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: Bureau of the Environment Environmental Quality Board TITLE NUMBER: 46

CITE AUTHORITY WV Code 22B-3-4

AMENDMENT TO AN EXISTING RULE: YES X 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.

Frances E. Hunter

Authorized Signature

23.60

ENVIRONMENTAL QUALITY BOARD

1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126
(304) 558-4002
Fax: (304) 558-0899

Gaston Caperton
Governor

Charles R. Jenkins
Chairman

July 31, 1995

The Honorable Ken Hechler
Secretary of State
Capitol Complex
Building 1, Room 157K
Charleston, West Virginia 25305

Attn: Judy Cooper

Dear Mr. Secretary:

Enclosed herewith for filing is a copy of the Environmental Quality Board's 46 CSR 1 - Requirements Governing Water Quality Standards which were approved by the Board along with the required documents as required by your office. Please be advised that a copy of the transcript of the hearing will be hand-delivered to your office in approximately two weeks as the court reporter is out of state. If you have any questions do not hesitate to contact Libby Chatfield or me at 558-4002.

Sincerely yours,

Frances E. Hunter

Frances E. Hunter
Executive Secretary

enclosures

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

GASTON CAPERTON
GOVERNOR

LAIDLEY ELI MCCOY, PH.D.
COMMISSIONER

July 21, 1995

Ms. Judy Cooper
Director, Administrative Law Division
Secretary of State's Office
Building 1, Suite 157K
Charleston, West Virginia 25305

RE: 56CSR1 - "Requirements Governing Water Quality Standards"

Dear Ms. Cooper:

This is to advise you that I am giving approval for the filing of the above-captioned agency-approved rule with the Secretary of State's Office and Legislative Rule-Making.

Your cooperation in this regard is very much appreciated. If you have any questions or require additional information, please feel free to contact Roger T. Hall at 759-0515.

Sincerely yours,

Laidley Eli McCoy, Ph.D.
Commissioner

LEM;RTH:cc

Attachment

DATE: July 31, 1995

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM:

LEGISLATIVE RULE TITLE: Requirements Governing Water Quality Standards

1. Authorizing statute(s) citation WV Code 22B-3-4

2. a. Date filed in State Register with Notice of Hearing

June 16, 1995

b. What other notice, including advertising, did you give of the hearing?

Was published in the Charleston Daily Mail, Charleston Gazette and seven (7) other newspapers in the State (see attached).

Copies of proposed rule was also sent to a mailing list (copy attached)

c. Date of Hearing(s) July 18, 1995 - 7:00 p.m.

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)

July 31, 1995

f. Name and phone number(s) of agency person(s) to contact for additional information:

Libby Chatfield, Technical Advisor

Environmental Quality Board

558-4002

3. If the statute under which you promulgated the submitted rules requires certain findings and determinations 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: N/A

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

   N/A

   d. Attach findings and determinations and reasons:

   Attached N/A

SUMMARY OF PROPOSED AMENDMENTS TO 46 CSR 1

The changes proposed herein include amending the current language of the "five mile rule". The current requirements which apply in the zone five miles above a drinking water intake have been deleted, and new language has been proposed in section 5.2 which describes requirements for mixing zones for human health criteria. The rule does not change the Chief's authority to limit discharges within a distance of 1/2 mile above a drinking water intake.

In brief, the current requirement that water quality standards be met at the "end of pipe" in waters which serve as public water supplies (Use Category A) has been changed to allow mixing zones to be assigned in Category A waters at the request of a discharger. Such mixing zones would allow limited mixing to occur within the receiving waters. Any mixing zone allowed according to the proposed changes must be sized to prevent significant human health risks. Mixing zones would not be allowed for bioaccumulative pollutants and would not be allowed in waters with a 7Q10 flow of less than 5 cubic feet per second. Mixing zones are not allowed in the ½ mile zone above a drinking water intake.

Amended language occurs in sections 2.1, 2.2, 5.2, 6.2 and 7.2 of the rule.

STATEMENT OF CIRCUMSTANCES REQUIRING
AMENDMENTS TO 46 CSR 1

The current language of section 5.2.b.B requires that discharges within five miles above a drinking water intake must meet water quality standards at the "end of pipe". During the last triennial review of the Water Quality Standards rule, completed in August 1994, the Board received comments from various industries who maintain that meeting standards at the end of pipe, rather than having an allowance fro mixing within the receiving stream, results in unduly burdensome costs. The Board also received comments from agencies and individuals who expressed serious concerns regarding the elimination of the protective buffer provided by the requirements of the five mile rule.

In this proposal, the Board has attempted to respond to all of the comments received and concerns expressed with regard to this provision. The proposed requirements are consistent with the Federal Clean Water Act and regulations promulgated thereunder.

FISCAL NOTE FOR PROPOSED RULES

Rule Title: Requirements Governing Water Quality Standards

Type of Rule: X **Legislative** ____ **Interpretive** ____ **Procedural**

Agency Bureau of the Environment - Environmental Quality Board

Address 1615 Washington Street, East - Suite 301

Charleston, WV 25311-2126

1. **Effect of Proposed Rule**

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

2. **Explanation of above estimates:**

3. **Objectives of these rules:** To establish narrative and numeric water quality standards to apply to the waters of the State of West Virginia. The amendments proposed at this time provide new requirements for meeting numeric standards in Category A, Public Water Supply waters.

Rule Title: Requirements Governing Water Quality Standards

4. Explanation of Overall Economic Impact of Proposed Rule.

A. Economic Impact on State Government.

None anticipated

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

The proposed amendments will make discharge requirements less stringent under certain circumstances and will therefore result in lower costs for wastewater treatment for some dischargers.

C. Economic Impact on Citizens/Public at Large.

None anticipated

Date: July 31, 1995

Signature of Agency Head or Authorized Reprensentative

Frances E. Hunter

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. "Bioaccumulation" is the net accumulation of a substance by an organism as a result of uptake from all environmental sources.

~~2.1.~~ 2.2 "Conventional treatment" is the treatment of water as approved by the State Health Department to assure that the

water is safe for human consumption.

~~2.2. "Cumulative" means a pollutant which increases in concentration in an organism by successive additions at different times or in different ways (bio-accumulation).~~

2.3. "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)

2.4. "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.

2.5. 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.

2.6. "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.

2.7. "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.

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

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

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

b. Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance by any person.

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

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

2.12. "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.

2.13. "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.

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

2.15. "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.

2.16. "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.

2.17. "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.

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

2.19. "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.

2.20. "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:

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

b. Deposits or sludge banks on the bottom;

c. Odors in the vicinity of the waters;

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

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

f. Distinctly visible color;

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

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

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:

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.

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.

A. High quality waters are those waters meeting the definition at section 2.6 herein.

B. High quality waters include but are not limited to the following:

(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

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

(c)Streams or stream segments which receive annual stockings of trout but which do not support year-round trout populations.

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:

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

B. All naturally reproducing trout streams.

C. All streams and other bodies of water in State and National Forests and Recreation Areas.

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

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.

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:

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.

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 EPAs 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 ~~and criteria for the protection of human health from the consumption of fish tissue~~ may be exceeded within the mixing zone but shall be met at the edge of the assigned mixing zone.

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 zones for human health criteria shall be assigned for bioaccumulative pollutants. For the purposes of this section, bioaccumulative pollutants are those listed in 40 CFR 132, EPAs Final Water Quality Guidance for the Great Lakes System, Table 6.A., titled "Pollutants that are bioaccumulative chemicals of concern." 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.

~~c~~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 endangered species.

~~d~~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 (½) of the cross-sectional area of the receiving stream.

~~e~~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.

~~f~~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.

~~g~~h. Mixing zones shall not:

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

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

C. Cause or contribute to any of the conditions prohibited in Section 46-1-3.

D. Be granted where instream waste concentration of a discharge is greater than 80%.

E. Overlap one another.

~~h~~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.

~~i~~j. The Chief may waive the requirements of subsections (d) and (g)(B) above if a discharger provides an acceptable demonstration of:

A. Information defining the actual boundaries of the mixing zone in question; and

B. Information and data proving no violation of subsection (c) and (f) above by the mixing zone in question.

~~j~~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), (d) and (g)(B).

~~k~~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.

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. (See subsection 4.1.d.)

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:

A. 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

B. Naturally-occurring pollutant concentrations prevent the attainment of the use; or

C. 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

D. 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

E. 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

F. 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.

c. The [illegible] 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.

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:

a. All community domestic water supply systems;

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

c. All private domestic water systems; and

d. All other surface water intakes where the water is used for human consumption~~; and~~

~~e. Shall apply to the stream segment extending upstream from the intake for a distance as defined in subsection 7.2.a.B of this series.~~ (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:

a. Category B1 -- Warm water fishery streams. -- Streams or stream segments which contain a fish population composed overwhelmingly of warm water species. (These

are primarily sport fisheries and may be stocked with trout seasonally.)

b. Category B2 -- Trout Waters. -- As defined in Section 2.16 (See Appendix A for a representative list.)

c. Category B3 -- Small non-fishable streams. -- Streams or stream segments which because of their size or flow patterns do not offer sport fishing; they generally contain populations of minnows, darters, aquatic invertebrates, etc.

d. Category B4 -- Wetlands. -- As defined in section 2.19; 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.

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

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

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.

a. Category E1 -- Water Transport. --

This category includes all stream segments modified for water transport and having permanently maintained navigation aides.

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

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 (1/2) mile below the wastewater discharge point. (See Appendix C for representative list)

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).

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

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:

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

B. PC - Cacapon River and all its tributaries.

C. PSB - South Branch and all its tributaries.

D. PNB - North Branch and all tributaries to the North Branch arising in West Virginia.

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:

A. MC - Cheat River and all its tributaries except those listed below:

(a) MCB - Blackwater River and all its tributaries.

B. MW - West Fork River and all its tributaries.

C. MT - Tygart River and all its tributaries except those listed below:

(a) MTB - Buckhannon River and all its tributaries.

(b) MTM - Middle Fork River and all its tributaries.

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

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.

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

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

(c) LKH - Hughes River and all its tributaries.

B. 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.

C. 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:

(a) KP - Pocatalico River and all its tributaries.

(b) KC - Coal River and all its tributaries.

(c) KE - Elk River and all its tributaries.

(d) KG - Gauley River. The Gauley River and all its tributaries excluding the following major tributaries which are designated as follows:

(A) KG-19 - Meadow River and all its tributaries.

(B) KG-34 - Cherry River and all its tributaries.

(C) KGC - Cranberry River and all its tributaries.

(D) KGW - Williams River and all its tributaries.

(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:

(A) KNG - Greenbrier River and all its tributaries.

(B) KNB - Bluestone River and all its tributaries.

(C) KN-60 - East River and all its tributaries.

(D) K(L)-81-(1) - Bluestone Lake.

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

(a) OGM - Mud River and all its tributaries.

E. 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:

(a) 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:

a. Water Use Categories as described in Section 6.

A. 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.

B. Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of ~~five (5) miles~~ one half (1/2) 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. ~~Provided, however, that~~ In addition, within ~~a~~ that one half (½) mile zone ~~extending one half (1/2) mile above the~~

~~intake~~, the Chief, Office of Water Resources ~~Section~~, Division of ~~Natural Resources~~ Environmental Protection, may establish for any discharge, effluent limitations for the protection of human health that require additional removal of ~~those~~ pollutants than would otherwise be provided by this rule. (If a watershed is not significantly larger than ~~either of the two (2)~~ this zones~~s~~ above the intake, the water supply section may include the entire upstream watershed to its headwaters.

b. In the absence of any special application or contrary provision, 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: Exceptions do not apply to trout waters nor the requirements of Section 3.

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

A. When the flow is less than 7Q10;

B. 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;

C. ~~In the zone of initial dilution of any mixing zones which are established pursuant to Section 5 of these rules;~~ 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;

D. Where lesser quality is due to natural conditions. In such cases the naturally occurring values shall be the applicable criteria.

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:

A. James River - (Reserved)

B. Potomac River

(a) Except for the unnamed tributary of the South Branch of Buzzard Run above and below Prather Pond shall not have Water Use Category A; therefore may contain fluoride not to exceed 2.0 mg/1.

(b) 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.

C. Shenandoah River - (Reserved)

D. Cacapon River - (Reserved)

E. South Branch - (Reserved)

F. North Branch

(a) 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.

G. Monongahela River

(a) 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.

(b) Except that site-specific numeric criteria shall apply to an unnamed tributary to the Monongahela River mainstem at approximately 3700 feet upstream of mile point 125, which may contain suspended solids not to exceed 60 mg/1, oil and grease not to exceed 15 mg/1, Ammonia-Nitrogen not to exceed 30 mg/1, total phenols not to exceed .10 mg/1, total cyanide not to exceed .05 mg/1, total manganese not to exceed 4 mg/1, total zinc not to exceed 1.5 mg/1, total copper not to exceed 1.0 mg/1, Benzene not to exceed .05 mg/1, Napthalene not to exceed .05 mg/1 and Benzo (a) Pyrene not to exceed .05 mg/1 and iron not to exceed 4 mg/1 for the months June through November and 7 mg/1 for the months of December through May.

H. Cheat River - (Reserved)

I. Blackwater River - (Reserved)

J. West Fork River - (Reserved)

K. Tygart River - (Reserved)

L. Buckhannon River - (Reserved)

M. Middle Fork River - (Reserved)

N. Youghiogheny River

(a) Water Use Categories A and E are excluded from the tributaries of the Youghiogheny River in West Virginia which flow into Maryland.

O. Ohio River Main Stem - (Reserved)

P. Ohio River Tributaries.

(a) 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 arsenic not to exceed 200 ug/1; selenium not to exceed 62 ug/1; and iron not to exceed 3.5 mg/1 as a monthly average and 7 mg/1 as a daily maximum.

(b) Except that site-specific numeric criteria 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 the Water Use Category A designation. Therefore, at any time the temperature shall not exceed 100 F, total iron shall not exceed 4.0 mg/1 and total fluoride shall not exceed 2.0 mg/1, each as thirty (30) day average values to be determined from four (4) weekly samples.

(c) Except in the stretch of Cow Creek (0-55) from its mouth to a point approximately 2,300 feet upstream, the Water Use Category A shall not apply.

Q. Little Kanawha River. - (Reserved)

R. Hughes River - (Reserved)

S. Kanawha River Zone 1 - Main Stem

(a) For the Kanawha River main stem, Zone 1, Water Use Category A shall not apply; and

(b) The minimum flow shall be 1,960 cfs at the Charleston gauge.

T. Kanawha River Zone 2 and Tributaries.

(a) For the main stem of the Kanawha River only, the minimum flow shall be 1,896 cfs at mile point 72.

(b) Except the stretch between the mouth of Little Scary Creek (K-31) and the Little Scary impoundment shall not have Water Use Category A or B1 and shall have Water Use Category B3. The following site-specific numeric criterion shall apply to that section: arsenic not to exceed 200 ug/1 and selenium not to exceed 62 ug/1; and copper not to exceed 105 ug/1 as a daily maximum nor 49 ug/1 as a 4-day average.

(c) Except for Ward Hollow (K-39-A), a small tributary of Davis Creek which may contain chlorides not to exceed 540 mg/1.

(d) 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.

U. Pocatalico River - (Reserved)

V. Coal River - (Reserved)

W. Elk River - (Reserved)

X. Gauley River - (Reserved)

Y. Meadow River - (Reserved)

Z. Cherry River - (Reserved)

AA. Cranberry River - (Reserved)

BB. Williams River - (Reserved)

CC. New River

(a) Except the stretch of Laurel Creek (KN-5), a tributary of the New River, from the confluence of Dempsey Branch and Laurel Creek to a point 1.7 miles below, where the site-specific numeric criterion for iron shall be 2.0 mg/l total iron, and from that point to the confluence of Laurel Creek and the New River, the site-specific numeric criterion for iron shall be 1.0 mg/l total iron.

DD. Greenbrier River

(a) Water Use Category A and B2 shall not apply to that segment of the East Fork of the Greenbrier River (KNG-78) from the reservoir located at the tannery to the confluence with the West Fork; Provided that all trout water (B2) standards shall not be violated in the mainstem Greenbrier River.

EE. Bluestone River - (Reserved)

FF. Bluestone Lake

(a) 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.

GG. East River - (Reserved)

HH. Guyandotte River - (Reserved)

II. Mud River - (Reserved)

JJ. Big Sandy River - (Reserved)

KK. Tug Fork River - (Reserved)

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

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

a. Specific state (i.e. total, total recoverable, 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 Series II, Section 7.3 of these regulations)

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

c. 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.

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 (*).

c. 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 Effects Ratio study pursuant to the procedures outlined in EPAs "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.

§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:

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.

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:

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

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

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.

River Basin	County	Stream
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	"	Elsey 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 119 Bridge)
MT	Preston	Roaring Creek (Above Little Lick Branch)
MT	Randolph	Tygart River (Above Huttonsville)
MT	"	Elkwater Fork
MT	"	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
MTM	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 Collision 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.

River Basin	County	Operating Company	Source
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 Peure 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 District 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	Tucker	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	Deecons & 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 Compresssor 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

lO	"	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-KI-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	Roahe	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	"	Procious 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 Rriver
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.

River Basin	County	Station Name	Operating Company
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.

River Basin	Stream Code	Stream	County
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
	O-2-H	Beech Fork of Twelvepole Creek/Beech Fork Lake	Wayne
	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	Anthony Creek	Greenbrier
	KNG-28-P	Meadow Creek/ Lake Sherwood	Greenbrier
	KNB	Bluestone River/ Bluestone Lake	Summers
	KG	Gauley River	Webster
	KG	Gauley River/ Summersville Lake	Nicholas
	KGW	Williams River	Webster

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.1 Aluminum (ug/l) Not to exceed:(See 7.1.d.B(b))	750	87	750	87			
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: $UA = \frac{1.2(\text{total ammonia-N})}{1+10^{(pka-pH)}}$ where pka = 0.0902 + 2730/(273.2 + T and T = temperature (°C) The concentration of un-ionized ammonia (NH3) shall not exceed 50 ug/l.						50	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, 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 Trivalent Arsenic Not to exceed:	360	190	360	190			
8.5 Barium (mg/l) Not to exceed:						1.0	
8.6 Beryllium (ug/l)		130		130		.0077	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.7 Cadmium (ug/l) Hardness (mg/l $CaCO_3$) Soluble Cd 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 cadmium shall not exceed the value determined by the following equation: $Cd = e^{(0.7852[\ln(hardness)])-3.490)}$		X		X			
8.7.4 The one-hour average concentration of total recoverable cadmium shall not exceed the value determined by the following equation: $Cd = e^{(1.128[\ln(hardness)])-3.828)}$	X		X				

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.8 Chloride (mg/l) Not to exceed:	860	230	860	230	250	250	
8.9 Copper (ug/l) Not to exceed:						1000	
8.9.1 The four-day average concentration of total recoverable copper shall not exceed the value determined by the following equation[a]: $Cu = e^{(0.8545[\ln(hardness)]-1.465)}$		X		X			
8.9.2 The one-hour average concentration of total recoverable copper shall not exceed the value determined by the following equation[a]: $Cu = e^{(0.9422[\ln(hardness)]-1.464)}$	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	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.11 Dissolved Oxygen[c]: not less than 5 mg/l at any time.		X			X	X	X
8.11.1 Kanawha River main stem, Zone 1 - Not less than 4.0 mg/l at any time.		X					
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.		X					
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				

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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	
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		

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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 Hexavalent chromium (ug/l) Not to exceed:	16	11	16	7.2		50	
8.15 Iron[c] (mg/l) Not to exceed:		1.5		0.5		1.5	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.15.1 Effluent limitations which may result in a concentration of up to 3.5 mg/l total iron in the stream are allowable upon a demonstration to the Chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either: (1) that the stream is supporting designated uses while containing total iron concentrations higher than the applicable criteria or (2) the stream does not have an aquatic life use to protect. Notwithstanding Section 4 herein, this demonstration shall be the only demonstration required before the Chief and the Board with respect to							

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
water quality related effluent limitations. This exception does not apply to trout waters.		X					
8.16 Lead (ug/l) Not to exceed:						50	
8.16.1 The four-day average concentration of total recoverable lead shall not exceed the value determined by the following equation[a]: $Pb = e^{(1.273[\ln(hardness)]-4.705)}$		X		X			
8.16.2 The one-hour average concentration of total recoverable lead shall not exceed the value determined by the following equation[a]: $Pb = e^{(1.273[\ln(hardness)]-1.46)}$	X		X				
8.17 Manganese (mg/l) Not to exceed:		1.0		1.0		1.0	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.17.1 Effluent limitations which may result in a concentration up to 2.0 mg/l Mn in the stream are allowable upon a demonstration to the Chief by the applicant that such concentration will not have an adverse impact upon designated stream uses. This demonstration is subject to EPA approval and must show either: (1) the stream is supporting designated uses while containing Mn concentrations higher than the applicable criteria, or (2) the stream does not have an aquatic life use to protect. Notwithstanding § 4 herein this demonstration shall be the only one required before the Chief and Board regarding water quality related effluent limitations.		X					

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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	
8.18.2 Methylmercury (water column) Not to exceed (ug/l):		.012		.012			
8.19 Nickel (ug/l) Not to exceed:				50	4600	510	
8.19.1 The four-day average concentration of nickel shall not exceed the value determined by the following equation[a]: $Ni = e^{(0.846[\ln(hardness)]+1.1645)}$		X					

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.19.2 The one-hour average concentration of total recoverable nickel shall not exceed the value determined by the following equation[a]: $Ni = e^{(0.846[\ln(hardness)]+3.361)}$	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[b] (ng/l)	2400	4.3	2400	4.3	0.46	0.46	0.46
DDT[b] (ng/l)	1100	1.0	1100	1.0	0.024	0.024	0.024
Aldrin[b] (ng/l)	3.0	0.071	3.0	0.071	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

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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	
Carbon tetrachloride[b] (ug/l)					4.4	0.25	
Chloroform[b] (ug/l)		15.7		15.7	470	0.19	
Halomethanes (ug/l)					15.7	0.19	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
1,2-dichloroethane[b] (ug/l)					99	0.035	
1,1,1-trichloroethane[b] (mg/l)						12	
1,1,2,2-tetrachloroethane (ug/l)		10.7		10.7	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			

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
Vinyl chloride[b] (chloroethene)(ug/l)					525	2.0	
alpa-BHC (alpha-Hexachloro-cyclohexane)[b] (ug/l)					0.013	.0039	
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	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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.							

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		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[c] No values below 6.0 nor above 9.0. Higher values due to photosynthetic activity may be tolerated.	X	X	X	X	X	X	X
8.24 Phenolic materials (ug/l) Not to exceed:	5		5			5	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, 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

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.27 Silver Hardness — Silver (ug/l) 0-50 — 1 51-100 — 4 101-200 — 12 >201 — 24				X		X	
8.27.1 0-50 — 1 51-100 — 4 101-200 — 12 201-400 — 24 401-500 — 30 501-600 — 43		X					
8.27.2 The one-hour average concentration of total recoverable silver shall not exceed the value determined by the following equation: $Ag=e^{(1.72[\ln(\text{hardness})]-6.52)}$	X		x				
8.28 Temperature Temperature rise shall be							

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, 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 seasonable temperature fluctuations that existed before the addition of heat due to other natural causes should be maintained.		X					

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, 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				

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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: Oct-Apr: Daily Mean 50 °F, Hourly Max 55 °F Sep-May: Daily Mean 58 °F, Hourly Max 62 °F Jun-Aug: Daily Mean 66 °F, Hourly Max 70 °F			X				

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, 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 Ave. / Inst. 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	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.30 Threshold odor[c] 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			10	10	
8.31.1 No chlorinated discharge allowed			X				

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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.							

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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.		X		X	X	X	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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.		X			X	X	
8.33 Zinc: Hardness mg/l CaCo3 — Zinc ug/l 0-50 — 50 151-300 — 100 301-400 — 300 >401 — 600						X	

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.33.1 The four-day average concentration of total recoverable zinc shall not exceed the value determined by the following equation[a]: $Zn = e^{(0.8473[\ln(hardness)]+0.7614)}$		X		X			
8.33.2 The one-hour average concentration of total recoverable zinc shall not exceed the value determined by the following equation[a]: $Zn = e^{(0.8473[\ln(hardness)]+0.8604)}$	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.

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B3, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[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.

ATTACHMENT A

TABLE 3.—WATER QUALITY CRITERIA FOR PROTECTION OF HUMAN HEALTH—Continued

Chemical	HNV (μg/L)		HCV (μg/L)	
	Drinking	Nondrinking	Drinking	Nondrinking
Trichloroethylene			2.9E1	3.7E2

[1] Includes methylmercury.

TABLE 4.—WATER QUALITY CRITERIA FOR PROTECTION OF WILDLIFE

Chemical	Criteria (μg/L)
DDT and metabolites	1.1E–5
Mercury (including methylmercury).	1.3E–3
PCBs (class)	7.4E–5
2,3,7,8-TCDD	3.1E–9

TABLE 5.—POLLUTANTS SUBJECT TO FEDERAL, STATE, AND TRIBAL REQUIREMENTS

Alkalinity
Ammonia
Bacteria
Biochemical oxygen demand (BOD)
Chlorine
Color
Dissolved oxygen
Dissolved solids
pH
Phosphorus
Salinity
Temperature
Total and suspended solids
Turbidity

TABLE 6.—POLLUTANTS OF INITIAL FOCUS IN THE GREAT LAKES WATER QUALITY INITIATIVE

A. Pollutants that are bioaccumulative chemicals of concern (BCCs):
Chlordane
4,4'-DDD; p,p'-DDD; 4,4'-TDE; p,p'-TDE
4,4'-DDE; p,p'-DDE
4,4'-DDT; p,p'-DDT
Dieldrin
Hexachlorobenzene
Hexachlorobutadiene; hexachloro-1, 3-butadiene
Hexachlorocyclohexanes; BHCs
alpha-Hexachlorocyclohexane; alpha-BHC
beta-Hexachlorocyclohexane; beta-BHC
delta-Hexachlorocyclohexane; delta-BHC
Lindane; gamma-hexachlorocyclohexane; gamma-BHC
Mercury
Mirex
Octachlorostyrene
PCBs; polychlorinated biphenyls
Pentachlorobenzene
Photomirex
2,3,7,8-TCDD; dioxin
1,2,3,4-Tetrachlorobenzene
1,2,4,5-Tetrachlorobenzene Toxaphene

B. Pollutants that are not bioaccumulative chemicals of concern:
Acenaphthene
Acenaphthylene
Acrolein; 2-propenal
Acrylonitrile
Aldrin
Aluminum
Anthracene
Antimony
Arsenic
Asbestos
1,2-Benzanthracene; benz[a]anthracene
Benzene
Benzidine
Benzo[a]pyrene; 3,4-benzopyrene
3,4-Benzofluoranthene; benzo[b]fluoranthene
11,12-Benzofluoranthene; benzo[k]fluoranthene
1,12-Benzoperylene; benzo[ghi]perylene
Beryllium
Bis(2-chloroethoxy) methane
Bis(2-chloroethyl) ether
Bis(2-chloroisopropyl) ether
Bromoform; tribromomethane
4-Bromophenyl phenyl ether
Butyl benzyl phthalate
Cadmium
Carbon tetrachloride; tetrachloromethane
Chlorobenzene
p-Chloro-m-cresol; 4-chloro-3-methylphenol
Chlorodibromomethane
Chloroethane
2-Chloroethyl vinyl ether
Chloroform; trichloromethane
2-Chloronaphthalene
2-Chlorophenol
4-Chlorophenyl phenyl ether
Chlorpyrifos
Chromium
Chrysene
Copper
Cyanide
2,4-D; 2,4-Dichlorophenoxyacetic acid
DEHP; di(2-ethylhexyl) phthalate
Diazinon
1,2:5,6-Dibenzanthracene; dibenz[a,h]anthracene
Dibutyl phthalate; di-n-butyl phthalate
1,2-Dichlorobenzene
1,3-Dichlorobenzene
1,4-Dichlorobenzene
3,3'-Dichlorobenzidine
Dichlorobromomethane; bromodichloromethane
1,1-Dichloroethane
1,2-Dichloroethane
1,1-Dichloroethylene; vinylidene chloride
1,2-trans-Dichloroethylene
2,4-Dichlorophenol
1,2-Dichloropropane
1,3-Dichloropropene; 1,3-dichloropropylene
Diethyl phthalate
2,4-Dimethylphenol; 2,4-xylenol
Dimethyl phthalate
4,6-Dinitro-o-cresol; 2-methyl-4,6-dinitrophenol
2,4-Dinitrophenol
2,4-Dinitrotoluene
2,6-Dinitrotoluene
Dioctyl phthalate; di-n-octyl phthalate
1,2-Diphenylhydrazine
Endosulfan; thiodan
alpha-Endosulfan
beta-Endosulfan
Endosulfan sulfate
Endrin
Endrin aldehyde
Ethylbenzene
Fluoranthene
Fluorene; 9H-fluorene
Fluoride
Guthion
Heptachlor
Heptachlor epoxide
Hexachlorocyclopentadiene
Hexachloroethane
Indeno[1,2,3-cd]pyrene; 2,3-o-phenylene pyrene
Isophorone
Lead
Malathion
Methoxychlor
Methyl bromide; bromomethane
Methyl chloride; chloromethane
Methylene chloride; dichloromethane
Napthalene
Nickel
Nitrobenzene
2-Nitrophenol
4-Nitrophenol
N-Nitrosodimethylamine
N-Nitrosodiphenylamine
N-Nitrosodipropylamine; N-nitrosodi-n-propylamine
Parathion
Pentachlorophenol
Phenanthrene
Phenol
Iron
Pyrene
Selenium
Silver
1,1,2,2-Tetrachloroethane
Tetrachloroethylene
Thallium
Toluene; methylbenzene
1,2,4-Trichlorobenzene
1,1,1-Trichloroethane
1,1,2-Trichloroethane
Trichloroethylene; trichloroethene
2,4,6-Trichlorophenol
Vinyl chloride; chloroethylene; chloroethene
Zinc

Appendix A to part 132—Great Lakes Water Quality Initiative Methodologies for Developments of Aquatic Life Criteria and Values

Methodology for Deriving Aquatic Life Criteria: Tier I

Great Lakes States and Tribes shall adopt provisions consistent with (as protective as) this appendix.

ENVIRONMENTAL QUALITY BOARD
1615 Washington Street, E.
Charleston, WV 25311

46 CSR 1 - Requirements Governing Water Quality Standards

Speakers Only

1. Robert L. Foster — WV Manufacturers Assoc
2. David M Flannery — WV Chamber of Commerce
3. Kathy G. Beckett — Wheeling - Pittsburgh Steel
4. Cindy Rank — W.V. Highlands Conservancy
5. Mary Jan Peck — WV Rivers Coalition
6. Ned Rose — Weirton Steel
7. Ron Evaldi — U.S. Geological Survey
8.

ENVIRONMENTAL QUALITY BOARD
1615 Washington Street, E.
Charleston, WV 25311

Public Hearing Attendance Sheet

1. Kim Byard, [illegible] Corp.
2. Ken Ward [illegible] [illegible]
3. Ken Politan WVDEP - OMR
4. Mike [illegible] [illegible]
5. Mark Vignovic Weirton Steel Corp
6. Gene Current Weirton Steel Corp
7. [illegible] Bl[illegible] [illegible] Steel [illegible]
8. Gene Breza - LLAPPA - Student Glenville ENVR. Studies

The West Virginia Mining and Reclamation Association

1624 Kanawha Blvd., E, Charleston, WV 25311

and the

West Virginia Coal Association

1301 Laidley Tower, Charleston, WV 25301

****

comments in response to

The Proposed Legislative Rule (Water Quality - Five Mile Rule) 46 CSR Series 1, Division of Environmental Protection, Environmental Quality Board

I. ABOUT THE PUBLIC COMMENT OPPORTUNITY:

A. OUR REPRESENTATION:

The West Virginia Mining and Reclamation Association and the West Virginia Coal Association represent over 400 coal producing companies and associate member companies who provide products and services to the coal industry. Our comments on this proposed regulation are on behalf of all of the members of the WVMRA and the WVCA.

B. OUR APPRECIATION FOR THIS OPPORTUNITY:

We are grateful for the opportunity to offer comments on this proposed legislative rule.

II. BACKGROUND ON THE WEST VIRGINIA COAL INDUSTRY:

The coal mining industry in West Virginia produces hundreds of millions of tons of high quality coal for domestic and foreign use as an energy source for the production of electricity, steel and a host of other applications. Employment directly in West Virginia mines and indirectly in the mining support trades and the hundreds of millions of dollars of taxes generated by coal related sources are the **economic backbone** of the Mountain State.

A recent study found that one out of every ten payroll dollars in West Virginia comes from the coal industry. It was further revealed that one of every three business tax dollars being collected by the State comes directly from the coal industry.

Every influence which alters the production of West Virginia coal changes the fragile **competitive balance** between coal mines here and coal mines in other coal producing states and other nations. Therefore, changes in the governmental regulations affecting this industry must be made with the potential negative impacts of those changes foremost in the minds of those considering such changes.

III. OUR COMMENTS ABOUT THE PROPOSED LEGISLATIVE RULE:

Much of this proposed new language is welcomed, since it eliminates some unnecessary language relating to the five mile requirement. However, we still have some areas of concern in this latest draft rule. Please consider the following before publishing the final rule prior to legislative consideration:

A. We recommend Section 5.2.c. be deleted, since there is no clear definition of "bioaccumulative pollutant". Further, there do not appear to be any federal EPA requirements prohibiting mixing zones for bioaccumulatives.

B. If a discharge is greater than five miles from an existing public water source, then the new rule should not require that Category A criteria be met. This is unnecessary and not required by federal standards.

C. This new rule should only apply to discharges located near public water supplies that exist today. Companies cannot make large outlays of capital investment now, only to find themselves unable to operate in the future as a result of having a new public water supply superimposed upon them.

IV. SUMMARY:

We agree generally with the legislative rule as proposed by the Division of Environmental Protection and we hope you will consider these comments for improving the rule.

We may offer additional comments on this rule prior to action by the legislature.

Again, we are grateful to Environmental Quality Board for providing this opportunity for comments and amendments.

(end of comments)

(no attachments)

K. O. Dawson

ATTACHMENT A

leasing. Such program shall include, but shall not be limited to, activities to identify, select, and classify those areas throughout the United States that have a high potential for hot dry rock geothermal energy production and activities to develop and disseminate information regarding the utilization of such areas for hot dry rock energy production. Such information may include information regarding field test processes and techniques for assuring that hot dry rock geothermal energy development projects are developed in an economically feasible manner without adverse environmental consequences. Utilizing the information developed by the Secretary, together with information developed in connection with other related programs carried out by other Federal agencies, the Secretary, acting through the United States Geological Survey, may also enter into contracts and cooperative agreements with any public or private entity to provide assistance to any such entity to enable such entity to carry out additional projects with respect to the utilization of hot dry rock geothermal energy resources which will further the purposes of this section.

(b) AUTHORIZATION OF APPROPRIATIONS.—There are authorized to be appropriated such sums as may be necesary to carry out this section.

SEC. 2502. HOT DRY ROCK GEOTHERMAL ENERGY IN EASTERN UNITED STATES.

The United States Geological Survey, in collaboration with the Secretary of Energy, shall convene a workshop of interested governmental and private parties to discuss the regional potential for hot dry rock geothermal energy in the Eastern United States. The purpose of the workshop shall be to review the status of recoverability of hot dry rock energy in the Eastern United States and to determine what geologic, technological, and economic obstacles need to be overcome to make the utilization of hot dry rock energy feasible. The workshop shall be convened within 6 months after enactment of this Act and the United States Geological Survey shall submit a report to Congress within 6 months after the workshop containing a summary of the findings and conclusions of the workshop.

SEC. 2503. COAL REMINING.

(a) MODIFICATION OF PROHIBITION.—Section 510 of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1260) is amended by adding the following new subsection at the end thereof:

"(e) MODIFICATION OF PROHIBITION.—After the date of enactment of this subsection, the prohibition of subsection (c) shall not apply to a permit application due to any violation resulting from an unanticipated event or condition at a surface coal mining operation on lands eligible for remining under a permit held by the person making such application. As used in this subsection, the term 'violation' has the same meaning as such term has under subsection (c). The authority of this subsection and section 515(b)(20)(B) shall terminate on September 30, 2004.".

(b) PERIOD OF RESPONSIBILITY.—Section 515(b)(20) of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1265(b)(20)) is amended as follows:

(1) Insert "(A)" after "(20)".

(2) Add the following new subparagraph at the end thereof:

"(B) on lands eligible for remining assume the responsibility for successful revegetation for a period of two full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with the applicable standards, except in those areas or regions of the country where the annual average precipitation is twenty-six inches or less, then the operator's assumption of responsibility and liability will be extended for a period of five full years after the last year of augmented seeding, fertilizing, irrigation, or other work in order to assure compliance with the applicable standards.".

(c) DEFINITIONS.—Section 701 of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1291) is amended by striking the period at the end of paragraph (32) and inserting a semicolon in lieu thereof, and by adding the following new paragraphs at the end thereof:

"(33) the term 'unanticipated event or condition' as used in section 510(e) means an event or condition encountered in a remining operation that was not contemplated by the applicable surface coal mining and reclamation permit; and

"(34) the term 'lands eligible for remining' means those lands that would otherwise be eligible for expenditures under section 404 or under section 402(g)(4).".

(d) ELIGIBILITY.—Section 404 of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1234) is amended by adding the following new sentence at the end thereof: "Surface coal mining operations on lands eligible for remining shall not affect the eligibility of such lands for reclamation and restoration under this title after the release of the bond or deposit for any such operation as provided under section 519. In the event the bond or deposit for a surface coal mining operation on lands eligible for remining is forfeited, funds available under this title may be used if the amount of such bond or deposit is not sufficient to provide for adequate reclamation or abatement, except that if conditions warrant the Secretary shall immediately exercise his authority under section 410.".

(e) ABANDONED COAL REFUSE SITES.—(1) Notwithstanding any other provision of the Surface Mining Control and Reclamation Act of 1977 to the contrary, the Secretary of the Interior shall, within one year after the enactment of this Act, publish proposed regulations in the Federal Register, and after opportunity for public comment publish final regulations, establishing environmental protection performance and reclamation standards, and separate permit systems applicable to operations for the on-site reprocessing of abandoned coal refuse and operations for the removal of abandoned coal refuse on lands that would otherwise be eligible for expenditure under section 404 and section 402(g)(4) of the Surface Mining Control and Reclamation Act of 1977.

(2) The standards and permit systems referred to in paragraph (1) shall distinguish between those operations which reprocess abandoned coal refuse on-site, and those operations which completely remove abandoned coal refuse from a site for the direct use of such coal refuse, or for the reprocessing of such coal refuse, at another location. Such standards and permit systems shall be premised on the distinct differences between operations for the on-site reprocess-

ing, and operations for the removal, of abandoned coal refuse and other types of surface coal mining operations.

(3) The Secretary of the Interior may devise a different standard than any of those set forth in section 515 and section 516 of the Surface Mining Control and Reclamation Act of 1977, and devise a separate permit system, if he determines, on a standard-by-standard basis, that a different standard may facilitate the on-site reprocessing, or the removal, of abandoned coal refuse in a manner that would provide the same level of environmental protection as under section 515 and section 516.

(4) Not later than 30 days prior to the publication of the proposed regulations referred to in this subsection, the Secretary shall submit a report to the Committee on Interior and Insular Affairs of the United States House of Representatives, and the Committee on Energy and Natural Resources of the United States Senate containing a detailed description of any environmental protection performance and reclamation standards, and separate permit systems, devised pursuant to this subsection.

SEC. 2504. SURFACE MINING ACT IMPLEMENTATION.

(a) SUBSIDENCE.—(1) Title VII of the Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1291 and following) is amended by adding the following new section at the end thereof:

"SEC. 720. SUBSIDENCE.

"(a) REQUIREMENTS.—Underground coal mining operations conducted after the date of enactment of this section shall comply with each of the following requirements:

"(1) Promptly repair, or compensate for, material damage resulting from subsidence caused to any occupied residential dwelling and structures related thereto, or non-commercial building due to underground coal mining operations. Repair of damage shall include rehabilitation, restoration, or replacement of the damaged occupied residential dwelling and structures related thereto, or non-commercial building. Compensation shall be provided to the owner of the damaged occupied residential dwelling and structures related thereto or non-commercial building and shall be in the full amount of the diminution in value resulting from the subsidence. Compensation may be accomplished by the purchase, prior to mining, of a noncancellable premium-prepaid insurance policy.

"(2) Promptly replace any drinking, domestic, or residential water supply from a well or spring in existence prior to the application for a surface coal mining and reclamation permit, which has been affected by contamination, diminution, or interruption resulting from underground coal mining operations.

Nothing in this section shall be construed to prohibit or interrupt underground coal mining operations.

"(b) REGULATIONS.—Within one year after the date of enactment of this section, the Secretary shall, after providing notice and opportunity for public comment, promulgate final regulations to implement subsection (a).".

(2XA) The Secretary of the Interior shall review existing requirements r lated to underground coal mine subsidence and natural gas and p oleum pipeline safety. Such review shall consider the fol-

Attachment B

ENROLLED

COMMITTEE SUBSTITUTE
FOR

COMMITTEE SUBSTITUTE
FOR

Senate Bill No. 287

(SENATORS WOOTON AND LOVE, *original sponsors*)

[Passed March 11, 1995; in effect ninety days from passage.]

AN ACT to amend and reenact section four, article three, chapter twenty-two-b of the code of West Virginia, one thousand nine hundred thirty-one, as amended, relating to environmental quality board rule-making authority; authorizing the promulgation of procedural rules granting site specific variances for water quality standards for coal remining operations; providing minimum requirements for procedures for granting variances; granting variance without requirement of best available technology and best professional judgment prohibited; granting variance without demonstration of potential for improvement prohibited; and granting variance if degradation will result prohibited.

Be it enacted by the Legislature of West Virginia:

That section four, article three, chapter twenty-two-b of the code of West Virginia, one thousand nine hundred thirty-one, as amended, be amended and reenacted to read as follows:

ARTICLE 3. ENVIRONMENTAL QUALITY BOARD.

§22B-3-4. Environmental quality board rule-making authority.

(a) In order to carry out the purposes of this chapter and chapter twenty-two of this code, the board shall promulgate legislative rules setting standards of water quality applicable to both the surface waters and groundwaters of this state. Standards of quality with respect to surface waters shall be such as to protect the public health and welfare, wildlife, fish and aquatic life, and the present and prospective future uses of such water for domestic, agricultural, industrial, recreational, scenic and other legitimate beneficial uses thereof.

(b) Except for the alternate procedures provided for in subsection (c) of this section, the board shall promulgate legislative rules setting water quality standards in accordance with the provisions of article three, chapter twenty-nine-a of this code and the declaration of policy set forth in section two, article eleven, chapter twenty-two of this code.

(c) The board may grant site specific variance only for remined areas of coal remining operation from the standards of water quality set forth in legislative rule 46-CSR-1, et seq., setting standards for iron manganese and pH prior to the issuance of a national pollutant discharge elimination system (NPDES) permit by the division of environmental protection in accordance with 33 USC Section 1311(p) of the federal Water Pollution Control Act. The standards established in the variance will exist for the term of the NPDES permit. The board will promulgate procedural rules on granting site specific coal remining variances in accordance with the provisions of article three, chapter twenty-nine-a of this code on or before the first day of July, one thousand nine

hundred ninety-five. At a minimum, the procedures for granting or denying a remining variance will include the following: A description of the data and information to be submitted to the board by the applicant for such variance; the criteria to be employed by the board in its decision; and provisions for a public comment period and public hearing prior to the board's decision. The board may not grant a variance without requiring the applicant to improve the instream water quality as much as is reasonably possible by applying best available technology economically achievable using best professional judgment which requirement will be included as a permit condition. The board may not grant a variance without a demonstration by the applicant that the coal remining operation will result in the potential for improved instream water quality as a result of the remining operation. The board may not grant a variance where the board determines that degradation of the instream water quality will result from the remining operation.

(d) No rule of the board may specify the design of equipment, type of construction or particular method which a person shall use to reduce the discharge of a pollutant.

ATTACHMENT C

Colombo
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coal mine.

(e) Notwithstanding any other provision of this code, the coal underlying any lands designated unsuitable for surface-mining operations under any provisions of this article or underlying any land upon which mining is prohibited by any provisions of this article shall be assessed for taxation purposes according to their value and the Legislature hereby finds that the coal has no value for the duration of the designation or prohibition unless suitable for underground mining not in violation of this article: *Provided*, That the owner of the coal shall forthwith notify the proper assessing authorities if the designation or prohibition is removed so that the coal may be reassessed.

§22A-3-23. Release of performance bond or deposits; application; notice, duties of commissioner; public hearings; final maps on grade release.

(a) The permittee may file a request with the commissioner for the release of a performance bond or deposit. The permittee shall publish an advertisement regarding such request for release in the same manner as is required of advertisements for permit applications. A copy of such advertisements shall be submitted to the commissioner as part of any bond release application and shall contain a notification of the precise location of the land affected, the number of acres, the permit and the date approved, the amount of the bond filed and the portion sought to be released, the type and appropriate dates of reclamation work performed and a description of the results achieved as they relate to the permittee's approved reclamation plan. In addition, as part of any bond release application, the permittee shall submit copies of letters which he has sent to adjoining property owners, local government bodies, planning agencies, sewage and water treatment authorities or water companies in the locality in which the surface-mining operation is located, notifying them of the permittee's intention to seek release from the bond. Any request for grade release shall also be accompanied by final maps.

(b) Upon receipt of the application for bond release, the commissioner, within thirty days, taking into consideration existing weather conditions, shall conduct an inspection and

evaluation of the reclamation work involved. Such evaluation shall consider, among other things, the degree of difficulty to complete any remaining reclamation, whether pollution of surface and subsurface water is occurring, the probability of continuance or future occurrence of such pollution and the estimated cost of abating such pollution. The commissioner shall notify the permittee in writing of his decision to release or not to release all or part of the performance bond or deposit within sixty days from the date of the initial publication of the advertisement if no public hearing is requested. If a public hearing is held, the commissioner's decision shall be issued within thirty days thereafter.

(c) If the commissioner is satisfied that reclamation covered by the bond or deposit or portion thereof has been accomplished as required by this article, he may release said bond or deposit, in whole or in part, according to the following schedule:

(1) When the operator completes the backfilling, regrading and drainage control of a bonded area in accordance with his approved reclamation plan, the release of sixty percent of the bond or collateral for the applicable bonded area: *Provided*, That a minimum bond of ten thousand dollars shall be retained after grade release;

(2) Two years after the last augmented seeding, fertilizing, irrigation or other work to ensure compliance with subdivision (19), subsection (b), section twelve of this article, the release of an additional twenty-five percent of the bond or collateral for the applicable bonded area: *Provided*, That a minimum bond of ten thousand dollars shall be retained after the release provided for in this subdivision, and

(3) When the operator has completed successfully all surface mining and reclamation activities, the release of the remaining portion of the bond, but not before the expiration of the period specified in subdivision (20), subsection (b), section twelve of this article: *Provided*, That the revegetation has been established on the regraded mined lands in accordance with the approved reclamation plan. *Provided, however*, That such a release may be made where the quality of the untreated post-mining water discharged is better than or equal to the premining water quality discharged from the mining site.

No part of the bond or deposit may be released under this subsection so long as the lands to which the release would be applicable are contributing additional suspended solids to streamflow or runoff outside the permit area in excess of the requirements set by section twelve or thirteen of this article, or until soil productivity for prime farmlands has returned to equivalent levels of yield as nonmined land of the same soil type in the surrounding area under equivalent management practices as determined from the soil survey performed pursuant to section nine of this article. Where a sediment dam is to be retained as a permanent impoundment pursuant to section twelve of this article, or where a road or minor deviation is to be retained for sound future maintenance of the operation, the portion of the bond may be released under this subsection so long as provisions for sound future maintenance by the operator or the landowner have been made with the commissioner.

(d) If the commissioner disapproves the application for release of the bond or portion thereof, the commissioner shall notify the permittee, in writing, stating the reasons for disapproval and recommending corrective actions necessary to secure said release and notifying the operator of his right to a hearing.

(e) When any application for total or partial bond release is filed with the commissioner, he shall notify the municipality in which a surface-mining operation is located by registered or certified mail at least thirty days prior to the release of all or a portion of the bond.

(f) Any person with a valid legal interest which is or may be adversely affected by release of the bond or the responsible officer or head of any federal, state or local governmental agency which has jurisdiction by law or special expertise with respect to any environmental, social or economic impact involved in the operation, or is authorized to develop and enforce environmental standards with respect to such operations, has the right to file written objections to the proposed bond release and request a hearing with the commissioner within thirty days after the last publication of the permittee's advertisement. If written objections are filed and a hearing requested, the commissioner shall inform all of the interested parties of the time and place of the hearing and

shall hold a public hearing in the locality of the surface-mining operation proposed for bond release within three weeks after the close of the public comment period. The date, time and location of such public hearing shall also be advertised by the commissioner in a newspaper of general circulation in the same locality.

(g) Without prejudice to the rights of the objectors, the applicant, or the responsibilities of the commissioner pursuant to this section, the commissioner may hold an informal conference to resolve any written objections and satisfy the hearing requirements of this section thereby.

(h) For the purpose of such hearing, the commissioner has the authority and is hereby empowered to administer oaths, subpoena witnesses and written or printed materials, compel the attendance of witnesses, or production of materials, and take evidence including, but not limited to, inspections of the land affected and other surface-mining operations carried on by the applicant in the general vicinity. A verbatim record of each public hearing required by this section shall be made and a transcript made available on the motion of any party or by order of the commissioner at the cost of the person requesting the transcript.

§22A-3-24. Water rights and replacement; waiver of replacement.

(a) Nothing in this article shall be construed as affecting in any way the rights of any person to enforce or protect, under applicable law, his interest in water resources affected by a surface-mining operation.

(b) Any operator shall replace the water supply of an owner of interest in real property who obtains all or part of his supply of water for domestic, agricultural, industrial or other legitimate use from an underground or surface source where such supply has been affected by contamination, diminution or interruption proximately caused by such surface-mining operation, unless waived by said owner.

§22A-3-25. Citizen suits; order of court; damages.

(a) Except as provided in subsection (b) of this section, any person having an interest which is or may be adversely affected may commence a civil action in the circuit court of the county to which the surface-mining operation is located on his own

ATTACHMENT D

WATER QUALITY ACT OF 1987

For Legislative History of Act, see p. 5.

An Act to amend the Federal Water Pollution Control Act to provide for the renewal of the quality of the Nation's waters, and for other purposes.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Water Quality Act of 1987.

SECTION 1. SHORT TITLE; TABLE OF CONTENTS; AMENDMENTS TO FEDERAL WATER POLLUTION CONTROL ACT; DEFINITION OF ADMINISTRATOR.

(a) SHORT TITLE.—This Act may be cited as the "Water Quality Act of 1987". 33 USC 1251 note.

(b) TABLE OF CONTENTS.—

Sec. 1. Short title; table of contents; amendments to Federal Water Pollution Control Act; definition of Administrator.
Sec. 2. Limitation on payments.

TITLE I—AMENDMENTS TO TITLE I

Sec. 101. Authorizations of appropriations.
Sec. 102. Small flows clearinghouse.
Sec. 103. Chesapeake Bay.
Sec. 104. Great Lakes.
Sec. 105. Research on effects of pollutants.

TITLE II—CONSTRUCTION GRANTS AMENDMENTS

Sec. 201. Time limit on resolving certain disputes.
Sec. 202. Federal share.
Sec. 203. Agreement on eligible costs.
Sec. 204. Design/build projects.
Sec. 205. Grant conditions; user charges on low-income residential users.
Sec. 206. Allotment formula.
Sec. 207. Rural set aside.
Sec. 208. Innovative and alternative projects.
Sec. 209. Regional organization funding.
Sec. 210. Marine CSO's and estuaries.
Sec. 211. Authorization for construction grants.
Sec. 212. State water pollution control revolving funds.
Sec. 213. Improvement projects.
Sec. 214. Chicago tunnel and reservoir project.
Sec. 215. Ad valorem tax dedication.

TITLE III—STANDARDS AND ENFORCEMENTS

Sec. 301. Compliance dates.
Sec. 302. Modification for nonconventional pollutants.
Sec. 303. Discharges into marine waters.
Sec. 304. Filing deadline for treatment works modification.
Sec. 305. Innovative technology compliance deadlines for direct dischargers.
Sec. 306. Fundamentally different factors.
Sec. 307. Coal remining operations.
Sec. 308. Individual control strategies for toxic pollutants.
Sec. 309. Pretreatment standards.
Sec. 310. Inspection and entry.
Sec. 311. Marine sanitation devices.
Sec. 312. Criminal penalties.
Sec. 313. Civil penalties.
Sec. 314. Administrative penalties.
Sec. 315. Clean lakes.

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(B) to affect the procedures and standards applicable to the Administrator in issuing permits under section 402(aX1XB) of the Federal Water Pollution Control Act, and 33 USC 1342.

(C) to affect the authority of any State to deny or condition certification under section 401 of such Act with respect to the issuance of permits under section 402(aX1XB) of such Act. 33 USC 1341.

SEC. 307. COAL REMINING OPERATIONS.

Section 301 is amended by adding at the end thereof the following: *Ante*, p. 35.

"(p) MODIFIED PERMIT FOR COAL REMINING OPERATIONS.—

"(1) IN GENERAL.—Subject to paragraphs (2) through (4) of this subsection, the Administrator, or the State in any case which the State has an approved permit program under section 402(b), may issue a permit under section 402 which modifies the requirements of subsection (bX2XA) of this section with respect to the pH level of any pre-existing discharge, and with respect to pre-existing discharges of iron and manganese from the remined area of any coal remining operation or with respect to the pH level or level of iron or manganese in any pre-existing discharge affected by the remining operation. Such modified requirements shall apply the best available technology economically achievable on a case-by-case basis, using best professional judgment, to set specific numerical effluent limitations in each permit. State and local governments. 33 USC 1342.

"(2) LIMITATIONS.—The Administrator or the State may only issue a permit pursuant to paragraph (1) if the applicant demonstrates to the satisfaction of the Administrator or the State, as the case may be, that the coal remining operation will result in the potential for improved water quality from the remining operation but in no event shall such a permit allow the pH level of any discharge, and in no event shall such a permit allow the discharges of iron and manganese, to exceed the levels being discharged from the remined area before the coal remining operation begins. No discharge from, or affected by, the remining operation shall exceed State water quality standards established under section 303 of this Act. State and local governments. 33 USC 1313.

"(3) DEFINITIONS.—For purposes of this subsection—

"(A) COAL REMINING OPERATION.—The term 'coal remining operation' means a coal mining operation which begins after the date of the enactment of this subsection at a site on which coal mining was conducted before the effective date of the Surface Mining Control and Reclamation Act of 1977. 30 USC 1201 note.

"(B) REMINED AREA.—The term 'remined area' means only that area of any coal remining operation on which coal mining was conducted before the effective date of the Surface Mining Control and Reclamation Act of 1977.

"(C) PRE-EXISTING DISCHARGE.—The term 'pre-existing discharge' means any discharge at the time of permit application under this subsection.

"(4) APPLICABILITY OF STRIP MINING LAWS.—Nothing in this subsection shall affect the application of the Surface Mining Control and Reclamation Act of 1977 to any coal remining operation, including the application of such Act to suspended solids.".

ATTACHMENT E

DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION
10 McJunkin Road
Nitro, WV 25143-2506

Gaston Caperton
Governor
John M. Ranson
Cabinet Secretary

David C. Callaghan
Director
Ann A. Spainer
Deputy Director

WEST VIRGINIA
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
WATER POLLUTION CONTROL PERMIT

NPDES PERMIT NO.: WV0094871 ISSUE DATE: January 6, 1994

ARTICLE 3 NO.: S-2018-88 EXPIRATION DATE: January 6, 1999

SUBJECT: Remining

SUPERSEDES: N/A EFFECTIVE DATE: N/A

LOCATION:	Davis (City)	Tucker (County)	Monongahela (Drainage Basin)

TO WHOM IT MAY CONCERN:

This is to certify that: Buffalo Coal Company, Inc.
Post Office Box 282
Bayard, West Virginia 26707

is hereby granted a West Virginia NPDES Water Pollution Control Permit to: open and operate the Gatzmer Surface Mine, which is to remine an abandoned surface mine, and daylight an abandoned deep mine in the Upper Freeport Coal Seam, and discharge treated water into Beaver Creek at Blackwater River of the Cheat River of the Monongahela River.

This permit is subject to the following terms and conditions:

-- **The effluent limitations, monitoring requirements and other conditions set forth in Section A, B, C, and D.**

BY: Faulkner E McCoy
Chief, Office of Water Resources

DMM-5-A

PERMIT NO. WV0094871
PAGE 2A OF 8

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTLET The permittee is authorized to discharge during the months of January, February, March, April, November, and December from Outlet:

318 47

Number: 002	Number:	Number:
Effluent Type C	Effluent Type	Effluent Type
Latitude: 39° 11' 03"	Latitude: ° ' "	Latitude: ° ' "
Longitude: 79° 23' 11"	Longitude: ° ' "	Longitude: ° ' "

2. EFFLUENT LIMITATIONS AND MONITORING FREQUENCY: Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENT	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Total Iron	1.06 lbs/day	5.46 lbs/day	Semi-Monthly	Grab
Total Manganese	1.74 lbs/day	8.24 lbs/day	Semi-Monthly	Grab
Total Hot Acidity	13.19 lbs/day	50.80 lbs/day	Semi-Monthly	Grab
Suspended Solids	35.0 mg/l	70.0 mg/l	Semi-Monthly	Grab
Flow	Report Only gpm	Report Only gpm	Semi-Monthly	Measured
Settleable Solids	N/A	0.5 ml/l*	(See Page 2 Item 4)	Grab

3. COMPLIANCE POINT: Samples taken for compliance with the above monitoring requirements shall be taken at the following locations(s): Outlet Sites.

*Instantaneous maximum limitation not to be exceeded at any time.

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTLET The permittee is authorized to discharge from

Number: 001	Number: 003	Number:
Effluent Type d	Effluent Type d	Effluent Type
Latitude 39 ° 11 ' 06"	Latitude 39 ° 11 ' 09"	Latitude ° ' "
Longitude 79 ° 23 ' 26"	Longitude 79 ° 22 ' 47"	Longitude ° ' "

2. EFFLUENT LIMITATIONS AND MONITORING FREQUENCY: Outlets should be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENTS	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Flow	Report only GPM	Report only GPM	Semi-Monthly	Estimated
pH	6 - 9 Standard Units	At All Times	Semi-Monthly	Grab
Total Iron	3.0 mg/l	6.0 mg/l	Semi-Monthly	Grab
Manganese	2.0 mg/l	4.0 mg/l	Semi-Monthly	Grab
Suspended Solids	35.0 mg/l	70.0 mg/l	Semi-Monthly	Grab
Settleable Solids	N/A	0.5 ml/l*	(See Item 4 below)	Grab
Aluminum			Semi-Monthly	Grab

*Instantaneous maximum limitation not to be exceeded at any time.

3. COMPLIANCE POINT: Samples taken for compliance with the above monitoring requirements shall be taken at the following location(s): Outlet Sites

4. ALTERNATE EFFLUENT LIMITATIONS: If alternate effluent limits are chosen, the following monitoring scheme applies:

a. Table I "Alternate Storm Limitations" applies to any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period.

b. Analyze the required parameters, which are determined by effluent type (listed in A.1.) and rainfall event, listed in Table I "Alternate Storm Limitations".

c. The permittee shall have the burden of proof that the discharge or increase in discharge was caused by the applicable rainfall event. This shall be verified by the use of a rainfall gauge located within three miles of the discharge point and last emptied no more than twenty-four hours prior to the time the sample was taken. Automated raingauges may also be utilized. The sampling date and amount of rainfall measured by the gauge shall be reported on the Discharge Monitoring Report (DMR).

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTLET The permittee is authorized to discharge during the months of May, June, July, August, September, and October from Outlet:

Number: 002	Number:	Number:
Effluent Type C	Effluent Type	Effluent Type
Latitude: 39° 11' 03"	Latitude: ° ' "	Latitude: ° ' "
Longitute: 79° 23' 11"	Longitute: ° ' "	Longitute: ° ' "

2. EFFLUENT LIMITATIONS AND MONITORING FREQUENCY: Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENT	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Total Iron	0.95 lbs/day	5.46 lbs/day	Semi-Monthly	Grab
Total Manganese	1.13 lbs/day	8.24 lbs/day	Semi-Monthly	Grab
Total Hot Acidity	7.11 lbs/day	50.80 lbs/day	Semi-Monthly	Grab
Suspended Solids	35.0 mg/l	70.0 mg/l	Semi-Monthly	Grab
Flow	Report Only gpm	Report Only gpm	Semi-Monthly	Measured
Settleable Solids	N/A	0.5 ml/l*	(See Page 2 Item 4)	Grab

3. COMPLIANCE POINT: Samples taken for compliance with the above monitoring requirements shall be taken at the following locations(s): Outlet Sites.

*Instantaneous maximum limitation not to be exceeded at any time.

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTLET The permittee is authorized to discharge during the months of January, February, March, April, November, and December from Outlet:

Number: 004	Number:	Number:
Effluent Type C	Effluent Type	Effluent Type
Latitude: 39° 11' 07"	Latitude: ° ' "	Latitude: ° ' "
Longitute: 79° 22' 50"	Longitute: ° ' "	Longitute: ° ' "

2. EFFLUENT LIMITATIONS AND MONITORING FREQUENCY: Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENT	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Total Iron	2.26 lbs/day	15.09 lbs/day	Semi-Monthly	Grab
Total Manganese	1.46 lbs/day	6.22 lbs/day	Semi-Monthly	Grab
Total Hot Acidity	20.44 lbs/day	165.30 lbs/day	Semi-Monthly	Grab
Suspended Solids	35.0 mg/l	70.0 mg/l	Semi-Monthly	Grab
Flow	Report Only gpm	Report Only gpm	Semi-Monthly	Measured
Settleable Solids	N/A	0.5 ml/l*	(See Page 2 Item 4)	Grab

3. COMPLIANCE POINT: Samples taken for compliance with the above monitoring requirements shall be taken at the following locations(s): Outlet Sites.

*Instantaneous maximum limitation not to be exceeded at any time.

A. DISCHARGE LIMITATIONS AND MONITORING REQUIREMENTS

1. OUTLET The permittee is authorized to discharge during the months of May, June, July, August, September, and October from Outlet:

Number: 004	Number:	Number:
Effluent Type C	Effluent Type	Effluent Type
Latitude: 39° 11' 07"	Latitude: ° ' "	Latitude: ° ' "
Longitude: 79° 22' 50"	Longitude: ° ' "	Longitude: ° ' "

2. EFFLUENT LIMITATIONS AND MONITORING FREQUENCY: Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTIC	DISCHARGE LIMITATIONS		MONITORING REQUIREMENT	
	Average Monthly	Maximum Daily	Measurement Frequency	Sample Type
Total Iron	2.32 lbs/day	15.09 lbs/day	Semi-Monthly	Grab
Total Manganese	1.43 lbs/day	6.22 lbs/day	Semi-Monthly	Grab
Total Hot Acidity	13.93 lbs/day	165.30 lbs/day	Semi-Monthly	Grab
Suspended Solids	35.0 mg/l	70.0 mg/l	Semi-Monthly	Grab
Flow	Report Only gpm	Report Only gpm	Semi-Monthly	Measured
Settleable Solids	N/A	0.5 ml/l*	(See Page 2 Item 4)	Grab

3. COMPLIANCE POINT: Samples taken for compliance with the above monitoring requirements shall be taken at the following locations(s): Outlet Sites.

*Instantaneous maximum limitation not to be exceeded at any time.

TABLE 1
ALTERNATE STORM LIMITATIONS

EFFLUENT TYPES	DRY WEATHER	DCP*	1 YEAR-24 HOUR	2 YEAR-24 HOUR	10 YEAR-24 HOUR
ACID OR FERRUGINOUS CATEGORIES					
. Discharges from underground workings of underground mines not commingled	TSS pH Iron Flow Manganese		(NO ALTERNATE LIMITATIONS)		
. Discharges from underground workings of underground mines commingled	TSS pH Iron Manganese Flow				Flow pH
. Controlled surface mine drainage (except steep slope and mountaintop removal	TSS pH Iron Manganese Flow				Flow pH
Non-controlled surface mine drainage (except steep slope and mountaintop removal	TSS pH Iron Flow Manganese	SS** pH Iron Flow Manganese		SS** pH Flow	Flow pH
. Discharges from coal refuse disposal areas	TSS pH Iron Manganese Flow		Flow SS* pH		Flow pH
. Discharges from steep slope and mountaintop removal areas	TSS pH Iron Flow Manganese	Flow SS** pH			Flow pH
. Discharges from preparation plants and preparation plant associated areas (excluding coal refuse piles)	TSS pH Iron Flow Manganese	Flow SS** pH			Flow pH
. Discharges from reclamation areas	Flow, SS**, pH				Flow pH
ALKALINE CATEGORY					
. Discharges from underground workings of underground mines not commingled & water quality based effluent limits	TSS pH Iron Flow		(NO ALTERNATE LIMITATIONS)		
. Alkaline mine discharges	TSS pH Iron Flow	Flow SS** pH			Flow pH
. Reclamation areas	SS**, pH, Flow				Flow pH

CP* -- Discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period.
S** -- Settleable Solids

5. SUBMISSION OF DISCHARGE MONITORING REPORTS (DMR'S)

(a) Permittee shall submit each month, accordingly to the enclosed format, a Discharge Monitoring Report (DMR) indicating the values of the constituents listed in Part A, to be in the discharge measured at the specific compliance points. All analysis must be determined by methods required in 40 CFR Part 136.

(b) The required monthly reports shall be postmarked no later than twenty (20) days following the end of the reporting period and shall be sent to the address below:

Division of Environmental Protection
NPDES Section
10 McJunkin Road
Nitro, West Virginia 25143-2506

Division of Environmental Protection
Environmental Protection
105 South Railroad Street
Post Office Box 900
Philippi, West Virginia 26416

(c) Enter reported average and maximum values under "Quantity" and "Concentration" in the units specified for each parameter, as appropriate.

(d) Specify the number of analyzed samples that exceed the allowable permit conditions in the columns labeled "N.E." (i.e. number exceeding).

(e) Specify frequency or analysis for each parameter as number of analyses/specified period (e.g. "3"/month is equivalent to 3 analyses performed every calendar month). If continuous, enter "Cont". The frequency listed on format is the minimum required.

(f) Calculations for all limitations which require averaging of measurements shall utilize an arithmetic means unless otherwise specified in the permit.

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the following interim requirements and the discharge limitations specified in this permit in accordance with the following schedule:

Interim Requirements	Completion Date
Effective Date of this Permit	

2. Reports of compliance or non-compliance with, and progress reports on the interim and final requirements contained in the above compliance schedule, shall be submitted no later than fourteen (14) days following each schedule date.

N/A

C. TERMS AND CONDITIONS INCORPORATED BY REFERENCE TO THE WVNPDES REGULATIONS FOR COAL MINING FACILITIES, SERIES 30.

5.1 Duty to Comply, Penalties

5.2 Duty to Reapply

5.3 Duty to Halt or Reduce Activity

5.4 Duty to Mitigate

5.5 Proper Operation and Maintenance

5.6 Permit Actions

5.7 Transfer

5.8 Property Rights

5.9 Duty to Provide Information

5.10 Inspection and Entry

5.11 Monitoring and Records

5.12 Signatory Requirements

5.13 Reporting Requirements

5.14 Bypass

5.15 Upset

5.16 Reopener Clause

5.17 Removed Substances

5.18 New Sources (if applicable)

5.19 Definitions

D. OTHER REQUIREMENTS

1. REPORTING SPILLS AND ACCIDENTAL DISCHARGES - nothing in this permit shall be constructed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities or penalties established pursuant to Series 3, Section 1 of the Water Resources Board's Regulations.

Attached is a copy of the West Virginia Spill Alert System for use in complying with Series 3, Section 1 of the regulations as they pertain to the reporting of spills and accidental discharges.

2. HAULAGEWAYS AND ACCESS ROADS - shall be constructed and maintained in accordance with best management practices including, but not limited to, the performance standards contained in Section A of the West Virginia Surface Mining Regulations, the standards and specifications contained in the Technical Handbook of Standards and Specifications for Erosion and Sediment Control: Excess Spoil Disposal: Haulageways for Mining Operations in West Virginia. West Virginia Department of Energy, 1985, and the standards and specifications outlined in the Construction Best Management Practice Manual, West Virginia Department of Natural Resources, 1981.

3. The receiving streams shall be monitored by grab samples semi-monthly at the stream sampling points listed below and the samples shall be analyzed for the parameters listed below. The flow of the stream shall also be measured at the time of monitoring. Monitoring shall be done approximately at the same time as the discharge points are monitored as required under Section A of this permit. A monthly report of the stream monitoring and flow shall be sent to the NPDES Section in Nitro, on the enclosed forms along with the reports required under Section A. Based upon the stream monitoring flow data, water quality standards or other information, the Division may at any time modify the effluent limits in Section A of this permit for any of the discharge points, if necessary, to insure compliance with water quality standards.

STREAM STATIONS	PARAMETERS
Beaver Creek Stations A and 2	Total Hot Acidity, Total Iron, Total Manganese, Sulfates, Alkalinity, and pH.
Little Beaver Creek Stations A and B	Total Hot Acidity, Total Iron, Total Manganese, Sulfates, Alkalinity, and pH.

E. REMINING PERMIT CONDITIONS

1. The permittee has identified two (2) pre-existing discharges which are hydrogeologically connected and have the potential of being affected by remining activities associated with this permit. These pre-existing discharges have been created by past surface and deep mining activities in the Upper Freeport Coal Seam. The two (2) pre-existing discharges are located on the drainage/proposal map and identified below:

STATION	LONGITUDE	LATITUDE	OUTLET
Seep	79° 25' 11"	39° 22' 03"	002
Abandoned Deep Mine	79° 22' 52"	39° 11' 12"	004

2. The permittee shall implement the abatement plan as defined in the WVNPDES Application No. WV0094871.

3. The following Trend-Line Monitoring Limit has been established for the Outlet:

   Outlet 002: Total Hot Acidity - 15.19 lbs/day
   Outlet 004: Total Hot Acidity - 35.71 lbs/day

   Upon initiation of remining activities within the contributing drainage area of the outlets, the untreated water shall be monitored semi-monthly. The monitoring shall occur on the same day that the outlet is monitored. If no prior chemical treatment has occurred at the outlet, monitoring of the outlet and reporting of the analyses for the Trend-Line Monitoring Limit is acceptable. The analyses shall be reported on the enclosed forms at the same frequency as the other reports required under Section A. If the Trend-Line Monitoring Limit is exceeded on three successive reporting periods, the permittee must submit a revised abatement plan which will restore compliance with the Trend-Line Monitoring Limit.

4. The following Bond Release Limits have been established for the remined area:

   Total Iron - 1,057.81 lbs/yr.
   Total Manganese - 725.22 lbs/yr.
   Total Hot Acidity - 9,149.64 lbs/yr.

Upon the conclusion of the mining and reclamation operation, the permittee must demonstrate, based on twelve consecutive months of semi-monthly sampling and analysis of all untreated discharges emanating from the remining operation, that the Bond Release Limit has not been exceeded, and that the water quality being discharged from the site has been improved. Failure to make such a demonstration, shall require installation, operation, and maintenance of a water treatment system to achieve compliance with the monthly average and daily maximum effluent limitations.

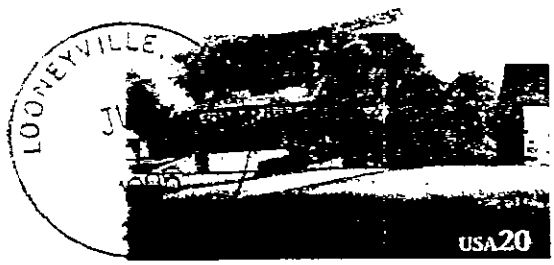
5. In accordance with CSR 38-2-12.2(e) and 38-2-14.7(d), no portion of the bond will be released until the Bond Release Limit has been achieved and maintained for twelve consecutive months. Upon the bond being final released, the WVNPDES Permit shall be terminated.

The herein-described activity is to be extended, modified, added to, made, enlarged, acquired, constructed or installed, and operated, used and maintained strictly in accordance with the terms and conditions of this permit; the plans and specifications submitted with Permit Application No. WV0094871, dated the 28th day of May, 1992, the information submitted with Application for Reissuance No. N/A dated the _____ day of N/A, 199__, with the plan of maintenance and method of operation thereof submitted with such application(s) with the WVNPDES Regulations, Series 30, and with any applicable rules and regulations promulgated by the State Water Resources Board.

Failure to comply with the terms and conditions of this permit, with the plans and specifications submitted with Permit Application No. WV0094871, dated the 28th day of May, 1992, with the information submitted with Application for Reissuance No. N/A, dated the _____ day of _____, 199__, and with the plan of maintenance and method of operation thereof submitted with such application(s) shall constitute grounds for the revocation or suspension of this permit and for the invocation of all the enforcement procedures set forth in Article 5A, Chapter 20 of the Code of West Virginia.

This permit is issued in accordance with the provisions of Article 5A, Chapter 20 of the Code of West Virginia, and is transferrable under the terms of WVNPDES Regulations, Series 30, Subsection 3.5.3.

Clay Rt. Box 89-C
Spencer 25276



RECEIVED
ENVIRONMENTAL QUALITY BOARD
CHARLESTON, WEST VIRGINIA

Environmental Quality Board
Att: Public Comments
1615 Washington St. E
Charleston, W. Va.
25311-2126

Att. Libby
Chief

The group I represent in Roane County, CCC (Concerned Citizens Coalition) strongly objects to your weakening of the "five mile rule" that protects drinking water. I know industries find it financially burdensome. Let's hope you or your family never find pollution medically burdensome. Be aware we will never compromise on our stand to insure clear air, water and land.

Sincerely,

Chuck Wyrostok for the CCC
Clay Rt. Box 89-C, Spencer 25276
927-2978

Susannah Reid
913 Egypt Ridge
Spencer, WV 25276

THE ENVIRONMENTAL
QUALITY BOARD
1615 WASHINGTON ST EAST
CHARLESTON, WV 25311-2126

ATT: LIBBY CHATFIELD

Dear Miss Chatfield, 7/15/95

I am alarmed to discover that you may permit an easement on the "5 mile rule" concerning drinking water and pollution. Why would you risk the health of citizens, wildlife and the environment for the sake of something as transitory as big business? KEEP THE "FIVE-MILE RULE"! We want health, and survival for future generations! Sincerely, Susannah Reid

J. Reid
913 Egypt Ridge
Spencer, WV 25276-9403

THE ENVIRONMENTAL QUALITY BOARD
1615 WASHINGTON ST. EAST
CHARLESTON, WV 25311-2126

7/16/96

DEAR MS. WHITFIELD:

I WAS APPALLED TO DISCOVER YOUR PROPOSED ELIMINATION OF THE "5 MILE RULE" FOR CLEAN DRINKING WATER. KEEP THE FIVE MILE RULE! WE WANT CLEANER, NOT MORE TOXIC DRINKING WATER - SOME OF US HAVE CHILDREN AND THEIR HEALTH TO CONSIDER. PLEASE, DO THE RIGHT THING. KEEP THE FIVE MILE RULE! VERY TRULY YOURS

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES
Office of Environmental Health Services
815 Quarrier Street, Suite 418
Charleston, WV 25301

Gaston Caperton
Governor

(304) 558-2981
FAX: (304) 558-0691

July 18, 1995

Environmental Quality Board
1615 Washington Street, East
Charleston West Virginia 25311-2126

Requirements Covering Water
Quality Standards
Amendments to 46 CSR 1

We have reviewed the proposed standards and offer suggested revisions in the following three areas. If adopted, these revisions will further strengthen the public health protection aspect of the standards, particularly as related to public drinking water systems. Our comments are predicated on the other provisions of the proposed rule remaining substantially intact.

- §46-1-5 (page 6)
  Under 5.2 add new language as follows:
  headwaters.
  If mixing zones are determined to be allowable and applicable, the Chief shall establish mixing zones and assign definable geometric limits for a discharge or a pollutant, or pollutants within a discharge for all discharges five (5) miles upstream of a public water supply or to the

- §46-1-5 (page 7)
  Under 5.2.c add the following language:
  c. Concentrations of pollutants which exceed the criteria for the protection of human health set forth in Appendix E shall be assigned by the Chief after consultation with the Commissioner of the Bureau of Public Health. In the case of downstream water intakes, the accumulative effects of a contaminant or contaminants of upstream discharges and mixing zones shall be considered when considering human health risks.

- Revise the following parameters (allowable concentrations of pollutants in Appendix E - Human Health, Category A):

Antimony	6 µg/l
Lead	15 µg/l
Nickel	100 µg/l
1,2-dichlorobenzene	0.6 mg/l
1,4-dichlorobenzene	0.075 mg/l
1,1,1-trichloroethane	0.2 mg/l
Toluene	1.0 mg/l
Chlorobenzene	0.1 mg/l
Ethylbenzene	0.7 mg/l

The above allowable concentrations of pollutants are comparable to current maximum contaminant levels (MCLs) established for public drinking water systems.

We appreciate the opportunity to comment on the Board's proposed regulations. Please contact me at 558-2981 if you or staff wish to discuss further the rationale behind our recommendations.

Sincerely,

Nancy Fleming

for Donald A. Kuntz, P.E.
Director
Environmental Engineering Division

DAK:nsf

KOPPERS INDUSTRIES ENVIRONMENTAL SERVICES DEPARTMENT
436 Seventh Avenue-Pittsburgh, PA 15219-1800

DELIVER IMMEDIATELY TO:

Robert Jenkins
Chairman
Environmental Quality Board
304-558-4116

2 PAGES FOLLOWS THE COVER PAGE!

MESSAGE: July 18, 1995

Dear Mr. Jenkins:

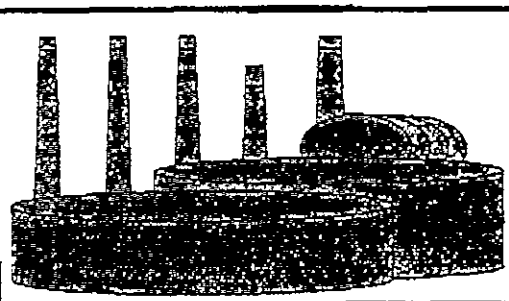
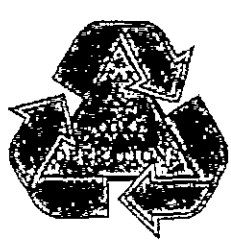
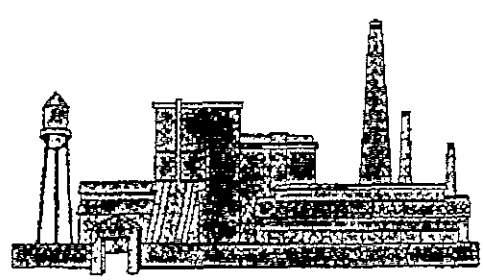
Due to circumstances beyond my control, I am unable to attend the public hearing schedule for 7:00 pm tonight concerning the Board's proposed amendment to the Water Quality Standards.

Accordingly, please accept my comments for submittal to the board via this fax transmittal. Sorry that I could not personally attend the hearing.

My compliments to you and members of the Board for coming up with a "reasonable" solution to a complex issue!

William E. Swearingen
Manager, Environmental Programs

PHONE 412-227-2883 *W. E. SWEARINGEN* FAX 412-227-2423

COMMENTS OF KOPPERS INDUSTRIES, INC. TO ENVIRONMENTAL QUALITY BOARD REGARDING PROPOSED AMENDMENT TO 46 CFR 1 WEST VIRGINIA WATER QUALITY STANDARDS

July 18, 1995

Koppers Industries, Inc. (KII) is a Pennsylvania Company with headquarters located in Pittsburgh, Pennsylvania. The Company owns and operates a coal tar refining plant in Follansbee, WV. This facility has been in operation for over 75 years. The plant is situated on the Ohio River at mile post 69.3 and utilizes the river as an industrial water supply and as a receptor for its NPDES outfall. It is regulated under the effluent limitations guidelines specified for the synthetic organic chemical manufacturing industry (SOCMI). The treatment system currently in place is considered the Best Available Technology (BAT) for the type of waste water processed at this location. The treatment facilities continue to meet or exceed the effluent standards on a consistent basis.

These facts notwithstanding, the current language of Section 5.2.b.B ("five mile rule") of the Water Quality Standards would require that this facility meet end-of-pipe water quality standards in any subsequent NPDES Permit renewal. The water quality based limitations imposed by the standards cannot be achieved with the waste water treatment system we are now using. This would require increased capital expenditures and unduly burdensome operating costs. However, these limitations can be achieved in the main water body through mixing zones at minimal increased costs.

At the last triennial review of the Water Quality Standards rule, KII and other affected industries submitted comments to the Board which objected to the establishment of water quality standards at end-of-pipe rather than in mixing zones within the receiving stream.

The Environmental Quality Board has proposed an amendment to the "five mile rule" which allows for the attainment of water quality standards within mixing zones rather than at end-of-pipe. The proposed amendment as filed with the West Virginia Legislative Rule Making Review Committee on June 16, 1995 addresses KII objections with the provisions of the current rule. It is a fair and equitable solution to a perplexing problem; yet provides continued protection of the public water supply. The proposed amendment is consistent with the Federal Clean Water Act. We support the Board's proposed amendment and urge its adoption by the West Virginia Legislature.

Thank you.

WEST VIRGINIA
MANUFACTURERS ASSOCIATION
2001 Quarrier Street, Charleston, WV 25311
Telephone: (304) 342-2123
FAX: (304) 342-4552

July 20, 1995

Mr. Charles Robert Jenkins, Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Suite 301
Charleston, WV 25311-2126

Attention: Frances Hunter

Re: Supplemental Comments on Proposed Revisions to West Virginia Water Quality Standards, 46 C.S.R. 1

Dear Chairman Jenkins:

At the public hearing held July 17, 1995 to accept comments on proposed changes to the West Virginia Water Quality Standards, Cindy Rank of the Highlands Conservancy suggested that the Board identify bioaccumulative pollutants by adopting a list of bioaccumulatives. The listed bioaccumulatives would be ineligible for a mixing zone, as provided in the Board's proposed amendments. As a result of some attendees' interest in responding to that suggestion and other comments made during the hearing, the time for submitting comments was extended until July 20th. Please accept these comments on behalf of the West Virginia Manufacturers Association with regard to Ms. Rank's suggestion that bioaccumulatives be listed, as well as some additional thoughts on the issue of denying mixing zones for bioaccumulatives.

A preliminary impediment to the development of a list of bioaccumulatives is the lack of a comprehensive list of such substances. There is a list of bioaccumulatives in the Great Lakes Initiatives ("GLI"), but it was not intended to apply throughout the country. As EPA noted in its preamble, its treatment of bioaccumulatives in that rule was based on factors unique to the Great Lakes region. There has not been any showing that the substances listed as bioaccumulative in the GLI are problems or potential problems in West Virginia. Furthermore,

it is not clear whether the GLI list identifies all substances that are arguably "cumulative", as that term is defined in 46 C.S.R. 1-2.2.[1]

In a more basic sense, though, the listing of bioaccumulatives, and denying a mixing zone for those substances, is the wrong approach to reducing their presence in state waters. Denying a mixing zone addresses only one source, the NPDES discharger, and ignores what could be substantially greater sources from non-point or non-regulated discharges such as agricultural and urban runoff, air deposition, etc. For example, mercury may migrate to streams from a variety of sources, no one of which is more responsible than the other for the overall level of mercury in state waters. Regulating only one source is unfair and may not result in sufficient reductions.

Denying mixing zones for bioaccumulatives also fails to recognize that the bioaccumulative nature of the substances was taken into account in EPA's development of water quality criteria, which have largely been adopted by the Board in Appendix E of 46 C.S.R. 1. For example, the West Virginia criterion for discharges of methylmercury is .012 ug/L. The EPA Quality Criteria for Water 1986 (" Gold Book") states that

> Basing a fresh water criterion on the Final Residue Value of 0.012 ug/L derived from the bioconcentration factor of 81,700 for methylmercury with the fathead minnow (Olson et. al. 1975) essentially assumes that all discharged mercury is methylmercury.

Gold Book Summary of Mercury Criteria. It is evident from this passage that the bioaccumulative effects of methylmercury have already been considered when setting criteria, and that denial of a mixing zone is unnecessary for the protection of state waters.

EPA has not stated in its guidance documents that mixing zones should be prohibited for all bioaccumulatives in all locations. It has recognized that the best approach to reducing bioaccumulatives is a reduction of mass loadings by wasteload allocations and control of nonpoint sources. Mixing zones, by way of contrast, are set to prevent excessive concentration of pollution in limited areas. There are site-specific and chemical-specific factors to be considered before determining whether a mixing zone is appropriate for any substance, including bioaccumulatives, and it is better to proceed on a case-by-case basis rather than institute a blanket prohibition on mixing zones for a substance.

Zinc, for instance, has a bioaccumulation factor of 51 to 1,130 times the ambient water concentration, and therefore arguably meets the definition of "cumulative", yet is not on the GLI list of bioaccumulatives.

WEST VIRGINIA
MANUFACTURERS ASSOCIATION

Rather than adopt a list of bioaccumulatives and deny mixing zones for them, the Board should consider taking more measured action. The WVMA suggests that the proper course of action would be to determine where bioaccumulatives are substances of concern in state waters, and then identify the source(s) of those bioaccumulatives. This would require investigating some sources that traditionally have not been scrutinized, such as urban and agricultural runoff, that are contributing to a loading of that pollutant throughout the watershed. If a problem in fact exists, the state should reduce loadings from all sources, not just industrial dischargers. Otherwise, industrial dischargers, because of the ease with which they are regulated, may be forced to provide all the reductions in pollutant loadings that are needed to meet water quality standards, even though they are not a major contributor to those loadings. In fact, current discharge limits for many substances are so low that further reductions may be impossible.

Looking at bioaccumulatives that are actual, rather than possible, substances of concern, and taking needed corrective action on a watershed basis, is consistent with EPA's focus on watersheds rather than stream segments. The watershed approach is also consistent with the work being done by George Constantz of the Division of Natural Resources in the West Virginia Watershed Conservation and Management Program.

The WVMA appreciates this opportunity to supplement its comments with regard to the proposed changes to water quality standards. We strongly urge the Board not to prohibit mixing zone for bioaccumulatives.

Sincerely yours,

Karen S. Price

Karen S. Price
President

KSP:shb

cc: Mr. Robert L. Foster

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, 1995

Charles R. Jenkins, Chairman
Environmental Quality Board
1615 Washington Street, East
Charleston, WV 25311-2126

RE: Proposed Amendments to 46 CSR 1
(Requirements Governing Water
Quality Standards)

Dr. Jenkins and Board Members,

Please accept these written comments as a reiteration of my oral presentation on behalf of the WV Highlands Conservancy (WVHC) to the Board at the public hearing July 18, 1995.

These comments address amendments to 46 CSR 1 that were filed in the Secretary of State's Office June 16, 1995 and that alter the existing provisions commonly referred to as "the five-mile rule" (7.2.a.B., et al).

I. As stated in my comments with regard to proposed rule changes to 46CSR1 at this time last year (7/13/94), WVHC continues to support current language of 7.2.a.B. which allows both a 5 mile buffer zone upstream from the intake of a public water supply and the ability for the Chief of Water Resources to impose more protective requirements within 1/2 mile upstream of those intakes.

WVHC opposed weakening amendments in 1983 (see letter dated 9/27/83 submitted with our 7/13/94 comments). The resulting "5 mile rule" language was a bit more palatable than the original proposed language of that time, but in fact was a giant step away from the protection afforded public water supplies by WV Water Quality Regulations prior to 1983.

This current proposal moves us even further away from the protection levels necessary to secure the viability of many WV streams for future beneficial uses and further away from the original intent of the Federal Clean Water Act to "eliminate pollution" and to "improve" the quality of the waters of the nation. WVHC must object to these changes because they jeopardize the future beneficial uses as well as the existing high quality of many waters of the state.

II. Although WVHC remains opposed to these changes for the reasons stated above, we also recognize the pressure that brought the Board to considering industry's proposed relaxation of the 5-mile rule. In light of the state level pressure and the current mood of the nation's lawmakers in Washington, WVHC commends the Board for its efforts to create some reasonable, though minimal, limits while allowing the flexibility industry is seeking.

Momentarily putting aside our wholesale objections to any proposed change to the 5-mile rule, we respectfully suggest the following changes to the proposed language:

1. 46 CSR 1-5.2.c. Mixing zones for human health criteria.

(a) We agree that no mixing zones should be allowed for bioaccumulative pollutants and applaud the Board for including this restriction. We would however, suggest that a list of those pollutants be included to provide a bit more clarity. The current EPA list was mentioned by myself and others at the hearing and could be a good starting point, realizing that all such lists are subject to change as science and experience dictate.

(b) As I stated at the June 27th public meeting RE these proposed amendments, WVHC is concerned especially about some of the smaller streams in the state that provide water supplies for major portions of the state. The Boards suggested prohibition of mixing zones for human health criteria on streams which have a 7Q10 of 5 cfs or less is a fair attempt at providing protection for some of the smallest streams. However, WVHC is concerned that a 7Q10 of 5cfs would still allow many of the mid sized streams that are more similar to the headwaters areas in terms of both existing quality and use patterns, to be subject to the same criteria as the largest streams like the OHIO. We would recommend further evaluation of stream size and extend the prohibition to streams with 7Q10 of 20 or 30 cfs or even more.

(The partial lists in the USGS Report 88-4027 presented at the July 18th hearing - though flawed in many respects - may be a point of reference, as would other agency records, eg Office of Water, etc., in compiling a more comprehensive picture of the needs of various areas of the state and various individual watersheds.)

2. 46 CSR 1-7.2.a.B. Applicability of Water Quality Standards for Water Use Category A (water supply public). Even if the Board approves the elimination of the five (5) mile buffer zone above the intake of a public water supply, the entire zone of protection should not be eliminated.

As proposed, there can conceivably be water intakes where the only buffer zone will be that of the mixing zone itself. WVHC recommends the minimum 1/2 mile zone be retained and the edge of any mixing zone not be allowed to be established within 1/2 mile of an intake of a water supply public. To this end we recommend the following language for 46 CSR 1-7.2.a.B.:

"In each segment extending upstream from the intake of a water supply public (water Use Category A), for a distance of one-half (1/2) 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. Provided, however, that within that 1/2 mile zone, the Chief, Office of Water Resources, 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 the rule. (If a watershed is not significantly larger that this zone above the intake, the entire upstream watershed to its headwaters may be included in this zone.) No mixing zone for human health criteria (as provided in 5.2.c.) will be allowed to extend into this zone."

The prohibition of mixing zones extending into this half mile zone should also be made part of 5.2.c. with a reference to 7.2.a.B. as well.

3. 46 CSR 1-6.2. Catagory A -- Water Supply, Public -- New language at the end of the first paragraph merely reiterates the historic presumption of the Board (and the state) that waters of the state are to be protected for their highest and best use. While the current version of 46 CSR may have lost the clarity of some earlier approved regulations on this matter, the proposed changes allowing mixing zones in closer proximity to public water supply intakes requires that the obvious be restated as clearly as possible. Proposed 6.2. does just that.

As always we are grateful for the opportunity to comment on the Boards proposed course of action. Please, if there are questions or the need for clarifications about this statement, feel free to contact me at the address and/or phone numbers below.

Sincerely,

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

- phone: (h) 924-5802, (w) 924-6263 -

WEST VIRGINIA RIVERS COALITION

July 20, 1995

Environmental Quality Board
1615 Washington Street East
Charleston, WV 25311-2126

Dear Friends:

Please accept these comments on the proposed changes in Rules Governing Water Quality Standards as an addition to those I made at the Environmental Quality Board hearing July 18 in Charleston.

The West Virginia Rivers Coalition strongly supports retaining the five mile rule to provide a measure of protection for drinking water supplies for residents throughout the state. Coming out of the rule changes in 1983, this provision is the only one on the state level that offers state residents an assurance that their water needs are given some weight when balanced against the needs and wants of the state's industries.

Our opposition to the proposed changes reflects the following considerations:

-- Mixing zones amount to "in-stream treatment" which is contrary to the intent of the Clean Water Act. Replacing the five mile rule with mixing zones gives tacit approval to the notion that "dilution is the solution to pollution," and they will result in continued degradation of the waters of the state.

-- Water quality standards, particularly upstream of water supply intakes, should have a significant, built-in safety factor. Industry may find that overkill, but standards should be set with an understanding that 1) political (rather than scientific) considerations are sometimes reflected in the permit effluent limits actually set, and 2) pollution events occur. The better the ambient water quality, the better chance that dilution will buffer the effects of a pollution event.

-- Enforcement costs will increase. I assume that if this rule change is approved, permits will require dischargers to monitor the level of pollutants at the end of the mixing zone. But, when standards are violated in heavily industrialized areas, where mixing zones for several companies may overlap, the process of sorting out who is the violator will additionally tax the time and resources of the Water Resources Division, which are already stretched.

P.O. Box 606 Buckhannon, West Virginia 26201 (304) 472-0025

If the Board decides to accept this rule change, we urge you to maintain the restriction on mixing zones for bioaccumulative pollutants and for low-flow or highly variable streams which have a seven day, ten year return frequency of 5 cfs or less.

By definition, dilution cannot be the solution to bioaccumulative pollutants, since those pollutants continue to build up in humans and other organisms. In fact, serious thought should be given to banning all discharge of bioaccumulative substances, since damage is hard to reverse and may already be done before the potential for damage is fully recognized.

In restricting mixing zones on smaller streams and those with more variable flows, it may be prudent to include streams with a 7Q10 flow of up to 9 or 10 cfs, in light of USGS calculation that their equations have a standard error of 82-83 percent. ("Low Flow Characteristics of Streams in West Virginia", page 12.)

We urge the Board to resist the suggestions of Mr. Flannery and other industry representatives that these provisions be dropped and that new water supply intake sites be restricted to spare industry from having to cope with a "moving target."

The philosophy behind the current proposed changes approaches a direct contradiction of Sec. 46-1-6 a. "Waste assimilation and transport are not recognized as designated uses." Implementing all the industry suggestions made at the July 18 hearing would amount to declaring that the best and highest use of all our streams is as channels for washing away industrial pollutants, and that the uses of all other interests are secondary.

Finally, I'd like to share my "context" for examining any efforts to relax water quality standards. WVRC is based in Buckhannon and, consequently, has a special view of the water treatment challenges facing small communities around the state.

I acknowledge that this is not strictly "on point" in discussion of rule changes currently contemplated. The discharges in question are already coming further than 5 miles upstream. On the other hand, it may give you some clearer idea of how political and economic considerations in the permitting process can erode your best standard setting efforts and force the treatment costs and headaches onto downstream users.

Some of you may recall the appearance of Buckhannon city officials and water treatment plant operators before you several years ago in opposition to Island Creek's request for a variance from the manganese standard for their mining complex at Ten Mile.

Plant operators are now trying to cope with ammonia and hardness (both a result of the treatment of drainage from mines upstream). They have expended considerable effort in the past

year to document their treatment problems, track down the source of those discharges, and look for solutions.

We are very fortunate to have plant operators who take their responsibilities seriously and work hard to deliver safe, potable water daily to people within the system, regardless of the quality of water they find at their intake valves.

Buckhannon is the only municipality in Upshur County and the city system supplies water to about 70% of county residents. Our population is not large (approx. 23,000 people) so it may not be regarded by state officials as a big problem. But for those who rely on the municipal water supply, it is extremely important.

Most folks have no other available source of good water. The water table here is perched. Shallow wells out in the county may produce good water, but not very much of it. While deeper wells may have sufficient water but with high levels of iron and sulphur.

I'm not sure plant operators have figured out how to deal with the problems created by ammonia. The fix for hardness involves building a bigger treatment plant -- a costly proposition. Even without a bigger plant, treatment has become more complicated and requires more chemicals.

All of this is a direct result of earlier decisions to give "economic development," and rosy promises of treatment effectiveness, much more weight than scientific analysis.

The end result is that the jobs disappeared when treatment costs escalated, companies (or the state) continue to invest significant amounts in on-site treatment at mines upstream of Buckhannon, water quality in the Buckhannon River has deteriorated, and substantial water treatment costs continue to be passed on to people and communities downstream.

It is a classic lose-lose situation. It happened here pretty rapidly (within about 15 years). But, I believe, it is the inevitable long-term consequence of trying to purchase "economic development" by degrading the air, water, and land on which we must all depend for both life and livelihood.

I appreciate your consideration of these comments.

Sincerely

Mary Pat Peck

Mary Pat Peck
Public Education Director

FROM

W.VA. RIVERS COALITION

P.O. BOX 606
BUCKHANNON, WV 26201
PHONE: (304) 472-0025
FAX: (304) 472-0033

TO

Environmental Quality Bd

304 558 1222

SENT BY	ATTENTION:	NO. PAGES (INCLUDING COVER)
Mary Sue Locke	Libby Chatfield	4

MESSAGE:

Libby,

It's earlier in the day, so hopefully I'm more coherent.

Thanks,

Mary Sue

WEST VIRGINIA MANUFACTURERS ASSOCIATION

2001 Quarrier Street, Charleston, WV 25311
Telephone: (304) 342-2123
FAX: (304) 342-4552

July 20, 1995

Mr. Charles Robert Jenkins, Chairman
West Virginia Environmental Quality Board
1615 Washington Street, East
Suite 301
Charleston, WV 25311-2126

Attention: Frances Hunter

Re: Supplemental Comments on Proposed Revisions to West Virginia Water Quality Standards, 46 C.S.R. 1

Dear Chairman Jenkins:

At the public hearing held July 17, 1995 to accept comments on proposed changes to the West Virginia Water Quality Standards, Cindy Rank of the Highlands Conservancy suggested that the Board identify bioaccumulative pollutants by adopting a list of bioaccumulatives. The listed bioaccumulatives would be ineligible for a mixing zone, as provided in the Board's proposed amendments. As a result of some attendees' interest in responding to that suggestion and other comments made during the hearing, the time for submitting comments was extended until July 20th. Please accept these comments on behalf of the West Virginia Manufacturers Association with regard to Ms. Rank's suggestion that bioaccumulatives be listed, as well as some additional thoughts on the issue of denying mixing zones for bioaccumulatives.

A preliminary impediment to the development of a list of bioaccumulatives is the lack of a comprehensive list of such substances. There is a list of bioaccumulatives in the Great Lakes Initiatives ("GLI"), but it was not intended to apply throughout the country. As EPA noted in its preamble, its treatment of bioaccumulatives in that rule was based on factors unique to the Great Lakes region. There has not been any showing that the substances listed as bioaccumulative in the GLI are problems or potential problems in West Virginia. Furthermore,

it is not clear whether the GLI list identifies all substances that are arguably "cumulative", as that term is defined in 46 C.S.R. 1-2.2.[1]

In a more basic sense, though, the listing of bioaccumulatives, and denying a mixing zone for those substances, is the wrong approach to reducing their presence in state waters. Denying a mixing zone addresses only one source, the NPDES discharger, and ignores what could be substantially greater sources from non-point or non-regulated discharges such as agricultural and urban runoff, air deposition, etc. For example, mercury may migrate to streams from a variety of sources, no one of which is more responsible than the other for the overall level of mercury in state waters. Regulating only one source is unfair and may not result in sufficient reductions.

Denying mixing zones for bioaccumulatives also fails to recognize that the bioaccumulative nature of the substances was taken into account in EPA's development of water quality criteria, which have largely been adopted by the Board in Appendix E of 46 C.S.R. 1. For example, the West Virginia criterion for discharges of methylmercury is .012 ug/L. The EPA Quality Criteria for Water 1986 (" Gold Book") states that

> Basing a fresh water criterion on the Final Residue Value of 0.012 ug/L derived from the bioconcentration factor of 81,700 for methylmercury with the fathead minnow (Olson et. al. 1975) essentially assumes that all discharged mercury is methylmercury.

Gold Book Summary of Mercury Criteria. It is evident from this passage that the bioaccumulative effects of methylmercury have already been considered when setting criteria, and that denial of a mixing zone is unnecessary for the protection of state waters.

EPA has not stated in its guidance documents that mixing zones should be prohibited for all bioaccumulatives in all locations. It has recognized that the best approach to reducing bioaccumulatives is a reduction of mass loadings by wasteload allocations and control of nonpoint sources. Mixing zones, by way of contrast, are set to prevent excessive concentration of pollution in limited areas. There are site-specific and chemical-specific factors to be considered before determining whether a mixing zone is appropriate for any substance, including bioaccumulatives, and it is better to proceed on a case-by-case basis rather than institute a blanket prohibition on mixing zones for a substance.

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[1] Zinc, for instance, has a bioaccumulation factor of 51 to 1,130 times the ambient water concentration, and therefore arguably meets the definition of "cumulative", yet is not on the GLI list of bioaccumulatives.

WEST VIRGINIA
MANUFACTURERS ASSOCIATION

Rather than adopt a list of bioaccumulatives and deny mixing zones for them, the Board should consider taking more measured action. The WVMA suggests that the proper course of action would be to determine where bioaccumulatives are substances of concern in state waters, and then identify the source(s) of those bioaccumulatives. This would require investigating some sources that traditionally have not been scrutinized, such as urban and agricultural runoff, that are contributing to a loading of that pollutant throughout the watershed. If a problem in fact exists, the state should reduce loadings from all sources, not just industrial dischargers. Otherwise, industrial dischargers, because of the ease with which they are regulated, may be forced to provide all the reductions in pollutant loadings that are needed to meet water quality standards, even though they are not a major contributor to those loadings. In fact, current discharge limits for many substances are so low that further reductions may be impossible.

Looking at bioaccumulatives that are actual, rather than possible, substances of concern, and taking needed corrective action on a watershed basis, is consistent with EPA's focus on watersheds rather than stream segments. The watershed approach is also consistent with the work being done by George Constantz of the Division of Natural Resources in the West Virginia Watershed Conservation and Management Program.

The WVMA appreciates this opportunity to supplement its comments with regard to the proposed changes to water quality standards. We strongly urge the Board not to prohibit mixing zone for bioaccumulatives.

Sincerely yours,

Karen S. Price

Karen S. Price
President

KSP:shb

cc: Mr. Robert L. Foster

Appalachian Power Company
PO Box 2021
Roanoke, VA 24022-2121
703 985 2300

AEP
APPALACHIAN POWER

OVERNIGHT

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

Re: Comments of American Electric Power and Appalachian Power Company on Proposed Amendment to 46 CSR 1: Requirements Governing Water Quality Standards Proposed Amendment to 46 CSR 6: Procedural Regulations for the Revision of Water Quality Standards

July 17, 1995

Dear Ms. Chatfield:

On behalf of American Electric Power Service Corporation and Appalachian Power Company, I offer the attached comments on the West Virginia Division of Environmental Protection's Proposed Amendment to the Requirements Governing Water Quality Standards and the Proposed Amendment to the Procedural Regulations for the Revision of Water Quality Standards. I would like to offer our appreciation for the opportunity to submit these comments and I look forward to a continued good relationship between our companies and the DEP.

If you have any questions concerning our comments, please contact Mr. Timothy P. Mallan of my staff at (540) 985-2367.

Sincerely,

Robert J. Robinson

Robert J. Robinson
Environmental Affairs Director

RJR:d
Attachments

COMMENTS OF AMERICAN ELECTRIC POWER ON THE PROPOSED AMENDMENTS TO 46 CSR 6 PROCEDURAL REGULATIONS FOR THE REVISION OF WATER QUALITY STANDARDS

Introduction

The American Electric Power Corporation, a holding company for the Appalachian Power Company, presents the following comments to the proposed amendments to West Virginia Division of Environmental Protection's Procedural Regulations for the Revision of Water Quality Standards.

General Comments

The Company has reviewed the proposed amendments to the rule that outline circumstances allowing site-specific revisions to water quality standards, application requirements for dischargers seeking site-specific water quality standards, and criteria to be considered by the Board in reviewing applications, as well as procedures to be followed by the Board once a decision is made on an application. With the possible exception that the Company feels that there is extended emphasis on the Section 7.2 requirements for a Water Effects Ratio study and its correlation to acceptance of alternative site-specific numeric water quality criterion, the Company concurs with the proposed amendments.

Conclusion

The Company appreciates this opportunity to comment on this proposal and looks forward to the continuance of a good working relationship with the Division.

COMMENTS OF AMERICAN ELECTRIC POWER ON THE PROPOSED AMENDMENTS TO 46 CSR 1: REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

Introduction

The American Electric Power Corporation, a holding company for the Appalachian Power Company, presents the following comments to the proposed amendments to West Virginia Division of Environmental Protection's Requirement Governing Water Quality Standards.

General Comments

The Company has reviewed the proposed amendments to Sections 5.2, 6.2 and 7.2 of the rule and concurs with the changes to the current language of the "five mile rule," including deleting requirements which apply in the zone five miles above a drinking water intake, and adding new language which describes requirements for mixing zones for human health criteria.

Conclusion

The Company appreciates this opportunity to comment on this proposal and looks forward to the continuance of a good working relationship with the Division.

The
West Virginia Mining and Reclamation Association
1624 Kanawha Blvd., E, Charleston, WV 25311

and the
West Virginia Coal Association
1301 Laidley Tower, Charleston, WV 25301

****

comments in response to

The Proposed Legislative Rule (Water Quality - Remining) 46 CSR Series 6, Division of Environmental Protection, Environmental Quality Board

I. ABOUT THE PUBLIC COMMENT OPPORTUNITY:

A. OUR REPRESENTATION:

The West Virginia Mining and Reclamation Association and the West Virginia Coal Association represent over 400 coal producing companies and associate member companies who provide products and services to the coal industry. Our comments on this proposed regulation are on behalf of all of the members of the WVMRA and the WVCA.

B. OUR APPRECIATION FOR THIS OPPORTUNITY:

We are grateful for the opportunity to offer comments on this proposed legislative rule.

II. BACKGROUND ON THE WEST VIRGINIA COAL INDUSTRY:

The coal mining industry in West Virginia produces hundreds of millions of tons of high quality coal for domestic and foreign use as an energy source for the production of electricity, steel and a host of other applications. Employment directly in West Virginia mines and indirectly in the mining support trades and the hundreds of millions of dollars of taxes generated by coal related sources are the **economic backbone** of the Mountain State.

A recent study found that one out of every ten payroll dollars in West Virginia comes from the coal industry. It was further revealed that one of every three business tax dollars being collected by the State comes directly from the coal industry.

Every influence which alters the production of West Virginia coal changes the fragile **competitive balance** between coal mines here and coal mines in other coal producing states and other nations. Therefore, changes in the governmental regulations affecting this industry must be made with the potential negative impacts of those changes foremost in the minds of those considering such changes.

III. ABOUT REMINING:

"Remining" is often misunderstood. Remining is the process of revisiting the same property that was previously mined. This is made more practicable today because of advances in mining equipment, new mining techniques and improved coal preparation technology. There have been several legislative initiatives, both state and federal, over the past 12 years promoting remining. They include: The Colombo Amendment (WV Legislature, 1983, see attachment C); Rahall Amendment (Congress, 1987, see attachment D); OSM legislation (Congress, 1990); and the National Energy Act (Congress, 1992, see attachment A). These acts included incentives to remine and recognized the benefits to the environment brought about by remining.

In many parts of Northern West Virginia and some parts of Southern West Virginia, there is over 100 years of mining history and several degraded watersheds from a water quality point of view. During modern remining the pyritic material that is inherent in the coal is removed, while other toxic materials in the spoil or overburden can be selectively handled to avoid extensive contact with water.

Beaver Creek in Tucker County and Simpson Creek and Elk Creek in Central West Virginia are all excellent examples of watersheds that have benefited with improved water quality as a direct result of remining.

It is a consensus view that the watershed where remining takes place is "always" improved by the process. Therefore, remining is good for West Virginia and good for the Nation and every effort should be made to encourage it.

Senate Bill 287, passed by the West Virginia Legislature and signed by the Governor earlier this year, follows the legislative history noted above by again encouraging the practice of remining by simplifying the process of obtaining a "variance". The note found following the last paragraph in SB 287 while it was being considered stated:

"NOTE: The purpose of this bill is to authorize the environmental quality board to grant site specific variances for coal remining operations from the current water quality standards. Currently each variance is promulgated as a new legislative rule. This delays the permit process for one year."

The Legislature clearly understood the value of remining to the environment and to the economy of the state. Therefore, the spirit and intent of SB 287 (see attachment B) was to establish a variance process which would be friendly to those coal operators who seek new permits on previously mined lands.

IV. OUR COMMENTS ABOUT THE PROPOSED LEGISLATIVE RULE:

On page 5, section 46-6-5.1:

Typographical error: In the middle of the paragraph the rule drafter accidentally placed the word "it". This should be deleted.

On page 5, section 46-6-5.2:

Since one of the major purposes of SB 287 was to remove the Legislature from the routine process of granting variances, the words "and approved by the legislature" should be deleted.

On page 6, section 46-6-6.2.a. & b.:

Remining is encouraged any time any portion of the water quality can be improved. There is no language in the law requiring iron, manganese and pH to all be out of compliance with established water quality standards in order to get a remining variance. This should be an "or" test, not an "and" test requiring all three elements. There are certainly some locations where

the pH and iron are in compliance, but the manganese is not. Other sites might have pH and iron out of compliance, but manganese in compliance. Even the federal Clean Water Act fails to link the three individual standards to a single combined standard, as noted by the use of the word "or) in the Rahall Amendment to the federal Water Quality Act of 1987 (attachment D).

Therefore, 6.2.a & b. should read:

> **"a. the stream does not currently meet the applicable numeric water quality criteria for iron, manganese or pH;**
>
> **"b. the remining activity cannot be carried out in compliance with the numeric water quality standards for iron, manganese or pH; and"**

On page 6, section 46-6-6.2c.:

The word "clearly" does not appear in SB 287. This is a new higher standard being imposed by the drafter of this rule. The word "clearly" must be deleted.

On page 7, section 46-6-6.3.h.:

The last sentence in the paragraph, beginning with the words "In addition...", is unfounded and unnecessary. The coal operator should not be required to provide the Board a cafeteria list of options for the Board to choose the option they like best. Usually all of the alternatives have been explored by the applicant while working with the NPDES permitting staff on the final form of the draft permit. The operator is actually only obligated to simply propose an abatement action plan that meets the standards and improves the water quality. Therefore that last sentence must be deleted.

On page 7, section 46-6-6.6:

In the sentence beginning "Such notice shall..." the drafter apparently intended to say "not less than thirty nor more than 60 days". Regardless, that period of time delays the permitting process. Remember, the Legislature wanted to avoid delays in remining permits. Therefore, the publication of such notices in the state register should be made:

"not less than ten days nor more than twenty days before the date of the public hearing."

And the language in the last paragraph should read"

"in a publication area in the same area where the proposed mine is located."

Also, it should be noted that the advertisement period should be configured to run concurrent with the NPDES Draft Permit announcements.

On page 8, section 46-6-6.10.:

Why is there a reference in this paragraph to the issuance of an "order"? The Board simply grants a variance and sends a written correspondence to the coal operator and the NPDES staff at DEP announcing the decision.

On page 8, section 46-6-6.11.:

The drafter has again imposed a higher standard than that imposed by the Legislature. SB 287 says "The board may not grant". The proposed rule says "The Board shall not grant". Any English student or legislative drafter knows that "may" is permissive and "shall" is mandatory. The Legislature established guidelines in SB 287, not hard and fast rules as written by this drafter. Therefore, we recommend "**may**" be inserted in lieu of "shall", just like it reads in SB 287.

D. SUMMARY:

Legislative intent was clear: ENCOURAGE THE PRACTICE OF REMINING COAL. This proposed legislative rule was not drafted to be as simple and encouraging as SB 287. We therefore recommend the amendments noted above be included in the final draft.

Remining's value has been clearly proven by the projects completed in the past and by the numerous permits where remining is currently taking place. The results of remining have been excellent.

We urge the Board to revisit the language of the proposed rule and improve it towards encouraging remining and making the application process simple.

(end of comments)

K.A. Damron

ATTACHMENTS THAT FOLLOW:

A	National Energy Act of 1992 (3 page excerpt)
B	SB 287 (3 pages)
C	Colombo Amendment, WV Code, 1983 (4 pages)
D	Water Quality Act of 1987 (Rahall Amendment , 2 page excerpt)
E	Buffalo Coal Company's current NPDES remining permit (14 pages)

July 18, 1995

EQB Comment Reviewer
Environmental Quality Board
1615 Washington Street
Charleston, WV 25311-2126

RE: Comments to Proposed Amendments to 46 CSR 1
(Requirements Governing Water Quality Standards)

Dear EQB Comment Reviewer:

This letter is written to provide you with specific comments I had upon reading the proposed amendments to 46 CSR 1.

1. I think that the comment period should be extended. I didn't receive a copy of the proposed amendments until yesterday (July 17, 1995). This did not allow enough time for me to schedule time to be at the public hearing. Also, I discovered, through personnel communication, that regulatory employees in other offices (Water Resources for example) have not had access to the proposed amendments as of today.

2. Regarding Section 5.2 d. (p.7); I think West Virginia rare, threatened and endangered species (as well as Federal threatened species) should be included (perferably at the end of 5.2.d).

3. Regarding Section 5.2.j A. (information concerning mixing zone boundaries); I think that mixing zone boundaries should be clearly delineated on maps and be part of the permit (and therefor be part of the public record available within the spirit of "community right to know").

4. In a related comment to #3, I think that fishing and swimming advisory signs should be required (as a permit condition) to be posted around the boundaries of mixing zones, if human health criteria is allowed to be exceeded within an assigned mixing zone.

If there are any questions or problems related to my comments I can be reached at the address below.

Sincerely,

Melvin L. Tyree

Melvin L. Tyree
106 Chapman Lane
Hurricane, WV 25526

FAX

WVDEP
OFFICE OF WASTE MANAGEMENT
SOLID WASTE MANAGEMENT SECTION
1356 HANSFORD ST.
CHARLESTON, WV 25301

Date 7, 18, 95

Number of Pages 2 with coversheet

TO: EQB

FROM: Mel Tyree

(304) 558-6350

FAX (304) 558-0256

REMARKS:

Review comments for proposed 46 CSR 1 amendments.

To the Environmental Quality Board:

Please do not relax the "five-mile rule" concerning drinking water intakes and industrial emmissions into streams and rivers. Please do not partake in the current frenzy to roll back environmental regulations that work. Who can measure the cost of healthy populations versus sick environments? Please do not let "government of the people, by the people, for the people" be replaced by government of, by and for the corporation!

Thank you for reading my opinion.

Vivian Stockman

Vivian Stockman
Otto Rt. Box 195A
Spencer WV
25276

LEAGUE OF WOMEN VOTERS OF WEST VIRGINIA
6128 GIDEON RD • HUNTINGTON, WV 25705 • TELEPHONE 304-736-3287

July 18, 1995

To: Environmental Quality Board
Attn: Libby Chatfield

From: Helen Gibbins, League of Women Voters

Re: Requirements Governing Water Quality Standards, 46 CSR 1.

The League of Women Voters of West Virginia wishes to make some comments on 46 CSR 1.

When establishing effluent limitations upstream of a water intake, consideration should be given to the cumulative effects of several industries upstream from a water intake, including those from another state . Each one might meet water quality standards but the accumulation of all of the industrial effluents could endanger drinking water or make it more expensive to treat the drinking water.

Furthermore, when the Chief of Water Resources is considering specific standards for mixing zones or deciding when to allow mixing zones, it should be required that he/she consult with the director of West Virginia's drinking water program.

p. 15, line 2, we believe the wording should be "shall establish" rather than "may establish".

We believe that the Environemntal Quality Board should stand firm on maintaining standards for bioaccumulative pollutants.

Helen Gibbins

OVEC Ohio Valley Environmental Coalition
1101 Sixth Avenue, Rm. 225
Huntington, WV 25701

Comments by Ohio Valley Environmental Coalition (OVEC) on proposed rule changes to 46 CSR 1 and 46 CSR 6, WV Code:
July 20, 1995

General comments:

*Public interest groups (OVEC, League of Women Voters, et al) and even state agency offices in Department of Health & Human Resources (DHHR) and Division of Environmental Protection (DEP) were not properly informed of proposed rules. Some groups and offices were not notified until the final days of the comment period.

*DEP has not provided a summary discussion of mixing zone implementation needs (i.e. use of GIS technology, statistically significant sampling of mixing zone margins, etc.). DEP has not issued to the public any maps or lists of existing mixing zones and their proximity to water intakes in order to provide for informed comment on the proposed rules.

*DEP has not issued to the public a map and list of stream segments which do not now meet water quality standards. In fact, DEP has failed to establish Total Maximum Daily Loads (TMDLs) for such stream segments, as required by US EPA under the Clean Water Act.

*DEP's proposed rules do not specifically provide for the Chief of Water Resources to coordinate site-specific variances from the water quality standards or the establishment of mixing zones with a TMDL program. The proposed rules do not even acknowledge TMDLs.

*Proper management of the state's resources would require coordination of these various requirements, as well as coordination with DHHR's Environmental Engineering Division to be protective of public water intakes.

*Adverse economic impacts were not listed. The rules changes have the potential to increase costs for treatment of public drinking water supplies or industrial process water. The rules changes have the potential to adversely impact recreational uses, including fishing and swimming, as well as pleasure boating (riverboat tourism is currently a valuable growth industry). There was no adverse economic impact listed regarding public health effects caused by exposure to water pollution which directly impact a family's economic resources.

*Paragraph 6.6 page 7, the sentence should read "Such notice shall be filed with the Office of the Secretary of State for publication in the state register not ~~more~~ less than thirty nor more than sixty days before the date of the public hearing."

* Paragraph 6.7, append to the last sentence to read "Notice of such continuance shall be promptly filed in the state register and should be published as a Class I legal advertisement in a widely circulated publication nearest the affected stream."

Closing comments:

In addition, **OVEC requests an extension of the comment period for both these rules.** Also, OVEC requests that WV-DEP prepare a report for the West Virginia legislature and the U.S. Environmental Protection Agency which would summarize the effects of the rule changes, including efforts to coordinate water quality standard variances, establishment of mixing zones, enforcement of TMDL requirements and especially protection of public drinking water supplies and recreational uses of the state's waters. Such a report would include lists of all the outfalls and intakes as well as maps that indicate locations of currently established and proposed mixing zones. OVEC believes that WV-DEP should be able to accomplish this using their GIS (Geographic Information System) technology.

Respectfully,

Lewis Baker, Chair
OVEC Board of Directors

Janet Fout, Project coordinator

c: Mark Scott, Deputy Director, WV-DEP
Barbara Taylor, Chief of Office of Water Resources
Alvin R. Morris, Director of Water Management, Region III, US EPA

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

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

JUL 20 1995

Dear Ms. Chatfield:

The U. S. Environmental Protection Agency (EPA) has reviewed the amendment to "Procedural Regulations for the Revision of Water Quality Standards", Series Number 6, proposed on June 16, 1995. As a result of our review, we have the following comments:

General Questions & Comments:

(1) Please clarify whether removing designated uses, granting variances from water quality standards, granting remining variances and establishing site-specific numeric criteria are considered promulgations/revisions of legislative rules.

(2) §46-6-3 (3.1) & §46-6-4 (4.1) (4.2) (4.3), we suggest that "removal of a designated use" be revised to read "reclassification of a designated use" because although a designated use may be removed, an alternative use must remain or be established.

(3) We request that you clarify how these procedures relate to the September 29, 1993, Division of Environmental Protection Policy Memorandum on Compliance Limits for Water Quality on Remining Operations and identify the authority that the State has to implement and enforce the Policy.

(4) We would like an explanation of the process and timing that West Virginia will use to meet the public review requirements for the coal remining variance and the associated NPDES permit.

§46-6-3

(1) 3.1
In accordance with 40 CFR 131.10(j), any changes to water quality standards which result in the reclassification of a designated use or issuance of a variance must be supported by a Use Attainability Analysis (UAA), which should be a structured scientific assessment of the factors affecting attainment of the use which may include physical, chemical, biological, and economic factors as described in 40 CFR

131.10(g). Guidance on the nature and content of a UAA can be found in EPA's Water Quality Standards Handbook and in EPA's Technical Support Manual: Waterbody Surveys and Assessments for Conducting Use Attainability Analyses, November 1983. The UAA must be submitted to EPA as supporting evidence for any resulting changes to water quality standards.

(2) 3.1.b.
It would be useful to more fully define minimum data requirements for dischargers seeking use and criteria changes. EPA would be pleased to work with West Virginia on any general guidance or on specific cases.

(3) 3.1.d. & 3.3.c.
West Virginia will need to clarify how existing uses are defined. We assume that existing use identification would be included in the State's antidegradation implementation procedures.

(4) 3.1.f.
In addition to determining the average flow rate in a segment, the application should indicate if it is a flowing water segment, whether the stream is ephemeral, intermittent or perennial; and, if perennial, determine the appropriate design flow for aquatic life protection and for human health protection.

(5) 3.1.g.
A Use Attainability Analysis should include a comprehensive assessment of the biological characteristics and potential of the stream. Guidance on biological evaluations is contained in EPA's Rapid Bioassessment Protocol and EPA's Water Quality Standards Handbook.

(6) 3.3.e.
Since the requested revision could also be denied, this section should be revised to read "A brief abstract of the supportive documentation which demonstrates that the revision is appropriate, **or inappropriate.**"

§46-6-4

(1) Please explain why the State did not include the phrase "without violating State water conservation requirements" in §46-6-4, 4.1.c. 40 CFR §131.10(g)(2) reads, "Natural, ephemeral, intermittent or low flow conditions or water levels prevent the attainment of the use, unless these conditions may be compensated for by the discharge of sufficient volume of effluent discharges **without violating State water conservation requirements** to enable uses to be met."

(2) The State should include the prohibitions for removing a designated use found in 40 CFR 131.10(h).

§46-6-5

(1) 5.1 & 5.3
Change "numeric water quality standards" to "water quality standards".

(2) 5.2
Variances need to not only be reviewed by the Board upon expiration but also resupported by a demonstration that the circumstances which lead to the original issuance still apply. This section should be modified to reflect that requirement.

(3) The State does not seem to require the following conditions necessary for approval by EPA: (1) Documentation that treatment more advanced than that required by Clean Water Act Sections 303(c)(2)(A) and (B) has been carefully considered, and that alternative effluent control strategies have been evaluated; (2) The discharger who is given a variance for one particular constituent is required to meet the applicable criteria for other constituents; (3) The discharger either must meet the standard upon the expiration of the variance, or must make a new demonstration of "unattainability"; (4) Reasonable progress is being made toward meeting the standards; and (5) The public notice should contain a clear description of the impact of the variance upon achieving water quality standards in the affected stream segment.

§46 CSR 6

(1) 6.1
"(R)emined areas of coal remining operations" seems redundant. Also, capitalize "division of environmental protection" and "federal Water Pollution Control Act", although, the Federal citation "§301(p) of the Clean Water Act" is more appropriate.

(2) 6.2.a. and 6.3.f.
We are sure that the intention of these sections is to allow remining and water quality standards variances where either iron, manganese or pH does not meet water quality standards due to abandoned mine drainage. However, to better assure this is understood, we suggest changing the last sentence to "...for iron, manganese and pH" to "...for iron, manganese **or pH due to abandoned mine drainage.**"

(3) 6.2.b.
This section is is unclear to us. As written, we assume that this condition means that the remining activity can not be carried out without causing or contributing to a water quality standards violation of the receiving stream. Please provide the State's interpretation.

(4) 6.3.g.
The alternative numeric water quality criteria appears to be equivalent to the actual receiving stream quality before remining. This would be determined by the applicant's stream monitoring. However, the applicant also monitors his background preexisting discharge into the receiving stream and may report these number instead. To avoid confusion, the wording in this section could be changed to "...pH **in the receiving stream** requested by the applicant."

(5) This subsection does not include a section entitled "Amendment of 46 CSR 1". Are remining variances considered as revisions to 46 CSR 1, Requirements Governing Water Quality Standards? EPA Region III would consider each coal remining variance as a change to West Virginia's water quality standards, subject to EPA's review and approval.

(6) To Section 6.11.c., we suggest adding "In the event that the Board determines that degradation of the **existing** instream water quality will result from the remining operation."

(7) Somewhere (the NPDES application requirements would be appropriate) the State should ask for certification that the proposed coal remining operation will be confined to the remining area. The State should also assure that they have the authority to request the extensive Baseline Sampling Data that is described in the 9/29/93 Policy (the Baseline Sampling Data will be needed to support 6.3.g. "The alternative numeric water quality criteria for iron, manganese and pH requested by the applicant).

(8) Other information that may be helpful to the State when making a determination that a discharger is eligible for a coal remining variance:

(a) Plans, cross-sections, and schematic drawings describing the techniques for handling acid-forming materials to reduce the discharge of acidity, iron and manganese.

(b) A description of the range of abatement levels that probably can be achieved, costs, and each step proposed to reduce the discharge of acidity, iron, and manganese.

(c) A description of the spoil handling practices necessary to reduce the discharge of acidity, iron, and manganese.

(d) A detailed topographic map of the proposed coal remining operation, including the locations of the preexisting and proposed discharges.

(9) In Section 6.2, it states that the Board may grant a variance if it finds that all of the requirements of "this rule" have been met. Would this include a determination that one of the conditions outlined in section 4.1 a-f apply, and that that condition would be identified in the public notice?

§46-6-7

(1) 7.2.b. & 7.2.c
Change "Water Effects Ratio" to "Water Effect Ratio", in all instances.

(2) In section 7.2.b., the State should either specify that this is the February 1994 version of the Water Effect Ratio (WER) interim guidance, or somehow certify that any subsequent versions of this document would also be valid for use.

(3) The procedures should indicate whether or not a discharger could also use the Recalculation Procedure, and whether or not a discharger could use a Recalculation in combination with a WER.

(4) Considering the relative expense of preparing a WER, we suggest that a discharger should be required to contact the Board prior to beginning the WER process, to assure the Board agrees with the dischargers plans. Given that EPA must ultimately approve all WERs, we also suggest that EPA in involved in the review of any work plans under consideration.

Typographical Errors:

§46-6-4, 4.1.d., should read, "...cause more environmental damage to correct than to leave in place;"

§46-6-4, 4.1.f., should read, "Physical conditions related to the natural features of the..."

§46-6-5, 5.1., "...if ~~it~~ the Board determines..."

§46-6-5, 5.3.c., should read, "Identification of the criterion outlined in section 4.1 a-f above which render..."

§46-6-7, 7.2.b., add quotation marks to read, "...the procedures outlined in EPA's "Interim Guidance on the Determination..."

If you have any questions concerning these comments, please contact Denise Penn Hakowski at (215) 597-6746.

Sincerely,

Denise Hakowski

for Evelyn S. MacKnight, Chief
Water Quality Planning Section

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

JUL 20 1995

Ms. Elizabeth Chatfield
Technical Advisor
West Virginia State Water Resources Board
1615 E. Washington Street
Charleston, West Virginia 25311

Dear Ms. Chatfield:

The United States Environmental Protection Agency (EPA) has reviewed the proposed changes to West Virginia's water quality standards which were filed on June 16, 1995, to modify the rule that requires dischargers within five miles above a drinking water intake to meet water quality standards at the "end of pipe." EPA's position regarding protection of downstream uses requires simply that downstream uses, including drinking water uses, must be met. There is no analogous Federal rule that would prevent mixing zones or impart any guarantee of safety by a five-mile buffer zone above a public water intake. Therefore, EPA would not object to removal of the "five-mile" requirement, provided that water quality standards were met at the drinking water intake.

EPA's Water Quality Standards Handbook, August 1994, notes that mixing zones should not encroach on drinking water intakes and that where fish tissue residues are a concern (either because of measured or predicted residues), mixing zones should not be projected to result in significant health risks to average consumers of fish, after considering aquatic exposure and fish consumption patterns in the area. The Handbook also notes that "careful consideration must be given to the appropriateness of a mixing zone where a substance discharged is bioaccumulative, persistent, carcinogenic, mutagenic, or teratogenic. Denial should be considered when bioaccumulative pollutants are considered in the discharge." EPA would support West Virginia's prohibition against allowance of mixing zones for bioaccumulative pollutants. We suggest that "bioaccumulative" be defined and refer the State to the Final Water Quality Guidance for the Great Lakes System which was published in the Federal Register on March 23, 1995, and the accompanying Technical Support Document for further information.

We would like to note that EPA has not yet received the revised water quality standards regulation for which the amendment is being proposed for review and approval. Therefore,

our comments only address the changes which were proposed on June 16, 1995. If you have any questions, please do not hesitate to contact me at (215) 597-4491.

Sincerely,

Evelyn S. MacKnight

Evelyn S. MacKnight, Chief
Water Quality Planning Section

RATIONALE

Introduction

The amendments to the State's water quality standards proposed by the Board herein pertain to the regulation of discharges into State waters that serve as the public water supply. The water quality standards regulation currently includes a provision, commonly known as the "five mile rule" which limits discharges within five miles above any drinking water intake in a stream. The existing limitation on such discharges is that water quality standards must be met at the "end of pipe" which means that no mixing is allowed in the receiving stream. This requirement differs from discharges into the other waters of the State in that effluent limitations for discharges generally allow for limited mixing to occur at the discharge point.

In the 1995 legislative session, an amendment to this provision was proposed in the Legislative Rule Making Review Committee which would have deleted the five mile rule and required the DEP to make a demonstration of necessity prior to requiring a discharger to meet water quality standards at end of pipe. Neither the Board nor the Office of Water of the DEP supported the proposed amendment as written. Based on an agreement that the Board would review the issue and consider revisions to the rule in the 1996 legislative session, the proponents of the amendment agreed to its withdrawal.

Since then, the Board has reviewed the issue and has worked with the DEP as well as the proponents of the rule change. In addition, in order to provide an opportunity for public input on the proposal early on in the process, the Board held a public meeting on April 20, 1995 at 7:00 PM to receive comments and suggestions regarding a possible change in the rule. The meeting was held at the Board office and was attended by approximately 30 people. Further, the Board sought input and suggestions from the staff of the water quality standards division of Region III of the U. S. Environmental Protection Agency.

Based on the information generated during the process described above, the Board developed a proposal that was filed with the Office of the Secretary of State on June 15, 1995. Notice of the proposed rule was published in the Charleston Newspapers and in several other papers throughout the State. Notices of the proposed rule were also sent to a mailing list of approximately 80 parties, including numerous state and federal agencies.

In summary, this proposal eliminates the end of pipe discharge requirement in the five mile zone above drinking water intakes and allows mixing zones for human health criteria in state waters designated as category A (public water supply). The proposal prohibits mixing zones in streams with 7Q10 flows of 5 cubic feet per second (cfs) or less and also prohibits mixing zones for bioaccumulative pollutants. The proposal retains a protective zone one half (½) mile above drinking water intakes. In that zone, no discharges can exceed water quality standards, and the Chief may establish effluent limitations more protective than would otherwise be required by the water quality standards.

GENERAL COMMENTS

In addition to the comments reviewed below , the Board received comments addressing issues which are not the subject of this revision. Although many of those comments may have merit, the Board declines to adopt significant changes to the rule that were not available for public review and comment. Those comments will be considered for inclusion in the next review of these standards but are not addressed in this proposed revision or this rationale document.

The Board received a number of letters generally opposed to any changes in the five mile rule. The commenters expressed concerns about relaxing drinking water protection to favor industrial development.

Several commenters requested an extension of the comment period because they had not been notified of the proposed rule until shortly prior to the public hearing in July. The Board made every reasonable effort to provide public notice of the rule, as described in the introduction, above and other documents attached to this filing. A copy of the list of parties who were notified by the Board, and who received a copy of the proposed rule is attached to this document. While the Board regrets that some individuals may not have been notified in a timely fashion, we decline to extend the public comment period. The Board encourage anyone wishing to receive individual notice of our proposed rules to contact the Board office and request to be placed on our mailing list.

One commenter requested that the Board hold the public hearing in advance of the close of the public comment period to provide sufficient time for response to comments provided at the hearing. The Board scheduled the public hearing two days prior to the close of the public comment period. We recognize that extra time would be helpful and will make every effort to honor this request in the future.

SECTION 46-1-2 Definitions

Existing Rule

Section 2.2 provides a definition of "cumulative" which is similar to and refers to the term bioaccumulation.

Proposed Changes

The Board proposed no changes to this section.

Comments Received

Numerous commenters indicated the need to provide a definition of the term bioaccumulation or bioaccumulative pollutant as well as a list of bioaccumulative pollutants in order to clarify the implementation of the prohibition against mixing zones for bioaccumulative pollutants proposed by the Board.

The Board agrees that a definition of the term bioaccumulative is needed to clarify the proposed changes in the rule.

Board Action

The Board amended this section by deleting the definition of "cumulative" in section 2.2, and adopting the term "bioaccumulation" and the definition of that term which is found in the USEPAs Final Water Quality Guidance for the Great Lakes System (40 CFR 9, 122, 123, 131, and 132, March 23, 1995).

SECTION 46 -1-5 Mixing Zones

Existing Rule

This section outlines the requirements and guidelines to be followed in establishing mixing zones for permitted discharges into the State's waters.

Proposed Changes

The Board's proposed changes establish requirements for developing mixing zones for human health criteria. Proposed section 5.2.c. provides that the human health criteria, outlined in Appendix E of the Water Quality Standards, cannot be exceeded unless a mixing zone has been established by the Chief of the Office of Water Resources. If a mixing zone is established, human health criteria may be exceeded within the mixing zone, but must not be exceeded outside of the outer boundary of such established mixing zone.

In addition, section 5.2.c. prohibits mixing zones for human health criteria for bioaccumulative pollutants and in streams which have a 7Q10 flow of 5 cubic feet per second (cfs) or less.

Comments Received and Board's Responses

Prohibition of Mixing Zones for Bioaccumulative Pollutants

The majority of the comments received on this section addressed the prohibition on mixing zones for bioaccumulative pollutants. Several commenters requested deletion of the prohibition,

voicing concerns that there is no definition of or list of bioaccumulative pollutants established in the rule. In addition, the commenters claimed that bioaccumulative pollutants are best addressed through the development of total maximum daily loads (TMDLs). They further argued that an outright ban on bioaccumulative pollutants is inconsistent with USEPA policy and guidance.

Additional comments filed by those opposing the prohibition suggested caution in reliance on the list of bioaccumulative pollutants in the EPAs Great Lakes Initiative because that list was developed with the local concerns in mind and was not intended to apply nationwide. They reiterated that reduction of the concentrations of bioaccumulative pollutants in state waters is best accomplished not by prohibiting mixing zones, which are intended to address excessive pollutant concentrations in limited areas, but by reducing mass loadings by wasteload allocations and control of nonpoint sources. The recommendation made by this commenter is to conduct an investigation to determine where bioaccumulative pollutants are substances of concern in State waters and then identify the sources of them.

Several commenters voiced support of the ban on mixing zones for bioaccumulative pollutants; those commenters also requested that the Board include a definition and a list of such pollutants.

The Board deliberated carefully before including the prohibition on mixing zones for bioaccumulative pollutants in the proposed amendments to the five mile rule. In their review, they considered where the existing "end of pipe" limitations of the five mile rule would be appropriate to relax and where concern for human health protection warranted retention of such limitations. The Board recognizes that there is no outright prohibition on mixing zones for bioaccumulative pollutants included in current EPA guidance documents. However, every EPA document reviewed by the Board includes proximity to drinking water intakes and the presence of bioaccumulative pollutants in the discharge as situations where it may be appropriate to limit or prohibit mixing zones.

EPAs Technical Support Document for Water Quality-based Toxics Control (EPA/505/2-90-001 PB91-127415, March 1991) (hereinafter "TSD") makes several references to the problems of allowing mixing zones for bioaccumulative pollutants. The following discussion is found on page 71:

> For example, denial (of a mixing zone in a site-specific case) should be considered when bioaccumulative pollutants are in the discharge. The potential for a pollutant to bioaccumulate in living organisms is measured by (1) the bioconcentratyion factor (BCF), which is chemical-specific and describes the degree to which an organism or tissue can acquire a higher contaminant concentration than its environment (e.g., surface water); (2) the duration of exposure; and (3) the concentration of the chemical of interest. While any BCF value greater than 1 indicates that bioaccumulation potential exists, bioaccumulation potential is generally not considered to be significant unless the BCF exceeds 100 or more.

Thus, a chemical that is discharged to a receiving stream, resulting in low concentrations, and that has a low BCF value will not create a bioaccumulation hazard. Conversely, a chemical that is discharged to a receiving stream, resulting in a low concentration but having a high BCF value, may cause in (sic) a bioaccumulation hazard. Also, some chemicals of relatively low toxicity, such as zinc, will bioconcentrate in fish without harmful effects resulting from human consumption.

Further, section 4.3.4 of the TSD provides the following on page 72:

> **4.3.4 Prevention of Bioaccumulation Problems for Human Health**
> States are not required to allow mixing zones. Where unsafe fish tissue levels or other evidence indicates a lack of assimilative capacity in a particular waterbody for a bioaccumulative pollutant, care should be taken in calculating discharge limits for this pollutant or the additivity of multiple pollutants. In particular, relaxing discharge limits because of the provision of a mixing zone may not be appropriate in this situation.

EPAs Water Quality Standards Handbook, Second Edition (EPA-823-B-93-002, September 1993) provides the following guidance on mixing zones for bioaccumulative pollutants:

> Mixing zone allowances will increase the mass loadings of the pollutant to the waterbody and decrease treatment requirements. They adversely impact immobile species, such as benthic communities, in the immediate vicinity of the outfall. Because of these and other factors, mixing zones must be applied carefully , so as not to impede progress toward the Clean Water Act goals of maintaining and improving water quality...

And further:

> 5.1.3. Human Health Protection
>
> For protection of human health, the presence of mixing zones should not result in significant health risks when evaluated using reasonable assumptions about exposure pathways. Thus, where drinking water contaminants are a concern, mixing zones should not encroach on drinking water intakes. Where fish tissue residues are a concern (either because of measured or predicted residues), mixing zones should not be projected to result in significant health risks to average consumers of fish and shellfish, after considering exposure duration of the affected aquatic organisms in the mixing zone and the patterns of fisheries use in the area.
>
> While fish tissue contamination tends to be a far-field problem affecting entire

water bodies rather than a narrow-scale problem confined to mixing zones, restricting or eliminating mixing zones for bioaccumulative pollutants may be appropriate under conditions such as the following:

- Mixing zones should be restricted such that they do not encroach on areas often used for fish harvesting particularly of stationary species such as shellfish.

- Mixing zones might be denied (see section 5.1.4) where such denial is used as a device to compensate for uncertainties in the protectiveness of the water quality criteria or uncertainties in the assimilative capacity of the water body.

5.1.4. Were Mixing Zones Are Not Appropriate

States are not required to allow mixing zones and, if mixing zones are allowed, a State regulatory agency may decide to deny a mixing zone in a site-specific case. Careful consideration must be given to the appropriateness of a mixing zone where a substance discharged is **bioaccumulative**, persistent, carcinogenic, mutagenic, or teratogenic (emphasis added).

Denial should be considered when bioaccumulative pollutants are in the discharge...

In a document developed by USEPA Region 8 entitled "EPA Region VIII Mixing Zones and Dilution Policy" (December 1994), the following discussion about the sizing mixing zones for aquatic life and human health protection is included:

Site specific factors that may be the basis for down-sizing individual mixing zones include existing bioaccumulation problems in fish tissue or sediment, biologically-important areas, low acute to chronic ratio, potential human exposure from drinking water or recreation, attraction of aquatic life to the effluent plume, toxicity/persistence of the substance, zone of passage for migrating fish (including access to tributaries), and cumulative effects of multiple discharges and multiple mixing zones.

The USEPAs Final Water Quality Guidance for the Great Lakes System (40 CFR 9, 122, 123, 131, and 132)(hereinafter referred to as "Great Lakes Initiative" or "GLI") provides a regulatory program for the Great Lakes. The Great Lakes Initiative was developed by EPA with extensive participation by numerous interest groups, including industry, the environmental community, and the general public. The GLI includes a list of bioaccumulative chemicals of concern (BCCs) and a program for regulation of those pollutants (See Attachment A). In the

Boards view, that document provides the most thorough treatment of the issue of bioaccumulative pollutants that is currently available.

The USEPA, Region III provided comments to the proposed changes to the five mile rule. Their support for the Board's proposed language is expressed as follows: "EPA would support West Virginia's prohibition against allowance of mixing zones for bioaccumulative pollutants. We suggest that "bioaccumulative" be defined and refer the State to the Final Water Quality Guidance for the Great Lakes System which was published in the Federal Register and the accompanying Technical Support Document form further information."

After careful review of the comments provided on this issue as well as the information outlined above, the Board has decided to retain the ban on mixing zones for human health criteria which are bioaccumulative pollutants. Although aware that EPAs guidance does not require an outright prohibition on such mixing zones, the Board believes that such a prohibition is consistent with EPA guidance. In fact, as discussed above, the comments filed by EPA during the public comment period on this rule demonstrate their support for this provision.

Several factors weighed into the Boards decision on this issue. As indicated above, one commenter suggested that the most effective method on identifying and resolving problems with bioaccumulative pollutants is through the development of total maximum daily loads or "TMDLs", rather than trying to limit discharges on a permit by permit basis. The Board agrees that the institution of a TMDL program will go far in identifying and eliminating the loadings of bioaccumulative pollutants in the state's waters. However, the state currently has no TMDL program in place. Until such a program is instituted the Board believes that the limitations on the discharge of such pollutants provided in this rule are not only appropriate, but necessary to protect the drinking waters of the state. While the relative contribution of bioaccumulative pollutants by individual dischargers is relatively low, such discharges contribute to the loadings of such substances in the State's waters. The Board believes that the proposed plan of regulation is appropriate to minimize those contributions of bioaccumulative substances to the States waters.

The Board agrees with the suggestion offered by all who commented on this section regarding the need to include a definition and a list of bioaccumulative pollutants which will be subject to this prohibition. The Board has therefore amended the proposed regulation by adopting the definition of bioaccumulation from the GLI, and further, has adopted, by reference, the list of "bioaccumulative chemicals of concern" from the GLI. (See Attachment A). In response to those who cautioned against adopting that list, we believe that the examination of the problem of bioaccumulative pollutants in the GLI is the most thorough available. While the document was developed with local issues in mind, the technical issues and human health problems related to such pollutants do not vary from location to location.

We recognize that as more information becomes available through further study of this issue and possibly through the development of a program of using TMDLs, that the Great Lakes Initiative list may be determined to be either over inclusive or underinclusive for West Virginia.

The Board therefore intends to continue its review of this issue and will address necessary changes during the next scheduled triennial review, which is to be conducted in 1997. If the need for changes arises before the initiation of that review, we will consider legislative changes prior to that time.

Additional Requirements for Mixing Zones for Human Health Criteria

West Virginia Department of Health and Human Resources provided comments regarding establishing mixing zones for human health criteria. Their comments included a suggestion that Board include a provision requiring the Chief to consult with the Commissioner of the Bureau of Public health prior to assigning a mixing zone in a permit. Further, they suggested that language be included in section 5.2.c requiring the Chief to consider the cumulative effects of multiple discharges and mixing zones above the intake in determining the human health risks of a mixing zone. Finally, they provided a list of pollutants for which the human health criteria in Appendix E are less stringent that the Maximum Contaminant Levels (MCLs) established by the Federal Safe Drinking Water Act, as requested that the Board adopt the more protective MCL value for each of the pollutants.

Board Action

The Board amended the proposed language of 5.2.c by adopting language requiring the Chief to consult with the Commissioner of the West Virginia Bureau of Public Health prior to establishing a mixing zone for human health criteria and by adding the following language:

> 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.

In addition the Board added language adopting the list of "bioaccumulative chemicals of concern" in EPAs Great Lakes Initiative as the defining list of bioaccumulative pollutants for the purpose of implementing section 5.2.c. (See Attachment A). (See, also, above discussion of adoption of definition of bioaccumulation)

SECTION 46-1- 6.2

This section defines the criteria for water use Category A, Public Water Supply.

Proposed Changes

The existing definition provides:

Category A--Water Supply, Public-- This category is sued to describe waters which, after conventional treatment, are used for human consumption. This category includes:

a. All community domestic water supply systems;

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

c. All private domestic water systems;

d. All other surface water intakes where the water is used for human consumption; and

e. Shall apply to the stream segment extending upstream from the intake for a distance as defined in subsection 7.2.a.B of this series. (See Appendix B for partial listing of category A waters).

The first amendment proposed in this section is to change the second sentence to read "This category includes streams on which the following are located:" In proposing this change, the Board intends to clarify its intent that any stream upon which one of the systems described in a - e occurs, is considered category A for the entire length of the stream.

The second amendment to this section deletes the text of subsection e, retains the reference the list of waters in Appendix B and adds a reference to 7.2.a.B for additional requirements for category A waters. In proposing this change the Board intends to delete from the rule the existing requirements in the five mile zone above a drinking water intake.

Comments Received and Board's Responses

Several commenters objected to the proposed amendment which establishes that any stream on which an intake is located is to be designated category A. They opposed designation of the entire stream as category A and argued for the retention of the five mile zone for the purpose of establishing category A waters. According to their proposal, category A waters would be comprised of stream sections extending five miles above established drinking water intakes. Between the five mile segments other use designations would apply (fishable/swimmable).

The Board disagrees with the suggestions offered by the commentor. The current practice by the Office of Water Resources in determining the appropriate water use category for a stream is to assume that all uses apply to all streams unless a determination can be made that a use clearly is not being made of the water. Then the permit limits are calculated using the most stringent criteria among the uses that apply. To the Board's knowledge, the five mile rule has never been used to establish section by section category A waters; but has been considered a zone of extra protection, where limits more stringent than those otherwise allowed by the water quality standards would be imposed.

In its review of this issue, the Board looked carefully at the existing requirement to meet water quality standards at end of pipe. Recognizing the financial burden associated with that requirement, the Board proposed an alternative which would relieve that burden, while maintaining standards that, while less stringent, the Board believes to be fully protective of the States drinking water supply. Requiring all dischargers into streams which are used as public water supplies to meet the criteria established to protect human health, especially with the opportunity to establish a limited mixing zone, is a reasonable requirement, and ensures the protection of those waters which serve as the drinking water supply for the citizens of the State.

Board Action

Proposal adopted.

SECTION 46-1-7.2

Existing Rule

This section describes the exceptions to the general requirement that water quality standards apply at all times in the waters of the state. The current language in this section includes the "five mile rule" which provides:

> In each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of five miles 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. Provided, however, that within a zone extending one half (½) mile above the intake the Chief, Water Resources section Division of Natural Resources, may establish for any discharge, effluent limitations for the protection of human health that require additional removal of those pollutants . (If a watershed in not significantly larger than either of the two (2) zones above the intake, the water supply section may include the entire upstream watershed to its headwaters.

Proposed Changes

The Board proposes amending this section by deleting the language in the first sentence after the words "...(Water Use Category A)". Further, the proposal would delete the language in the second sentence before the words "one half (½) mile above the intake..." and would add at the end of the second sentence the words "than would otherwise be provided by this rule".

The effect of the changes described above would be to eliminate the requirement to meet water quality standards at the end of pipe in the five mile zone above a drinking water intake. The proposal would retain the Chief's discretion to establish effluent limitations more stringent than

existing requirements in the one half mile zone above a drinking water intake. The intent of this language is to allow the Chief to require a discharger to meet human health standards at end of pipe, or to require even further removal of pollutants from the effluent.

An additional amendment proposed in this section occurs in 7.2.c.C. The existing language provides that numeric water quality standards do not have to be met in zones of initial dilution of mixing zones. The proposed amendment adds to that exception mixing zones for human health criteria and mixing zones for aquatic life criteria for which a zone of initial dilution is not assigned.

This change is necessary to clarify the point in a mixing zone at which water quality standards are to be met. Some of the aquatic life criteria in Appendix E of the rule include two values, an **acute** criterion, which is the maximum concentration tolerable to aquatic life, and the **chronic** criterion, which is the concentration determined to be safe for aquatic life even at continuous exposure. In a mixing zone for aquatic life criteria where the standards have established an acute and a chronic value, a zone of initial dilution (ZID) must be established by the Chief and the acute value must be met at the edge of the ZID and the chronic value must be met at the edge of the mixing zone. For human health criteria and aquatic life criteria for which only chronic values have been established, there is only one mixing zone and the criterion must be met at the edge of that zone.

The final proposed amendment to this section is to correct the reference to the Chief's office. "Water Resources Section, Division of Natural Resources" is now "Office of Water Resources, Division of Environmental Protection".

Comments Received and Board's Responses

Another comment received requested that the Board retain the protections currently required by the five mile rule in the ½ mile zone above an intake. As proposed, the Chief has the authority to place limits on discharges in the ½ mile zone "in addition to those provided elsewhere in this rule", but does not specifically require water quality standards to be met at end of pipe.

The Board agrees with the commenter and has amended the proposed rule to clarify that the zone ½ mile above a drinking water intake "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 amending this section, the Board's intent is that water quality standards be met at the end of the discharge pipe in the ½ mile zone above a drinking water intake, and that if further removal of pollutants is warranted, the Chief is authorized to require such further removal as part of the permit requirements.

Board Action

The Board amended section 7.2.a.B to read as follows:

B. 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, Office of Water Resources, Division of Environmental Protection, 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.

COMMENTS OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION ON REQUIREMENTS REGARDING WATER QUALITY STANDARDS, 46 C.S.R. 1

WEST VIRGINIA MANUFACTURERS ASSOCIATION

2001 QUARRIER STREET

CHARLESTON, WEST VIRGINIA

(304) 342-2123

July 18, 1995

COMMENTS OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION ON REQUIREMENTS REGARDING WATER QUALITY STANDARDS, 46 C.S.R. 1

I. Introduction

The West Virginia Manufacturers Association (WVMA) is a trade organization composed of manufacturers and supporting businesses located in West Virginia. For many years, the WVMA has participated in the rule-making process by commenting on rules promulgated by the Environmental Quality Board. The regulations relating to water quality standards, found at 46 C.S.R. 1, have important implications for all WVMA members with NPDES permits, and therefore the standards have been followed with great interest by the WVMA. The WVMA is particularly interested in the current proposed changes to the standards, as they would resolve an issue that has been of significant concern, the five-mile rule.

In its proposed rule, the Board has removed the five mile limitation for the Category A (public drinking water supply) use, and allowed application of Category A criteria anywhere upstream of a drinking water intake. To avoid application of Category A criteria as stringent end-of-pipe limits, the Board has allowed the Chief of the Office of Water Resources to establish a mixing zone for Category A substances. This would allow discharges of Category A substances in concentrations greater than the water quality criteria as long as the discharges do not interfere with the use. However, no mixing zone is allowed for human health criteria for any substance that is bioaccumulative.

By removing the five mile limitation on Category A, and denying a mixing zone for bioaccumulatives, the Board has effectively imposed Category A criteria as end-of-pipe limits for bioaccumulatives throughout West Virginia, and has imposed Category A criteria on all dischargers regardless of their distance from a public water supply. This could have important ramifications on industrial and municipal dischargers, as discussed below.

II. Comments

A. Removal of Five Mile Limitation

Water quality standards are a combination of the use, or the function the water body serves, and the criteria to protect that use. One of the uses that can be assigned in West Virginia is Category A, for streams that are used as public water supplies. Public water supplies are defined in the Safe Drinking Water Act as those with 25 or more users. The criteria for the Category A use are intended to protect those users from offensive taste or odor, carcinogens, and toxic effects.

Unlike Category B (aquatic life) and Category C (water contact recreation), which constitute the fishable and swimmable uses that apply in all state water, Category A currently does not have universal application. This is because the criteria is developed to protect those who drink from public water supplies, and therefore the only place the criteria have relevance is at the point they are drawn into the public water supply treatment plant. It is only the water drawn into an intake that must not contain substances in excess of Category A criteria; the rest of the river does not pose harm to the public water supply customers.

Presently, the Board has applied the Category A use to the river for five miles upstream of an intake, in recognition of the fact that only a portion of the stream is actually used for drinking water supply. As reported in the January, 1986 Rationale for the changes to the water quality standards made in 1985, the Board intended the Category A use to apply only to those stretches of a river actually used as a drinking water supply. "Above all, [the Board] agreed that the category and criteria for public water supplies should not be applied to streams or stream segments where no one is using the waters for drinking." Rationale at pages 19-20. The Board did not expand the zone of protection to 20 miles because " (1) the State of Virginia . . . has long had a 5 mile zone of protection

with no deleterious effects and (2) there is no scientific evidence that 20 miles is more protective than 5 miles." The WVMA believes that a five mile area of protection, with allowance of mixing zones within that area where justified, continues to be the most scientifically defensible use limitation.

The importance of this five mile rule is that it draws a bright line as to where the use ends. Those discharging within the five mile segment must make a demonstration that a mixing zone is appropriate, or be faced with Category A criteria as end-of-pipe limits in their NPDES permits. As a mixing zone cannot overlap a public water intake, and Category A criteria must be met outside a mixing zone, the water being drawn into a public water intake will be less than the criteria. Those outside the five mile area would not have permit limits established using Category A criteria unless they were contributing to an exceedance of the criteria at the public water supply. In that event, the Chief would look at all sources actually contributing to the exceedance and adjust permit limits as appropriate, because they would be contributing to an impairment of the use. In this fashion the Category A use would be protected without requiring stringent controls on sources that are far from an intake and are not contributing to a use impairment.

The WVMA wants to clarify that it is not suggesting that the Board retain its current practice of applying Category A criteria as end-of-pipe limits within five miles of a public water intake. Rather, it urges the Board to apply the standards to protect the Category A use in the same fashion as all other uses. For example, Category B and Category C criteria are imposed at all locations in the State's waters, even at the point of an industrial discharge, except where a mixing zone is allowed. In that event, the assimilative capacity of the river is calculated and permit limits imposed accordingly. This system is sufficient to protect aquatic life, which is present at the discharge, and is doubly safe

for protection of human health, where the point of protection is downstream of the discharge and mixing zone.

If a discharger is causing the criteria to be exceeded at the point water is being drawn into a public water supply intake the Chief has authority to impose whatever tighter limits are reasonably necessary to prevent violations of the Category A criteria. Applying the Category A use throughout the state is not necessary to protect public water supplies, and accordingly the WVMA urges the Board to continue the five-mile limitation on the use, Category A with mixing zones allowed within the five mile area.

B. Denial of Mixing Zone for Bioaccumulatives

The proposed rule would ban mixing zones for bioaccumulatives, so that the permit limits for those substances would be the Category A criteria. The rule does not contain a definition of bioaccumulatives, although there is a definition of "cumulative" that contains a reference to bioaccumulation. This definition is somewhat vague, and does not identify the substances that are deemed to be bioaccumulative. Without some list of the substances meeting the definition, there will be endless dispute as to which substances qualify for a mixing zone.

There is also some question as to the efficacy of limiting point source discharges of bioaccumulatives by denying mixing zones. Bioaccumulatives are best addressed through use of total maximum daily loads ("TMDLs") or similar regional limits on mass loading, rather than reducing concentrations in mixing zones. Most problems with bioaccumulatives are a result of pollutant loading on a watershed basis, not as a result of a single discharger. In its Technical Support Document for Water Quality-based Toxics Control (March 1991) ("TSD"), EPA noted that ". . . fish tissue contamination tends to be a far-field problem affecting entire waterbodies rather than a narrow

scale problem confined to mixing zones. . ." and specifically noted only two situations in which restriction or elimination of mixing zones for bioaccumulative pollutants might be appropriate. TSD at 34. In addition, site-specific factors such as natural transport and transformation processes, including sorption of metals, may have a great effect on the bioavailability of pollutants.

Other EPA guidance, such as the Water Quality Standards Handbook, does not recommend mixing zones not be allowed for bioaccumulatives. The Great Lakes Initiative ("GLI") would ban mixing zones for bioaccumulatives after 12 years, but it has been the subject of much opposition from the states affected, and is widely expected to be changed in the future. Even if it is not, it does not prohibit mixing zones for bioaccumulatives immediately, as the Board's proposal would do. Most importantly, the GLI policy on bioaccumulatives was not developed with West Virginia in mind. EPA felt that prohibition of mixing zones for a short list of bioaccumulatives was necessary "[b]ecause of the unique nature of the Great Lakes ecosystem, documented ecological impacts, and the need for consistency . . ." 60 Fed. Reg. 15376 (March 23, 1995). Given these considerations, the GLI policy on mixing zones and bioaccumulatives should not be relied on to justify a denial of mixing zones for bioaccumulatives in West Virginia.

The WVMA is also concerned that a prohibition on mixing zones for human health criteria for bioaccumulatives might be interpreted as prohibiting mixing zones for such substances even where the Category A use has been removed. The proposed language could be interpreted by the Office of Water Resources or others to require denial of a mixing zone for substances for which there is Category A criteria, even if Category B or C criteria is being used, on the grounds that such a mixing zone would result in permit limits that are higher than the limits that would be applied if the Category A criteria were used. In short, no mixing zone would be allowed for bioaccumulatives at any place

in the state, and dischargers would be forced to meet criteria for Categories B and C as end-of-pipe limits. The WVMA does not believe this is the intention of the Board, but is concerned that such an argument will be advanced if the language remains as proposed.

Because of these concerns, the WVMA urges the Board to delete the prohibition of a mixing zone for bioaccumulatives. It can do so knowing that there are other protections, such as TMDLs, for addressing bioaccumulatives if they become a problem in the future. At present, though, any advantage gained by limiting discharges of bioaccumulatives in this fashion is greatly outweighed by the cost to industrial and municipal dischargers of doing so.

C. New Public Water Supplies.

The WVMA understands the need to protect public water supplies, and to accommodate that important use of the state's streams. However, as currently written, any new public water supply instantly becomes entitled to Category A protection, even though its existence will have a significant impact on upstream dischargers. There is no incentive for the water supply company to identify upstream dischargers and determine whether the intake could be located where it will not force drastic changes in the discharger's permit.

This could be addressed by making the Category A use available only to those water supplies in existence on a specific date, (e.g., June 1, 1995) and adding new water suppliers and stream segments on a case-by-case basis. This would give both the discharger and the new water supply a reason to negotiate over location of an intake before bringing the matter to the Board for a resolution. The water supply would want to show it had made a good faith effort to locate its intake in a mutually acceptable location, or risk being denied the Category A use designation. The discharger would want to show that it made best efforts to resolve the issue, or face imposition of Category A-

based permit limits. With such incentives driving both sides, it is highly likely that a compromise would be reached.

III. Conclusion

The WVMA appreciates this opportunity to offer comments on the water quality standards, and urges careful consideration of them. Changes to the rule that the WVMA believes would address the concerns it has raised are attached to these comments.

Robert L. Foster, Chairman
West Virginia Manufacturers Association

Prepared by:
Robinson & McElwee
500 Virginia Street, East
600 United Center
Charleston, WV 25301
304-344-5800

Proposed Modification to Water Quality Standards
Presented by the West Virginia Manufacturers Association

Section 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 in a Category A streams (as set forth in Section 7.2.a.B) unless a mixing zone has been assigned by the Chief. 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. ~~No mixing zones for human health criteria shall be assigned for bioaccummulative pollutants~~. 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.

Section 7.2.a.B.

Category A criteria shall apply only in those river segments where the Chief, Office of Water Resources, Division of Environmental Protection, determines that one or more of the uses set forth in Section 6.2 presently exists, and in no case shall extend more than five miles above said use. In each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of one half (1/2) mile above the intake, the Chief, Office of Water Resources ~~Section~~, Division of ~~Natural Resources~~ Environmental Protection, 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.)

Section 6.2

6.2 Category A - Water Supply, Public -- This category is used to describe waters which, after conventional treatment are used for human consumption as of June 1, 1995 . After June 1, 1995, waters may be accorded Category A classification on a site-specific basis upon promulgation of a legislative rule by the Board. This Category includes streams on which the following are located:

[remainder of section as proposed]

ENVIRONMENTAL QUALITY BOARD

1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126
(304) 558-4002
Fax: (304) 558-0899

Gaston Caperton
Governor

Charles R. Jenkins
Chairman

August 17, 1995

Judy Cooper, Director
Administrative Law Division
Office of the Secretary of State
Building 1, Suite 157K
1900 Kanawha Blvd. E.
Charleston, WV 25305-0771

RE: Proposed amendments to 46 CSR 1, filed on July 31, 1995

Dear Ms. Cooper:

In the letter which accompanied our filing of the rule cited above, we indicated that we were unable to include a copy of the transcript from the public hearing on the rule because of a delay in receiving it from the court reporter. We received the transcript this week and have enclosed a copy to complete our filing on the proposed changes to the rule.

Also enclosed are copies of two comments received on the rule during the comment period which, due to an oversight, were not included in the July 31 filing.

If you have any questions regarding this matter, please feel free to call me.

Sincerely,

Libby Chatfield
Technical Advisor

enclosures

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Gaston Caperton
Governor

Charles R. Jenkins
Chairman

August 17, 1995

Delegate Vickie Douglas and
Senator Mike Ross, Cochairs
Legislative Rule-Making Review Committee
Room MB 47 - State Capitol
Charleston, West Virginia 25305

RE: Proposed amendments to 46 CSR 1, filed on July 31, 1995.

Dear Ms. Douglas and Mr. Ross:

The Environmental Quality Board filed proposed amendments to 46 CSR 1, Requirements Governing Water Quality Standards, on July 31, 1995. In a letter accompanying our filing we indicated that we were unable to include the transcript from the hearing held on the proposed rule because of a delay in receiving it from the court reporter. We received the transcript yesterday and have enclosed a copy to complete our filing on the proposed changes to the rule.

Also enclosed are copies of two comments received on the rule during the comment period which, due to an oversight, were not included in the July 31 filing. I apologize for the oversight and wish to assure the committee that, while omitted from the original filing, the comments were reviewed and considered by the Board during the preparation of the proposal filed for your consideration.

The Board appreciates the opportunity to update our filing. If you have any questions regarding this letter or the proposed amendments, please feel free to call me.

Sincerely,

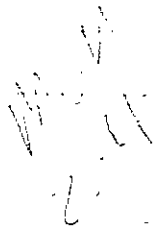
Libby Chatfield
Technical Advisor

enclosures

Environmental Quality Board,

Please send me any information on "Requirements Governing Water Quality Standards". I need to see this for the W.V. Extension Homemakers.

Thank You
Pearl Probst
Rt 2 Box 315
New Martinsville
Wva 26155



WV ENVIRONMENTAL QUALITY BOARD
DIVISION OF ENVIRONMENTAL PROTECTION
STATE OF WEST VIRGINIA

PUBLIC HEARING

DATE:	JULY 18, 1995
TIME:	7:15 P.M.
LOCATION:	1615 Washington Street, East Charleston, West Virginia 25311
SUBJECT:	46 C.S.R. 1 - Requirements Governing Water Quality Standards
	46 C.S.R. 6 - Procedural Regulations for the Revision of Water Quality Standards

[illegible], C.C.R.
ECHO REPORTING AGENCY
[illegible] PLACE
CHARLESTON, WEST VIRGINIA [illegible]
[illegible]

APPEARANCES: DR. ROBERT JENKINS, Chairman
DR. DAVID SAMUEL, Member
MS. SARA LEE NEAL, Member
MS. LIBBY CHATFIELD, Technical Advisor
MS. MARGARET CHICO-EDDY, Clerk of the Boards

PRESENT: RONALD EVALDI, U.S. GEOLOGICAL SURVEY
WENDY E. RADCLIFF, WV DEP
MARY PAT PECK, WV RIVERS COALITION
CINDY RANK, WV HIGHLANDS CONSERVANCY
KEN POLITAN, WV DEP, OMR
DAVID M. FLANNERY, WV CHAMBER OF COMMERCE
KATHY G. BECKETT, WHEELING-PITTSBURGH STEEL
ROBERT L. FOSTER, WV MANUFACTURERS ASSOCIATION
K. O. DAMRON, WV MINING & RECLAMATION ASSOCIATION
KIM BYARD, TERRADON CORPORATION
KEN WARD, JR., CHARLESTON GAZETTE
NED ROSE, ESQUIRE, WEIRTON STEEL
MIKE CRANSTON, WCHS RADIO
DON BLUEDORN, WEIRTON STEEL
GENE CURRENT, WEIRTON STEEL
MARK VIGNOVIC, WEIRTON STEEL
EUGENE BSEZA, LLAPPA, STUDENT, GLENVILLE

SPEAKERS (46 C.S.R. 1): ROBERT L. FOSTER
DAVID M. FLANNERY
KATHY G. BECKETT
CINDY RANK
MARY PAT PECK
NED ROSE, ESQUIRE
RONALD EVALDI

SPEAKERS (46 C.S.R. 6): K. O. DAMRON
ROBERT L. FOSTER
CINDY RANK

P R O C E E D I N G S

CHAIRMAN JENKINS: Good evening. I'd like to introduce the Board to you people here before we get started. Over at my far right is staff member Margaret Chico-Eddy and the court reporter, whose name I don't know. And member of the Board, Dr. Dave Samuel from Morgantown, another member Sara Lee Neal from Rainelle, and I'm Bob Jenkins from Morgantown. To my left is Libby Chatfield, our technical director.

The first thing we're going to take up this evening is on the requirements governing the water quality standards of those that affect what is referred to as the "Five-Mile Rule" and I have six speakers listed here and I'll call them in the order in which they signed up. First of all is Bob Foster.

MR. FOSTER: I'm handing out copies of my statement and also copies of our written comments that we want to submit to the Board. My name is Robert Foster and I'm Chairman of the Manufacturers Association Environmental Safety & Health Committee.

The Association appreciates the work that the Board and its staff have put into proposing changes to West

Virginia water quality standards and to address problems that have arisen with regard to the so-called Five-Mile Rule.

The Five-Mile Rule is an important issue for manufacturers in this state and we're glad the Board has been willing to consider much-needed relief. Overall, the changes made by the Board appear to be very helpful. The Association would, however, urge that they also consider some additional proposed alterations.

Number one, the Association encourages the Board to delete the reference in Section 5.2.c to a prohibition of mixing zones for bioaccumulative pollutants. First of all, the Board has not defined what constitutes a bioaccumulative pollutant. The standards contain a definition of "cumulative," but there's no list of substances that fit this definition, nor is it clear whether the prohibition on setting a mixing zone for bioaccumulatives would prevent setting a mixing zone for such substances if the Category A use is removed.

The Association assumes that mixing zones may be established for any bioaccumulative for which there is a criteria established under one of the other such uses, such

as Category B or Category C, but that is not clear either.

Furthermore, we're not aware of any requirement by EPA that the State prohibit mixing zones for bioaccumulatives and believe that there is no scientific reason for doing so, absent evidence that the bioaccumulatives are having an adverse effect on the use. If that should occur, for example, if fish tissue were to show levels of bioaccumulative in excess of the Board's criteria, then the problem could be best resolved by site-specific permitting efforts by the Office of Water Resources.

The Association believes that the best result would be to remove the sentence in Section 5.2.c that prohibits mixing zones for bioaccumulative pollutants and we urge the Board to make that change.

Second, the Association assumes that the Board requires compliance with Category A criteria where it is needed, at or near a public water intake. Those who are discharging more than five miles from an intake who are not affected by the intake should not have to meet the stringent Category A criteria for permit limits.

If the sampling shows that the intake or the

area five miles upstream are meeting Category A water quality standards, why impose additional limits beyond the five-mile area? If, on the other hand, Category A criteria are exceeded in the intake or five miles upstream, then the use is not being protected and the Office of Water Resources would have authority to impose additional controls.

It is unfair to impose the burdens of meeting very low Category A criteria on those who are not interfering with the operation of a water supply. The Association urges the Board to retain it's five-mile limit on Category A use, with mixing zones allowed where appropriate within that five-mile stretch.

The Association also would urge the Board to consider limiting the public water supplies that are protected by these rules to those water supplies that presently exist, and to those that are put into place later on on a case-by-case basis.

As presently written, the water quality standards give no incentive to public water suppliers to consider the effects of their decision to locate a new intake downstream of an industrial discharger. If the owner of a public water supply knew he would not have the Category

A use automatically assigned to his intake, unless he made a good-faith effort to investigate the effects of his actions on others, he would be more inclined to consider other alternatives.

The discharger would also have the incentive to cooperate or risk having the Board assign the Category A use upstream of the intake against its wishes. Both sides, therefore, would be encouraged to consider one another's position and we believe a resolution would be arrived at in almost all cases. In most situations the Category A use would be expected to apply.

We want to thank you for the opportunity to offer these comments and, as I said, we have submitted to you written comments with more detail for you to consider. Thank you.

CHAIRMAN JENKINS: Thank you, Mr. Foster. Next, Mr. David Flannery?

MR. FLANNERY: Thank you, Mr. Chairman. I'm David Flannery. I chair the Environmental Committee of the West Virginia Chamber of Commerce. I'm glad to have the chance to appear before you this evening to address the Five-Mile Rule and the changes which the Board has proposed

to it.

I'm circulating my statement this evening. It is my intent, however, in my oral comments tonight simply to highlight those remarks.

When we appeared before the Board back on April 20, we brought to your attention at that time the concerns we had over the Five-Mile Rule and this illogical result that seemed to us occurred when -- in the absence of a mixing zone we imposed the public drinking water criteria as it applies to discharge limitations rather than to have those applied at the edge of the mixing zone.

We are very pleased that the Board has addressed that issue and has brought about some well-needed changes to that rule. We are in basic agreement with the proposal the Board has advanced. We share, however, the basic concerns the Manufacturers Association have voiced to that, principally concerns about the fact that the Board in its proposal would not allow a mixing zone for bioaccumulative pollutants, a concern that the Board has applied to the public water supply use designation to all of the state streams and the failure on the part of the proposal advanced by the Board to deal with new water supply

intakes.

Our concerns with respect to the absence of the mixing zone dealing with bioaccumulative pollutants is really founded in two basic concepts. One, a belief that bioaccumulation has already been addressed by the Board in its water quality standards, and we believe that it would be duplicative of the Board if it indeed took bioaccumulation into account twice, one in developing the criteria and the other in determining how that criteria would be applied through the mixing zone concept.

Our second concern deals with the fact that -- beyond the fact that there's no definition of bioaccumulation that's contained in the rule itself, we of course recognize that EPA has a list of bioaccumulative pollutants that it uses for other purposes. But even there the concern is that there may be other parameters that might actually be bioaccumulative but are not of enough significance that they have been a matter of regulatory interest.

So while we have a list of fifteen (15) or sixteen (16) bioaccumulative pollutants that EPA has already looked at, there may be others that have not been of great

concern to anyone in the past, and without a definition of that those might get picked up and get rolled through in the process.

And as we think about POTWs, municipal discharges with fairly complex waste streams, we're concerned that there may be an unintended result of what the Board has done, significantly ratcheting down on the allowable discharges from such facilities, and we join the Manufacturers Association in urging that that one sentence in your Section 5.2.c be deleted.

With respect to the proposal on the Board to make a public water supply use designation applicable to all streams, we similarly have a concern. We know of no justification for doing that. In fact, those stream segments are not used as public water supplies. They likely never will be. The effect of making that change is to require the wholesale rewrite of a great many discharge permits and we know of no mandate under the federal program for that and accordingly believe that it is ill-advised and would urge that change not to be made.

And as we pointed out in our comments on April 20, we're extremely concerned about this moving target

that can result from a new public water supply intake being installed downstream of existing industrial discharges, and to address that we, too, join the concept that's advanced by the Manufacturers Association of having the Board go through a new rule-making each time one of those sections is to be added to the category of public water supply use designation.

We don't mind accepting whatever the facts are as of now, but if new segments are to be added, we believe that public policy would require going back through a new rule-making that would allow the Board to go through this careful balancing that it must necessarily go through under the policy that applies to all of its actions in assuring that everyone has an opportunity to engage in reasonable uses of the water.

The Board has a -- and certainly my written comments go in some length into some of the statutory mandates that apply to Board action, and it's apparent here that beyond the Board having to go through the usual balancing of the uses of water for both public health and aquatic protection, but also the economic development concept that's been a part of your rule making for decades

literally; beyond that, with the DEP reorganization bill, you now are subject to the same sorts of policy statements that apply to DEP's rule-making and that invokes concepts of being certain that your regulations are not more stringent than comparable federal regulations or programs.

There are at least two concepts you've advanced in here that we believe fall into that category. We do not believe, for example, EPA would require that public water supply use-designations apply to all streams. Neither do we believe EPA would require that mixing zones not be allowed for bioaccumulative pollutants. And we encourage you to review that provision in your authority so as not to run afoul of that.

In short, the Chamber applauds the initiatives this Board has taken to address the Five-Mile Rule. We believe that with these few requirements that we've suggested that we can come up with a very effective approach for balancing how we address this issue. We appreciate the opportunity to bring these comments to your attention this evening and I look forward to working with you to bring this to a successful solution. Thank you.

CHAIRMAN JENKINS: Thank you, Mr. Flannery.

Next is Kathy Beckett.

MS. BECKETT: I have copies of my statement for everyone.

My name is Kathy Beckett. I'm from the law firm of Robinson & McElwee and I am appearing this evening on behalf of Wheeling Pittsburgh Steel Corporation with regard to the Board's proposed changes to the West Virginia water quality standards.

Wheeling Pittsburgh greatly appreciates the efforts of the Board and its staff to work with those concerned about the water quality standards to reach a reasonable resolution of the Five-Mile Rule.

As presently interpreted, however, the Five-Mile Rule would prevent discharges of substances in excess of the Category A criteria, which would impose great burdens on Wheeling Pittsburgh and its wastewater treatment system, a system that has undergone recent renovation. The changes to the rule proposed by the West Virginia Manufacturers Association represent a reasonable approach to protection of water quality supplies without imposing unnecessary treatment costs on industry.

Wheeling Pittsburgh is particularly concerned

that the definition of bioaccumulatives is vague and there is no list of pollutants which are considered bioaccumulative. Furthermore, removing the five-mile limitation on the Category A use imposes Category A criteria unnecessarily on those dischargers far from a public water supply intake. We urge the Board to change its proposal to address these concerns in the manner suggested by the West Virginia Manufacturers Association in their detailed oral comments and written comments.

Again, we thank the Board for its attention and consideration of this issue, which is of great importance to Wheeling Pittsburgh Steel Corporation. Thank you very much.

CHAIRMAN JENKINS: Thank you, Ms. Beckett. Ms. Cindy Rank?

MS. RANK: I have no comments to give you but I will try to get to you before Thursday, based on tonight, some written comments.

What I would like to remind you again as last time when we got together I, of course, am opposed to the change to the Five-Mile Rule because I think that that is protective of our water supplies and should remain in

effect.

If, in fact, you decide that you do find it necessary to make the change that you're recommending, I do have other suggestions to offer. One is, and of course I differ with my friends who testified a couple of minutes ago, I believe that the ban on the bioaccumulative mixing zone is good and I do see the fuzziness of what's here. I would recommend that you include the list from EPA of the bioaccumulative list.

Just as we do for drinking water standards, just as we do for trout streams, you can include that list and say among others these are to be considered, and as that list changes it can certainly be changed just as we do on a case-by-case basis with several other instances that we use.

I have concerns about the 7Q10 of five cubic feet per second or less. I am not sure whether or not the restriction on those mixing zones directly address the concerns I had at the last meeting, but I've been unable to put together a whole picture of how many streams we're talking about. I just think that that's something that isn't in one little place, although there is a study that begins to address that that we have tonight and other pieces

to that puzzle will be put together. But I would still be concerned about some of those streams that are not necessarily the Ohio River that we talked about and are not necessarily the 7Q10 of five cubic feet per second, but fall a little way in between.

I think that there are a few that would still remain of concern to myself and perhaps to -- I can't remember the woman's name who spoke last time on behalf of the public water supplies -- but I think that maybe the Elk River and the South Branch of the Potomac are a couple of examples where there are some places that I would be concerned about.

My final prepared comment would be that I would think that if we eliminated the five-mile bumper zone, we should at least say that those mixing zones, that the edges of the mixing zones would not be permitted beyond that half mile above the drinking water supply intake. I mean, we've not only eliminated the five-mile bumper zone, we've also eliminated the half mile, leaving in the language that's proposed the ability for the Chief to impose stricter standards, if I understand it, within that half mile upstream from the water intake.

I would see it important to say somewhere that the edge of the mixing zone where the standards are to be met should not be extended beyond that half mile so that we still had a half-mile zone of protection above the drinking water supply or drinking water intake. I would ask that the Board consider that, if you haven't already, and as a further requirement of what you're suggesting if you are going to be changing the rule.

Mr. Flannery talked about the -- I don't think he said it was unwise -- but he certainly didn't like categorizing all streams as drinking water. But I think that the history of the Board and the water quality standards in the State has been that we consider the highest and best use of all the streams unless proven otherwise. So that I think that the more protective measures based on the fact that waters could be used as drinking water is most appropriate for the Board and for the State of West Virginia.

I would assume that even though Dave thinks that it would likely never be used as a drinking water supply, I'm one of those people who think that there are going to be more people coming into the area and more people

looking at using our streams for drinking water supplies as well as for industrial uses, and that the more protective we are of them to begin with, the more likely we are to be able to expand our residence base and our industry base based on the protection of our waters and cleanliness of our waters. Thank you.

CHAIRMAN JENKINS: Thank you, Ms. Rank. Be sure to get some written comments to us, please.

Ms. Mary Pat Peck?

MS. PECK: I work for the West Virginia Rivers Coalition and obviously we're very concerned about anything that affects the rivers and streams in the State. I would like to oppose the changes to the Five-Mile Rule. I think that they whittle away at the current protections that we have for both drinking water and for total uses of the river by a whole variety of users.

One particular concern that I didn't see addressed in the rules is how the monitoring -- how having mixing zones would change the monitoring of what is in the water, whether it is the end user downstream below the mixing zone who then is responsible for figuring out what's in the water at various times, at various flows, at various

discharge levels, as opposed to the industry who is actually putting, discharging pollutants into the water.

And I think that that begins to shift the responsibility of who bears the burden of the cost, whether it is some user who may assume that they have a right to clean water coming into their tap, being used by their industrial use, being used by tourism users, recreational users, municipalities doing water treatment and their customers; or whether the responsibility for that ought to remain with the industry that wishes to use the water and then discharge it back into the stream, whether it makes sense to shift the cost of that from the people who are making a profit from the use of that water to a downstream user, or whether it makes sense for each of us in our use of water to pass it on to the next person as good or better than what we got it as.

So those are very basic concerns that I have about the direction that we're going in terms of changing our water quality standards. I think that people downstream are -- now become, if this rule goes into effect, people downstream become the people who have to prove that they are harmed rather than the discharger proving that their

discharge produces no harm.

DR. SAMUEL: I don't see that. In fact, I don't understand how that --

MS. PECK: Well, I think -- I live in a headwaters area so I'm used to changes in stream flow and I don't know how the mixing zone allows -- how it incorporates those kinds of changes and ensures it during high flows and low flows so the next users has water that's able to be used.

I do appreciate the work that the Board and the Board's staff has done to improve this version of the rule from what it was in April.

And I would finally like to address the issues that consider the economic benefits to the State and your responsibility currently to look at the economic effect on industry of any rules and regulations.

I think that it is part of the history of this State that if we could secure economic prosperity by continuing to degrade the environment, we would already be among the richest states in the union instead of one at the bottom of the list nationwide. That has not worked for us in the past and we have industries that do not come in or do

not function in this State because the environment is degraded and that adds to their cost.

It certainly adds to the cost of individuals and municipalities who continue to have to pick up the pieces when industry -- and not all industries certainly, but some industries -- wish to use our resources and pass on the problems to the next user. Thank you.

CHAIRMAN JENKINS: Thank you, Ms. Peck.

The last speaker on my list here is Mr. Ned Rose.

MR. ROSE: Thank you. Good evening. My name is Ned Rose. I am here tonight to make a brief statement on behalf of Weirton Steel Corporation.

Weirton Steel owns and operates an integrated steel-making facility situated on the banks of the Ohio River in Weirton, West Virginia. Weirton Steel is one of the largest employee-owned companies in the world with approximately fifty-five hundred (5,500) owner-employees and is West Virginia's single largest industrial employer and taxpayer.

Weirton Steel is also committed to protecting West Virginia's natural resources. During the last ten

years Weirton Steel has spent more than thirteen percent (13%) of its capital resources on pollution control equipment, in excess of one hundred million dollars ($100,000,000).

In June of 1994 the Office of Water Resources issued to Weirton Steel a final NPDES permit requiring us to treat our industrial wastewater to drinking water quality before discharging it into the Ohio River. These requirements were imposed because of the Division of Environmental Protection's interpretation of the Five-Mile Rule and the fact that the City of Weirton and Steubenville, Ohio's public water intakes are located approximately three miles downstream from Weirton Steel.

It is currently impossible for Weirton Steel to comply with these stringent requirements despite our state-of-the-art wastewater treatment facilities. Indeed, a preliminary engineering study estimates the capital cost to achieve compliance at sixty-five million dollars ($65,000,000), plus or minus fifty percent (50%). To make matters worse, compliance with the stringent requirements would have absolutely no beneficial impact on the quality of water at the City of Weirton and Steubenville intakes.

Weirton Steel commends the Board for its consideration of this issue and its efforts to revise the Five-Mile Rule. Weirton Steel believes the proposed modification would maintain the current level of protection for public water intakes while at the same time allowing the Office of Water Resources to take site-specific stream conditions into account when setting discharge limitations; however, Weirton Steel believes that the minor modifications proposed by the Manufacturers Association will only strengthen the rule and we urge the Environmental Quality Board to adopt these modifications and present a final ruling to the Legislature this fall. Thank you.

CHAIRMAN JENKINS: Thank you, Mr. Rose.

Okay, is there anyone else who would like to make some comments, presentation of any sort regarding this matter?

VOICE: I might like to just note --

CHAIRMAN JENKINS: Would you give us your name here and then we'd be happy to have some input from you.

MR. EVALDI: I'm Ron Evaldi with the U. S. Geological Survey, and some mention was made of a study for

West Virginia in which some of the 7Q10 data is available for use for some of these regulations, and I simply just want to make the Board aware of that and I have copies of that report available for anybody who would be interested in that. That's all.

CHAIRMAN JENKINS: Thank you, Mr. Evaldi. We want it.

Okay, anybody else?

Okay, we've listened to the public comments. There will be some period of time in which written comments will be accepted and that will be until?

MS. CHATFIELD: The 20th, the end of the working day of the 20th, and they can be faxed or even postmarked on the 20th will be fine.

CHAIRMAN JENKINS: So any of you or your acquaintances who wish to have input into this issue, please get it to us by the 20th or have it postmarked by then, and with that I'd like to --

DR. SAMUEL: Could I just say something?

CHAIRMAN JENKINS: Sure.

DR. SAMUEL: I've been listening to these kinds of things for twelve (12) years and this five-mile

thing is difficult, and it is difficult. And I'm sitting here listening to all sides here tonight and I thought the comments were excellent on both sides and I hope that you all get a feeling that this Board wants to listen to everybody's comments and we're still anxious to do that.

We would like nothing better than for everybody to leave all these hearings all the time feeling really happy about what's happened. We know that can't be done, but this Board, I can't speak for all of the Board members but I can speak for myself, and I think I speak for the Board members that are not here, we try hard and we want to try hard and we really -- I especially, I really enjoyed the efforts and the comments that both parties here put forth. I thought they were excellent.

And I'm excited that we have so many interested people in what we're trying to do. And what we are trying to do is what's best for the state and best for everybody all the time. We don't always do that, but we sure do try. I thought the comments were excellent. I just had to say that, Mr. Chairman.

CHAIRMAN JENKINS: That's fine. I appreciate that, David. And we will make serious considerations of all

of the things that you've stated tonight. And whenever we issue our final version, why, we will address each of these issues with some rationale as to why we took the position that will be in that final statement. So I hope that that will make final clarification of things at that time.

And so I'd like to call a five-minute recess and then we are going to take up the procedural regulations for the revision of water quality standards, the second issue of the evening, so let's take a break.

(WHEREUPON, a recess was taken, after which the proceedings continued as follows:)

CHAIRMAN JENKINS: We now want to get some of your comments regarding our procedural regulations for the revision of water quality standards and the modifications that we're suggesting here we feel clarifies the procedure for reviewing our water quality rules and standards and procedures on how to issue variances, including remining variances. And so I have three speakers listed presently on this issue and first is Mr. K. O. Damron.

MR. DAMRON: Thank you, Mr. Chairman. Members of the Board, I'm K. O. Damron, vice-president of

the West Virginia Mining and Reclamation Association. My comments tonight will be brief and they'll be followed by submission of a written set of comments probably by Thursday, your deadline, after I revise a couple of typos.

I'm going to speak very informally with you tonight and tell you I'm representing both the members of the Mining and Reclamation Association and the members of the Coal Association here in West Virginia. We have entitled Senate Bill 287 the "remining bill." Obviously it affects more than just coal mining but it affects remining for us and that's a very important part of our business.

The bill, as you may know, and it will be in an attachment to my written comments, is a very simple bill. It's three pages. And we think the intent of the bill is also very simple, that the intent of the bill is to simplify the process of getting a variance from the standard water quality standards for certain situations. And for our industry we're talking about mining in a place where mining has taken place before, revisiting the same site.

Now, if you'll look at certain areas of the state, particularly the north central areas of the state, there's a lot of acidic soils up there, there are a lot of

pyritic materials up there that are in the spoil or the overburden around the coal seam. All those places have been mined. There's a hundred-year history of mining in those places, and yet the water quality there in many places is not very high, and maybe some of that is a direct result of the mining.

However, an opportunity to remine those locations, to go back into that same area under today's standards with some variance for certain water quality standards offers us an opportunity to recover the coal and an opportunity to improve the water quality, and that's a win-win from the standpoint of whether or not you're a coal operator or whether or not you're a pure environmentalist, as some of the folks in the audience are considered today. So we think that this bill and the regulations that follow are very positive.

If you'll look back at the history of the state and federal regulations and law as they apply to the process we call "remining" or revisiting a location, if you go back to 1983, something called the Columbo Amendment took place in the state, and in 1987 the Rahall Amendment to the Water Quality Act took place at the federal level, and 1990

the Surface Mine Act to 1992 the National Energy Act, all of these acts encouraged the process of going into a location and mining under conditions that will improve the water quality, not degrade the water quality of that area. So we're encouraged by the passage of the bill, we're encouraged by the promulgating of the regulations.

We have some individual concerns about the regulations which will be better spelled out in my written comments. There's a couple of minor typos, probably unintended language, but there's also some language that we had some concerns about, including one condition wherein you say that if the iron and the manganese and the pH are not in compliance, then that's a condition under which you would issue a variance. I think you meant to say that if the iron "or" the manganese "or" the pH are not in compliance with the current standards, then you may want to issue a variance.

The other thing is it seemed like your procedures for issuing a variance were perhaps a little more cumbersome. They talked about issuing an order, and I think what the Legislature was trying to say is that the old process of issuing variances was too complicated and it

should be much simpler. When you recognize that the mining operator intends to improve the quality of the water, therefore, a simple granting or variance should take place.

So that basically is all I wanted you to know. I just wanted you to realize that this is a very important piece of legislation. The language may seem simple and the bill might seem small, but the process of remining perhaps is the only opportunity that some coal operators or some coal lands will have in areas like Preston County or Tucker County and some of those places like that.

So we hope that you'll revisit this and take a close look at simplifying it and maybe follow our comments. We do appreciate your efforts to this point and hope that you can follow through with seeing our side of trying to encourage the process of remining in West Virginia. Thank you for your time.

CHAIRMAN JENKINS: Thank you, Mr. Damron. Next is Bob Foster.

MR. FOSTER: I am Robert Foster, Chairman of the West Virginia Manufacturers Association Environmental Health & Safety Committee. I have no formal statement here. I'll just sort of summarize it quickly and I'll give you

some written comments tonight.

Basically we're a little concerned about Section 4, which relates to providing grounds for use removal. There are five grounds listed for use removal and that all those are tied to some physical condition of the water body. A sixth division, a sixth ground or sixth element that has not been included may be potentially the most important of all because that relates to the impact or the deleterious effect that continuing the use would have on surrounding community and humans.

Failure to allow a variance on the grounds of negative impact and socioeconomic effects could deprive some dischargers of an opportunity to obtain a variance. So we think maybe you ought to reconsider that and include that last ground for removal.

Another area that we're concerned about is Section 5.3, in which the language as written indicates -- sort of alternates between using "criterion" and "criteria," and we'd like to see it clarified a little bit more so we know that a single application can be made for multiple criteria, application for variance can be applied for using more than one criteria.

Another one we're concerned about is that the Office of Water Resources treats the criteria for metals as total rather than dissolved fraction, even though your criteria that you have listed in the past have been done using dissolved metals as a basis.

The Association just would like to be -- to see a confirmation that the site-specific criteria-setting procedures that's in Section 7 will allow dischargers to establish a percentage of metals of -- basically a percentage of dissolved or total solids. We think having a ratio will allow permit writers to write permits allowing basically higher permit limits without violating water quality standards and causing an increased harm in the aquatic life.

Those are basically in summary our major concerns of the proposed revisions and proposed language, and here's some written detailed comments. Thank you.

CHAIRMAN JENKINS: Thank you, Mr. Foster.

The next speaker is Cindy Rank.

MS. RANK: My name is Cindy Rank and I am the Mining Committee Chair of the West Virginia Highlands Conservancy. There are a few comments on all of the

proposed revisions that I'll include in my written statement. They are relatively minor, some grammatical, some questions on that.

What I'd like to talk to right here is maybe seven points on the "remining" section, Section 6. Keying off of what K. O. said earlier, I understand that through the legislation we were looking at a simplification of the variance procedure because to come to the Board for a variance under the normal procedure would require them going back to the Legislature and having that approved.

So rather than simplifying it even further, I think that what you are proposing here tonight is indeed a simplification that is a godsend to the mining industry who would like to go ahead and have these variances without the drawn-out, longer process and returning to the Legislature for approval after you all have acted on it.

I also understand that 287 was to implement the Rahall Amendment, which is an OSM and federally-approved remining statute, as opposed to what I would consider not a federally-approved Columbo Amendment and all of that, but we can get into the specifics. And so that everything we talk about in these regulations we refer directly back to the

Rahall Amendment of the Clean Water Act and a couple of my comments I think focus on that.

I would suggest that in Section 6.2 you do refer to the West Virginia Code and the coal remining policy issued on September 30, 1993. I would suggest that a further reference be made in that paragraph to the Rahall Amendment to that section of the federal Clean Water Act.

Knowing that state policy may change, federal policy may change also, but state policy may change more readily than the Rahall Amendment and the Clean Water Act, although I say that with a bit of doubt at this point in time, given the tenor of the Congress right now, but I would think that the federal statute will change less rapidly than the policy, or at least that's a possibility, and I would suggest that the double reference to the federal statute as well as to the state policy would important in that 6.2.

In 6.2(a) you talk about, "The Board may grant the variance if it finds the following," and it talks about the stream not currently meeting "applicable numeric water quality criteria for iron, manganese and pH," and I know K. O. suggested there was a concern from industry.

My concern is that if the stream doesn't meet

the applicable numeric water quality, whether it be for all iron, manganese and pH or any of those, is not the important thing here because there are some old mine sites that may not have a problem with their specific discharge into a stream that's been destroyed or has poor water quality because of some upstream, so that the stream itself may not meet the applicable numeric water quality for manganese, iron or pH; but it's the discharge from that abandoned or that old mine site that's important.

And I know that the Board doesn't deal with discharge or effluent limits, but I think in this particular section the evaluation of whether or not you can grant a variance for that specific stream could depend on your evaluation of whether or not the discharge is not meeting those standards as opposed to whether or not the stream is meeting the discharge.

I'll try to say it again so I wipe the frown off of Dr. Jenkins' forehead.

CHAIRMAN JENKINS: I think I've got it. I think I picked you up on it.

MS. RANK: If in fact there is a stream that's already damaged from something upstream --

CHAIRMAN JENKINS: I'm with you.

MS. RANK: -- but the old mine site does not have a problem with their drainage -- it's unlikely that it would happen but it may happen -- that the discharge from that mined area is meeting water quality standards for iron manganese and pH, then it does not, under Rahall, qualify for a remining exemption and, therefore, the Board wouldn't want to give it a variance for that part of the stream.

So I would suggest that in this portion, and I know you all don't deal with effluent limits and discharge specifically. You usually look at the stream and water quality in the stream. In this particular section you all could evaluate the discharge because that's also what's being evaluated through the NPDES permit and all the rest before you move ahead and then look at the stream quality and what you might allow for it.

Did that frown go completely off of him? Okay.

Again, that applies also in 6.3(f) where we talk about the remining variance the applicant has to show "A demonstration that the water quality of the stream does not meet current numeric water quality criteria for iron,

manganese and pH."

I'm not sure whether that's the place to put the change that I'm suggesting or the first place, but I find the same problem reflected in both of those sections and I'm not sure exactly which one would tie it down.

The fourth point would be on Section (g) there. We talk about the applicant putting forth, "The alternative numeric water quality criteria for iron, manganese and pH requested," and I think also that you have to refer to Rahall in that instance because what you do in the stream or what you allow in the stream has to reflect that, that it's not allowing any more manganese or any more iron or a worse pH than is existing in the preexisting discharge.

I mean Rahall says that, you know, even if they get a variance in the NPDES, it can't be for a greater amount of manganese or iron or a worse pH, and I think that's a concern. I'll try to put it into better language, but I think that that doesn't quite do what the regs are trying to do.

In Section (h) there we talk about, "A description of the abatement action which will be carried

out on site and how such action will result in improved water quality in the receiving stream."

And the improvement that's been made to this it says, "In addition, the applicant shall provide information about other abatement actions considered," but I think that the Board would have to go further and ask for a demonstration of why the chosen abatement action is indeed the best available technology using best professional judgment. I mean, a demonstration that indeed of all the alternatives that's just not preferred by the particular company but it is in fact the best available technology.

DR. SAMUEL: And what do you mean by the word "demonstration"?

MS. RANK: Perhaps show how that actually carries out the intent of -- I think EPA has lists or guidelines as to determining the best available technology.

DR. SAMUEL: And what do you mean then by "show"?

MS. RANK: Rather than just a statement of this is the one we prefer, this is why we prefer it and this is how we come to this --

DR. SAMUEL: So, some literature?

MS. RANK: -- and a reference to maybe the EPA guidelines on BAT.

DR. SAMUEL: Sure, I got that.

MS. RANK: In 6.10 you talk about after a decision, "Such order shall be forwarded to the Applicant and to the Director of the Division of Environmental Protection." I would ask that you also include somehow notification to the public either who have commented on that or who have expressed an interest in any remining variances that might be granted, somehow a notification to people who have commented or asked about that specific case or remining variances in general.

And the only other two is the Prohibitions. Section 6.11 is a repeat of what is in 287, but I would also suggest that in (a) there we go back to some kind of a showing or demonstration which means more of an explanation that the applicant is going to be using in the operation, the BAT, you know, the best available technology given the circumstances. Rather than just saying it how you said it, I would suggest "without a showing by the applicant that the proposed operation will employ the best available technology economically achievable," et cetera, et cetera.

The only other thing would be in that last Section (c), "In the event that the Board determines the degradation of the instream water quality will result from the remining operation," the Board is not supposed to grant that variance.

I realize that in the law that was passed by the Legislature the word "will" is in there. I would suggest it would be better for the Board if the word "may" would be in there, although I doubt that you would change it at this point, but the way it's written it's almost that the Board has to prove that. In fact, the degradation of the instream water quality would happen if you granted it and the proof should be on the other side. I think that's an oversight in the legislation from my perspective, but I would suggest you consider that anyway; and otherwise, I thank you.

I didn't really agree with the industry that they needed special exemptions and I thought they should go through the regular variance procedures, though I do appreciate the Board's attempt to maintain the close connection to the Rahall Amendment as much as you have been in what's being proposed, and I thank you.

CHAIRMAN JENKINS: Thank you, Ms. Rank. That's the last name on my list. Is there anyone else here who would care to make a comment at this time? If so, we'd be happy to add you to the list.

Well, I'd like to second the comments that David made a while ago at the end of the first hearing. We really do appreciate all the comments that you have made and I hope that the procedures that we're going through here will result in improvement of the situation for both industry and the environment here in the state.

With that, I guess we'll call an end to the hearing. We'll adjourn.

(WHEREUPON, at 8:20 p.m., the proceedings in the above-entitled matter were concluded.)

REPORTER'S CERTIFICATE

STATE OF WEST VIRGINIA,

COUNTY OF KANAWAH, to wit:

I, Lana Bender Olds, Certified Court Reporter and Notary Public, do hereby certify that the foregoing is, to the best of my skill and ability, a true and accurate transcript of all the testimony adduced and proceedings had in the aforementioned case, as set forth in the caption hereof, at a hearing held on the 18th day of July, 1995.

Given under my hand this 14th day of August, 1995.

Lana Bender Olds

Lana Bender Olds,
Certified Court Reporter
and Notary Public.