. (If a watershed is not significantly larger than this zone above the intake, the water supply section may include the entire upstream watershed to its headwaters.)

7.2.b. In the absence of any special application or contrary provision, numeric water quality standards shall apply at all times when flows are equal to or greater than the minimum mean seven (7) consecutive day drought flow with a ten (10) year return frequency (7Q10). NOTE: With the exception of section 7.2.c.5 listed herein exceptions do not apply to trout waters nor the requirements of Section 3.

7.2.c. Exceptions: Numeric water quality standards shall not apply: (See section 7.2.d for site specific revisions)

7.2.c.1. When the flow is less than 7Q10;

7.2.c.2. In wet weather streams (or intermittent streams, when they are dry or have no measurable flow): Provided, That the existing and designated uses of downstream waters are not adversely affected;

7.2.c.3. In any assigned zone of initial dilution of any mixing zone where a zone of initial dilution is required by section 5.2.b herein, or in any assigned mixing zone for human health criteria or aquatic life criteria for which a zone of initial dilution is not assigned; In zones of initial dilution and certain mixing zones: Provided, That all requirements described in §5 herein shall apply to all zones of initial dilution and all mixing zones;

7.2.c.4. Where lesser quality is due to natural conditions. In such cases the naturally occurring values shall be the applicable criteria. Provided, That the existing and designated uses of downstream waters are not adversely affected.

7.2.c.5. For the upper Blackwater River from the mouth of Yellow Creek to a point 5.1 miles upstream, when flow is less than 7Q10. naturally occurring values for

Dissolved Oxygen as established by data collected by the dischargers within this reach and reviewed by the Board and Division of Environmental Protection shall be the applicable criteria.

7.2.d. Site-specific applicability of water use categories and water quality criteria
- State-wide water quality standards shall apply except where site-specific numeric criteria, variances or use removals have been approved following application and hearing, as provided in 46 C.S.R. 6. (See §8.3 and §8.4) The following are approved site-specific criteria, variances and use removals:

7.2.d.1. James River - (Reserved)

7.2.d.2. Potomac River

7.2.d.2.1. Except that a site-specific numeric criterion for aluminum, not to exceed 500 ug/l, shall apply to the section of Opequon Creek from Turkey Run to the Potomac River.

7.2.d.3. Shenandoah River - (Reserved)

7.2.d.4. Cacapon River - (Reserved)

7.2.d.5. South Branch - (Reserved)

7.2.d.6. North Branch

7.2.d.6.1 Except that the Stony River downstream from the limit of the thermal mixing zone (as established by Board Order of 11/20/75) for the Mount Storm Lake wastewater treatment facility to its confluence with the North Branch of the Potomac River is exempt from the 5°F above natural temperature rise; however, the maximum temperature outside the mixing zone shall not exceed 87°F at any time during the months of May through November and not exceed 73°F at any time during the months of December through April. This exception shall apply until the successful completion of a study conducted pursuant to section 316(a) of the Federal Clean Water Act or December 31, 1998, whichever comes first.

7.2.d.7. Monongahela River

7.2.d.7.1. Except that flow in the main stem of the Monongahela River, as regulated by the Tygart Reservoir, operated by the U. S. Army Corps of Engineers, is based on a minimum flow of 345 cfs at Lock and Dam No. 8, river mile point 90.8. This exception does not apply to tributaries of the Monongahela River.

7.2.d.8. Cheat River

7.2.d.8.1. Except that the following site-specific numeric criteria shall apply to the unnamed tributary of Daugherty Run approximately one mile upstream of Daugherty Run's confluence with the Cheat River: iron not to exceed 3.5 mg/l and selenium not to exceed 15.24 ug/l and the following site-specific numeric criteria shall apply to Fly Ash Run of Daugherty Run: aluminum: 888.5 ug/l and manganese: 5 mg/l.

7.2.d.9. Blackwater River - (Reserved)

7.2.d.10. West Fork River - (Reserved)

7.2.d.11. Tygart River - (Reserved)

7.2.d.12. Buckhannon River - (Reserved)

7.2.d.13. Middle Fork River - (Reserved)

7.2.d.14. Youghiogheny River

7.2.d.14.1 Water Use Categories A and E are excluded from the tributaries of the Youghiogheny River in West Virginia which flow into Maryland.

7.2.d.15. Ohio River Main Stem - (Reserved)

7.2.d.16. Ohio River Tributaries.

7.2.d.16.1. Except that site-specific numeric criteria shall apply to the stretch of Conners Run (0-77-A), a tributary of Fish Creek, from its mouth to the discharge from Conner Run impoundment, which shall not have the Water Use Category A and may contain selenium not to exceed 62 ug/l; and iron not to exceed 3.5 mg/l as a monthly average and 7 mg/l as a daily maximum.

7.2.d.16.2. 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 70 ug/l, Daily Maximum; Lead 14 ug/l, Daily Maximum, Total Phenolic Materials 10 ug/l, Daily Maximum, Zinc 200 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 2.0 mg/l, Monthly Average and 4.0 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 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 May 30, 1999 a report setting forth the water quality of the discharge from Outlet 004 for these parameters during the period from June 1, 1998 to May 1, 1999; (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, 1997, 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 Environmental Quality Board to revise such exceptions or until June 29, 2000, whichever comes first.

7.2.d.17. Little Kanawha River. - (Reserved)

7.2.d.18. Hughes River - (Reserved)

7.2.d.19. Kanawha River Zone 1 - Main Stem

7.2.d.19.1 For the Kanawha River main stem, Zone 1, Water Use Category A shall not apply; and

7.2.d.19.2. The minimum flow shall be 1,960 cfs at the Charleston gauge.

7.2.d.20. Kanawha River Zone 2 and Tributaries.

7.2.d.20.1. For the main stem of the Kanawha River only, the minimum flow shall be 1,896 cfs at mile point 72.

7.2.d.20.2. Except the stretch between the mouth of Little Scary Creek (K-31) and the Little Scary impoundment shall not have Water Use Category A. The following site-specific numeric criterion shall apply to that section: selenium not to exceed 62 ug/l and copper not to exceed 105 ug/l as a daily maximum nor 49 ug/l as a 4-day average.

7.2.d.20.3. Except for Simmons Creek (K-54) from its mouth to a point 1200 feet upstream to which the following site-specific numeric criterion shall apply: a maximum daily temperature not to exceed 38°C (100°F) nor a monthly average temperature to exceed 34°C. This exception shall apply until the successful completion of a study conducted pursuant to section 316(a) of the Federal Clean Water Act or May 30, 1998, whichever comes first.

7.2.d.21. Pocatalico River - (Reserved)

7.2.d.22. Coal River - (Reserved)

7.2.d.23. Elk River - (Reserved)

7.2.d.24. Gauley River - (Reserved)

7.2.d.25. Meadow River - (Reserved)

7.2.d.26. Cherry River - (Reserved)

7.2.d.27. Cranberry River - (Reserved)

7.2.d.28. Williams River - (Reserved)

7.2.d.29. New River - (Reserved)

7.2.d.30. Greenbrier River - (Reserved)

7.2.d.31. Bluestone River - (Reserved)

7.2.d.32. Bluestone Lake

7.2.d.32.1. Category E Water Uses are deleted in Bluestone Lake and temperature rise shall be limited to no more than 3°F above natural not to exceed 81°F at any time during the months of May through November and not to exceed 73°F at any time during December through April.

7.2.d.33. East River - (Reserved)

7.2.d.34. Guyandotte River - (Reserved)

7.2.d.35. Mud River - (Reserved)

7.2.d.36. Big Sandy River - (Reserved)

7.2.d.37. Tug Fork River - (Reserved)

§46-1-8. Specific Water Quality Criteria.

8.1. Charts of specific water quality criteria are included in Appendix E.

8.1.a. Specific state (i.e. total, total recoverable, dissolved valence, etc.) of any parameter to be analyzed shall follow 40 CFR 136, Guidelines Establishing Test Procedures for

Analysis of Pollutants Under the Clean Water Act, as amended, June 15, 1990. (See also Section 7.3 of 47 CSR 10 - National Pollutant Discharge Elimination System (NPDES) Program.)

8.1.b. Compliance with aquatic life water quality criteria expressed as dissolved metal shall be determined based on dissolved metals concentrations.

8.1.b.1. The aquatic life criteria for all metals listed in Appendix E, Table 2 shall be converted to a dissolved concentration by multiplying each numerical value or criterion equation from Appendix E by the appropriate conversion factor (CF) from Appendix E, Table 2.

8.1.b.2. Permit limits based on dissolved metal water quality criteria shall be prepared in accordance with the U.S. EPA document "The Metals Translator: Guidance For Calculating A Total Recoverable Permit limit From A Dissolved Criterion. June 1996: (translator document).

8.1.b.3. NPDES permit applications may petition the Office of Water Resources of the Division of Environmental Protection (OWR) to develop a site-specific translator consistent with the provisions in this section. The OWR may, on a case-by-case basis require an applicant applying for a translator to conduct appropriate sediment monitoring through SEM/AVS ratio, bioassay or other approved methods to evaluate effluent limits that prevent toxicity to aquatic life."

8.1.b.c. An "X" or numerical value in the use columns of Appendix E shall represent the applicable criteria.

8.1.c.d. Charts of water quality criteria in Appendix E shall be applied in accordance with major stream and use applications, Sections 6 and 7.

8.2. Criteria for Toxicants.

8.2.a. Toxicants which are carcinogenic have human health criteria (Water Use Categories A and C) based upon an estimated risk level of one additional cancer case per one million persons (10^{-6}) and are indicated in Appendix E with an endnote (^b).

8.2.b. A final determination on the critical design flow for carcinogens is not made in this rule, in order to permit further review and study of that issue. Following the conclusion of such review and study, the Legislature may again take up the authorization of this rule for purposes of addressing the critical design flow for carcinogens: Provided, That until such time as the review and study of the issue is concluded or until such time as the Legislature may again take up the authorization of this rule, the regulatory requirements for determining effluent limits for carcinogens shall remain as they were on the date this rule was proposed.

8.3. Variances from Specific Water Quality Criteria. A variance from numeric criteria

may be granted to a discharger if it can be demonstrated that the conditions outlined in subsections 6.1.b.A - F limit the attainment of one or more specific water quality criteria. Variances shall apply only to the discharger to whom they are granted and shall be reviewed by the Board at least every three years. In granting a variance, the requirements for revision of water quality standards in 46 CSR Series 6 shall be followed.

8.4. Site-specific numeric criteria. The Board may establish numeric criteria different from those set forth in Appendix E for a stream or stream segment upon a demonstration that existing numeric criteria are either over-protective or under-protective of the aquatic life residing in the stream or stream segment. A site-specific numeric criterion will be established only where the numeric criterion will be fully protective of the aquatic life and the existing and designated uses in the stream or stream segment. The site-specific numeric criterion may be established by conducting a Water Effect Ratio study pursuant to the procedures outlined in EPA's "Interim Guidance on the Determination and Use of Water-Effect Ratios for Metals" (February 1994); other methods may be used with prior approval by the Board. In adopting site-specific numeric criteria, the requirements for revision of water quality standards set forth in 46 CSR 6 shall be followed.

8.5. Implementation procedures for parameters with water quality criteria which are lower than the detection limit.

8.5.a. The implementation procedures outlined in this section and corresponding appendices apply to the following parameters of concern: chlordane, DDT, aldrin, dieldrin, endrin, toxaphene, PCB, dioxin and hexachlorobenzene.

8.5.b. The methods outlined in this section and corresponding appendices may be used for the following purposes:

8.5.b.1. For measuring background concentrations of the parameters of concern for the purpose of calculating effluent limits in National Pollutant Discharge Elimination System (NPDES) permits; and

8.5.b.2. For measuring background concentrations of the parameters of concern to determine whether a stream is meeting water quality for those parameters (ie: for compiling the 303(d) list)

8.5.c. For making the determinations outlined in section b for the parameters of concern outlined in section a above, the Chief may use or approve the use of any of the following methods:

8.5.c.1. Direct measurement of water concentrations.

8.5.c.1.1. High volume sampling method.

8.5.c.2. Indirect measurement of water concentrations

8.5.c.2.1. Back-calculation of water concentration from known fish tissue concentrations. The acceptable methods for back-calculation are outlined in Appendix F.

8.5.c.2.2. Semi-permeable membrane method. Prior to using or approving the use of this method for the purposes and parameters outlined above, the Chief shall consult with USEPA, Region III.

8.5.d. Prior to implementation of any of the procedures outlined herein, a sampling protocol shall be submitted to the Chief for review and approval after consultation with the West Virginia Division of Natural Resources. In developing sampling protocols for any of the methods outlined herein the guidelines in the USEPA document entitled "Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Volume 1, Fish Sampling and Analysis, Second Edition (EPA Document No. EPA 823-R-95-007, September 1997) shall be used.

§46-1-9. Establishment Of Safe Concentration Values.

When a specific water quality standard has not been established by these rules and there is a discharge or proposed discharge into waters of the State, the use of which has been designated a Category B1, B2, B3 or B4, such discharge may be regulated by the chief where necessary to protect State water through establishment of a safe concentration value as follows:

9.1. Establishment of a safe concentration value shall be based upon data obtained from relevant aquatic field studies, standard bioassay test data which exists in substantial available scientific literature, or data obtained from specific tests utilizing one (1) or more representative important species of aquatic life designated on a case-by-case basis by the chief and conducted in a water environment which is equal to or closely approximates that of the natural quality of the receiving waters.

9.2. In those cases where it has been determined that there is insufficient available data to establish a safe concentration value for a pollutant, the safe concentration value shall be determined by applying the appropriate application factor as set forth below to the 96-hour LC 50 value. Except where the chief determines, based upon substantial available scientific data that an alternate application factor exists for a pollutant, the following appropriate application factors shall be used in the determination of safe concentration values:

9.2.a. Concentrations of pollutants or combinations of pollutants that are not persistent and not cumulative shall not exceed 0.10 (1/10) of the 96-hour LC 50.

9.2.b. Concentrations of pollutants or combinations of pollutants that are persistent or cumulative shall not exceed 0.01 (1/100) of the 96-hour LC 50.

9.3. Persons seeking issuance of a permit pursuant to these rules authorizing the discharge of a pollutant for which a safe concentration value is to be established using special bioassay tests pursuant to subsection 9.1 of this section shall perform such testing as approved by the chief and shall submit all of the following in writing to the chief:

9.3.a. A plan proposing the bioassay testing to be performed.

9.3.b. Such periodic progress reports of the testing as may be required by the chief.

9.3.c. A report of the completed results of such testing including, but not limited to, all data obtained during the course of testing, and all calculations made in the recording, collection, interpretation and evaluation of such data.

9.4. Bioassay testing shall be conducted in accordance with methodologies outlined in the following documents: U.S. EPA Office of Research and Development Series Publication, Methods for Measuring the Acute Toxicity (EPA/600/4-90/027F, August 1993, 4th Edition) or Short Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/600/4-89/001), March 1989; Standard Methods for the Examination of Water and Wastewater (18th Edition); or ASTM Practice E 729-88 for Conducting Acute Toxicity Tests with Fishes, Macroinvertebrates and Amphibians as published in Volume 11.04 of the 1988 Annual Book of ASTM Standards. Test waters shall be reconstituted according to recommendations and methodologies specified in the previously cited references or methodologies approved in writing by the chief.

APPENDIX A
CATEGORY B-2 - TROUT WATERS

This list contains known trout waters and is not intended to exclude any waters which meet the definition in Section 2.16.

<u>River Basin</u>	<u>County</u>	<u>Stream</u>
James River		
J	Monroe	South Fork Potts Creek
Potomac River		
P	Jefferson	Town Run
P	"	Rocky Marsh Run
P	Berkeley	Opequon Creek
P	"	Tuscarora Creek (Above Martinsburg)
P	"	Middle Creek (Above Route 30 Bridge)
P	"	Mill Creek
P	"	Hartland Run
P	"	Mill Run
P	"	Tillance Creek
P	Morgan	Meadow Branch
PS	Jefferson	Flowing Springs Run (Above Halltown)
PS	"	Cattail Run
PS	"	Evitt's Run
PS	"	Big Bullskin Run
PS	"	Long Marsh Run
PC	Hampshire	Cold Stream
PC	"	Edwards Run and Impoundment
PC	"	Dillons Run
PC	Hardy	Lost River
PC	"	Camp Branch
PC	"	Lower Cove Run
PC	"	Moores Run
PC	"	North River (Above Rio)
PC	"	Waites Run
PC	"	Trout Run
PC	"	Trout Pond (Impoundment)
PC	"	Warden Lake (Impoundment)
PC	"	Rock Cliff Lake (Impoundment)
PSB	Hampshire	Mill Creek
PSB	"	Mill Run
PSB	Hardy	Dumpling Creek
PSB	Grant-Pendleton	North Fork South Branch
PSB	Grant	North Fork Lunice Creek
PSB	"	South Fork Lunice Creek
PSB	"	South Mill Creek (Above Hiser)
PSB	"	Spring Run

PSB	Pendleton	Hawes Run (Impoundment)
PSB	"	Little Fork
PSB	"	South Branch (Above North Fork)
PSB	"	Senena Creek
PSB	"	Laurel Fork
PSB	"	Big Run
PNB	Mineral	North Fork Patterson Creek
PNB	"	Fort Ashby (Impoundment)
PNB	"	New Creek
PNB	"	New Creek Dam 14 (Impoundment)
PNB	"	Mill Creek (Above Markwood)

Monongahela River

M	Monongalia-Marion	Whiteday Creek (Above Smithtown)
MC	Monongalia	Morgan Run
MC	"	Coopers Rock (Impoundment)
MC	"	Blaney Hollow
MC	Preston	Laurel Run
MC	"	Elsy Run
MC	"	Saltlick Creek
MC	"	Buffalo Creek
MC	"	Wolf Creek
MC	Tucker	Clover Run
MC	"	Elklick Run
MC	"	Horseshoe Run
MC	"	Maxwell Run
MC	"	Red Creek
MC	"	Slip Hill Mill Branch
MC	"	Thomas Park (Impoundment)
MC	"	Blackwater River (Above Davis)
MC	Randolph	Camp Five Run
MC	"	Dry Fork (Above Otter Creek)
MC	"	Glady Fork
MC	"	Laurel Fork
MC	"	Gandy Creek (Above Whitmer)
MC	"	East Fork Glady Fork (Above C & P Compressor Station)
MC	Randolph	Shavers Fork (Above Little Black Fork)
MC	"	Three Spring Run
MC	"	Spruce Knob Lake (Impoundment)
MW	Harrison	Dog Run (Pond)
MW	Lewis	Stonecoal
MT	Barbour	Brushy Fork (Above Valley Furnace)
MT	"	Teter Creek Lake (Impoundment)
MT	"	Mill Run
MT	Taylor-Barbour	Tygart Lake Tailwaters (Above Route

MT	Preston	119 Bridge)
MT	Randolph	Roaring Creek (Above Little Lick Branch)
MT	"	Tygart River (Above Huttonsville)
MT	"	Elkwater Fork
		Big Run
MTB	Upshur-Randolph-Lewis	Right Fork Buckhannon River
MTB	Upshur	Buckhannon River (Above Beans Mill)
MTB	Upshur	French Creek
MTB	Upshur-Randolph	Left Fork Right Fork
MTN	Upshur	Right Fork Middle Fork River
MTM	Randolph	Middle Fork River (Above Cassity)
MY	Preston	Rhine Creek
Little Kanawha River		
LK	Upshur	Left Fork-Right Fork Little Kanawha River)
LK	Upshur-Lewis	Little Kanawha River (Above Wildcat)
Kanawha river		
KE	Braxton	Sutton Reservoir
KE	"	Sutton Lake Tailwaters (Above Route 38/5 Bridge)
KE	Webster	Back Fork
KE	"	Desert Fork
KE	"	Fall Run
KE	"	Laurel Fork
KE	"	Left Fork Holly River
KE	"	Sugar Creek
KE	"	Elk River (Above Webster Springs)
KC	Raleigh	Stephens Lake (Impoundment)
KC	"	Marsh Fork (Above Sundial)
KG	Nicholas	Summersville Reservoir (Impoundment)
KG	"	Summersville Tailwaters (Above Collison Creek)
KG	Nicholas	Deer Creek
KG	Randolph-Webster	Gauley River (Above Moust Coal Tipple)
KG	Fayette	Glade Creek
KG	Nicholas	Hominy Creek
KG	"	Anglins Creek
KG	Greenbrier	Big Clear Creek
KG	"	Little Clear Creek and Laurel Run
KG	"	Meadow Creek
KG	Fayette	Wolf Creek
KG	Nicholas	Cherry River
KG	Greenbrier-Nicholas	Laurel Creek
KG	" "	North Fork Cherry River

KG	Greenbrier	Summit Lake (Impoundment)
KG	Greenbrier-Nicholas	South Fork Cherry River
KGC	Pocahontas-Webster- Nicholas	Cranberry River
KGC	Pocahontas	South Fork Cranberry River
KGW	Pocahontas	Tea Creek
KGW	Pocahontas-Webster	Williams River (Above Dyer)
KN	Raleigh	Glade Creek
KN	Summers	Meadow Creek
KN	Fayette	Mill Creek
KN	"	Laurel Creek (Above Cotton Hill)
KN	Raleigh	Pinch Creek
KN	Monroe	Rich Creek
KN	"	Turkey Creek
KN	Fayette	Dunloup Creek (Downstream from Harvey Sewage Treatment Plant)
KN	Mercer	East River (Above Kelleysville)
KN	"	Pigeon Creek
KN	Monroe	Laurel Creek
KNG	Monroe	Kitchen Creek (Above Gap Mills)
KNG	Greenbrier	Culverson Creek
KNG	"	Milligan Creek
KNG	Greenbrier-Monroe	Second Creek (Rt. 219 Bridge to Nickell's Mill)
KNG	Greenbrier	North Fork Anthony Creek
KNG	"	Spring Creek
KNG	"	Anthony Creek (Above Big Draft)
KNG	Pocahontas	Watoga Lake
KNG	"	Beaver Creek
KNG	"	Knapp's Creek
KNG	"	Hills Creek
KNG	"	North Fork Deer Creek (Above Route 28/5)
KNG	"	Deer Creek
KNG	"	Sitlington Creek
KNG	"	Stoney Creek
KNG	"	Swago Creek
KNG	"	Buffalo Fork (Impoundment)
KNG	"	Seneca (Impoundment)
KNG	"	Greenbrier River (Above Hosterman)
KNG	"	West Fork-Greenbrier River (Above the impoundment at the tannery)
KNG	"	Little River-East Fork
KNG	"	Little River-West Fork
KNG	"	Five Mile Run
KNG	"	Mullenax Run
KNG	"	Abes Run
KNB	Mercer	Marsh Fork

KNB	"	Camp Creek
OG	Wyoming	Pinnacle creek
BST	McDowell	Dry Fork (Above Canebrake)

APPENDIX B

This list contains known waters used as public water supplies and is not intended to exclude any waters as described in Section 6.2.

<u>River Basin</u>	<u>County</u>	<u>Operating Company</u>	<u>Source</u>
Shenandoah River			
S	Jefferson	Charlestown Water	Shenandoah River
Potomac River			
P	Jefferson	3-M Company	Turkey Run
P	"	Shepherdstown Water	Potomac River
P	"	Harpers Ferry Water	Elk Run
P	Berkeley	DuPont Potomac River Works	Potomac River
P	"	Berkeley County PSD	Le Feure Spring
P	"	Opequon PSD	Quarry Spring
P	"	Hedgesville PSD	Speck Spring
P	Morgan	Paw Paw Water	Potomac River
PSB	Hampshire	Romney Water	South Branch Potomac River
PSB	"	Peterkin Conference Center	Mill Run
PSB	Hardy	Moorefield Municipal Water	South Fork River
PSB	Pendleton	U.S. Naval Radio Sta.	South Fork River
PSB	"	Circleville Water Inc.	North Fork of South Branch, Potomac River
PSB	Grant	Mountain Top PSD	Mill Creek, Impoundment
PSB	"	Petersburg Municipal Water	South Branch, Potomac River
PNB	Grant	Island Creek Coal	Impoundment
PNB	Mineral	Piedmont Municipal Water	Savage River, Maryland
PNB	"	Keyser Water	New Creek
PNB	"	Fort Ashby PSD	Lake
Monongahela River			
M	Monongalia	Morgantown Water Comm.	Colburn Creek & Monongahela River
M	"	Morgantown Ordinance Works	Monongahela River
M	Preston	Preston County PSD	Deckers Creek
M	Monongalia	Blacksville # 1 Mine	Impoundment
M	"	Loveridge Mine	Impoundment
M	"	Consolidation Coal Co.	Impoundment
M	Preston	Mason Town Water	Block Run
MC	Preston	Fibair Inc.	Impoundment

MC	Monongalia	Cheat Neck PSD	Cheat Lake
MC	"	Lakeview County Club	Cheat Lake-Lake Lynn
MC	"	Union Districk PSD	Cheat Lake-Lake Lynn
MC	"	Cooper's Rock State Park	Impoundment
MC	Preston	Kingwood Water	Cheat River
MC	"	Hopemount State Hosp.	Snowy Creek
MC	"	Rowlesburg Water	Keyser Run & Cheat River
MC	"	Albright	Cheat River
MC	Tucker	Parsons Water	Shavers & Elk Lick Fork
MC	"	Thomas Municipal	Thomas Reservoir
MC	"	Hamrick PSD	Dry Fork
MC	"	Douglas Water System	Long Run
MC	"	Davis Water	Blackwater River
MC	"	Hambleton Water System	Roaring Creek
MC	"	Canaan Valley State Park	Blackwater River
MC	Pocahontas	Cheat Mt. Sewer	Shavers Lake
MC	"	Snowshoe Co. Water	Shavers Fork
MC	Randolph	Womelsdorf Water	Yokum Run
MW	Harrison	Lumberport Water	Jones Run
MW	"	Clarksburg Water Bd.	West Fork River
MW	"	Bridgeport Mun. Water	Deacons & Hinkle Creek
MW	"	Salem Water Board	Dog Run
MW	"	West Milford Water	West Fork Ricer
MW	Lewis	W.V. Water-Weston District	West Fork River
MW	"	Jackson's Mill Camp	Impoundment
MW	"	West Fork River PSD	West Fork River
MW	"	Kennedy Compressor Station	West Fork River
MW	"	Jane Lew Water Comm.	Hackers Creek
MW	Harrison	Bel-Meadow Country Club	Lake
MW	"	Harrison Power Station	West Fork River
MW	"	Oakdale Portal	Impoundment
MW	"	Robinson Port	Impoundment
MT	Marion	Fairmont Water Comm.	Tygart River
MT	"	Mannington Water	Impoundment
MT	"	Monongah Water Works	Tygart River
MT	"	Eastern Assoc. Coal Corp.	Impoundment
MT	"	Four States Water	Impoundment
MT	Harrison	Shinnston Water Dept.	Tygart River
MT	Taylor	Grafton Water	Tygart River-Lake
MT	Barbour	Phillippi Water	Tygart River
MT	"	Bethlehem Mines Corp.	Impoundment
MT	"	Belington Water Works	Tygart River & Mill Run Lake
MT	Randolph	Elkins Municipal Water	Tygart River

MT	"		Beverly Water	Tygart river
MT	"		Valley Water	Tygart River
MT	"		Huttonsville Medium Security Prison	Tygart River
MT	"		Mill Creek Water	Mill Creek
MTB	Upshur		Buckhannon Water Board	Buckhannon River
Ohio River				
O	Zone 1	Hancock	Chester Water & Sewer	Ohio River
O	"	Brooke	City of Weirton	Ohio River
O	"	"	Weirton Steel Division	Ohio River
O	"	Ohio	Wheeling Water	Ohio River
O	"	Tyler	Sistersville Mun. Water	Ohio River
O	"	Pleasants	Pleasants Power Station	Ohio River
O	"	Cabel	Huntington Water Corp.	Ohio River
O	"	Marshall	Mobay Chemical Co.	Ohio River
O	"	Wood	E. I. DuPont	Ohio River
O	Zone 2	Marshall	Cameron Water	Glass House Hollow
O	"	"	New Urindahana Water System	Wheeling Creek
O	"	Wetzel	Pine Grove Water	North Fork, Fishing Creek
O	"	Marshall	Consolidated Coal Co.	Impoundment
O	"	Tyler	Middlebourne Water	Middle Island Creek
O	"	Doddridge	West Union Mun. Water	Middle Island Creek
O	"	Mason	Hidden Valley Country	Lake/Impoundment
O	"	Jackson	Ripley Water	Mill Creek
IO	"	Wayne	Wayne Municipal Water	Twelve Pole Creek
O	"	"	East Lynn Lake	East Lynn Lake
O	Zone 2	Wayne	Monterey Coal Co.	Impoundment
Little Kanawha				
LK		Wood	Claywood Park PSD	Little Kanawha River
LK		Calhoun	Grantsville Mun. Water	Little Kanawha River
LK		Gilmer	Glenville Utility	Little Kanawha River
LK		"	Consolidated Gas Compressor	Steer Creek
LK		Braxton	Burnsville Water Works	Little Kanawha river
LK		Roane	Spencer Water	Spring Creek & Mile Tree Reservoir
LK		Wirt	Elizabeth Water	Little Kanawha River
LKH		Ritchie	Cairo Water	North Fork Hughes River
LKH		"	Harrisville Water	North Fork Hughes River
LKH		"	Pennsboro Water	North Fork Hughes River
Kanawha River				
K		Putnam	Buffalo Water	Cross Creek

K	"	Winfield Water	Poplar Fork & Crooked Creek
K	"	South Putnam PSD	Poplar Fork & Crooked Creek
K	Kanawha	Cedar Grove Water	Kanawha River
K	"	Pratt Water	Kanawha River
K	Fayette	Armstrong PSD PO-K1-CO-EL	Kanawha River & Gum Hollow
K	"	Kanawha Water Co.- Beards Fork	Unnamed Tributary Kanawha River
K	Kanawha	Midland Trail School	Impoundment
k	"	Cedar Coal Co.	Impoundment
K	Fayette	Elkem Metals Co.	Kanawha River
K	"	Deepwater PSD	Kanawha River
K	"	Kanawha Falls PSD	Kanawha River
K	"	W.V. Water-Montgomery	Kanawha River

Pocatalico river

KP	Kanawha	Sissonville PSD	Pocatalico River
KP	Roane	Walton PSD	Silcott Fork Dam

Coal River

KC	Kanawha	St. Albans Water	Coal River
KC	"	Washington PSD	Coal River
KC	Lincoln	Lincoln PSD	Coal River
KC	Boone	Coal River PSD	Coal River
KC	"	Whitesville PSD	Coal River
KC	Raleigh	Armco Mine 10	Marsh Fork
KC	"	Armco Steel-Montc. Stickney	Coal River
KC	Raleigh	Peabody Coal	Coal River
KC	"	Stephens Lake Park	Lake Stephens
KC	Boone	W.V. Water-Madison Dist.	Little Coal River
KC	"	Van PSD	Pond Fork
KC	Raleigh	Consol. Coal Co.	Workmans Creek
KC	Boone	Water Ways Park	Coal River

Elk River

KE	Kanawha	Clendenin Water	Elk River
KE	"	W.V. Water-Kanawha Valley District	Elk River
KE	Kanawha	Pinch PSD	Elk River
KE	Clay	Clay Waterworks	Elk River
KE	"	Prociuous PSD	Elk River
KE	Braxton	Flatwoods-Canoe Run PSD	Elk River
KE	"	Sugar Creek PSD	Elk River
KE	"	W.V. Water-Gassaway Dist.	Elk River
KE	"	W.V. Water-Sutton Dist.	Elk River
KE	Webster	W.V. Water-Webster Springs	Elk River
KE		Holly River State Park	Holly River

Gauley River

KG	Nicholas	Craigsville PSD	Gauley River
KG	"	Summersville Water	Impoundment/Muddlety Creek
KG	"	Nettie-Leivasy PSD	Jim Branch
KG	Webster	Cowen PSD	Gauley River
KG	Nicholas	Wilderness PSD	Anglins Creek & Meadow River
KG	"	Richwood Water	North Fork Cherry River

New river

KN	Fayette	Ames Heights Water	Mill Creek
KN	"	Mt. Hope Water	Impounded Mine (Surface)
KN	"	Ansted Municipal Water	Mill Creek
KN	"	Fayette Co. Park	Impoundment
KN	"	New River Gorge Campground	Impoundment
KN	"	Fayetteville Water	Wolfe Creek
KN	Raleigh	Beckley Water	Glade Creek
KN	"	Westmoreland Coal Co.	Farley Branch

Bluestone River

KNB	Summers	Jumping Branch-Nimitz	Mt. Valley Lake
KNB	"	Bluestone Conf. Center	Bluestone Lake
KNB	"	Pipestem State Park	Impoundment
KNB	Mercer	Town of Athens	Impoundment
KNB	"	Bluewell PSD	Impoundment
KNB	"	Bramwell Water	Impoundment
KNB	"	Green Valley-Glenwood PSD	Bailey Reservoir
KNB	"	Kelly's Tank	Spring
KNB	"	W.V. Water Princeton	Impoundment/Brusch Creek
KNB	"	Lashmeet PSD	Impoundment
KNB	"	Pinnacle Water Assoc.	Mine
KNB	"	W.V. Water Bluefield	Impoundment

Greenbrier River

KNG	Summers	W.V. Water Hinton	Greenbrier River & New River
KNG	"	Big Bend PSD	Greenbrier River
KNG	Greenbrier	Alderson Water Dept.	Greenbrier River
KNG	"	Ronceverte Water	Greenbrier River
KNG	"	Lewisburg Water	Greenbrier river
KNG	Pocahontas	Denmar State Hospital Water	Greenbrier River
KNG	"	City of Marlinton Water	Knapp Creek
KNG	"	Cass Scenic Railroad	Leatherbark Creek
KNG	"	Upper Greenbrier PSD	Greenbrier River

KNG	"	The Hermitage	Greenbrier
Guyandotte River			
OG	Cabell	Salt Rock PSD	Guyandotte River
OG	Lincoln	West Hamlin Water	Guyandotte River
OG	Logan	Logan Water Board	Guyandotte River
OG	"	Man Water Works	Guyandotte River
OG	"	Buffalo Creek PSD	Buffalo Creek/ Mine/Wells
OG	Logan	Chapmanville	Guyandotte River
OG	"	Logan PSD	Whitman Creek/ Guyandotte River
OG	Mingo	Gilbert Water	Guyandotte River
OG	Wyoming	Oceana Water	Laurel Fork
OG	"	Glen Rogers PSD	Impoundment
OG	"	Pineville Water	Pinnacle Creek/ Guyandotte River
OG	Raleigh	Raleigh Co. PSD-Amigo	Tommy Creek
OMG	Cabell	Milton Water Works	Guyandotte River
OMG	"	Culloden PSD	Indian Fork Creek
OMG	Putnam	Hurricane Municipal Water	Impoundment
OMG	"	Lake Washington PSD	Lake Washington
Big Sandy River			
BS	Wayne	Kenova Municipal Water	Big Sandy River
BS	"	Fort Gay Water	Tug Fork
BST	Mingo	Kermit Water	Tug Fork
BST	"	Matewan Water	Tug Fork
BST	"	A & H Coal Co., Inc.	Impoundment
BST	"	Williamson Water	Impoundment
BST	McDowell	City of Welch	Impoundment/Wells
BST	"	City of Gary	Impoundment/Mine

APPENDIX C
CATEGORY E-3 - POWER PRODUCTION

This list contains known power production facilities and is not intended to exclude any waters as described in Section 6.6.c.

<u>River Basin</u>	<u>County</u>	<u>Station Name</u>	<u>Operating Company</u>
Monongahela River			
M	Monongalia	Fort Martin Power Station	Monongahela Power
M	Marion	Rivesville Station	Monongahela Power
MC	Preston	Albright Station	Monongahela Power
Potomac	Grant	Mt. Storm Power Station	Virginia Electric & Power Company
Ohio River			
O - Zone 1	Wetzel	Hannibal (Hydro)	Ohio Power
O " "	Marshall	Kamer	Ohio Power
O " "	"	Mitchell	Ohio Power
O " "	Pleasants	Pleasants Station	Monongahela Power
O " "	"	Willow Island Station	Monongahela Power
O " "	Mason	Phillip Sporn Plant	Central Operating (AEP)
O " "	"	Racine (Hydro)	Ohio Power
O " "	"	Mountaineer	Appalachian Power Co.
K	Putnam	Winfield (Hydro)	Appalachian Power Co.
K	Kanawha	Marmet (Hydro)	Appalachian Power Co.
K	"	London (Hydro)	Appalachian Power Co.
K	"	Kanawha River	Appalachian Power Co.
K	"	John E. Amos	Appalachian Power Co.

APPENDIX D
CATEGORY C - WATER CONTACT RECREATION

This list contains waters known to be used for water contact recreation and is not intended to exclude any waters as described in Section 6.4.

<u>River Basin</u>	<u>Stream Code</u>	<u>Stream</u>	<u>County</u>
Shenandoah	S	Shenandoah River	Jefferson
Potomac	P	Potomac River	Jefferson
	P	" "	Hampshire
	P	" "	Berkeley
	P	" "	Morgan
	P-9	Sleepy Creek & Meadow Branch	Berkeley
	P-9-G-1	North Fork of Indian Run	Morgan
South Branch	PSB	South Branch of Potomac River	Hampshire
	PSB	" "	Hardy
	PSB	" "	Grant
	PSB-21-X	Hawes Run	Pendleton
	PSB-25-C-2	Spring Run	Grant
	PSB-28	North Fork South Branch Potomac River	Grant
North Branch	PNB	North Branch of Potomac River	Mineral
	PNB-4-EE	North Fork Patterson Creek	Grant
	PNB-7-H	Linton Creek	Grant
	PNB-17	Stoney River-Mt. Storm Lake	Grant
	PC	Cacapon River	Hampshire
Monongalia			
Cheat	MC	Cheat Lake/Cheat river	Monongalia/Preston
	MC	Alpine Lake	Preston
	MC-6	Coopers Rock Lake/Quarry Run	Monongalia
	MC-12	Big Sandy Creek	Preston
	MSC	Shavers Fork	Randolph
	MTN	Middle Fork River	Barbour/Randolph/Upshur
	MW	West Fork River	Harrison

	MW-18	Stonecoal Creek/ Stonecoal Lake	Lewis
Ohio	O	Ohio River	Brooke/Cabell/ Hancock/Jackson/ Marshall/Mason/ Ohio/Pleasants/ Tyler/Wayne/Wood/ Wetzel Wayne
	O-2-H	Beech Fork of Twelvepole Creek/Beech Fork Lake	
	O-2-Q	East Fork of Twelvepole Creek/East Lynn Lake	Wayne
	O-3	Fourpole Creek	Cabell
	O-21	Old Town Creek/ McClintic Ponds	Mason
	Omi	Middle Island Creek/ Crystal Lake	Doddridge
	OG	Guyandotte River	Cabell
	OG	Guyandotte River/ R. D. Bailey Lake	Wyoming
	OGM	Mud River	Cabell
Little Kanawha	LK	Little Kanawha River/ Burnsville Lake	Braxton
Kanawha	K	Kanawha River	Fayette/Kanawha/ Mason/Putnam
	K-1	Unnamed Tributary Krodel Lake	Mason
	KC	Coal River	Kanawha
	KC-45-Q	Stephens Branch/ Lake Stephens	Raleigh
	KE	Elk River	Kanawha/Clay/ Braxton/Webster/ Randolph
	KE	Sutton lake	Braxton
	KN	New River	Fayette/Raleigh/ Summers
	KN-26-F	Little Beaver Creek	Raleigh
	KNG	Greenbrier River	Greenbrier/Pocahontas/ Summers

KNG-23-E-1	Little Devil Creek/ Moncove Lake	Monroe
KNG-28 KNG-28-P	Anthony Creek Meadow Creek/ Lake Sherwood	Greenbrier Greenbrier
KNB	Bluestone River/ Bluestone Lake	Summers
KG KG	Gauley River Gauley River/ Summersville Lake	Webster Nicholas
KGW	Williams River	Webster

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	C ³	A ⁴			
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.1 Aluminum (ug/l) Not to exceed:(See 7.2.d.B(b))	750		750				
8.2 Ammonia (ug/l): Un-ionized ammonia (UA) shall be determined from values of total ammonia-N, pH and temperature according to the following equation: $UA = \frac{1.2(\text{total ammonia-N})}{1 + 10^{(pk_a - pH)}}$ where $pk_a = 0.0902 + 2730/(273.2 + T)$ and $T = \text{temperature } (^{\circ}C)$ The concentration of un-ionized ammonia (NH ₃) shall not exceed 50 ug/l.						50	

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.2.1 Acute and chronic aquatic life criteria for ammonia shall be determined using the tables and formulae in the National Criteria section of USEPAs Ambient Water Quality Criteria for Ammonia - 1984 (EPA 440/5-85-001, January 1985)	X	X	X	X			
8.3 Antimony (ug/l) Not to exceed:					4300	14	
8.4 Arsenic ^b (ug/l) Not to exceed:					50	50	100
8.4.1 Dissolved Trivalent Arsenic Not to exceed:	360 x CF ⁵	190 x CF ⁵	360 x CF ⁵	190 x CF ⁵			
8.5 Barium (mg/l) Not to exceed:						1.0	
8.6 Beryllium (ug/l)	130		130			.0077	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	C ³	A ⁴			
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²	C ³	A ⁴	ALL OTHER USES	
8.7 Cadmium (ug/l) Hardness Soluble Cd (mg/l CaCO ₃) 0 - 35 1.0 36 - 75 2.0 76 - 150 5.0 > 150 10.0						X	
8.7.1 Not to exceed 10 ug/l in the Ohio River (O Zone 1) main stem (see section 7.1.d)						X	
8.7.3 The four-day average concentration of total recoverable dissolved cadmium shall not exceed the value determined by the following equation: $Cd = e^{(0.7852[\ln(\text{hardness})]-3.828)} \times CP^5$		X		X			
8.7.4 The one-hour average concentration of total recoverable dissolved cadmium shall not exceed the value determined by the following equation: $Cd = e^{(1.128[\ln(\text{hardness})]-3.828)} \times CP^5$	X		X				
8.8 Chloride (mg/l)	860	230	860	230	250	250	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	C ³	A ⁴			
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.9 Copper (ug/l) Not to exceed:							1000	
8.9.1 The four-day average concentration of total recoverable dissolved copper shall not exceed the value determined by the following equation ^a : $Cu = e^{(0.8545[\ln(\text{hardness})]-1.465)} \times CP^5$		X		X				
8.9.2 The one-hour average concentration of total recoverable dissolved copper shall not exceed the value determined by the following equation ^a : $Cu = e^{(0.9422[\ln(\text{hardness})]-1.464)} \times CP^5$	X		X					
8.10 Cyanide (ug/l) (As free cyanide HCN+CN ⁻) Not to exceed:	22	5.0	22	5.0	5.0	5.0		
8.11 Dissolved Oxygen ^c : not less than 5 mg/l at any time.	X				X	X	X	X
8.11.1 Kanawha River main stem, Zone 1 - Not less than 4.0 mg/l at any time.	X							

APPENDIX E

PARAMETER	USE DESIGNATION							
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES	
	B1, B4	CHRON ²	ACUTE ¹	CHRON ²	C ³	A ⁴		
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²				

8.11.2 Ohio River main stem - the average concentration shall not be less than 5.0 mg/l per calendar day and shall not be less than 4.0 mg/l at any time or place outside any established mixing zone - provided that a minimum of 5.0 mg/l at any time is maintained during the April 15-June 15 spawning season.								
8.11.3. Not less than 7.0 mg/l in spawning areas and in no case less than 6.0 mg/l at any time.	X							
8.12 Fecal Coliform: Maximum allowable level of fecal coliform content for Primary Contact Recreation (either MPN or MF) shall not exceed 200/100 ml as a monthly geometric mean based on not less than 5 samples per month; nor to exceed 400/100 ml in more than ten percent of all samples taken during the month.			X			X	X	

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.12.1 Ohio River main stem (zone 1) - During the non-recreational season (November through April only) the maximum allowable level of fecal coliform for the Ohio River (either MPN or MF) shall not exceed 2000/100 ml as a monthly geometric mean based on not less than 5 samples per month.					X		
8.13 Fluoride (mg/l) Not to exceed:						1.4	
8.13.1 Not to exceed 2.0 for category D uses							X
8.14. <u>Dissolved</u> Hexavalent chromium (ug/l) Not to exceed:	16 x CF ⁵	11 x CF ⁵	16 x CF ⁵	7.2 x CF ⁵		50	
8.15 Iron ⁶ (mg/l) Not to exceed:		1.5		0.5		1.5	
8.16 Lead (ug/l) Not to exceed:						50	

APPENDIX E

PARAMETER	USE DESIGNATION							
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴				
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²				

8.16.1 The four-day average concentration of total recoverable dissolved lead shall not exceed the value determined by the following equation ^a : $Pb = e^{(1.273 \ln(\text{hardness}) - 4.705)} \times CF^5$		X		X			
8.16.2 The one-hour average concentration of total recoverable dissolved lead shall not exceed the value determined by the following equation ^a : $Pb = e^{(1.273 \ln(\text{hardness}) - 1.46)} \times CF^5$	X		X				
8.17 Manganese (mg/l) Not to exceed:						1.0	
8.17.1 Effluent limitations regarding Mn shall not apply where the applicant certifies the stream or stream segment is not category A water.							
8.18 Mercury The total organism body burden of any aquatic species shall not exceed 0.5 ug/g as methylmercury.					0.5	0.5	
8.18.1 Total mercury in any unfiltered water sample shall not exceed (ug/l):	2.4		2.4		0.15	0.14	

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			
8.18.2 Methylmercury (water column) Not to exceed (ug/l):		.012	.012			
8.19 Nickel (ug/l) Not to exceed:				4600	510	
8.19.1 The four-day average concentration of dissolved nickel shall not exceed the value determined by the following equation: $Ni = e^{(0.846(\ln(\text{hardness})+1.1645))} \times CP^5$		X			X	
8.19.2 The one-hour average concentration of total recoverable dissolved nickel shall not exceed the value determined by the following equation: $Ni = e^{(0.846(\ln(\text{hardness})+1.360))} \times CP^5$	X		X			
8.20 Nitrate (as Nitrate-N) (mg/l)					10	
8.21 Nitrite (as Nitrite-N) (mg/l) Not to exceed:	1.0		.060			
8.22 Organics						
Chlordane ⁶ (ng/l)	2400	4.3	2400	4.3	0.46	0.46

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C ³	A ⁴	
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²				

DDT ^b (ng/l)	1100	1.0	1100	1.0	0.024	0.024	0.024
Aldrin ^b (ng/l)	3.0		3.0		0.071	0.071	0.071
Dieldrin ^b (ng/l)	2500	1.9	2500	1.9	0.071	0.071	0.071
Endrin (ng/l)	180	2.3	180	2.3	2.3	2.3	2.3
Toxaphene ^b (ng/l)	730	0.2	730	0.2	0.73	0.73	0.73
PCB ^b (ng/l)		14.0		14.0	0.045	0.044	0.045
Methoxychlor (ug/l)		0.03		0.03	0.03	0.03	0.03
Dioxin (2,3,7,8- TCDD) ^b (pg/l)					0.014	0.013	0.014
Acrylonitrile ^b (ug/l)					0.66	0.059	
Benzene ^b (ug/l)					71	0.66	
1,2-dichlorobenzene (mg/l)					17	2.7	
1,3-dichlorobenzene (mg/l)					2.6	0.4	
1,4-dichlorobenzene (mg/l)					2.6	0.4	
2,4-dinitrotoluene ^b (ug/l)					9.1	0.11	
Hexachlorobenzene ^b (ng/l)					0.77	0.72	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	C ³	A ⁴			
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²				

Carbon tetrachloride ^b (ug/l)					4.4	0.25	
Chloroform ^b (ug/l)	28,900	1,240	28,900	1,240	470	0.19	
Halomethanes (ug/l)					15.7	0.19	
1,2-dichloroethane ^b (ug/l)					99	0.035	
1,1,1-trichloroethane ^b (mg/l)						12	
1,1,2,2-tetrachloroethane (ug/l)		2400		2400	11	0.17	
1,1-dichloroethylene ^b (ug/l)					3.2	0.03	
Trichloroethylene ^b (ug/l)					81	2.7	
Tetrachloroethylene ^b (ug/l)					8.85	0.8	
Toluene ^b (mg/l)					200	6.8	
Polynuclear Aromatic Hydrocarbons (PAH) ^b (ug/l)					0.031	.0028	
Phthalate esters (ug/l)		3.0		3.0			
Vinyl chloride ^b (chloroethene)(ug/l)					525	2.0	
alpha-BHC (alpha- Hexachloro-cyclohexane) ^b (ug/l)					0.013	.0039	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	CHRON ²	B2	CHRON ²	C ³	A ⁴	
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

beta-BHC(beta- Hexachloro-cyclohexane) ^b (ug/l)					0.046	0.014	
gamma-BHC (gamma- Hexachloro-cyclohexane) ^b (ug/l)	2.0	0.08	2.0	0.08	0.063	0.019	
Chlorobenzene (mg/l)					21	0.68	
Ethylbenzene (mg/l)					29	3.1	
Heptachlor ^b (ng/l)	520	3.8	520	3.8	0.21	0.21	
2-methyl-4,6- Dinitrophenol (ug/l)					765	13.4	
Fluoranthene (ug/l)					370	300	
8.22.1 The organic chemicals listed in §8.22 shall not exceed the specified water quality criteria. When the specified criteria are less than the practical laboratory quantification level, instream values will be calculated from discharge concentrations and flow rates and from fish body burden, where applicable.							

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	CHRON ²	B2	C ³		A ⁴
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.22.2 The following body burden criteria shall not be exceeded in edible tissues of fish: Parameter Body Burden Chlordane 1.0 (ug/g) DDT 0.1 (ug/g) Aldrin - Dieldrin 0.3 (ug/g) Endrin 0.3 (ug/g) Toxaphene 1.0 (ug/g) PCB 2.0 (ug/g) Dioxin 6.4 (pg/g)						
8.23 pH ^e No values below 6.0 nor above 9.0. Higher values due to photosynthetic activity may be tolerated.	X	X	X	X	X	X
8.24 Phenol (ug/l) (except Category A) Not to exceed:	10,200	2,560	10,200	2,560		3.5 mg/l

APPENDIX E

PARAMETER	USE DESIGNATION							
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES	
	B1, B4		B2		C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²					

8.25 Radioactivity: Gross Beta activity not to exceed 1000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.	X		X		X	X	X
8.25.1 Gross total alpha particle activity (including radium-226 but excluding radon and uranium shall not exceed 15 pCi/l and combined radium-226 and radium-228 shall not exceed 5pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved particle activity does not exceed 5pCi/l; the concentration of tritium shall not exceed 20,000 pCi/l; the concentration of total strontium-90 shall not exceed 8 pCi/l in the Ohio River main stem.	X		X		X	X	X
8.26 Selenium (ug/l) Not to exceed:	20	5	20	5		10	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	B2	C ³	A ⁴			
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²				

8.27 Silver							
<u>Hardness</u>	<u>Silver (ug/l)</u>						
0-50	1						
51-100	4						
101-200	12			X			X
>201	24						
8.27.1	1						
0-50	4						
51-100	12						
101-200	24						
201-400	30						
401-500	43	X					
501-600							
8.27.2 The one-hour average concentration of total recoverable dissolved silver shall not exceed the value determined by the following equation: $A_g = e^{(1.72[\ln(\text{hardness})] - 6.52)}$ X CP ⁵		X					
8.28 Temperature Temperature rise shall be			X				

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			
limited to no more than 5°F above natural temperature, not to exceed 87°F at any time during months of May through November and not to exceed 73°F at any time during the months of December through April. During any month of the year, heat should not be added to a stream in excess of the amount that will raise the temperature of the water more than 5°F above natural temperature. In lakes and reservoirs, the temperature of the epilimnion should not be raised more than 3°F by the addition of heat of artificial origin. The normal daily and seasonal temperature fluctuations that existed before the addition of heat due to other natural causes should be maintained.						

APPENDIX E

PARAMETER	USE DESIGNATION																				
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES														
	B1, B4	B2	C ³	A ⁴																	
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²																		
8.28.1 For the Kanawha River Main Stem (K-1): Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 90°F in any case.		X																			
8.28.2 For the Bluestone R (KNB), Bluestone Lake (KN-60) East River (KNE), New River (KN), Gauley R. (KG) and Greenbrier River (KNG): Temperature rise shall be limited to no more than 5°F above natural temperature, not to exceed 81°F at any time during the months of May through November and not to exceed 73°F at any time during December through April.			X																		
8.28.3 No heated effluents will be discharged in the vicinity of spawning areas. The maximum temperatures for cold waters are expressed in the following table: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Daily</th> <th>Hourly</th> </tr> <tr> <th></th> <th>Mean °F</th> <th>Max °F</th> </tr> </thead> <tbody> <tr> <td>Oct-Apr</td> <td>50</td> <td>55</td> </tr> <tr> <td>Sep-May</td> <td>58</td> <td>62</td> </tr> <tr> <td>Jun-Aug</td> <td>66</td> <td>70</td> </tr> </tbody> </table>		Daily	Hourly		Mean °F	Max °F	Oct-Apr	50	55	Sep-May	58	62	Jun-Aug	66	70			X			
	Daily	Hourly																			
	Mean °F	Max °F																			
Oct-Apr	50	55																			
Sep-May	58	62																			
Jun-Aug	66	70																			

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.28.4 For Ohio River Main Stem (01)(Section 7.1.d):									
Dates	Period	Inst.							
	Ave.	Max.							
Jan 1-31	45°F	50°F							
February	45	50							
March 1-15	51	56							
March 16-31	54	59							
April 1-15	58	64							
April 16-30	64	69							
May 1-15	68	73							
May 16-31	75	80							
June 1-15	80	85							
June 16-30	83	87							
July 1-31	84	89							
August 1-31	84	89							
Sept 1-15	84	87							
Sept 16-30	82	86							
Oct 1-15	77	82							
Oct 16-31	72	77							
Nov 1-30	67	72							
Dec 1-31	52	57	X						
8.29 Thallium (ug/l)						6.3	1.7		

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4	CHRON ²	ACUTE ¹	B2	CHRON ²	C ³	
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			

8.30 Threshold odor ^e Not to exceed a threshold odor number of 8 at 104°F as a daily average.		X		X	X	X	
8.31 Total Residual Chlorine (ug/l - measured by amperometric or equivalent method) Not to exceed:	19	11					
8.31.1 No chlorinated discharge allowed			X				
8.32 Turbidity No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU or less, or have more than a 10% increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs.				X			

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
	ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²		

<p>This limitation shall apply to all earth disturbance activities and shall be determined by measuring stream quality directly above and below the area where drainage from such activity enters the affected stream. Any earth disturbing activity continuously or intermittently carried on by the same or associated persons on the same stream or tributary segment shall be allowed a single net loading increase.</p>		X		X	X	X	
<p>8.32.1 This rule shall not apply to those activities at which Best Management Practices in accordance with the State's adopted 208 Water Quality Management Plan are being utilized, maintained and completed on a site specific basis as determined by the appropriate 208 cooperative or an approved Federal or State Surface Mining Permit is in effect. This exemption shall not apply to Trout Waters.</p>		X		X	X	X	

APPENDIX E

PARAMETER	USE DESIGNATION					
	AQUATIC LIFE		HUMAN HEALTH		ALL OTHER USES	
	B1, B4	B2	C ³	A ⁴		
ACUTE ¹	CHRON ²	ACUTE ¹	CHRON ²			
8.33 The four-day average concentration of total recoverable dissolved zinc shall not exceed the value determined by the following equation: $Zn = e^{(0.3473[\ln(\text{Hardness})-0.7614]} \times \text{CF}^5$		X		X		
8.33.1 The one-hour average concentration of total recoverable dissolved zinc shall not exceed the value determined by the following equation: $Zn = e^{(0.3473[\ln(\text{Hardness})+0.8604]} \times \text{CF}^5$	X		X			

- 1 One hour average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.
- 2 Four-day average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.
- 3 These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted.
- 4 These criteria have been calculated to protect human health from toxic effects through drinking water and fish consumption, unless otherwise noted.
- 5 The appropriate Conversion Factor (CF) is a value used as a multiplier to derive the dissolved aquatic life criterion is found in Appendix E, Table 2.
 - a Hardness as calcium carbonate (mg/l). The minimum hardness allowed for use is this equation shall not be less than 25 mg/l, even if the actual ambient hardness is less than 25 mg/l. The maximum hardness value for use in this equation shall not exceed 400 mg/l even if the actual hardness is greater than 400 mg/l.

- b Known or suspected carcinogen. Human health standards are for a risk level of 10^{-6}
- c May not be applicable to wetlands (B4) - site-specific criteria are desirable.

APPENDIX E
TABLE 2

Conversion Factors

<u>Metal</u>	<u>Acute</u>	<u>Chronic</u>
<u>Arsenic (III)</u>	<u>1.000</u>	<u>1.000</u>
<u>Cadmium</u>	<u>1.136672-[(ln hardness)(0.041838)]</u>	<u>1.101672-[(ln hardness)(0.041838)]</u>
<u>Chromium(VI)</u>	<u>0.982</u>	<u>0.962</u>
<u>Copper</u>	<u>0.960</u>	<u>0.960</u>
<u>Lead</u>	<u>1.46203-[(ln hardness)(0.145712)]</u>	<u>1.46203-[(ln hardness)(0.145712)]</u>
<u>Nickel</u>	<u>0.998</u>	<u>0.997</u>
<u>Silver</u>	<u>0.85</u>	<u>N/A</u>
<u>Zinc</u>	<u>0.978</u>	<u>0.986</u>

APPENDIX F: Procedure for Calculating Instream Concentrations of Bioaccumulative Chemicals of Concern (BCCs) From Fish Tissue Concentrations¹

DATA REQUIRED

*Average concentration of BCC from composite fish tissue samples.²

*Average percent lipids concentration of composite fish tissue samples.

*Average concentration of dissolved organic carbon (DOC)³.

*Average concentration of particulate organic carbon (POC)³.

REFERENCE DATA REQUIRED:

*Log K_{ow} (See Table F-2)

*Default baseline bioaccumulation factor (BAF) for trophic level 3 or 4 (See Table F-1) or a site-specific BAF derived using methods approved by the Chief

CALCULATIONS ⁴:

Calculate lipid normalized BCC concentration in fish tissue:

$$C_l = \frac{C_t}{f_l}$$

¹This procedure is taken from the Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine Bioaccumulation Factors (EPA-820-B-95-005) March 1995.

²In developing sampling protocols for the collection of fish tissues, "Guidance for Assessing Chemical Contaminant Data for Use in Fish Advisories, Volume 1, Fish Sampling and Analysis" Second Edition (#EPA 823-R-95-007, September 1997) shall be used.

³The Chief shall establish the average concentration of DOC and POC from one of the following sources in descending order of priority 1) the fish sampling location, 2) a representative waterbody, or 3) a default value of statewide average. The DOC and POC values used in these calculations must be collected at the same time. (Note convert mg/l to kg/l for use in the calculation below)

⁴Proposed Water Quality Criteria Methodology Revision; Human Health, Draft Environmental Protection Agency, September 20, 1996.

Calculate freely dissolved fraction of BCC in water column:

$$f_{fd} = \frac{1}{(1 + POC \cdot K_{ow}) + (DOC \cdot \frac{K_{ow}}{10})}$$

Express baseline BAF on the basis of total BCC:

$$BAF^{t_1} = BAF^{fd_1} (f_{fd})$$

Calculate instream concentration of BCC:

$$C_w^{t_1} = \frac{C_l}{BAF^{t_1}}$$

DEFINITION OF TERMS:

POC = concentration of particulate organic carbon (kg/l)

DOC = concentration of dissolved organic carbon (kg/l)

K_{ow} = n-octanol water partition coefficient for the chemical

C_l = concentration of the chemical in the wet tissue either whole organism or specified tissue (ug/g).

C_l = lipid-normalized concentration of the chemical in tissues of the biota (ug/g lipid).

C_w^t = total concentration of chemical in the water (kg/l).

f_l = fraction lipid content in the organism.

f_{fd} = fraction of the total chemical that is freely dissolved in the water.

Baseline BAF = generalized BAF for a specific trophic level, based on the total chemical concentration in the water column, and normalized to 100% lipid.

BAF_l^{fd} = BAF (L/kg lipid) reported on the basis of the lipid-normalized concentration of chemical in the biota (kg/kg lipid) divided by the freely dissolved concentration of the chemical in the water (kg/L).

BAF_l^t = BAF (L/kg lipid) reported on the basis of the lipid-normalized concentration of chemical in the biota (kg/kg lipid) divided by the total concentration of the chemical in the water (kg/L).

TABLE F- 1: Human Health BAFs

Chemical	Trophic Level 3	Trophic Level 4	Method ^a
	Baseline BAF (BAF ₁ ^{fd})	Baseline BAF (BAF ₁ ^{fd})	
aldrin	3,035,905	4,600,499	3
chlordan	7,943,000 ^b	6,166,000	1
DDT	34,670,000 ^b	60,260,000	1
dieldrin	4,180,000 ^{c,d}	19,300,000	2
endrin	325,440	247,809	4
PCBs	55,280,000	116,600,000	1
2,3,7,8-TCDD	9,360,000 ^c	9,000,000	2
toxaphene	27,510,000 ^c	21,580,000	1
hexachlorobenzene	2,630,000	2,512,000	

^a The methods used to calculate the recommended baseline BAFs for trophic level 4 were:
 1 = A measured baseline BAF was based on field-measured BAF.
 2 = A predicted baseline BAF was based on field-measured BSAF methodology.
 3 = A predicted baseline BAF was based on a laboratory-measured BCF and a Food-Chain Multiplier (FCM)
 4 = A predicted baseline BAF was based on a predicted BCF and a FCM.

^b This is the geometric mean of measured baseline BAFs for sculpin and alewives, both of which are trophic level 3.

^c Cook, P.M.. 1995 Memorandum to C.E. Stephan. March 7.

^d This is based on the concentrations of dieldrin in sediment and fish. However, the concentration in fish is probably partially due to exposure of the fish to aldrin, which is converted to dieldrin. This BAF is probably not appropriate where there is more or less aldrin.

^e This baseline BAF for trophic level 3 was calculated by using the following equation:

$$BAF_{TL3} = (BAF_{TL4}) (FCM_{TL4})$$

where:

BAF_{TL3} = Baseline BAF for trophic level 3

BAF_{TL4} = Baseline BAF for trophic level 4

FCM_{TL3} = Food-Chain Multiplier for trophic level 3

FCM_{TL4} = Food-Chain Multiplier for trophic level 4

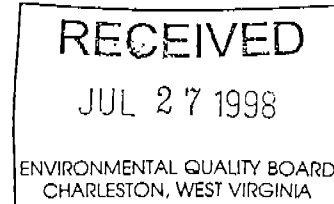
These values needed for this calculation are given in Appendix G of the Great Lakes Water Quality Initiative Technical Support Document for the Procedure to Determine BAFs, EPA-820-B-95-005, March 1995.

TRANSCRIPT OF PUBLIC HEARING

ORIGINAL

BEFORE THE ENVIRONMENTAL QUALITY BOARD
STATE OF WEST VIRGINIA

PUBLIC HEARING ON PROPOSED RULE 46 CSR 1
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS



Transcript of proceedings had at a public hearing
before the Environmental Quality Board on Monday, the
20th day of July, 1998, at 1615 Washington Street,
East, Charleston, West Virginia, commencing at 7:00
p.m..

BEFORE: BETSY DULIN

CHARLES R. JENKINS

DAVID E. SAMUEL

STAFF: LIBBY M. CHATFIELD, Technical Adviser

REBECCA S. CHARLES, Legal Adviser

DATE: JULY 28, 1998

NINETY DAYS FROM THE ABOVE DATE THE
TAPES OF THIS MATTER WILL BE ERASED
SO THAT THEY MAY BE REUSED UNLESS
WE HEAR FROM YOU INDICATING YOUR
REASONS WHY THIS SHOULDN'T BE DONE.

JANET T. SURFACE
145 BELLE ACRES
SCOTT DEPOT, WV 25560
PHONE (304) 757-0622 757-4251

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1 MS. CHATFIELD: Welcome to our public
2 hearing on water quality standards.

3 I'm Libby Chatfield, the Technical
4 Adviser to the Environmental Quality Board. We're here
5 today to hold a public hearing on the Board.

6 We have with us Doctor Bob Jenkins
7 who is from the Morgantown area.

8 We have Betsy Dulin who is currently
9 teaching at Marshall University.

10 And we have Dave Samuel who is
11 recently retired from WVU.

12 We also have with us Becky Charles
13 who is the attorney for the Environmental and Air
14 Quality Boards.

15 We are here tonight to accept
16 comments on proposed changes that the Board has made to
17 the Water Quality Standards Rule which is 46 CSR 1.
18 And the changes fall into two categories. We have
19 proposed an antidegradation implementation guidance
20 document which will be incorporated into the rule as an
21 appendix to the rule.

22 And the other changes that have been

1 proposed will allow the state to use dissolved
2 concentrations of metals rather than the current total
3 metal concentrations for determining compliance with
4 effluent limits in NPDES permits.

5 I think the best way to do this is
6 that if folks have comments on both of those changes,
7 as you come up to speak, you can go ahead and address
8 both issues at the same time so we won't be getting
9 people up and down again.

10 So as soon as we get the sign-in
11 sheet completed--

12 (Pause.)

13 MS. CHATFIELD: First on our list of
14 commenters is Wayne Appleton.

15 MR. WAYNE APPLETON: Good evening.

16 I'm here to talk specifically about
17 the antidegradation policy. I think there are a couple
18 of significant problems with the policy as it's
19 written.

20 DR. SAMUEL: Who are you with?

21 MR. APPLETON: I'm with Dupont. I'm a
22 senior chemist with Dupont. And I also teach at the

1 University of Charleston.

2 And I would like to address
3 specifically the question of chemical condition
4 evaluation which is part of policy 4.C.2.a 1.A which
5 defines significant degradation as an increase in the
6 ambient concentration of any parameter more than five
7 percent over at critical flow.

8 Part of my job function is to bring
9 new chemicals, new processes to the plants. And as I
10 read this particular wording, this tells me that that's
11 something that we can no longer do. If the compound is
12 not already in the list, it's not part of the ambient
13 waters. This would trigger a finding that an increase
14 or the presence of a material would then be a
15 significant degradation. And as I read that, basically
16 that means that there are going to be no more new
17 chemical processes and no more new products for my
18 plant site or for any other plant site.

19 A couple of other problems that I see
20 specifically, the policy document doesn't define which
21 water quality parameters will be measured and which are
22 excluded. There are some specific exclusions but it

1 doesn't define which parameters specifically are to be
2 included. And part of the problem that I have with
3 that is that hypothetically if you read the document
4 and take it at face value, what that says is that any
5 change, even a relatively minor change in chemical
6 process, could trigger an antidegradation ruling. And
7 that could be a significant problem. Again, it's
8 hypothetically because you don't know how it would be
9 interpreted. But if you take the words directly as
10 they are printed, I couldn't make a change in a
11 chemical process. I couldn't bring a new process here.

12 If there were a small inadvertent
13 change to a process that changed the composition of the
14 waste stream, even if it were within permitted levels,
15 I could trigger the antidegradation policy and end up
16 with a significant review. And from a business and
17 development standpoint, I don't think that's what you
18 want to try to accomplish.

19 And that's what I have to say.

20 Thank you.

21 Do you have any questions?

22 DR. SAMUEL: Do you have a written statement

1 for us?

2 MR. APPLETON: No. But I would be happy to
3 provide notes. Thank you.

4 MS. CHATFIELD: The comment period-- The
5 deadline for filing written comments will be tomorrow
6 at five p.m.. And we will accept fax copies. So
7 anyone that has a written statement today, please feel
8 free to turn it in. And, if not, you can provide it
9 tomorrow before five o'clock.

10 Next on the list is Karen Price.

11 MS. KAREN PRICE: Good evening.

12 My name is Karen Price. I'm
13 president of the West Virginia Manufacturers
14 Association.

15 The WVMA is vitally interested in the
16 changes to the water quality standards that have been
17 proposed by the Board, particularly the antidegradation
18 implementation guidance that is found in Appendix G.
19 We believe those changes represent some of the more
20 profound revisions to the standards that have occurred
21 in recent years.

22 After reviewing the antidegradation

1 guidance, we believe the Board would be well served to
2 withdraw it and establish a committee for evaluating
3 all aspects of antidegradation. We do this with the
4 full realization that EPA has asked the Board to
5 develop an antidegradation implementation process and
6 that representatives of the Board and other state
7 agencies have worked to craft the Board's current
8 proposal.

9 The reasons for taking this position
10 are several-fold. First, EPA is currently reevaluating
11 its antidegradation policy, and it is highly likely
12 that it will be changing, perhaps radically, the way in
13 which it expects states to implement their
14 antidegradation policies. If EPA expects to develop
15 revisions to its existing policy, we would be well
16 advised to wait and see how that policy turns out.

17 Second, antidegradation is intended
18 to protect stream uses. Determining what uses apply to
19 streams and the manner in which attainment of those
20 uses is demonstrated has never been clear.

21 Third, while we appreciate the hard
22 work that went into the Board's proposal, we believe

1 that the guidance could benefit from reconsideration.
2 Many parts of the guidance are vague and require
3 actions be taken without specifying which agency is
4 responsible for carrying out those actions. More
5 specificity is needed so that the public is aware of
6 what is required of the agencies that are to implement
7 the Board's antidegradation policy.

8 With regard to the Board's proposal
9 to adopt dissolved criteria for certain metals, we
10 support the change and commend the Board for addressing
11 this issue. We hope that similar dissolved criteria
12 and translators will be adopted for aluminum,
13 manganese, and iron in the near future.

14 Thank you for the opportunity to
15 address you tonight.

16 MS. CHATFIELD: Thank you.

17 Did you have anything in writing to
18 hand in tonight, Karen?

19 MS. PRICE: Yes. I have given it to the
20 reporter.

21 MS. CHATFIELD: You did. Thank you.

22 Tim Albert.

1 MR. TIM ALBERT: I'm Tim Albert. I'm the
2 Environmental Manager for the Dupont, Belle site, and I
3 also serve as the committee chair for the Manufacturers
4 Association water team.

5 I would like to talk to you tonight
6 about the antidegradation implementation rule. I
7 believe that today the EQB and DEP and we as the
8 regulated community are embarking on several of the
9 most critical panels that we have embarked upon in some
10 time. And these are 303-D list development and TMDL
11 development.

12 In essence, we are reassessing the
13 entire water program, the discharge program. Neither
14 of these programs are simple undertakings but instead
15 require the regulator as well as the regulated
16 community to closely evaluate these documents in order
17 to fully understand the impact.

18 Each of these program elements,
19 including the development and implementation of the
20 antidegradation rule, require open and consistent
21 dialogue with all stakeholders in order to yield a
22 product that accomplishes that which it was intended.

1 The product, I believe, is to protect against the
2 degradation of the waters of the state. It would
3 appear, however, that we have not used the stakeholder
4 process or even sat down together and reviewed the data
5 purposefully. It seems instead we have quickly pulled
6 together these programs using data not fully
7 understood, possibly completely not fully developed, or
8 data that is not current in many cases.

9 It would appear to the casual
10 observer that we are rushing ahead of good judgment and
11 science in order to fulfill some report card
12 requirement to implement rules such as the
13 antidegradation implementation rule. As one reads
14 through the antidegradation policy, it appears too
15 vague and too open for interpretation to be a useful
16 tool in dealing even-handedly with the regulated
17 community. Speaking of being even-handed, it seems
18 that the policy will be applied much more strictly to
19 point sources than nonpoint sources. This does not
20 seem fair, especially in light of the ambiguity of the
21 balance of the policy.

22 I would like to talk to the Board

1 about some specific areas of concern. The key to the
2 implementation of Tier 1 is the determination that
3 existing uses apply to water quality in the application
4 of controls to ensure that the appropriate numeric and
5 narrative criteria are met. The permittee must have a
6 clear understanding of how the determination will be
7 made and how that criteria will be used and what
8 controls will be applied and how.

9 The other thing which is somewhat
10 problematic is trading. It is mentioned in the policy
11 but does not seem to be dealt with appropriately, in my
12 opinion. Trading should not normally require that TMDL
13 be done, particularly if the trading is to be done
14 among point sources. Given the enormous resource
15 requirements for TMDL, this requirement will greatly
16 discourage trading opportunities. This is a subtlety
17 of the policy which may not otherwise be understood
18 unless one spends a lot of time poring over this
19 policy.

20 Another sole part of the policy is
21 the mention of a margin of safety. I would like to
22 draw your attention to 4D.2.c. The margin of safety

1 mentioned here should not be used to address
2 uncertainties with proposed nonpoint source controls.
3 An MOS, or margin of safety, is typically used to
4 address only modeling uncertainties.

5 The other thing that is somewhat
6 problematic is, there's absolutely no mention of a
7 provision for temporary short-term increase in Tier 2
8 waters greater than five percent if it can be
9 demonstrated that a certain activity will have an
10 overall environmental benefit, such as in the case of
11 remediation where pump and treat is required.

12 I would like to conclude with a point
13 which I think is of paramount importance to us. I
14 would conclude that some science has been left out of
15 this policy as is evidenced by what seems to be an
16 arbitrary definition of what constitutes significant
17 degradation. The increases in five percent of a
18 parameter as being considered significant has no
19 discernable scientific basis, in my opinion. This
20 could be used as a reasonable default position but the
21 discharger should have the opportunity to prove that
22 even an increase of a particular parameter above five

1 percent would not lead to significant degradation in a
2 specific water body.

3 Here's an example. If you have a
4 parameter such as TDS, or total dissolved solids, that
5 parameter may well not have any impact on the uses of
6 that stream in concentrations greater than five
7 percent.

8 I'm going to conclude now. Some of
9 you are probably glad to hear that.

10 Let's consider visioning a day where
11 front end loading will become a phrase that we will all
12 consider when developing rules and policies. The
13 acronym is F, as in frank, E-L, front end loading.
14 Front end loading simply applies when we lay out all
15 the groundwork before embarking on building the final
16 product. Front end loading includes getting all
17 stakeholders involved ahead of time, develop a scope of
18 what it is we want to accomplish, review the tools and
19 resources we have to work with, ensure we are not
20 moving out ahead of our ability to deliver a quality
21 product for our state. Once we have done a reasonable
22 degree of front end loading, then let's get it together

1 with the best product we can possibly deliver. This
2 allows us to spend precious energy building, not
3 debating, issues.

4 And I would point out that we only
5 have so much discretionary energy, all of us. We are
6 here tonight because we're concerned about this policy.
7 We're all tired. We've had a long day. As we look at
8 new policies coming down the pike, and there will be
9 more policies coming down the pike, I believe that, we
10 need to be sure that we're not expending our precious
11 discretionary energy in a fruitless manner.

12 This rule as it will guarantee, as
13 is, will guarantee, in my opinion, substantial debate
14 because the gaps are too great. The product does not
15 seem to have the proper level of involvement from the
16 regulated community. Implementation of this rule does
17 not advance us but simply causes us to expend large
18 amounts of energy arguing the many ambiguous facets of
19 the rule. I urge the EQB to simply withdraw this rule.
20 Let's go back and conduct a proper level of front end
21 loading.

22 Thank you.

1 MS. CHATFIELD: Thank you.

2 Jim Eychaner.

3 MR. JIM EYCHANER: Good evening.

4 I'm Jim Eychaner with the U. S.
5 Geological Survey. My work involves the national water
6 quality assessment program, a review of the Kanawha
7 River Basin over the last couple of years.

8 I applaud the effort and thought that
9 the Board has put into this proposal in obviously an
10 expectation of benefiting the citizens of West
11 Virginia. My only comments are really quibbles.

12 In Appendix G, 4.C.2a1A2 discussing
13 changes in high quality waters, there's a formula there
14 that assumes twice as much runoff from disturbed areas
15 as from undisturbed areas.

16 The formula as stated, if you follow
17 through the algebra, says if you disturb more than five
18 percent of a basin, the permitted discharges have to be
19 less than the original ambient discharges. And I don't
20 know if that was the Board's intention but you probably
21 want to take a look at that. Because there are other
22 ways of looking at that.

1 It seems a little strange to define
2 four tiers of water quality protection and name them
3 one, two, two-and-a-half, and three, instead of one,
4 two, three, four.

5 And, finally, in Appendix G at 4B1c,
6 I note the requirement to advertise in a newspaper of
7 the largest circulation, which has sort of established
8 the monopoly by county. And you might wish to
9 encourage competition for the present legal advertising
10 by allowing options that encourage competition.

11 And I have a couple of pages that
12 describe notes on the algebra that you might want to
13 look at.

14 Thank you.

15 MS. CHATFIELD: Thank you.

16 George Golliday.

17 MR. GEORGE GOLLIDAY: Good evening.

18 My name is George Golliday. I am an
19 environmental scientist in the water protection
20 division of the Environmental Protection Agency, Region
21 III.

22 First I would like to thank the

1 Environmental Quality Board for providing this
2 opportunity for EPA to offer comments on the
3 antidegradation implementation procedures and dissolved
4 metals criteria.

5 In addition, I would like to thank
6 the members of both the metals committee and the
7 antidegradation committee for their time and effort.

8 The water quality standards program
9 serves as the basis for the water quality based
10 approach to pollution control and is a fundamental
11 component of watershed management. The water quality
12 standards program is authorized under Section 303 of
13 the Clean Water Act, the objective of which is to
14 restore and maintain the chemical, physical, and
15 biological integrity of the nation's waters.

16 A water quality standard defines the
17 desired goal for a specific water body. In order to
18 carry out this goal, there are three main components of
19 the water quality standards program. The first is
20 defining and establishing the existing and designated
21 uses of a water body. Second is establishing the
22 criteria necessary to protect those uses. And the

1 third is an antidegradation policy, which at a minimum
2 maintains and protects existing in-stream uses and the
3 level of water quality necessary to protect those uses.

4 Antidegradation was originally based
5 on the spirit and intent of the Clean Water Act. It
6 was later codified into regulation specifically at 40
7 CFR 131.12. Those regulations clarify that states
8 must adopt the antidegradation policy and the
9 procedures that implement it.

10 In a November 9, 1995, letter, EPA
11 conditionally approved the antidegradation policy based
12 on the understanding that implementation procedures
13 will be developed. EPA had previously disapproved West
14 Virginia's antidegradation policy. EPA understands
15 that West Virginia plans to include the implementation
16 procedures for consideration during the 1999 West
17 Virginia legislative session. Pending further review
18 of the procedural contents, the EPA will reevaluate its
19 conditional approval during the formal review period
20 based on the implementation procedures officially
21 adopted by the state.

22 The EPA is encouraged by the progress

1 West Virginia has made in developing a protective
2 antidegradation policy. Specifically the EPA is
3 pleased to see that West Virginia has recognized the
4 difficulties of implementing Tier 3 procedures and
5 adopted Tier 2.5 procedures. In addition, the
6 parameter-by-parameter approach for Tier 2.5 and 3
7 procedures supports a high level of protection to these
8 waters. However, the EPA has identified areas of
9 needed improvement in the implementation procedures.
10 The state has not provided an explanation of listing
11 procedures for Tier 2.5 and Tier 3 waters.

12 In addition, the language addressing
13 nonpoint sources, while adequate for now, excuse me, is
14 adequate for now. However, EPA is developing guidance
15 on expectations and procedures for states to follow to
16 fully implement antidegradation policies relating to
17 effluent runoff as required by the clean water action
18 plan by December of 1998.

19 In October of 1993,
20 Martha G. Prothro, EPA acting assistant administrator
21 for water, issued a memorandum which outlined the
22 office of water quality and technical guidance on

1 interpretation and implementation of aquatic life
2 metals criteria. The memorandum set forth EPA's policy
3 that the use of dissolved metal in place of total
4 recoverable metal set and measure compliance with water
5 quality standards is recommended since dissolved metals
6 more closely approximates the bio-available fraction of
7 metal in the water.

8 Over the past few months the metals
9 committee, consisting of representatives from the
10 Environmental Quality Board, Division of Environmental
11 Protection's Office of Water Resources and Office of
12 Mining and Reclamation, West Virginia Chamber of
13 Commerce, West Virginia Environmental Council, and the
14 West Virginia University Extension Service, met to
15 discuss the possibility of using dissolved metals to
16 measure compliance with metals criteria in West
17 Virginia. The current policy in West Virginia is to
18 measure compliance using total recoverable metals. EPA
19 Region III participated in the majority of these
20 meetings on an advisory basis.

21 Consistent with EPA national policy,
22 the metals committee has recommended to adopt dissolved

1 metals criteria in the water quality standards program.
2 In addition, pursuant to EPA's request, the committee
3 has recommended to adopt the EPA developed conversion
4 factors and translator guidance. The conversion
5 factors allow total recoverable water quality criteria
6 to be expressed as dissolved criteria and the
7 translator guidance allows for calculation of a total
8 recoverable permit limit for use in NPDES permits as
9 required by regulation from the dissolved standard.
10 EPA believes that the committee recommendation to use
11 dissolved metals to measure compliance with water
12 quality standards is consistent with national policy
13 and regulation and is representative of current
14 science.

15 The EPA has drafted and submitted, as
16 part of the public notice provision, substantive
17 comments regarding both the antidegradation
18 implementation procedures and the dissolved metals
19 criteria. EPA hopes that these comments will be of
20 assistance to both committees and the Environmental
21 Quality Board in refining these recommendations before
22 a formal review period.

1 We look forward to continuing to work
2 with West Virginia to make sure that these policies are
3 protective of the waters of West Virginia.

4 And my written comments were
5 submitted to Libby this afternoon. And I'm sure copies
6 will be available.

7 Thank you.

8 MS. CHATFIELD: Thank you.

9 Mike Brown.

10 MR. MIKE BROWN: Good evening.

11 I'm Mike Brown with American Electric
12 Power. And I would like to thank the Board for
13 approving my nomination to participate on the dissolved
14 metals subcommittee. I have found the opportunity to
15 partake in that committee both challenging and
16 rewarding. The best thing I felt about it was that we
17 brought together a very diverse group of people
18 representing multiple interests and we built consensus
19 over several months. And the position to move the
20 issue forward was voted on unanimously, which I think
21 is a real compliment to the time and effort that we put
22 together to move that forward, I think.

1 The other thing, there were several
2 key issues that I think made that process a success.
3 We were afforded the opportunity to solicit outside
4 assistance both from EPA Region III with George
5 Golliday; also the office of research and development,
6 Dave Mount in Duluth; and Cindy Roberts from EPA
7 headquarters, a toxicologist with metals background.
8 Those people were instrumental in helping the committee
9 get over a few of the issues that were most
10 controversial and allow West Virginia to adopt the same
11 criteria that more than thirty other states have
12 already adopted.

13 I also want to speak on
14 antidegradation. I commend the committee that was
15 formed to begin the process of crafting an
16 antidegradation implementation policy. However, we
17 also have a few concerns with some of the language.
18 One of the ways that I try to understand proposed rules
19 is to try to apply them in a practical or permitting
20 situation. And I had difficulty with some of the same
21 sections that many of the other people have commented
22 on, particularly the parameter or the definition of

1 significant degradation ambient concentrations at no
2 more than five percent above critical flow conditions.

3 Any parameter is not defined. And
4 although we had some examples, I'll give you a specific
5 one. There's nothing in here that excludes hardness.
6 And if hardness was increased greater than five percent
7 beyond the ambient concentrations at low flow
8 conditions, there's no harm to the aquatic community at
9 all. If anything, it ameliorates the toxicity of
10 metals, and that's actually a benefit.

11 There are several other de minimis
12 activities that many of our neighboring states have
13 recognized and specifically excluded from
14 antidegradation review. A couple of specific examples
15 are treatment chemicals to control zebra mussels. If a
16 water supply develops a zebra mussel infestation
17 problem, one of the treatment technologies is to use
18 chemicals to eradicate those. If that chemical is
19 discharged at a concentration that is well below
20 detection level or well below the aquatic life criteria
21 established for that, there is no harm to the aquatic
22 community. However, if that chemical is not already

1 present in the upstream waters at critical flow
2 conditions, then that would exceed a five-percent
3 threshold and require a full antidegradation review
4 based on the literal interpretation of that section.

5 I think the definition of any
6 parameter needs to be specified only to those
7 parameters which are regulated within the water quality
8 standards.

9 The other concern is with the five
10 percent beyond ambient concentrations. Most of our
11 neighboring states use assimilative capacity instead of
12 an ambient concentration. Ohio, Virginia, Indiana, to
13 name a few. And it's a lot easier to calculate. It
14 makes more practical sense from an administrative
15 standpoint and it eliminates the real concern I have
16 with using a five percent beyond ambient concentrations
17 at low flow conditions. Because I have a hard time
18 figuring out how that original concentration is going
19 to be set. Low flow conditions is usually considered
20 the critical condition which is a seven-day, low-flow
21 period over the previous ten years. That occurs very
22 infrequently. To have data that actually represents

1 that condition within a given stream may be possible
2 but to have that data available for all streams is
3 highly unlikely. Therefore, I have a hard time
4 understanding how the initial numbers will be set and
5 then how those dischargers, whether existing or new
6 dischargers, will be compared to determine that five
7 percent.

8 I do recognize that EPA Region III
9 has asked West Virginia to adopt an implementation
10 policy. I also recognize that EPA themselves also
11 recognize that the federal intent of antidegradation is
12 unclear and implementation strategies throughout the
13 nation vary across the board unlike most other issues.
14 Numeric aquatic life criteria are fairly consistent
15 across the nation. Use designations are consistent.
16 Antidegradation implementation is not. It's amazing
17 the variety that you can get. EPA has recognized that
18 and plans to address it as part of their advancement of
19 proposed rule making on water quality standards.

20 There is a quote that I don't recall
21 the exact language but I do have it in my written
22 comments, that they recognize there are some

1 deficiencies in the antidegradation policy and
2 implementation procedures and they look forward to
3 addressing that by drawing together a broad based
4 stakeholder process across the national level.

5 I certainly hope that West Virginia
6 will consider the same prospect for their
7 antidegradation implementation policy. I think there
8 can be some real value by expanding the stakeholders to
9 allow additional participation similar to the dissolved
10 metals committee. Those committee meetings were open
11 to the public. Lots of issues were brought up, very
12 controversial issues, but issues that we managed to
13 work through and identify, outside experts to help with
14 us when the need arised, and we eventually built
15 consensus. I look forward to the Board considering the
16 same thing.

17 I do have written comments here and I
18 will give those to Libby.

19 If there are any questions, I would
20 be glad to answer them.

21 (Pause.)

22 MS. CHATFIELD: Thank you.

1 Bob McLusky.

2 MR. BOB McLUSKY: Good evening.

3 I'm Bob McLusky. I'm with Jackson
4 and Kelly here in Charleston. I'm here on behalf of
5 the West Virginia Coal Association and the West
6 Virginia Mining and Reclamation Association.

7 Detailed written comments on behalf
8 of both groups will be submitted tomorrow before five
9 o'clock.

10 Tonight I would just like to offer a
11 few general comments on both sets of proposals before
12 the Board.

13 First is the proposed changes to the
14 metal standards. The associations fully support the
15 cooperative effort that has gone into and resulted in
16 the Board's proposal to express the aquatic life water
17 quality criteria in terms of dissolved as opposed to
18 total metals. That, as you've heard, is the result of
19 a long, cooperative, negotiated process.

20 And in contrast to that negotiated
21 process stands the antidegradation procedures that the
22 Board has proposed. So far as I know, there was no

1 general distribution of any draft of those procedures
2 prior to last month. As a result, I think what you
3 heard tonight is true and true on behalf of the
4 associations which regards them as complicated,
5 substantive rather than just procedural in nature, and
6 will require substantial rewriting to clarify what I
7 believe are a lot of problems the way they're written.

8 Moreover they come at a time when
9 EPA, less than two weeks ago, announced that it is
10 intending to provoke a national debate on this very
11 issue. The advanced notice of proposed rule making you
12 heard about was issued July 7th of this year, less than
13 two weeks ago. The stated purpose of that document was
14 to provoke a national debate on these very issues. And
15 one of the questions in there is: Should EPA engage in
16 national rule making on this issue in recognition of
17 the fact that the states are widely divergent in the
18 way they have addressed antidegradation.

19 Despite the fact that EPA has asked
20 the Board to submit a set of procedures at this point,
21 we believe that it is premature to do so in light of
22 the advance notice of proposed rule making to EPA and

1 note that the current federal rules only require
2 identification of procedures. They do not require
3 procedures to be submitted to rule making at the state
4 level nor submitted to EPA for approval. They may well
5 be as a result of the advance notice of proposed rule
6 making, but at this point, identification only is
7 required.

8 Finally, on the general comments of
9 the current proposed procedure, before I get into more
10 detail, in looking at the regulatory analysis at the
11 start, I don't believe the Board has adequately
12 assessed the potential costs to industry or to state
13 government in the implementation of this procedure. I
14 think the statement up front was either for state
15 government that there were no anticipated costs,
16 significant costs, and for industry they were just
17 unknown, without any real attempt to quantify them. We
18 believe that would not withstand scrutiny and any
19 challenge to the rules.

20 With respect to specific comments on
21 the antidegradation procedures, Section 4.1.b.2 of the
22 actual water quality standards, and it's repeated again

1 in the procedural document, would create a presumption
2 that all water qualities are high quality, or all
3 waters are high quality waters, we believe is in
4 inappropriate, especially in light of the fact that
5 this was touted as a procedural document. We just
6 finished a triennial review and now we're seemingly
7 attempting to adopt what I regard as a substitute
8 change in the rule.

9 In addition, there's no basis
10 specified in this regulation for why such a presumption
11 would be created. The Board should be aware by
12 creating a presumption that all waters are high quality
13 waters, you submit any new or modified discharge which
14 triggers the substantial antidegradation language to
15 this fairly detailed alternatives analysis, that is,
16 the analysis of the alternative technology and of the
17 economic and social impacts. So virtually every permit
18 for a new facility would automatically trigger this
19 antidegradation review as a result of an unfounded
20 presumption.

21 With respect to the applicability of
22 the procedures, I believe you'll see in AEP's comments,

1 written comments, that no antidegradation analysis
2 should apply to-- The applicability section refers to
3 Section 404 of the Clean Water Act, which are the
4 dredge and fill permits issued by the Corps of
5 Engineers. No antidegradation analysis should apply to
6 the use of a nationwide permit that has already been
7 certified for compliance with the antidegradation
8 provisions. That is the state certifies nationwide
9 permits in advance, and that people simply signal the
10 fact they're going to use a nationwide permit. I think
11 it ought to be clear that the antidegradation analysis
12 does not apply to the individual use of those permits
13 once the nationwide permit has been certified.

14 The Board also needs to make clear
15 that the antidegradation policy and procedures do not
16 prohibit or apply to fill activities. There are those,
17 some of you in this room, I suppose, that seek to argue
18 that the antidegradation, both federal and state
19 antidegradation standards prohibit filling activities
20 in waters of the state or waters of the United States
21 in an attempt to prohibit valley fills and coal refuse
22 impoundments.

1 EPA's own water quality standards
2 handbook says that, literally read, the federal
3 antidegradation standard would prohibit activities
4 which are clearly authorized under the Clean Water Act,
5 such as fills. And I believe that the Board needs to
6 make clear that the antidegradation policy does not
7 prohibit filling activities which are properly subject
8 to permitting under the Clean Water Act and subjected
9 generally to mitigation requirements. Otherwise, all
10 fills are risks to the state.

11 I'll give an example. The Toyota
12 plant which filled in wetlands to construct its
13 facility pursuant to a properly-executed mitigation
14 agreement.

15 The associations also urge-- There
16 are some, in the applicability section, Section 4A.3,
17 some exemptions for Brownfields sites, the associations
18 urge the Board to extend that to remaining sites which
19 by definition are intended to mitigate impacts on the
20 environment.

21 Section 4C is the Tier 2 procedures
22 for the antidegradation analysis of higher quality

1 streams. As Mike Brown of AEP just said, that
2 regulation seemingly requires an antidegradation
3 analysis and the consideration of less degrading
4 alternatives whenever any ambient parameter is exceeded
5 by more than five percent as a result of a permitted
6 discharge, even if there's not a numeric criterion for
7 the pollutant to be discharged. We believe that the
8 regulation should be limited to pollutants for which
9 there are numeric criteria.

10 And another example of what could
11 happen, the Board just got through deleting the aquatic
12 life criterion for manganese. Now most coal mines are
13 going to discharge some manganese. If antidegradation
14 analysis is triggered every time you increase the
15 ambient level by five percent for manganese, you're
16 going to undergo the antidegradation analysis for Tier
17 2 waters, applying the presumption that all are high
18 quality waters, even though the Board has found that
19 discharge of manganese will have absolutely no impact
20 on aquatic life. That, as far as the association is
21 concerned, undoes all the Board did in deleting the
22 aquatic life criterion for manganese.

1 In Section 4C.2.a.f, the procedures
2 address effluent trading in Tier 2 review. It appears
3 to be the intent to allow mitigation either upstream or
4 downstream to offset the expected impact of the
5 permitted discharge and thereby then avoid the
6 antidegradation analysis. The associations
7 wholeheartedly support that type of trading. But I do
8 know that the regulation goes on to say that the trade
9 has to be documented in a TMDL or other appropriate
10 measure. Again the associations have no objection to
11 documentation of the trade but want to make sure that a
12 TMDL doesn't have to be approved before the trade can
13 be recognized. Because that can take very, very long
14 to get a TMDL approved at the state and federal level.

15 In addition, it's not entirely clear
16 to me why you would be doing a TMDL for a high quality
17 stream. Because by definition a TMDL is done only for
18 noncompliance streams.

19 And, finally, and I believe AEP will
20 address these in their written comments in more detail,
21 in Section 4C.5 and 6, this addresses the less
22 degrading and nondegrading alternatives analysis that

1 one must undergo in Tier 2 review. The way that
2 regulation is written, it does not merge the analysis
3 of less degrading alternatives with the economic and
4 social impact. The way it is written, you would
5 address them independently. Those considerations need
6 to be merged. The purpose of the regulation is to
7 limit discharges unless there's some economic or social
8 reason for allowing the discharge. The way that
9 regulation is written, you must submit an analysis to
10 the, presumably, permit writer of less degrading or
11 nondegrading alternatives. And then if you and DEP are
12 unable to reach some agreement on whether any less
13 degrading or nondegrading alternative should apply, the
14 permit gets denied, period, without any analysis of
15 what is really at the heart of the rule, that is, the
16 economic impact of denial of that permit. So those
17 sections need to be merged together so that the
18 economic analysis is part of the analysis of less
19 degrading alternatives.

20 And that concludes my remarks.

21 MS. CHATFIELD: Bob, did you say you would
22 be turning something in tomorrow?

1 MR. McLUSKY: Yes.

2 MS. CHATFIELD: Thank you.

3 And our last speaker of the evening,
4 Cindy Rank.

5 MS. CINDY RANK: My name is Cindy Rank and
6 I'm representing the West Virginia Highlands
7 Conservancy here this evening. And I don't know where
8 to begin, so I'll try not to say everything that I
9 would be confused about saying at this point in time.

10 I obviously disagree with a lot of
11 what was just said. The Highlands Conservancy, as well
12 as many other groups that are associated with the West
13 Virginians For Clean Water campaign, is very
14 appreciative that you all have finally come up with an
15 antidegradation policy, implementation policy. We
16 think that that's long overdue.

17 We know it's very difficult but we
18 also believe that the Clean Water Act indeed specifies
19 that what we're all about is maintaining and restoring
20 water quality which goes not just to uses but to the
21 quality that might be better than what is required to
22 achieve those uses.

1 We have in very few instances even in
2 permitting been able to reach back and try to address
3 the quality where it's higher quality than that needed
4 for the particular uses. And I think the
5 antidegradation implementation policy that you all have
6 come up with at least takes us one step closer to being
7 able to use that when we come to individual permits.

8 So for those of us who have insisted
9 over the years that some of the permitting isn't quite
10 as stringent as we need to be to protect some of the
11 headwater streams that we're mainly concerned with most
12 often, I think we may find it a little bit easier to
13 address some of our major concerns.

14 The Conservancy would like to support
15 the comments that are going to be submitted to you
16 tonight from the West Virginians for Clean Water
17 campaign. I think Perry has a copy that he will be
18 submitting to you. (See Attachment No. 6)

19 If I could just go quickly through,
20 besides the fact that we think that this is a very
21 positive step that you took, even though it will be
22 difficult to actually carry it forth, we do see some

1 areas of concern. And one of those is the idea of the
2 significant level of degradation.

3 We really believe that the Clean
4 Water Act means for us to take all important steps if
5 we're going to degrade the quality of high quality
6 waters, in particular, means that we will have to
7 assess parameter by parameter, site specific by site
8 specific, all of the concerns that were mentioned here
9 by the previous speakers. It doesn't mean that they
10 won't be able to discharge, but it does mean that we'll
11 have to evaluate and have it very clear in our minds
12 that we are going to be doing some degrading and these
13 are the very important socioeconomic reasons why we're
14 choosing to do that. And I think this policy helps us
15 move in that direction even though we disagree that the
16 significant level should be measured at any percentage.
17 We think that any measurable change should trigger a
18 review at least.

19 We don't think that the cumulative
20 impacts have been addressed very much. And it's
21 particularly problematic when you rely on the
22 significant level of degradation. Because if you're

1 waiting for point source impacts of five percent or
2 fifteen percent or whatever, you could grant a lot of
3 individual sites that have less than that. But on a
4 cumulative basis you would be increasing. You would
5 have more than a significant impact. So we do have a
6 very difficult time with the whole idea of significant
7 criteria.

8 Nonpoint sources was mentioned
9 before. That is one point of agreement. Nonpoint
10 sources are adequately addressed. And we do hope if
11 Mr. Golliday is correct that we have some guidance from
12 EPA as to how to actually implement that because we see
13 that as a major deficiency in this particular policy.

14 We also think that trading should not
15 be permitted. We disagree that that is a good idea. I
16 think under the antidegradation policy, if it was truly
17 an antidegradation policy we would be looking at each
18 site and trying to reduce as much as possible at each
19 site and not allowing some of those discharges if we
20 thought that it was going to be harmful to the quality
21 of that water, not just to uses.

22 We find it commendable that in 4E81c,

1 we specifically afford the same level of protection in
2 the Tier 3 waters to all upstream segments of the
3 outstanding national resource waters. We do think,
4 however, that that kind of protection should also be
5 extended at least to 2.5 waters. And I would point to
6 trout streams in particular. It's very difficult to
7 say where above that point where you find a fish you
8 should draw a line and say that really doesn't
9 contribute to the quality of the water that makes that
10 a trout stream. So we find it difficult to think that
11 we're going to be drawing lines in, say, cold water
12 fisheries and saying that above that it doesn't exist
13 as a cold water fishery and shouldn't be afforded the
14 same protection. So we would ask that that be extended
15 to 2.5 waters at least.

16 I think that's about all. The metals
17 criteria, I submitted. I think that Don Brannon
18 submitted something directly to the Board. If not, I
19 have attached it to our comments. And again we would
20 agree with the metals comments that were submitted or
21 will be submitted with the West Virginians for Clean
22 Water campaign and the addition of addressing the

1 sediment issue within the metals standards that we
2 should allow at least the water resources to address
3 that if and when there is some basis for that.

4 I would just end by saying again that
5 we can't stress too much how important this is for high
6 quality streams in areas up in the hills and hollows.
7 For example, where I live where we're not necessarily
8 concerned with the Ohio River or the Kanawha River or
9 even the Monongahela River but tiny tributaries and
10 streams that are very easily impacted by the very
11 smallest discharges from any kind of activity, oil and
12 gas well drilling, road building, mining, not
13 necessarily the larger industrial plants up where we
14 live. And the antidegradation policy is what we see as
15 one of the main defenses of the quality of water that
16 we think are quite pristine and very worthwhile saving
17 in the State of West Virginia.

18 Again we thank you for the
19 opportunity to comment.

20 MS. CHATFIELD: Thank you.

21 Is there anybody else that would like
22 to speak that hasn't had a chance to?

1 (Pause.)

2 MS. CHATFIELD: Anything from the Board?

3 (Pause.)

4 MS. CHATFIELD: We thank everybody for
5 coming.

6 Yes, Dave.

7 MR. DAVID YAUSSY: Would you entertain
8 questions of commenters, or would you rather not do
9 that? I'm speaking specifically of, say, EPA?

10 MS. CHATFIELD: What do you guys think?

11 DR. SAMUEL: We can go off the record.

12 MS. CHATFIELD: I think we could do that. I
13 mean, I think that maybe we could do that after, go off
14 the record and do that.

15 Do you all have any thoughts on that?

16 MR. RICHARD HACKNEY: Before you close, I
17 would like to make one-- I didn't get a chance to sign
18 that sheet.

19 MS. CHATFIELD: Oh, okay. Do you want to
20 come and identify yourself.

21 MR. HACKNEY: I'm Richard Hackney.

22 A couple of things I've seen here on

1 drinking water allowances for the contamination
2 contained in drinking water that's mandated by the
3 clean drinking water act, they use zinc sulfate to
4 control lead. Any discharge is going to be above the
5 zinc limit.

6 They also-- The use of chlorine is
7 going to have chloroform, which would also be above the
8 limit. And there's no provision for any net that comes
9 from drinking water.

10 That's the only comments I have.

11 MS. CHATFIELD: Okay.

12 MR. HACKNEY: Thank you.

13 MS. CHATFIELD: Thank you.

14 Thanks, everyone, for coming.

15 And we will, as I said before, accept
16 written comments until five o'clock tomorrow evening.

REPORTER'S CERTIFICATE

I, the undersigned, Janet T. Surface, Stenomask Reporter, do hereby certify that the foregoing is, to the best of my skill and ability, a true and accurate transcript of the aforementioned public hearing held on the 20th day of July, 1998.

Given under my hand this the 24th day of July, 1998.

Janet T Surface

Reporter



WEST VIRGINIA MANUFACTURERS ASSOCIATION

2001 Quarrier Street, Charleston, WV 25311

Telephone: (304) 342-2123

FAX: (304) 342-4552

wvma@wvma.com

Statement of the West Virginia Manufacturers Association Regarding West Virginia's Water Quality Standards

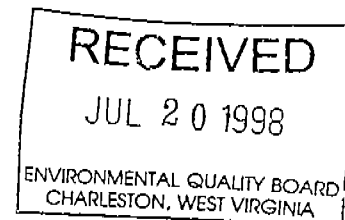
My name is Karen Price, and I am here on behalf of the West Virginia Manufacturers Association. The WVMA is vitally interested in the changes to the water quality standards that have been proposed by the Board, particularly the antidegradation implementation guidance that is found in Appendix G. We believe those changes represent some of the more profound revisions to the standards that have occurred in recent years.

After reviewing the antidegradation guidance, we believe the Board would be well served to withdraw it and establish a committee for evaluating all aspects of antidegradation. We do this with the full realization that EPA has asked the Board to develop an antidegradation implementation process, and that representatives of the Board and other state agencies worked to craft the Board's current proposal. The reasons for taking this position are several fold. First, EPA is currently re-evaluating its antidegradation policy. It is highly likely that it will be changing, perhaps radically, the way in which it expects states to implement their antidegradation policies. If EPA expects to develop revisions to its existing policy, we would be well advised to wait and see how that policy turns out. Second, antidegradation is intended to protect stream uses. Determining what uses apply to streams, and the manner in which attainment of those uses is demonstrated, has never been very clear. Third, while we appreciate the hard work that went into the Board's proposal, we believe that the guidance could benefit from reconsideration. Many parts of the guidance are vague, and require actions to be taken without specifying which agency is responsible for carrying out those actions. More specificity is needed so that the public is aware of what is required of the agencies that are to implement the Board's antidegradation policy.

With regard to the Board's proposal to adopt dissolved criteria for certain metals, we support the change and commend the Board for addressing this issue. We hope that similar dissolved criteria and translators will be adopted for aluminum, manganese and iron in the future.

Thank you for the opportunity to offer these comments.

Karen Price
President
West Virginia Manufacturers Association
July 20, 1998

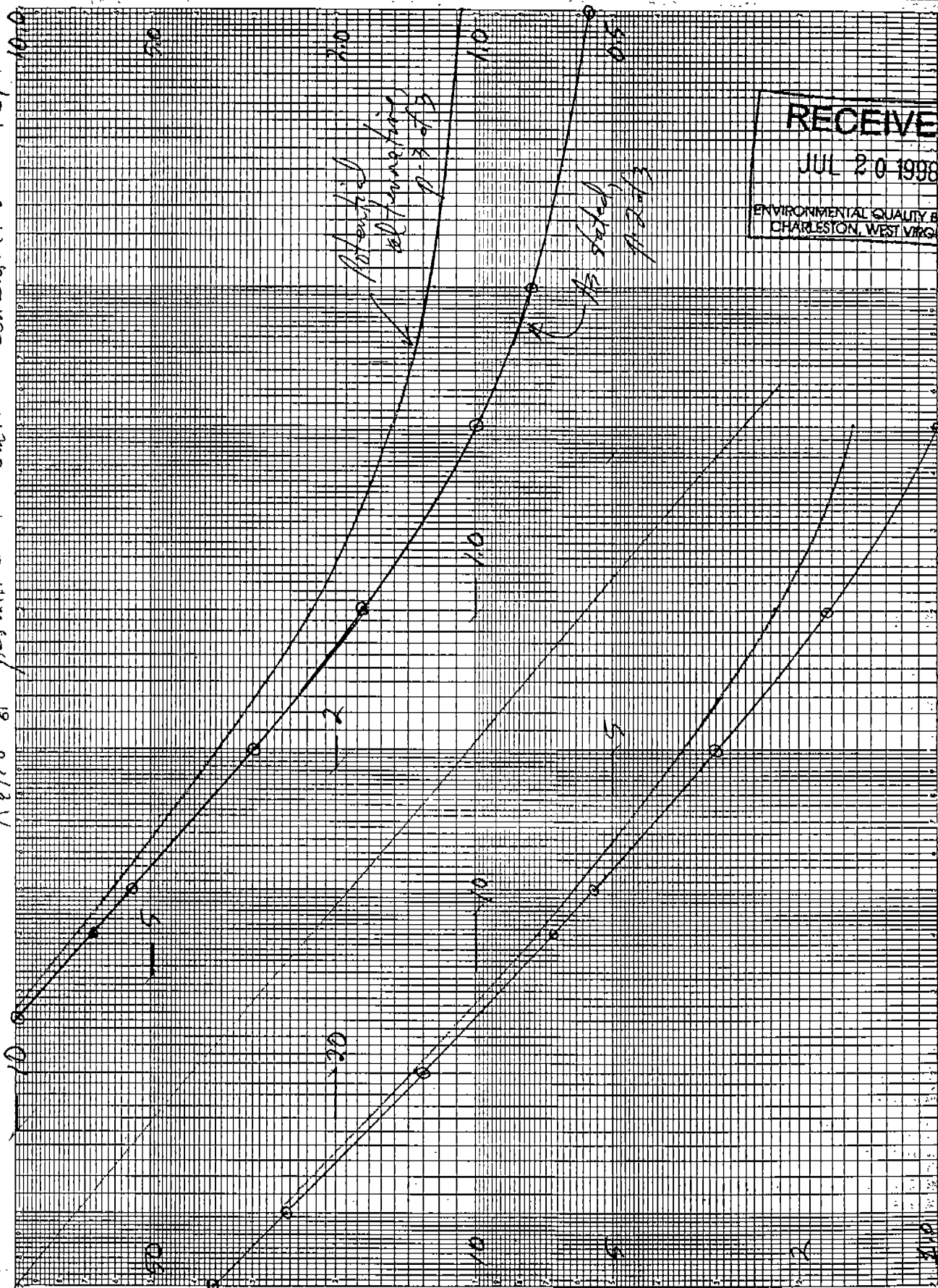


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Jim Eyckman
File # 1 of 3

Ratio of permitted to ambient concentration C_p/C_a



Sheet No. _____ of _____ sheets. Prepared by JKE Date 6-29-98 Checked by _____ Date _____

Appendix 6, antidegradation implementation procedures

§ 4C.2.a.1.A.2 - Mass balance approach to estimate limiting concentrations for precipitation induced discharges

Flow from disturbed areas is assumed 2X flow from other areas

the rule offers: $C_1 A_1 + C_2 (2A_2) = C_3 A_3$

in which C_2 is the chemical concentration from the disturbed area that would increase the combined-flow concentration by 5%.

C_1 = ambient concentration

C_3 = ambient + 5% = $1.05 C_1$

A_2 = disturbed area, A_3 = total area, $A_1 + A_2 = A_3$

By algebra

$$C_1 A_1 + C_2 (2A_2) = C_3 A_3$$

$$C_2 = 1.05 C_1$$

$$A_1 = A_3 - A_2$$

Then $C_1 (A_3 - A_2) + 2 C_2 A_2 = 1.05 C_1 A_3$

$$2 C_2 A_2 = 1.05 C_1 A_3 - C_1 A_3 + C_1 A_2$$

$$C_2 = \frac{C_1 A_2}{2 A_2} + 0.05 \frac{C_1 A_3}{2 A_2}$$

$$\frac{C_2}{C_1} = 0.5 + 0.025 \frac{A_3}{A_2}$$

where C_2/C_1 is the ratio limiting concentration to the ambient concentration and A_3/A_2 is the ratio of total drainage area to disturbed area.

This formula would require chemical concentrations in storm runoff from the disturbed area to be less than ambient concentration if more than 5 percent of the drainage basin is disturbed. Conversely, if less than 0.1 percent of the basin is disturbed, concentrations more than 25 times ambient would be permitted.

Max ambient concentration increase 5%

- C_0 = original ambient
 - Q_0 = original discharge at critical flow
 - A_0 = total drainage area
 - A_2 = disturbed area
- 0 = original, sur
 1 = undisturbed
 2 = disturbed

Flow - $Q_0 = k A_0$ Pre-disturbance

$Q_2 = 2k A_2$ Disturbed area

$Q_1 = k (A_0 - A_2)$ Undisturbed area

$Q_3 = Q_1 + Q_2 = k (A_0 + A_2)$ Total basin with disturbance

Load - $L_0 = C_0 Q_0$

$L_2 = C_2 Q_2 =$

$L_1 = C_0 Q_1$

$L_3 = L_1 + L_2 = C_0 Q_1 + C_2 Q_2$

Concentration - $C_3 = \frac{L_3}{Q_3} = 1.05 C_0$

$$1.05 C_0 = \frac{C_0 Q_1 + C_2 Q_2}{Q_1 + Q_2} = \frac{C_0 k (A_0 - A_2) + C_2 (2k A_2)}{k (A_0 + A_2)}$$

$$1.05 C_0 (A_0 + A_2) = C_0 (A_0 - A_2) + 2 C_2 A_2$$

$$1.05 C_0 = \frac{k [C_0 A_0 - C_1 A_2 + 2 C_2 A_2]}{k (A_0 + A_2)} = C_0 \left(\frac{A_0 - A_2}{A_0 + A_2} \right) + 2 C_2 \left(\frac{A_2}{A_0 + A_2} \right)$$

$$2 C_2 \left(\frac{A_2}{A_0 + A_2} \right) = C_0 \left[1.05 - \frac{A_0 - A_2}{A_0 + A_2} \right] = \left[\frac{1.05 (A_0 + A_2) - (A_0 - A_2)}{A_0 + A_2} \right] C_0$$

$$2 C_2 A_2 = C_0 (0.05 A_0 + 2.05 A_2)$$

$$2 C_2 \left(\frac{A_2}{A_0 + A_2} \right) = C_0 \left(\frac{0.05 A_0 + 2.05 A_2}{A_0 + A_2} \right)$$

$$\frac{C_2}{C_0} = \frac{0.05 A_0 + 2.05 A_2}{2 A_2}$$

$$\frac{C_2}{C_0} = C_0 \left(\frac{0.05 A_0 + 2.05 A_2}{2 A_2} \right) = C_0 \left(0.025 \frac{A_0}{A_2} + 1.025 \right)$$

$$\frac{C_2}{C_0} = 1.025 + 0.025 \frac{A_0}{A_2}$$

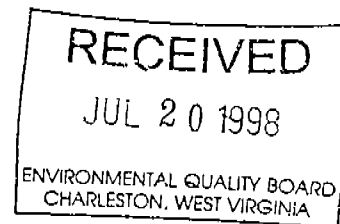
$$\frac{C_2}{C_0} = 1.025 + 0.025 \frac{A_0}{A_2}$$



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

July 20, 1998

Ms. Elizabeth Chatfield
Technical Advisor
Environmental Quality Board
1615 East Washington Street
Charleston, WV 25311-2126



Dear Ms. Chatfield:

The U.S. Environmental Protection Agency (EPA), Region III has received the notice of proposed changes to the Water Quality Standards Rule, 46CSR1 which includes adoption of antidegradation implementation procedures and adoption of dissolved metals criteria. Pursuant to 40 CFR §131.20(b), the EPA offers specific comments on the antidegradation implementation procedures and dissolved metals criteria.

The EPA conditionally-approved West Virginia's Antidegradation Policy on November 9, 1995, on the understanding that implementation procedures would be developed. The Antidegradation Committee, which was charged with development of implementation procedures, developed and submitted those procedures to the Environmental Quality Board on June 17, 1998. The EPA would like to acknowledge and commend the time and effort the committee spent developing these procedures.

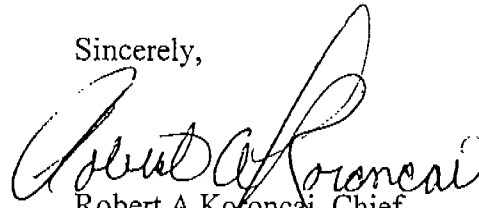
In addition to the antidegradation implementation procedures, West Virginia is also proposing to adopt dissolved metals criteria. This proposal was recommended to the Environmental Quality Board (EQB) by the Metals Committee, which was convened to investigate the possibility of setting and measuring compliance with water quality standards using dissolved metals. The EPA recognizes that the use of dissolved metals and conversion factors are consistent with national policy because dissolved metals more closely approximate the bioavailable fraction of metal in water.

The enclosed documents outline substantive comments on both the Antidegradation Implementation Procedures (Enclosure 1) and the Dissolved Metals Criteria (Enclosure 2). The EPA hopes that these comments will assist the Environmental Quality Board in further refining these policies to ensure that the antidegradation implementation procedures and dissolved metals

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criteria are protective of the waters of West Virginia and consistent with current federal and state policy and regulations.

Sincerely,



Robert A Koroncai, Chief
VA/WV Branch

Enclosure 1
General & Specific Comments on Antidegradation Implementation Procedures

I. General Comments

- Definitions should be added for the following terms to the Water Quality Standards definition section to aid the interpretation of the implementation procedures:
 - disturbed area
 - best management practices
 - ambient
 - increased discharge
- The procedures should indicate where the findings of the antidegradation review will be documented.
- Please provide an explanation of how and where the state will provide a list of Tier 2, Tier 2.5 and Tier 3 waters. The state does not need to provide a list of Tier 2 waters if Tier 2 is the default.
- Will a Tier designation be considered a legislative action? What is the process for nominating a Tier 2.5 and Tier 3 water? Who approves the process and nomination? How is the public notified of the nomination process? What information, if any, does the person seeking the nomination need to provide?

II. Specific Comments

46-1-4A

- The language of Section 4A.1 may limit the applicability of this section. The EPA suggests that the following language be inserted: “The procedures herein are intended to apply, *but are not limited to*, activities that require.....”.
- The EPA believes that the language addressing Nonpoint Sources in section 4A.2 is adequate for now. However, as a result of the recent Clean Water Action Plan, EPA is required, by 12/98, to develop guidance that more specifically defines expectations and procedures for states to follow to fully implement antidegradation policies relating to polluted runoff. Once that guidance is completed, EPA expects that West Virginia will modify the procedures in accordance with guidance.
- West Virginia should clarify who will be responsible for implementing these procedures.
- Section 4A.3.a acknowledges that there is a potential for surface water impacts from this activity, yet this proposed action requires no antidegradation review. This appears to be contrary to the Antidegradation Policy. Please clarify the intention of this statement and

why this action does not require an antidegradation review.

- Section 4A.3.b only addresses “new” discharges. The state should ensure that “increased” discharges from these sites are also subject to antidegradation reviews.
- Please clarify the intent of section 4A.3 and types of activities covered. Is the socio-economic justification process under 47-57.6.9.2 consistent with the socio-economic process required in these procedures?

46-1-4B

- West Virginia should explicitly state that all waters in West Virginia are provided Tier 1 protection.
- Section 4B.1 does not clearly identify how an existing use is determined. Please clarify how the state intends for this language to determine existing uses. The following example is intended to provide the state with one possibility: “Existing uses can be established by: 1) demonstrating that a use has actually occurred on or after November 28, 1975, or 2) by demonstrating that although a use has not occurred, the water quality is suitable to allow such a use to occur, unless there are physical problems which prevent the use from being attained.”
- In Section 4B.2.b, the procedure for correcting a situation in which the designated use is less than an existing use is not consistent with 131.10(i) which states, “Where existing water quality standards specify designated uses less than those which are presently being attained, the state shall revise its standards to reflect the uses actually being attained.” Section 4B.2.b.1 appears to be reflective of this regulation, therefore, section 4B.2.b should be revised and combined with 4B2.b.1. In addition, please ensure that this regulation is clear and consistent.

46-1-4C

- In section 4C.1, please clarify the procedures or methods the state plans on using to provide a list of Tier 2 waters, and where it will be listed. As stated before, this is unnecessary if Tier 2 is the default.
- Section 4C.1.a appears to be an “all or nothing” approach to designating waters as high quality. For example, if a water did not attain the fecal coliform standard, thus exceeding the “swimmable” use standard, and the copper criterion, thus exceeding the “fishable” use standard, that water would not qualify for protection under Tier 2 even though that water may be of high quality and have sufficient assimilative capacity for all other relevant parameters. During development of these procedures, did the state consider using a parameter-by-parameter approach for designating Tier 2 waters? If so, why was this approach discarded in favor of the current approach? The EPA would like to discuss this

further with the state. EPA is concerned that this approach may exclude the majority of waters in West Virginia from Tier 2 protection.

- EPA recommends WV consider basing the “de minimus” calculation on the remaining assimilative capacity. By basing this calculation on an increase above the ambient concentration, very small additional loads in very clean waters are significant while it requires much larger loads to be significant in more polluted waters. For example:
(1) If, for chemical X with a criterion value of 10 mg/L, the ambient concentration is zero (not an unlikely scenario for man-made organics) NO increase would be insignificant because $5\% \times 0 = 0$, and
(2) if the ambient concentration is 1 mg/L, 0.05 mg/L increase in instream concentration would be significant.
(3) On the other hand, if the ambient concentration is 9.5 mg/L, an insignificant discharge would essentially use all of the remaining assimilative capacity ($9.5 \times 5\% = 0.475$, which, when added to the ambient concentration approximately equals the criterion.)
This provides the highest level of protection to the cleanest waters (not a bad idea) but also allows substantial amounts of remaining assimilative capacity to be used without an antidegradation review in waters closer to the criterion.

By basing the significance test on remaining assimilative capacity, the argument above is reversed, allowing larger loads to be insignificant in cleaner water while progressively reducing the amount that can be insignificant as assimilative capacity is used up. Using the above example:

- (1) If, for chemical X with a criterion value of 10 mg/L, the ambient concentration is zero an increased load would need to lower water quality by 0.5 mg/L in order to be significant,
- (2) if the ambient concentration is 1 mg/L, 0.45 mg/L increase in instream concentration would be significant, and
- (3) if the ambient concentration is 9.5 mg/L, an insignificant discharge would be allowed to use very little of the remaining assimilative capacity ($(10-9.5) \times 5\% = 0.035$).

If WV wants to protect BOTH very clean waters AND remaining assimilative capacity, it could apply the more stringent of the above two approaches.

- In section 4C.2.a.1.A.1, average daily flow is used for municipal facilities in order to represent “critical conditions”. However, municipal NPDES permits are developed using a “design flow” which more accurately represents the critical flow condition.
- Our interpretation of section 4C.2.a.2 is that these parameters are exempt from an antidegradation review. If the intent of this section is otherwise, please clarify the exact intent and how this will be applied to antidegradation reviews.
- Please provide the rationale used to justify that any reduction of less than 0.4 ppm at maximum DO sag based upon an appropriate wasteload allocation model will not cause significant degradation. Based on the rationale discussed above, the EPA suggests that

the state consider a percentage of the assimilative capacity of DO in this situation.

- In section 4C.5.b, does finding a less or non-degrading alternative complete the review or does the alternative itself need to be addressed by a separate antidegradation review? In addition, please specify the decision criteria which will lead to choosing one alternative over another and the authority with whom this power resides.
- What will trigger the applicant to be required to submit the information listed in section 4C.6.b? Furthermore, who has the authority to require this information? At what point during the review would the applicant be required to submit this information?
- Any determinations or decisions made as part of section 4C.3, 4C.5.b and 4C.6.d should be preliminary determinations and be included as part of the public participation process and the appropriate comment period should be provided.
- Under section 4C.8.c, please specify the duration of the public comment period and the manner in which the public comment and findings will be advertised.
- In section 4C.8.c.2, a description of the surface water which is subject to the antidegradation review should be included in the review sheet.

46-1-4D

- What procedures or methods are used to designate a “water of special concern”? Can Tier 2.5 waters be nominated in the same manner as Tier 3 waters? Does the state plan on providing a list of water which are designated Tier 2.5?
- The state should ensure that the information required in the antidegradation review sheet of section 4D.3.b is included in the public notice. The use of “may” in this section introduces an aspect of subjectivity which gives the impression that this information may not be required in all situations.

46-1-4E

- How does the state intend to protect Tier 3 waters?
- Similar to Tier 2 and Tier 2.5 waters, what procedures or methods will be used to designate a Tier 3 water? Does the state plan on providing a list of Tier 3 waters? Again, if Tier 2 is the default, there is no need for a designation method of Tier 2.
- Do all of the factors included in section 4E.2 have to be met for an activity to be allowed? The last sentence of this section should be clarified to indicate a framework of how these decision criteria will be applied. The EPA suggests the use of the following language in

the last sentence to clear up any ambiguity: “after consideration of the following factors”.

- Similar to the comments made in section 4D.3.b, the state should ensure that the information required in the antidegradation review sheet of section 4E.4.b is included in the public notice.
- The language, “will be based on the factors listed above” should be added to the end of section 4E.4.d in order to better clarify how the determinations are made.
- Section 4E.6 should be moved so that it directly follows section 4E.3.
- It appears that Section 4E.7 attempts to provide consistency with 40 CFR §131.10(b) which states, “In designating uses of a water body and the appropriate criteria for those uses, the state shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.” Please explain how the state plans on implementing this policy.
- Section 4E.9 should include an appropriate contact and address of the person who will receive the petitions.

Enclosure 2
Specific Comments on Dissolved Metals Criteria

- The current policy in West Virginia is to measure compliance using total recoverable metals. EPA Region III participated in the majority of these meetings and was involved on an advisory basis. Consistent with national policy, the Metals Committee has recommended to adopt dissolved metals criteria in the West Virginia Water Quality Standards. In addition, pursuant to EPA's request, the committee has recommended to adopt the EPA developed conversion factors and Translator Guidance. The conversion factors allow total recoverable limits to be expressed as dissolved limits and the Translator Guidance allows for calculation of a total recoverable permit limit for use in NPDES permits, as required by regulation, from a dissolved standard. The EPA believes that the committee recommendation to use dissolved metals to measure compliance with water quality standards is consistent with national policy and regulation, and is representative of current science.

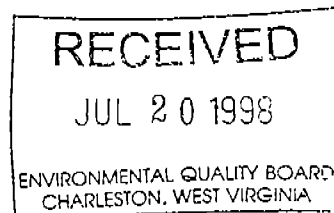
- The EPA now recognizes a freshwater chronic conversion factor of 0.85 for mercury. The conversion factor applies to the recent 304(a) recommendation for chronic levels of mercury found in the *Final Water Quality Guidance for the Great Lakes System*; Final Rule (60FR15366) and the *Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California*; Proposed Rule (62FR42160). Therefore, this conversion factor would not apply to West Virginia's chronic mercury number because it is based on previous 304(a) recommendations. However, the chronic mercury conversion factor should be adopted if West Virginia revises its standard to reflect the new 304(a) recommendations.



Dr. Edward M. Snyder
Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

July 20, 1998

Re: Adoption of Dissolved Metals Aquatic Life Criteria



Dear Dr. Snyder,

I would like to thank the Environmental Quality Board (EQB) for approving my nomination to participate (as a representative of the West Virginia Chamber of Commerce) on the interagency "Metals Committee." I found the committee's assigned task of reviewing the EPA's dissolved metals aquatic life criteria, and providing a recommend course of action to the EQB, both challenging and rewarding.

With a broad base of stakeholder interests represented, the committee was provided with an opportunity to examine in detail the EPA's metals translator guidance document, metals translator case studies, and the criteria adopted by many neighboring states.

In addition, the committee secured input from several third party sources that were critical in building consensus among the metals committee members. These sources included Cindy Roberts, USEPA Headquarters, and Dave Mount, USEPA-ORD, Duluth. Ms. Roberts provided the committee with a written assessment on potential risks associated with sediments, and Dave Mount fielded a list of committee questions via conference call during one of the committee's several meetings.

On behalf of AEP, I am also reaffirming our support for the EQB's proposed adoption of dissolved metals aquatic life criteria within 46CSR1. The use of dissolved metals criteria is clearly a more appropriate and more accurate approach to set and measure compliance with water quality standards than are "total recoverable" metals criteria.

AEP also commends the EQB for providing the regulated community with criteria that are consistent with the majority of states, including the neighboring states of Ohio, Pennsylvania, Maryland and Virginia. We believe this to be critical since West Virginia shares common watersheds with the neighboring states referenced.

AEP also supports the "Metals Committee" recommendation to have the flexibility to use EPA's document entitled, "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion." The

procedures outlined in this document provide the regulated community with the necessary tools to calculate more accurate total recoverable water quality based permit limits.

Finally, the Office of Water Resources will benefit from the adoption of dissolved metals aquatic life criteria. They are gaining use of an improved scientific tool for permitting decisions, and they will be able to more accurately assess the attainment of the aquatic life use designation of waterbodies throughout West Virginia.

If you have any questions, please call me at (614) 223-1286.

Sincerely,



J. Michael Brown
Environmental Specialist

c: Ms. Libby Chatfield, Technical Advisor
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

Dr. David Samuels
West Virginia Environmental Quality Board
1615 Washington Street, East
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Dr. Betsy Dulin
West Virginia Environmental Quality Board
1615 Washington Street, East
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Dr. Donald Tartar
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

Dr. Charles Jenkins
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311



Dr. Edward M. Snyder
Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

July 20, 1998

Re: **The EQB's notice for public comment on the proposed
antidegradation implementation procedures under 46CSR1.**

Dear Dr. Snyder,

The daunting task of developing an antidegradation strategy and implementing procedures to comply with the Clean Water Act goal to, "restore and maintain the chemical, physical, and biological integrity of the nation's water" has been a difficult one for many states. Two of the many reasons include:

1. The Federal intent for antidegradation procedures is not clear, and
2. Implementation strategies have an impact on water quality from many activities (e.g. nonpoint source impacts, Corps of Engineers Section 404 permitting) beyond the normal jurisdiction and authority of the state agency responsible for water quality standards.

As a result of these difficulties, antidegradation has been implemented inconsistently at the state level, and it has often been subject to legislative and judicial challenges.

We need to look no further than the neighboring state of Ohio and examine the events over the past several years that resulted in the Ohio Supreme Court overturning an Ohio EPA action on two discharge permits and forcing the agency to rewrite its antidegradation regulations. Two of the many controversial issues within the original Ohio antidegradation rules included a lack of exemptions for minor permit decisions that will not result in "significant degradation," and an implementation strategy that tended to penalize dischargers with a good performance record by constraining the ability of a permittee to discharge pollutants within the full design capacity of the permitted activity.

While we commend the EQB for beginning the arduous task of crafting a state antidegradation implementation strategy to comply with the mandates of 40 CFR Section 131, we suggest that the EQB defer action on adopting a policy at this time for the following reasons:

First, West Virginia's draft antidegradation policy appears to contain many of the same controversial issues identified within Ohio's original antidegradation policy. Second, the policy falls short of providing a clear focus on implementation strategies, and it proposes an antidegradation review triggering criterion for "significant degradation" which is markedly different and more stringent than the criterion used by many neighboring states.

We believe that these issues could, and should, be addressed through an expanded stakeholder process prior to final adoption. Thus, we urge the Board to defer action on this rulemaking at this time and convene a broadly represented stakeholder group to continue the crafting of the antidegradation policy. We believe an expanded stakeholder process will also afford the Board an opportunity to further study the actions taken by other neighboring states, thereby ensuring that the terminology and final policy adopted by West Virginia is equitable.

We further suggest that the stakeholder process be deferred until EPA completes action on a revised approach to implement antidegradation a national level. On July 7, 1998, USEPA issued an advance notice of proposed rulemaking (ANOPR) that announces their plans to comprehensively address deficiencies with the current water quality standards, including a revised approach for the implementation of States' antidegradation policies (ANOPR Revisions to Water Quality Standards at 40 CFR Part 131; 63 FR 36741-36806).

EPA states within the ANOPR that, " EPA's current thinking is that on a national scale, antidegradation is not being used as effectively as it could be and that a structured national debate on antidegradation is key to improvement. The debate needs to identify deficiencies in antidegradation policy and implementation provisions and begin the process of strengthening antidegradation as a meaningful mechanism to attain and maintain water quality standards. EPA invites comments and suggestions on the three-tiered approach currently in use and described below, as well as possible other approaches to more effectively accomplish the intent of the antidegradation requirements. As part of the "Clean Water Action Plan" announced on February 14, 1998 by the Administrator of EPA and the Secretary of Agriculture, EPA plans to develop additional guidance on Antidegradation." 63 FR 36779

The ANOPR language referenced above confirms the complexity and controversy surrounding antidegradation implementation, and it reaffirms the need for expanded stakeholder involvement in crafting West Virginia's implementation guidance.

In deference to the above, AEP has prepared the enclosed technical comments on the Board's proposed Antidegradation Implementation Procedures. We believe that these comments will further support our


Dr. Edward M. Snyder
July 20, 1998
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request for an expanded stakeholder process to continue the deliberations on this key initiative.

Should you have any questions on these comments, please contact Mike Brown at (614) 223-1286.

Sincerely,

J. M. Brown for

Alan R. Wood, P. E. 
Manager, Water Quality Section

ARW/JMB

c: Ms. Libby Chatfield, Technical Advisor
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

BEFORE THE ENVIRONMENTAL QUALITY BOARD

COMMENTS BY AMERICAN ELECTRIC POWER

REGARDING THE PROPOSED ADOPTION OF APPENDIX G:

ANTIDEGRADATION IMPLEMENTATION PROCEDURES WITHIN 46CSR1.

1. **Section 4B.1.a.** inadvertently refers to Section 6.2. The proper citation here should be Section 6.
2. **Section 4B.1.b.** inadvertently refers to, "...designated uses in section 6.2." The proper citation here should also be Section 6.
3. **Section 4C2.a.2.** defines circumstances that shall not be considered to cause "significant degradation."

This section should be expanded to include a variety of other de minimis activities that do not result in a significant lowering of water quality. Many of West Virginia's neighboring states have recognized a variety of additional de minimis activities that qualify for an exclusion or waiver from antidegradation review. The following bullet items are a compilation of activities exempted in other neighboring state's antidegradation implementation programs. The value of including these exemptions in West Virginia's antidegradation implementation policy include the resultant savings in valuable agency resources, and the saving of time by avoiding lengthy staff antidegradation reviews for inconsequential permitting activities. We urge the Environmental Quality Board to add language to Section 4C2.a.2. that provides an antidegradation review exclusion for the following de minimis activities:

- The term "significant degradation" shall not include changes in loadings of a pollutant or pollutant parameter within the existing capacity and processes that are covered by an existing applicable permit, which include, but are not limited to the following:
 - a) Normal operational variability, including, but not limited to intermittent increased discharges due to wet-weather conditions;
 - b) changes in intake water pollutants not added by the discharger;
 - c) changes that result from increasing the production hours of the facility, for example, by adding a second shift; or
 - d) changes that result from increasing the rate of production.

- New limits for an existing permitted discharger that **are not** the result of changes in pollutant loading, including but not limited to new limits that are the result of the following:
 - a) new or improved monitoring data,
 - b) new or improved analytical data,
 - c) new or modified water quality criteria or values; or
 - d) new or modified effluent limitations guidelines, pretreatment standards, or control requirements for POTWs.
- Bypasses that are not prohibited pursuant to 40 CFR 122.41(m) and applicable state NPDES rules.
- A new or increased discharge of a substance used to treat zebra mussels or other nuisance species in an intake water pipe or structure if the new or increased discharge will not cause adverse effects on human health and aquatic life.
- New or increased discharges of a substance that will result only in a short term, temporary lowering of water quality (12 months or less).
- Any source discharging to limited quality waters, and any source that discharges to Tier 1 waters.
- Any net increase in the discharge of a regulated pollutant resulting from a change of fuel used by the discharger, provided the discharger was capable of accommodating the new fuel on the effective date of the policy.
- New or increased discharges of a substance, when the facility withdraws intake water containing the pollutant from the same body of water, and the new or increased discharge of the pollutant is due solely to the presence of the pollutant in the intake.
- A new or increased discharge of a parameter, if the new or increased discharge is necessary to accomplish a reduction in the discharge of another pollutant or pollutant parameter and the director/chief determines that the action will result in a net improvement of water quality in the waterbody, if the following requirements are met:
 - a) the new or increased pollutant or pollutant parameter is determined to be significantly less toxic than the decreased pollutant or pollutant parameter; and
 - b) the applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased discharge have been taken.

- A new or increased discharge of a pollutant if the increase is necessary to accomplish a reduction in the discharge of an air pollutant and the director/chief determines that the action will result in a net environmental improvement, if the following requirements are satisfied:
 - a) the reduction in the discharge of the air pollutant is necessary to meet State or Federal air quality standards or will substantially reduce human exposure to hazardous air pollutants; and
 - b) the applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased discharge have been taken.

- Those applicants seeking coverage under a Nationwide Corps of Engineers General Permit for which 401 water quality certification has been waived. (Note: If a project is covered by a Section 404, Nationwide General Permit currently authorized in West Virginia, then the permittee should not have to go through an antidegradation review process when the project being initiated satisfies the terms of coverage under the approved Nationwide permit. The Nationwide permit will undergo antidegradation review every five (5) years; thus, if the WVDEP grants 401 water quality certification to the various Corps of Engineers Nationwide Permits, the antidegradation review process can be satisfied. Antidegradation review for individual 401 water quality certification of Section 404 permits should only be required where an individual permit is being requested).

- Any application approved pursuant to the authorization for storm water discharges associated with **construction** activity under the WV/NPDES General Permit No. WV0115100, or any subsequent reissuance of the same permit.

- Any application approved pursuant to the authorization of storm water discharges associated with **industrial** activity (including applicable coal mining general permits) under the applicable WV/NPDES General Permit, or any subsequent reissuance of the same permit. (Note: Individuals applying for coverage under applicable WV/NPDES Storm Water General Permits are seeking coverage under a previously approved NPDES permit that has already gone through public notice procedures and antidegradation review. Any applicant seeking coverage under this or any other NPDES general permit must not be forced to go through a potentially lengthy and onerous antidegradation review process to receive permit coverage. A possible antidegradation review should only be triggered when an applicant is either denied coverage under one of the available General Permits, or where the applicant voluntarily elects to seek coverage under an individual WV/NPDES storm water permit for discharges associated with construction or industrial activity).

- Waiver allowing the chief/director to approve activities that lower water quality on a temporary basis whenever the chief/director determines that an emergency exists requiring immediate action to protect public health and welfare.
- A proposed new discharge from a sanitary wastewater treatment plant constructed to alleviate a public health concern, for example, a connection of existing residences currently on septic systems.
- New or increased discharges of a substance due to water body segment dredging pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, corrective actions pursuant to the Resource Conservation and Recovery Act (RCRA), as amended, or similar federal or state authorities, undertaken to alleviate a release into the environment of hazardous substances, pollutants or contaminants.

4. **Section 4B.1.a.** This section currently states that all waters not included in Tiers 2.5 and 3 will be considered “high quality waters” **unless it can be demonstrated that** the water quality is not better than necessary to attain both fishable (Category B) and swimmable (Category C) uses. It further states that, “**If either the fishable or swimmable use is attained, the water is a high quality water**” (emphasis added). Who carries the burden of demonstrating that water quality is not better than necessary to attain both fishable and swimmable uses? Further, what criteria are to be used?

Normally, if a stream cannot meet its use designation, it is classified as “impaired” and placed on the state’s 303(d) list. Was it the Board’s intent that streams which are classified as “impaired” under one set of rules be classified as “high quality water” for purposes of antidegradation review? If so, why? Can a stream be classified as Tier 2 for one pollutant and Tier 1 for another pollutant?

5. **Section 4C2.a.1.a.** This section states that, “any proposed activity that would increase the **ambient concentration of any parameter more than 5% at critical flow conditions** shall be considered significant degradation (emphasis added).”

There are two significant issues with the language in this section that must be addressed by the EQB. The first issue relates to the use of “any parameter” when assessing the potential of “significant degradation.”

The assumption that the addition of “any parameter” should be considered “significant degradation” is overly restrictive and inconsistent with the implementation strategy of neighboring states. As currently drafted, this section could be interpreted to imply that an increase of hardness, alkalinity or an increase of **any parameter**, regardless of whether it has a

numeric water quality standard, or is listed as a priority pollutant within 307(a)(1) of the Clean Water Act, could also be considered “significant degradation” and trigger an antidegradation review.

We submit that it is not the intent of the antidegradation policy to apply to **any parameter** regardless of its potential to cause use impairment. Instead, the language in this section should be clarified such that only those regulated parameters with water quality standards adopted within 46CSR1 are considered during an antidegradation review process.

The second concern with the language in Section 4B2.a.1.a. is the use of an, “**ambient concentration of ... more than 5% at critical flow conditions**” for the determination of “significant degradation” thresholds.

How will the “ambient concentration” at “critical flow conditions” of each individual parameter be determined at each location? If a measurement of ambient pollution concentrations at 7Q10 flow conditions are required, how is this to be performed? It appears that the wording of this section could require a huge undertaking requiring years of data collection at an unwarranted and prohibitive expense just to document ambient stream conditions at critical flow conditions. Arguably, no decisions could even be made regarding antidegradation until this data is collected. Without the background data at critical flow conditions; how will decisions be made regarding what pollutant additions could cause an increase in ambient concentrations of more than 5%?

The EQB should amend this section to be more consistent with the current antidegradation implementation strategies of neighboring states including Ohio, Indiana, and Virginia. Specifically, the EQB should establish a criterion for “significant degradation” based upon the assimilative capacity of the stream - not on an arbitrary determination of ambient pollutant concentrations at critical flow conditions.

General criteria used by several neighboring states to define what constitutes “significant degradation” are provided below. We ask that the EQB carefully review these criteria and adopt similar language.

Ohio - Ohio’s antidegradation rule bases “significant degradation” thresholds for a “high quality” stream on assimilative capacity, not ambient concentrations. In general, streams with a category approximating West Virginia’s Tier 2 “high quality” designation are exempt from an antidegradation review unless the activity would individually result in the assignment of 10% or more of the available assimilative capacity of the receiving stream.

Indiana - Indiana is currently undergoing triennial review and has draft antidegradation language that is undergoing “public notice.” Within Indiana’s draft rule, they also define “significant

degradation” based on assimilative capacity. Some of the thresholds that must be exceeded to be considered “significant” in a comparable “Tier 2” stream include:

- a proposed increase in mass discharged that is more than ten percent (10%) of the unused loading capacity for a priority pollutant,
- a proposed increase in mass discharged that is more than fifteen percent (15%) of the unused loading capacity for a non-conservative pollutant.

Indiana also defines “**unused loading capacity**” as that amount of the total loading capacity not utilized by point source and non point source discharges, determined at the time that the proposed increase is considered.

The term “**total loading capacity**” is defined as the product of the applicable water quality criterion times the sum of the existing effluent flow and the applicable mixing volume or the stream design flow for the waterbody in the area where the proposed increase is to occur, expressed as a mass loading rate.

Virginia - The Virginia DEQ also bases antidegradation review on assimilative capacity. The DEQ looks at the predicted change in the instream concentration of the parameter (or other measure specified by the standard) for the parameters for aquatic life protection defined within their water quality standards regulations. If the predicted change is not greater than 25% of the difference between the existing quality and that allowed by the standards, no antidegradation review is required. The change allowed prior to antidegradation review for human health criteria is 10%.

In summary, establishing a de minimis threshold based upon a percentage of the assimilative capacity would clearly be a more equitable and easily calculated value than would ambient pollutant concentrations at critical flow conditions. Procedures for calculating total and available assimilative capacity can then be determined using standard wasteload allocation procedures (or other approved procedures).

As currently drafted, the language in this section penalizes dischargers to streams with low ambient pollutant concentrations and favors dischargers to streams with high ambient pollutant concentrations. This places an unfair bias on dischargers to streams with low “ambient” pollutant concentrations at critical flow conditions; while at the same time allowing the same discharger to a stream with higher “ambient” pollutant concentrations to avoid antidegradation review (See example provided in Attachment 1).

The above-referenced imbalance could have the unfortunate effect of creating a disincentive for dischargers to optimize treatment effectiveness because they could be rewarded with more stringent permit limits, loss of an operating cushion for compliance, and loss of reserve capacity for growth. This could also discourage or delay voluntary pollution prevention efforts because facilities that implement such measures would improve effluent quality and, potentially face more stringent effluent limits.

Finally, it is unclear how this section could effectively be applied with parameters that have ambient concentrations below analytical detection or quantification. How will the 5% criterion be applied in this case? Would it constitute "degradation" if the concentration of any parameter in an existing discharge is simply detectable, regardless of how far below the actual water quality standard the parameter may be?

6. Section 4C2.a.2.a. This section currently reads, "Temperature: Provided that the temperature of a discharge complies with the temperature criteria in Section 46-1-8.28 (Appendix E of this rule)."

This section is not consistent with federal antidegradation provisions at 40 CFR 131.12(4). It should be amended to recognize that permittees which either currently have or successfully apply for a variance in accordance with Section 316 of the CWA are also exempt from antidegradation review. To ensure this language is consistent with 40 CFR 131.12(4), we ask that the sentence be amended to read as follows:

"Temperature: Provided that the temperature of a discharge complies with the temperature criteria in Section 46-1-8.28 (Appendix E of this rule), or is otherwise consistent with Section 316(a) of the Clean Water Act ."

Note: EPA clearly intended that any state's antidegradation policy not restrict the application of Section 316(a) thermal discharge limits. This position is further clarified in EPA's August 1985 document entitled, "Questions & Answers on: Antidegradation." Within this document, EPA states that, "The statutory scheme and legislative history indicate that limitations developed under Section 316 take precedence over other requirements of the Act."

7. Section 4C.5.a. and b. This section of the draft policy relates exclusively to the merits of less degrading or non-degrading alternatives that are examined during the antidegradation review process.

As this section is currently drafted, a proposed activity could be denied under the terms of 4C.5.b. before any consideration is even given regarding the accommodation of important economic or social development. We submit that it is beyond the DEP's or any other state

agency's regulatory authority to deny an activity on a Tier 2 stream exclusively because, "mutually acceptable resolutions are not reached."

To correct this possible legal quandary, Sections 4C.5 and 4C.6 need to be integrated into one section so the antidegradation review considers the alternatives and the economic/social importance of the activity simultaneously, not independently.

We also suggest specifying that any nondegradation alternative, a minimal degradation alternative, or a mitigative degradation alternative to offset all or part of the proposed lowering of water quality, be evaluated based upon the following:

- a) Magnitude of the water quality impacts,
- b) The availability reliability and cost effectiveness of any non-degradation, minimal degradation or mitigative technique alternative, and
- c) The reliability of the preferred alternative including but not limited to the possibility of recurring operational and maintenance difficulties that would lead to the increased degradation condition.

8. Section 4D2.a. - This section, which applies to Tier 2.5 streams, states that, "If a determination is made that the activity will result in the lowering of water quality conditions, the activity shall not be allowed."

This language appears to provide a higher level of protection than that afforded to Tier 3 stream (Outstanding National Resource Waters) under Section 4E.2. of the draft rule. At a minimum, some consideration for short term projects and de minimis activities in Tier 2.5 streams must be provided. Incorporating language similar to that found in 4E.2.a. through 4E.2.f. should also be added to Section 4D.2.

9. Section 4E.7. This section currently states that, "All upstream segments of a ONRWs shall be considered ONRWs."

This language should be modified to state that no discharge upstream of an ONRW shall cause a measurable impact to the water quality of streams designated as ONRWs.

APPENDIX 1: ANTIDegradation IMPLEMENTATION EXAMPLE

The following example demonstrates the unfair bias the proposed antidegradation implementation guidance (**Section 4C2.a.1.A.**) places on dischargers to streams with low “ambient” pollutant concentrations at critical flow conditions. The example also shows how the same discharger to a stream with higher “ambient” pollutant concentrations can avoid antidegradation review.

Example Discharge Situation:

Stream XYZ has a 7Q10 flow of 10 MGD and an instream hardness of 100. Municipal ABC has an existing sanitary wastewater discharge of 100,000 gallons per day on the stream. The municipality is now receiving pretreated effluent from an industrial discharger and is currently discharging 100 parts per billion (ug/l) of nickel within their treatment plant effluent. The incremental increase from the municipality’s new industrial customer does not require the NPDES permit to be modified.

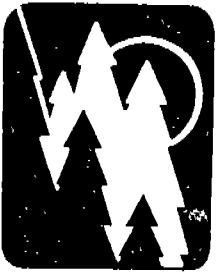
Current “ambient concentration” of zinc in the receiving stream at critical (7Q10) flow conditions is 1 part per billion (ug/l).

Using the Appendix E equations from 46CSR1, the chronic instream numeric aquatic life criterion for Zinc is 158 ug/l, the acute criterion is 1,418 ug/l and the stream’s approximate assimilative capacity at critical flow conditions is:

Chronic Zinc Loading:	$0.158 \text{ mg/l} \times 10 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	13.2 kg/d
Acute Zinc Loading:	$1.418 \text{ mg/l} \times 10 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	118.3 kg/d
Zinc loading from STP:	$0.100 \text{ mg/l} \times 0.100 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	0.08 kg/d

In this example, the zinc loading from the STP uses less than 1% of the available assimilative capacity in the stream at critical flow conditions; however, the discharge concentration results in an increase of the “ambient concentration” in the receiving stream by more than 5% at critical flow conditions which would mandate an antidegradation review under the proposed rule.

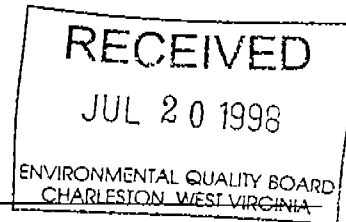
In contrast, if the same receiving stream had an ambient nickel concentration of 50 ug/l, the 1 ug/l increase from the STP would only be a 2% increase over “ambient concentrations.” This example demonstrates how the proposed language at **Section 4C2.a.1.A.** can be misapplied. It also calls into question how analytical variability will be considered when water column pollutant concentrations approach the level of analytical quantification.



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July 20, 1998

Environmental Quality Board
1615 Washington Street, East
Charleston, W.V. 25311-2126

RE: Proposed Rule Changes:
Antidegradation Implementation
& Dissolved Metals Criteria

Dear Members of the Board,

As always, the West Virginia Highlands Conservancy (WVHC) appreciates the opportunity to comment on the Board's proposed language for new regulations to be submitted for review during the upcoming Legislative Session.

This year's proposal from the Board includes a much needed implementation guidance for the State's antidegradation policy and a suggested change from total to dissolved criteria for some metals.

WVHC respectfully submits the following comments with the hope that you will seriously address them in your final proposal to the Legislative Rule Making Review Committee.

I. MAJOR POSITIVE STEP

First, we thank you for finally taking the step of creating an antidegradation implementation policy. This undertaking is not only required by law but is also much needed to assure the citizens of West Virginia that the waters of the state will be protected as we move ahead into the 21st century.

The Clean Water Act recognized the need for development and improvements that would change the pristine nature of the nations waters, but also insisted that such a change or diminution be approved only when and if a much needed development could not be accomplished without some relatively minor degradation of the nations waters.

1) On several occasions during the past 15 years WVHC has recommended implementation of the antidegradation policy in order to prevent costly and inexcusable water quality problems. We are

pleased to support the efforts of the Board today in the hopes that this proposal will take us one step closer to actually utilizing the antidegradation policy and thus hopefully preventing similar problems throughout the state of W.V.

2) Second only to its very creation, perhaps the most praiseworthy aspect of the currently proposed implementation policy is the fact that it appears to drive major permittees toward appropriate and detailed site specific and parameter by parameter evaluation and documentation.

Given the regulatory agencies' lack of adequate money and personnel to adequately gather and document background and ambient water quality for all waters of the state, especially the furthest reaches of the many high quality headwater streams, it is imperative that we exercise the utmost caution when granting permission to degrade the state's excellent water quality.If anything, the proposed language does not put enough responsibility upon the individual polluter to provide the necessary data and to provide adequate proof of need and lack of alternatives to rationalize any diminution of quality.

II. DEFICIENCIES AND AREAS OF CONCERN

Although pleased with the general tone and direction of the proposed guidance, it is important that WVHC emphasize some deficiencies that we believe make the guidance less protective of water quality than either Federal or State law requires.

1) Of particular concern is the Board's recommendation that an antidegradation review is triggered only when there is a "significant" level of degradation expected from a proposed activity. Any measurable degradation should require a review.

High quality headwater streams are particularly at risk in this scenario. Reliance on "significant" levels of degradation may slow the decline in water quality but will not fully protect waters of particular sensitivity. Of particular concern are areas where residents utilize surface water springs and creeks that are absent measurable amounts of pollutants even from natural sources where the barest minimum treatment (i.e. mere settling or sediment filters) is needed for using these surface waters for drinking water purposes.

(Please refer to further comments in II.6 below.)

2) Cumulative impacts are not considered in the proposed rule. The process is driven by individual permit applications and not by an overview of water quality in a given watershed.

This is particularly problematic when relying on a "significant" level of degradation to trigger a review. If individual multiple point source impacts fall below the suggested "significant" criteria (5% - or worse still, 10%, 20%, etc.) those individual activities can still be permitted without an antidegradation review.

This is also especially problematic when a point source activity carries with it other non-point source activities.

3) NON-POINT SOURCES ARE NOT ADEQUATELY ADDRESSED. As proposed, non-point sources are deemed to be "in compliance with the antidegradation requirements with the achievement of cost effective and reasonable best management practices in accordance with the WV Non-Point Source Management Plan." While this phrase may infer that activities where BMP's are not being implemented are not deemed to be in compliance and consequently may move to a greater use of BMPs, it does not create the needed linkage between BMPs and water quality standards. The antidegradation guidance should provide a tool by which BMPs are evaluated in relation to their ability to achieve water quality standards, and where those BMPs do not achieve standards, this guidance should be the impetus for review and improvement of BMPs currently in use.

At a minimum, compliance with antidegradation for non-point discharges should be assumed only where monitoring data are available that verify the effectiveness of BMPs.

4) TRADING SHOULD NOT BE PERMITTED. This is true for trading between point sources and between point and non-point sources.

a. Trading between point sources could not be allowed in a truly ANTIdegradation policy, i.e. where any measurable amount of degradation would trigger review, where non-point sources were included, where cumulative impacts are adequately considered, etc., --- each source would be held to the highest standards.

b. Trading between point and non-point sources poses a particular problem in that while point sources have regulatory oversight, public notification and monitoring requirements, non-point sources have none of these requirements. Furthermore, reliable verification of specific non-point reductions is nearly impossible because of variations in daily, seasonal and annual rainfall and access to testing sites.

c. If 'trading' is retained in the final proposal to the Legislature, it should not be included among those circumstances that "shall not be considered to cause significant

degradation" (4C.a.2./4C.2.a.2.F.) and thereby not trigger an antidegradation review (4C.3). Trading most certainly should undergo specific review and require evaluation of alternatives and the showings required in 4C.4, 4C.5 and 4C.6.

d. WVHC must object to the language in sections 4B.4, 4C.2.a.2.F., and 4D.2.C that states the basis for a trade will be made through a TMDL of "other appropriate measures". The phrase "other appropriate measures" makes the basis of these trades discretionary, without any clearly defined, scientifically sound criteria. This is especially important because TMDLs generally are only established when water fails to meet a standard and so the "other appropriate measures" would be the only method available for trades in the higher quality waters that the antidegradation policy is supposed to protect. If avenues beyond the TMDL strategy are available and scientifically sound they should be clearly outlined in this document.

5) While it is commendable that 4E.8.1.c. specifically affords the same level of protection (Tier 3.0) to all upstream segments of an ONWR, the same consistency should be specifically allotted to all upstream segments of waters that fall into Tier 2.5. (e.g. trout waters, etc. One can't indiscriminantly draw a line - say 100 feet - upstream from the site where a trout has been seen and then say that the waters and vegetation, etc. above that point aren't integrally connected, i.e. directly responsible for the water quality downstream that supports the trout population.)

6) For years WVHC and local citizen groups such as FOLK (Friends of the Little Kanawha) have appealed to the Board for an extra measure of protection for headwater streams which are relatively unpolluted, and in their natural state are suitable for the highest and best use, e.g. drinking water, without chemical treatment and relying only on the most basic treatment of settling or sediment filtering.

Granted, standards and protection measures for the Ohio River and the Kanawha, and even in some ways the Monongahela are overwhelming concerns for the Chamber of Commerce and the Manufacturers Association, but for individuals and communities where relatively pristine and pure waters serve as the lifeblood for our existence, more protective measures must be afforded to protect our lifestyles from the pollution meted out by mining, timbering, oil and gas road building and pit and brine waste discharges, and in some instances agriculture runoff.

Somewhere, somehow, the Board has to be clear on what protective measures are to be meted out to those outlying, relatively isolated but pristine areas.

In public meetings where the question has been raised the Board has been adamant that it assumes ALL waters of the state are to be considered capable of supporting the highest and best use (and therefore subject to the most stringent standards) unless an applicant for some activity makes a showing that limits the existing use of that stream. However, since approximately 1984 the specific language of the standards no longer is clear in this regard.

WVHC believes that it is incumbent upon the Board to clarify this grey area by either 1) in Section 6.1 explicitly designating all waters of the state for ALL USES unless proven to be of lesser quality by an applicant for some specific activity (as was the case in the WV water quality standards at least until 1983), or 2) by including ALL WATERS of the State in Tier 3 for reasons of existing water quality e.g. pristine or naturally occurring (4E.8.1.c.) unless a showing can be made that the stream segment is not of sufficient quality to be so considered.

This position ^{# 1) above} has been advanced by Water Resources during the Triennial Review and is supported by the US EPA, Office of Water Regulations and Standards Criteria and Standards Division in its August 1985 Paper "Questions and Answers on: Antidegradation" page 2: "An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1995, OR, THAT THE WATER QUALITY IS SUITABLE TO ALLOW SUCH USES TO OCCUR (UNLESS THERE ARE PHYSICAL PROBLEMS WHICH PREVENT....) -- A copy is included with these comments.

IV. WVHC questions the adequacy of the intergovernmental coordination as outlined in Appendix G-1.

W. METALS CRITERIA

1) WVHC fully supports the comments submitted by ^{W.V. for CLEAN} ~~James~~ ^{WATER} ~~WATER~~ which reiterates ~~the~~ understanding from the metals committee that language was to be included in Section 8 that explicitly allows Water Resources to develop criteria based on sediments when sufficient basis is established.


2) WVHC supports the comments submitted by Don Brannon, Ph.D., former member of the Water Resources Board, with regard to metals. i.e.:

- Hg should be looked at again;
- Al criteria of 750 ug/l for B1 and B2 streams are too high, etc.

VI. BMPS

WVHC reiterates its long held belief and references Dr. Brannon's comments to support what we and other participants in the West Virginians for Clean Water Campaign believe RE: BMPs i.e. that 208 voluntary Best Management practices must become mandatory.

Again, on behalf of the WVHC I thank the Board for the opportunity to comment on these most important proposals.



Cindy Rank, Past President
& Mining Committee Chair
HC 78 Box 227
Rock Cave, WV 26234

phone (h) (304) 924-5802
(o) (304) 924-6263

cc John McFerrin, President

QUESTIONS AND ANSWERS ON: ANTIDEGRADATION

August 1985

U.S. Environmental Protection Agency
Office of Water Regulations and Standards
Criteria and Standards Division (WH-585)
401 M. Street, S.W.
Washington, DC 20460

5. WHAT COULD HAPPEN IF A STATE FAILED TO IMPLEMENT ITS ANTI-DEGRADATION POLICY PROPERLY?

If a State issues an NPDES permit which violates the required antidegradation policy, it would be subject to a discretionary EPA veto under Section 402(d) or to a citizen challenge. In addition to actions on permits, any wasteload allocations and total maximum daily loads violating the antidegradation policy are subject to EPA disapproval and EPA promulgation of a new wasteload allocation/total maximum daily load under Section 303(d) of the Act. If a significant pattern of violation was evident, EPA could constrain the award of grants or possibly revoke any Federal permitting capability that had been delegated to the State. If the State issues a §401 certification (for an EPA-issued NPDES permit) which fails to reflect the requirements of the antidegradation policy, EPA will, on its own initiative, add any additional or more stringent effluent limitations required to ensure compliance with Section 301(b)(1)(C). If the faulty §401 certification related to permits issued by other Federal agencies (e.g. a Corp of Engineers Section 404 permit), EPA could comment unfavorably upon permit issuance. The public, of course, could bring pressure upon the permit issuing agency.

6. WILL THE APPLICATION OF THE ANTIDEGRADATION POLICY ADVERSELY IMPACT ECONOMIC DEVELOPMENT?

This concern has been raised since the inception of the antidegradation policy. The answer remains the same. The policy has been carefully structured to minimize adverse effects on economic development while protecting the water quality goals of the Act. As Secretary Udall put it in 1968, the policy serves "...the dual purpose of carrying out the letter and spirit of the Act without interfering unduly with further economic development" (Secretary Udall, February 8, 1968). Application of the policy could affect the levels and/or kinds of waste treatment necessary or result in the use of alternate sites where the environmental impact would be less damaging. These effects could have economic implications as do all other environmental controls.

7. WHAT IS THE PROPER INTERPRETATION OF THE TERM "AN EXISTING USE"?

An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality). An example of the latter is an area where shellfish are propagating and surviving in a biologically suitable habitat and are available and suitable for harvesting. Such facts clearly establish that shellfish harvesting is an "existing" use, not one dependent on improvements in water quality. To argue otherwise would be to say that

Donald G. Brannon, Ph.D.
PO Box 59
Charlton Heights, WV 25040-0059

July 16, 1998

Environment Quality Board
165 Washington Street East
Room 301
Charleston, WV 25311-2126

RE: June 18, 1998 Proposed Title 46 Legislative Rules Environmental Board

1. Appendix E
 - a. The change from Total Recoverable to solution concentrations of metals except for Hg is correct. However, the filter size should be stipulated.
 - b. Aluminum criteria of 750 ug/L for B1 and B2 are much too high. An extensive body of literature supports my position. Aluminum is the primary culprit in destruction of B1 and B2 populations from AMD and acid precipitation. A literature search will reveal appropriate criteria based upon 0.1 x LC50s for both acute and chronic conditions.
2. Appendix G
The implementation of the antidegradation policy has been desperately needed and the Board is to be applauded for its inclusion.

Overall, a good set of rules except it has become obvious that 208 voluntary Best Management practices must become mandatory.

Donald G. Brannon
(Former Water Resources Board member)

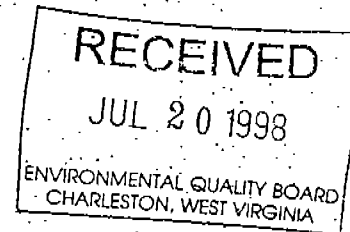
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West Virginians for Clean Water

July 19, 1998

Libby Chatfield
Environmental Quality Board
1615 Washington Street, East, Suite 301,
Charleston, West Virginia 25311-2126



Dear Ms. Chatfield:

Please accept these comments in reference to the proposed changes in the Water Quality Standards Rule, 46 CSR 1, dated June 17, 1998.

I. Dissolved Metals Criteria

The language of the proposed 8.1.b.B. states that permit limits based on dissolved metal "may" be prepared using the EPA guidance document, however, this portion of the rule should be mandatory. West Virginia would have difficulty justifying to EPA any permit limits established through methods that deviated significantly from their guidance document. We recommend that the "may" be replaced with a "shall".

This section would also be an appropriate place to address the concerns over sediment loadings considered by the Metals Committee. At a minimum, the following language should be added to 8.1.b.2.:

"On a case-by-case basis, the chief may require an applicant applying for a translator to conduct appropriate sediment monitoring through approved methods to evaluate effluent limits that prevent toxicity to aquatic life."

Some guidance to indicate when sediment monitoring would be appropriate is needed. We recommend the following:

"At a minimum, sediment monitoring may be required in areas where metals are expected to accumulate or in areas providing habitat for sensitive species."

The above language would help DEP and prevent monitoring of areas where sediment impacts are unlikely, while providing real world data to indicate whether impacts are likely to occur in areas that could be severely affected.

801 N. Randolph Avenue, Elkins, WV 26241 (304) 637-7201

Two editorial changes should be considered:

- 1) The footnote No. 5 at the end of Appendix E (page 57) is grammatically awkward and confusing. We suggest adding the words "is a value" after (CF). Also add the word "and" after "criterion".
- 2) The inclusion of the metals Chromium (III) and Chromium (VI) to the Table 2 list is confusing as it appears the EQB does not currently have a standard for these parameters, hence, it would be impossible to apply these Conversion Factors in any application.

II. Antidegradation Implementation Procedures (Appendix G)

We appreciate the time and effort that both the Environmental Quality Board and the Office of Water Resources have devoted to developing the antidegradation implementation guidance document. We realize that in a time of extreme budgetary constraints this was a significant commitment of resources. We strongly support this effort. The implementation of the antidegradation provision of the Clean Water Act has the potential to make a significant difference in state water quality and through the watershed approach to standardize environmental protection from region to region.

While we support this effort, we have a number of serious concerns:

The Clean Water Act goals of maintaining and restoring water quality must be upheld as the basis for West Virginia's antidegradation policy. An antidegradation policy is meant to provide protection not only for "uses" achieved in a watershed, but more importantly to provide additional protection for water quality that is better than needed to attain these uses. We are concerned that while the proposed implementation language may slow the decline of water quality, it is not really protective of water quality that exceeds use criteria or standards.

Clarification is needed concerning the agencies involved in antidegradation implementation. Without an updated state continuing planing process we have no assurance of adequate authority for intergovernmental cooperation in the implementation of this guidance. Since the mission of many agencies may be impacted and since these missions may at times be in conflict with each other we are concerned about authority for coordination.

What is the protocol for decision-making and what specific obligations exist for Office of Water Resources, the Environmental Quality Board and other state and federal agencies? Agencies participating in the development of nonpoint source best management practices need to be involved in this process above and beyond a simple notification process. The development of best management practices and their technical connection to water quality standards are critical.

The limit of cumulative impacts of multiple, new or expanded point sources or point sources that are associated with significant nonpoint source impacts - impacts

either above or below the suggested 5% criteria - are not outlined. The antidegradation review process is driven permit by permit and not by an overview of water quality in a given watershed and therefore is not ultimately protective of high quality waters.

46-1-4A

4A.2 Meaningful nonpoint source criteria for antidegradation implementation are absolutely necessary for a successful program. Sole reliance on best management practices is a serious weakness of the antidegradation implementation guidance document. Since best management practices in every sector are voluntary, there is no assurance BMPs will themselves be implemented. Additionally, best management practices are not technically linked to water quality standards. This approach further isolates nonpoint source pollution from the jurisdiction of water quality standards and severely undermines the EPA mandated task of including cumulative effects in the antidegradation implementation document.

We strongly urge the Board to consider an alternative approach to nonpoint source issues, one that more clearly limits nonpoint impacts especially when water quality standards are threatened or violated. At a minimum, compliance with antidegradation for nonpoint discharges should be assumed only where monitoring data is available that verifies the effectiveness of best management practices.

46-1-4A.3.

The Brownfields statute established a clear distinction between those sites where contamination existed prior to the effective date of the Act (July 1, 1996) versus those sites which became contaminated after the Act became effective [eg., 22-22-2(b) and 22-22-15(d)]. The purpose of this distinction was to establish a very clear policy of encouraging clean-ups of old abandoned sites without encouraging backsliding or carelessness at existing or new sites by relaxing standards.

We recommend rewriting sections 4A.3.a and 4A.3.b as follows to assure consistency with the language and intent of the Voluntary Remediation and Redevelopment Act:

4A.3.a. Where remediation efforts are being proposed for sites contaminated by releases which occurred prior to July 1, 1996 and where there is a potential for surface water impacts from contaminated groundwater, an antidegradation review will not be required.

4A.3.b. Where remediation efforts are being proposed for sites contaminated by releases which occurred on or after July 1, 1996, or where there is a potential for surface water impacts from activities resulting in new discharges from the treatment of contaminated groundwater, an antidegradation review will be required.

46-1-4B

4B.4 Trading should not be permitted, either between point sources or between point and nonpoint sources of pollution. Trading has no place in a truly anti-degradation policy ie. if any amount of degradation would trigger review, and nonpoint sources were included, and cumulative impacts were adequately considered, etc., trading would not be an issue.

Trades between point and nonpoint sources pose a particular problem in that while point sources have regulatory oversight, public notification, and monitoring requirements, nonpoint sources have none of these requirements. Further, reliable verification of short to medium term specific nonpoint reductions is nearly impossible because of variations in daily, seasonal, and annual rainfall and access to testing sites.

Trades should not be exempt from antidegradation review as in 4C.2.a.2 and 4C.3. This creates a significant loophole in the policy.

In sections 4B.4, 4C.2.a.2.F., and 4D.2.C it is stated the basis for a trade will be made through a TMDL or "other appropriate measure". We strongly object to the language "other appropriate measures" as it makes the basis of these trades discretionary, without any clearly defined, scientifically sound criteria. This is especially important because TMDLs generally are only established when water fails to meet a standard and so the "other appropriate measures" would be the only method available for trades in the higher quality waters that the antidegradation policy is supposed to protect. This allows a clear way out of antidegradation constraints for point source discharges and seriously threatens the intent of the antidegradation provision of the CWA.

46-1-4C

4C.2.a.1.A Antidegradation review is triggered only if greater than 5% percent in a pollutant is anticipated. Reliance on any "significant" degradation is not sufficiently protective. If any measurable degradation is predicted, an antidegradation review should occur.

4C.2.a.2.F See comments on trading above.

4C.6.a We would encourage the board to clarify that increased production alone without accompanying social and economic benefit to the community as a whole would not justify degradation.

4C.8.a We believe the intent of the Water Pollution Control Act goes beyond simple notification of the listed agencies. We ask the Board to outline the process for assuring adequate authority for intergovernmental cooperation in the implementation of the antidegradation implementation policy.

46-1-4D

4D.2.c See comments above on trading. This protocol seriously threatens the States most pristine waters and should not be allowed especially in tier 2.5 and 3 waters.

46-1-4E

4E.3 See above comments on trading. The point for non-point trading protocol seriously threatens Tier 3 waters and should not be allowed.

III. The following are a list of questions from EPA Region III Guidelines for Review of State Antidegradation Policy Implementation Procedures that we believe need clarification.

In reference to development of the antidegradation policy:

- (a) 4. When will the procedures become effective?
- (a) 5. How will amendments to the procedures be handled?
- (a) 7. What criteria will be used to identify activities to which the antidegradation procedures will apply? Note that EPA Region III intends that the antidegradation procedures must apply at a minimum to the NPDES program and any other Federally delegate and/or funded programs.
- (a) 10. How will intergovernmental coordination be accomplished? How will the procedures handle situations which cross organizational lines at the state and local level?
- (a) 11. How will the State insure that both point and nonpoint sources of pollution are addressed?

In reference to instream water uses:

- (1) 4. How will the State insure that existing instream uses are maintained and protected from degradation by point sources, nonpoint sources, both individually and from cumulative impacts?
- (1) 5. How will the State insure that existing instream uses are protected from impacts other than those related to water column chemistry?

In reference to Tier 2 waters:

- (2) 8. How will intergovernmental coordination and public participation be fully satisfied?

(2) 10. How will "all cost-effective and reasonable best management practices for nonpoint source control" be defined? How will their implementation be assured where a decision to lower water quality is to be made?

(2) 11. Who will make the determination that degradation of water quality is warranted?

(2) 12. How will the State insure that existing instream uses are maintained where a decision to lower water quality below existing conditions is made?

We appreciate the opportunity to submit these comments for your consideration. We hope the implementation of the antidegradation policy will help preserve the outstanding rivers of West Virginia, protect the health of all citizens of the state, and promote sustainable economic development.

Sincerely,

Patricia C. Moe Merritt
West Virginia Rivers Coalition

Lewis Baker
Old Valley Environmental Coalition

Cindy Rank
W.V. Highlands Conservancy

Myra J. ...
Sierra Club, WV chapter

Perry D. McDaniel
PERRY D. MCDANIEL

Wendy E. Radcliff
WENDY E. RADCLIFF

Margaret James
Potomac Headwaters Resource Alliance

James Kolcom
W. V. Environmental Council

PUBLIC HEARING
WATER QUALITY STANDARDS

July 20, 1998

Attending	Wish to Speak	Do not wish to Speak
✓ WAYNE APPLETON ^{DuPont} UC	Yes	
✓ Karen Price NWMTA	yes	
✓ Timothy Albert ^{DuPont-Bell} Chair NWMTA	Yes	
✓ Jim Eydenor USGS	Yes	
Leonard Kneer		X
STAN RUZUM		X
Jennie Henthorn		X
✓ GEORGE GOLDFAY	Yes	
DAVE MONTALI	NO	X
WENDY RADCLIFF		X
Ken Ward Jr	NO	X
✓ Mike Brown	Yes	
Jim Mallon		X
Ben Green		X
Dave Yaussey		X
Randy Cox		X

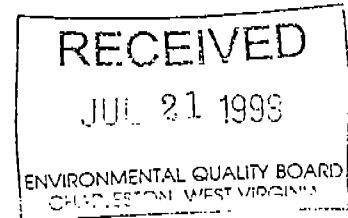
Mike Hogan		X
Bob McKinley	yes	
Chris Hamilton		X
Bill RAVEY		X
Cindy Rank	yes	
Perry McDaniel		X
Richard Mackney		

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DURING PUBLIC COMMENT PERIOD**



WEST VIRGINIA COAL ASSOCIATION

July 21, 1998



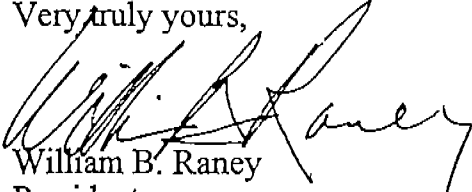
VIA HAND DELIVERY

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

Dear Chairman Snyder and Members of the Environmental Quality Board:

Thank you for the opportunity to comment on your recently proposed water quality standards and Antidegradation Implementation Procedures. Attached are the comments of both the West Virginia Coal Association and the West Virginia Mining and Reclamation Association.

Very truly yours,



William B. Raney
President
West Virginia Coal Association

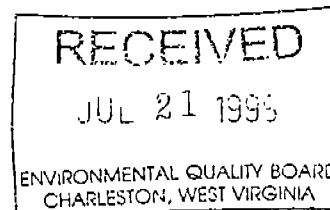
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WEST VIRGINIA COAL: MORE IMPORTANT THAN EVER
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**COMMENTS OF THE WEST VIRGINIA COAL ASSOCIATION
AND THE WEST VIRGINIA MINING AND RECLAMATION ASSOCIATION
ON THE ENVIRONMENTAL QUALITY BOARD'S PROPOSED
WATER QUALITY STANDARDS AND PROPOSED
ANTIDEGRADATION IMPLEMENTATION PROCEDURES**

July 21, 1998

GENERAL COMMENTS



1. **Dissolved vs. Total Metals.**

The Associations wholeheartedly support the cooperative effort that has resulted in the Board's proposal to express aquatic life criteria for metals in terms of the dissolved fraction.

2. **The Board's Remining Proposed Rules are Premature.**

In an "advanced notice of proposed rulemaking" ("ANPR") issued on July 7, 1998, U.S. EPA announced that it seeks to provoke "a structured national debate on antidegradation." See 63 Fed. Reg. 36741-3680C (July 7, 1998) (portions attached at Tab 1). In that ANPR, EPA reviewed the existing three-tiered antidegradation approach currently embodied in both Federal and West Virginia regulations. It concluded that there is wide disparity in the implementation procedures of the States and specifically asked whether implementation procedures should be nationalized.

Other observations and other questions for which EPA had no answers were:

1. What changes or clarifications could be made to the current tiered approach to protecting waters under antidegradation that would streamline and enhance antidegradation implementation?
2. Should the [federal] regulations be amended to identify the basic elements that must be included in an antidegradation implementation method . . . ?
3. Is national guidance on antidegradation implementation methods needed . . . ?

63 Fed. Reg. at 36781. In light of these statements from EPA, and in light of the fact that its ANPR will almost certainly result in a federal rulemaking, the Association urges the Board to await the outcome of the national debate before it adopts procedures that are virtually certain to result in substantial permit delays.

3. Current Law Only Requires “Identification” of Antidegradation Procedures.

Federal law currently requires that States “adopt, as part of [their] water quality standards, an antidegradation policy consistent with 40 CFR § 131.12 and identify implementation methods for such a policy.” 63 Fed. Reg. at 36780; *see* 40 C.F.R. § 131.12. There is, however, no express requirement that such implementation methods be embodied in the water quality standards or that they be submitted to EPA for its approval. In fact, in the July 7, 1998 ANPR, EPA conceded this point, stating that “EPA’s longstanding policy is that the implementation procedure should also be submitted to EPA for review. Often, however, implementation procedures are not submitted to EPA. EPA’s current thinking is that an important change to the regulation would be to clarify . . . that antidegradation implementation procedures (in addition to the policy) must be included in the submittal of State’s . . . water quality standards.” 63 Fed. Reg. at 36781.

In light of this fact and that EPA has, just two weeks ago, intentionally provoked a national debate on just what antidegradation procedures are appropriate, the Board’s proposed rule is simply premature and should be withdrawn pending EPA’s national debate.

4. **The Board Has Not Adequately Considered the Economic Consequences of its Actions.**

The proposed rules also violate the State Administrative Procedures Act (“APA”). That Act provides in W.Va. Code § 29A-3-5 that proposed rules must contain a fiscal note as defined in W.Va. Code § 29A-5-4(b):

When an agency proposes to promulgate a rule other than an emergency rule, it shall file in the state register a notice of its action, including a text of the rule proposed, a fiscal note as defined in subsection (b) of section 4 [§ 29A-3-4(b)], and any requests for the submission of evidence to be presented on any factual determinations or inquires as required by law to promulgate such rule.

W.Va. Code § 29A-3-5. Importantly, the fiscal note defined in W.Va. Code § 29-3-4(b) must include “a statement of the economic impact of the rule on the state or its residents.” W.Va. Code § 29A-3-4. The rule proposed by the Environmental Quality Board, however, does not meet this requirement.

In its fiscal note, the Board merely explains the economic impact of its proposed rule as follows:

A. Economic Impact on State Government.

NEW ANTIDEGRADATION PROVISIONS MAY REQUIRE ADDITIONAL TRAINING FOR STAFF OF AGENCIES IMPLEMENTING THE RULE. COST OF SUCH TRAINING IS UNKNOWN AT THIS TIME. ONLY MINOR IMPACT EXPECTED.

B. Economic Impact of Political Subdivisions; Specific Industries; Specific groups of Citizens.

CHANGES TO THE METALS PROVISIONS ARE EXPECTED TO RESULT IN CHANGES IN EFFLUENT LIMITS RESULTING IN COST SAVINGS TO AFFECTED DISCHARGERS. ANTIDEGRADATION PROVISIONS MAY

RESULT IN ADDITIONAL REQUIREMENTS FOR NPDES PERMITTEES - COSTS UNCERTAIN AT THE TIME.

C. Economic Impact on Citizens/Public at Large.

NONE ANTICIPATED.

Fiscal note at ¶ 4 (emphasis added). These statements do nothing more than explain that the Board does not know what the economic impacts of their proposed rule will be. Certainly, this confession of ignorance does not satisfy the requirement to provide a statement of economic impact. Indeed, if such statements were satisfactory, an agency could satisfy its duty to provide an economic impact statement by conducting no analysis and simply reporting that it didn't know anything. It is difficult to imagine that this is what the Legislature intended in enacting W.Va. Code §§ 29A-3-4 and -5.

SPECIFIC COMMENTS

1. § 46-1-4.1.b.2 (a provision of the water quality standards themselves).

As written, this provision of the proposed water quality standards would create a presumption that all waters will be considered "high quality" or "Tier 2" waters "unless it can be demonstrated that the water quality is not better than necessary to attain both fishable (Category C) and swimmable (Category C) uses." We have several comments:

- a. Fishable waters fall within Category B, not Category C waters. *See* § 46-1-6.3 & 6.4.
- b. The Board has provided no explanation for creating this presumption. In a Draft dated June 4, 1998 of the currently proposed Antidegradation

Implementation Procedures, the Board created two similar presumptions. First, that “the designated uses outlined in section 6.2 are all assumed to apply to all waters . . .” In a telephonic hearing convened by the Board on June 17, 1998, the Board members assured the public that this presumption would be deleted. Second, the June 4 Draft Implementation Guidelines contained the same language which the Board now proposes to move from a procedural guideline directly into the water quality standards.

Having recently completed a triennial review of its standards, the Board fails to explain why it is now not only proposing procedural guidelines, but a major substantive change to its water quality standards which creates a presumption requiring dischargers to prove a negative. The Associations know of no federal requirement for such a presumption and note that in its July 7, 1998 ANPR, EPA observed that the existing approaches by the States for identifying high quality waters fall into two broad categories: (in) pollutant-by-pollutant approaches; and (ii) water body-by-water body approaches. In the pollutant-by-pollutant approach, a State determines whether the existing water quality of a stream is better than that set by the water quality standard. If so, then the allowable assimilation capacity of the stream for proposals to discharge particular pollutants is subject to Tier 2 antidegradation protection. These determinations are made during the permit process and do not require intensive use of state reserves to determine overall water quality in advance of permitting decisions. The second approach weighs a variety of factors to determine a water body’s overall quality and may be made prior to or during

antidegradation review. *See* 63 Fed. Reg. at 36782-36783. Significantly, in neither case does EPA discuss or mandate a State approach which relies on a presumption that all waters are high-quality waters.

- c. Most importantly, the presumption that all waters are high-quality waters unless proven to be seemingly automatically subjects new or modified discharges to the detailed evaluation of alternatives set out in proposed § 46-1-4C.4.a. This is an unreasonable and unnecessary requirement that will impose substantial costs on industry either to prove that water quality is not better than that required or to make the evaluation demonstration. In either case, the Board has failed adequately to consider the costs of such a presumption.

2. § 46-1-4A: Applicability.

- a. Section 4A.1 proposes that the antidegradation procedures would apply to “all activities that require a permit or water quality certification pursuant to state or federal law, including Clean Water Act § 402 NPDES permits, CWA § 404 dredge and fill permits and any activities requiring a CWA § 401 certificate.” This section should not embrace “all permits,” many of which are unrelated to water. Instead, because the antidegradation policy is a creation originally of Federal Clean Water Act law, its applicability should be limited to CWA-required permits. It should be limited to NPDES permits and activities requiring CWA § 401 certification (which already includes CWA § 404 permits, so that the references to § 404 is redundant and confusing). There is no justification for applying it to “all permits.” The extension of the

antidegradation policy to “all permits” is a substantive extension of the water quality standards that should not be set out in a procedural document and is uncalled for under the Federal Clean Water Act.

- b. The Associations further note, and request that the Board make clear, even if it withdraws its proposed implementation procedures, that extension of the antidegradation policy to valley fills and refuse disposal facilities does not prohibit the placement of such structures in the headwaters of streams. The West Virginia Highlands Conservancy and others have recently filed an action in the United States District Court in Charleston, alleging that placement of valley fills, refuse impoundments and treatment ponds in the headwaters of streams, as is frequently required in West Virginia, is flatly prohibited by Federal and State water quality standards and antidegradation policies. *See Bragg v. Colonel Dana Robertson*, C.A. No. 2:98-6-636 (S.D. W.Va.). Their claim is that the very act of filling waters of the State is illegal because the antidegradation policy requires the protection of existing uses and water quality for all segments of a stream. The Conservancy evidently is joined in this belief by the *Charleston Gazette*'s Ken Ward, who evidently relies on a gratuitous comment by an EPA Region III staff person who stated, in response to a Freedom of Information Act request that:

Enclosed are excerpts from the West Virginia Water Quality Standards which indicate that valley fills violate the Anti-Degradation Policy (Section 46-1-4). Section 4.1.c requires that existing uses and the level of water quality necessary to protect existing uses be maintained and protected. Section 6.1 states that at a minimum all waters of the State are designated for the propagation and

maintenance of fish and other aquatic life. Since valley fills cover stream beds and smother any aquatic life present in stream beds, such filling would be an apparent violation of the Anti-Degradation Policy.

See Letter of April 20, 1998 from Dr. Sweeney to Ken Ward and *Charleston Gazette* article of 7/21/98 (attached at Tabs 2 and 3). However, both the EPA letter and Mr. Ward's article of July 21, 1998 contain only part of EPA's official position, which is contained in EPA Region III's "Draft" 1988 Policy, a copy of which is also attached (see Tab 4).

EPA's "Draft" 1988 Policy, which is not a draft at all and which has received judicial approval as a rule (see *West Virginia Coal Association v. Reilly*, 728 F. Supp. 1276 (S.D. W.Va. 1989)), applies the same standards to valley fills and in-stream ponds as does the dredge and fill program established under § 404 of the Federal Clean Water Act for any other type of fill activity.

Pursuant to the CWA § 404(b)(1) guidelines, EPA's rule does not flatly prohibit valley fills and in-stream ponds, but conditions their approval as follows:

Instream ponds and other associated fills relating to the coal mining and processing industry are prohibited, unless certain conditions are met to minimize adverse impacts on aquatic ecosystems.

EPA Region III 1988 Policy (copy attached at Tab 3). Those conditions include requirements for biological surveys, an assessment of feasible alternatives and a minimization of impacts, which is typically satisfied through a "mitigation" agreement with DEP. See EPA Region III 1988 Policy. Far from relying on water quality standards and antidegradation policies to

prohibit in-stream ponds and fills, EPA's rule expressly allows them. Stating that:

Placement of fill material in the waters of the United States shall be in compliance with Section 404 of the Clean Water Act. This includes spoil disposal operations, instream pond construction and other stream filling activities associated with the mining industry. The following sections provide a summary of Section 404 Guidelines and specific conditions for allowance of instream treatment and filling by the coal mining industry.

1988 EPA Policy. Thus, EPA's current rule expressly permits such in-stream activities as pond construction, valley fills and refuse disposal, subject to a mitigation agreement and other conditions imposed to minimize the impact of such structures.

EPA's 1988 Policy for the mining industry is consistent generally with EPA's interpretation of the relationship between the Federal antidegradation policy at 40 C.F.R. § 131.12 and the dredge and fill program under § 404 of the Clean Water Act. In interpreting these two parts of the Clean Water Act, EPA has clearly stated that the antidegradation policy does not prohibit fill activities despite the fact that the policy, if read alone, would seemingly prohibit them. EPA's current guidance on antidegradation states:

4.4.3 Existing Uses and Physical Modifications

A literal interpretation of 40 C.F.R. 130.12(a)(1) [antidegradation policy] could prevent certain physical modifications to a water body that are clearly allowed by the Clean Water Act, such as wetland filling operations under section 404 of the Clean Water Act. EPA interprets section 131.12(c)(1) of the antidegradation policy to be satisfied with respect to fills . . . if the

discharge did not result in “significant degradation” to the aquatic ecosystem as defined under . . . the [CWA] section 404(b)(1) Guidelines.

EPA WATER QUALITY STANDARD HANDBOOK: Second Edition, August 1994.

To ensure the continued viability of not only the mining industry, but also if every project that fills a stream segment or wetland, as has the project to construct a new automobile engine plant in Putnam County, the Board must make a statement that the State water quality standards and antidegradation policy are to be construed as consistent with EPA’s 1988 Policy and do not prohibit valley fills, in-stream ponds, refuse disposal or other filling activities which are otherwise covered by NPDES or § 404 CWA permits.

- c. Finally, this antidegradation policy should have no application to use of Nationwide Permits issued by the Corps of Engineers which have already received certification from West Virginia. Nationwide Permits, by law, are issued by the Corps only for activities having insignificant impact on waters of the United States. Instead, because Nationwide Permits will undergo antidegradation review every five years, the antidegradation review process should be applied only when the Nationwide Permits expire. Otherwise, the process should apply only when applicants seek individual permits from the Corps of Engineers and thereby require individual CWA § 401 certification. The same should be true with respect to any other general permit issued by the Office of Water Resources.

3. **Section 4A.2 Nonpoint Sources**

This section states that “Nonpoint source activities” will be deemed in compliance with antidegradation requirements “with the achievement of . . . best management practices . . .” Does this imply that any Nonpoint source activity that does not have a BMP plan is violating the State antidegradation policy? If so, how does the Board have the authority to regulate such activities?

4. **Section 46-1-4B Tier 1 Protection Review Procedures**

The existing State and Federal water quality standards require that “existing uses and the level of water quality necessary to protect the existing uses shall be maintained . . .” A Tier 1 review requires no more than a determination that existing uses will be maintained irrespective of any expected diminution in water quality due to a new permitted activity. In this light, the “Trading” provision in Section 4B.4 is confusing and implies that effluent trading can be required as part of a Tier 1 review and that only upstream controls can be utilized in effluent trading. It appears that the regulation is intended to address only the situation where the proposed activity would, without the upstream project, interfere with maintenance of an existing use, but this is not entirely clear. The Associations suggest that this be clarified.

5. **Section 46-1-4C Tier 2 Review Procedures (High-Quality Waters)**

§ 4C.1.c.:

This subsection creates a presumption that all waters are “high quality.” As discussed above, this should be deleted.

§ 4C.2.a.1.A: Significant Degradation Test:

This regulation seemingly requires an antidegradation analysis, with an accompanying “alternatives” analysis, the ambient concentration of whenever any parameter will be increased more than 5% even if there is not a numeric water quality standard for the parameter. This is unduly restrictive and is at odds with the entire purpose of water quality standards in the first place: to establish numeric criteria to protect recognizable stream uses.

For example, the Board just recently took steps to delete the aquatic life criterion for manganese, a chemical commonly released by coal mines. Unless this “procedural” section is limited to parameters for which there are numeric criterion, then most new discharges associated with coal mining will have to undergo the extensive Tier 2 analysis simply because of predictable manganese discharges, even though the Board has previously determined that these discharges will not impair an aquatic life use. Thus, an increase of a substance is not necessarily a “degradation.” To subject such dischargers to antidegradation review would be a needless waste of time and resources for dischargers and the State alike. Accordingly, this procedure must be limited to those pollutants for which there are numeric criteria.

6. **§ 4C.2.a.2.F.: Trading**

It appears that the intent of this subsection is to allow a mitigation project located upstream or downstream of a proposed permitted activity to offset the impact of the proposed permitted activity for the purpose of determining if the activity will cause significant degradation. The Associations wholeheartedly support the ability to use mitigation projects to avoid Tier 2 review and suggest that it use be expanded to allow trading across watersheds.

The proposed rule also requires that effluent trading be documented in a TMDL or other appropriate measure. The Associations simply ask that the Board make clear that the use of a trade to avoid Tier 2 review not be held up pending a TMDL as TMDL development is a time consuming process. Moreover, given that TMDLs are required only for non-compliant waters, and Tier 2 review is limited to “high quality waters,” it is difficult to image why a TMDL would be done to document a trade for a high quality water.

7. § 4C.4, .5 & .6: Less Degrading and Non-Degrading Alternatives

This section relates to the analyses of less degrading or non-degrading alternatives. The subsections 4C.4 & 4C.5 do not contain any criteria for evaluating the reasonableness or cost-effectiveness of less degrading alternatives. A less degrading alternative for almost any activity, without a simultaneous review of important economic or social development, will almost always exist, including the “no-activity” option. Because of this, the provisions of subsections 4C.5 and 4C.6 must be integrated so that antidegradation review evaluates less degrading alternatives simultaneously with the economic effect of imposing these alternatives. As drafted, this regulation would allow a permit writer to insist on a less degrading alternative without any consideration of its cost or economic impact and to deny the permit absent an agreement by the applicant to utilize that alternative. Such a result would be contrary to the provisions of CSR § 46-1-4.1.b, which requires that the antidegradation analysis involve an assessment of whether the activity is necessary to accommodate important economic or social development.

[Federal Register: July 7, 1998 (Volume 63, Number 129)]
[Proposed Rules]
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From the Federal Register Online via GPO Access [wais.access.gpo.gov]
[DOCID:fr07jy98-27]

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Part II

Environmental Protection Agency

40 CFR Part 131

Water Quality Standards Regulation; Proposed Rule

[[Page 36742]]

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 131

[FRL-0W-6118-9]
RIN-2040-AC56

Water Quality Standards Regulation

AGENCY: Environmental Protection Agency.

ACTION: Advance notice of proposed rulemaking.

SUMMARY: EPA is today publishing this advance notice of proposed rule making (ANPRM) seeking comments from interested parties on possible revisions to the Water Quality Standards Regulation at 40 CFR Part 131. This ANPRM is intended to initiate discussions on what if any changes are needed in the national water quality standards program to improve the effectiveness of water quality standards in restoring and maintaining the quality of the Nation's waters. EPA will consider all comments before deciding whether to propose revisions to the regulation. EPA is particularly interested in comments on certain key portions of the current Water Quality Standards Regulation (the regulation) contained in 40 CFR Part 131, which establishes requirements for adoption of water quality standards pursuant to section 303 of the Clean Water Act (CWA or the Act). This ANPRM identifies specific issues on which EPA solicits comment. In addition to the specific issues on which EPA solicits comments, EPA is interested in comments on any other aspects of the program. EPA requests comments with the objectives of: supporting watershed or place-based environmental water quality management, ensuring that current water quality criteria and water quality assessment science can be easily incorporated into State and Tribal water quality programs, and enhancing effective implementation of the Act.

DATES: Written comments must be submitted by midnight January 4, 1999.

ADDRESSES: Send written comments to W-98-01, WQS-ANPRM Comment Clerk, Water Docket, MC 4101, US EPA, 401 M Street, S.W., Washington, D.C. 20460. Comments may also be submitted electronically to OW-Docket@epamail.epa.gov. The record is available for inspection from 9:00 to 4:00 p.m., Monday through Friday, excluding legal holidays at the Water Docket, East Tower Basement, USEPA, 401 M St., S.W., Washington, D.C. For access to docket materials, please call (202) 260-3027 to schedule an appointment.

FOR FURTHER INFORMATION CONTACT: Rob Wood at U.S. EPA Standards and Applied Science Division (4305), 401 M Street SW, Washington, DC 20460 (e-mail: WOOD.ROBERT@EPA.GOV) (telephone: 202-260-9536).

SUPPLEMENTARY INFORMATION: EPA will hold a series of full-day public meetings for the purpose of discussion and debate on the issues

presented in this notice. EPA plans to hold the public meetings during the 180-day public comment period on this notice. Dates, times and locations of public meetings will be announced to the public.

A. Potentially Affected Entities

This ANPRM by itself will have no regulatory impact or effect. The ANPRM does contain EPA interpretations of core areas of the regulation as well as EPA thinking about how the regulation may need to be changed. As discussed in more detail below, this ANPRM marks the beginning of a national dialogue on possible changes to the water quality standards regulation and program. If changes to the regulation are proposed and ultimately made final, to the extent such changes would require and/or authorize changes to State and Tribal water quality standards, States and authorized Tribes would be affected. If changes to State and Tribal water quality standards result from any final rule that EPA may promulgate in the future, entities subject to compliance with State or Tribal water quality standards would also potentially be affected. For example, States and Tribes authorized to implement the National Pollutant Discharge Elimination System (NPDES) Permit Program would need to ensure that permits they issue include any limitations on discharges necessary to comply with any water quality standards established as a result of any subsequent final rulemaking. Therefore, entities discharging pollutants to waters of the United States under NPDES could be affected by subsequent proposed and final rulemaking. Categories and entities that may ultimately be affected include:

Category	Examples of potentially affected entities
State, Tribes and Jurisdictional Governments.	States, Tribes authorized to administer water quality standards, and jurisdictional governments.
Industry.....	Industrial dischargers of pollutants to waters of the U.S.
Municipalities.....	Publicly-owned treatment works discharging pollutants to waters of the U.S.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities that could be affected by any subsequent final rulemaking. If you have questions regarding the

applicability of this action to a particular entity, consult the person listed in the preceding FOR FURTHER INFORMATION CONTACT section.

B. Water Docket Information

The record for this notice has been established under docket number W-98-01 and includes supporting documentation. When submitting written comments to the Water Docket, (see ADDRESSES section above) please reference docket number [W-98-01] and submit an original and three copies of your comments and enclosures (including references). To ensure that EPA can read, understand and therefore properly respond to comments, the Agency would prefer that commenters cite the specific question(s) in the notice to which each comment refers. The questions presented in this notice for public comment are organized by subsection and numbered. Each question has a unique number (for example III.B.3.a., question 1) for this purpose.

Comments must be received or postmarked by midnight January 4, 1999. Commenters who want EPA to acknowledge receipt of their comments should enclose a self-addressed, stamped envelope. No facsimiles (faxes) will be accepted.

Electronic comments are encouraged and may be submitted to the Water Docket (see ADDRESSES section above). Electronic comments must be submitted as an ASCII file or a WordPerfect file avoiding the use of special characters and any form of encryption. Electronic comments must be identified by the docket number, [W-98-01], and be received by midnight of January 4, 1999. Comments and data will also be accepted on disks in WP5.1 format or

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ASCII file format. No confidential business information (CBI) should be sent via e-mail.

The remainder of this Supplementary Information section is organized as follows:

- I. Purpose and Objectives of This ANPRM
 - A. General Purpose and Vision
 - B. Objectives
- II. Introduction to Water Quality Standards
 - A. Statutory History
 - B. Regulatory History
 - C. Water Quality Guidance for the Great Lakes System
- III. Program Areas for Public Comment
 - A. Introduction
 - B. Uses
 - 1. Background
 - 2. Refined Designated Uses

- 3. Existing Uses
 - a. Protection of Existing Uses
- 4. Use Attainability
 - a. Attainability of Uses
 - b. Removal of Designated Uses
 - c. Use Attainability Analysis
 - d. Alternatives to "Downgrade" of the Designated Use
 - i. Variances
 - ii. Temporary Standards
 - iii. Ambient-based Criteria
- C. Criteria
 - 1. Background
 - 2. Ambient Water Quality Criteria to Protect Aquatic Life
 - 3. Site-Specific Criteria
 - 4. Narrative Water Quality Criteria
 - 5. State or Tribe Derived Criteria
 - 6. Water Quality Criteria for Priority Pollutants
 - 7. Criteria for Non-Priority Pollutants with Toxic Effects
 - 8. Criteria Where Data or Guidance is Limited
 - 9. Toxicity Criteria
 - 10. Sediment Quality Criteria
 - 11. Biological Criteria
 - 12. Wildlife Criteria
 - 13. Physical Criteria
 - 14. Human Health
 - a. Risk Levels
 - b. Fish Consumption Assumptions
 - c. Maximum Contaminant Levels
 - 15. Microbiological Criteria
 - 16. Nutrient Criteria
- D. Antidegradation
 - 1. Background
 - 2. General Description of Antidegradation
 - 3. 40 CFR 131.12 (a)(1) "tier 1"
 - a. Tier 1 Implementation
 - 4. 40 CFR 131.12 (a)(2) "tier 2"
 - a. Identification of "High Quality" Waters
 - b. Tier 2 Implementation
 - i. Triggers for tier 2 Review
 - ii. "Necessary" Lowering of Water Quality
 - iii. Identification of "Important" Social or Economic Activities
 - iv. Tier 2 and Identification of Waters under CWA Section 303(d)
 - v. Achieving all cost-effective and reasonable best management practices for nonpoint sources
 - 5. 40 CFR 131.12 (a)(3) "tier 3"
 - a. Designating ONRWs

- i. Relationship of tier 3 to the Wild and Scenic Rivers Act
- b. Tier 3 Implementation
- c. Tier 2\1/2\
- 6. 40 CFR 131.12 (a)(4) ``Thermal Discharges''
- E. Mixing Zones
 - 1. Background
 - 2. EPA Policy and Guidance on Mixing Zones
 - 3. State and Tribal Mixing Zone Policies
 - 4. Mixing Zone Requirements
 - 5. Mixing Analyses
 - 6. Narrative Criteria for Mixing Zones
 - 7. Mixing Zones for Bioaccumulative Pollutants
 - 8. Stream Design Flow Policies
- F. Wetlands as Waters of the United States
- G. Independent Application Policy
 - 1. Introduction
 - a. Biological Assessments
 - b. Toxicological Assessments
 - c. Chemical Assessments
 - 2. Independent Application and Water Quality Assessments
 - a. Independent Application
 - b. Alternatives to Independent Application
 - 3. Independent Application and NPDES Permitting
 - a. Independent Application
 - b. Alternatives to Independent Application
- IV. Summary and Potential Program and Regulation Changes
- V. Regulatory Assessment Requirements
 - A. Executive Order (E.O.) 12866, Regulatory Planning and Review
 - B. The Regulatory Flexibility Act (RFA) as Amended by the Small Business Regulatory Enforcement Fairness Act (SBREFA) of 1996
 - C. Paperwork Reduction Act

I. Purpose and Objectives of This ANPRM

A. General Purpose and Vision

On February 14, 1998, the visionary ``Clean Water Action Plan'' was announced by the Administrator of EPA and the Secretary of Agriculture. The ``Clean Water Action Plan'' is a blueprint for restoring and protecting the Nation's precious water resources. A key element of the plan is advancement of the watershed approach to water quality protection. EPA's belief is that refining designated uses and implementing better more integrated water quality criteria to protect the refined uses, two important themes of this ANPRM, are essential steps in carrying out the blueprint presented. Revision of the water quality standards regulation can be an essential component in implementing the vision of the ``Clean Water Action Plan.''

States, Tribes and EPA have developed functional water quality standards programs under the current regulation and these programs have provided the basis for significant water quality improvement in the United States. Simply put, the current regulation is not broken. Rather, with the renewed interest in watershed management combined with improved methods for water quality assessment, a comprehensive evaluation for the purpose of strengthening the regulation is appropriate at this time. EPA and the public need to examine whether changes in the regulation could enhance water quality management on a watershed basis and focus resources on areas of greatest concern. A review of the regulation will also complement similar outreach discussions EPA is currently undertaking for the purposes of reviewing the water quality planning and management and total maximum daily load (TMDL) programs as well as aspects of the NPDES program. EPA is committed to ensuring that these programs, combined, form an even stronger integrated basis for water quality planning, priority setting and implementation on a watershed basis.

In recent years there has been a rising level of scrutiny placed on water quality standards and the State, Tribal and EPA decisions based on water quality standards. The increased scrutiny comes from virtually all parties affected by water quality-based decisions and is evidenced by the growing tide of challenges to State standards, EPA policies and guidance, and individual water quality-based decisions. Remaining water quality problems in the U.S. are often difficult to assess, define and solve. Once agreed upon, the solutions will be less conventional than we are used to and may result in different regulatory approaches. Examples of such problems include aquatic and riparian habitat destruction from municipal and agricultural run-off and fish tissue contamination from chemicals with many and diverse sources.

EPA believes that this scrutiny will continue and that an evaluation of the water quality standards program and its regulatory and policy underpinnings to identify where these program underpinnings may need to be strengthened, clarified or revised is imperative. Our task under the Clean Water Act is to ensure adequate water quality even where it is difficult to do so. To accomplish this task, EPA envisions a national water quality standards program in which: the best possible information on whether designated uses are being attained and how to attain and maintain them is available and used; water quality criteria are selected from a wide-ranging menu of scientifically sound criteria that can be tailored to each watershed; national norms of consistency and flexibility in State and Tribal water quality standards are clear; and innovative, cost-effective approaches are

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encouraged. To realize this vision, EPA believes that a structured national debate is needed to identify a focused set of issues that may

ultimately lead to changes to the water quality standards regulation and policy.

The ANPRM process allows EPA to begin this work by consulting with all interested parties to find out what changes, if any, are necessary and desirable, to make the water quality standards regulation more responsive to current needs and to identify opportunities for further clarifications of policy and guidance by EPA. In the fourteen years since EPA last revised the water quality standards regulation, interested parties have gained considerable experience in developing and implementing water quality standards. This experience will provide valuable information for review of these regulations.

The most significant shift in water quality management programs in recent years has been the increased emphasis on the use of watershed based programs. It is increasingly apparent that EPA, States, Tribes, municipalities and the public share a common view that water quality programs, including water quality standards, can be better tailored to the characteristics, problems, risks and implementation tools available in individual watersheds or basins with meaningful involvement of the local communities. The water quality standards regulation should ensure that States and Tribes have the flexibility to define the water quality standards and hence the environmental objectives of a water body according to the characteristics of the ecosystem and the needs of the water's users within the bounds established under the CWA. The regulation must allow the States and Tribes to tailor water body use designations and criteria to protect these uses within individual basins or watersheds based on the needs in the basin. The present use of broad, jurisdiction-wide use classifications and lists of associated chemical criteria may be at once too general and too narrow for some waters, lacking the refinement necessary to tailor water quality management actions to specific watersheds. This general approach reflects the historical lack of information on specific basins or water bodies and the need to ensure that all waters receive adequate protection. Additionally, it should be made clear how much flexibility States and Tribes have to adjust use designations as information improves about whether a designated use or a higher use can be attained and to reflect natural and human caused changes in water quality that may have occurred. The challenge for EPA, States and Tribes is to identify and use opportunities to refine use designations for waters where it makes sense and better match the water quality criteria to the refined use, thus making water quality standards more flexible. In addition, to more effectively implement the standards, the criteria that are used need to better integrate multiple stressors and their cumulative impacts in order to more effectively protect designated uses.

Significant scientific advancements in recent years have added to the ability to assess environmental impacts and risks related to changes in water quality. As they are further developed, new and

emerging sophisticated and integrated analytical tools such as bioassessment, criteria for bioaccumulative chemicals, sediment quality criteria and toxicity assessments will increasingly allow States, Tribes, EPA and the public to characterize better the ecological condition of water resources. At present, this improving capability, used in a tailored watershed planning and management framework, can enhance the ability of States and Tribes to characterize and protect locally agreed upon goals for maintaining and protecting the chemical, physical and biological integrity of individual basins. In the long term, chemical, physical and biological assessment methods will continue to improve. As they do, the water quality standards program should be designed to accommodate effectively the new science. In the meantime, progress should not be stalled by incomplete knowledge.

With the new science and assessment methodologies, however, come new challenges for States and Tribes to identify the resources necessary to make use of these advances. One of the main themes of this ANPRM is the need for better data, and new types of data, in order to support a more refined approach to water quality protection. EPA recognizes, however, that efforts to obtain such data, and develop the analytical capacity to integrate it into existing regulatory programs, could encounter significant resource constraints in some States and Tribes. EPA is well aware that in order for a new, data-intensive, watershed-specific approach to succeed, it must be workable for the States and Tribes that will have to implement it. EPA welcomes comments regarding concerns over resource constraints and ideas for how to address them.

The water quality standards program must protect the nation's waters as envisioned in the CWA. It must establish requirements that are necessary to attain and maintain healthy, sustainable ecosystems. It must be flexible enough for States and Tribes to ensure that standards are protecting water quality in a way that makes sense. EPA seeks to avoid a program that results in costly requirements that have little or no environmental benefit. Thus EPA intends to use its experience and that of the States, Tribes, municipalities, the regulated community, environmental groups and the general public in implementing and utilizing water quality standards over the last fourteen years, to evaluate the regulation and determine if changes are needed to allow greater State, Tribal and local flexibility to develop innovative, cost-effective ways to protect water quality.

EPA may determine through the ANPRM process that the concepts described above can be better integrated into water quality management decision making through development of new or revised policies and guidance rather than revisions to the regulation. Because of this possibility, EPA is reserving its decision whether to propose and finalize revisions to the regulation. At minimum, EPA believes that any revisions to the water quality standards regulation should result in a regulation that can be used to render protective, tailored, site-

specific water quality-based decisions that bear reasonable compliance costs for the regulated community, as well as reasonable implementation costs for States, Tribes and EPA. At the same time, the regulation should allow sufficient flexibility to States and Tribes, if they choose, to implement water quality standards programs in a manner that is no more burdensome than under the existing regulation.

B. Objectives

In publishing this ANPRM, EPA is beginning a review of the regulation in a public forum in an attempt to identify possible amendments to the regulation, and new guidance or policy that may be needed to address three distinct objectives. They are: (1) to eliminate any barriers and develop incentives to enhance State and Tribal implementation of watershed-based water quality planning and management; (2) to enhance State and Tribal capability to incorporate current criteria and water quality assessment science into their water quality standards programs, and; (3) to improve the regulation so that it may be implemented more efficiently and effectively (including cost-effectively). Meeting these three objectives, EPA believes, will facilitate further water

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quality improvements locally and nationally. EPA urges commenters to keep all three main objectives in mind when reviewing, analyzing and commenting on this ANPRM.

II. Introduction to Water Quality Standards

A. Statutory History

The first comprehensive legislation for water pollution control was the Water Pollution Control Act of 1948 (Pub. L. 845, 80th Congress). This law adopted principles of State-Federal cooperative program development, limited federal enforcement authority, and limited federal financial assistance. These principles were continued in the Federal Water Pollution Control Act (Pub. L. 660, 84th Congress) in 1956 and in the Water Quality Act of 1965. Under the 1965 Act, States were directed to develop water quality standards establishing water quality goals for interstate waters. By the early 1970's, all the States had adopted such water quality standards. Since then, States have revised their standards to reflect new scientific information, the impact on water quality of economic development and the results of water quality controls.

Due to enforcement complexities and other problems, an approach based solely on water quality standards was deemed too weak to make a

difference. The purely water quality-based approach prior to 1972 lacked enforceable Federal mandates and standards, and a strong impetus to implement plans for water quality improvement. The result was an incomplete program that in Congress' view needed strengthening. In the Federal Water Pollution Control Act Amendments of 1972 (Pub. L. 92-500, Clean Water Act or CWA), Congress established the National Pollutant Discharge Elimination System (NPDES) whereby each point source discharger to waters of the U.S. is required to obtain a discharge permit. The 1972 Amendments required EPA to establish technology-based effluent limitations that are to be incorporated into NPDES permits. In addition, the amendments extended the water quality standards program to intrastate waters and required NPDES permits to be consistent with applicable State water quality standards. Thus, the CWA established complementary technology-based and water quality-based approaches to water pollution control. Now, after nearly 25 years of investment in technology-based controls and some \$70 billion in sewage treatment plant construction, attention is turning back to water quality standards as a mechanism to make improvements in water quality beyond those that have been achieved through technology-based controls.

Water quality standards serve as the foundation for the water-quality based approach to pollution control and are a fundamental component of watershed management. Water quality standards are State or Tribal law or regulation that: define the water quality goals of a water body, or segment thereof, by designating the use or uses to be made of the water; set criteria necessary to protect the uses; and protect water quality through antidegradation provisions. Although the CWA gives EPA an important role in determining appropriate minimum levels of protection and providing national oversight, it also gives considerable flexibility and discretion to States and Tribes to design their own programs and establish levels of protection above the national minimum. States and Tribes adopt water quality standards to protect public health or welfare, enhance the quality of water, and serve the purposes of the Act. "Serve the purposes of the Act" (as defined in Sections 101(a), 101(a)(2), and 303(c) of the Act) means that water quality standards should: (1) include provisions for restoring and maintaining chemical, physical, and biological integrity of State and Tribal waters, (2) provide, wherever attainable, water quality for the protection and propagation of fish, shellfish, and wildlife and recreation in and on the water ("fishable/swimmable"), and (3) consider the use and value of State and Tribal waters for public water supplies, propagation of fish and wildlife, recreation, agricultural and industrial purposes, and navigation. See 40 CFR 131.2.

Section 303(c) of the CWA establishes the basis for the current water quality standards program. Section 303(c):

1. Defines water quality standards;
2. Identifies acceptable beneficial uses: public water supply, propagation of fish and wildlife, recreational purposes, agricultural

and industrial water supplies and navigation;

3. Requires that State and Tribal standards protect public health or welfare, enhance the quality of water and serve the purposes of the Act;

4. Requires that States and Tribes review their standards every three years;

5. Establishes the process for EPA review of State and Tribal standards, including where necessary the promulgation of a superseding Federal rule in cases where a State's or Tribe's standards are not consistent with applicable requirements of the CWA or in situations where the Administrator determines that Federal standards are necessary to meet the requirements of the Act.

The decade of the 1970's saw State and EPA attention focus on creating the infrastructure necessary to support the NPDES permit program and development of technology-based effluent limitations. While the water quality standards program continued, it was a low priority in the overall CWA program. In the early 1980's, it began to be recognized that greater attention to the water quality-based approach to pollution control would be needed to effectively protect and enhance all of the nation's waters.

The first statutory evidence of this was the enactment of a CWA requirement that after December 29, 1984, no construction grant could be awarded for projects that discharged into stream segments which had not, at least once since December 1981, had their water quality standards reviewed and revised or new standards adopted as appropriate under Section 303(c). (Public Law 97-117, Section 24, "Revised Water Quality Standards.") The efforts by the States to comply with this one-time requirement essentially made the States' water quality standards current as of that date for segments with publicly-owned treatment works (POTWs) discharging into them.

Additional impetus to the water quality standards program occurred on February 4, 1987, when Congress enacted the Water Quality Act of 1987 (Pub. L. 100-4). Congressional impatience with the lack of progress in State adoption of standards for toxics (which had been a national program priority since the early 1980's) resulted in the 1987 adoption of new water quality standard provisions in the Water Quality Act amendments. These amendments reflected Congress' conclusion that toxic pollutants in water are one of the most pressing water pollution problems. One concern Congress had was that States were relying, for the most part, on narrative criteria to control toxics (e.g., "no toxics in toxic amounts"), which made development of effluent limitations in permits difficult. To remedy this, Congress adopted section 303(c)(2)(B), which essentially required development of numeric criteria for those water body segments where toxic pollutants were likely to adversely affect designated uses.

The 1987 Amendments gave new teeth to the control of toxic pollutants. As Senator Mitchell put it, Section 303(c)(2)(B) requires

``States to identify waters that do not meet water quality

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standards due to the discharge of toxic substances, to adopt numerical criteria for the pollutants in such waters, and to establish effluent limitations for individual discharges to such water bodies." (From Senator Mitchell, 133 Cong. Rec. S733.) To assist States in complying with Section 303(c)(2)(B), EPA issued program guidance in December 1988 and instituted an expanded program of training and technical assistance.

Section 518 was another major addition in the 1987 Amendments to the Act. This section extended participation in the water quality standards and 401 certification programs to certain Indian Tribes. The Act directed EPA to establish procedures by which a Tribe could ``qualify for treatment as a State," at its option, for purposes of administering the standards and 401 certification programs. The Act also required EPA to create a mechanism to resolve disputes that might develop when unreasonable consequences arise from a Tribe and a State or another Tribe adopting different water quality standards on common bodies of water.

Furthermore, with the 1987 Amendments, the Act explicitly recognized EPA's antidegradation policy for the first time. The intent of the antidegradation policy in EPA's regulation was and is to protect

under this section."

B. Regulatory History



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

APR 20 1998

Mr. Ken Ward, Jr.
Staff Writer
Charleston Gazette
1001 Virginia St., East
Charleston, WV 25301

Dear Mr. Ward:

This is in response to your Freedom of Information request of March 27, 1998 for three separate sets of documents and information. Listed below are descriptions of the documents and information which you requested, a list of our enclosures, and our comments for clarification where determined necessary.

1. Requested - Documents concerning the NPDES permit for Elkay Mining's Freeze Fork Mine

Enclosed are the following documents and articles of correspondence involved in EPA's review and comments on the draft NPDES permit:

- WVDEP's 1/27/98 draft permit, advertisement, and rationale - 49 pages;
- Original project description, biological monitoring plan, mitigation agreement, and mining phase plan - 35 pages (labeled under "Introduction");
- Original maps of project including: drainage/proposal (1), regrade (1), stream mitigation survey (1), site cross sections (2), and mining phases (10);
- EPA's 3/2/98 general objection letter to WVDEP;
- Revised application information including brief descriptions of revised mining plan, mitigation requirements, and compensation agreement - 14 pages (labeled under "NPDES WPC Permit");
- Revised maps of project including: drainage and proposal (1), mitigation survey (1), revegetation (1), regrade (1), map indicating seven mining phases (1), cross sections (2);
- Pittston (Elkay) 3/13/98 letter to EPA regarding revised plan including revised mitigation map and drainage/proposal map;
- Pittston (Elkay) 3/24/98 letter to EPA regarding Incidental Boundary Revision (IBR); and
- EPA's 3/17/98 letter to WVDEP withdrawing general objection under certain conditions (one condition - a letter giving assurances that the revisions and measures will be provided - was satisfied by Pittston's 3/13 letter).

Customer Service Hotline: 1-800-438-2474

Mr. Ken Ward, Jr.
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April 17, 1993

2. Requested - EPA's 1988 valley fill policy

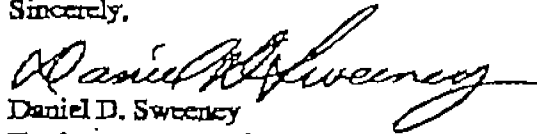
Enclosed is a copy (4 pages) of the "EPA Region Draft Policy for Instream Treatment and Filling by the Coal Mining Industry" dated November 1988. This is commonly referred to as the 1988 valley fill policy and was discussed in the 1989 Circuit Court Decision. There have been no subsequent valley fill policies developed by EPA Region III.

3. Requested - Documents, reports, or studies supporting EPA's statement that valley fills violate the non-degradation policy of the WV Water Quality Standards.

Enclosed are excerpts from the West Virginia Water Quality Standards which indicate that valley fills violate the Anti-Degradation Policy (Section 46-1-4). Section 4.1.a requires that existing waters uses and the level of water quality necessary to protect the existing uses be maintained and protected. Under "Water Use Categories" (Section 46-1-6), Section 6.1 states that at a minimum all waters of the State are designated for the propagation and maintenance of fish and other aquatic life. Since valley fills cover stream beds and smother any aquatic life present in the stream beds, such filling would be an apparent violation of the Anti-Degradation Policy.

If you have any questions on this Freedom of Information response, please call me at 215-566-5731.

Sincerely,



Daniel D. Sweeney
Environmental Engineer
Water Protection Division

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Industry denounces water protection rule

Lobbyists turn out to argue against pollution policy

July 21, 1998

By Ken Ward Jr.
STAFF WRITER

Coal, chemical and power company lobbyists turned out Monday night to argue against a policy that would prohibit state rivers and streams from being degraded.

Trade associations representing the coal industry and state manufacturers suggested that the state Environmental Quality Board throw out its proposal and start over.

Karen Price, president of the West Virginia Manufacturers Association, called the board's anti-degradation policy "some of the most profound revisions ... that have occurred in recent years."

"Many parts of the guidelines are too vague and require actions to be taken without specifying what agencies are to take those actions," Price said.

Price and other industry lobbyists also complained that the board developed the policy in conjunction with other state regulatory agencies, instead of through a public committee that would have given industry more input from the start.

The anti-degradation policy would generally prohibit activities which degrade streams to the point that various uses, such as fishing, drinking or swimming, are eliminated.

'Part of my job is to bring new chemical processes to the plants. As I read this rule, that is something we could not do. There are going to be no more new chemical processes and no more new products.'

Wayne Appleton,
DuPont chemist

The federal Clean Water Act, passed more than 25 years ago, requires states to have such a policy, and a plan to implement it.

West Virginia passed its policy, based on the requirements of federal law, in 1995. The state is currently behind schedule in writing a plan to implement that policy, as required by the U.S. Environmental Protection Agency.

About 25 people turned out Monday night for a required public hearing on the board's proposed implementation policy. All but five of them were industry lawyers, lobbyists or technical staffers.

Cindy Rank, an activist with the West Virginia Highlands Conservancy, praised the board for pushing to write the implementation policy.

"We think this is a very positive step," Rank said. "We think it's long overdue."

Rank, however, criticized part of the policy which requires elaborate cost-benefit studies of proposed stream degradation only if the degradation would be 5 percent worse than ambient stream quality.

Environmentalists believe the studies - which weigh whether degrading a stream is worth the economic benefits of the activity that would degrade it - should kick in if any degradation is proposed to occur.

"It's important if you believe anti-degradation means anti-degradation," Rank said.

But Wayne Appleton, a DuPont chemist, said that the 5 percent rule is arbitrary and overly stringent.

"Part of my job is to bring new chemical processes to the plants," Appleton said. "As I read this rule, that is something we could not do."

"There are going to be no more new chemical processes and no more new products," Appleton said. "From a business and development standpoint, I don't think that's what you want to try to accomplish."

Rank pointed out, though, that the degradation analysis doesn't forbid degradation, but simply requires a study of the costs and benefits of it before a decision is made.

George Golliday, an EPA scientist, said that the state should also be prepared to add non-point pollution sources - such as loggers and poultry farmers - to its anti-degradation policy.

Currently, the state's proposal does not include non-point pollution. But Golliday said EPA is working on guidance for how to include non-point sources.

Bob McCluskey, a Jackson & Kelly lawyer representing the coal industry, urged the board to change the policy so anti-degradation rules won't make strip mine valley fills illegal.

A lawsuit filed last week to curb mountaintop removal mining alleges that valley fills, by dumping millions of tons of rock and earth in streams, violate the anti-degradation rules.

EPA has agreed with that assessment.

"I believe the board needs to make clear that the anti-degradation policy does not prohibit filling activities," McCluskey said.

To contact staff writer Ken Ward Jr., call 348-1702.

Write a letter to the editor.

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EXHIBIT 4

EPA DRAFT POLICY FOR INSTREAM TREATMENT
AND FILLING BY THE COAL MINING INDUSTRY

Placement of fill material in the waters of the United States shall be in compliance with Section 404 of the Clean Water Act. This includes spoil disposal operations, instream treatment pond construction and other stream filling activities associated with the coal mining industry. The following sections provide a summary of Section 404 Guidelines and specific conditions for allowance of instream treatment and filling by the coal mining industry.

Summary of Section 404 Guidelines for Instream Filling

The Section 404(b)(1) Guidelines establish criteria for evaluating proposed dredge and fill projects. The intent of these Guidelines is to implement the fundamental goal of the Clean Water Act (CWA): "...to restore and maintain the chemical and biological integrity of the Nation's waters." Subpart A, Section 230.1 of the Guidelines sets forth the basic presumption against discharge of dredge and fill material into the aquatic ecosystem unless the discharge will not have unacceptable adverse impacts either individually or in combination with known and/or probable impacts of other activities affecting the ecosystems of concern.

The Guidelines state that no discharge of fill material shall be allowed which will cause or contribute to significant degradation of waters of the United States [Section 230.10(c)]. Further requirements on discharges are set forth in Subpart B, Section 230.10 and describe conditions which must be met before Section 404 permit issuance can occur. When proposed activities meet the basic requirements of Section 230.10 then adverse impacts can further be minimized by implementing measures outlined in Subpart H.

Instream treatment ponds and other associated fills related to the coal mining and processing industry are prohibited, unless certain conditions are met to minimize adverse impacts on the aquatic ecosystems. According to the 404(b)(1) Guidelines no discharge of dredged or fill materials shall be permitted:

1. If there is a practicable alternative to the proposed discharge which would have less adverse impact on the aquatic ecosystem so long as the alternative does not have other significant adverse environmental consequences.

2. If the proposed discharge will cause or contribute to violations of any state water quality standard, violate any applicable toxic effluent standard, or jeopardize the continued existence of any federal or state listed threatened or endangered species.
3. If the proposed discharge will cause significant degradation of the waters of the United States. Effects contributing to significant degradation, considered individually or collectively, include:
 - a. Significantly adverse effects of discharge of pollutants on human health or welfare, including but not limited to effects on municipal water supplies, plankton, fish, wildlife, and special aquatic sites.
 - b. Significantly adverse effects of discharge of pollutants on life stages of aquatic life and other wildlife dependent on aquatic ecosystems, including the transfer, concentration, and spread of pollutants or their by-products outside the disposal site through biological, physical and chemical processes.
 - c. Significantly adverse effects of discharge of pollutants on aquatic ecosystem diversity, productivity, and stability.
4. Unless appropriate and practicable steps have been taken which will minimize potential adverse impacts of the discharge on the aquatic ecosystem.

Conditions for Allowing Instream Treatment and
Filling by the Coal Mining Industry

The Corps of Engineers administers a Nationwide Section 404 permit which applies to most stream filling operations associated with the coal mining industry, including instream treatment pond construction and disposal of waste spoil material. EPA is concerned that the Nationwide permit may allow stream filling which will harm fish and other significant aquatic life. To minimize harm to the aquatic ecosystem, stream biological surveys and evaluations of feasible alternatives must precede filling operations in all stream segments except for headwaters of nontrout streams having watershed drainage areas of 200 acres or less.

The biological survey report must identify the aquatic species in the proposed instream pond and fill area and indicate the anticipated impact that the pond and fill would have on fish life downstream either directly or in combination with similar operations in adjacent watersheds. The survey should also indicate the apparent reason for lack of aquatic life and the potential for stream recovery. The feasible alternative evaluations must identify other alternatives to proposed instream pond and fill construction and include background information on technical and economic feasibilities.

EPA will not object to a proposed instream treatment pond or fill under the following conditions.

1. If the watershed drainage area above a proposed instream treatment pond or fill is greater than 200 acres, the following conditions must be met:
 - a(1). Fish or those invertebrates necessary for supporting downstream fish life are not found in the stream segment impacted by the instream facilities, and
 - (2). There are no feasible alternative sites for the instream facilities, or
 - b(1). Fish or those invertebrates necessary for supporting downstream fish life are found in the stream segment impacted by the instream facilities, and

- (2). The instream facilities do not impact stream segments containing fishable populations, and
 - (3). There are no feasible alternative sites for the instream facilities, and
 - (4). The loss of aquatic life in the stream segment impacted by the instream facilities will be compensated by the establishment of a permanent aquatic life habitat in that stream or, if not practical, a nearby area. The habitat must support an aquatic community which will be a significant improvement in quality and quantity over the existing aquatic community and will not adversely affect any downstream aquatic community. This mitigation must be included as a condition to the Nationwide Section 404 permit applicable to the proposed instream filling operations.
2. Timber cutting on the proposed mining area must not begin until after any necessary biological surveys have been provided.
 3. The instream facilities must be located as close as feasible to the mining area and headwaters.
 4. The instream facilities must not be located in a wetland, as defined in 40 CFR Section 230.3.
 5. The instream facilities must be designed and operated to prevent contamination of groundwater and the stream ecosystem during and after cessation of operation.
 6. At completion of mining and reclamation, settled material in any permitted instream treatment pond must be stabilized in accordance with appropriate state and federal Office of Surface Mining reclamation standards to prevent migration of the material downstream. This may be accomplished by removal and proper disposal of the material, capping the impoundment or other appropriate measures.
 7. The performance bond must be sufficient to provide adequate reclamation of instream ponds and any associated fills.
 8. Discharges from all instream treatment ponds must comply with applicable state water quality standards at the outfall except for ponds located on very small streams which flow only in direct response to precipitation.



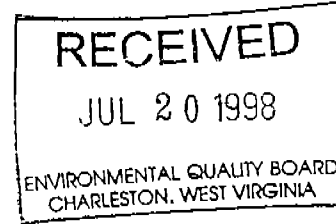
CECIL H. UNDERWOOD
GOVERNOR

DIVISION OF ENVIRONMENTAL PROTECTION
1201 Greenbrier Street
Charleston, WV 25311-1088

MICHAEL P. MIANO
DIRECTOR

July 20, 1998

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



Dear Dr. Snyder:

The Office of Water Resources (OWR) wishes to take this opportunity to support the EQB's Proposals for changes to 46CSR1, noted as filed with the Secretary of State's Office June 18, 1998, and most particularly, those changes proposed to implement 46-1-4.

This office further wishes to thank the EQB for including representatives of the OWR in the development process of the proposals and would offer our continued support and resources in future endeavors regarding these or other changes to the Board's rules.

We finally however, urge that the EQB consider those comments earlier submitted in memo from Mr. Randy Sovic dated 7/7/98, particularly as they relate to necessary corrections to allow for the greatest degree of efficiency in this office's mandated responsibility of implementation.

Thank you for the opportunity to provide comments on the proposed changes.

Sincerely,

OFFICE OF WATER RESOURCES

Barbara S. Taylor
Chief

BST/rs/t

cc: Ms. Libby Chatfield
Technical Advisor



CECIL H. UNDERWOOD
GOVERNOR

DIVISION OF ENVIRONMENTAL PROTECTION
1201 Greenbrier Street
Charleston, WV 25311-1088

JOHN E. CAFFREY
DIRECTOR

OFFICE OF WATER RESOURCES

FAX COVER SHEET

TO: Dr. Edward Snyder MAILCODE: _____

PHONE: _____ FAX: _____

FROM: Barbara Taylor FAX# (304) 558-5905

PHONE: 8-2107 TTY: (304) 558-2751

COMMENTS:

2 PAGES (INCLUDING COVERSHEET)

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CHARLESTON, WEST VIRGINIA



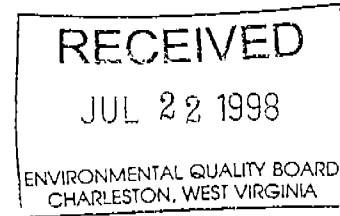
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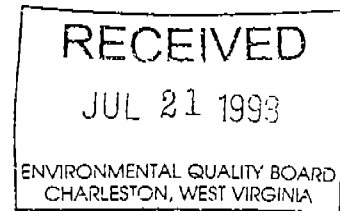
cc: Ms. Libby Chatfield
Technical Advisor



West Virginia
Chamber of Commerce

July 21, 1998

Hand Delivered
Dr. Edward M. Snyder
Chairman
Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311



RE: Proposed Antidegradation Implementation Procedures.

Dear Chairman:

Please find enclosed the comments to the Environmental Quality Board's proposed Antidegradation Implementation Procedures filed on behalf of the West Virginia Chamber of Commerce ("the Chamber"). The Chamber has as its mission statement the goal of being an action-taking business organization that works for a favorable business climate for its membership and state. The West Virginia Chamber works with local chambers of commerce and other associations to improve the economy of West Virginia by providing business leadership to solve state and regional problems. The West Virginia Chamber of Commerce is the voice of business in West Virginia.

Very truly yours,

Stephen G. Roberts
Stephen G. Roberts
President

cc: Elizabeth M. Chatfield, Esquire

The Voice of Business in West Virginia

Post Office Box 2789, Charleston, WV 25330-2789 • (304) 342-1115 • (304) 342-1130 FAX • E-Mail: wvchamber@citynet.net

**COMMENTS OF
THE WEST VIRGINIA CHAMBER OF COMMERCE
TO THE ENVIRONMENTAL QUALITY BOARD'S PROPOSED
ANTI-DEGRADATION IMPLEMENTATION PROCEDURES
July 21, 1998**

I. GENERAL COMMENTS

A. The Proposed Antidegradation Implementation Policy Should Be Withdrawn Pending EPA's National Proposal

On February 14, 1998 the Administrator of EPA and the Secretary of Agriculture announced the "Clean Water Action Plan." Part of that plan addressed the commitment on the part of both agencies to develop additional guidance on Antidegradation. Understanding that the federal government was about to engage in a full national study of antidegradation, it is somewhat surprising that the Environmental Quality Board would move in such a scurried fashion to promulgate West Virginia's policy. Although it is clear that West Virginia is required to identify antidegradation implementation procedures, it is equally clear that the lack of federal guidance on the issue has facilitated delay by many states in fashioning appropriate procedures. In fact, EPA Region III does not have implementation procedures it can recommend to its states. The Chamber urges the Board to proceed with measured caution and withdraw this proposal pending further input from both the federal regulators and the nation's public.

In the much anticipated July 7, 1998 "Advanced Notice of Proposed Rulemaking" ("ANPR") U.S. EPA announced that it seeks to provoke "a structured national debate on antidegradation." *See* 63 Fed. Reg. 36741-3680C (July 7, 1998). In that ANPR, EPA reviewed the existing three-tiered anti-degradation approach currently embodied in both Federal and West Virginia regulations. *See* 40 C.F.R. §§ 131.12(a)(1) through (2) and

WVCSR §§ 46-1-4. EPA has expressed concern over the wide disparity in the implementation procedures of the States. EPA has solicited comment on whether implementation procedures should be nationalized. Specifically EPA has raised the following questions:

1. What changes or clarifications could be made to the current tiered approach to protecting waters under anti-degradation that would streamline and enhance anti-degradation implementation?
2. Should the [federal] regulations be amended to identify the basic elements that must be included in an anti-degradation implementation method . . . ?
3. Is national guidance on anti-degradation implementation methods needed . . . ?

63 Fed. Reg. at 36781. In light of these statements from EPA, and in light of the fact that its ANPR will almost certainly result in a federal rulemaking, the Chamber urges the Board to await the outcome of the national debate before it adopts procedures that have been developed without the benefit of input from national EPA guidance.

B. The Board Is Urged to Follow EPA's Lead in Bringing All Interested Parties to the Table for Detailed Discussions

The Chamber is of the opinion that issue of the development of antidegradation implementation procedures must be addressed through an expanded stakeholder process prior to final

adoption. Thus, we urge the Board to defer action on this rulemaking at this time and convene a broadly represented stakeholder group to continue the crafting of the antidegradation policy. The Chamber holds the belief that an expanded stakeholder process will also afford the Board an opportunity to further study the EPA's ANPR; to participate in EPA's request for comments and input; and to assess successful implementation procedures adopted by other neighboring states. Well reasoned development of a final policy prior to implementation will afford the State of West Virginia efficiencies that it cannot afford to ignore.

C. Current Law Does Not Require Implementation Regulations for Anti-Degradation Procedures it only Requires "Identification" of Anti-Degradation Procedures

Federal law currently requires that States "adopt, as part of [their] water quality standards, an antidegradation policy consistent with 40 CFR § 131.12 and identify implementation methods for such a policy." *See* 63 Fed. Reg. at 36780. There is, however, no express requirement that such implementation methods be embodied in the water quality standards or that they be submitted to EPA for its approval. The Board is urged not to promulgate this legislative rule which will become governing law. It is most appropriate for the Board to delay action on this matter until all affected parties have a clearer understanding of the intent of the Clean Water Act and the guidance of EPA on the implementation of the antidegradation procedures. It is apparent that there is much confusion on this issue, so much that EPA has invited a nation discussion on the matter in the ANPR.

D. The Board Has Not Adequately Considered the Economic Consequences of its Actions.

The West Virginia Code, §29A-3-5 provides that "When an agency proposes to promulgate a rule other than an emergency rule it shall file in the state register a notice of

its action, including a text of the rule proposed, a fiscal note as defined in subsection (b) of section four. This proposed legislative rule fails to address the significant increased costs that will be incurred by the regulated community and the public with the implementation of this rule. It simply is not sufficient to state that the costs are unknown at this point. If anything at all, such a statement raises significant concerns that the true impact of this rule is so broad that the Board has chosen not to highlight the issue. The public has the legal right to be informed of fiscal impacts and the Board must acknowledge that. The Chamber urges the Board to engage in a thorough assessment of the fiscal impacts of this proposal.

II. SPECIFIC COMMENTS

A. § 46-1-4.1.b.2.

As written, this provision of the proposed water quality standards would create a presumption that all waters will be considered “high quality” or “Tier 2” waters “unless it can be demonstrated that the water quality is not better than necessary to attain both fishable (Category C) and swimmable (Category C) uses. The Chamber offers the following comments:

- a. Fishable waters fall within Category B, not Category C waters. *See* § 46-1-6.3 & 6.4.
- b. The Board has provided no explanation for creating this presumption. In a Draft dated June 4, 1998 of the current proposed Antidegradation Implementation Procedures, the Board created two similar presumptions. First, that “the designated uses outlined in section 6.2 are all assumed to apply to all waters . . .” In a telephonic hearing convened by the Board on June 17, 1998, the Board members assured the public that this presumption would be

deleted. Second, the June 4 Draft Implementation Guidelines contained the same language which the Board now proposed to move from a procedural guideline directly into the water quality standards. Having recently completed a triennial review of its standards, the Board fails to explain why it is now not only proposing procedural guidelines, but a major substantive change to its water quality standards which creates a presumption requiring dischargers to prove a negative. The Chamber is not aware of any federal requirement for such a presumption and notes that the July 7, 1998 ANPR, EPA observed that the existing approaches by the States for identifying high quality waters fall into two broad categories: (I) pollutant-by-pollutant approaches; and (ii) water body-by-water body approaches. In the pollutant-by-pollutant approach, a State determines whether the existing water quality of a stream is better than that set by the water quality standard. If so, then the allowable assimilation capacity of the stream for proposals to discharge particular pollutants is subject to Tier 2 anti-degradation protection. These determinations are made during the permit process and do not require intensive use of state resources to determine overall water quality in advance of permitting decisions. The second approach weights a variety of factors to determine a water body's overall quality and may be made prior to or during anti-degradation review. *See* 63 Fed. Reg. at 36782-36783. Significantly, in neither case does EPA discuss or mandate a State approach which relies on a presumption that all waters are high-quality waters. The Chamber urges that this presumption be significantly modified.

- c. The presumption that all waters are high-quality waters unless proven otherwise subjects new or modified discharges to the detailed evaluation of alternatives set out in proposed § 46-1-4C.4.a. This is an unreasonable and unnecessary requirement that will impose substantial costs on industry either to prove that water quality is not better than that required or to make the evaluation demonstration. In either case, the Board has failed adequately to consider the costs of such a presumption as required by W.Va. Code § 29A-3-5.

B. § 46-1-4A: Applicability.

Section 4A.1 proposes that the anti-degradation procedures would apply to “all activities that require a permit or water quality certification pursuant to state or federal law, including Clean Water Act § 402 NPDES permits, CWA § 404 dredge and fill permits and any activities requiring a CWA § 401 certificate. This section should, at the least, be limited to NPDES permits and activities requiring CWA § 401 certification (which already includes CWA § 404 permits, so that the references to § 404 is redundant and confusing). There is no justification for applying it to “all permits.” The extension of the anti-degradation policy to “all permits” is a substantive extension of the water quality standards that should not be set out in a procedural document and is uncalled for under the Federal Clean Water Act.

Finally, this anti-degradation policy should have no application to use of Nationwide Permits issued by the Corps of Engineers which have already received certification from West Virginia. Nationwide Permits, by law, are issued by the Corps only for activities having insignificant impact on waters of the United States. Instead, because Nationwide Permits will undergo anti-degradation review every five years, the anti-degradation review

process should be applied only when the Nationwide Permits expire. Otherwise, the process should apply only when applicants seek individual permits from the Corps of Engineers and thereby require individual CWA § 401 certification. The same should be true with respect to any other general permit issued by the Office of Water Resources.

C. Section 46-1-4B Tier 1 Protection Review Procedures

The existing State and Federal water quality standards require that “existing uses and the level of water quality necessary to protect the existing uses shall be maintained . . .” A Tier 1 review requires no more than a determination that existing uses will be maintained irrespective of any diminution in water quality due to a new permitted activity. In this light, the “Trading” provision in Section 4B.4 is confusing and implies that effluent trading can be required as part of a Tier 1 review and that only upstream controls can be utilized in effluent trading. It appears that the regulation is intended to address only the situation where the proposed activity would, without the upstream project, interfere with maintenance of an existing use, but this is not entirely clear. The Chamber joins the regulated community in urging the Board to clarify this section.

D. Section 46-1-4C Tier 2 Review Procedures (High-Quality Waters)

§ 4C.1.c.:

This subsection creates a presumption that all waters are “high quality.” As discussed above, this should be deleted.

§4C.2.a.1.A: Significant Degradation Test:

This regulation seemingly requires an anti-degradation analysis, with an accompanying “alternatives” analysis, whenever any parameters will be increased more than 5% even if there is not a numeric water quality standard for the parameter.

accompanying “alternatives” analysis, whenever any parameters will be increased more than 5% even if there is not a numeric water quality standard for the parameter. This is unduly restrictive and is at odds with the entire purpose of water quality standards which is to establish numeric criteria to protect recognizable stream uses.

The Board recently took steps to delete the aquatic life criterion for manganese. This “procedural” section must be limited to parameters for which there are numeric criterion, otherwise new discharges not subject numeric criterion will have to undergo the extensive Tier 2 analysis simply because of predatable discharges, even though the Board has previously determined that these discharges will not impair an aquatic life use and therefore have not been assigned a numeric water quality standard. Accordingly, this procedure must be limited to those pollutants for which there are numeric criteria.

E. § 4C.2.a.2.F.: Trading:

It appears that the intent of this subsection is to allow a mitigation project located upstream or downstream of a proposed permitted activity to offset the impact of the proposed permitted activity for the purpose of determining if the activity will cause significant degradation. The Chamber supports the ability to use mitigation projects to avoid Tier 2 review and suggests that its use be expanded to allow trading across watersheds.

The proposed rule also requires that effluent trading be documented in a TMDL or other appropriate measure. The Chamber joins others in the regulated community in requesting that the Board clarify that the use of a trade to avail Tier 2 review not be held up pending a TMDL as TMDL development is a time consuming

process. Moreover, given that TMDLs are required only for non-compliant waters, and Tier 2 review is limited to “high quality waters,” it is difficult to image why a TMDL would be done to document a trade for a high quality water.

F. § 4C.4,5 & .6: Less Degrading and Non-Degrading Alternatives:

This section relates to the analyses of less degrading or non-degrading alternatives. The subsections 4C.4 & 4C.5 do not contain any criteria for evaluating the reasonableness or cost-effectiveness of less degrading alternatives. A less degrading alternative for almost any activity, without a simultaneous review of important economic or social development, will almost always exist, including the “no-activity” option. Because of this, the provisions of subsections 4C.5 and 4C.6 must be integrated so that anti-degradation review evaluates less degrading alternatives simultaneously with the economic effect of imposing these alternatives. As drafted, this regulation would allow a permit writer to insist on a less degrading alternative without any consideration of its cost or economic impact and to deny the permit absent an agreement by the applicant to utilize that alternative. Such a result would be contrary to the provisions of CSR § 46-1-4.1.b, which requires that the anti-degradation analysis involve an assessment of whether the activity is necessary to accommodate important economic or social development.



WEST VIRGINIA MUNICIPAL WATER QUALITY ASSOCIATION

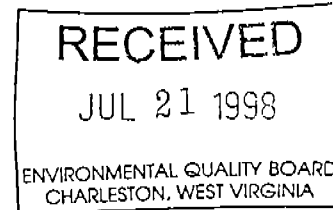
P. O. Box 3780

CHARLESTON, WEST VIRGINIA 25337

July 21, 1998

BY FAX (304/558-4116)

Ms. Libby Chatfield
Technical Advisor
Environmental Quality Board
1615 Washington Street East
Suite 301
Charleston, West Virginia 25311-2126



**Re: Proposed Changes to the Water Quality Standards Rule -
Antidegradation Requirements and Dissolved Metals Standards**

Dear Ms. Chatfield:

Please accept the following comments from the West Virginia Municipal Water Quality Association (the "MWQA") on the referenced regulatory proposal. The MWQA is a new, non-profit corporation comprising owners and operators of publicly-owned wastewater treatment works statewide. Our members serve numerous West Virginia businesses, industries, and a substantial majority of the sewered population statewide.

Our initial members include the following communities and organizations: the cities of Fairmont, Wheeling, Wellsburg, New Martinsville, and Martinsburg, the Sanitary Boards serving Bluefield, Moundsville, Weirton, Clarksburg, and Princeton, the Morgantown and Parkersburg Utility Boards and the St. Albans Municipal Utility Commission. Over the next several months, we anticipate that our membership will increase to include most of the major POTWs in the state.

The MWQA was formed with two principal goals, to (1) protect public health and the environment efficiently and cost-effectively and (2) ensure that the State's water quality programs are based upon sound science and regulatory policy. It is from this perspective that we offer the following comments on the proposed antidegradation language as well as the proposal to adopt dissolved water quality standards for metals.

At the outset, it bears noting that the MWQA is still in its embryonic stages. Accordingly, we have not had the benefit of participating in the development of the proposed changes to the Rule presently under consideration. Nevertheless, there are several issues that we believe should be carefully considered before any final action is taken on the proposed rule. Our comments follow.

Antidegradation Implementation.

We have both general and specific comments on the proposed revisions and additions to the antidegradation provisions in the Rule. Because this is our organization's first opportunity to comment on

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this Rule some of our comments go beyond the sections with proposed changes.

General Comments.

We strongly recommend that the proposed antidegradation revisions be temporarily withdrawn to allow a work group of stakeholders to meet with the EQB staff on a number of significant issues ranging from implementation procedures to ensuring appropriate cross-references in the final proposal. The MWQA would welcome the opportunity to assist the EQB in such an effort. While we recognize the EQB must respond to EPA's conditional approval of the State's antidegradation provisions, we believe additional public review and input is necessary and appropriate before final revisions and implementation procedures can be adopted.

For example, we believe the antidegradation review process should occur as part of the routine permit issuance/reissuance process. This is the approach taken in most, if not all, other states. However, Section 4B1.b of the proposed Implementation Procedures would require the permit writer to "Determine whether the water currently supports, or has supported since November 28, 1975, an existing use other than the designated uses in section 6.2."

We view this type of inquiry to be part of the triennial review of water quality standards and not an appropriate review during a permit action. The only relevant antidegradation inquiry should be a comparison of available instream data (of appropriate quality) against the water quality criteria applicable to a given stream based upon its designated uses. Reviewing the attainability of uses and the appropriateness of designated uses is an exercise that must remain separate from permit issuance and is most appropriately addressed during triennial review of the water quality standards.

Other general issues include the following:

Trading. The MWQA fully supports the EQB's leadership in the effort to promote effluent trading as a means to facilitate water pollution control and reduction. However, we have questions about how trading will occur. Given the significance of this issue, we believe further public discussion is appropriate. By way of an example, assume a river meets all water quality criteria except for PCBs, which are present due to legacy sediment contamination. A new municipal discharger, that will not have any PCBs in its effluent, might be precluded from trading to off-set other pollutants of concern given the provision in section 4B.4 which will require discharges to "show that the level of water quality necessary to protect existing uses fully will be achieved." Obviously, the POTW cannot be expected to address the PCB contamination. It would not make sense to preclude the POTW from trading to comply with antidegradation requirements unrelated to the PCB issue.

High Quality Waters. Section 4.1.b.2 of the Rule and Section 4.C.1.a of the Implementation Procedures specify that a water is a High Quality Water (Tier 2) if it either supports fishable or swimmable uses. We question this approach. Generally, where a water has dual designated uses, the associated water quality criteria are reviewed and the most stringent criteria for each parameter is used as the benchmark for all permitting (including antidegradation) purposes. This is the same approach that should be used for antidegradation purposes.

Significant Degradation. Section 4C.2.a.1.A of the Procedures specifies that a Tier 2 water will be significantly degraded if a proposed activity will increase the ambient concentration of any parameter by more than five percent at critical flow conditions. We question the appropriateness of the fixed, not-to-

exceed, five percent threshold. Such a small allowance for a change in instream concentration would not appear to make much sense in situations where substantial instream assimilative capacity is available for a parameter in question. Moreover, accurate measurement and/or modeling of such a small impact may be difficult in certain situations or with certain parameters. We would welcome the opportunity to explore this important issue with the Board's staff.

Fecal Coliform. Section 4C.2.a.2.B calls for a fecal coliform requirement to be imposed on permittees that differs from the statewide criteria. Significantly, this section would require a not-to-exceed daily maximum standard of 400 counts/100 ml. The existing statewide criteria is found at Section 46-1-8.12 of the Water Quality Standards regulation and states:

8.12 Fecal Coliform: Maximum allowable level of fecal coliform content for Primary Contact Recreation (either MPN or MF) shall not exceed 200/100 ml as a monthly geometric mean based on not less than 5 samples per month; nor to exceed 400/100 ml in more than ten percent of all samples taken during the month.

The standard expressly allows up to 10 percent of the monthly samples taken by our members to exceed a level of 400. This standard has been determined by the Board to be protective for primary contact recreation, regardless of the type of receiving water (e.g., Tier 1, 2, or 3). Even when properly expressed to allow 10 percent of the samples each month to exceed 400/100 mls, our research indicates that West Virginia's fecal coliform criteria for public water supply and primary contact recreation will remain among the most stringent nationally. Moreover, it will remain the most stringent of any of our neighboring states - an interesting situation given the fact that dischargers from those states share a number of receiving waters with MWQA members.

Consider for example:

- a. Virginia imposes a monthly average of 200/100 mls as a geometric mean with no upper limit on allowable concentrations.
- b. Ohio's primary contact recreation standard is a monthly average of 1,000/100 mls as a geometric mean with up to 10 percent of the samples allowed to exceed 2,000/100 mls.
- c. Pennsylvania POTWs are generally required to meet a monthly 200/100 mls geometric mean with not more than 10 percent of the samples exceeding 1,000/100 mls. Even less stringent requirements are applied to POTWs discharging to the Delaware River Basin.
- d. Maryland, like Virginia, imposes a monthly average of 200/100 mls as a geometric mean for waters designated for primary contact recreation, with no upper limit on allowable concentrations.
- e. Kentucky imposes a monthly geometric mean of 200 and a weekly average of 400.

In addition to the stringency in the State's numeric criteria, West Virginia is the only state in this region to impose a daily maximum fecal coliform requirement on POTWs. Imposition of Daily Maximum limitations for POTWs is inconsistent with EPA's permitting regulation (40 C.F.R. Part 122.45(d)) which specifies average weekly and average monthly effluent limits for POTWs.

For these reasons, we request that the Board reconsider the inclusion of Section 4C.2.a.2.B in the implementation procedures. We would welcome the opportunity to discuss this issue with the Board's staff during an additional period for public input.

Justifications for New/Expanded Discharges to Tier 2 Waters. The demonstration that Section 4C.4.a will require of dischargers to Tier 2 waters could be enormously burdensome and is likely beyond the ability of many potential dischargers, including local governments, to properly conduct. Moreover, the review of alternatives to the proposed discharge does not appear to be framed by what is feasible and/or cost-effective.

Particularly troublesome is Section 4C.6.b which would require a prospective discharger to provide DEP with information about current water uses, unspecified information about potential environmental impacts, socio-economic information for the surrounding area, land use information, and other detailed information that could be highly onerous for even local governments to assemble. Much of the environmental information should already be in the State agencies' possession. Moreover, any general background data that may need to be collected may be more appropriately collected by the State and not an existing or potential new discharger.

Tier 3 Waters. We strongly urge the Board to allow additional public discussion of the Tier 3 implementation procedures. At a minimum, we believe heightened local government participation, at the earliest stages when a water might be considered for Tier 3 status, is essential. Moreover, given the permanence of a Tier 3 designation under the Clean Water Act and the absolute prohibition on new or expanded discharges, we recommend that the Board consider a landowner notification policy to ensure that reasonable efforts will be made to alert landowners, but particularly absentee landowners, to any proposed Tier 3 designation that might affect the future use of their property. These are important public safeguards that the Board should accommodate in any final Rule.

Additionally, we question the basis behind the threshold criteria in Section 4E.2 of the Guidance.

Also, we strongly question the appropriateness of proposed Section 4E.7 on page 72, that would impose Tier 3 requirements on all upstream segments (regardless of any demonstrable impacts to the downstream Tier 3 segment from future upstream activities).

Finally, we believe additional information should be provided to the public to help our citizens to better understand what type of waters or segments thereof, will be candidates for Tier 3 designation. We also encourage the Board to develop, with DEP, a nomination form for the public to use. This will go a long way toward indicating the type of information that must be compiled to support a serious petition and will facilitate the Board's review of petitions. Again, we urge the Board to pay particular attention to the views of potentially affected local governments when considering any Tier 3 nominations.

Specific/Technical Comments.

1. Section 2.9. We recommend that this definition of High Quality Waters be revised as follows:

"High quality waters" (also known as "tier 2 waters"): are those waters whose water quality is equal to or better than the ~~minimum levels necessary to achieve the national water quality goal~~ uses applicable state water quality criteria.

The reference to “national water quality goal uses” is vague and confusing. The most appropriate benchmark for antidegradation purposes is the State’s water quality criteria adopted to protect the State-designated uses of State waters.

2. Section 2.20. First sentence: correct the spelling of the word “Concern.” Rewrite the last sentence as follows: “See section 4.1.c. for a list of categories of high quality waters.” The Board may wish to consider providing a cross-reference to other sections of the rule that may actually contain a list of waters that fall within the four categories of waters identified in section 4.1.c(1-4) (e.g., Trout waters).

3. Section 4.1.b. We recommend that the last sentence be rewritten as follows:

If limited degradation is allowed, it shall not result in injury or interference with existing stream water uses or in violation of applicable water quality criteria ~~State or Federal water quality criteria that describe the base levels necessary to sustain the national water quality goal uses of protection and propagation of fish, shellfish and wildlife and recreating in and on the water.~~

We believe this correction is more technically accurate and easier to understand.

4. Section 4.1.b.1. The cross-reference should be to section 2.9.

5. Section 4.1.b.2. The reference to “fishable (Category C) . . .” should be to “(Category B).”

6. The cross-reference in Section 6.3.b should be to Section 2.19. We recommend that the document be electronically searched to verify the correct cross-references for revised sections 2.5 through 2.24.

7. Section 6.4.a and b. It appears the textual description of Categories C1 and C2 are missing.

8. Section 4D.2.d (page 70) in the Implementation Procedures is misnumbered.

9. Section 4E.1-4E. should reference Section 4E.1.d. Section 4E.3 should reference Section 4E.2.a-f. Also the reference in Section 4E.6 appears to be incorrect.

Based upon the foregoing, we urge the Board to initiate another round of public input on the proposed revisions to the antidegradation rule and the implementation guidance. We believe that a stakeholder workgroup should review the entire proposal, followed by another opportunity for public comment. There is no federal deadline for the Board to adopt these revisions. Significantly, within EPA Region III, the State of Maryland will not even begin to consider adopting an antidegradation program until its triennial review of water quality standards that is scheduled to begin later this year.

Metals Criteria

The Association fully supports the Board’s proposed adoption of dissolved water quality criteria in lieu of the existing total recoverable criteria. Moving to dissolved water quality criteria will significantly improve the scientific underpinnings of the State’s water quality criteria program.

However, we have serious technical concerns with the Board's proposal to apply EPA's "correction factors" when converting from the current total recoverable criteria to statewide dissolved criteria. As indicated above, the Association is dedicated to ensuring that the State's water quality programs will be based upon sound science. We do not believe EPA's proposed correction factors meet this threshold. Our concerns are wide-ranging and include the following:

Lack of Meaningful Public Input. Significantly, EPA has never, to our knowledge, released publicly the data underlying the correction factors and, even more importantly, the formulas that were applied to the data to produce the so-called "correction factors." While we understand that the correction factors were included and discussed in the Great Lakes Guidance and National Toxics Rule, neither of those activities applied to West Virginia. Moreover, we understand that neither of those initiatives provided the underlying data and/or formulas used to derive the correction factors.

Of course, the Board's notice does not discuss the availability of the underlying data or the formulas that EPA used. Because the correction factors did not go through a proper administrative review at the federal level, they are not binding. Thus, before the Board takes any action regarding the factors, it is incumbent on the Board to independently evaluate the underlying data and the formulas that were used to derive the correction factors.

By these comments, we ask that the Board provide us with a copy of the data and formulas that support the correction factors for lead, cadmium (II), mercury, and Silver. We would also like to have a copy of the Board's review of the data and formula for these metals - to the extent that one was done in support of this proposed rulemaking.

Real World Perspective on EPA's Correction Factors. We seriously question whether EPA's correction factors were scientifically derived in the lab. Putting those concerns aside for a moment, outside of the lab, they clearly make no sense.

The national water quality criteria which the Board has adopted for West Virginia waters are almost universally 10-15 years old. Rather than applying a correction factor, the national standards are in dire need of being updated. Simply applying a correction factor (in most cases approximating 1.0) is like trying to treat cancer with a cough drop. The absurdity of this approach can be demonstrated by looking to last year's triennial review in Virginia. First of all, Virginia declined to adopt any of the conversion factors based on technical concerns and, instead, has put the specific issue of conversion factors out for a second round of more focussed public review and comment.

Significantly, during Virginia's triennial review, the Department of Environmental Quality comprehensively studied and updated the underlying science behind the national lead (freshwater) and nickel (freshwater) standards, which both Virginia and West Virginia had adopted. The result was an increase in the statewide lead standard of approximately 30 percent. EPA has not objected to this change. A similar effort has recently been completed in Maryland to revise the estuarine copper standard upwards from 2.9 ug/l to 9.1 ug/l. Maryland has also resisted adopting correction factors given these real world results.

Not only has the Board not considered this excellent technical work by Virginia in finally updating the national lead standard, and Maryland the copper standard, but the Board now proposes to make the current lead standard even more erroneous by applying a 30 percent reduction to that standard through use of EPA's correction factor for lead.

The same reality check is available from Virginia's experience with Nickel. Last year, Virginia DEQ concluded, after updating the national Nickel standard that it should be substantially more stringent (i.e., a 70 percent reduction in the standard) than the old standard (and current West Virginia standard). However, EPA's correction factor for Nickel is 0.99! This demonstrates that the correction factors are, at best, a wild shot in the dark and, absent careful and independent consideration by the Board itself, not appropriate for adoption.

Finally, it is important to note that several of the correction factors range from 0.960 (copper) to 0.998 (Nickel). These changes are so minute that they are both well below detection/quantitation levels in the real world and are well within the multiple margins of safety that are built into the national criteria, which the State has adopted.

Thus, from a practical perspective, most of the correction factors approximate 1.0 and, consequently, will have no real world affect - so why bother (especially when such minute changes suggest a level of precision and accuracy from EPA that we know is unattainable). Where the correction factors would make a measurable difference in the standards, there is indisputable evidence from Virginia (Lead and Nickel) and Maryland (copper) that the correction factors are completely wrong.

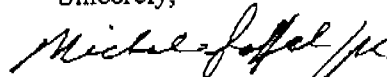
Technical Issues. Some of the data which allegedly supports the correction factors were apparently derived at a level that is below appropriate detection/quantitation levels. Accordingly, we question the validity of the resulting factors. Also, data was used that was reportedly below the solubility limits for the metals. Because the solubility product is the driving force to take the metals out of solution, logically, the correction factor values could not have been measured at these levels.

In summary, we urge the Board to go forward with the change to dissolved water quality criteria, while staying any final action on EPA's correction factors pending additional public input and comment. We do not feel that the correction factors were presented for public consideration in a meaningful manner and question the scientific underpinnings of the factors based upon the technical issues we have raised as well as the real world feedback on water quality standards for metals from the recent standards reviews in Virginia and Maryland.

Again, the MWQA greatly values the cooperative relationship that our members have had with the Board and we would welcome the opportunity to provide additional input on both the antidegradation and correction factor issues which we have raised. We will contact you once the comment period closes to discuss how the Board will proceed.

In the meantime, please call (304/425-9599) if you have any questions or need additional information.

Sincerely,



Michael Saffel
MWQA President

bcc: Municipal Water Quality Association Members (w/attachment)

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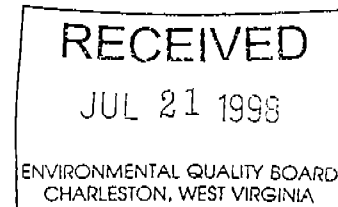
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July 20, 1998

Edward Snyder, Chair
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

Re: Proposed Rule
46 CSR § 1 - Water Quality Standards



Dear Chairman Snyder:

On behalf of Century Aluminum of West Virginia, Inc. ("Century"), I offer the following comments. The Environmental Quality Board (the "Board") proposes to adopt dissolved metals water quality criteria in the proposed Water Quality Standards rule, 46 CSR § 1, filed with the Secretary of State's office on June 18, 1998. Century supports this the adoption of dissolved metals criteria. The Board also proposes to adopt an antidegradation implementation policy as part of its proposed Water Quality Standards rule. Century opposes the adoption of this draft antidegradation policy.

Dissolved Metals

In response to comments received during the 1997 triennial review of its Water Quality Standards rule, the Board formed an ad hoc committee consisting of State government, citizen group, and industry representatives to consider whether West Virginia should adopt dissolved metals criteria. After numerous meetings conducted over six months, the committee voted unanimously to recommend the adoption of dissolved metals

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criteria. The Board accepted the committee's recommendations and has included the adoption of dissolved metals criteria in its proposed rule. Century supports this change.

When water quality standards were first established, EPA recommended that States measure compliance with water quality criteria using a total recoverable test. A total recoverable test measures both solid materials suspended in the water and ionic materials dissolved in the water. (Total = suspended + dissolved).

However, in 1993, EPA recognized that for metals, aquatic life is primarily harmed by the dissolved portion of the total metals concentration. EPA informed the States that using dissolved metals to measure compliance with water quality standards is the scientifically correct approach and recommended that State water quality standards be based on dissolved metals. (Prothro Memorandum, 1993).

To date, approximately thirty-five states have adopted dissolved metals water quality criteria. Attached as Exhibit 1 to this letter is a map showing the status of the states with regard to dissolved metals water quality criteria. This map is based primarily on telephone calls to the various state agencies involved with water quality issues.

Considering EPA's support of dissolved metals criteria and the weight of the scientific evidence, West Virginia should adopt dissolved metals criteria as supported by the EPA and the committee formed by the Board.

EPA has approved conversion factors prepared by independent researchers which translate the current water quality criteria for certain metals into dissolved criteria. The Board has adopted these conversion factors in its proposed rule. However, a review of available literature indicates that a conversion factor for aluminum and several other metals has not been prepared. Century intends to continue the effort to establish an appropriate

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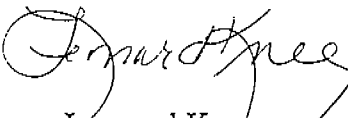
conversion factor for aluminum and anticipates that the necessary scientific studies by independent researchers ^{may} will be completed by December 31, 1998. Once an aluminum conversion factor has been prepared, Century will present the information to the Board for its consideration.

Antidegradation Policy

In its proposed revisions to the Water Quality Standards rule, the Board has proposed adopting an antidegradation policy prepared by a committee of representatives of the Board and State government. Century opposes the adoption of the draft antidegradation policy. The West Virginia Manufacturers Association and/or the West Virginia Chamber of Commerce are preparing extensive comments in opposition to the draft antidegradation policy. Century joins in the comments of the West Virginia Manufacturers Association and the West Virginia Chamber of Commerce and incorporates them by reference herein.

Thank you for the opportunity to comment on the proposed revisions to the Water Quality Standards rule. If you have any questions, please do not hesitate to contact me.

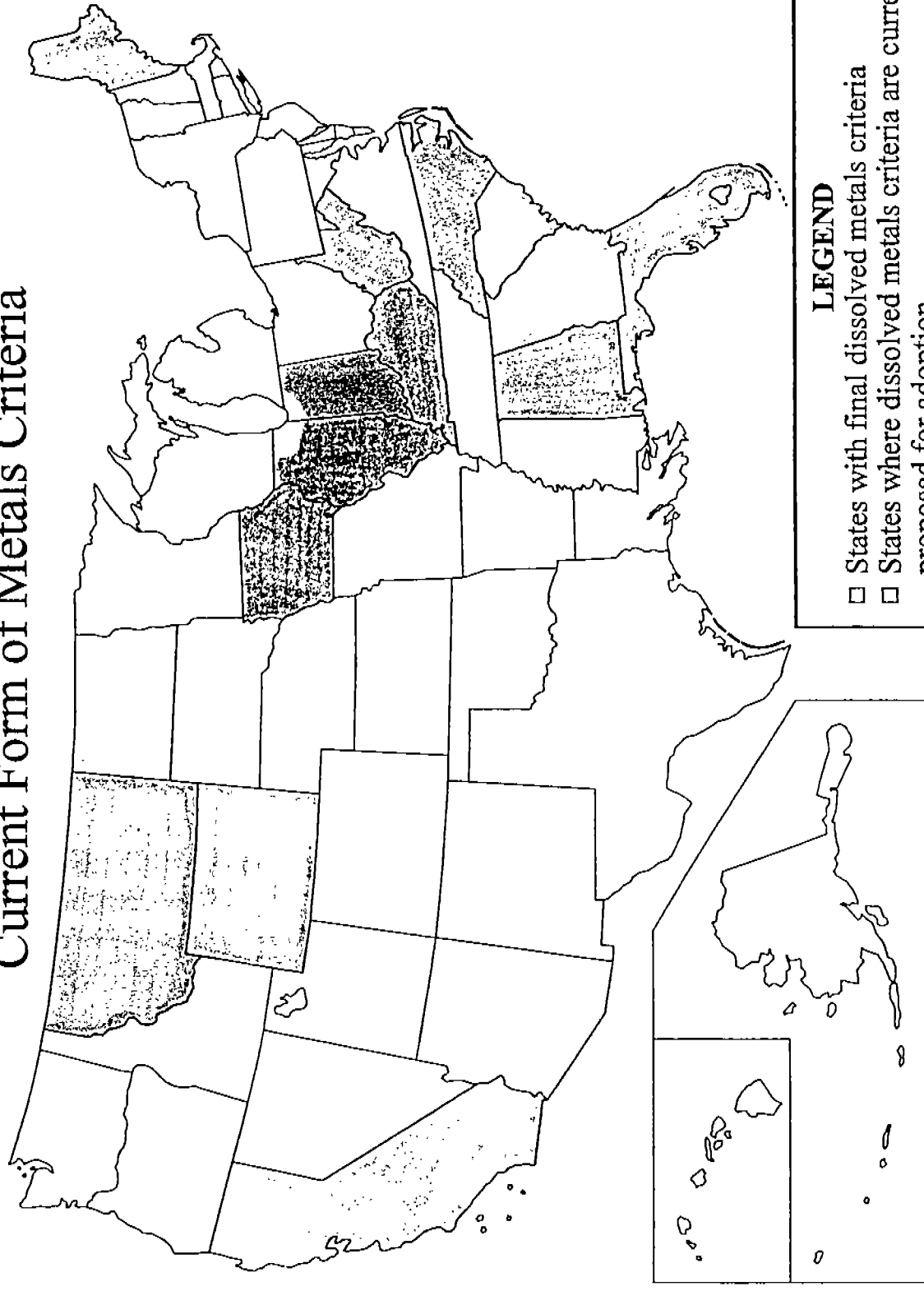
Very truly yours,



Leonard Knee

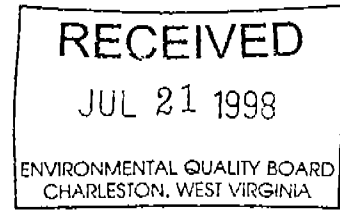
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Enclosure
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Current Form of Metals Criteria



LEGEND

- States with final dissolved metals criteria
- States where dissolved metals criteria are currently proposed for adoption
- States which are considering the adoption of dissolved metals criteria in 1998
- States which have not considered whether to adopt dissolved metals criteria
- States which have rejected dissolved metals criteria



**Comments of the
West Virginia Manufacturers Association
regarding the
West Virginia Water Quality Standards
46 C.S.R. 1**

July 21, 1998

**Comments of the
West Virginia Manufacturers Association
regarding the
West Virginia Water Quality Standards
46 C.S.R. 1**

July 21, 1998

I. Introduction

The West Virginia Manufacturers Association (WVMA) is an organization devoted to the advancement of manufacturing interests and related businesses in West Virginia. The WVMA frequently offers comments on rules and regulations that are of interest to its members. The Environmental Quality Board's proposed revisions to the West Virginia water quality standards are matters of great interest to WVMA members.

II. Dissolved Metals

We encourage the Board to adopt the proposed change to dissolved criteria for certain metals. The change is consistent with EPA guidance, and is protective of the environment without being unduly restrictive. We appreciate the efforts of the committee that developed a consensus on dissolved metals criteria, and look forward to its implementation.

III. Antidegradation

A. General Comments

1. Antidegradation Implementation Guidance is Premature.

On July 7, 1998 EPA published an Advance Notice of Proposed Rulemaking (ANPR) seeking comments on its water quality standards, found at 40 C.F.R. 131. EPA's request for comments extends to all aspects of the water quality standards, but several portions of EPA's program are singled out for extended discussion. One that merits special attention is antidegradation.

In that ANPR, EPA announces that it is seriously considering revising its antidegradation strategy:

EPA's current thinking is that on a national scale, antidegradation is not being used as effectively as it could be and that a structured national debate on antidegradation is key to improvement. The debate needs to identify deficiencies in antidegradation policy and implementation provisions and begin the process of strengthening antidegradation as a meaningful mechanism to attain and maintain water quality standards.

63 Fed. Reg. 36779 (July 7, 1998). One of the questions that EPA is requesting comment on is as follows: "Is national guidance on antidegradation implementation methods needed and should elements of such guidance be referenced or included in the regulation?" 63 Fed. Reg. 36781 (July 7, 1998). EPA is considering significant changes to its antidegradation implementation strategy, and is throwing all aspects of that strategy open to public comment.

As EPA makes abundantly clear in its ANPR, antidegradation has been a difficult concept for it to implement, and has resulted in confusion among the states as well. If it is pausing to rethink its strategy, West Virginia could not fairly be criticized for doing the same. We believe the Board should withdraw its proposed antidegradation implementation policy and constitute a committee to help develop a comprehensive policy that will be consistent with EPA's direction. Such a committee could consider the changes that EPA will be proposing in its revisions to water quality standards, recommend use designation procedures, and generate support for antidegradation policies. By including a broad range of interests, accommodation could be reached on a number of antidegradation issues that are currently unclear or contentious.

2. The Board Should Clarify Use Designations As Part of Its Antidegradation Implementation.

One of the most confusing aspects of water quality standards is use designation, yet use designation is the heart of antidegradation. Tier 1 protection extends to existing uses; Tier 2 applies to streams that are listed at 46 C.S.R. 1-4.1.b.1. For the most part, these are the streams listed in the Office of Water Resources' (OWR) High Quality Streams publication. The Board is proposing to change the Tier 2 designation to include all streams that have water quality better than that necessary to achieve the Clean Water Act's fishable/swimmable goals. Tiers 2.5 and 3 both protect special waters by not allowing any degradation at all.

An advantage of this approach is that it focuses on use attainment when determining whether streams are being degraded. A significant disadvantage is that it is tremendously vague. What are existing uses for a given stream? Are the fishable (Category B) and swimmable (Category C) uses the only designated uses statewide? And perhaps most importantly, how does one determine if a use is being attained? These and other aspects of use determination are the focus of the ANPR as well. *See 63 Fed. Reg. 36748 et seq.*

One way to determine whether a use is being attained is to find out whether the water quality criteria for that use are being met. However, this is not an infallible guide. There are no criteria for some pollutants, such as certain bacteria and nutrients. In other circumstances, the criteria may be met, but physical changes to the water body may preclude full use attainment.

The ANPR suggests that there are two acceptable means of determining whether a stream is a Tier 2 high quality water, i.e., whether designated uses are being maintained: a pollutant-by-pollutant approach and a water body-by-water body approach. The former assigns Tier 2 status to any water body to the extent that water body has concentrations of pollutants that are lower than the

water quality criteria - i.e., where there is some assimilative capacity. The latter “allows for a weighted assessment of chemical, physical, biological and other information (e.g., unique ecological or scenic attributes).” 63 *Fed. Reg.* 36783 (July 7, 1998). “EPA’s current thinking is that neither approach is clearly superior and that either, when properly implemented, is acceptable.” *Id.* at 36782.

An example of how the water body-by-water body approach might be applied is provided by the Kanawha River. The river bank is heavily riprapped in many places, there are dams and constant river traffic, and the river has been extensively channelized. It will not provide the same high quality of aquatic life as a less impacted stream, even if the water quality criteria are met. While dischargers must still comply with other water quality standards, there is no reason to apply Tier 2 antidegradation review to the Kanawha River.

We urge the Board to consider assignment of Tier 2 designation to streams after evaluating the characteristics of a water body, rather than on a pollutant-by-pollutant basis. This is consistent with our belief that the Board should consider identifying specific uses that apply to stream segments, so that achievement of those uses can be evaluated without slavish adherence to numeric criteria. We realize that this is a difficult process, and believe that it is something that would benefit from widespread participation by interested parties. This is an issue that the Board could assign to a committee that would offer recommendations on antidegradation implementation.

We would note that consideration of use designations in the manner we have suggested fits well with the Board’s obligation to consider the definition and application of the Category A public water supply use. Resolving issues surrounding the Category A use - where is public water supply an existing or designated use, and how should the use be defined - is exactly the sort of exercise that

will help the Board as it considers other issues relating to use designation. The legislature has already required the Board to study the meaning and implementation of the Category A use, and there is no reason not to do so in the context of a broader study of use designations.

3. Tier 2.5 Should Be Eliminated.

The Board should eliminate Tier 2.5, waters of special concern. Streams in Tier 2.5 are protected against degradation, even if important social and economic factors militate in favor of the degradation. For example, homes along a naturally reproducing trout stream may have septic fields indirectly discharging to the stream. Tier 2.5 designation would prevent those homes from combining their effluent, sending it to a package treatment plant located on the same stream, even if discharging a single effluent would have less effect on the stream than the septic tanks.

Tier 2.5 was originally adopted as an alternative to Tier 3, the most restrictive antidegradation category. The WVMA did not oppose that change, but after further reflection, in light of the implementation guidance, we can no longer do so, because we believe that Tiers 2 and 3 provide adequate protection. If a stream is of such special concern that no further degradation should be allowed, it should go through the public - and legislative - review for Tier 3 waters. If it is not sufficiently special, then it should be eligible for future development. Such future development, it must be remembered, would still be subject to water quality standards set for protection of all designated and existing uses, and to the antidegradation protections afforded Tier 2 waters.

The Tier 2 antidegradation protections convince us that waters of special concern will receive adequate protection. The Tier 3 designation is available for special waters in which no degradation is to be allowed. There is no need for Tier 2.5.

4. Responsibility For Antidegradation Implementation Should Be Established.

An implementation guidance should explain which agencies have roles in the implementation. Deciding who applies the Board's antidegradation provisions and who resolves disagreements is of more than esoteric interest. There is the real possibility of disagreement among the different agencies that may be called upon to make antidegradation decisions, and one agency must be given authority to make the ultimate decision. The Board is an obvious choice, but it will not be involved in antidegradation determinations absent some sort of appeal. That suggests that some agency, such as the Office of Water Resources, should be given the authority to resolve conflicts, subject to appeal to the Board.

The Board's interest in developing a guidance that can be applied by multiple agencies is commendable. There is still a need, though, for a memorandum of understanding or other agreement establishing who ultimately will be responsible for application of the antidegradation provisions.

B. Specific Comments

1. Antidegradation Guidance Applies To Surface Waters.

Section 4A.1 should be limited to those permits, certifications or licenses that authorize an increased discharge of pollutants to surface waters. The Board's water quality standards apply only to surface waters; groundwater is regulated under the Groundwater Protection Act. The section could be rewritten in this fashion:

The procedures herein are intended to apply to those activities that will result in a new or increased discharge of pollutants to surface waters of the state and for which approval, in the form of a permit, license or certification, is required by state or federal law.

2. Activities Regulated Under General Permits Should Be Treated Similarly to Nonpoint Sources.

Section 4A.2 states that nonpoint source activities that are being conducted in accordance with best management practices (“BMPs”) will be deemed to be in compliance with antidegradation requirements. The justification for this is presumably the limited impact on water quality that occurs when BMPs are implemented. The same is true of those activities for which general permits are issued, such as the stormwater general permit. Facilities that are in compliance with the general stormwater permit should also be deemed to be in compliance with antidegradation provisions.

3. Only Increased Discharges From Point Sources Are Subject To Antidegradation.

Section 4A.3.b should be limited to situations where there will be new or increased discharges as a result of treatment of contaminated groundwater. In some instances, the discharge of treated groundwater may result in lower levels of pollutants in the stream than were occurring as the result of seeps of untreated, contaminated groundwater. The “new discharge” would be more limited than the groundwater flow it replaced, yet would be subject to antidegradation restrictions. This section should be rewritten by replacing “new discharge” with “greater discharges of contaminants, or discharges of new contaminants, from a point source.”

4. Designated Uses Have Not Been Adequately Identified.

Section 4B.1.a is an excellent example of where further explanation about uses is needed, and where discussion with interested parties would be helpful. That section requires identification of “designated uses in Section 6.2¹ herein which apply to the water in question.” Who is to identify the uses, and what criteria is to be employed? For example, most streams are used by wildlife (Category D3) to some degree, but how is one to determine whether it is a designated use for any

¹As Section 6.2 refers only to the Category A use, we assume the intended reference is to Section 6.

given water body? The default assumption should be that only the Category B and C uses apply unless other uses can be shown to be appropriate.

Similar problems are presented by Section 4B.1.b, requiring identification of existing uses. Without criteria for Category D3, how can anyone determine whether a use has been supported anytime in the past? The assumption should be that a use does not apply unless affirmatively shown to exist.

5. Public Notice Procedures Are Unspecified.

Section 4B.1.c states that “before any final action is taken, public notice will [be] provided by publication. . .where the activity will occur.” Who is responsible for publishing notice - the agency or the permit applicant? It is clear the applicant pays for the notice, but does the agency approve its form? Furthermore, what is “the activity”? Does it apply only to those activities described in Section 4A.1?

6. The Nature Of Controls Is Unclear.

Section 4B.2.a introduces the element of “controls” which are to be applied as necessary to ensure that water quality standards are met. The OWR has the NPDES program and nonpoint source programs to protect water quality, but this suggests that additional “controls” can be applied to make sure that the criteria are being met. If this section is only stating the obvious - that controls may be needed to achieve water quality standards - it should be eliminated. If this section is referring to something else, such as TMDLs, that fact should be more clearly stated.

7. Criteria Developed For One Use Should Not Be Applied To Protect Another Use.

It is not clear what Section 4B.2.b means. It appears to give the OWR and other agencies the authority to use criteria from one use category to protect a separate use. The authority for doing this is unclear.

This one of the many places where the passive voice makes it difficult to tell who will be making the determination “that the designated uses do not appropriately reflect the existing use of the water. . .” or who will choose “the related designated use” for establishing numeric criteria. The rule should be revised to state that the agency that is considering approval of the potentially degrading activity will make the initial determination, and that if there is a conflict among multiple agencies the decision will be made by the OWR, in a manner that is appealable to the Board.

8. Water Quality Criteria Can Only Be Established By The Board.

Section 4B.2.b.1 suggests that the OWR can set limits in permits to protect Tier 1 waters even if there is no criteria in the water quality standards, if those limits are necessary to protect an existing use. Neither the OWR nor any other agency has the authority to develop water quality criteria, even on a temporary basis. Apart from the lack of statutory approval for this sort of standard setting, there are practical problems as well. Under the Board’s proposal, the Corps of Engineers could set numeric criteria for a substance as part of its Section 404 permit issuance, and the OWR could arrive at a different criteria for the same substance in setting a NPDES permit limits. Neither would be valid criteria.

9. The Guidance Does Not Specify Where Findings Are Documented.

Section 4B.2 states that “antidegradation review findings regarding uses of waters and protection of those uses shall be documented.” By whom? Where will they be documented? Is

there any right of appeal? Developing consistent use designations, and documenting those designations, is important, and deserving of greater explanation.

10. Trading Goals and Procedures Are Needed.

The trading of pollutants for purposes of antidegradation review is an excellent idea and one that is to be encouraged. However, the rough outline in Section 4B.4 is insufficient to provide any basis for those trades. What is a “new or expanded source”? Is trading allowed with nonpoint sources? How does one determine the baseline for trading, so that the trades can be quantified? While TMDLs may be an important part of this process, TMDLs may not be done for years after a problem is identified, whereas trades may need to be done immediately in order to allow a project to proceed. Furthermore, TMDLs are developed to allow a stream to meet water quality standards, not to prevent degradation from existing levels.

We are also concerned that trading not be required as a condition of each increase in pollutant loading from a point source. The antidegradation provisions of the water quality standards do not prohibit all increases in pollutants; some increases are allowed if important social and economic goals can be achieved as a result of the activity that causes the increase. Offsets of pollutant increases, through trading or otherwise, are not required in order for limited degradation to occur, and offsets should not be required for every increase in pollutant loading. Rather, trading should be an option when the use could be impacted by the increase, and offsetting reductions are needed to protect the existing or designated uses, or as an option to antidegradation review.

The Board should also consider allowing trading among pollutants, rather than limit trades to the same pollutant. In some situations, large loads of upstream pollutants, such as nutrients, may be preventing achievement of an aquatic life use. In that case, a discharger who seeks to increase an

unrelated pollutant should be allowed to control the upstream source that is impacting the use, rather than try to offset the minimal impacts of its own new discharge.

11. High Quality Streams Should Be Fishable and Swimmable.

Under Section 4C.1.a and 46 C.S.R. 1-4.1.b.2, streams are high quality waters if **either** the fishable or swimmable use is attained. The reason for this requirement is not clear. Under the Clean Water Act, the goal is that streams be both fishable and swimmable, and there is no reason a stream should be designated high quality if it is not both. Under the Board's approach, streams can be listed on both the 303(d) list of impaired streams, and on the Tier 2 list of high quality streams. If a stream is to be designated as high quality, that designation should mean that it is achieving basic Clean Water Act goals.

12. The Use Attainment Designator Should Be Identified.

Under Section 4C.2.a, who will make the determination that a proposed activity does not result in significant degradation of the water? Presumably the OWR or some other agency will do so, but what if there is a conflict? Furthermore, the parameter-by-parameter approach to determining use attainment should be reconsidered in favor of an overall stream assessment, as discussed in Comment III.A.2. It is the use that should be protected, not only the criteria.

13. Significant Degradation Is Defined Too Narrowly.

Section 4C.2.a.1 defines significant degradation as that which increases the ambient concentration of any parameter more than 5% at critical flow conditions. The 5% is too low and should be at least 10%. In addition, the increase should be that which will occur outside a mixing zone. If the Board elects to continue to determine degradation in light of existing loads, we suggest

the section be changed by deleting the “5%” and replacing it with this phrase: “10% outside any mixing zone.”

Of course, the Board may elect not to use a parameter-by-parameter approach to determining whether a use is being protected, and to determine which degree of antidegradation protection applies. We have pointed out in Comment III.A.2 why a water body-by-water body approach might be appropriate for a stream such as the Kanawha River. However, if the Board does use a parameter-by-parameter approach, it should set its de minimis standard as allowing a share of the unused assimilative capacity, not an increase of the “ambient concentration”, i.e., the existing level of pollution. For example, if the water quality criterion for a pollutant is 10 mg/l, and the ambient concentration is 9 mg/l, antidegradation review is not triggered until the ambient concentration rises to 9.45 mg/l. If, on the other hand, the existing quality of the river for that same parameter is 1 mg/l, the antidegradation review process would be triggered if the discharges increased the concentration to 1.05 mg/l. The first discharger could discharge nine times more pollutants than the second, into a stream that was far closer to a violation of water quality standards.

The Board’s policy does not state how “ambient concentration” is determined. Is this concentration based on actual monitoring data, with consideration for statistical variations in analytical methods? Is this based solely on mathematical models, and if so do the models account for variations in effluent flows and concentrations from known point source dischargers? Since so much depends on whether the activity may increase ambient concentrations by 5%, it is essential that the definition of ambient concentration be explained.

Critical flow is generally thought of as low flow, or a higher, stormwater induced flow. However, in the case of carcinogens, the harmonic mean flow should be used. EPA has generally

recommended the use of the harmonic mean flow in its *Technical Support Document for Water Quality-Based Toxics Control*.

14. The Alternative Model Option Should Be Clarified.

Section 4C.2.a.1.A.2 does not explain who approves the alternative models that may be used to predict changes in the water quality due to precipitation-induced discharges. If it is a permit issuing agency, that fact should be noted, and some basic guidance provided as to what models are appropriate.

15. The Dissolved Oxygen De Minimis Level Is Too Low.

The .4 ppm maximum dissolved oxygen sag is too slight to be a reasonable criteria, as it is within the range of normal dissolved oxygen variation. Given organic loading that occurs during flood events, and the effects of drought periods, some greater level of degradation should be allowed, as long as the aquatic use is protected.

16. Trading Requires Additional Explanation.

Section 4C.2a.2.F allows trading to avoid significant degradation, which is a good idea but suffers from the same problems identified in Comment III.B.10, above. In addition, this section requires “an appropriate margin of safety” which is undefined, but could be interpreted in an onerous fashion.

17. Antidegradation Analysis Requires Clarification.

Sections 4C.4 and 4C.5 require analysis of alternatives to “significant degradation” of a water body. Some further guidelines are needed to explain how this analysis is conducted. The “no build” scenario is always an alternative, as is very expensive pollution control equipment such as reverse osmosis. Some element of reasonableness and cost-effectiveness must be introduced into the

evaluation of alternatives to the proposed activity. EPA has stated “where less-degrading alternatives are more costly than the pollution controls associated with the proposal, the State or Tribe should determine whether the costs of the less-degrading alternative are reasonable.” *63 Fed. Reg.* 36784 (July 7, 1998). There is always some option that is less degrading, but it must be feasible from an economic and engineering standpoint.

18. The Antidegradation Determination Must Be Appealable.

Section 4C.5 requires a preliminary determination regarding availability of non-degrading or less degrading alternatives. What criteria is applied when determining whether a less degrading or nondegrading alternative will be required? The OWR is prohibited from specifying “the design of equipment, type of construction or particular method which a person shall use to reduce the discharge of a pollutant . . .” W.Va. Code §22-11-4(a)(16). This prohibition limits the OWR’s authority to require the implementation of any particular pollution control method as a condition for issuance of a permit or other approval of increased pollutant loadings.

Any decision to deny permission to conduct an activity that is premised on antidegradation implementation must be appealable, and that avenue of appeal should be clearly stated. Will this be done in the form of a permit denial, in the case of NPDES discharges? Is there a similar appeal where other permitting entities are involved, such as Section 404 permits issued by the Corps of Engineers?

19. Less Degrading Alternatives Are Options Only If Economically Feasible.

Section 4C.5.b gives agencies a veto over projects if they believe that a less-degrading or non-degrading alternative exists. We have the same objections here as are expressed in Comment

III.B.13. This section should be amended by inserting the phrase “cost effective and feasible” before the word “less-degrading.”

20. A Tier 1 Analysis Is Not Needed For Tier 2 Waters.

The implications of Section 4C.7 are unclear. Are the Tier 1 implementation procedures in addition to the Tier 2 protections? We believe that the Tier 2 protections are more extensive than Tier 1, so that a Tier 1 analysis is not needed for a Tier 2 water.

21. Guidance As To What Is “Important Social Or Economic Development” Is Needed.

The information required in order to demonstrate “important social or economic development” is unclear, but it appears to be excessive. Will it be satisfactory to show a benefit to the community from the proposed activity, or must the benefit outweigh the proposed degradation? Is there an equation for determining this? By whose standards is the value of the stream degradation measured?

22. De Minimis Changes to Tier 2.5 Waters Should Be Allowed.

The WVMA has urged the Board to eliminate Tier 2.5. If it does not do so, Sections 4D.2.a and b. forbid any degradation of waters of special concern. This prohibition should extend only to significant degradation, not de minimis effects. Significance should be determined in the same fashion as for Tier 2.

23. Trading Requires Clarification.

Section 4D.2.c allows trading. The same trading concerns as are found in Comment III.B.10 and III.B.16 apply here as well.

24. The Rulemaking Requirement For Tier 3 Is Appropriate.

Section 4E.9 requires applicants to nominate outstanding national resource waters (ONRWs), and the procedure for nominating ONRWs is the same as that for developing site-specific criteria. We believe this is appropriate, as it will require rulemaking, and hence legislative approval, before a stream is accorded Tier 3 protection, and removed from any possibility of future development. Consideration must also be given to the upstream inhabitants, who will be tremendously affected by an ONRW designation downstream.

IV. Conclusion

The WVMA appreciates this opportunity to comment on these critical changes to the West Virginia water quality standards. We hope that the Board will carefully consider them, and will elect to withdraw the proposed changes to the water quality standards and initiate a stakeholder process that would evaluate all aspects of the State's antidegradation rule and recommend implementation procedures.

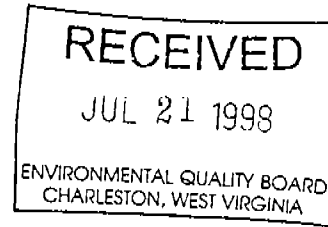
Submitted this July 21, 1998.

West Virginia Manufacturers Association

Karen S. Price, President

**Timothy A. Albert, Chairman
Water Committee**

Innsbrook Technical Center
5000 Dominion Boulevard
Glen Allen, Virginia 23060



VIRGINIA POWER

July 21, 1998

Dr. Edward M. Synder
Chairman
Environmental Quality Board
1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126

RE: COMMENTS CONCERNING PROPOSED REVISIONS TO WEST VIRGINIA'S WATER QUALITY STANDARDS REGULATION, 46 CSR 1

Dear Chairman Synder,

Virginia Power is pleased to provide you with the attached comments on West Virginia's proposed revisions to *Requirements Governing Water Quality Standards*, 46 CSR 1. We strongly support the development of water quality standards and implementation procedures that are protective, reasonable, and based in science. Consequently, we were pleased to note, and offer our support for, the Board's decision to apply dissolved rather than total recoverable metals criteria.

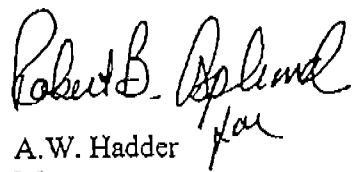
We are also providing a number of specific comments relative to the proposed antidegradation language. One overarching issue of concern to us is the proposed promulgation, as a rule, of a detailed guidance document such as that contained in Appendix G. It is our belief that to do so will significantly diminish the Board's ability to effectively implement West Virginia's antidegradation policy. Consequently, it is our recommendation that the Board not adopt the implementation procedures as a rule, but rather retain them as guidance. In addition, we would support the Board's establishment of a broad-based stakeholder group to continue the process of crafting the antidegradation policy and implementation procedures.

Virginia Power appreciates the privilege of providing you with these comments. It is our hope that they will receive your serious attention.

Dr. Edward M. Synder
July 21, 1998
Page 2

Please feel free to contact Ken Roller of my staff at (804) 273-3494 should you have any questions about this submittal.

Sincerely,

Handwritten signature of Robert B. Splund in cursive script.

A.W. Hadder *for*
Manager
Environmental Policy and Compliance

cc: Ms Libby Chatfield
Technical Advisor
West Virginia Environmental Quality Board
1615 Washington St.
Charleston, West Virginia 25311

Virginia Power's Comments on Proposed Revisions to West Virginia's Water Quality Standards Rule, 46 CSR 1

Virginia Power strongly supports establishing numeric water quality standards for metals based on the dissolved fraction.

Virginia Power commends the Environmental Quality Board for having established a stakeholder committee to look at the issues relative to the adoption of dissolved metals criteria, and for proposing to adopt dissolved metals standards, as recommended by the committee. We strongly support the adoption of dissolved metals standards, and believe that the use of such standards constitutes a more reasonable and technically sound approach to water quality protection.

The Environmental Quality Board should not adopt the antidegradation implementation procedures as a rule, but should retain them as guidance only.

The antidegradation implementation procedures of Appendix G describe in detail how the Environmental Quality Board intends to implement the established antidegradation policy. Detailed guidance documents, such as that proposed in Appendix G, should not be promulgated as law or regulation. To do so will mandate the full public participation process and legislative review for even the smallest of modifications to the implementation procedures, thereby reducing the regulatory flexibility that will undoubtedly be needed to effectively implement such a complex policy. The EPA does not require that a state adopt its antidegradation implementation procedures as rules. In fact, according to EPA guidance, it is not even required that the antidegradation policy itself be included in the water quality standards, only that it "be specifically referenced in the water quality standards so that the functional relationship between the policy and the standards is clear".¹ In light of the above, Virginia Power recommends that the EQB not adopt the antidegradation procedures as a rule, but rather retain them as guidance only.

Trading should be allowed with both upstream and downstream sources as long as the ultimate goals for each waterbody type are achieved.

According to §4.B.4 and §4.D.2.c a proposed activity that will result in a new or expanded source may be allowed [to a Tier 1 or Tier 2.5 water] where the applicant agrees to implement or finance upstream controls of point or nonpoint sources sufficient to offset the water quality effects of the proposed activity" (boldface and underlining added for emphasis). In both situations, trading with upstream and/or downstream sources should be allowed as long as the antidegradation goals for each waterbody type are achieved. In addition, there may be cases where an applicant is involved in a trade, but is not financing or implementing any controls. Section 4.C.2.a.2.F discusses trading in Tier 2 waters and recognizes that both upstream and downstream trading may occur as

¹ Section 4.3, *Water Quality Standards Handbook: Second Edition*, EPA-823-B-005a, August 1994.

long as "a proposed activity will not pose significant degradation". Virginia Power recommends that §4.B.4 and § 4.D.2.c be modified to recognize both upstream and downstream trading, and that the language be modified in each section to reflect the more general language of § 4.C.2.a.2.F as shown below:

"A determination may be made that a proposed activity will not compromise the antidegradation goals for the waterbody based upon the specifics of any upstream and/or downstream trading undertaken by the project applicant."

An increase of 5% above ambient concentration should not be used as the criterion for determination of significant degradation in Tier 2 waters.

According to §4.C.2.a.1.A "[a]ny proposed activity that would increase the ambient concentration of any parameter more than 5% at critical flow conditions shall be considered significant degradation". In practice, using a criterion of 5% above ambient will probably result in a great many needless decisions to require a Tier 2 review, and may result in the denial of proposed activities that would cause little or no real waterbody degradation.

For example, say the water quality standard for pollutant X in a waterbody is 10 ug/L, and the background concentration is 1 ug/L. A new discharger to the stream (Permittee A) requests to discharge enough pollutant X that the resulting ambient concentration would be predicted to be 1.6 ug/L (or 60% above background). In this situation, the addition of an extra 0.6 ug/L of pollutant X shouldn't constitute significant degradation of water quality. Yet, using the proposed antidegradation procedures, this discharger would be subject to the full antidegradation review for Tier 2 waters. Now consider a situation where a new or expanded discharger to the same waterbody would increase the ambient concentration to 9 ug/L (800% increase). In this case, the discharger still would not cause a violation of the water quality standard for pollutant X, however, the resulting increase in ambient concentration is much greater, and probably more significant to the stream, than in the first example.

An alternative to the proposed procedure for determining significant degradation would be to set the threshold as some proportion of the difference between the existing quality of the waterbody (ambient concentration) and the appropriate water quality standard for that water body. Using the above example the difference between the ambient concentration (1 ug/L) and water quality standard (10 ug/L) is 9 ug/L. Now say that the regulatory criterion for significant degradation is that the discharge can not increase the ambient concentration by more than 25% of the difference (or 2.25 ug/L). The resulting threshold concentration for antidegradation determination would equal 3.25 ug/L, and only Permittee B would be subject to Tier 2 antidegradation review. A similar approach is currently being implemented in Virginia.

The Environmental Quality Board should abandon the proposed approach for significant degradation determinations where the proposed activity involves a "precipitation induced" discharge.

Section 4.C.2.a.1.A.2 outlines a procedure for use in making significant degradation decisions where a proposed activity involves a precipitation-induced discharge. The approach presented uses a simple mass balance procedure that makes a general assumption concerning the relative runoff coefficients for disturbed and undisturbed areas, and also employs the 5% above ambient criterion of §4.C.2.a.1.A. The use of a 5% above ambient concentration for establishing significant degradation is complicated even further for storm water discharges. Storm water discharges are highly variable, both in terms of flow and pollutant concentrations and the relationships between discharges and water quality can be complex. Consequently, the steady state modeling assumptions typically used for continuous discharges are not applicable to storm water discharges. The EPA, in August, 1996², "due to the nature of storm water discharges, and the typical lack of information on which to base numeric water quality-based effluent limitations (expressed as concentration and mass)", recommended the use of best management practices (BMPs) with storm water discharges to provide attainment of water quality standards.

Based on the above, Virginia Power recommends that the Environmental Quality Board abandon the proposed approach for significant degradation determinations where storm water discharges are involved. Instead, we suggest that applicants proposing new or expanded activities involving precipitation-induced discharges, be required to implement BMPs determined appropriate to maintain water quality standards.

An increase of 5% in ambient concentration should not be used as a "general" criterion to gauge the risk associated with an activity in Outstanding National Resource Waters.

As outlined above, the use of a 5% above ambient criterion will result in a meaningless measure of water quality-degradation. Therefore, it is recommended that §4.E.2. be modified as follows:

- 1) Add the phrase "and of limited effect" following "temporary" at the end of the first sentence
- 2) Delete the second sentence.

It is also recommended that §4.E.2.b. be modified by replacing the word "percent" with "predicted".

² *Interim Permitting Approach for Water Quality-Based Effluent Limitations in Storm Water Permits.* Memorandum from Robert Perciasepe, Assistant Administrator, USEPA Office of Water, to EPA Water Management Division Directors. August 1, 1996.

The above changes will achieve the Environmental Quality Board's goal that any impacts to ONRWs be temporary and of little impact, but will also provide for flexibility in performing site-specific risk assessments, which will most likely be needed to assess the potential for impacts to such areas.

If the water quality of a particular waterbody is not sufficient to attain both fishable (Category B) and swimmable (Category C) uses, then the waterbody should not be designated a high quality water.

Section 4.C.1.a states the following:

"All waters not included in Tiers 2.5 and 3 will be considered high quality waters unless it can be demonstrated that the quality is not better than necessary to attain both fishable (Category B) and swimmable (Category C) uses. If either the fishable or swimmable use is attained, the water is a high quality water."

Virginia Power does not believe that in the absence of data to suggest otherwise, a waterbody should be presumed to be of high quality. Stream designations should be based on monitoring data that support the designation, not on presumptions. In addition, according to the proposed definition in §2.9, High Quality Waters are "those waters whose quality is equal to or better than the minimum levels necessary to achieve the water quality goal uses." Section 4.1.b *Tier 2 Protection* defines the national water quality goal uses as "protection and propagation of fish, shellfish and wildlife and recreating in and on the water". Based on the above, it is clear that where both fishable (Category B) and swimmable (Category C) uses are possible, a waterbody must attain both uses in order to be classified as a high quality water.

Based on the above, Virginia Power recommends that the language in §4.1.b.2 be revised as follows:

"All waters not designated as waters of special concern (Tier 2.5) or outstanding national resource waters (Tier 3), and in which the quality of the waters exceed water quality standards, shall be designated as Tier 2 waters."

Additional Editorial Comments

Section	Suggested Revision
§4.B.1.a.	Change §6.2 to §6
§4.C.5.a.	Delete additional "and" following "continue".
§4.D.2.c.	In second full sentence delete "on" and "or" after "occurs but before upstream.
§4.1.b.1.	Change 2.8 to 2.9

FACSIMILE TRANSMISSION



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Environmental Policy & Compliance
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DATE: 7-21-98

TO: DR. EDWARD M. SYNDER

FAX NUMBER: 304/558-4114

NO. OF PAGES (INCLUDING THIS COVER PAGE): 7

FROM: KEN ROLLER

TELEPHONE NO.: 804/273-3494

COMMENTS:

VIRGINIA POWER'S COMMENTS ON PROPOSED CHANGES
TO WEST VIRGINIA'S WATER QUALITY STANDARDS
REGULATION. ORIGINAL/HARDCOPY WILL BE MAILED.
PLEASE NOTIFY ME THAT FAX WAS RECEIVED.

THANK YOU.

JUL 21 1998

ENVIRONMENTAL QUALITY BOARD
CHARLESTON, WEST VIRGINIA

**Comments Submitted to the Environmental Quality Board on the Proposed
Water Quality Antidegradation Policy**

Wayne C. Appleton, Ph.D. E.I. DuPont de Nemours and Company, Inc.

As a chemist involved in the effort to bring new products and processes to West Virginia chemical plants, I have serious concerns about the proposed Water Antidegradation Policy as written.

The criteria for chemical condition evaluations (4.c.2.a. I.A) defining significant degradation as an increase in the ambient concentration of any parameter by more than 5% at critical flow could effectively STOP any new chemical products or processes from being installed in any plant in the state in the future. By this standard, *any* chemical not already in the ambient waters could be prohibited from manufacture. The wording of the policy is very clear that any increase of 5% or more over the ambient concentration of any parameter would trigger an anti-degradation review and would be prohibited if the agency and the applicant could not reach agreement on ways to reduce the impact to less than 5% of ambient concentrations. This is a significant change in public policy with serious implications for both the permitting process and future economic development in West Virginia. I do not believe that the Board intends this consequence of a literal reading of the proposed policy as written.

In a similar manner, this definition of "significant" degradation could prevent the use of chemicals and processes which are used to make water safe for drinking, in permitted waste treatment facilities or for the remediation of environmental problems. Chemicals are added in these processes, or generated by the chemistry of the process, which would be above the 5% of ambient level criterion. This could trigger an anti-degradation review and subsequently be prohibited if they could not be brought into compliance with the 5% rule even though the intent was improved public safety and a cleaner environment.

The policy doesn't define which "water quality parameters" are to be measured and which may be excluded from consideration. By this standard, any change in very minor components in the effluent from a permitted facility could trigger a finding that the waters had suffered significant degradation. As an example, an increase in hypothetical compound X from 1 ppb in the affected waters to 2 ppb could be prohibited even if compound X was considered nonhazardous at that level. The policy needs to be more specific in defining those parameters which are covered by the policy. One valid approach would be to specify that the parameters to be considered are those listed in the NPDES permits for a facility. Without specifying which parameters are included, a literal reading of this

policy could require every permitted facility in the state to analyze their outfalls for every conceivable component at concentrations which would otherwise be without regulatory or environmental concern. Surely, this is not the intention of the Board.

The choice of the 5% increase in the ambient concentration of a parameter at critical flow conditions as the criterion for "significant degradation" is totally arbitrary and not justified scientifically. The more scientifically defensible position is to establish the "assimilative capacity" of the stream for that parameter and write permits on that basis. This would allow for future development without endangering the waters that the policy is trying to protect.

Having been an analytical chemist for ten years, I would also raise the issue of whether the 5% increase versus ambient conditions could be reliably measured for some parameters. This could be a significant added cost for new analytical method development and the additional oversight costs could significantly impact both the permitted facility and the agency.

The policy as written does not define where measurements are to be made to determine "significant degradation". Is this an "end of pipe" measurement or downstream of the outfall? If the determination is to be made downstream of the outfall, how far downstream is the determination of "significant degradation" to be made? This policy needs to be specific enough to provide meaningful direction for both the regulatory agency and the regulated community.

This policy effectively ignores the contribution of non-point sources to the overall level of any given parameter in a body of water by stating that these non-point sources will be deemed to be in compliance "with the achievement of cost effective and reasonable best management practices in accordance with the West Virginia Nonpoint Source Management Plan (A42). For some low-level compounds, the nonpoint sources may comprise the majority contributors of the total for a given parameter. For many of the parameters of interest the data to define the "nonpoint sources" to be managed doesn't exist and the Nonpoint Source Management Plan is not a workable plan for managing these parameters.

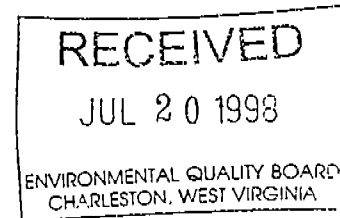
I support the need for a consistent water anti-degradation policy but believe the current proposal is seriously flawed in some aspects. In light of this, and considering that the federal EPA has this month opened a dialogue aimed at establishing a new national anti-degradation policy, I urge the Board to withdraw the proposed policy at this time.



Dr. Edward M. Snyder
Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

July 20, 1998

Re: Adoption of Dissolved Metals Aquatic Life Criteria



Dear Dr. Snyder,

I would like to thank the Environmental Quality Board (EQB) for approving my nomination to participate (as a representative of the West Virginia Chamber of Commerce) on the interagency "Metals Committee." I found the committee's assigned task of reviewing the EPA's dissolved metals aquatic life criteria, and providing a recommend course of action to the EQB, both challenging and rewarding.

With a broad base of stakeholder interests represented, the committee was provided with an opportunity to examine in detail the EPA's metals translator guidance document, metals translator case studies, and the criteria adopted by many neighboring states.

In addition, the committee secured input from several third party sources that were critical in building consensus among the metals committee members. These sources included Cindy Roberts, USEPA Headquarters, and Dave Mount, USEPA-ORD, Duluth. Ms. Roberts provided the committee with a written assessment on potential risks associated with sediments, and Dave Mount fielded a list of committee questions via conference call during one of the committee's several meetings.

On behalf of AEP, I am also reaffirming our support for the EQB's proposed adoption of dissolved metals aquatic life criteria within 46CSR1. The use of dissolved metals criteria is clearly a more appropriate and more accurate approach to set and measure compliance with water quality standards than are "total recoverable" metals criteria.

AEP also commends the EQB for providing the regulated community with criteria that are consistent with the majority of states, including the neighboring states of Ohio, Pennsylvania, Maryland and Virginia. We believe this to be critical since West Virginia shares common watersheds with the neighboring states referenced.

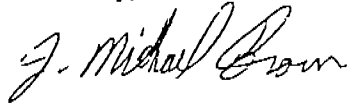
AEP also supports the "Metals Committee" recommendation to have the flexibility to use EPA's document entitled, "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion." The

procedures outlined in this document provide the regulated community with the necessary tools to calculate more accurate total recoverable water quality based permit limits.

Finally, the Office of Water Resources will benefit from the adoption of dissolved metals aquatic life criteria. They are gaining use of an improved scientific tool for permitting decisions, and they will be able to more accurately assess the attainment of the aquatic life use designation of waterbodies throughout West Virginia.

If you have any questions, please call me at (614) 223-1286.

Sincerely,



J. Michael Brown
Environmental Specialist

c: Ms. Libby Chatfield, Technical Advisor
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

Dr. David Samuels
West Virginia Environmental Quality Board
1615 Washington Street, East
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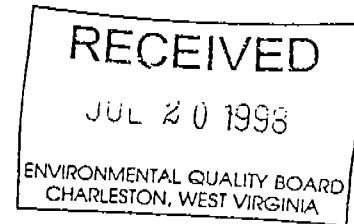
Dr. Charles Jenkins
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311



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

July 20, 1998

Ms. Elizabeth Chatfield
Technical Advisor
Environmental Quality Board
1615 East Washington Street
Charleston, WV 25311-2126



Dear Ms. Chatfield:

The U.S. Environmental Protection Agency (EPA), Region III has received the notice of proposed changes to the Water Quality Standards Rule, 46CSR1 which includes adoption of antidegradation implementation procedures and adoption of dissolved metals criteria. Pursuant to 40 CFR §131.20(b), the EPA offers specific comments on the antidegradation implementation procedures and dissolved metals criteria.

The EPA conditionally-approved West Virginia's Antidegradation Policy on November 9, 1995, on the understanding that implementation procedures would be developed. The Antidegradation Committee, which was charged with development of implementation procedures, developed and submitted those procedures to the Environmental Quality Board on June 17, 1998. The EPA would like to acknowledge and commend the time and effort the committee spent developing these procedures.

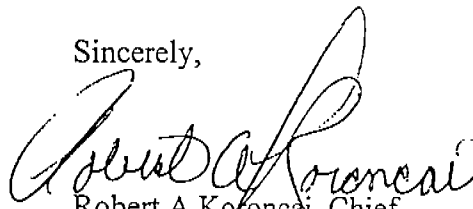
In addition to the antidegradation implementation procedures, West Virginia is also proposing to adopt dissolved metals criteria. This proposal was recommended to the Environmental Quality Board (EQB) by the Metals Committee, which was convened to investigate the possibility of setting and measuring compliance with water quality standards using dissolved metals. The EPA recognizes that the use of dissolved metals and conversion factors are consistent with national policy because dissolved metals more closely approximate the bioavailable fraction of metal in water.

The enclosed documents outline substantive comments on both the Antidegradation Implementation Procedures (Enclosure 1) and the Dissolved Metals Criteria (Enclosure 2). The EPA hopes that these comments will assist the Environmental Quality Board in further refining these policies to ensure that the antidegradation implementation procedures and dissolved metals

Customer Service Hotline: 1-800-438-2474

criteria are protective of the waters of West Virginia and consistent with current federal and state policy and regulations.

Sincerely,

A handwritten signature in cursive script, appearing to read "Robert A. Koroncai". The signature is written in black ink and is positioned above the printed name and title.

Robert A. Koroncai, Chief
VA/WV Branch

Enclosure 1
General & Specific Comments on Antidegradation Implementation Procedures

I. General Comments

- Definitions should be added for the following terms to the Water Quality Standards definition section to aid the interpretation of the implementation procedures:
 - disturbed area
 - best management practices
 - ambient
 - increased discharge
- The procedures should indicate where the findings of the antidegradation review will be documented.
- Please provide an explanation of how and where the state will provide a list of Tier 2, Tier 2.5 and Tier 3 waters. The state does not need to provide a list of Tier 2 waters if Tier 2 is the default.
- Will a Tier designation be considered a legislative action? What is the process for nominating a Tier 2.5 and Tier 3 water? Who approves the process and nomination? How is the public notified of the nomination process? What information, if any, does the person seeking the nomination need to provide?

II. Specific Comments

46-1-4A

- The language of Section 4A.1 may limit the applicability of this section. The EPA suggests that the following language be inserted: “The procedures herein are intended to apply, *but are not limited to*, activities that require.....”.
- The EPA believes that the language addressing Nonpoint Sources in section 4A.2 is adequate for now. However, as a result of the recent Clean Water Action Plan, EPA is required, by 12/98, to develop guidance that more specifically defines expectations and procedures for states to follow to fully implement antidegradation policies relating to polluted runoff. Once that guidance is completed, EPA expects that West Virginia will modify the procedures in accordance with guidance.
- West Virginia should clarify who will be responsible for implementing these procedures.
- Section 4A.3.a acknowledges that there is a potential for surface water impacts from this activity, yet this proposed action requires no antidegradation review. This appears to be contrary to the Antidegradation Policy. Please clarify the intention of this statement and

why this action does not require an antidegradation review.

- Section 4A.3.b only addresses “new” discharges. The state should ensure that “increased” discharges from these sites are also subject to antidegradation reviews.
- Please clarify the intent of section 4A.3 and types of activities covered. Is the socio-economic justification process under 47-57.6.9.2 consistent with the socio-economic process required in these procedures?

46-1-4B

- West Virginia should explicitly state that all waters in West Virginia are provided Tier 1 protection.
- Section 4B.1 does not clearly identify how an existing use is determined. Please clarify how the state intends for this language to determine existing uses. The following example is intended to provide the state with one possibility: “Existing uses can be established by: 1) demonstrating that a use has actually occurred on or after November 28, 1975, or 2) by demonstrating that although a use has not occurred, the water quality is suitable to allow such a use to occur, unless there are physical problems which prevent the use from being attained.”
- In Section 4B.2.b, the procedure for correcting a situation in which the designated use is less than an existing use is not consistent with 131.10(i) which states, “Where existing water quality standards specify designated uses less than those which are presently being attained, the state shall revise its standards to reflect the uses actually being attained.” Section 4B.2.b.1 appears to be reflective of this regulation, therefore, section 4B.2.b should be revised and combined with 4B.2.b.1. In addition, please ensure that this regulation is clear and consistent.

46-1-4C

- In section 4C.1, please clarify the procedures or methods the state plans on using to provide a list of Tier 2 waters, and where it will be listed. As stated before, this is unnecessary if Tier 2 is the default.
- Section 4C.1.a appears to be an “all or nothing” approach to designating waters as high quality. For example, if a water did not attain the fecal coliform standard, thus exceeding the “swimmable” use standard, and the copper criterion, thus exceeding the “fishable” use standard, that water would not qualify for protection under Tier 2 even though that water may be of high quality and have sufficient assimilative capacity for all other relevant parameters. During development of these procedures, did the state consider using a parameter-by-parameter approach for designating Tier 2 waters? If so, why was this approach discarded in favor of the current approach? The EPA would like to discuss this

further with the state. EPA is concerned that this approach may exclude the majority of waters in West Virginia from Tier 2 protection.

- EPA recommends WV consider basing the “de minimus” calculation on the remaining assimilative capacity. By basing this calculation on an increase above the ambient concentration, very small additional loads in very clean waters are significant while it requires much larger loads to be significant in more polluted waters. For example:
(1) If, for chemical X with a criterion value of 10 mg/L, the ambient concentration is zero (not an unlikely scenario for man-made organics) NO increase would be insignificant because $5\% \times 0 = 0$, and
(2) if the ambient concentration is 1 mg/L, 0.05 mg/L increase in instream concentration would be significant.
(3) On the other hand, if the ambient concentration is 9.5 mg/L, an insignificant discharge would essentially use all of the remaining assimilative capacity ($9.5 \times 5\% = 0.475$, which, when added to the ambient concentration approximately equals the criterion.)
This provides the highest level of protection to the cleanest waters (not a bad idea) but also allows substantial amounts of remaining assimilative capacity to be used without an antidegradation review in waters closer to the criterion.

By basing the significance test on remaining assimilative capacity, the argument above is reversed, allowing larger loads to be insignificant in cleaner water while progressively reducing the amount that can be insignificant as assimilative capacity is used up. Using the above example:

- (1) If, for chemical X with a criterion value of 10 mg/L, the ambient concentration is zero an increased load would need to lower water quality by 0.5 mg/L in order to be significant,
- (2) if the ambient concentration is 1 mg/L, 0.45 mg/L increase in instream concentration would be significant, and
- (3) if the ambient concentration is 9.5 mg/L, an insignificant discharge would be allowed to use very little of the remaining assimilative capacity ($(10-9.5) \times 5\% = 0.035$).

If WV wants to protect BOTH very clean waters AND remaining assimilative capacity, it could apply the more stringent of the above two approaches.

- In section 4C.2.a.1.A.1, average daily flow is used for municipal facilities in order to represent “critical conditions”. However, municipal NPDES permits are developed using a “design flow” which more accurately represents the critical flow condition.
- Our interpretation of section 4C.2.a.2 is that these parameters are exempt from an antidegradation review. If the intent of this section is otherwise, please clarify the exact intent and how this will be applied to antidegradation reviews.
- Please provide the rationale used to justify that any reduction of less than 0.4 ppm at maximum DO sag based upon an appropriate wasteload allocation model will not cause significant degradation. Based on the rationale discussed above, the EPA suggests that

the state consider a percentage of the assimilative capacity of DO in this situation.

- In section 4C.5.b, does finding a less or non-degrading alternative complete the review or does the alternative itself need to be addressed by a separate antidegradation review? In addition, please specify the decision criteria which will lead to choosing one alternative over another and the authority with whom this power resides.
- What will trigger the applicant to be required to submit the information listed in section 4C.6.b? Furthermore, who has the authority to require this information? At what point during the review would the applicant be required to submit this information?
- Any determinations or decisions made as part of section 4C.3, 4C.5.b and 4C.6.d should be preliminary determinations and be included as part of the public participation process and the appropriate comment period should be provided.
- Under section 4C.8.c, please specify the duration of the public comment period and the manner in which the public comment and findings will be advertised.
- In section 4C.8.c.2, a description of the surface water which is subject to the antidegradation review should be included in the review sheet.

46-1-4D

- What procedures or methods are used to designate a “water of special concern”? Can Tier 2.5 waters be nominated in the same manner as Tier 3 waters? Does the state plan on providing a list of water which are designated Tier 2.5?
- The state should ensure that the information required in the antidegradation review sheet of section 4D.3.b is included in the public notice. The use of “may” in this section introduces an aspect of subjectivity which gives the impression that this information may not be required in all situations.

46-1-4E

- How does the state intend to protect Tier 3 waters?
- Similar to Tier 2 and Tier 2.5 waters, what procedures or methods will be used to designate a Tier 3 water? Does the state plan on providing a list of Tier 3 waters? Again, if Tier 2 is the default, there is no need for a designation method of Tier 2.
- Do all of the factors included in section 4E.2 have to be met for an activity to be allowed? The last sentence of this section should be clarified to indicate a framework of how these decision criteria will be applied. The EPA suggests the use of the following language in

the last sentence to clear up any ambiguity: “after consideration of the following factors”.

- Similar to the comments made in section 4D.3.b, the state should ensure that the information required in the antidegradation review sheet of section 4E.4.b is included in the public notice.
- The language, “will be based on the factors listed above” should be added to the end of section 4E.4.d in order to better clarify how the determinations are made.
- Section 4E.6 should be moved so that it directly follows section 4E.3.
- It appears that Section 4E.7 attempts to provide consistency with 40 CFR §131.10(b) which states, “In designating uses of a water body and the appropriate criteria for those uses, the state shall take into consideration the water quality standards of downstream waters and shall ensure that its water quality standards provide for the attainment and maintenance of the water quality standards of downstream waters.” Please explain how the state plans on implementing this policy.
- Section 4E.9 should include an appropriate contact and address of the person who will receive the petitions.

Enclosure 2
Specific Comments on Dissolved Metals Criteria

- The current policy in West Virginia is to measure compliance using total recoverable metals. EPA Region III participated in the majority of these meetings and was involved on an advisory basis. Consistent with national policy, the Metals Committee has recommended to adopt dissolved metals criteria in the West Virginia Water Quality Standards. In addition, pursuant to EPA's request, the committee has recommended to adopt the EPA developed conversion factors and Translator Guidance. The conversion factors allow total recoverable limits to be expressed as dissolved limits and the Translator Guidance allows for calculation of a total recoverable permit limit for use in NPDES permits, as required by regulation, from a dissolved standard. The EPA believes that the committee recommendation to use dissolved metals to measure compliance with water quality standards is consistent with national policy and regulation, and is representative of current science.

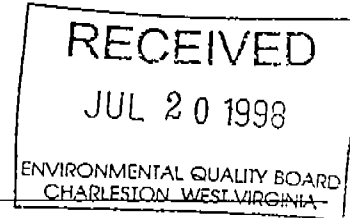
- The EPA now recognizes a freshwater chronic conversion factor of 0.85 for mercury. The conversion factor applies to the recent 304(a) recommendation for chronic levels of mercury found in the *Final Water Quality Guidance for the Great Lakes System*; Final Rule (60FR15366) and the *Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California*; Proposed Rule (62FR42160). Therefore, this conversion factor would not apply to West Virginia's chronic mercury number because it is based on previous 304(a) recommendations. However, the chronic mercury conversion factor should be adopted if West Virginia revises its standard to reflect the new 304(a) recommendations.



west
virginia
highlands
conservancy

MAILING ADDRESS • P. O. Box 306 • Charleston, West Virginia 25321

Publishers of The Highlands Voice and the Monongahela National Forest Hiking Guide



July 20, 1998

Environmental Quality Board
1615 Washington Street, East
Charleston, W.V. 25311-2126

RE: Proposed Rule Changes:
Antidegradation Implementation
& Dissolved Metals Criteria

Dear Members of the Board,

As always, the West Virginia Highlands Conservancy (WVHC) appreciates the opportunity to comment on the Board's proposed language for new regulations to be submitted for review during the upcoming Legislative Session.

This year's proposal from the Board includes a much needed implementation guidance for the State's antidegradation policy and a suggested change from total to dissolved criteria for some metals.

WVHC respectfully submits the following comments with the hope that you will seriously address them in your final proposal to the Legislative Rule Making Review Committee.

I. MAJOR POSITIVE STEP

First, we thank you for finally taking the step of creating an antidegradation implementation policy. This undertaking is not only required by law but is also much needed to assure the citizens of West Virginia that the waters of the state will be protected as we move ahead into the 21st century.

The Clean Water Act recognized the need for development and improvements that would change the pristine nature of the nations waters, but also insisted that such a change or diminution be approved only when and if a much needed development could not be accomplished without some relatively minor degradation of the nations waters.

1) On several occasions during the past 15 years WVHC has recommended implementation of the antidegradation policy in order to prevent costly and inexcusable water quality problems. We are

pleased to support the efforts of the Board today in the hopes that this proposal will take us one step closer to actually utilizing the antidegradation policy and thus hopefully preventing similar problems throughout the state of W.V.

2) Second only to its very creation, perhaps the most praiseworthy aspect of the currently proposed implementation policy is the fact that it appears to drive major permittees toward appropriate and detailed site specific and parameter by parameter evaluation and documentation.

Given the regulatory agencies' lack of adequate money and personnel to adequately gather and document background and ambient water quality for all waters of the state, especially the furthest reaches of the many high quality headwater streams, it is imperative that we exercise the utmost caution when granting permission to degrade the state's excellent water quality.If anything, the proposed language does not put enough responsibility upon the individual polluter to provide the necessary data and to provide adequate proof of need and lack of alternatives to rationalize any diminution of quality.

II. DEFICIENCIES AND AREAS OF CONCERN

Although pleased with the general tone and direction of the proposed guidance, it is important that WVHC emphasize some deficiencies that we believe make the guidance less protective of water quality than either Federal or State law requires.

1) Of particular concern is the Board's recommendation that an antidegradation review is triggered only when there is a "significant" level of degradation expected from a proposed activity. Any measurable degradation should require a review.

High quality headwater streams are particularly at risk in this scenario. Reliance on "significant" levels of degradation may slow the decline in water quality but will not fully protect waters of particular sensitivity. Of particular concern are areas where residents utilize surface water springs and creeks that are absent measurable amounts of pollutants even from natural sources where the barest minimum treatment (i.e. mere settling or sediment filters) is needed for using these surface waters for drinking water purposes.

(Please refer to further comments in II.6 below.)

2) Cumulative impacts are not considered in the proposed rule. The process is driven by individual permit applications and not by an overview of water quality in a given watershed.

This is particularly problematic when relying on a "significant" level of degradation to trigger a review. If individual multiple point source impacts fall below the suggested "significant" criteria (5% - or worse still, 10%, 20%, etc.) those individual activities can still be permitted without an antidegradation review.

This is also especially problematic when a point source activity carries with it other non-point source activities.

3) NON-POINT SOURCES ARE NOT ADEQUATELY ADDRESSED. As proposed, non-point sources are deemed to be "in compliance with the antidegradation requirements with the achievement of cost effective and reasonable best management practices in accordance with the WV Non-Point Source Management Plan." While this phrase may infer that activities where BMP's are not being implemented are not deemed to be in compliance and consequently may move to a greater use of BMPs, it does not create the needed linkage between BMPs and water quality standards. The antidegradation guidance should provide a tool by which BMPs are evaluated in relation to their ability to achieve water quality standards, and where those BMPs do not achieve standards, this guidance should be the impetus for review and improvement of BMPs currently in use.

At a minimum, compliance with antidegradation for non-point discharges should be assumed only where monitoring data are available that verify the effectiveness of BMPs.

4) TRADING SHOULD NOT BE PERMITTED. This is true for trading between point sources and between point and non-point sources.

a. Trading between point sources could not be allowed in a truly ANTIdegradation policy, i.e. where any measurable amount of degradation would trigger review, where non-point sources were included, where cumulative impacts are adequately considered, etc., --- each source would be held to the highest standards.

b. Trading between point and non-point sources poses a particular problem in that while point sources have regulatory oversight, public notification and monitoring requirements, non-point sources have none of these requirements. Furthermore, reliable verification of specific non-point reductions is nearly impossible because of variations in daily, seasonal and annual rainfall and access to testing sites.

c. If 'trading' is retained in the final proposal to the Legislature, it should not be included among those circumstances that "shall not be considered to cause significant

degradation" (4C.a.2./4C.2.a.2.F.) and thereby not trigger an antidegradation review (4C.3). Trading most certainly should undergo specific review and require evaluation of alternatives and the showings required in 4C.4, 4C.5 and 4C.6.

d. WVHC must object to the language in sections 4B.4, 4C.2.a.2.F., and 4D.2.C that states the basis for a trade will be made through a TMDL of "other appropriate measures". The phrase "other appropriate measures" makes the basis of these trades discretionary, without any clearly defined, scientifically sound criteria. This is especially important because TMDLs generally are only established when water fails to meet a standard and so the "other appropriate measures" would be the only method available for trades in the higher quality waters that the antidegradation policy is supposed to protect. If avenues beyond the TMDL strategy are available and scientifically sound they should be clearly outlined in this document.

5) While it is commendable that 4E.8.1.c. specifically affords the same level of protection (Tier 3.0) to all upstream segments of an ONWR, the same consistency should be specifically allotted to all upstream segments of waters that fall into Tier 2.5. (e.g. trout waters, etc. One can't indiscriminantly draw a line - say 100 feet - upstream from the site where a trout has been seen and then say that the waters and vegetation, etc. above that point aren't integrally connected, i.e. directly responsible for the water quality downstream that supports the trout population.)

6) For years WVHC and local citizen groups such as FOLK (Friends of the Little Kanawha) have appealed to the Board for an extra measure of protection for headwater streams which are relatively unpolluted, and in their natural state are suitable for the highest and best use, e.g. drinking water, without chemical treatment and relying only on the most basic treatment of settling or sediment filtering.

Granted, standards and protection measures for the Ohio River and the Kanawha, and even in some ways the Monongahela are overwhelming concerns for the Chamber of Commerce and the Manufacturers Association, but for individuals and communities where relatively pristine and pure waters serve as the lifeblood for our existence, more protective measures must be afforded to protect our lifestyles from the pollution meted out by mining, timbering, oil and gas road building and pit and brine waste discharges, and in some instances agriculture runoff.

Somewhere, somehow, the Board has to be clear on what protective measures are to be meted out to those outlying, relatively isolated but pristine areas.

In public meetings where the question has been raised the Board has been adamant that it assumes ALL waters of the state are to be considered capable of supporting the highest and best use (and therefore subject to the most stringent standards) unless an applicant for some activity makes a showing that limits the existing use of that stream. However, since approximately 1984 the specific language of the standards no longer is clear in this regard.

WVHC believes that it is incumbent upon the Board to clarify this grey area by either 1) in Section 6.1 explicitly designating all waters of the state for ALL USES unless proven to be of lesser quality by an applicant for some specific activity (as was the case in the WV water quality standards at least until 1983), or 2) by including ALL WATERS of the State in Tier 3 for reasons of existing water quality e.g. pristine or naturally occurring (4E.8.1.c.) unless a showing can be made that the stream segment is not of sufficient quality to be so considered.

This position ^{# 1) above} has been advanced by Water Resources during the Triennial Review and is supported by the US EPA, Office of Water Regulations and Standards Criteria and Standards Division in its August 1985 Paper "Questions and Answers on: Antidegradation" page 2: "An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1995, OR, THAT THE WATER QUALITY IS SUITABLE TO ALLOW SUCH USES TO OCCUR (UNLESS THERE ARE PHYSICAL PROBLEMS WHICH PREVENT....) -- A copy is included with these comments.

IV. WVHC questions the adequacy of the intergovernmental coordination as outlined in Appendix G-1.

V. METALS CRITERIA

1) WVHC fully supports the comments submitted by ^{W.V. for CLEAN} James ~~Water Resources~~ which reiterates ~~the~~ understanding from the metals committee that language was to be included in Section 8 that explicitly allows Water Resources to develop criteria based on sediments when sufficient basis is established.

2) WVHC supports the comments submitted by Don Brannon, Ph.D., former member of the Water Resources Board, with regard to metals. i.e.:

- Hg should be looked at again;
- Al criteria of 750 ug/l for B1 and B2 streams are too high, etc.

VI: BMPS

WVHC reiterates its long held belief and references Dr. Brannon's comments to support what we and other participants in the West Virginians for Clean Water Campaign believe RE: BMPs i.e. that 208 voluntary Best Management practices must become mandatory.

Again, on behalf of the WVHC I thank the Board for the opportunity to comment on these most important proposals.



Cindy Rank, Past President
& Mining Committee Chair
HC 78 Box 227
Rock Cave, WV 26234

phone (h) (304) 924-5802
(o) (304) 924-6263

cc John McFerrin, President

QUESTIONS AND ANSWERS ON: ANTIDEGRADATION

August 1985

U.S. Environmental Protection Agency
Office of Water Regulations and Standards
Criteria and Standards Division (WH-585)
401 M. Street, S.W.
Washington, DC 20460

5. WHAT COULD HAPPEN IF A STATE FAILED TO IMPLEMENT ITS ANTI-DEGRADATION POLICY PROPERLY?

If a State issues an NPDES permit which violates the required antidegradation policy, it would be subject to a discretionary EPA veto under Section 402(d) or to a citizen challenge. In addition to actions on permits, any wasteload allocations and total maximum daily loads violating the antidegradation policy are subject to EPA disapproval and EPA promulgation of a new wasteload allocation/total maximum daily load under Section 303(d) of the Act. If a significant pattern of violation was evident, EPA could constrain the award of grants or possibly revoke any Federal permitting capability that had been delegated to the State. If the State issues a §401 certification (for an EPA-issued NPDES permit) which fails to reflect the requirements of the antidegradation policy, EPA will, on its own initiative, add any additional or more stringent effluent limitations required to ensure compliance with Section 301(b)(1)(C). If the faulty §401 certification related to permits issued by other Federal agencies (e.g. a Corp of Engineers Section 404 permit), EPA could comment unfavorably upon permit issuance. The public, of course, could bring pressure upon the permit issuing agency.

6. WILL THE APPLICATION OF THE ANTIDEGRADATION POLICY ADVERSELY IMPACT ECONOMIC DEVELOPMENT?

This concern has been raised since the inception of the antidegradation policy. The answer remains the same. The policy has been carefully structured to minimize adverse effects on economic development while protecting the water quality goals of the Act. As Secretary Udall put it in 1968, the policy serves "...the dual purpose of carrying out the letter and spirit of the Act without interfering unduly with further economic development" (Secretary Udall, February 8, 1968). Application of the policy could affect the levels and/or kinds of waste treatment necessary or result in the use of alternate sites where the environmental impact would be less damaging. These effects could have economic implications as do all other environmental controls.

7. WHAT IS THE PROPER INTERPRETATION OF THE TERM "AN EXISTING USE"?

An existing use can be established by demonstrating that fishing, swimming, or other uses have actually occurred since November 28, 1975, or that the water quality is suitable to allow such uses to occur (unless there are physical problems which prevent the use regardless of water quality). An example of the latter is an area where shellfish are propagating and surviving in a biologically suitable habitat and are available and suitable for harvesting. Such facts clearly establish that shellfish harvesting is an "existing" use, not one dependent on improvements in water quality. To argue otherwise would be to say that

Donald G. Brannon, Ph.D.
PO Box 59
Charlton Heights, WV 25040-0059

July 16, 1998

Environment Quality Board
165 Washington Street East
Room 301
Charleston, WV 25311-2126

RE: June 18, 1998 Proposed Title 46 Legislative Rules Environmental Board

1. Appendix E
 - a. The change from Total Recoverable to solution concentrations of metals except for Hg is correct. However, the filter size should be stipulated.
 - b. Aluminum criteria of 750 ug/L for B1 and B2 are much too high. An extensive body of literature supports my position. Aluminum is the primary culprit in destruction of B1 and B2 populations from AMD and acid precipitation. A literature search will reveal appropriate criteria based upon 0.1 x LC50s for both acute and chronic conditions.
2. Appendix G
The implementation of the antidegradation policy has been desperately needed and the Board is to be applauded for its inclusion.

Overall, a good set of rules except it has become obvious that 208 voluntary Best Management practices must become mandatory.

Donald G. Brannon
(Former Water Resources Board member)



WEST VIRGINIA MANUFACTURERS ASSOCIATION

2001 Quarrier Street, Charleston, WV 25311
Telephone: (304) 342-2123
FAX: (304) 342-4552
wvma@wvma.com

Statement of the West Virginia Manufacturers Association Regarding West Virginia's Water Quality Standards

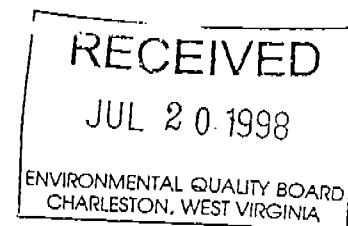
My name is Karen Price, and I am here on behalf of the West Virginia Manufacturers Association. The WVMA is vitally interested in the changes to the water quality standards that have been proposed by the Board, particularly the antidegradation implementation guidance that is found in Appendix G. We believe those changes represent some of the more profound revisions to the standards that have occurred in recent years.

After reviewing the antidegradation guidance, we believe the Board would be well served to withdraw it and establish a committee for evaluating all aspects of antidegradation. We do this with the full realization that EPA has asked the Board to develop an antidegradation implementation process, and that representatives of the Board and other state agencies worked to craft the Board's current proposal. The reasons for taking this position are several fold. First, EPA is currently re-evaluating its antidegradation policy. It is highly likely that it will be changing, perhaps radically, the way in which it expects states to implement their antidegradation policies. If EPA expects to develop revisions to its existing policy, we would be well advised to wait and see how that policy turns out. Second, antidegradation is intended to protect stream uses. Determining what uses apply to streams, and the manner in which attainment of those uses is demonstrated, has never been very clear. Third, while we appreciate the hard work that went into the Board's proposal, we believe that the guidance could benefit from reconsideration. Many parts of the guidance are vague, and require actions to be taken without specifying which agency is responsible for carrying out those actions. More specificity is needed so that the public is aware of what is required of the agencies that are to implement the Board's antidegradation policy.

With regard to the Board's proposal to adopt dissolved criteria for certain metals, we support the change and commend the Board for addressing this issue. We hope that similar dissolved criteria and translators will be adopted for aluminum, manganese and iron in the future.

Thank you for the opportunity to offer these comments.

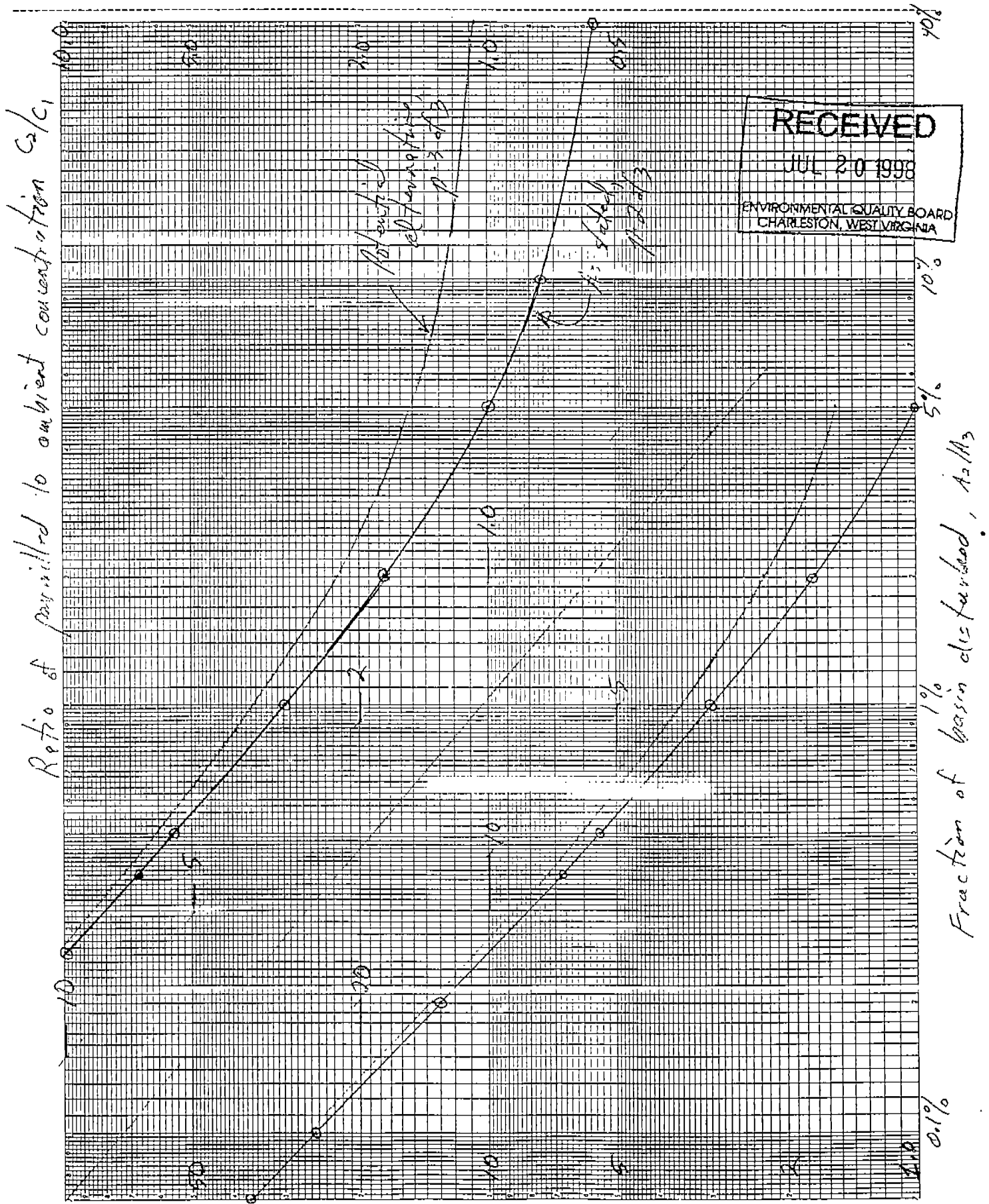
Karen Price
President
West Virginia Manufacturers Association
July 20, 1998



Board of Directors

AEP	Downard Hydraulics, Inc.	Georgia-Pacific Corporation	Marble King, Inc.	Union Carbide Corporation
Ashland Inc.	DuPont	Halltown Paperboard Company	One Valley Bank	W.M. Cramer Lumber Co.
BASF Corporation	Eagle Manufacturing Co.	Hester Industries, Inc.	PPG Industries, Inc.	Weirton Steel Corporation
Bayer, Inc.	Elkem Metals Company	Imation	Quebecor Printing	
Capitol Cement Corporation	Flexsys	Inco Alloys International, Inc.	Ravenswood Aluminum Corp.	
Corning Incorporated	FMC Corporation	Kanawha Manufacturing Co.	Rhone-Poulenc Ag Company	
The Dean Company	GE Plastics	Koppers Industries, Inc.	U.S. Silica Company	

Jim Eychever
File p. 1 of 3



Sheet No. of sheets. Prepared by JJE Date 6-29-98 Checked by Date

Appendix 6, antidegradation implementation procedures

§ 4C.2.a.1.A.2 - Mass balance approach to estimate limiting concentrations for precipitation induced discharges

Flow from disturbed areas is assumed 2X flow from other areas
the rate offers: $C_1 A_1 + C_2 (2A_2) = C_3 A_3$

in which C_2 is the chemical concentration from the disturbed area that would increase the combined-flow concentration by 5%.

C_1 = ambient concentration

C_3 = ambient + 5% = $1.05 C_1$

A_2 = disturbed area, A_3 = total area, $A_1 + A_2 = A_3$

By algebra

$$C_1 A_1 + C_2 (2A_2) = C_3 A_3$$

$$C_3 = 1.05 C_1$$

$$A_1 = A_3 - A_2$$

$$\text{Then } C_1 (A_3 - A_2) + 2 C_2 A_2 = 1.05 C_1 A_3$$

$$2 C_2 A_2 = 1.05 C_1 A_3 - C_1 A_3 + C_1 A_2$$

$$C_2 = \frac{C_1 A_2}{2 A_2} + \frac{0.05 C_1 A_3}{2 A_2}$$

$$\frac{C_2}{C_1} = 0.5 + 0.025 \frac{A_3}{A_2}$$

where C_2/C_1 is the ratio limiting concentration to the ambient concentration
and A_3/A_2 is the ratio of total drainage area to disturbed area.

This formula would require chemical concentrations in storm runoff from the disturbed area to be less than ambient concentration if more than 5 percent of the drainage basin is disturbed. Conversely, if less than 0.1 percent of the basin is disturbed, concentrations more than 25 times ambient would be permitted.

Max ambient concentration increase 5%.

C_0 = original ambient

Q_0 = original discharge at critical flow

A_0 = total drainage area

A_2 = disturbed area

0 = original sum
1 = undisturbed
2 = disturbed

Flow - $Q_0 = k A_0$

Pre - disturbance

$Q_2 = 2k A_2$

Disturbed area

$Q_1 = k (A_0 - A_2)$

Undisturbed area

$Q_3 = Q_1 + Q_2 = k (A_0 + A_2)$ total basin with disturbance

Load - $L_0 = C_0 Q_0$

$L_2 = C_2 Q_2 =$

$L_1 = C_0 Q_1$

$L_3 = L_1 + L_2 = C_0 Q_1 + C_2 Q_2$

Concentration - $C_3 = \frac{L_3}{Q_3} = 1.05 C_0$

$$1.05 C_0 = \frac{C_0 Q_1 + C_2 Q_2}{Q_1 + Q_2} = \frac{C_0 k (A_0 - A_2) + C_2 (2k A_2)}{k (A_0 + A_2)}$$

$$1.05 C_0 = \frac{k [C_0 A_0 - C_1 A_2 + 2 C_2 A_2]}{k (A_0 + A_2)} = C_0 \left(\frac{A_0 - A_2}{A_0 + A_2} \right) + 2 C_2 \left(\frac{A_2}{A_0 + A_2} \right)$$

$$1.05 C_0 (A_0 + A_2) = C_0 (A_0 - A_2) + 2 C_2 A_2$$

$$2 C_2 \left(\frac{A_2}{A_0 + A_2} \right) = C_0 \left[1.05 - \frac{A_0 - A_2}{A_0 + A_2} \right] = \frac{C_0 [1.05(A_0 + A_2) - (A_0 - A_2)]}{A_0 + A_2}$$

$$C_2 A_2 = C_0 (0.05 A_0 + 2.05 A_2)$$

$$2 C_2 \left(\frac{A_2}{A_0 + A_2} \right) = C_0 \left(\frac{0.05 A_0 + 2.05 A_2}{A_0 + A_2} \right)$$

$$\frac{C_2}{C_0} = \frac{0.05 A_0 + 2.05 A_2}{2 A_2}$$

$$C_2 = C_0 \left(\frac{0.05 A_0 + 2.05 A_2}{2 A_2} \right) = C_0 \left(0.025 \frac{A_0}{A_2} + 1.025 \right)$$

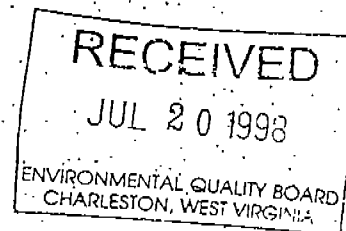
$$\frac{C_2}{C_0} = 1.025 + 0.025 \frac{A_0}{A_2}$$

$$\frac{C_2}{C_0} = 1.025 + 0.025 \frac{A_0}{A_2}$$

West Virginians for Clean Water

July 19, 1998

Libby Chatfield
Environmental Quality Board
1615 Washington Street, East, Suite 301,
Charleston, West Virginia 25311-2126



Dear Ms. Chatfield:

Please accept these comments in reference to the proposed changes in the Water Quality Standards Rule, 46 CSR 1, dated June 17, 1998.

I. Dissolved Metals Criteria

The language of the proposed 8.1.b.B. states that permit limits based on dissolved metal "may" be prepared using the EPA guidance document, however, this portion of the rule should be mandatory. West Virginia would have difficulty justifying to EPA any permit limits established through methods that deviated significantly from their guidance document. We recommend that the "may" be replaced with a "shall".

This section would also be an appropriate place to address the concerns over sediment loadings considered by the Metals Committee. At a minimum, the following language should be added to 8.1.b.2.:

"On a case-by-case basis, the chief may require an applicant applying for a translator to conduct appropriate sediment monitoring through approved methods to evaluate effluent limits that prevent toxicity to aquatic life."

Some guidance to indicate when sediment monitoring would be appropriate is needed. We recommend the following:

"At a minimum, sediment monitoring may be required in areas where metals are expected to accumulate or in areas providing habitat for sensitive species."

The above language would help DEP and prevent monitoring of areas where sediment impacts are unlikely, while providing real world data to indicate whether impacts are likely to occur in areas that could be severely affected.

801 N. Randolph Avenue, Elkins, WV 26241 (304) 637-7201

Two editorial changes should be considered:

- 1) The footnote No. 5 at the end of Appendix E (page 57) is grammatically awkward and confusing. We suggest adding the words "is a value" after (CF). Also add the word "and" after "criterion".
- 2) The inclusion of the metals Chromium (III) and Chromium (VI) to the Table 2 list is confusing as it appears the EQB does not currently have a standard for these parameters; hence, it would be impossible to apply these Conversion Factors in any application.

II. Antidegradation Implementation Procedures (Appendix G)

We appreciate the time and effort that both the Environmental Quality Board and the Office of Water Resources have devoted to developing the antidegradation implementation guidance document. We realize that in a time of extreme budgetary constraints this was a significant commitment of resources. We strongly support this effort. The implementation of the antidegradation provision of the Clean Water Act has the potential to make a significant difference in state water quality and through the watershed approach to standardize environmental protection from region to region.

While we support this effort, we have a number of serious concerns:

The Clean Water Act goals of maintaining and restoring water quality must be upheld as the basis for West Virginia's antidegradation policy. An antidegradation policy is meant to provide protection not only for "uses" achieved in a watershed, but more importantly to provide additional protection for water quality that is better than needed to attain these uses. We are concerned that while the proposed implementation language may slow the decline of water quality, it is not really protective of water quality that exceeds use criteria or standards.

Clarification is needed concerning the agencies involved in antidegradation implementation. Without an updated state continuing planing process we have no assurance of adequate authority for intergovernmental cooperation in the implementation of this guidance. Since the mission of many agencies may be impacted and since these missions may at times be in conflict with each other we are concerned about authority for coordination.

What is the protocol for decision-making and what specific obligations exist for Office of Water Resources, the Environmental Quality Board and other state and federal agencies? Agencies participating in the development of nonpoint source best management practices need to be involved in this process above and beyond a simple notification process. The development of best management practices and their technical connection to water quality standards are critical.

The limit of cumulative impacts of multiple, new or expanded point sources or point sources that are associated with significant nonpoint source impacts - impacts

either above or below the suggested 5% criteria - are not outlined. The antidegradation review process is driven permit by permit and not by an overview of water quality in a given watershed and therefore is not ultimately protective of high quality waters.

46-1-4A

4A.2 Meaningful nonpoint source criteria for antidegradation implementation are absolutely necessary for a successful program. Sole reliance on best management practices is a serious weakness of the antidegradation implementation guidance document. Since best management practices in every sector are voluntary, there is no assurance BMPs will themselves be implemented. Additionally, best management practices are not technically linked to water quality standards. This approach further isolates nonpoint source pollution from the jurisdiction of water quality standards and severely undermines the EPA mandated task of including cumulative effects in the antidegradation implementation document.

We strongly urge the Board to consider an alternative approach to nonpoint source issues, one that more clearly limits nonpoint impacts especially when water quality standards are threatened or violated. At a minimum, compliance with antidegradation for nonpoint discharges should be assumed only where monitoring data is available that verifies the effectiveness of best management practices.

46-1-4A.3.

The Brownfields statute established a clear distinction between those sites where contamination existed prior to the effective date of the Act (July 1, 1996) versus those sites which became contaminated after the Act became effective [eg, 22-22-2(b) and 22-22-15(d)]. The purpose of this distinction was to establish a very clear policy of encouraging clean-ups of old abandoned sites without encouraging backsliding or carelessness at existing or new sites by relaxing standards.

We recommend rewriting sections 4A.3.a and 4A.3.b as follows to assure consistency with the language and intent of the Voluntary Remediation and Redevelopment Act:

4A.3.a. Where remediation efforts are being proposed for sites contaminated by releases which occurred prior to July 1, 1996 and where there is a potential for surface water impacts from contaminated groundwater, an antidegradation review will not be required.

4A.3.b. Where remediation efforts are being proposed for sites contaminated by releases which occurred on or after July 1, 1996, or where there is a potential for surface water impacts from activities resulting in new discharges from the treatment of contaminated groundwater, an antidegradation review will be required.

46-1-4B

4B.4 Trading should not be permitted, either between point sources or between point and nonpoint sources of pollution. Trading has no place in a truly anti-degradation policy i.e. if any amount of degradation would trigger review, and nonpoint sources were included, and cumulative impacts were adequately considered, etc., trading would not be an issue.

Trades between point and nonpoint sources pose a particular problem in that while point sources have regulatory oversight, public notification, and monitoring requirements, nonpoint sources have none of these requirements. Further, reliable verification of short to medium term specific nonpoint reductions is nearly impossible because of variations in daily, seasonal, and annual rainfall and access to testing sites.

Trades should not be exempt from antidegradation review as in 4C.2.a.2 and 4C.3. This creates a significant loophole in the policy.

In sections 4B.4, 4C.2.a.2.F., and 4D.2.C it is stated the basis for a trade will be made through a TMDL or "other appropriate measure". We strongly object to the language "other appropriate measures" as it makes the basis of these trades discretionary, without any clearly defined, scientifically sound criteria. This is especially important because TMDL's generally are only established when water fails to meet a standard and so the "other appropriate measures" would be the only method available for trades in the higher quality waters that the antidegradation policy is supposed to protect. This allows a clear way out of antidegradation constraints for point source discharges and seriously threatens the intent of the antidegradation provision of the CWA.

46-1-4C

4C.2.a.1.A Antidegradation review is triggered only if greater than 5% percent in a pollutant is anticipated. Reliance on any "significant" degradation is not sufficiently protective. If any measurable degradation is predicted, an antidegradation review should occur.

4C.2.a.2.F See comments on trading above.

4C.6.a We would encourage the board to clarify that increased production alone without accompanying social and economic benefit to the community as a whole would not justify degradation.

4C.8.a We believe the intent of the Water Pollution Control Act goes beyond simple notification of the listed agencies. We ask the Board to outline the process for assuring adequate authority for intergovernmental cooperation in the implementation of the antidegradation implementation policy.

46-1-4D

4D.2.c See comments above on trading. This protocol seriously threatens the States most pristine waters and should not be allowed especially in tier 2.5 and 3 waters.

46-1-4E

4E.3 See above comments on trading. The point for non-point trading protocol seriously threatens Tier 3 waters and should not be allowed.

III. The following are a list of questions from EPA Region III Guidelines for Review of State Antidegradation Policy Implementation Procedures that we believe need clarification.

In reference to development of the antidegradation policy:

(a) 4. When will the procedures become effective?

(a) 5. How will amendments to the procedures be handled?

(a) 7. What criteria will be used to identify activities to which the antidegradation procedures will apply? Note that EPA Region III intends that the antidegradation procedures must apply at a minimum to the NPDES program and any other Federally delegate and/or funded programs.

(a) 10. How will intergovernmental coordination be accomplished? How will the procedures handle situations which cross organizational lines at the state and local level?

(a) 11. How will the State insure that both point and nonpoint sources of pollution are addressed?

In reference to instream water uses:

(1) 4. How will the State insure that existing instream uses are maintained and protected from degradation by point sources, nonpoint sources, both individually and from cumulative impacts?

(1) 5. How will the State insure that existing instream uses are protected from impacts other than those related to water column chemistry?

In reference to Tier 2 waters:

(2) 8. How will intergovernmental coordination and public participation be fully satisfied?

(2) 10. How will "all cost-effective and reasonable best management practices for nonpoint source control" be defined? How will their implementation be assured where a decision to lower water quality is to be made?

(2) 11. Who will make the determination that degradation of water quality is warranted?

(2) 12. How will the State insure that existing instream uses are maintained where a decision to lower water quality below existing conditions is made?

We appreciate the opportunity to submit these comments for your consideration. We hope the implementation of the antidegradation policy will help preserve the outstanding rivers of West Virginia, protect the health of all citizens of the state, and promote sustainable economic development.

Sincerely,

Patricia C. Mae Merritt
West Virginia Rivers Coalition

Lewis Baker
Ohio Valley Environmental Coalition

Cindy Rank
W.D. Highlands Conservancy

Myra J. ...
Sierra Club, WV chapter

Peter D. McDaniel

Wendy E. Radcliff
Wendy E. Radcliff

Margaret Jones
Potomac Headwaters Resource Alliance

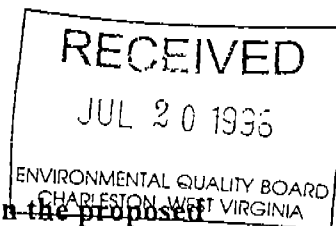
James Kotcon
W.V. Environmental Council



Dr. Edward M. Snyder
Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

July 20, 1998

Re: **The EQB's notice for public comment on the proposed**
antidegradation implementation procedures under 46CSR1.



Dear Dr. Snyder,

The daunting task of developing an antidegradation strategy and implementing procedures to comply with the Clean Water Act goal to, "restore and maintain the chemical, physical, and biological integrity of the nation's water" has been a difficult one for many states. Two of the many reasons include:

1. The Federal intent for antidegradation procedures is not clear, and
2. Implementation strategies have an impact on water quality from many activities (e.g. nonpoint source impacts, Corps of Engineers Section 404 permitting) beyond the normal jurisdiction and authority of the state agency responsible for water quality standards.

As a result of these difficulties, antidegradation has been implemented inconsistently at the state level, and it has often been subject to legislative and judicial challenges.

We need to look no further than the neighboring state of Ohio and examine the events over the past several years that resulted in the Ohio Supreme Court overturning an Ohio EPA action on two discharge permits and forcing the agency to rewrite its antidegradation regulations. Two of the many controversial issues within the original Ohio antidegradation rules included a lack of exemptions for minor permit decisions that will not result in "significant degradation," and an implementation strategy that tended to penalize dischargers with a good performance record by constraining the ability of a permittee to discharge pollutants within the full design capacity of the permitted activity.

While we commend the EQB for beginning the arduous task of crafting a state antidegradation implementation strategy to comply with the mandates of 40 CFR Section 131, we suggest that the EQB defer action on adopting a policy at this time for the following reasons:

First, West Virginia's draft antidegradation policy appears to contain many of the same controversial issues identified within Ohio's original antidegradation policy. Second, the policy falls short of providing a clear focus on implementation strategies, and it proposes an antidegradation review triggering criterion for "significant degradation" which is markedly different and more stringent than the criterion used by many neighboring states.

We believe that these issues could, and should, be addressed through an expanded stakeholder process prior to final adoption. Thus, we urge the Board to defer action on this rulemaking at this time and convene a broadly represented stakeholder group to continue the crafting of the antidegradation policy. We believe an expanded stakeholder process will also afford the Board an opportunity to further study the actions taken by other neighboring states, thereby ensuring that the terminology and final policy adopted by West Virginia is equitable.

We further suggest that the stakeholder process be deferred until EPA completes action on a revised approach to implement antidegradation at a national level. On July 7, 1998, USEPA issued an advance notice of proposed rulemaking (ANOPR) that announces their plans to comprehensively address deficiencies with the current water quality standards, including a revised approach for the implementation of States' antidegradation policies (ANOPR Revisions to Water Quality Standards at 40 CFR Part 131; 63 FR 36741-36806).

EPA states within the ANOPR that, "*EPA's current thinking is that on a national scale, antidegradation is not being used as effectively as it could be and that a structured national debate on antidegradation is key to improvement. The debate needs to identify deficiencies in antidegradation policy and implementation provisions and begin the process of strengthening antidegradation as a meaningful mechanism to attain and maintain water quality standards. EPA invites comments and suggestions on the three-tiered approach currently in use and described below, as well as possible other approaches to more effectively accomplish the intent of the antidegradation requirements. As part of the "Clean water Action Plan" announced on February 14, 1998 by the Administrator of EPA and the Secretary of Agriculture, EPA plans to develop additional guidance on Antidegradation.*" 63 FR 36779

The ANOPR language referenced above confirms the complexity and controversy surrounding antidegradation implementation, and it reaffirms the need for expanded stakeholder involvement in crafting West Virginia's implementation guidance.

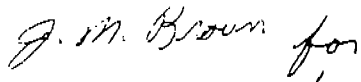
In deference to the above, AEP has prepared the enclosed technical comments on the Board's proposed Antidegradation Implementation Procedures. We believe that these comments will further support our

Dr. Edward M. Snyder
July 20, 1998
Page 3

request for an expanded stakeholder process to continue the deliberations on this key initiative.

Should you have any questions on these comments, please contact Mike Brown at (614) 223-1286.

Sincerely,



Alan R. Wood, P. E. ↓
Manager, Water Quality Section

ARW/JMB

c: Ms. Libby Chatfield, Technical Advisor
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311

BEFORE THE ENVIRONMENTAL QUALITY BOARD

COMMENTS BY AMERICAN ELECTRIC POWER

REGARDING THE PROPOSED ADOPTION OF APPENDIX G:

ANTIDEGRADATION IMPLEMENTATION PROCEDURES WITHIN 46CSR1.

1. **Section 4B.1.a.** inadvertently refers to Section 6.2. The proper citation here should be Section 6.
2. **Section 4B.1.b.** inadvertently refers to, "...designated uses in section 6.2." The proper citation here should also be Section 6.
3. **Section 4C2.a.2.** defines circumstances that shall not be considered to cause "significant degradation."

This section should be expanded to include a variety of other de minimis activities that do not result in a significant lowering of water quality. Many of West Virginia's neighboring states have recognized a variety of additional de minimis activities that qualify for an exclusion or waiver from antidegradation review. The following bullet items are a compilation of activities exempted in other neighboring state's antidegradation implementation programs. The value of including these exemptions in West Virginia's antidegradation implementation policy include the resultant savings in valuable agency resources, and the saving of time by avoiding lengthy staff antidegradation reviews for inconsequential permitting activities. We urge the Environmental Quality Board to add language to Section 4C2.a.2. that provides an antidegradation review exclusion for the following de minimis activities:

- The term "significant degradation" shall not include changes in loadings of a pollutant or pollutant parameter within the existing capacity and processes that are covered by an existing applicable permit, which include, but are not limited to the following:
 - a) Normal operational variability, including, but not limited to intermittent increased discharges due to wet-weather conditions;
 - b) changes in intake water pollutants not added by the discharger;
 - c) changes that result from increasing the production hours of the facility, for example, by adding a second shift; or
 - d) changes that result from increasing the rate of production.

- New limits for an existing permitted discharger that **are not** the result of changes in pollutant loading, including but not limited to new limits that are the result of the following:
 - a) new or improved monitoring data,
 - b) new or improved analytical data,
 - c) new or modified water quality criteria or values; or
 - d) new or modified effluent limitations guidelines, pretreatment standards, or control requirements for POTWs.
- Bypasses that are not prohibited pursuant to 40 CFR 122.41(m) and applicable state NPDES rules.
- A new or increased discharge of a substance used to treat zebra mussels or other nuisance species in an intake water pipe or structure if the new or increased discharge will not cause adverse effects on human health and aquatic life.
- New or increased discharges of a substance that will result only in a short term, temporary lowering of water quality (12 months or less).
- Any source discharging to limited quality waters, and any source that discharges to Tier 1 waters.
- Any net increase in the discharge of a regulated pollutant resulting from a change of fuel used by the discharger, provided the discharger was capable of accommodating the new fuel on the effective date of the policy.
- New or increased discharges of a substance, when the facility withdraws intake water containing the pollutant from the same body of water, and the new or increased discharge of the pollutant is due solely to the presence of the pollutant in the intake.
- A new or increased discharge of a parameter, if the new or increased discharge is necessary to accomplish a reduction in the discharge of another pollutant or pollutant parameter and the director/chief determines that the action will result in a net improvement of water quality in the waterbody, if the following requirements are met:
 - a) the new or increased pollutant or pollutant parameter is determined to be significantly less toxic than the decreased pollutant or pollutant parameter; and
 - b) the applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased discharge have been taken.

- A new or increased discharge of a pollutant if the increase is necessary to accomplish a reduction in the discharge of an air pollutant and the director/chief determines that the action will result in a net environmental improvement, if the following requirements are satisfied:
 - a) the reduction in the discharge of the air pollutant is necessary to meet State or Federal air quality standards or will substantially reduce human exposure to hazardous air pollutants; and
 - b) the applicant demonstrates that all reasonable and cost-effective methods for avoiding the new or increased discharge have been taken.
- Those applicants seeking coverage under a Nationwide Corps of Engineers General Permit for which 401 water quality certification has been waived. (**Note:** If a project is covered by a Section 404, Nationwide General Permit currently authorized in West Virginia, then the permittee should not have to go through an antidegradation review process when the project being initiated satisfies the terms of coverage under the approved Nationwide permit. The Nationwide permit will undergo antidegradation review every five (5) years; thus, if the WVDEP grants 401 water quality certification to the various Corps of Engineers Nationwide Permits, the antidegradation review process can be satisfied. Antidegradation review for individual 401 water quality certification of Section 404 permits should only be required where an individual permit is being requested).
- Any application approved pursuant to the authorization for storm water discharges associated with **construction** activity under the WV/NPDES General Permit No. WV0115100, or any subsequent reissuance of the same permit.
- Any application approved pursuant to the authorization of storm water discharges associated with **industrial** activity (including applicable coal mining general permits) under the applicable WV/NPDES General Permit, or any subsequent reissuance of the same permit. (**Note:** Individuals applying for coverage under applicable WV/NPDES Storm Water General Permits are seeking coverage under a previously approved NPDES permit that has already gone through public notice procedures and antidegradation review. Any applicant seeking coverage under this or any other NPDES general permit must not be forced to go through a potentially lengthy and onerous antidegradation review process to receive permit coverage. A possible antidegradation review should only be triggered when an applicant is either denied coverage under one of the available General Permits, or where the applicant voluntarily elects to seek coverage under an individual WV/NPDES storm water permit for discharges associated with construction or industrial activity).

- Waiver allowing the chief/director to approve activities that lower water quality on a temporary basis whenever the chief/director determines that an emergency exists requiring immediate action to protect public health and welfare.
- A proposed new discharge from a sanitary wastewater treatment plant constructed to alleviate a public health concern, for example, a connection of existing residences currently on septic systems.
- New or increased discharges of a substance due to water body segment dredging pursuant to the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) as amended, corrective actions pursuant to the Resource Conservation and Recovery Act (RCRA), as amended, or similar federal or state authorities, undertaken to alleviate a release into the environment of hazardous substances, pollutants or contaminants.

4. **Section 4B.1.a.** This section currently states that all waters not included in Tiers 2.5 and 3 will be considered “high quality waters” **unless it can be demonstrated that** the water quality is not better than necessary to attain both fishable (Category B) and swimmable (Category C) uses. It further states that, “**If either the fishable or swimmable use is attained, the water is a high quality water**” (emphasis added). Who carries the burden of demonstrating that water quality is not better than necessary to attain both fishable and swimmable uses? Further, what criteria are to be used?

Normally, if a stream cannot meet its use designation, it is classified as “impaired” and placed on the state’s 303(d) list. Was it the Board’s intent that streams which are classified as “impaired” under one set of rules be classified as “high quality water” for purposes of antidegradation review? If so, why? Can a stream be classified as Tier 2 for one pollutant and Tier 1 for another pollutant?

5. **Section 4C2.a.1.a.** This section states that, “any proposed activity that would increase the **ambient concentration of any parameter more than 5% at critical flow conditions** shall be considered significant degradation (emphasis added).”

There are two significant issues with the language in this section that must be addressed by the EQB. The first issue relates to the use of “any parameter” when assessing the potential of “significant degradation.”

The assumption that the addition of “any parameter” should be considered “significant degradation” is overly restrictive and inconsistent with the implementation strategy of neighboring states. As currently drafted, this section could be interpreted to imply that an increase of hardness, alkalinity or an increase of **any parameter**, regardless of whether it has a

numeric water quality standard, or is listed as a priority pollutant within 307(a)(1) of the Clean Water Act, could also be considered “significant degradation” and trigger an antidegradation review.

We submit that it is not the intent of the antidegradation policy to apply to **any parameter** regardless of its potential to cause use impairment. Instead, the language in this section should be clarified such that only those regulated parameters with water quality standards adopted within 46CSR1 are considered during an antidegradation review process.

The second concern with the language in Section 4B2.a.1.a. is the use of an, “**ambient concentration of ... more than 5% at critical flow conditions**” for the determination of “significant degradation” thresholds.

How will the “ambient concentration” at “critical flow conditions” of each individual parameter be determined at each location? If a measurement of ambient pollution concentrations at 7Q10 flow conditions are required, how is this to be performed? It appears that the wording of this section could require a huge undertaking requiring years of data collection at an unwarranted and prohibitive expense just to document ambient stream conditions at critical flow conditions. Arguably, no decisions could even be made regarding antidegradation until this data is collected. Without the background data at critical flow conditions; how will decisions be made regarding what pollutant additions could cause an increase in ambient concentrations of more than 5%?

The EQB should amend this section to be more consistent with the current antidegradation implementation strategies of neighboring states including Ohio, Indiana, and Virginia. Specifically, the EQB should establish a criterion for “significant degradation” based upon the assimilative capacity of the stream - not on an arbitrary determination of ambient pollutant concentrations at critical flow conditions.

General criteria used by several neighboring states to define what constitutes “significant degradation” are provided below. We ask that the EQB carefully review these criteria and adopt similar language.

Ohio - Ohio’s antidegradation rule bases “significant degradation” thresholds for a “high quality” stream on assimilative capacity, not ambient concentrations. In general, streams with a category approximating West Virginia’s Tier 2 “high quality” designation are exempt from an antidegradation review unless the activity would individually result in the assignment of 10% or more of the available assimilative capacity of the receiving stream.

Indiana - Indiana is currently undergoing triennial review and has draft antidegradation language that is undergoing “public notice.” Within Indiana’s draft rule, they also define “significant

degradation” based on assimilative capacity. Some of the thresholds that must be exceeded to be considered “significant” in a comparable “Tier 2” stream include:

- a proposed increase in mass discharged that is more than ten percent (10%) of the unused loading capacity for a priority pollutant,
- a proposed increase in mass discharged that is more than fifteen percent (15%) of the unused loading capacity for a non-conservative pollutant.

Indiana also defines “**unused loading capacity**” as that amount of the total loading capacity not utilized by point source and non point source discharges, determined at the time that the proposed increase is considered.

The term “**total loading capacity**” is defined as the product of the applicable water quality criterion times the sum of the existing effluent flow and the applicable mixing volume or the stream design flow for the waterbody in the area where the proposed increase is to occur, expressed as a mass loading rate.

Virginia - The Virginia DEQ also bases antidegradation review on assimilative capacity. The DEQ looks at the predicted change in the instream concentration of the parameter (or other measure specified by the standard) for the parameters for aquatic life protection defined within their water quality standards regulations. If the predicted change is not greater than 25% of the difference between the existing quality and that allowed by the standards, no antidegradation review is required. The change allowed prior to antidegradation review for human health criteria is 10%.

In summary, establishing a de minimis threshold based upon a percentage of the assimilative capacity would clearly be a more equitable and easily calculated value than would ambient pollutant concentrations at critical flow conditions. Procedures for calculating total and available assimilative capacity can then be determined using standard wasteload allocation procedures (or other approved procedures).

As currently drafted, the language in this section penalizes dischargers to streams with low ambient pollutant concentrations and favors dischargers to streams with high ambient pollutant concentrations. This places an unfair bias on dischargers to streams with low “ambient” pollutant concentrations at critical flow conditions; while at the same time allowing the same discharger to a stream with higher “ambient” pollutant concentrations to avoid antidegradation review (See example provided in Attachment 1).

The above-referenced imbalance could have the unfortunate effect of creating a disincentive for dischargers to optimize treatment effectiveness because they could be rewarded with more stringent permit limits, loss of an operating cushion for compliance, and loss of reserve capacity for growth. This could also discourage or delay voluntary pollution prevention efforts because facilities that implement such measures would improve effluent quality and, potentially face more stringent effluent limits.

Finally, it is unclear how this section could effectively be applied with parameters that have ambient concentrations below analytical detection or quantification. How will the 5% criterion be applied in this case? Would it constitute "degradation" if the concentration of any parameter in an existing discharge is simply detectable, regardless of how far below the actual water quality standard the parameter may be?

6. Section 4C2.a.2.a. This section currently reads, "Temperature: Provided that the temperature of a discharge complies with the temperature criteria in Section 46-1-8.28 (Appendix E of this rule)."

This section is not consistent with federal antidegradation provisions at 40 CFR 131.12(4). It should be amended to recognize that permittees which either currently have or successfully apply for a variance in accordance with Section 316 of the CWA are also exempt from antidegradation review. To ensure this language is consistent with 40 CFR 131.12(4), we ask that the sentence be amended to read as follows:

"Temperature: Provided that the temperature of a discharge complies with the temperature criteria in Section 46-1-8.28 (Appendix E of this rule), or is otherwise consistent with Section 316(a) of the Clean Water Act."

Note: EPA clearly intended that any state's antidegradation policy not restrict the application of Section 316(a) thermal discharge limits. This position is further clarified in EPA's August 1985 document entitled, "Questions & Answers on: Antidegradation." Within this document, EPA states that, "The statutory scheme and legislative history indicate that limitations developed under Section 316 take precedence over other requirements of the Act."

7. Section 4C.5.a. and b. This section of the draft policy relates exclusively to the merits of less degrading or non-degrading alternatives that are examined during the antidegradation review process.

As this section is currently drafted, a proposed activity could be denied under the terms of 4C.5.b. before any consideration is even given regarding the accommodation of important economic or social development. We submit that it is beyond the DEP's or any other state

agency's regulatory authority to deny an activity on a Tier 2 stream exclusively because, "mutually acceptable resolutions are not reached."

To correct this possible legal quandary, Sections 4C.5 and 4C.6 need to be integrated into one section so the antidegradation review considers the alternatives and the economic/social importance of the activity simultaneously, not independently.

We also suggest specifying that any nondegradation alternative, a minimal degradation alternative, or a mitigative degradation alternative to offset all or part of the proposed lowering of water quality, be evaluated based upon the following:

- a) Magnitude of the water quality impacts,
- b) The availability reliability and cost effectiveness of any non-degradation, minimal degradation or mitigative technique alternative, and
- c) The reliability of the preferred alternative including but not limited to the possibility of recurring operational and maintenance difficulties that would lead to the increased degradation condition.

8. Section 4D.2.a. - This section, which applies to Tier 2.5 streams, states that, "If a determination is made that the activity will result in the lowering of water quality conditions, the activity shall not be allowed."

This language appears to provide a higher level of protection than that afforded to Tier 3 stream (Outstanding National Resource Waters) under Section 4E.2. of the draft rule. At a minimum, some consideration for short term projects and de minimis activities in Tier 2.5 streams must be provided. Incorporating language similar to that found in 4E.2.a. through 4E.2.f. should also be added to Section 4D.2.

9. Section 4E.7. This section currently states that, "All upstream segments of a ONRWs shall be considered ONRWs."

This language should be modified to state that no discharge upstream of an ONRW shall cause a measurable impact to the water quality of streams designated as ONRWs.

APPENDIX 1: ANTIDegradation Implementation Example

The following example demonstrates the unfair bias the proposed antidegradation implementation guidance (**Section 4C2.a.1.A.**) places on dischargers to streams with low “ambient” pollutant concentrations at critical flow conditions. The example also shows how the same discharger to a stream with higher “ambient” pollutant concentrations can avoid antidegradation review.

Example Discharge Situation:

Stream XYZ has a 7Q10 flow of 10 MGD and an instream hardness of 100. Municipal ABC has an existing sanitary wastewater discharge of 100,000 gallons per day on the stream. The municipality is now receiving pretreated effluent from an industrial discharger and is currently discharging 100 parts per billion (ug/l) of nickel within their treatment plant effluent. The incremental increase from the municipality’s new industrial customer does not require the NPDES permit to be modified.

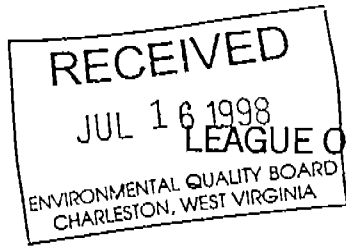
Current “ambient concentration” of zinc in the receiving stream at critical (7Q10) flow conditions is 1 part per billion (ug/l).

Using the Appendix E equations from 46CSR1, the chronic instream numeric aquatic life criterion for Zinc is 158 ug/l, the acute criterion is 1,418 ug/l and the stream’s approximate assimilative capacity at critical flow conditions is:

Chronic Zinc Loading:	$0.158 \text{ mg/l} \times 10 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	13.2 kg/d
Acute Zinc Loading:	$1.418 \text{ mg/l} \times 10 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	118.3 kg/d
Zinc loading from STP:	$0.100 \text{ mg/l} \times 0.100 \text{ MGD} \times 8.3453 \text{ lb/gal.} =$	0.08 kg/d

In this example, the zinc loading from the STP uses less than 1% of the available assimilative capacity in the stream at critical flow conditions; however, the discharge concentration results in an increase of the “ambient concentration” in the receiving stream by more than 5% at critical flow conditions which would mandate an antidegradation review under the proposed rule.

In contrast, if the same receiving stream had an ambient nickel concentration of 50 ug/l, the 1 ug/l increase from the STP would only be a 2% increase over “ambient concentrations.” This example demonstrates how the proposed language at **Section 4C2.a.1.A.** can be misapplied. It also calls into question how analytical variability will be considered when water column pollutant concentrations approach the level of analytical quantification.



LEAGUE OF WOMEN VOTERS OF WEST VIRGINIA
 2023 Huber Road
 Charleston, WV 25314
 Phone 304-342-2706
 FAX 304 342-1377

July 15, 1998

To: The West Virginia Environmental Quality Board

Re: Proposed Changes to the Water Quality Standards Rule, Adopting Antidegradation Implementation Guidance Procedures

The League of Women Voters of West Virginia wishes to make some comments on the proposed antidegradation implementation guidance procedures.

Any antidegradation procedure should take into account cumulative impacts rather than just site specific impacts of pollutants.

When considering socio-economic benefits of an applicant's activity which would result in degradation, the socio-economic benefit of not degrading the water should also be considered. The impact on drinking water supplies whether for individuals or public water supplies should be one of the socio-economic benefits of clean water. Source water protection for public water supplies is encouraged under the federal 1996 Safe Drinking Water Amendments.

Public participation should be an integral part of the process rather than at the end. Those who live downstream should be notified as well as those who live in the area of impact.

46-1-4B.4 - Trading. Line 7. We believe that "other appropriate measures" should be better defined or left out until the OWR has experience with Trading.

4D.2.c. - Trading. Line 8. How is "an appropriate margin of safety" determined? This phrase should that be better defined.

A major weakness in West Virginia's regulatory program is that the Nonpoint Source Management Plan is deficient for protecting our waters. Until nonpoint source pollution is adequately regulated, nondegradation goals will be impossible to achieve.

Sincerely,

ES/HG

Helen Gibbins

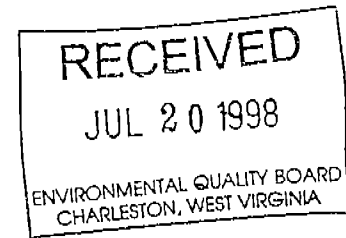
Ellender Stanchina, President
 League of Women Voters of WV
 2023 Huber Rd.
 Charleston, WV 25314

Helen Gibbins, Natural Resources
 League of Women Voters of WV
 6128 Gideon Rd.
 Huntington, WV 25705
 304-736-3287

THE SILVER COUNCIL

July 18, 1997

Ms. Libby Chatfield
West Virginia State Water Resources Board
1615 Washington Street
Charleston, West Virginia 25311-2126



Dear Ms. Chatfield;

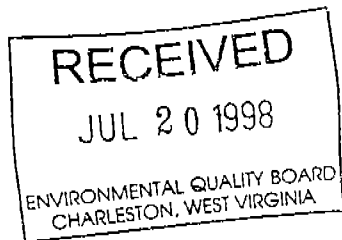
The Silver Council supports the proposed changes to the Water Quality Standards Rule at 46 CSR, 1-8.1.b. that relate to the adoption of dissolved metals criteria. We believe that this action is justified because it comports with guidance provided by the U.S. Environmental Protection Agency, it is based in science and, most importantly, it provides a more accurate measure of bioavailable metal.

Thank you for your attention to our comments and input over the past year. The process employed in the consideration of the available options has worked in an exemplary fashion, thanks in large part to your work and that of the staff of the Water Control Board. We appreciate the opportunity to participate.

Sincerely,

A handwritten signature in black ink, appearing to read "Thomas W. Purcell". The signature is fluid and cursive, written over a horizontal line.

Thomas W. Purcell, Ph.D.
Senior Vice President, Science



Donald G. Brannon, Ph.D.
PO Box 59
Charlton Heights, WV 25040-0059

July 16, 1998

Environment Quality Board
165 Washington Street East
Room 301
Charleston, WV 25311-2126

RE: June 18, 1998 Proposed Title 46 Legislative Rules Environmental Board

1. Appendix E
 - a. The change from Total Recoverable to solution concentrations of metals except for Hg is correct. However, the filter size should be stipulated.
 - b. Aluminum criteria of 750 ug/L for B1 and B2 are much too high. An extensive body of literature supports my position. Aluminum is the primary culprit in destruction of B1 and B2 populations from AMD and acid precipitation. A literature search will reveal appropriate criteria based upon 0.1 x LC50s for both acute and chronic conditions.
2. Appendix G
The implementation of the antidegradation policy has been desperately needed and the Board is to be applauded for its inclusion.

Overall, a good set of rules except it has become obvious that 208 voluntary Best Management practices must become mandatory.


Donald G. Brannon
(Former Water Resources Board member)

RESPONSE TO COMMENTS

RESPONSES TO COMMENTS
46 CSR 1
Requirements Governing Water Quality Standards
August 3, 1998

This document describes the changes proposed in the Water Quality Standards rule. For each proposed change, the following are provided: a description of the existing rule; the amendment proposed by the Board; a summary of the comments received on the proposed amendment and the Board's response to the comments and the final action taken by the Board on the proposed amendment.

Please note that the Board received some written comments on sections of the rule for which no change was proposed. The Board recognizes the importance of many of these comments. However, to abide by the WV Administrative Procedures Act the Board must limit the changes to those which logically flow from a change actually proposed in the June 18 notice to the Secretary of State. The Board will make every effort to address these comments during the next triennial review, or before if appropriate.

SECTION 46-1-4

This section establishes the antidegradation policy which outlines requirements for retaining the existing quality of the waters of the State.

Proposed Amendments

The Board proposed several amendments to this section, including the addition of a new section (Appendix G) establishing antidegradation implementation procedures. The procedures provided detailed guidance regarding how the existing antidegradation policy is to be applied to permitted discharges into the waters of the state. These provisions were proposed based on federal requirements as well as a demonstrated need for assistance in using the antidegradation policy by the Division of Environmental Protection, which is responsible for implementation of the Water Quality Standards in the state.

Comments and Responses

The Board received extensive comments from various industrial interests groups, environmental organizations and other interested parties about the antidegradation implementation procedures. The comments range from comments regarding whether procedures are needed at all, to very detailed questions about how the guidance will apply to specific activities.

Because of the volume of comments and the nature of the concerns expressed during the

public comment period, the Board has decided to withdraw this section of the rule for further review and revision before submitting it to the Legislature.

Board Action

Proposed language withdrawn.

SECTION 46-1-8

Existing Rule

This section addresses the specific water quality criteria outlined in Appendix E of the rule.

Proposed Amendments

The changes proposed in this section provide for the conversion of existing aquatic life criteria for metals from total concentrations to dissolved concentrations. The proposal further provides for translation from the dissolved criteria to effluent limits based on total concentrations. The proposed language reflects USEPAs recommendations and guidance regarding the use of dissolved concentrations in developing permit limits for discharges of metals.

A new section 8.1.b is proposed. This section provides that compliance with aquatic life numeric criteria expressed as dissolved metal shall be determined based on dissolved metals concentrations. Further, section 8.1.b.1 provides for the conversion of the existing aquatic life metals criteria from total concentrations to dissolved concentrations and refers to a new chart of conversion factors at Appendix E, Table 2. New section 8.1.b.2 provides for the use of USEPAs metals translator guidance for preparation of permit limits based on dissolved metals. Additional changes are proposed in Appendix E sections 8.4.1 (trivalent arsenic), 8.7.3 and 8.7.4 (cadmium), 8.9.1 and 8.9.2 (copper), 8.14 (hexavalent chromium), 8.16.1 and 8.16.2 (lead), 8.19.1 and 8.19.2 (nickel), 8.27.2 (silver), and 8.33 and 8.33.1 (zinc).

Comments and Responses

One commenter identified a recommendation made by the committee proposing these changes to the Board which was not included in the proposed rule. That recommended language provides for sediment testing to be conducted in certain circumstances. The recommended language provides:

“The OWR may, on a case-by-case basis require an applicant applying for a translator to conduct appropriate sediment monitoring through SEM/AVS ratio, bioassay or other approved methods to evaluate effluent limits that prevent

toxicity to aquatic life.”

The Board agreed that this language should be included in section 8.1.b.

One commenter suggested that the Board include language in this section providing for NPDES permit applicants to petition the DEP for site specific metals translators. This would allow permittees to work with OWR in the development of metals translators for use in establishing permit limits for metals.

The Board agrees with the commenter and proposes inclusion of the following language in section 8.1.b:

NPDES permit applicants may petition the Office of Water Resources of the DEP to develop a site-specific translator consistent with the provisions in this section.

Several comments were received by regarding the use of the word "may" rather than "shall" in 8.1.b.2. Commenters indicated that the use of EPAs guidance document should be mandatory in developing permit limits and suggested using "shall" in that sentence in support of that position.

The Board agrees with the commenters that the use of EPAs guidance document in developing translators for establishing permit limits should be required.

One commenter expressed concern that the new provisions for developing translator mechanisms may place unreasonable monetary requirements on certain entities discharging metals.

Allowing applicants to petition for site-specific translators provides the opportunity to use the "rebuttable presumption" option in the guidance, which would result in using a translator equal to the conversion factor. Using the conversion factor as the translator will produce the same result as assuming no difference between dissolved and total recoverable metal concentrations. In essence, the effluent limits will be the same as current limits using total recoverable criteria. This option would eliminate the requirement to collect the data required for other translator mechanisms, therefore addressing the concern about placing extra costs on small dischargers.

The Board believes that allowing permittees to apply for site-specific translators as described herein will address this concern.

One commenter expressed concern regarding the accuracy of USEPAs conversion factors for converting total metals criteria to dissolved criteria. The commenter indicated that Virginia and Maryland are currently reviewing those values. This issue was not discussed by the committee established by the Board to review the dissolved metals issue, and all members of that

committee support the use of EPAs conversion factors. EPA indicated that their approval of a dissolved metals protocol would hinge on adoption of the conversion factors, as well as the guidance document.

The Board is interested in the comments provided on this issue and will continue to review the activities in Maryland and Virginia. If changes are warranted based on this review, the Board will consider them during the next triennial review.

One commenter suggested editing footnote 5 in Appendix E to read as follows: "The appropriate Conversion Factor (CF) is a value used as a multiplier to derive the dissolved aquatic life criterion is found in Appendix E, Table 2.

The Board agrees with the suggestion.

One commenter expressed concerns regarding the inclusion of a conversion factors for Chromium III, for which there is no numeric criterion in Appendix E. Because those values would not be applied without the criteria, inclusion of the conversion factor in Table 2 is unnecessary and confusing. The Board agrees.

USEPA commented that the conversion factor for mercury of 0.85 included in Table 2 is intended to be applied to the numeric criterion for mercury which has been promulgated in the Great Lakes Initiative and in the proposed "Establishment of Numeric Criteria for Priority Toxic Pollutants for the State of California". It is not intended to apply to the current value for mercury provided in Appendix E. Therefore, they recommend withdrawing the conversion factor for mercury and reconsidering its adoption if the Board chooses to amend the mercury criterion in the future.

The Board agrees with the comments from that agency and will delete the conversion factor for mercury until we have an opportunity to review the existing mercury criteria.

Board Action.

The Board adopted the proposed language with the following amendments:

- addition of sediment testing language provided above to section 8.1.b
- addition of language providing for development of site-specific translators
- "may" changed to "shall" in section 8.1.b.2 by changing the word "may" to "shall".
- conversion factors for trivalent chromium and mercury removed from Table 2
- edit footnote 5 in Appendix E

145 eight, relating to the division of environmental protection
146 (underground storage tank insurance trust fund, 33 CSR 32) are
147 authorized.

§64-3-2. Environmental quality board.

1 The legislative rule filed in the state register on the third
2 day of August, one thousand nine hundred ninety-eight,
3 authorized under the authority of section four, article three,
4 chapter twenty-two-b, of this code, relating to the environmen-
5 tal quality board (requirements governing water quality
6 standards, 46 CSR 1), is authorized until the thirtieth day of
7 October, 1999: *Provided*, That the environmental quality board
8 shall review, revise and propose, within this statutory deadline,
9 and in accordance with the provisions of chapter twenty-nine-a
10 of this code, emergency and legislative rules to address the
11 interpretive differences regarding the designation of category A
12 waters and analyze the need for distance prohibitors for the
13 policies of public drinking water intake, with the amendments
14 set forth below:

15 On page fourteen, subsection 7.2.b., by following the words
16 "contrary provision," by striking the word "numeric";

17 And, on page twenty, by striking-out all of subsection 8.5..

18 On page 14, at the end of paragraph 7.2.a.2 after the word
19 "headwaters.)" by inserting the following:

20 "Until June 30, 2003, the one-half mile zone described in
21 this section shall not apply to the Ohio River main channel
22 (between Brown's Island and the left descending bank) between
23 river mile points 61.0 and 63.5."