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-MARKING REVIEW COMMITTEE

AGENCY: Environmental Quality Board TITLE NUMBER: 46 CSR 1

CITE AUTHORITY: 22B-3-4

AMENDMENT TO AN EXISTING RULE: YES X NO _____

IF YES, SERIES NUMBER OF RULE BEING AMENDED: Series One

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.

Signature

$20.00

Executive Office
#10 McJunkin Road
Nitro, WV 25143-2506
Telephone No: (304)759-0575
Fax No: (304)759-0526

West Virginia Bureau of Environment

Cecil H Underwood
Governor

Michael C. Castle
Commissioner

January 12, 2000

Ms. Judy Cooper
Director, Administrative Law
Division
Secretary of State's Office
Capitol Complex
Charleston, WV 25305

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

Dear Ms. Cooper:

WV Code §29A-3-11(a) requires the Secretary of the executive department which administers an agency under WV Code §5F-2-1, et seq., to take the necessary steps to submit rules finalized by the agencies which it administers to the legislative rulemaking process. Because I am charged with providing administrative support to the Environmental Quality Board pursuant to WV Code §5F-2-1(a)(3)(C), I hereby submit, as notice of an agency-approved rule, the enclosed rulemaking package prepared by the Environmental Quality Board entitled "Requirements Governing Water Quality Standards." In my capacities both as Commissioner of the Bureau of Environment and Director of the Division of Environmental Protection, though, I take no position on the appropriateness or need for the rule, and note that it is more stringent than the parallel federal rules concerning the designation of stream uses.

Should you have any questions, please feel free to contact me at 759-0515, or Libby Chatfield, Technical Advisor, Environmental Quality Board at 558-4002.

Sincerely,

Michael C. Castle

Michael C. Castle
Commissioner

MCC:cc

cc: Libby Chatfield
John Johnston
Carrie Chambers

Questionnaire

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

DATE: January 14, 2000

TO: LEGISLATIVE RULE-MAKING REVIEW COMMITTEE

FROM: (Agency Name, Address & Phone No.) The Environmental Quality Board
1615 Washington Street East
Suite 301
Charleston, WV 25311
(304)558-4002

LEGISLATIVE RULE TITLE: 46 CSR 1 Requirements Governing Water Quality Standards

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

2. a. Date filed in State Register with Notice of Hearing or Public Comment Period:

Appeared in the October 29, 1999 State Register

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

Extensive electronic mailing to the Environmental Quality Board state-wide mailing list which includes individuals, organizations, associations, companies and corporations.

c. Date of Public Hearing (s) or Public Comment Period ended:

Hearing held on November 29, 1999. Public Comment Period ended December 6, 1999.

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)

January 14, 2000

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

Ms. Libby Chatfield, Technical Advisor
1615 Washington St., E., Suite 301
Charleston, WV 25311
(304)558-4002 - Phone
(304)558-4116 - Fax
Chatfe@mail.wvnet.edu - E-mail

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

NONE

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: N/A

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.

b. Date of hearing or comment period:

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

d. Attach findings and determination and reasons:

Attached _____

46 CSR 1
Requirements Governing Water Quality Standards
January 14, 2000

Summary of Proposed Changes

The changes proposed address the implementation of the drinking water supply use category (category A) in section 6.2 of the rule. The rule will be amended to clarify that the drinking water supply use category applies to all waters of the state. This is not a new interpretation of this section. The Office of Water Resources of the Division of Environmental Protection has implemented the use category in this way for some time. However, the existing language in the rule does not clearly define this interpretation. The Board is therefore proposing the amendment to make this clarification.

The specific changes proposed are to remove the existing language in section 6.2 and replace it with language providing that category A applies to all waters unless it has been specifically removed as provided in Section 7 of the rule. Additionally, Appendix B, which includes a list of public water supplies, is deleted.

The Board intends that the application of category A will be revisited upon completion of the delineation of Zones of Critical Concern ("ZCCs") in the Source Water Assessment and Protection Plan being implemented by the WV Bureau for Public Health. According to that plan the Bureau will delineate zones of protection in all waters to ensure that appropriate water quality is maintained in the vicinity of public drinking water intakes. Those delineations are scheduled for completion in July 2000. Upon completion, the Board will review the delineations and reconsider the application of category A waters using the ZCCs.

46 CSR 1
Requirements Governing Water Quality Standards
January 14, 2000

Statement of Circumstances Requiring Proposed Amendments

In 1999, the West Virginia Legislature passed HB2533, which, among other things, approved amendments to the Water Quality Standards rule. Section 64-3-2 authorized the rule until October 30, 1999 with a proviso that the Board ". . . review, revise and propose . . . emergency and legislative rules to address the interpretive differences regarding the designation of category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake . . . "

The proposed language clarifies that the drinking water use category (category A) applies to all waters of the State, except where that use has been removed through the legislative rulemaking process. Those use removals are listed in section 7.2.d of the rule. This clarified language is consistent with the current application category A by the Office of Water Resources of the Division of Environmental Protection in the National Pollutant Discharge Elimination System (NPDES) permitting program.

In considering the clarification of how category A is to apply to the state's waters, the Board looked at a number of alternatives to the current implementation protocol. After reviewing these options, the Board believes that applying the watershed approach is a valuable way of implementing the public drinking water category. The Board will review the Zones of Critical Concern ("ZCCs") to be delineated around drinking water intakes as outlined in the Source Water Assessment and Protection Plan ("SWAPP") prepared by the West Virginia Bureau for Public Health ("Bureau"). The projected completion date of the delineation of the ZCCs by the Bureau is July of 2000. The Board will then implement a reassessment of category A based on those ZCCs. Until then, the Board has determined that the current application of category A to all streams of the State is appropriate in that it ensures full protection of those waters until a review of the protection zones in the SWAPP is completed.

APPENDIX B

FISCAL NOTE FOR PROPOSED RULES

Rule Title: 46 CSR 1 Requirements Governing Water Quality Standards

Type of Rule: X Legislative ____Interpretive ____Procedural

Agency: WV Environmental Quality Board

Address: 1615 Washington Street, E., Suite 301
Charleston, WV 25311

---

1. Effect of Proposed Rule N/A

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

2. Explanation of above Estimates:

N/A

3. Objectives of these rules:

Proposed changes clarify the application of category A, the public drinking water supply use designation in the Water Quality Standards Rule.

Rule Title: Requirements Governing Water Quality Standards.

4. Explanation of Overall Economic Impact of Proposed Rule.

A Economic Impact on State Government.

None anticipated. The amendments clarify he existing implementation protocol employed by the Division of Environmental Protection.

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

No changes in the permitting process will occur as a result of the proposed changes. NPDES permits will continue to include discharge limits based on use category A requirements where applicable.

C. Economic Impact on Citizens/Public at Large.

Retaining Statewide application of category A will ensure protection of state waters until a watershed approach as outlined in the West Virginia Bureau for Public Health's Source Water Assessment and Protection Program can be implemented.

Date: January 14, 2000

Signature of Agency Head or Authorized Representative

Libby Chatfield

TITLE 46
LEGISLATIVE RULES
ENVIRONMENTAL QUALITY BOARD
SERIES 1
REQUIREMENTS GOVERNING WATER QUALITY STANDARDS

§46-1-1. General.

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

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

1.3. Filing Date. -- October 18, 1999

1.4. Effective Date. --

§46-1-2. Definitions.

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

2.1. "Board" is the Environmental Quality Board.

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

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

2.4. "Cumulative" means a pollutant which increases in concentration in an organism by

successive additions at different times or in different ways (bio-accumulation).

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

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

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

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

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

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

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

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

2.12a. Those water quality values which exist unaffected by -- or unaffected as a consequence of -- any water use by any person; and

2.12b. Those water quality values which exist unaffected by the discharge, or direct or indirect deposit of, any solid, liquid or gaseous substance from any point source or non-point source.

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

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

2.15. "Point source" shall mean any discernible, confined and discrete conveyance,

including, but not limited to, any pipe, ditch, channel, tunnel, conduit, well, discrete fissure, container, rolling stock or vessel or other floating craft, from which pollutants are or may be discharged. This term does not include agricultural stormwater discharges and return flows from irrigated agriculture.

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

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

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

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

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

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

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

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

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

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

waters of the State.

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

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

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

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

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

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

3.2.f. Distinctly visible color;

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

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

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

§46-1-4. Anti-Degradation Policy.

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

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

4.1.b. The existing high quality waters of the State must be maintained at their existing high quality unless it is determined after satisfaction of the intergovernmental

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

§46-1-5. Mixing Zones.

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

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

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

5.2.b. Concentrations of pollutants which exceed the acute criteria for protection of aquatic life set forth in Appendix E shall not exist at any point within an assigned mixing zone or in the discharge itself unless a zone of initial dilution is assigned. A zone of initial dilution may be assigned on a case-by-case basis at the discretion of the chief. The zone of initial dilution is the area within the mixing zone where initial dilution of the effluent with the receiving water occurs, and where the concentration of the effluent will be its greatest in the water column. Where a zone of initial dilution is assigned by the Chief, the size of the zone shall be determined using one of the four alternatives outlined in Section 4.3.3 of 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 may be exceeded within the mixing zone but shall be met at the edge of the assigned mixing zone.

5.2.c. Concentrations of pollutants which exceed the criteria for the protection of human health set forth in Appendix E shall not be allowed at any point unless a mixing zone has

been assigned by the Chief after consultation with the Commissioner of the West Virginia Bureau of Public Health. Human health criteria may be exceeded within an assigned mixing zone, but shall be met at the edge of the assigned mixing zone. Mixing zones for human health criteria shall be sized to prevent significant human health risks and shall be developed using reasonable assumptions about exposure pathways. In assessing the potential human health risks of establishing a mixing zone upstream from a drinking water intake, the Chief shall consider the cumulative effects of multiple discharges and mixing zones on the drinking water intake. No mixing zone for human health criteria shall be established on a stream which has a seven (7) day, ten (10) year return frequency of 5 cfs or less.

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

5.2.e. The mixing zone shall not exceed one-third (1/3) of the width of the receiving stream, and in no case shall the mixing zone exceed one-half (½) of the cross-sectional area of the receiving stream.

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

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

5.2.h. Mixing zones shall not:

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

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

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

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

5.2.h.5. Overlap one another.

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

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

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

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

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

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

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

§46-1-6. Water Use Categories.

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

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

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

6.1.b. At a minimum, uses are deemed attainable if they can be achieved by the imposition of effluent limits required under Sections 301 (b) and 306 of the Federal Clean Water

Act and use of cost-effective and reasonable best management practices for non-point source control. Seasonal uses may be adopted as an alternative to reclassifying a water body or segment thereof to uses requiring less stringent water quality criteria. If seasonal uses are adopted, water quality criteria will be adjusted to reflect the seasonal uses; however, such criteria shall not preclude the attainment and maintenance of a more protective use in another season. A designated use which is not an existing use may be removed, or subcategories of a use may be established if it can be demonstrated that attaining the designated use is not feasible because:

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

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

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

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

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

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

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

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

6.2. Category A -- Water Supply, Public. -- This use category shall apply to all waters of the state unless specifically removed as indicated in section 7.2.d, herein. ~~This category is used to describe waters which, after conventional treatment, are used for human consumption. This category includes streams on which the following are located:~~

6.2.a. ~~All community domestic water supply systems;~~

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

~~6.2.c. All private domestic water systems;~~

~~6.2.d. All other surface water intakes where the water is used for human consumption. (See Appendix B for partial listing of category A waters;~~ (see section 7.2.a.2. for additional requirements for category A waters.)

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

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

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

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

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

6.5. Category D -- Agriculture and wildlife uses.

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

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

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

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

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

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

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

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

§46-1-7. West Virginia Waters.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

7.2.a.2. Each segment extending upstream from the intake of a water supply public (Water Use Category A), for a distance of one half (½) mile or to the headwater, must be protected by prohibiting the discharge of any pollutants in excess of the concentrations designated for this Water Use Category in Section 8. In addition, within that one half (½) mile

zone, the Chief may establish for any discharge, effluent limitations for the protection of human health that require additional removal of pollutants than would otherwise be provided by this rule. (If a watershed is not significantly larger than this zone above the intake, the water supply section may include the entire upstream watershed to its headwaters.) Until June 30, 2003, the one-half mile zone described in this section shall not apply to the Ohio River main channel (between Brown's Island and the left descending bank) between river mile points 61.0 and 63.5.

7.2.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: With the exception of section 7.2.c.5 listed herein exceptions do not apply to trout waters nor the requirements of Section 3.

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

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

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

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

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

7.2.c.5. For the upper Blackwater River from the mouth of Yellow Creek to a point 5.1 miles upstream, when flow is less than 7Q10. naturally occurring values for Dissolved Oxygen as established by data collected by the dischargers within this reach and reviewed by the Board and Division of Environmental Protection shall be the applicable criteria.

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

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

7.2.d.2. Potomac River

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

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

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

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

7.2.d.6. North Branch

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

7.2.d.7. Monongahela River

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

7.2.d.8. Cheat River

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

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

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

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

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

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

7.2.d.14. Youghiogheny River

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

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

7.2.d.16. Ohio River Tributaries.

7.2.d.16.1. Except that site-specific numeric criteria shall apply to the stretch of Conners Run (0-77-A), a tributary of Fish Creek, from its mouth to the discharge from Conner Run impoundment, which shall not have the Water Use Category A and may contain selenium not to exceed 62 ug/1; and iron not to exceed 3.5 mg/1 as a monthly average and 7 mg/1 as a daily maximum.

7.2.d.16.2. Except that a socio-economic variance shall apply to that segment of Harmon Creek (0-97) from its confluence with the Ohio River to a point 2.2 miles upstream, which shall not have water use Category A designation, and which shall have the following instream criteria: Free Cyanide 70 ug/l, Daily Maximum; Lead 14 ug/l, Daily Maximum, Total Phenolic Materials 10 ug/l, Daily Maximum, Zinc 200 ug/l, Daily Maximum, Temperature 100° F (monitored per Footnote 12 of the permit); Iron 4.0 mg/l, Monthly Average and 8.0 mg/l, Daily Maximum (monitored per Footnote 12 of the permit); Fluoride 2.0 mg/l, Monthly Average and 4.0 mg/l, Daily Maximum (monitored per Footnote 12 of the permit). Provided, however, that the criteria for Free Cyanide, Lead, Total Phenolic Materials, Zinc, Temperature and Iron shall not apply, and instead the state-wide criteria for these parameters shall apply, unless: Weirton Steel Corporation (1) submits to the Office of Water Resources on or before May 30, 1999 a report setting forth the water quality of the discharge from Outlet 004 for these parameters during the period from June 1, 1998 to May 1, 1999; (2) offers proposals for any appropriate reductions in the above excepted levels; (3) provides an engineering analysis of potential alternatives for reducing further the concentrations of said parameters in the discharge toward achieving statewide criteria; and (4) submits to the Office of Water Resources on a semi-annual basis commencing on December 31, 1997, summary reports on the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation during the prior six (6) months to improve the quality of said discharge. These exceptions shall be in effect until action by the Environmental Quality Board to revise such exceptions or until June 29, 2000, whichever comes first.

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

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

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

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

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

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

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

7.2.d.20.2. Except the stretch between the mouth of Little Scary Creek (K-31) and the Little Scary impoundment shall not have Water Use Category A. The following site-specific numeric criterion shall apply to that section: selenium not to exceed 62 ug/1 and copper not to exceed 105 ug/1 as a daily maximum nor 49 ug/1 as a 4-day average.

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

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

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

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

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

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

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

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

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

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

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

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

7.2.d.32. Bluestone Lake

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

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

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

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

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

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

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

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

8.1.a. Specific state (i.e. total, total recoverable, dissolved valence, etc.) of any parameter to be analyzed shall follow 40 CFR 136, Guidelines Establishing Test Procedures for Analysis of Pollutants Under the Clean Water Act, as amended, June 15, 1990. (See also Section 7.3 of 47 CSR 10 - National Pollutant Discharge Elimination System (NPDES) Program.)

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

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

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

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

toxicity to aquatic life.

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

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

8.2. Criteria for Toxicants.

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

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

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

8.4. Site-specific numeric criteria. The Board may establish numeric criteria different from those set forth in Appendix E for a stream or stream segment upon a demonstration that existing numeric criteria are either over-protective or under-protective of the aquatic life residing in the stream or stream segment. A site-specific numeric criterion will be established only where the numeric criterion will be fully protective of the aquatic life and the existing and designated uses in the stream or stream segment. The site-specific numeric criterion may be established by conducting a Water Effect Ratio study pursuant to the procedures outlined in 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:

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

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

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

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

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

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

9.4. Bioassay testing shall be conducted in accordance with methodologies outlined in the following documents: U.S. EPA Office of Research and Development Series Publication, Methods for Measuring the Acute Toxicity (EPA/600/4-90/027F, August 1993, 4th Edition) or Short Term Methods for Estimating Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms (EPA/600/4-89/001), March 1989; Standard Methods for the Examination of Water and Wastewater (18th Edition); or ASTM Practice E 729-88 for Conducting Acute

Toxicity Tests with Fishes, Macroinvertebrates and Amphibians as published in Volume 11.04 of the 1988 Annual Book of ASTM Standards. Test waters shall be reconstituted according to recommendations and methodologies specified in the previously cited references or methodologies approved in writing by the chief.

APPENDIX A
CATEGORY B-2 - TROUT WATERS

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

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
MTN	Upshur	Right Fork Middle Fork River
MTM	Randolph	Middle Fork River (Above Cassity)
MY	Preston	Rhine Creek

Little Kanawha River

LK	Upshur	Left Fork-Right Fork Little Kanawha River)
LK	Upshur-Lewis	Little Kanawha River (Above Wildcat)

Kanawha river

KE	Braxton	Sutton Reservoir
KE	"	Sutton Lake Tailwaters (Above Route 38/5 Bridge)
KE	Webster	Back Fork
KE	"	Desert Fork
KE	"	Fall Run
KE	"	Laurel Fork
KE	"	Left Fork Holly River
KE	"	Sugar Creek
KE	"	Elk River (Above Webster Springs)
KC	Raleigh	Stephens Lake (Impoundment)
KC	"	Marsh Fork (Above Sundial)
KG	Nicholas	Summersville Reservoir (Impoundment)
KG	"	Summersville Tailwaters (Above Collison Creek)
KG	Nicholas	Deer Creek
KG	Randolph-Webster	Gauley River (Above Moust Coal Tipple)
KG	Fayette	Glade Creek
KG	Nicholas	Hominy Creek
KG	"	Anglins Creek
KG	Greenbrier	Big Clear Creek
KG	"	Little Clear Creek and Laurel Run
KG	"	Meadow Creek
KG	Fayette	Wolf Creek
KG	Nicholas	Cherry River
KG	Greenbrier-Nicholas	Laurel Creek
KG	" "	North Fork Cherry River
KG	Greenbrier	Summit Lake (Impoundment)
KG	Greenbrier-Nicholas	South Fork Cherry River

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

BST	McDowell	Dry Fork (Above Canebrake)

APPENDIX B

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

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 Feure Spring
	P	"	Opequon PSD	Quarry Spring
	P	"	Hedgesville PSD	Speck Spring
	P	Morgan	Paw Paw Water	Potomac River
	PSB	Hampshire	Romney Water	South Branch Potomac River
	PSB	"	Peterkin Conference Center	Mill Run
	PSB	Hardy	Moorefield Municipal Water	South Fork River
	PSB	Pendleton	U.S. Naval Radio Sta.	South Fork River
	PSB	"	Circleville Water Inc.	North Fork of South Branch, Potomac River
	PSB	Grant	Mountain Top PSD	Mill Creek, Impoundment
	PSB	"	Petersburg Municipal Water	South Branch, Potomac River
	PNB	Grant	Island Creek Coal	Impoundment
	PNB	Mineral	Piedmont Municipal Water	Savage River, Maryland
	PNB	"	Keyser Water	New Creek
	PNB	"	Fort Ashby PSD	Lake
Monongahela River				
	M	Monongalia River	Morgantown Water Comm.	Colburn Creek & Monongahela
	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	"	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-K1-CO-EL	Kanawha River & Gum Hollow
K	"	Kanawha Water Co. Beards Fork	Unnamed Tributary Kanawha River
K	Kanawha	Midland Trail School	Impoundment
k	"	Cedar Coal Co.	Impoundment
K	Fayette	Elkem Metals Co.	Kanawha River
K	"	Deepwater PSD	Kanawha River
K	"	Kanawha Falls PSD	Kanawha River
K	"	W.V. Water-Montgomery	Kanawha River

Pocatalico river

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

Coal River

KC	Kanawha	St. Albans Water	Coal River	
KC	"	Washington PSD	Coal River	
KC	Lincoln	Lincoln PSD		Coal River
KC	Boone	Coal River PSD		Coal River
KC	"	Whitesville PSD		Coal River
KC	Raleigh	Armco Mine 10		Marsh Fork
KC	"	Armco Steel-Monte. 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/	Lewis

		Stonecoal Lake	
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

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.1 Aluminum (ug/l) Not to exceed:(See 7.2.d.B(b))	750		750				
8.2 Ammonia (ug/l): Un-ionized ammonia (UA) shall be determined from values of total ammonia-N, pH and temperature according to the following equation: $UA = \frac{1.2(\text{total ammonia-N})}{1+10^{(pka-pH)}}$ 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	
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			

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.3 Antimony (ug/l) Not to exceed:					4300	14	
8.4 Arsenic[b] (ug/l) Not to exceed:					50	50	100
8.4.1 Dissolved Trivalent Arsenic Not to exceed:	360 x CF[5]	190 x CF[5]	360 x CF[5]	190 x CF[5]			
8.5 Barium (mg/l) Not to exceed:						1.0	
8.6 Beryllium (ug/l)	130		130			.0077	
8.7 Cadmium (ug/l) Hardness Soluble Cd (mg/l $CaCO_3$) 0 - 35 1.0 36 - 75 2.0 76 - 150 5.0 > 150 10.0						X	
8.7.1 Not to exceed 10 ug/l in the Ohio River (O Zone 1) main stem (see section 7.1.d)						X	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.7.3 The four-day average concentration of dissolved cadmium shall not exceed the value determined by the following equation: $Cd = e^{(0.7852[\ln(\text{hardness})]-3.490)} \times CF^5$		X		X			
8.7.4 The one-hour average concentration of dissolved cadmium shall not exceed the value determined by the following equation: $Cd = e^{(1.128[\ln(\text{hardness})]-3.828)} \times CF^5$	X		X				
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 dissolved copper shall not exceed the value determined by the following equation[a]: $Cu = e^{(0.8545[\ln(\text{hardness})]-1.465)} \times CF^5$		X		X			
8.9.2 The one-hour average concentration of dissolved copper shall not exceed the value determined by the following equation[a]: $Cu = e^{(0.9422[\ln(\text{hardness})]-1.464)} \times CF^5$	X		X				

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.10 Cyanide (ug/l) (As free cyanide $HCN+CN^-$) Not to exceed:	22	5.0	22	5.0	5.0	5.0	
8.11 Dissolved Oxygen[c]: not less than 5 mg/l at any time.	X				X	X	X
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				

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.12 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		
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. Dissolved Hexavalent chromium (ug/l) Not to exceed:	16 x CF[5]	11 x CF[5]	16 x CF[5]	7.2 x CF[5]		50	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.15 Iron[c] (mg/l) Not to exceed:		1.5		0.5		1.5	
8.16 Lead (ug/l) Not to exceed:						50	
8.16.1 The four-day average concentration of dissolved lead shall not exceed the value determined by the following equation[a]: $Pb = e^{(1.273[\ln(\text{hardness})]-4.705)} \times CF$[5]		X		X			
8.16.2 The one-hour average concentration of dissolved lead shall not exceed the value determined by the following equation[a]: $Pb = e^{(1.273[\ln(\text{hardness})]-1.46)} \times CF$[5]	X		X				
8.17 Manganese (mg/l) Not to exceed:						1.0	
8.17.1 Effluent limitations regarding Mn shall not apply where the applicant certifies the stream or stream segment is not category A water.							

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.18 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:					4600	510	
8.19.1 The four-day average concentration of dissolved nickel shall not exceed the value determined by the following equation[a]: $Ni = e^{(0.846[\ln(hardness)]+1.1645)} \times CF^5$		X		X			
8.19.2 The one-hour average concentration of dissolved nickel shall not exceed the value determined by the following equation[a]: $Ni = e^{(0.846[\ln(hardness)]+3.361)} \times CF^5$	X		X				
8.20 Nitrate (as Nitrate-N) (mg/l)						10	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.21 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		3.0		0.071	0.071	0.071
Dieldrin[b] (ng/l)	2500	1.9	2500	1.9	0.071	0.071	0.071
Endrin (ng/l)	180	2.3	180	2.3	2.3	2.3	2.3
Toxaphene[b] (ng/l)	730	0.2	730	0.2	0.73	0.73	0.73
PCB[b] (ng/l)		14.0		14.0	0.045	0.044	0.045
Methoxychlor (ug/l)		0.03		0.03	0.03	0.03	0.03
Dioxin (2,3,7,8- TCDD)[b] (pg/l)					0.014	0.013	0.014
Acrylonitrile[b] (ug/l)					0.66	0.059	
Benzene[b] (ug/l)					71	0.66	
1,2-dichlorobenzene (mg/l)					17	2.7	
1,3-dichlorobenzene (mg/l)					2.6	0.4	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
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)	28,900	1,240	28,900	1,240	470	0.19	
Halomethanes (ug/l)					15.7	0.19	
1,2-dichloroethane[b] (ug/l)					99	0.035	
1,1,1- trichloroethane[b] (mg/l)						12	
1,1,2,2-tetrachloroethane (ug/l)		2400		2400	11	0.17	
1,1-dichloroethylene[b] (ug/l)					3.2	0.03	
Trichloroethylene[b] (ug/l)					81	2.7	
Tetrachloroethylene[b] (ug/l)					8.85	0.8	
Toluene[b] (mg/l)					200	6.8	
Polynuclear Aromatic Hydrocarbons (PAH)[b] (ug/l)					0.031	.0028	
Phthalate esters (ug/l)		3.0		3.0			

APPENDIX E

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

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.22.1 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.							
8.22.2 The following body burden criteria shall not be exceeded in edible tissues of fish: Parameter Body Burden Chlordane 1.0 (ug/g) DDT 0.1 (ug/g) Aldrin - Dieldrin 0.3 (ug/g) Endrin 0.3 (ug/g) Toxaphene 1.0 (ug/g) PCB 2.0 (ug/g) Dioxin 6.4 (pg/g)							
8.23 pH[e] No values below 6.0 nor above 9.0. Higher values due to photosynthetic activity may be tolerated.	X	X	X	X	X	X	X

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.24 Phenol (ug/l) (except Category A) Not to exceed:	10,200	2,560	10,200	2,560		3.5 mg/l	
8.25 Radioactivity: Gross Beta activity not to exceed 1000 picocuries per liter (pCi/l), nor shall activity from dissolved strontium-90 exceed 10 pCi/l, nor shall activity from dissolved alpha emitters exceed 3 pCi/l.	X		X		X	X	X
8.25.1 Gross total alpha particle activity (including radium-226 but excluding radon and uranium shall not exceed 15 pCi/l and combined radium-226 and radium-228 shall not exceed 5pCi/l; provided that the specific determination of radium-226 and radium-228 are not required if dissolved particle activity does not exceed 5pCi/l; the concentration of tritium shall not exceed 20,000 pCi/l; the concentration of total strontium-90 shall not exceed 8 pCi/l in the Ohio River main stem.	X		X		X	X	X
8.26 Selenium (ug/l) Not to exceed:	20	5	20	5		10	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.27 Silver 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 dissolved silver shall not exceed the value determined by the following equation: $Ag=e^{(1.72[\ln(\text{hardness})]-6.52)} \times CF$[5]	X		X				
8.28 Temperature Temperature rise shall be							

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

APPENDIX E

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

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.28.4 For Ohio River Main Stem (01)(Section 7.1.d): Period Inst. Dates Ave. Max. Jan 1-31 45°F 50°F February 45 50 March 1-15 51 56 March 16-31 54 59 April 1-15 58 64 April 16-30 64 69 May 1-15 68 73 May 16-31 75 80 June 1-15 80 85 June 16-30 83 87 July 1-31 84 89 August 1-31 84 89 Sept 1-15 84 87 Sept 16-30 82 86 Oct 1-15 77 82 Oct 16-31 72 77 Nov 1-30 67 72 Dec 1-31 52 57	X						
8.29 Thallium (ug/l)					6.3	1.7	

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		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					
8.31.1 No chlorinated discharge allowed			X				
8.32 Turbidity No point or non-point source to West Virginia's waters shall contribute a net load of suspended matter such that the turbidity exceeds 10 NTU's over background turbidity when the background is 50 NTU or less, or have more than a 10% increase in turbidity (plus 10 NTU minimum) when the background turbidity is more than 50 NTUs.							

APPENDIX E

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

APPENDIX E

PARAMETER	USE DESIGNATION						
	AQUATIC LIFE				HUMAN HEALTH		ALL OTHER USES
	B1, B4		B2		C[3]	A[4]	
	ACUTE[1]	CHRON[2]	ACUTE[1]	CHRON[2]			
8.33 The four-day average concentration of dissolved zinc shall not exceed the value determined by the following equation[a]: $Zn = e^{(0.8473[\ln(hardness)]+0.7614)} \times CF^5$		X		X			
8.33.1 The one-hour average concentration of dissolved zinc shall not exceed the value determined by the following equation[a]: $Zn = e^{(0.8473[\ln(hardness)]+0.8604)} \times CF^5$	X		X				

1 One hour average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.

2 Four-day average concentration not to be exceeded more than once every three years on the average, unless otherwise noted.

3 These criteria have been calculated to protect human health from toxic effects through fish consumption, unless otherwise noted.

4 These criteria have been calculated to protect human health from toxic effects through drinking water and fish consumption, unless otherwise noted.

5 The appropriate Conversion Factor (CF) is a value used as a multiplier to derive the dissolved aquatic life criterion is found in Appendix E, Table 2.

a Hardness as calcium carbonate (mg/l). The minimum hardness allowed for use is this equation shall not be less than 25 mg/l, even if the actual ambient hardness is less than 25 mg/l The maximum hardness value for use in this equation shall not exceed 400 mg.l even if the actual hardness is greater than 400 mg/l.

b Known or suspected carcinogen. Human health standards are for a risk level of 10^{-6}

c May not be applicable to wetlands (B4) - site-specific criteria are desirable.

APPENDIX E
TABLE 2

Conversion Factors

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

ORIGINAL

BEFORE THE ENVIRONMENTAL QUALITY BOARD
STATE OF WEST VIRGINIA

Transcript of the public hearing held on Monday, the 29th day of November, 1999, at 1615 Washington Street, East, Second Floor Conference Room, Charleston, West Virginia, commencing at 7:00 p.m., regarding 46 CSR 1, Requirements Governing Water Quality Standards.

BEFORE: DONALD C. TARTER, Chairman

EDWARD M. SNYDER, Co-Chairman

CHARLES R. JENKINS, Member

STAFF:

LIBBY M. CHATFIELD, Technical Adviser

REBECCA S. CHARLES, Legal Adviser

MELISSA CARTE, Clerk

DATE: DEC. 27, 1999

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

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

INDEX OF SPEAKERS

INDEX OF SPEAKERS (continued):

INDEX OF WRITTEN STATEMENTS

CHAIRMAN TARTER: The Board wants to welcome you to our public hearing tonight and we begin with Public A use category.

Let me introduce, for those that might not know, the members of the Board and staff.

Melissa Carte is our clerk of the Board and doing a super job for us.

Becky Charles is our attorney and tries to keep our lawyering straight.

And Libby, I started to say McIntyre, as I knew her, Libby Chatfield who is our technical adviser.

On my right is our co-chair, Ed Snyder, from the eastern panhandle, Shepherd College.

And not driving home tonight, I hope.

DR. SNYDER: No. No way.

CHAIRMAN TARTER: And a new grandpa as of about-- How long?

DR. JENKINS: Less than twenty-four hours.

CHAIRMAN TARTER: Doctor Bob Jenkins, professor emeritus from WVU and a proud grandparent

again tonight.

I'm Don Tarter, co-chair of the Board. And all I can say is Go Herd for those of us out there who are hoping to break the top ten.

(WHEREUPON, a discussion was had off the record.)

CHAIRMAN TARTER: Libby, would you give us some background and we'll just go right into this.

MS. CHATFIELD: Sure. We are here to take comments tonight on the emergency rule that was filed on October 18th.

As Doctor Tarter stated, the changes that have been proposed deal with the Public A use category. And the Board, in this emergency rule, has clarified that the Public A use category applies to all streams throughout the state. And they, the Board, decided to do that on an interim basis. And when the Bureau for Public Health completes their delineation of some of the critical concerns, the Board will be looking to those delineations to potentially amend the application of use category.

So that's what we're taking comments

on tonight.

CHAIRMAN TARTER: Do we have some volunteers or do we have a list that we can--

DR. JENKINS: Is the list still moving?

MS. CHATFIELD: While we're waiting for it, I'll remind everybody that the deadline for submitting written comments will close on Monday, December 6th. So we have provided a period of time for anyone wishing to follow up with written comments to do so. And the Board will probably be looking at these comments, discussing them at our December meeting.

DR. JENKINS: Maybe we should find out if somebody just wandered in out of the cold and hasn't really had an opportunity to read this. Are copies available anywhere?

MS. CHATFIELD: Yes. We can get you a copy.

The changes really clarify that the use applies to all streams of the state. The existing language has been removed, and one statement addressing the application of the use category has been included in Section 7 of the rule, I believe, 6.2.

And copies are available. We haven't

made any copies for here tonight but we could run upstairs and do that.

DR. JENKINS: If anybody wants them.

CHAIRMAN TARTER: Does anybody need a copy?

A VOICE: I need a copy.

DR. JENKINS: Why don't we get a count. Everybody that wants a copy get a hand up in the air and hold it there for a little bit.

(Pause.)

DR. JENKINS: I think I saw six hands.

DR. SNYDER: It's been a long day, but I think I see the same number.

CHAIRMAN TARTER: With that in mind then, I'm just simply going to go down through the list here.

Wayne Appleton.

MR. WAYNE APPLETON: Thank you.

I'm Wayne Appleton speaking on behalf of the Manufacturers Association. I'm going to read my comments tonight so that there is no question as to my meaning or intent.

In 1998, the West Virginia Legislature mandated the Environmental Quality Board to

study and justify the rationale for designating all the state's waters as Category A public drinking waters. Rather than performing any studies or analyses to determine whether it is indeed appropriate to continue to protect uses which do not exist, the Board has chosen to retain this designation despite an awareness of the problems that this can cause.

The Board is aware that there are serious problems with designating all of the state's waters as Public A. The Board is aware of the differences that exist between the Water Quality Standards for drinking waters and those designed to protect aquatic life. The Board is aware of specific health problems, such as manganese, where the application of the human health criteria would require treatment which would be very detrimental to the downstream aquatic life and which would degrade water quality substantially.

In designating all of the state's waters as Category A, the Board appears to be ignoring or underestimating the implications of their actions. By designating waters which have no drinking water uses

as drinking water, the Board has arbitrarily determined that some of these waters will be designated as impaired for that nonexistent use. This is despite the fact that these streams have vibrant, healthy aquatic systems and that no one is using these streams for potable water.

The implication of defining these streams as impaired is that these streams will then be inappropriately listed on the 303(d) list as impaired waters when in fact they are healthy. This then implies that a total maximum daily load, or TMDL, will have to be established and corrective action to fix a nonexistent problem will have to be taken.

The West Virginia Manufacturers Association strongly supports identifying those streams which are truly impaired and taking corrective action to remediate specific problems. We do not believe that West Virginia has the resources to do unnecessary TMDLs or to remediate problems which exist only because the Board's decision protects nonexistent uses.

The West Virginia Manufacturers Association does not believe that the Board has met the

mandate of the legislature to explain and justify designating all of the state's waters as Category A. WVMA is unaware of any use attainability analyses which have been done or any other technical, significant technical studies done by the Board's staff which support this designation.

WVMA believes that the Board must either reconsider this arbitrary designation or provide the regulated community with a well defined and practical means to change the designation for specific waters. If these issues are not adequately addressed by the Board, the WVMA will find it necessary to take these issues to the legislature in the upcoming session.

Thank you.

And I have provided you with written copies.

CHAIRMAN TARTER: Thank you.

Larry Emerson from Arch Coal.

MR. LARRY EMERSON: Thank you for this opportunity to speak. And I will make my comments specifically to the manganese criteria and the

importance that this issue has presented in the coal industry. All I wanted to do is make a couple of points with respect to the problems associated for treating for manganese down to a one-point-o-part-per-million effluent limit, which as I understand it would be the Public A level.

Manganese, as many of you know, is difficult to get out of solution. It doesn't precipitate out of solution until it reaches a pH of approaching ten. And as a result of that, there are some problems just with chemically treating to meet a one-point-o-milligram-per-liter limit. What we have found in our work in treatment of manganese, particularly in remote areas where there's -- we're literally miles from a source of electricity, they're hard to get to, they're in areas that you have to drive a long way through narrow roads, subject to vandalism, all of those types of things, that there are ways to treat these sources to an effluent limit that is above one, but still protects aquatic life, takes care of any dissolved iron that might be in the effluent, keeps the pH in an acceptable range, that protects aquatic life

but, however, would not meet one-point-o. It would be a little bit above that.

My suggestion is that the Board take these things into account. These kinds of things, in order to meet a one-point-o-part-per-million manganese, there is a cost involved in that; not just in dollars spent by the coal industry, but it impacts on the environment.

Things happen out in the real world. We cannot put a fence around all these sites and keep people out. People come in uninvited. They mess with these treatment systems. We had a situation in Boone County where four-thousand dollars of equipment was just picked up over the weekend and thrown into the pond. These things happen. We just can't keep them out.

So what does all of this mean? No one is talking about not treating. We are talking about treating to the best effluent possible to protect the aquatic life, to maintain the health of the stream, but yet would be something more than one-point-o-part-per-million manganese.

We would suggest that the Board take these issues into account so that the best effluent is discharged in the waters of the state and not necessarily drinkable.

Thank you very much.

CHAIRMAN TARTER: Thank you, Larry.

MS. WENDY RADCLIFF: Actually I think I was next. I signed up, but I didn't know we were supposed to put--

CHAIRMAN TARTER: Okay. Wendy Radcliff.

MS. WENDY RADCLIFF: My name is Wendy Radcliff. And I'm here as a citizen. I guess we all are.

I just wanted to respond to some of the things that Wayne Appleton was saying in terms of the assumption that waters of the state, not all waters of the state are being used as public drinking water supplies.

From 1994 to 1998 in my role as an environmental advocate at DEP, I held a series of town meetings around the state in which we opened up to the public to come in and talk to us, the DEP, about how

they, we're doing our job, what were some of the conditions they were facing. And I was amazed at the time because I was under the same assumption that Wayne was, that nobody uses the water directly out of the stream or the river or whatever it might be, whatever size the water body is. And at every meeting that we held, we had people show up that talked about how they were taking water out of the stream and using it. So I think that's important. We may sit here in Charleston or in our nice fancy homes and talk about how nobody uses water right out of the stream or out of the river. Whether it's right, wrong, or indifferent, people do it.

And so the responsibility of this Board and the DEP permitting agency is to protect the water quality and the public health. I think that you can't overlook the fact that whether we all like to think everyone's on a public water supply and has nice clean water, we have to recognize that people aren't.

We also found this when we would have water quality standard workshops in a couple of different areas of the state and we asked people to

come out and talk to us. And at those meetings we had people show up that were talking about how they used the water, whether it was on their gardens or to the extreme of using it within their homes.

So I can't stress enough-- I mean statistically in terms of the numbers of people that are out in the state, if just a few people that came to our meetings, which to me in terms I guess of one-point-eight-million people that reside in the state, that of the thousand or so that came to the meetings over those four years, there was a percentage of them that did use the water directly out of the stream. I think when you look at that in terms of percentages, it gets to be pretty high.

I would also say that in terms of the manganese, I would just-- I encourage and I'm glad--

Back on the Public A, I'm sorry, I forgot to put that in there, but I am glad to see that the Board has addressed that and has decided to continue to have it in there as all the waters of the state are public drinking water.

On the manganese, I think you need to

really research and figure out whether this wouldn't be a shift from the industry that wants to use the water, whether it's within mining or how ever it is in terms of treating it, over to the water supplies that are out there, the small operators and how it may affect them when they go to treat the water supplies for public use if they were not shifting it, where, who might be treating the water for the manganese and what affects it might have on an everyday residential customer.

So those are just a couple of thoughts and some observations that I've had.

CHAIRMAN TARTER: Thank you.

If I miss someone, we'll catch you at the end.

Judy Rodd with the West Virginia Highlands Conservancy.

MS. JUDY RODD: Hi. I'm Judy Rodd, vice president of the West Virginia Highlands Conservancy.

I'm just here with some general comments. I think numerous surveys across the nation and in West Virginia have shown that one of the foremost environmental concerns of people is a concern

with clean water. And I think that when you do these telephone polls and mailings, that's what's top of the list of environmental concerns.

I think it's wonderful that West Virginia is aiming to have the waters of all its rivers and streams be drinkable. I think this bodes well for our tourism industry that we're looking to get back to a more pristine era and stand for Wild, Wonderful West Virginia. And I think people will flock to the state as we implement these standards. We applaud you for going to this high level.

I think there is a deep concern about manganese which is associated with heavy metals and needs to be dealt with and not kind of sort of brushed aside.

Thank you.

CHAIRMAN TARTER: Thank you.

Tom Rodd.

MR. TOM RODD: My name is Tom Rodd and I'm here as a citizen. I for many years worked on mine drainage issues in northern West Virginia on behalf of a lot of different citizens groups up there. I'm

familiar with the regulatory and water quality issues that face the folks up in the northern, above the hinge, as it were, where things like the Fairmont pool and the explosion of mine-affected waters and the groundwater are going to be huge issues for generations to come up there, many generations to come, as those mines that are being abandoned fill up with water and the water starts to percolate up and the groundwater itself is affected and the streams as well, not just from existing mine sites but as part of a general affect upon the groundwater in northern West Virginia. It's a huge issue that we're just beginning to see develop in that area.

And I hope the Board is thinking in those terms when it's talking about setting stream quality standards for the State of West Virginia because it's applying to an area where we're facing just an immense problem, the scope of which we don't really even understand at this time. It's uncertain. But I am glad that the Board again is taking a strong stand for saying that all water needs to meet drinking water standards.

I would point out that even if households don't necessarily draw water from streams, lots of agriculturalists do. Lots of farms do. Many people in this drought that we've just had, the only place their cattle could get water when springs dried up was in streams. There are just so many folks who rely upon that for their living and for their livelihood. They don't want their cattle or their stock drinking polluted water any more than they want to be drinking it themselves.

One of the things that I learned about manganese from my colleague, Richard DiPretoro, the hydrogeologist with whom I worked for about ten years, I asked him, I said, "Well, what is the problem with this manganese; why do they treat for manganese, Richard?" Trying to get a simple answer to the situation.

He said, "Well, it's not the human health aspects of manganese; it's that manganese is an indicator for heavy metals; that if manganese is removed from solution, you can be pretty sure that you're taking care of the heavy metals that go into the

food chain that could be deposited upon the bottoms of streams and those sorts of things. If you get the manganese out, you've done what's necessary to get those others out."

And those are very difficult to test for. At very small levels, they're hard to test for. And so I think that if you're really looking at the manganese standard, and I believe that he told me that when SMCRA was passed, the Surface Mine Control Reclamation Act in 1977, that there was a decision to establish a manganese standard, refer to a manganese standard, the human health standard for manganese, because it was thought, well, that's just a shortcut way of dealing with the water quality affects with respect to lead, cadmium, all sort of metals which exist in very trace amounts in the overburden of mining and which are leached out by acid mine drainage in trace amounts and concentrated in the drainage from mines.

So not pretending to be a chemist or a biologist or anything like that, but just sharing with you what I've heard from a person in whom I have

great confidence in the integrity of what he would tell me about these things, I believe that manganese is a strong indicator, and was thought by regulators when they set these standards to be an indicator for things that are far more serious. And the question is: Do we want those going into the food chain; do we want them going into the aquatic food chain; or, do we want them to be removed as part of the treatment process?

So I'm just pointing out, suggesting that the issue probably goes a little bit beyond manganese.

Thanks.

CHAIRMAN TARTER: Thank you.

Kathy Beckett, West Virginia Chamber and Jackson and Kelly.

MS. KATHY BECKETT: There are some written copies of my statement.

My name is Kathy Beckett of the law firm of Jackson and Kelly. I'm here tonight to present a statement on behalf of the West Virginia Chamber of Commerce.

The Environmental Quality Board has

elected to designate all waters of the state as Category A drinking waters in the form of an emergency rule which is also slated to become a final rule. The Environmental Quality Board was directed by the legislature in March of 1999 to review, revise, and propose within the statutory deadline of October 30th of this year, emergency and legislative rules to address the interpretive differences regarding designation of Category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake. Although the Board has dedicated portions of its meetings, as well as time for public hearings, it's not apparent that it has given appropriate consideration to the impacts of the decision that it has made.

Although the Board historically has received lengthy comments from the West Virginia Chamber, as well as from other trade organizations and individual companies describing the inherent regulatory difficulties of designating all of the state's waters as Category A waters, the Board has elected to adopt the statewide designation. This broad brush approach

creates a legal generalization that takes reality and turns it on its head. Waters upon which there are no drinking water uses are now designated as such without having undergone even the first analytical assessment of actual uses. What is gained by creating this fiction is a water quality criteria goal that would make all water bodies appropriate for human consumption after conventional treatment. It is well for the public to be educated on this very important detail. Just by designating all waters as drinking water supply does not mean the public is free to sip a teacup full of West Virginia's waters and expect those waters to be potable.

Another significant fiction that is created by the Board is that waters that fail to meet Category A criteria, whether or not there is a public water intake, will be subject to TMDL analysis and development, as Wayne Appleton described to you in detail. With each layer of regulation, the myth grows larger and larger and more and more resource intensive.

The Chamber strongly urges the Board to withdraw this rule and provide a report to the

legislature detailing the need for additional time. The EQB has been confronted with very complex legal and technical issues this past year as it has worked tirelessly to address EPA's comments presented in the last triennial review. The Chamber supports the hard work the Board has done thus far, but the Chamber is keenly aware of the outstanding issues that remain unaddressed. It simply is not acceptable to rely on the stroke of a broad brush when we are dealing with important matters such as water quality.

The most familiar episode in this fiction that creates a terrible fact is that which is described by those facilities that will be required to treat for manganese to such an extent that aquatic life will be threatened, if not eliminated.

The Chamber strongly urges the Board to withdraw the current rule in favor of allocating appropriate time for all Board members to thoroughly study this issue and arrive at a public policy decision that will create a regulation that is well founded in law as well as fact.

The Chamber will be filing more

detailed comments by Monday's deadline. And I thank you for your time this evening.

CHAIRMAN TARTER: Thank you, Kathy.

Did I miss anyone?

MS. ANN BRADLEY: I'm Ann Bradley and I just have some written comments to file on behalf of Weirton Steel. Mark Vignovic apologizes for not being able to be here tonight.

And I would also add that Weirton is very concerned about the economic implications of the rule, as the comments state, and believes that there is a less restrictive approach that is both scientifically and factually supportable. And we urge the Board to give consideration to that.

CHAIRMAN TARTER: Thank you.

MS. PAM MOE-MERRITT: My name is Pam Moe-Merritt and I'm here this evening representing the West Virginia Rivers Coalition and also the West Virginians for Clean Water campaign, which is a coalition of ten citizen groups around the state.

And we are very pleased to see that the Board is proposing to retain the definition of

Category A. That public drinking water category will, or in fact shall, apply to all waters of the state. And we would certainly like to see this go beyond the interim basis that you are proposing currently.

We believe that this assures the maximum degree of protection for all of our state's surface waters for existing uses and in particular for those people who currently use the water and in many cases, as Wendy pointed out, are not in the system and are not accounted for. And as you've heard from me in the past, I'm one of those people that supplements our spring with water that we directly get from our local river.

We also believe that it's absolutely inappropriate to include the language which provides the exemption from manganese, the human health criterion, for above five miles of a known water source. Of course, it eliminates those potential sources and people who are using water that I talked about. But it also contradicts the language that you're using for a category which protects all of those existing uses. And in fact, I think that it violates

the language of the Clean Water Act that regards existing uses.

In the letter that we submitted to you on July 13, 1999, the Clean Water Act specifically states that existing uses are those that have been attained at any time since 1975 when the Clean Water Act regulations regarding designation were established. Existing uses include, one, uses actually being made whether or not the level of quality to fully support the uses exists; and, two, uses for which the level of quality has been attained whether or not the use is being made.

The Clean Water Act goes on to state flatly that existing instream water uses and the level of water quality necessary to provide and protect the existing uses shall be maintained and protected. And that's what we need to do.

Unfortunately it's embarrassingly clear whose interest is being considered here with this exemption and who is being catered to. The summary here of the proposed changes says the change has been included to address concerns raised by the coal

industry regarding the difficulty of meeting the manganese limit. For those people who use the waters and streams of West Virginia to make a profit, must be held accountable and to be willing to bear the cost of preserving the quality of our waters.

And it appears that the coal industry does not want to be responsible and expend the resources necessary to fully treat for manganese. The treatment that they're currently talking about I would consider a partial treatment because they're saying, well, it raises the alkalinity of the receiving stream to a degree that may in fact violate water quality standards.

There are other treatment options available to also reduce the pH, and those should be fully explored before we consider altering language for our uses. And it's the responsibility of the coal industry to look at those and to employ them. It's a problem that can be dealt with through the permitting process. It can be dealt with through other Clean Water Act mechanisms such as variances but not as a proposed language change to designated uses.

The burden of proof and the treatment responsibility should not be shifted to the public. And the common everyday need for clean water should be preserved for use now, use in the future. And we have to remember that potential future use that's there. We want to have clean water available and not to use it all up, not to pollute it all right now.

Regarding the intention of the Board to consider the zones of critical concern by the Bureau of Public Health is, you know, currently assessing and planning to use, it says that again these zones will be maintained in the vicinity of public drinking water intakes. And again this leaves out those people, such as myself, who are using water but are not being serviced by a public service district or an intake system. And there has to be mechanisms to account for that whether it's via the Bureau of Public Health or what other, you know, whatever agencies are out there doing it needs to find a way to include these people.

Again we appreciate your protective definition that you've included and we request that you eliminate the inappropriate, if not illegal, language

that would exempt manganese.

Thank you.

CHAIRMAN TARTER: Thank you.

Okay. Mary. Mary is with EPA Region III. Mary Kuo.

MS. MARY KUO: As he said, my name is Mary Kuo. And I'm with the Water Protection Division of EPA, its Region III office in Philadelphia. I'm happy to be in West Virginia and I thank the Board for having me.

According to the notice, we're here to discuss the Public A issue. I want to focus more on the manganese exemption.

Before I begin though, I wanted to commend the Board on its time and effort in trying to resolve this issue. After sitting in on some meetings and conference calls, I recognize that there are some difficulties they have been wrestling with.

And the current language in 8.17.1 is one of the disapproved items included in our approval-disapproval letter of June 1999. And so EPA is pleased to see that the Board is taking action in trying to

resolve this disapproval.

Regarding Category A, the water quality standards do not explicitly state that all waters are designated as drinking water supplies. So in that sense, EPA is pleased also that the current, there is clarification on the current interpretation.

For manganese, I want to take this opportunity to reiterate some of the main points that were discussed during the November 3rd conference call between the Environmental Quality Board and EPA. The first point is that criteria for the protection of human health is needed for all water bodies designated as drinking water supply. Under the Clean Water Act, the state needs to adopt the appropriate criteria where necessary to support the designated uses. Thus, if the Public A drinking water supply use is designated to all waters of the state, then the human health criteria for pollutants, including manganese, needs to be applied to all waters as well. Otherwise, the Category A use is not being fully supported throughout the state.

The second point is that there are already available means of limiting an application of a

manganese human health criterion. A revision to this criterion could be explored through a variance or a use attainability analyses. And it seems like a lot of the difficulties in meeting the one-point-o level speaks to the high cost of treatment involved. And if that is the case, EPA regulations do allow for a socioeconomic variance which would need to be, would need to demonstrate that. There is substantial and widespread social and economic impacts involved. And specifically that would mean that a discharger would demonstrate that it would not be able to afford some of the necessary pollution reduction or that in meeting that level, that criterion, that there would be significant adverse social and economic impacts. And I want to also stress that like any other type of variance, a socioeconomic variance is temporary and it would need to be resubmitted on a regular basis.

As I stated earlier, it's important that West Virginia works to resolve this issue. It seems that the proposed language resulted from the previously disapproved language in 8.17.1. And so I extend my assistance in trying to work towards a

criterion that meet the approval.

Thank you.

CHAIRMAN TARTER: Thank you, Mary.

Anyone else?

Yes sir. Your name, please.

MR. DOYLE COAKLEY: Doyle Coakley. I'm on there someplace.

CHAIRMAN TARTER: Okay.

MR. COAKLEY: I'm Doyle Coakley from Webster County. I think some of you remember me.

CHAIRMAN TARTER: Yes sir.

MR. COAKLEY: I like the Category A, but I'm very concerned about any exemptions or exceptions that are made to the coal industry because I've seen what they did to the streams in Webster County. Laurel Creek is -- there's no fish at all in it. Amos Run is practically dead.

I can't tell you that manganese is what killed the fish. I don't know what killed the fish. But we have about five-- Actually we have seven streams right in my neighborhood, there's no fish in them, there's nothing in them, as a result of coal

companies. I think if they mine coal, they ought to pay the cost of treating the water.

Thank you.

CHAIRMAN TARTER: Thank you.

Anyone else?

MR. TIFF HILTON: My name is Tiff Hilton. I'm with WOPEC, Working on People's Environmental Concerns. And everybody can blame the manganese problem on me.

DR. JENKINS: I'm glad to hear we have somebody to blame it on.

MR. HILTON: Well, I sort of got this all started. And I want to apologize because I took the wrong approach. And, you know, that's what I've told some of these people all along in that the way we approached this is that we wanted to formulate a protocol to get relief on manganese. But the way that relief came through the NPDES process was to report only manganese, which tended to make everyone think that we just stopped treating for manganese. And I think some people got that impression, where in fact the protocol and what we did, we actually---- And this

has been for three years now. We've done testing, field testing, toxicity testing, benthic testing. And what we've actually done is not just not treated for manganese, we've treated to the best effluent for the aquatics. Based on all of this testing, what we've had, we've had streams come back that didn't have fish in them that now do have fish in them. We've had more sensitive species that are coming back.

So, you know, I think I took the wrong approach. Instead of coming forward and saying we need relief on manganese, what I should have said was: How about letting us treat to the best least toxic effluent that we possibly can. That has a positive aspect rather than trying to say, you know, don't let us, we want to get out of treating for manganese. Because that's not what we've done. And the people that have been involved in this protocol, we have people that treat to a nine pH, an eight-and-a-half pH. They treat to whatever pH it takes to get the best quality effluent into that receiving stream.

And I thought that's what it was all about. It's not hard to treat for a one manganese;

it's very simple. The fact is though: Is that the best water quality for the stream? So we keep getting lost in the confusion on the pendulum back and forth between, well, because it's the coal industry and they want it, you know, don't let them have it, or this, that, or the other. I really don't care about that. I'm in for doing the right thing. What's right's right and wrong's wrong.

And I thought the intent of the whole system was to put the best water quality that we could generate into the streams. Well, the best water quality that we can generate doesn't always jibe with the one manganese because sometimes that is adverse to the environment in the streams.

So what we're faced with right now is a problem that is becoming compounded for one reason because of the Category A. You know, this takes all of our work that we've done for the past three years, which we want to share with EPA and show them, you know, because water chemistry on A and B sites is so site specific that you just can't say a one or a two. It doesn't work that way.

What you have to determine through your own testing for this particular water chemistry is what is the best effluent that you could come up with and then that's what you want to meet. I mean, to me it's more stringent than meeting a one. Because a one is real easy to meet. You just overtreat and people, what they end up doing, if-- Each water is different on a pH, if it takes this water ten-and-a-half pH, what's a guy going to treat to? He's going to treat to eleven. Because out in the field there's no electricity; you're miles away from everything. And I don't care what anybody says-- Yeah, there's other ways to treat. You can use oxidizers. But oxidizers are pH sensitive. And you just don't use an oxidizer to take manganese out because it doesn't work that way. You have to achieve a certain pH then plus an oxidizer. You're talking about multiple treatment systems. We're lucky out in the boondocks to be able to treat once to do it right the first time.

So what we envisioned and what we tried to do was develop a program that would achieve the best effluent. And it was my fault because I said

we wanted relief on manganese. I should have never said that and this whole issue would have never started. I should have come forth and said: EPA, let us treat to the best effluent that we possibly can. Then you would have been in that positive aspect.

So where we're at now with the Board, and I know the Board understands the situation and they made the politically correct decision on making everything Category A, you know. You don't have the resources to try to define all the streams in the state. So it's understandable to let everybody else on a case-by-case situation. The problem is with the Bureau of Public Health, the way that program is, or my perception of it, we had them, and Libby has been very kind to help us out in some of our meetings, is that program is really towards unintentional spills, the way the five miles, five hours, and where they calculate all the zones of critical concern. It's not for continuous discharges. Which is what we're talking about. For us to have a spill equivalent to what they're trying to plan for-- Let's take the Coal River. Every treatment system in Coal River would have

to shut down simultaneously. You're talking maybe hundreds. All right. If that occurred then, yeah, you would have a spill but it wouldn't be the manganese that would be a problem. It would be the pH, the aluminum. It would be everything else but the manganese.

So what we're trying to do is take a common sense approach, not trying to get away with anything. Because we have people that, based on their testing, they've got to keep treating exactly the way they've been treating. But we have places that have a seven pH and have four parts manganese which have to treat to a ten-and-a-half. So all they've done is taken that water, they've increased the conductivity to two-thousand or three-thousand micromoles. You know.

This is all out of hand. It's not us versus them. It's not the environmentalists versus the coal industry. It's just simply doing the right thing. All right. And we know how to do that. We do it scientifically the way you would have us do it. We do the toxicity, the benthics, and there's no problem checking for the heavy metals. We do that within this

testing.

And you'll find, and I've done this for the past three years throughout the entire state, that you won't see heavy metals generally other than nickel and zinc. And the nickel and zinc generally occur less than the EPA water quality standards for drinking water. Where it does occur is in your higher concentrations generally associated with refuse area leachate and stuff like this. But we still test for it no matter what the site is. And we look at those heavy metals and at the pH that we designate as the best for the aquatics, what happens with them.

And you just can't say that treating the manganese, because the way they originally did it, they looked at, I think it was two-hundred sites. And they looked at the manganese concentrations and then they did-- They said it was a surrogate for heavy metals. Well, that's fine. You know, let's check for the heavy metals. It's not difficult. We do it all the time.

So let's take a common sense approach. Let's do something about this instead of

just throwing it up in the air and letting everybody roll around in the issues. We can treat to a one. We can treat to a zero. If you treat to a one or two, you know, one or two parts manganese, do you think that's where you treat to. You can't. Those systems are manual systems. You don't treat to a one-point-eight manganese because that's not how the titration curve show that manganese come out. You treat to zero and hope that you meet the limits. And by treating to zero, it means overtreatment. So instead of doing all of this and going around in circles and saying it's bad for this side, don't give it to them because, you know, they want out of something, look at it on the positive aspect and say we want to treat to have the best effluent for that receiving stream, not that we want out of anything. We want to have the best effluent. And I thought that's what it was all about.

I'm sorry. I go on too long. Thank you.

CHAIRMAN TARTER: Thank you.

Scott Goldman.

MR. SCOTT GOLDMAN: I have prepared some

comments and I had made some revisions. So I will submit my oral comments revised when I submit my formal written comments.

Thank you for the opportunity to address the Board. My name is Scott Goldman. Tonight I'm here on behalf of both the West Virginia Coal Association and the West Virginia Mining and Reclamation Association. Both groups will be submitting formal written comments to this Board by the December 6, 1999, deadline. However, I would like to take the time to briefly comment and express the opinions of the two associations whom I represent.

I would first like to begin by commenting on the process of this rulemaking. I recognize that the legislature passed House Bill 2533 on March 21, 1999. The legislature authorized the Board, quote, in accordance with the provisions of Chapter 29A of the West Virginia Code, emergency and legislative rules to address the interpretive differences regarding the designation of Category A waters and analyze the need for distance prohibitors for the policies of public drinking water intakes,

close quote.

I would first suggest that this Board, as it did with the antidegradation implementation process, waited until the eleventh hour to consider the Public A issue. The Board had plenty of time between when the legislature passed House Bill 2533 in March and August when the proposed rules were required to be submitted to the legislative rulemaking committee. There's no excuse that the Board waited, once again, until the last possible moment before submitting the emergency rule in October '99. By going through the emergency rulemaking process rather than through the legislative rulemaking process, the Board sidestepped the normal notice and comment period which provides appropriate opportunities to provide public participation.

In addition, I would suggest that the Board never considered distance prohibitors during the process as the legislature required. In fact, I would suggest that the Board summarily dismissed the legislature's requirement that this Board specifically, quote, analyze the need for distance prohibitors.

To follow up, I asked the technical adviser of the Board a procedural question regarding this rule. What, if anything, is before the rulemaking committee, before the legislative rulemaking committee? Commonly when rules are submitted for emergency rulemaking, the agency also submits the same rule to the legislative rulemaking committee for consideration during the next legislative session. Specifically this question addresses what the effect of the secretary of state accepting as an emergency rulemaking part of Public A while denying another part.

If the Board has submitted the proposed rule to the legislative rulemaking committee, I would ask what form the rule currently has. If the Board has not submitted the proposed rule to the legislative rulemaking committee, I would suggest the Board has specifically violated the legislature's own order which required the Board to propose, quote, emergency and legislative rules, close quote.

Now I would like to briefly comment on the substantive issues at hand. Existing uses, as it is defined in 46 CSR 1, consists of only those uses,

quote, actually attained in a water body on or after November 28, 1975, close quote. The state water quality standards create a presumption that all streams serve aquatic life, which is Category B, and water contact recreation, which is Category C. Nowhere in the state water quality standards is there a presumption that all water is used for drinking water, and the Board should not make such a presumption now.

In addition, the Board has never done a use attainability analysis as is required by the federal water quality standards at 40 CFR Part 131.10, open paren, little j, close paren. The Board has simply stated that because it has always assumed that all waters of the state were used for drinking water, the Board should codify its assumption. Such acceptance of an assumption, especially through an emergency rulemaking, is especially poor public policy at the minimum and, quite possibly, illegal under the federal water quality standards.

By declaring all waters of the state public drinking water supplies, the Board has essentially stated that it does not want to address the

issue until the Bureau of Public Health completes and implements its Source Water Assessment and Protection Program. However, on numerous occasions, the Bureau of Public Health, with its limited state resources, has stated that it hopes to complete the Source Water Assessment and Protection Program by the summer of 2000 but that it is not required or committed to complete the Source Water Assessment Protection Program until 2003.

Accordingly both the West Virginia Coal Association and the West Virginia Mining and Reclamation Association request the Board to withdraw its assumption that all waters of the state are used for drinking water. Rather, the West Virginia Coal Association and the West Virginia Mining and Reclamation Association suggest the Board require all human health criteria to be met at some distance, perhaps five miles, upstream of all known drinking water intakes. To do otherwise, is inappropriate public policy.

At this time, I will not address all the numerous studies and discussions regarding whether

manganese degrades water quality or whether the treatment is more degrading. As Doctor Samuel has noted on numerous occasions through his many years on the Board, this issue has been presented, some would suggest ad nauseam, to the Board numerous times over the past several years. Accordingly and in the interest of brevity, I will limit my reference to the problems with treating manganese to my written comments.

Finally, I would like to clarify one misconception. In public notices and in the notice to the secretary of state, this Board has constantly stated that the exemption from human health criteria for manganese was included to, quote, address concerns raised by the coal industry regarding the difficulty of meeting the manganese limit, close quote. However, such a statement is not the case. The reason the coal industry has requested an exemption from the manganese human health criteria is that the treatment is actually worse than the underlying problem. As has been presented to this Board over and over again, the reason the coal industry has requested such exemption is that

properly treating and removing manganese is actually worse for the water quality than the manganese itself.

That's the close my prepared comments.

I would like to respond briefly to what EPA has suggested. As Ms. Kuo stated, if all waters of the state are designated drinking water, as the Board is proposing to do and has proposed through the emergency rulemaking, then the Board cannot, it is specifically prohibited from having exclusion for manganese. The Board has voted on numerous times, as recently as last month, they acknowledged the public policy issue regarding the exemption for manganese, that treating manganese is worse than the manganese itself.

If the Board moves forward with its proposal to declare all waters of the state used for drinking water, then the Board will prohibit-- The EPA says the Board will prohibit this Board from ever excluding manganese, as it has done, voted on numerous times in 8.17.1 as it's currently written, and as I said, as was recently proposed as late as last month.

Thank you.

CHAIRMAN TARTER: Thank you.

Are there other speakers we've missed on the sheet?

(Pause.)

CHAIRMAN TARTER: Libby, do you want to say anything at this point?

MS. CHATFIELD: I think that I'd address what the Board will do at this point. We will be taking comments until the 5th. The 6th. Excuse me. Monday, the 6th.

And I'll probably summarize this for you and at our next meeting, which will be on the 16th and 17th, we'll be discussing the comments received.

DR. JENKINS: What's the Board going to do with all these comments anyway?

MS. CHATFIELD: Well, that's up to you all. We'll be compiling them. This is kind of the emergency rulemaking process is such that you end up getting the comments after the rule has been approved by the secretary of state's office. Or in this case that's what happened.

There are opportunities and procedures available for the Board to amend the emergency rule if after receiving those comments they deem it necessary to do so. So we will be taking the comments seriously and you all will have a chance to review your decision in light of these comments and make changes if necessary.

CHAIRMAN TARTER: So if we have any written material tonight, we'll take it. The December 6th deadline will be firm.

On behalf of the Board, I want to express appreciation for all the discussion that we had tonight. A lot of different viewpoints out there. And that's the goal of the Board, is to try to take the input and make it so that we can have the best water we possibly can.

That's all we have tonight. Have a safe trip home and dress warmly tomorrow.

REPORTER'S CERTIFICATE

I, the undersigned, Janet T. Surface, Stenomask Reporter, do hereby certify that the foregoing is, to the best of my skill and ability, a true and accurate transcript of the proceedings had in the above-styled hearing on the 29th day of November, 1999.

Given under my hand this the 22nd day of December, 1999.

Janet T. Surface

Reporter

STATE OF WEST VIRGINIA
DEPARTMENT OF HEALTH AND HUMAN RESOURCES

Cecil H. Underwood
Governor

Joan E. Ohl
Secretary

November 15, 1999

Donald Tartar, Ph.D.
Edward Snyder, Ph.D.
Environmental Quality Board
1615 Washington Street, East, Suite 301
Charleston, West Virginia 25311-2126

RE: Comments on Public A Use Category and Manganese Water Limits

Dear Dr. Tartar and Dr. Snyder:

The West Virginia Bureau for Public Health (WV BPH), Office of Environmental Health Services (OEHS), Environmental Engineering Division (EED) has prepared a list of concerns regarding the Public A Use Category and Manganese Water Limits issue.

Based on information obtained through and discussions with the Environmental Quality Board (EQB), we understand that the Board would entertain adopting the Source Water Assessment and Protection (SWAP) program's Time-of-Travel (TOT) guideline for surface water bodies, primarily rivers, reservoirs, and streams. The SWAP program uses a TOT of five (5) hours for the distance between a public water supply intake and the outer boundary for potential contaminant sources. This area is referred to as the Zone of Critical Concern (ZCC). The ZCCs were established as a safety mechanism to provide sufficient time for water treatment works operators to respond to spills and to provide an area for the development of the potential contaminant source inventories.

In adopting the ZCC for surface water, the EQB would require surface water quality to meet drinking water or surface water quality standards within the ZCC of the affected public water supply system. Several issues relative to this use of the ZCC are as follows:

1. If a surface water contaminant entering the ZCC is above a drinking water standard or water quality standard, what mechanism(s), within the ZCC, will lower it to drinking water standards or evaluate these discharges causing the higher chemical concentrations? Mixing and/or dilution may impact the concentration, but no assurance can be given without modeling, etc.

BUREAU FOR PUBLIC HEALTH
Office of Environmental Health Services
815 Quarrier Street, Suite 418
Charleston, West Virginia 25301-2616
Telephone: (304) 558-2981

2. If a new system is constructed outside of an ZCC, what mechanism would be used to define new areas or to existing lower constituent concentrations that exceed drinking water standards in the new ZCC?

3. Would the application be only to discharges physically located within the defined area?

4. How would the Department of Environmental Protection issue permits inside and outside the ZCC? How would the WV BPH be involved with this process?

With respect to the issue of manganese, we offer the following comments. When manganese is present in water, chlorine (used of water treatment) oxidizes manganese and other metals before it attacks carbon-based molecules. Quite often systems have problems with manganese in the finished water because many systems do not routinely test raw waters for the manganese or fail to recognize increased chlorine demands. Plant operators are also reluctant to feed $KNmO_4$ (potassium permanganate) because of cost and possibility of overfeeds which turns the water pink. Chlorine will oxide manganese, but it takes time and some plants with short treatment times may find the reaction takes place in the filter, clear well, and distribution system. Manganese will coat the filter media grains until the media no longer meets the uniformity coefficient nor effective size as required by our design standards. Carried over into the distribution system, it will also coat the interior walls of piping, thus reducing both the effective size and increasing friction which affect flow characteristics.

The WV BPH also notes that if manganese is released into streams above the appropriate water quality standard, the concentration of manganese is not lowered by any natural processes other than mixing/dilution. If the source water at the intake is high in manganese, three consequences can occur: First, if the increased chlorine demand goes unrecognized, the possibility of the water not being completely disinfected before distribution arises. Some types of bacteria and other pathogenic organisms are more resistant to chlorine therefore, the concentration and contact time must be sufficient to remove them. The rough surfaces on the interior of pipelines, in the distribution system also provide sites for promotion of bacteria regrowing which maybe detrimental to public health.

The second issue deals with the additional chlorine treatment necessary to oxidize the manganese. Additional chlorine treatment promotes a reaction with naturally occurring organic compounds, halogenating them, and creates disinfection byproducts such as Trihalomethanes (THM's) and haloacetic acids (HAA_5). These byproducts are potential or known carcinogins. The Environmental Protection Agency has promulgated the Disinfectant/Disinfection ByProducts Rule to deal with these newly regulated compounds. To avoid formation of THMs and HAA_5 more costly alternative oxidizers must be used. Such treatment requires more technically competent and generally more highly paid water treatment works operators.

Thirdly, additional costs are associated with treating contaminated raw water to drinking water standards. The more treatment required, the greater the cost. The municipal and public water supply systems (PWSS) will normally pass the additional costs on to the consumers based on Public Service Commission (PSC) approval. There is also the issue of allowing a NPDES permit holder to discharge high levels of manganese and cause the PWSS consumers to pay for the additional, required treatment in the form of higher rates.

We appreciate the opportunity to provide our comments. If you have additional questions or comments, please contact me.

Sincerely,

Chris Gordon, Interim Director
Office of Environmental Health Services

CG/cjj

pc: Elizabeth Chatfield, Technical Advisor, Environmental Quality Board
Mike Zeto, DEP/Environmental Enforcement, Chief Inspector
Donald Kuntz, OEHS, Director, Environmental Engineering Director
Victor Wilford, OEHS/EED, Assistant Director
William Toomey, Acting Administrator, Source Water Protection Program

Century ALUMINUM
Ravenswood Operations

December 6, 1999

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

Re: 46 CSR _ 1 - Water Quality Standards
Category A Use Designation

Dear Chairman Snyder:

Century Aluminum of West Virginia, Inc., ("CAWV") submits the following comments in response to the recent decision of the Environmental Quality Board (the "Board") to designate all waters in West Virginia as Category A drinking waters. CAWV requests that the Board reconsider its decision and adopt regulatory language which limits Category A waters to a distance of five (5) miles above a public water intake or other known drinking water source.

CAWV commends the Board's hard work on this issue over the last few months to satisfy the Legislative mandate to study the designation of Category A drinking waters. In particular, CAWV appreciates the Board's consideration of the efforts by the Bureau of Health to more adequately identify and assess waters which are used for drinking water purposes.

However, the results of the Bureau of Health assessment likely will take several more years to complete. In the meantime, the Board's placeholder of designating all streams as Category A drinking waters could have a devastating effect on point source dischargers to the State's waters. Because of the Board's designation, all waters must be compared to drinking water standards to determine whether State water quality standards are being met. This could result in streams being placed on the 303(d) list of impaired waters based on drinking water standards even though the streams are not used for drinking water purposes. If this occurs, a TMDL must be prepared for each of these streams to bring it into compliance with drinking water standards

Century Aluminum of West Virginia, Inc
Post Office Box 98
Ravenswood, WV 26164

(304) 273-6000 Phone

A Century Aluminum Company

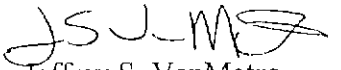
to protect a nonexistent use. This effort will divert the State's limited resources from necessary and important water quality improvements based on valid stream uses.

Perhaps manganese is the best example of the effects of the Board's decision. When water is treated for manganese, the water becomes more toxic to aquatic life than if the manganese were not treated. The drinking water standard for manganese is based solely on aesthetics. Clearly, this is not a wise tradeoff, especially for streams with no drinking water use.

CAWV requests that the Board limit its designation of Category A waters to five miles above a known drinking water source. CAWV believes that this will serve as a more appropriate placeholder as the Bureau of Heath works on its assessment of drinking waters. In effect, any streams which have an existing drinking water use will be provided full protection in the interim.

CAWV looks forward to working with the Board as it reassesses this important issue in the future. Thank you for the opportunity to provide these comments. Should you have any questions, please do not hesitate to contact me.

Very truly yours,



Jeffrey S. VanMatre
Manager, Environmental Affairs

American Electric Power
PO Box 1986
Charleston, WV 25327-1986

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

RE: 46 CSR 1 - Public A Use Designations

December 6, 1999

Dear Chairman Snyder,

Over the past few years, the West Virginia Environmental Quality Board ("Board") has struggled with a decision over how to apply the Public A use designation to waters of the State This struggle has apparently culminated in a decision to designate all surface waters with the Public A use. American Electric Power believes that this decision does not accurately reflect the fact that a vast majority of West Virginia streams do not actually have public water supply intakes. In addition, such a use designation is not required under either the Clean Water Act, the Safe Drinking Water Act, or under the implementing regulations of either Act.

AEP is aware of no clear scientific basis that compels the Board to make the decision it did. As a result, we are providing the following technical comments for the Board's consideration. We trust that if the Board carefully and objectively weighs these comments, it will conclude that the universal declaration that all West Virginia waters are classified with a Public A use designation is a poor public policy decision that fails to satisfy the Board's charge under 46 CSR 1, Section 1.1.

AEP's comments are broken down into three sub-categories: 1) Comments intended to dispel misconceptions the general public may have related to purpose and intent of the Public A use designation, 2) Real problems and unnecessary costs that will be incurred by both DEP and the citizens of West Virginia as a result of the Board's action, and 3) A legal discussion that questions whether the Board can make a statewide Public A use designation without first conducting a use attainability analysis on the affected streams. Following careful review of these comments we ask the Board to withdraw the emergency rule and reinstate the five-mile rule provisions as originally recommended by AEP, the West Virginia Manufacturer's Association, and the Chamber of Commerce.

Apparent misconceptions related to the Public A use designation

Misconception # 1 - A large portion of streams within the state are used as public water supplies.

The above claim is clearly a misconception. Based on the information that Don Koontz (Bureau of Public Health) provided to the Board during a March 26, 1999 public meeting, we estimate that less than 2% (and possibly less than 1%) of all streams within West Virginia have public water supply intakes.

According to information within the West Virginia DEP's manual entitled, "West Virginia Watershed Management Framework Manual," (May 15, 1997), and other readily available DEP information, West Virginia waters make up 32 hydrologic regions, 344 major sub-watersheds, and 9000 different streams totaling more than 28,000 miles.

In contrast, based on our notes from Don Koontz's March 26, 1999 comments to the Board, there are approximately 675 public water supply systems in West Virginia (including surface water, groundwater and non-transient, non-community systems). Of this total, approximately 141 systems have surface water intakes. The remaining 530+ systems secure their potable water from groundwater wells. Combined, the 675 systems serve 75% of the people in West Virginia. The other 25% are primarily supplied by private drinking water wells.

Based on these Bureau of Public Health numbers, even if each of the 141 public water supply systems were located individually on one of the state's 9000 streams, less than 2% of all streams within the state would actually qualify for the Public A use. In reality, many of the large streams (the Ohio River, etc.) have multiple public water supply intakes; therefore, the number of streams with public water supply intakes is probably less than 1%.

When a Board member inquired about the number of West Virginian's who consume directly from a stream, Don Koontz estimated that a very small number of families, most of whom may be living in abject poverty, actually secured untreated or inadequately treated drinking water directly from a stream

Misconception # 2 – All raw surface waters should be safe for human consumption and that the statewide Category A use designation will protect those individuals that drink untreated or improperly treated water from a West Virginia stream.

Based on comments provided by some members of the environmental community, they apparently believe that the Category A use designation will somehow protect the health of individuals who withdraw untreated drinking water from a stream. This is not the case, and to imply otherwise may inadvertently or knowingly risk the health and welfare of those individuals.

Section 6.2 of 46 CSR 1 specifies that the Category A use applies to, "... waters which, **after conventional treatment, are used for human consumption.**"

This use designation was never intended to provide protection for individuals drinking untreated water directly from a stream.

Given the above, the small number of individuals who drink untreated water directly from a stream are placing themselves and their families at serious risk of exposure to a variety of microbiological contaminants that can cause acute health problems and possibly death.

If the environmental community and the health department are accurate in their claims that some small minority of people continue to drink untreated or improperly treated water from streams, then the state may very well have a public health concern on its hands. However, it is not one that can be solved by classifying all streams with a statewide Public A use, nor is it one that the EQB should attempt to solve with its rulemaking authority under the State's water quality standards rules.

Regardless of whether a stream is classified with the Public A use, the water quality standards will provide precious little additional protection for individuals who drink untreated or inadequately treated water directly from a stream. These individuals will not receive protection from the serious risk to exposure to viruses, total coliform bacteria, fecal coliform bacteria, Giardia lamblia, Escherichia coli, Cryptosporidium, and a variety of other microbiological contaminants that are often present in all surface waters. These microbiological contaminants pose acute health risks to individuals who may consume them in raw, untreated, or partially treated water; however, they are often not caused by anthropogenic activities.

As a result, the Safe Drinking Water Act and its implementing regulations require extensive and thorough treatment of surface waters to reduce and/or eliminate the public's exposure to these contaminants before the water treatment system can deliver the treated water to the public. However, neither the state water quality standards nor the Clean Water Act and its implementing regulations were designed to ensure that raw surface water is free from the naturally occurring microbes referenced above, or that it is otherwise safe for human consumption prior to conventional treatment.

Instead, the requirements within the Safe Drinking Water Act and its implementing regulations specify detailed and specific treatment requirements to ensure that raw surface waters undergo treatment, including proper filtration and thorough disinfection. The finished water must then meet standards of purity established not only for microbiological contaminants but for a variety of other parameters. These drinking water standards are treatment technology based and are designed to ensure the water is aesthetically appealing (no bad tastes, foul odors, etc.) and that over a lifetime of exposure, other trace parameters are not consumed at levels that could pose a significant health concern.

For the Board or anyone else to imply otherwise would be misleading to the public and may inadvertently result in a continuation of a small number of people

drinking untreated surface water because the individuals engaging in the activity may falsely perceive they are not placing themselves at risk.

In the end, the Board's decision to either keep or remove the Public A use will do little to protect the health and welfare of the individuals drinking untreated surface water. These poor and/or misinformed people will continue to receive no more protection from exposure to the acute health risks associated with the microbiological contaminants identified above.

Apparent Misconception # 3 – Designating all waters of the state with the Public A use will protect human health from manganese exposure.

The Safe Drinking Water Act establishes a secondary maximum contaminant level (MCL) for manganese not because it poses a risk to public health, but because it can cause staining to clothing, etc. at higher concentrations. Thus, if manganese is present in untreated water withdrawn from West Virginia streams for human consumption, the individuals drinking it are not going to be exposed to an additional health risk

Real Problems that will arise from a statewide Public A use designation.

Problem # 1: With a statewide Public A use designation, the WVDEP will be forced to waste valuable resources to assess thousands of streams for compliance with the numeric criteria unique to the Public A use despite the fact that it is an existing use in less than 200 streams.

The funding woes of the DEP and their resultant inability to effectively administer and fully fund all of the water related programs they are charged with administering is real and well documented. Through the Board's actions, they will be exacerbating this problem by forcing additional costs on the DEP through its watershed assessment program and other programs to assess thousands of streams for compliance with "Category A" numeric criteria. This is an inefficient use of precious resources that would be better spent on the evaluation of streams and NPDES permits for compliance with numeric water quality criteria for those uses that actually exist.

In deference to the above, AEP fully supports the Board's ability and obligation to assign more than one designated use to a stream or stream segment. For example, the Clean Water Act requires that all streams have both the "fishable" (Category B) and the "swimmable" (Category C) use. If the same stream segment also has a public water supply intake (Category A), and an industrial discharger (Category E4) then all of these uses are existing uses and the applicable numeric criteria to ensure each of the uses are met should apply.

Applying numeric criteria in this manner allows the DEP to apply aquatic life criteria appropriate for trout streams to all dischargers to a designated trout stream, aquatic life criteria appropriate for warm water streams to all dischargers to designated warm water streams, and human health criteria applicable to public water supplies to those dischargers on a stream segment with a public water

supply. In contrast, it makes no more sense to apply numeric criteria applicable to trout waters to the Ohio River than it does to apply Human Health criteria to many small, headwater, and intermittent streams that do not serve as a source of drinking water.

Most states with NPDES primacy follow this approach when designating stream uses within their respective water quality standards regulations. AEP is simply asking West Virginia to follow this same approach.

Problem # 2 - The WVDEP may be forced to place streams on the state's 303(d) list of "impaired waters" for parameters such as manganese to protect a Public A use that does not exist. This could then result in a waste of valuable resources developing TMDLs.

Once adequate data is collected on a stream to show that a designated use is not being met (even if it is not an existing use), the DEP will be forced to list the stream as impaired and place it on the state's 303(d) list. Once a stream that is improperly designated with the Public A use is placed on this list, the state and/or EPA will be forced to waste limited state and federal resources to collect additional data, conduct stream modeling, develop a TMDL, and reduce loadings of parameters in the water that are not actually impairing aquatic life or human health.

Since the DEP is already struggling with a plan to generate funding to take over the TMDL program from EPA, it would be a waste of resources to force them to spend their efforts on fixing problems that arose as a result of an artificial and overly conservative stream designation instead of focusing on correcting real problems in streams that have real adverse affects on aquatic life. The DEP currently estimates that the annual costs to administer the TMDL program will likely be hundreds of thousands of dollars and may even exceed 1 million dollars. The Board's actions regarding universal Category A use designations could drive this cost estimate even higher.

Problem # 3 - The only relief mechanism currently available to a discharger adversely affected by the statewide Public A use designation is a long and cumbersome regulatory and legislative process.

Although at face value it may appear reasonable to require an adversely affected party to affirmatively demonstrate that a stream does not have a Public A use and then have the use removed, the process that must be followed makes it an onerous problem for the regulated community. A discharger must first collect data and then file appropriate documents with the Board requesting the removal of the use designation from the stream. The Board must then propose formal changes to the water quality standards regulations that would remove the Public Water Supply use designation from the stream. The draft amendments to the rule must then go through a public notice process and eventually be approved by the West Virginia legislature. This entire process can easily take two years from the time an individual begins collecting data until the change is codified in an update to the State Water Quality Standards regulations.

We submit that these types of hurdles are not in the public interest, particularly since the EPA regulations do not require all streams to be designated as public water supplies.

The Board's authority to assign the Public A use to all streams could provide reasonable grounds for a legal challenge.

The Board's actions could be considered to be in violation of mandates required under federal water quality standards regulations at 40 CFR Part 131 10(j) because the Board failed to conduct a Use Attainability Analysis confirming that the Public A use actually exists on all streams with the Public A use designation. Although the outcome of such a legal challenge is currently unknown, we believe the Board should eliminate this risk by removing the statewide assignment of the Public A use to all waters. What the Board should do is conduct a use attainability analysis as defined in 40 CFR Part 131.3(g) to designate the Public A use to only those waters of the state that actually satisfy the criteria specified under 46 CSR 1, Section 6.2

Based on our reading of 40 CFR Part 131.10(k), we believe that a state can only designate a use by "default" if it is listed in Section 101(a)(2) of the Clean Water Act (CWA), and that the only uses listed in this section of the CWA are the "fishable/swimmable" uses (see Section 101(a)(2) of the CWA).

Since the Public A use is not listed in Section 101(a)(2), then 40 CFR Part 131.10(j) requires state to conduct a use attainability analysis to verify the use is attained (or has been attained since November 28, 1975) before establishing it as a designated use.

Our reading of 40 CFR Part 131.10(j) is that a state MUST conduct a use attainability analysis as described in Part 131.3(g) whenever.

(1) The State designated or has designated uses that do not include the uses specified in Section 101(a)(2) of the CWA, or

(2) The State wishes to remove a designated use that is specified in section 101(a)(2) of the CWA which requires less stringent criteria.

Section 101(a)(2) of the CWA states that, "...it is the national goal that wherever attainable, an interim goal of water quality which provides for the protection and propagation of fish, shellfish, and wildlife and provides for recreation in and on the water be achieved by July 1, 1983;"

Section 101(a)(2) is silent on "Drinking Water" as a use, therefore, we believe that the state must conduct a use attainability analysis on each water before it can designate the Public A use to the waterbody. The default should therefore be, a waterbody segment does not have the Public A use designation unless there is an existing public water supply intake meeting the criteria outlined under 46 CSR 1 Section 6.2, or a use attainability analysis has been conducted to show that the use, as defined under 46 CSR 1 Section 6.2, actually exists.

Request for Action

The Board has received numerous comments outlining that the Public Water Supply Category A Use is being mistakenly applied to all streams of the state. AEP agrees with these comments and we urge the Board to affirm that Section 6.2. of the rules should be applied only as they are written. Only those streams or stream segments that are used for human consumption after conventional treatment as defined under Section 6.2. of 46 CSR 1, should be given the Public A use designation.

Conversely, the Public A use designation should not apply if the stream segment is not a source of water that undergoes conventional treatment and is subsequently provided for human consumption through a community domestic water supply system, a non-community domestic water supply system (i.e. hospitals, schools, etc.), or a private domestic water system.

Based on the comments provided herein, we ask the Board to withdraw the emergency rule and reinstate the five-mile rule provisions as originally recommended by AEP, the West Virginia Manufacturer's Association, and the Chamber of Commerce.

If you have any questions regarding AEP's written comments, please contact Mike Brown at (614) 223-1286.

Sincerely,

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

ARW/JMB

c. Ms. Libby Chatfield, EQB Technical Advisor

LEGAL SERVICES

Allegheny Power

1310 Fairmont Avenue
P.O. Box 1392
Fairmont, WV 26555-1392
Phone: (304) 366-3000
FAX: (304) 367-3157

Writer's Direct Dial No.
(304) 367-3423

December 3, 1999

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

RE: Comments on Category A Use Designation
Water Quality Standards Rule 46 CSR 1

COMMENTS OF ALLEGHENY ENERGY

Comments have been requested by the Environmental Quality Board with regard to designating all streams in West Virginia as public drinking water supply. Allegheny Energy feels that the current proposal to classify all West Virginia waters as public drinking water supply is extremely poor public policy. First, the vast majority of streams in West Virginia are not suitable as a source of drinking water. Hence, such a designation is not at all reflective of actual conditions. Secondly, any stream not meeting Category A criteria, whether or not there is a public water supply intake, will be subject to TMDL development. Such a designation would have a significant economic impact on West Virginia and its citizens and we, therefore, believe that the Board must reconsider its irrational proposal. Finally, West Virginia's only neighboring state with a statewide public water supply designation is Pennsylvania. However, Pennsylvania provides discharger relief by allowing development of site-specific human health criteria.

Allegheny Energy submitted detailed comments on August 12, 1999 and those pre-filed comments are attached hereto.

Respectfully submitted,
ALLEGHENY ENERGY, INC.

By Counsel

Gary A. Jack
Senior Attorney
Allegheny Energy
1310 Fairmont Avenue
Fairmont, WV 26554
(304) 367-3423

LEGAL SERVICES

Allegheny Power

1310 Fairmont Avenue
P.O. Box 1392
Fairmont, WV 26555-1392
Phone: (304) 366-3000
FAX: (304) 367-3157

Writer's Direct Dial No.
(304) 367-3423
August 12, 1999

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

RE: Comments on Category A Use Designation
Water Quality Standards Rule 46 CSR 1
July 15, 1999 Public Meeting

Dear Dr. Snyder:

Allegheny Energy, Incorporated (Allegheny) appreciates the opportunity to offer comments on the category A water use designation currently under consideration by the Environmental Quality Board (Board). We believe that some relief from the current default position that all streams are designated as drinking water, unless specifically exempted in the regulation, represents a public policy dilemma. The result of this approach is that every stream regardless of size and of its ability to actually serve as a public water supply is shunted into this default category. This statewide use designation cheapens the designation and erodes the significance of this special status for streams which actually serve as raw water supplies for public systems. Moreover, it can result in significant increased costs to dischargers to meet water quality standards in their discharge to protect a use which does not or will not actually exist.

While the idea of protecting prospective uses may be seen to have some merit, it must be balanced with the likelihood that new water systems are not likely to be added. The trend appears to be a consolidation of existing systems into larger utilities, not new utilities springing up to withdraw water from streams where none existed prior. Some of these consolidation efforts do result in new plants being located where none had been before, but these are typically on larger rivers which have existing water withdraws on them. Should new systems come on line the designated use of a stream can be changed. Discharge limits in permits can then be changed to be protective of the category A use.

The West Virginia State Department of Health=s (Health Department) developing Source Water Assessment and Protection Program (SWAPP) appears to be the most logical option currently under consideration. This program which establishes a specific Zone of Critical Concern (ZCC) is designed to protect drinking water supplies. The Board=s category A designation should match the Health Department=s ZCC. The desired outcome of both efforts should be to have the water quality criteria for the category A parameters met at the point of raw water withdraw. This is protective of the users of the individual systems and tracks the intent of having a category A use designation.

This leaves the problem of how to transition from the current everything-is-category-A program to the source-water-protection program. It would seem appropriate to use the five-mile-rule, as Virginia currently employs, which was in place for several years in this state. Allegheny would recommend the use of the five-mile-rule approach which in turn would be replaced as the Health Department=s ZCCs are developed. Additionally, there are a number of streams which could never support a drinking water supply because they lack sufficient flow. These are usually small first or second order streams which typically would not be five miles in length and which have a low flow (7Q10) at or near zero. It is impractical for these streams to be used as water supplies. They should be removed from the category A list in conjunction with adoption of the interim five-mile-rule.

Allegheny appreciates the opportunity to offer these comments to the Board and would be pleased to discuss these recommendations with the Board upon request. Should you have questions, please contact Mr. Rick Herd at (724) 838-6813.

Sincerely yours,

Gary A. Jack
Senior Attorney

GAJ:tmw

PUBLIC HEARING

WV Environmental Quality Board
NOVEMBER 29th, 1999
7:00 P.m.
Sign-In Sheet

1. Tiff Hilton - WOPEC speak
2. WAYNE APPLETON - WVMA SPEAKING
3. Larry Emerson - Arch Coal, Inc. - speaking
4. Wendy Radcliff speaking
5. Carey L. Persinger - Penn Virginia Coal Co.
6. Mary Kuo - EPA, Region 3 Speak
7. Reuben Gillespie - Bureau for Public Health if
8. Randall Lewis WVRMA
9. Scott D. Goodman - WVCA & WVMRA Speak
10. Ann Bradley - Spilman, Thomas Battle for Weirton Steel Speak
11. Judy Rodd WVHC - speak

12. Pam Nixon Merritt — WV Rivers Coalition (speak)
13. Ronald Lilly — Mallard Environmental Services
14. Tom Rodd — citizen - speak
15. Lloyd Crowley — Citizen (speak)
16. David Yaussy — Robinson & McElwee
17. Tim Mallan — AEP
18. Jennie Henthorn — Bowles Rice / Century
19. Kathy Beckett — WV Chamber Jackson+Kelly - speaking
20. Louis Baker — Citizen
21.
22.
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29.

ORAL COMMENTS OF
THE WEST VIRGINIA COAL ASSOCIATION AND
THE WEST VIRGINIA MINING AND RECLAMATION ASSOCIATION
ON THE ENVIRONMENTAL QUALITY BOARD'S
IMPLEMENTATION OF DRINKING WATER SUPPLY

Public Hearing - 11/29/99

Thank you for the opportunity to address the Board. My name is Scott Goldman. Tonight I am here on behalf of both the West Virginia Coal Association and the West Virginia Mining and Reclamation Association. Both groups will be submitting formal, written comments to this Board by December 6, 1999. However, I would like to take the time to briefly comment and express the opinions of the two associations whom I represent.

I would first like to begin by commenting on the process of this rulemaking. I recognize that the Legislature passed House Bill 2533 on March 21, 1999. The Legislature authorized the Board "in accordance with the provisions of chapter twenty-nine-a of [the West Virginia] code, emergency AND LEGISLATIVE rules to address the interpretive differences regarding the designation of category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake." I would first suggest that this board, as it did with the antidegradation implementation process, waited until "the eleventh hour" to consider the "public A issue." The Board had plenty of time between when the Legislature passed HB 2533 in March and August when proposed rules must be submitted to the Legislative Rulemaking Committee. There is no excuse that the Board waited, once again, until the last possible moment before submitting the emergency rule in October 1999. By going through the emergency rulemaking process, rather than through the legislative rulemaking process, the Board sidestepped the normal notice and comment period which provides appropriate opportunities to provide public participation. In addition, I would suggest that the Board never considered distance prohibitors during the process, as the Legislature required. In fact, I would

suggest that the Board summarily dismissed the Legislature's mandate that this Board specifically "analyze the need for distance prohibitors."

In follow up, I ask the Technical Advisor of the Board a specific procedural question regarding this rule.. What, if anything, is before the rulemaking committee? Commonly when rules are submitted for emergency rulemaking, the agency also submits the same rule to the Legislative Rulemaking Committee for consideration during the next legislative session. Specifically, this question addresses what the effect of the Secretary of State accepting, as an emergency rulemaking, part of Public A while denying the exception for manganese. If the Board HAS submitted the proposed rule to the legislative rulemaking committee, I would ask what form the rule currently has. If the Board has NOT submitted the proposed rule to the legislative rulemaking committee, I would suggest that the Board has specifically violated the Legislature's own order which required the Board to propose "emergency **AND** legislative rules."

Now I would like to briefly comment on the substantive issue at hand. "Existing uses", as it is defined in 46CSR1, consists of only those uses "actually attained in a water body on or after November 28, 1975." In fact, the state water quality standards create a presumption that all streams serve aquatic life (Category B) and water contact recreation (Category C). Nowhere in the state water quality standards is there a presumption that all water is used for drinking water, and the Board should not make such a presumption now. In addition, the Board has never done a use attainability analysis, as is required by the federal water quality standards at 40 CFR Part 131.10(j). The Board has simply stated that because it has always assumed that all waters of the state were used for drinking water, the Board should codify its assumption. Such acceptance of an assumption, especially through an emergency rulemaking, is especially

poor public policy at the minimum and, quite possibly, illegal under the federal water quality standards.

By declaring all waters of the state public drinking water supplies, the Board has essentially stated that it does not want to "address" the issue until the Bureau of Public Health completes and implements its Source Water Assessment and Protection Program ("SWAPP.") However, on numerous occasions, the Bureau of Public Health, with its limited state resources, has stated that it HOPES to complete the SWAPP by the summer of 2000, but that it has not REQUIRED to complete the SWAPP until 2003.

Accordingly, both the WVCA and WVMRA request the Board to withdraw its assumption that all waters of the State are used for drinking water. Rather, the WVCA and WVMRA suggest that the Board require all human health criteria to be met at some distance, perhaps five miles, upstream of ALL KNOWN DRINKING WATER INTAKES. To do otherwise, is inappropriate public policy.

At this time, I will NOT address all the numerous studies and discussions regarding whether manganese degrades water quality. As Dr. Samuel has noted on numerous occasions, this issue has been presented - some would suggest ad nauseum - to the Board numerous times over the past several years. Accordingly and in the interest of brevity, I will limit my reference to the problems with treating manganese to my written comments.

Finally, I would like to clarify one misconception. In public notices and in the notice to the Secretary of State, this Board has constantly stated that the exemption from human health criteria for manganese was included to "address concerns raised by the coal industry regarding the difficulty of meeting the manganese limit." However, such a statement is not the case. The reason the coal industry has requested an exemption from the manganese human health criteria is that the treatment is actually worse than the underlying problem. As has been

presented to this board over and over again, the reason the coal industry has requested such exemption is that properly treating and removing manganese is actually worse for the water quality than the manganese itself.

WRITTEN COMMENTS OF
THE WEST VIRGINIA COAL ASSOCIATION AND
THE WEST VIRGINIA MINING AND RECLAMATION ASSOCIATION
ON THE ENVIRONMENTAL QUALITY BOARD'S
IMPLEMENTATION OF DRINKING WATER SUPPLY

December 6, 1999

The following comments are submitted on behalf of both the West Virginia Coal Association ("WVCA") and the West Virginia Mining and Reclamation Association ("WVMRA.") In addition, WVCA and WVMRA submitted oral comments at the public hearing on Monday, November 29, 1999 and are submitting a copy of the prepared remarks.

The WVCA and WVMRA together represent most of the coal producers in West Virginia and have an enormous stake in the State's Water Quality Standards. We thank the Board for allowing the opportunity to provide comments and for considering our concerns.

The Board did NOT comply with HB 2533

On March 21, 1999, the Legislature passed House Bill 2533. The Legislature authorized the Board "in accordance with the provisions of chapter twenty-nine-a of [the West Virginia] code, emergency AND LEGISLATIVE rules to address the interpretive differences regarding the designation of category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake." The WVCA and WVMRA feel that the Board, as it did with the antidegradation implementation process, waited until "the eleventh hour" to consider the "public A issue." The Board had plenty of time between when the Legislature passed HB 2533 in March and August when proposed rules must be submitted to the Legislative Rulemaking Committee. The WVCA and WVMRA find it inexcusable that the Board waited, once again, until the last possible moment before submitting the emergency rule in October 1999. By going through the emergency rulemaking process, rather than through the legislative rulemaking process, the Board has sidestepped the normal notice and comment

period which provides appropriate opportunities to provide public participation. Providing one public hearing - after the rule has already been implemented through emergency rulemaking - does not provide the appropriate "give and take."

Further, the Board never considered distance prohibitors during the process, as the Legislature required. In fact, the Board summarily dismissed the Legislature's mandate that this Board specifically "analyze the need for distance prohibitors." Such a failure to consider whether the development of distance prohibitors would be an appropriate water quality protection measure specifically violates the Legislature's mandate.

All waters of the State are NOT presumed Category A

The State water quality standards do not create a presumption that all streams and stream segments serve all "uses." Instead, while the regulations do create a presumption that all streams serve aquatic life (Category B) and water contact recreation (Category C) uses, they do not create any such presumption with respect to human consumption (Category A) uses. See C.S.R. § 46-1-61.[1] Indeed, absent this designation of all streams as serving aquatic life and water contact recreation uses, only "existing uses" are protected. "Existing uses" consist only of those uses "actually attained in a water body on or after November 28, 1975 . . .." C.S.R. § 46-1-2.6. See also, C.S.R. §§ 46-1-4.1.1 (policy of State is to protect "existing" uses), -6.2 (Category A waters are limited to those "which, after conventional treatment, are used for human consumption"), & -7.2a.A ("based on meeting [the definition of the particular "uses"

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[1]C.S.R. § 46-1-6.1 provides that:

> "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 may or may not constitute a justification for assignment of a water use category to a particular stream segment."

identified in Section 6], tributaries or stream segments may be classified for one or more Water Use Categories.")[2] Certainly, neither DEP in its administration of NPDES program nor the State water quality standards presume that all streams are "trout streams" (Category B2), "wetlands" (Category B4) or "industrial" waters (Category E4) in determining what criteria to apply in divining permit limits.[3] Accordingly, there is neither any precedent nor any bases for automatically applying Category A to all waters, and the Board should not now do so absent legislative guidance or a well-reasoned and discussed public policy change.

Nowhere in the state water quality standards is there a presumption that all water is used for drinking water, and the Board should not make such a presumption now. In addition, the Board has never done a use attainability analysis, as is required by the federal water quality standards at 40 CFR Part 131.10(j). The Board has simply stated that because it has always assumed that all waters of the state were used for drinking water, the Board should codify its assumption. Such acceptance of an assumption, especially through an emergency rulemaking, is especially poor public policy at the minimum and, quite possibly, illegal under the federal water quality standards.

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[2]C.S.R. § 46-1-7.2.a.A specifically provides that waters shall be classified based on whether they meet the definitions of the individual water uses set out in C.S.R. § 46-1-6. It also provides that streams may be "classified for one or more Water Use Categories [and that [w]hen more than one use exists, they shall be protected by criteria for the use category requiring the most stringent protection." This language makes clear that not all stream segments are presumed to serve all uses. If they were, then this regulatory language would be surplusage, and the law presumes that such language cannot be mere surplusage.

[3]We are aware of language in E.I. DuPont de Nemours and Co., Inc. and Affiliated Trades Foundation v. Chief, Nos. 599 & 602 (EQB Dec. 13, 1995) which affirmed the Chief's decision to apply Category A criteria to a section of the Ohio River notwithstanding DuPont's contention that its discharges were more than five miles upstream of any public water in-take. There, however, The Board utilized other evidence to find that "the waters of the Ohio River are used for human consumption," a fact which rarely exists for the small streams into which the mining industry most often discharges. Thus, absent other evidence that a stream is used for human consumption, the rationale is the DuPont case is inapplicable to the mining industry.

By declaring all waters of the state public drinking water supplies, the Board has essentially stated that it does not want to "address" the issue until the Bureau of Public Health completes and implements its Source Water Assessment and Protection Program ("SWAPP.") However, on numerous occasions, the Bureau of Public Health, with its limited state resources, has stated that it HOPES to complete the SWAPP by the summer of 2000, but that it has not REQUIRED to complete the SWAPP until 2003.

Accordingly, both the WVCA and WVMRA request the Board to withdraw its assumption that all waters of the State are used for drinking water. Rather, the WVCA and WVMRA suggest that the Board require all human health criteria to be met at some distance, perhaps five miles, upstream of ALL KNOWN DRINKING WATER INTAKES. To do otherwise, is inappropriate public policy.

Manganese

As Dr. Samuel has noted on numerous occasions, the regarding manganese - whether the treatment is worse than the cure - has been presented to the Board numerous times over the past several years. Accordingly, WVCA and WVMRA will not provide extensive comment on this matter at this point. Rather, WVCA and WVMRA will rely on the large amounts of previous comment which have been submitted to this Board. It is clear from the Board's actions over the past several years[4] that the Board understands the "manganese issue." However, the WVCA and the WVMRA would be more than willing to provide any analytical or other type of data to the Board should it wish to consider such information.

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[4]As early as 1997 and as recently as seven and a half weeks ago, the Board has continuously and correctly recognized that treating manganese is more detrimental to water quality than the manganese itself. Most recently, on October 15, 1999, the Board voted unanimously to propose a "five mile rule" for manganese. Unfortunately, such effort by the Board was negated by the Secretary of State.

Response to EPA's Comment

Finally, the WVCA and WVMRA wish to formally respond to the oral comments provided by the United States Environmental Protection Agency - Region III ("USEPA") at the November 29, 1999 public hearing. At the hearing, Mary Kuo, on behalf of USEPA, stated that if the Board declares all waters of the State to be Public A, as the Board has done through its emergency rulemaking, then EPA would object to a statewide exemption for the human health criteria for manganese. That is, if the Board does not withdraw its rule mandating that all waters of the State are used for public drinking water, then the Board may NOT propose an exemption for manganese - regardless of what the analytical data and common sense suggest.

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

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

DEC 0 6 1999

Dear Ms. Chatfield,

The Environmental Protection Agency has received notice of the Environmental Quality Board's proposed amendments to Section 6.2 of the West Virginia Water Quality Standards, which addresses implementation of the drinking water supply use category. Pursuant to 40 CFR §131.20(b), EPA offers comments on the proposed changes.

Specifically, the proposed language states that Category A will apply to all waters. In addition, it provides exemption from the human health manganese criteria above five miles of a known drinking water source.

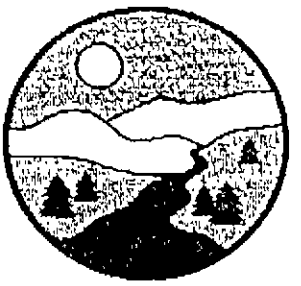
The West Virginia Water Quality Standards does not explicitly state that all waters are designated as drinking water supply. Thus, EPA is pleased to see clarification on this current interpretation.

Regarding the additional language relative to manganese, an exemption to the human health criteria in light of a statewide application of Category A does not reflect the intentions of the Clean Water Act. Criteria for the protection of human health are needed for waterbodies designated for public water supply, in order to support the designated use. Thus, if Public A is to be applied to all waters, then human health criteria for pollutants, including manganese, need to be applied to all waters as well.

EPA hopes that these comments will assist the EQB in the development of fully protective Water Quality Standards. If you have any questions or concerns, please contact me at (215) 814-2390.

Sincerely,

Mary A. Kuo
Environmental Scientist



WEST VIRGINIA RIVERS COALITION

December 6, 1999

Libby Chatfield
Technical Advisor
WV Environmental Quality Board
1615 Washington Street East, Suite 301
Charleston, WV 25311-2126

RE: Comments on Emergency Rulemaking for the Public Drinking Water Supply Designated Use Category (A)

Dear Ms. Chatfield:

On behalf of the West Virginia Rivers Coalition and the West Virginians for Clean Water campaign, I am submitting the following comments regarding the proposed emergency rulemaking for the public drinking water supply designated use category (A).

We are pleased to see that the Environmental Quality Board is proposing to retain the definition of Category A such that the public drinking water supply category of use shall apply to all waters of the state. We would certainly like to see this go beyond an interim basis.

The West Virginia Rivers Coalition and West Virginians for Clean Water believe this assures the maximum degree of protection for all our states surface waters for existing uses (including those who currently use surface waters for drinking and are not accounted for) and, for potential future uses as drinking water.

We also believe it is absolutely inappropriate to include the language which provides an exemption from the manganese human health criterion above fives mile of a known drinking water source. This contradicts the previous language of Category A which protects for all existing uses. In fact, it violates the language of the Clean Water Act regarding existing uses.

The Clean Water Act (CWA) says that *existing uses* are those that have been attained at any time since 1975, when the CWA regulations regarding designation were established. Existing uses include: 1) uses actually being made, whether or not the level of quality to fully support the uses exists; and 2) uses for which the level of quality has been attained, whether or not the use is yet being made

The CWA at 131.12 (a)(1) flatly states that "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected."

The Summary of Proposed Changes states "This change has been included to address concerns raised by the coal industry regarding the difficulty of meeting the manganese limit." We question whether the proposed changes are being offered for the maintainance and protection of existing uses as required by law, or to serve the specific interests of a specific industry.

Those who use the waters and streams of West Virginia to make a profit, and effect the character and quality of those waters by doing so, should be held accountable for preserving the quality of our waters.

In this scenario, it appears that the coal industry is attempting to avoid this responsibility, and the full treatment necessary for manganese. The current (partial) treatment raises the alkalinity of the receiving stream to a degree that it may in fact violate water quality standards.

There are other treatment options available to reduce the pH, and they should be employed. This is a problem that should be dealt with via the permitting process or appropriate Clean Water Act mechanisms, such as variances or use attainment analyses. But it should not be a proposed language change to designated uses.

The burden of proof and treatment responsibilities should not be shifted to the public.

The common everyday need for clean water should be preserved for the use - now and in the future - of every citizen.

As for the intention of the Board to revisit the application of Category A upon the completion of the delineation of Zones of Critical Concern in the Source Water Assessment and Protection Plan being implemented by the WV Bureau for Public Health, I would again raise the concern that this does not include people who use surface waters and are not served by a so-called public service provider. Protection for the use of our surface waters for drinking must be retained

Again, we appreciate the protective definition of Category A you are proposing and we request that you eliminate the inappropriate, if not illegal, language that would exempt the manganese human health criterion above five miles of a 'known' drinking water source.

Sincerely,

Pamela C. Moe-Merritt

Pamela C. Moe-Merritt
Conservation Director

cc: Mr. Bob Koroncai, US EPA, Region III

WEST VIRGINIA RIVERS COALITION

West Virginia Rivers Coalition Statement for the Public Hearing on Emergency Rulemaking for the Public Drinking Water Supply Designated Use Category (A) 11/29/99

My name is Pamela Moe-Merritt and I am here this evening representing the West Virginia Rivers Coalition and the West Virginians for Clean Water campaign

We are pleased to see that the Environmental Quality Board is proposing to retain the definition of Category A such that the public drinking water supply category of use shall apply to all waters of the state. We would certainly like to see this go beyond an interim basis.

The West Virginia Rivers Coalition and West Virginians for Clean Water believe this assures the maximum degree of protection for all our states surface waters for existing uses (including those who currently use surface waters for drinking and are not accounted for) and, for potential future uses as drinking water.

We also believe it is absolutely inappropriate to include the language which provides an exemption from the manganese human health criterion above five mile of a known drinking water source This contradicts the previous language of Category A which protects for all existing uses. In fact, it violates the language of the Clean Water Act regarding existing uses.

The Clean Water Act (CWA) says that *existing uses* are those that have been attained at any time since 1975, when the CWA regulations regarding designation were established. Existing uses include: 1) uses actually being made, whether or not the level of quality to fully support the uses exists; and 2) uses for which the level of quality has been attained, whether or not the use is yet being made.

The CWA at 131.12 (a)(1) flatly states that "Existing instream water uses and the level of water quality necessary to protect the existing uses shall be maintained and protected "

Unfortunately, it is embarrassingly clear who's interest the Board is attempting to cater to in this instance. The Summary of Proposed Changes states "This change has been included to address concerns raised by the coal industry regarding the difficulty of meeting the manganese limit."

801 N. Randolph Avenue • Elkins, West Virginia 26241 • (304) 637-7201 • www.wvrivers.org
"Seeking the conservation and restoration of West Virginia's exceptional rivers and streams"

Those who use the waters and streams of West Virginia to make a profit must be held accountable and be willing to bear the cost of preserving the quality of our waters.

It appears that the coal industry does not want to be responsible and expend the resources necessary to fully treat for manganese. The current (partial) treatment raises the alkalinity of the receiving stream to a degree that it may in fact violate water quality standards.

There are other treatment options available to also reduce the pH. It is the responsibility of the coal industry to employ them. And it is a problem that should be dealt with via the permitting process or appropriate Clean Water Act mechanisms, such as variances or use attainment analyses. But it should not be a proposed language change to designated uses.

The burden of proof and treatment responsibilities should not be shifted to the public.

The common everyday need for clean water should be preserved for the use - now and in the future - of every citizen.

As for the intention of the Board to revisit the application of Category A upon the completion of the delineation of Zones of Critical Concern in the Source Water Assessment and Protection Plan being implemented by the WV Bureau for Public Health, I would again raise the concern that this does not include folks who use surface water that are not served by a so-called public service provider. Protection for the use of our surface waters for drinking must be retained.

Again, we appreciate the protective definition of Category A you are proposing and we request that you eliminate the inappropriate, if not illegal, language that would exempt the manganese human health criterion above five miles of a 'known' drinking water source.

(3)

WEIRTON
STEEL CORPORATION

November 29, 1999

Dr. Donald Tarter
Chairman, Environmental Quality Board
1615 Washington Street, E.
Charleston, WV 25311-2126

Dear Dr. Tarter:

Weirton Steel Corporation ("WSC") is pleased to submit the following comments on proposed amendments to the Surface Water Quality Standards, 46 CSR 1, filed on October 18, 1999. As the Environmental Quality Board is aware, WSC has a strong interest in the water quality regulations of the Board and seeks to provide thoughtful and constructive input to the Board in its deliberations concerning changes to its rules. These comments are offered for that purpose.

The narrative accompanying the proposed regulatory changes states that the amendments are intended to clarify that "the public drinking water supply use category applies to all waters of the state." See "Summary of Proposed Changes," Environmental Quality Board, October 18, 1999. The narrative goes on to state:

> The Office of Water Resources . . . has implemented the use category in this way for some time. However, the existing language in the rule does not clearly define this interpretation.

WSC believes that it is precisely because the Office of Water Resources applied an interpretation of the water quality regulations that conflicted with the express language of the rules that this issue was the point of contention in numerous appeals over the years. The Board has proposed to resolve this issue by decreeing that all waters of the state be designated as public water supplies until designated otherwise. For the reasons stated in its comments filed on July 15, 1999, on the Advance Notice of Proposed Rulemaking, WSC opposes the proposed change. A copy of WSC's previous comments is attached to this letter.

In the narrative accompanying the proposed rule, it is suggested that the Board favors the "Zone of Critical Concern" concept that is currently under consideration by the Department of Health through the exercise of that agency's responsibilities under the Safe Drinking Water Act. It is submitted that this approach is very similar to the "Five Mile Rule" (and the retention or updating of the existing list of public water supplies in Appendix B of the Rule). By committing to reexamine the scope of the application of Category A upon the publication of the Department of Health's Zones of Critical Concern, and at the same time,

applying the Category A Use designation to all waters of the State, the Board is moving in diverse directions simultaneously. WSC believes that it would be more logical to define the Category A Use as those waters five miles upstream of any public water supply listed in Appendix B and adjusting this distance if deemed appropriate to reconcile with the Zones of Critical Concern once they have been finalized.

Secondly, other than being the most conservative approach that can be taken, we are aware of no factual or scientific support for the Board's proposal. WSC is particularly sensitive to the economic impact of regulatory decisions on businesses operating in this State. We urge the Board to make choices based on sound science and to be aware of the economic impact of regulatory approaches that are overly restrictive, when a less restrictive choice can be scientifically and factually supported. We believe the adoption of the five-mile rule would meet this latter test.

Whichever approach the Board adopts, WSC reiterates its belief that the "one-half mile" rule (Sec. 7.2.a.2) should be deleted from the Rule. With minor adjustments, the Mixing Zone Rule (§ 46-1-5) provides all the flexibility needed to address discharges in close proximity to drinking water intakes. This approach properly focuses on the impact at the intake and not the discharge. See pages 3, 4 of attached comments.

We thank the Board for the opportunity to provide these comments and WSC looks forward to working with the Board in the coming months to achieve practical solutions to these issues.

Sincerely yours,

Mark Vignovic
Manager, Environmental Control

Encl.
cc: Gene P. Current

WEIRTON
STEEL CORPORATION

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

July 15, 1999

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

RE: West Virginia Water Quality Standards - Advanced Notice of Proposed Rulemaking

Dear Ms. Chatfield:

Weirton Steel Corporation ("WSC") is pleased to submit the following comments to the recent Advanced Notice of Proposed Rulemaking ("ANPR") regarding the West Virginia Water Quality Standards, which was issued on June 29, 1999 by the West Virginia Environmental Quality Board (the "Board").

I. BACKGROUND

The ANPR provides that the Board is considering changes to Section 6 of the West Virginia Water Quality Standards Rule, 46 CSR 1, which establishes use categories for waters of the State. Specifically, the changes, which are being contemplated, would affect the designation of waters for use as public water supplies (known as Category A). The Board has proposed several options for modifying the Water Quality Standards Rule, and is seeking comments on its proposals. It is our understanding that the Board is considering such changes based upon a directive from the West Virginia Legislature.

II. INTRODUCTION

As you know, WSC owns and operates an integrated steel making facility along the Ohio River in Weirton, West Virginia. As part of its operations, WSC withdraws approximately 200 million gallons of water from the Ohio River for use as both process water and drinking water. This water is withdrawn from the Ohio River approximately 1500 feet downstream of one of the company's permitted discharges (Outlet 002). Because of the water intake's proximity to the 002 discharge (i.e., within one-half mile), the 002 discharge is subject to the "one-half mile

rule," 46 CSR 1 Section 7.2.a.2, which would require absent some exception, that WSC discharge "drinking water quality" effluent from Outlet 002. In such case, WSC could theoretically use the effluent as drinking water, which would appear to be a ridiculous result.

The costs of installing control equipment or moving the discharge are astronomical (well over $30 million). Another alternative would be to relocate the drinking water intake, a project which would cost approximately $2 million with no attendant environmental benefit. In fact, this relocation would likely have a detrimental environmental impact, given the dredging and piling work necessary to construct a new intake structure.

The ongoing regulatory concern with the Category A designation, specifically the old "5-mile rule," arose at the same time WSC's NPDES Permit was reissued by the Office of Water Resources in 1994. Among other things, this permit imposed effluent limitations equivalent to drinking water criteria on WSC's Outlet 002. Although it appears that the purpose of the "5-mile rule" was to clarify that drinking water standards only apply in those stream segments located 5 miles upstream of a water supply intake, the rule was interpreted to impose drinking water criteria as effluent limitations for all discharges in these 5 mile zones.

In recognition of the special circumstances existing at the Weirton Plant and to allow WSC time to adequately consider the option of utilizing water supplied by the City of Weirton rather that its own potable water plant, an exception was inserted within the current half-mile rule. See Sec. 7.2 a.2, effective July 1, 1999. We believe it is critical that any option for addressing the Category A use designation chosen by the Board include a mechanism for recognizing special circumstances where it can be demonstrated that despite proximity to a drinking water intake, drinking water quality is assured.

III. THE BOARD'S PROPOSED OPTIONS

The Board is proposing four separate options for the Category A use designation for public water supplies. These include: (1) maintaining the current interpretation of the use designation that all waters in the State are designated as Category A, unless specifically removed; (2) using protective zones as determined by the West Virginia Bureau of Public Health; (3) providing for the removal of the designation during the NPDES permitting process; and (4) applying the use designation for a distance five miles upstream of existing water supply intakes.

Retaining the existing Category A presumption is simply not the best alternative, given the stringent water quality criteria associated with public drinking water supply use designations. This approach gives no consideration to actual uses that are being made of surface waters nor does it

recognize any treatment that is applied to drinking water systems. Simply presuming that all waters of the State are used for drinking water and, as a result, placing the significant burden of overcoming this presumption on the discharger at the discharge location, is excessive for the adequate protection of the State's drinking water.

The option of using protective zones as established by the Bureau of Public Health is not desirable because that program is still in the developing stages and its implications cannot yet be identified. The option of utilizing the Office of Water Resources to review and possibly remove the Category A use during the NPDES permit review process raises questions that the Board may unlawfully delegate its authority to establish water quality standards.

In addition, WSC believes that the Board cannot effectively modify the existing Category A use designation without corresponding changes to the "one-half mile rule." Specifically, WSC believes that the regulatory change should reflect the following conditions:

1) The existing regulations include a mechanism whereby the Department of Health can have input on which sources merit protection as public drinking water supplies, and it is important to retain this mechanism.

2) Most of the regulated community does not object to Category A designations that are protective of public drinking water supplies, nor does it object to water quality-based effluent limitations ("WQBELs") that are rationally designed to protect those supplies. Rather, it objects to arbitrary, non-scientific brightline rules that impose overly protective criteria "end-of-pipe."

3) With minor modifications, the existing mixing zone regulations will provide the Office of Water Resources ("OWR") with adequate flexibility to develop WQBELs that are protective of public drinking water supplies A proper mixing zone analysis should ensure the development of WQBELs that prevent the exceedance of the drinking water criteria at the public water supply intake. This approach properly focuses on the impact at the intake and not the discharge.

4) WSC's situation is somewhat unique, because it owns both the effluent discharge and the water supply intake/treatment facility. As such, WSC should be able to determine where treatment technology should be installed to protect the water supply (i.e , at the discharge or at the intake)

IV. - PROPOSED CHANGES

After considering all of the pertinent facts, and the somewhat tortured path that has led the Board to this point, WSC recommend that the following changes should be made to the water quality standards:

A) The Category A use designation should apply five miles upstream (or to the headwaters, whichever is shorter) of all public water supply intakes, as designated in Appendix B of the water quality standards, unless otherwise removed in accordance with the site-specific criteria portions of the standards.

B) The Category A use designation should not apply outside of these five-mile segments or as otherwise removed in accordance with the site-specific criteria portions of the standards.

C) The Office of Water Resources ("OWR") should consult with the Department of Health on at least an annual basis to determine whether additions or deletions should be made to the list of public water supplies designated in Appendix B of the water quality standards, and should propose to the Board any such changes that it deems appropriate.

D) The "one-half mile rule" (which imposes criteria "end-of-pipe") should be deleted.

E) A provision should be added to the mixing zone regulations that provides that the mixing zone for human health criteria should not extend beyond the intake for any public water supply, as designated in Appendix B of the water quality standards, unless the water supply and the discharge are owned by the same entity. If the water supply and the discharge are owned by the same entity, the mixing zone may extend beyond the intake, but the OWR may require additional monitoring at the drinking water supply to ensure that the drinking water regulations are being met.

WSC believes that these changes will provide OWR with adequate tools and flexibility to develop appropriate water quality-based effluent limitations that are protective of public drinking water supplies, without reliance on the unscientific, "belts and suspenders" protection proffered by the one-half mile rule. At the same time, the changes will provide the regulated community with certain assurances that WQBELs will be based on sound science and demonstrated facts.

V. CONCLUSION

Again, thank you for the opportunity to provide these comments, and WSC looks forward to working with the Board in the coming months to achieve practical solutions to these issues If you would like to discuss these comments in greater detail, or if I can be of any additional assistance, please do not hesitate to contact me.

Sincerely yours,

Mark Vignovic
Manager, Environmental Control

cc. Gene P. Current

Statement by Kathy G. Beckett
On Behalf Of the
West Virginia Chamber of Commerce

My name is Kathy G. Beckett, of the law firm of Jackson & Kelly, PLLC. I am here tonight to present a statement on behalf of the WV Chamber of Commerce. The Environmental Quality Board has elected to designate all waters of the state as Category A [illegible] Waters in the form of an emergency rule which is now slated to become a final rule. The Environmental Quality Board was directed by the Legislature on March 21, 1999 to review, revise and propose, within the statutory deadline of October 30, 1999 emergency and legislative rules to address the interpretive differences regarding the designation of category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake Although the Board has dedicated portions of its meetings, as well as set aside time for public hearings, it is not apparent that it has given appropriate consideration to the impacts of the decision that it has made

Although the Board historically has received lengthy comments from the WV Chamber, as well as from other trade organizations and individual companies describing the inherent regulatory difficulties of designating all of the state's waters as Category A waters, the Board has elected to adopt the statewide designation. This broad-brush approach creates a legal generalization that takes reality and turns it on its head Waters upon which there are no drinking water uses are now designated as such without having undergone even the first analytical assessment of actual uses. What is gained by creating this fiction is a water quality criteria goal that would make all waterbodies appropriate for human consumption, after conventional treatment. It is well for the public to be educated on this very important detail. Just by designating all waters as drinking water supply,

does not mean the public is free to sip from a teacup filled with West Virginia's waters.

Another significant fiction that is created by the Board is that waters that fail to meet Category A criteria, whether or not there is a public water intake, will be subject to TMDL analysis and development. With each layer of regulation, the myth grows larger and larger and more and more resource intensive

The Chamber strongly urges the Board to withdraw this rule and provide a report to the Legislature detailing the need for additional time The Environmental Quality Board has been confronted with very complex legal and technical issues this past year as it has worked tirelessly to address EPA's comments presented in the last triennial review The Chamber supports the hard work the Board has done thus far, but the Chamber is keenly aware of the outstanding issues that remain unaddressed. It simply is not acceptable to rely on the stroke of a broad brush when we are dealing with important matters such as water quality.

The most familiar episode in this fiction that creates a terrible fact, is that which is described by those facilities that will be required to treat for manganese to such an extent that aquatic life will be threatened if not eliminated.

The Chamber strongly urges the Board to withdraw the current rule in favor of allocating appropriate time for all Board members to thoroughly study this issue and arrive at a public policy decision that will create a regulation that is well-founded in law, as well as fact.

Respectfully submitted this 29th of November, 1999.

West Virginia
Chamber of Commerce

December 6, 1999

Dr. Ed Snyder, Co-Chairman
Post Office Box 987
Shepardstown, West Virginia 25443

Dr. Donald C. Tartar, Co-Chairman
38 Lynn Morr Drive
Huntington, West Virginia 25705

Re: Public A – Drinking Water Supply Designation

Dear Chairmen and Board Members:

These comments are offered on behalf of the West Virginia Chamber of Commerce concerning the decision by the Environmental Quality Board to designate all waters of the state as Category A Drinking Waters in the form of an emergency rule which is now slated to become a final rule.

The Environmental Quality Board was directed by the Legislature on March 21, 1999 to review, revise and propose, within the statutory deadline of October 30, 1999 emergency and legislative rules to address the interpretive differences regarding the designation of category A waters and analyze the need for distance prohibitors for the policies of public drinking water intake. Although the Board has dedicated portions of its meetings, as well as set aside time for public hearings, it is not apparent that it has given appropriate consideration to the impacts of the decision that it has made.

Although the Board historically has received lengthy comments from the WV Chamber, as well as from other trade organizations and individual companies describing the inherent regulatory difficulties of designating all of the state's waters as Category A waters, the Board has elected to adopt the statewide designation. This broad-brush approach creates a legal generalization that takes reality and turns it on its head. Waters upon which there are no drinking water uses are now designated as such without having undergone even the first analytical

assessment of actual uses. What is gained by creating this fiction is a water quality criteria goal that would make all waterbodies appropriate for human consumption, after conventional treatment. It is well for the public to be educated on this very important detail. Just by designating all waters as drinking water supply, does not mean the public should hold the misbelief that waters will now be of a potable quality without additional treatment.

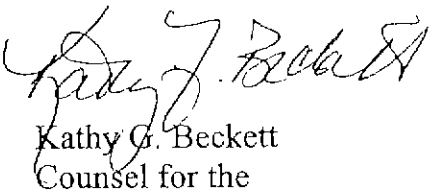
Another significant fiction that is created by the Board is that waters that fail to meet Category A criteria, whether or not there is a public water intake, will be subject to TMDL analysis and development. With each layer of regulation, the myth grows larger and larger and more and more resource intensive.

The Chamber strongly urges the Board to withdraw this rule and provide a report to the Legislature detailing the need for additional time. The Environmental Quality Board has been confronted with very complex legal and technical issues this past year as it has worked tirelessly to address EPA's comments presented in the last triennial review. The Chamber supports the hard work the Board has done thus far, but the Chamber is keenly aware of the outstanding issues that remain unaddressed. It simply is not acceptable to rely on the stroke of a broad brush when we are dealing with important matters such as water quality.

The most familiar episode in this fiction that creates a terrible fact, is that which is described by those facilities that will be required to treat for manganese to such an extent that aquatic life will be threatened if not eliminated.

The Chamber strongly urges the Board to withdraw the current rule in favor of allocating appropriate time for all Board members to thoroughly study this issue and arrive at a public policy decision that will create a regulation that is well-founded in law, as well as fact.

Very truly yours,



Kathy G. Beckett
Counsel for the
WV Chamber of Commerce

cc: Mr. Stephen G. Roberts, President
WV Chamber of Commerce

David M. Flannery, Chair
Environmental Committee
WV Chamber of Commerce

Elizabeth Chatfield, Staff
Environmental Quality Board

Donald C. Tartar
38 Lynn Morr Drive
Huntington, West Virginia 25705

Betsy E. Duhlin, P.E.
3909 Kanawha Avenue
Charleston, West Virginia 25304

Charles Jenkins
432 Wilburn Street
Morgantown, West Virginia 26505

David Samuel
1 Harvest Drive
Morgantown, West Virginia 26508

December 5, 1999

Dr. Donald Tartar, Chair
WV Environmental Quality Board
1615 Washington Street, East
Charleston, WV 25311-2126

RE: 46 CSR1 Water Quality Standards
-Use Category A, Water Supply, Public
-And criteria for Manganese

Chairman Tartar,

On behalf of the statewide organization West Virginia Highlands Conservancy (WVHC), the more local citizens group Friends of the Little Kanawha (FOLK), and myself personally I submit these brief statements regarding Use Category A Water Supply, Public and criteria for Manganese.

PUBLIC A

Aware of individual families across the state who are users of surface water for private domestic water systems (previously identified by Sections 6.2 b., c. and d. of WV Water Quality Standards 46 CSR1), we are acutely aware of the need to protect the high quality of our surface waters that are suitable for drinking water purposes. WV is blessed with a multitude of surface waters that are most often suitable for drinking water use. This is particularly true in the more isolated headwaters areas where old Sections 6.2 c and d. are frequently applicable. We continue to be deeply concerned about industry efforts over the past 20 years to have the Board lower its assumptions and expectations for these high quality waters merely to make it easier and/or less expensive to conduct some activity or another.

We commend the Board for it's proposed language in Section 6.2 that retains the assumption that Use Category A applies to all waters of the state unless specifically removed from that category.

As evident from our numerous submissions to the Board over the years, WVHC and FOLK have consistently maintained this position and will continue to do so.

(We do have concerns about the Board's expected reliance on the Bureau of Public Health's current efforts in its Source Water Assessment and Protection Program to study and delineate "Zones of Critical Concern "(ZCC) to further refine the application of Category A to waters of the state.

In particular, at this point it appears that the delineation of ZCC may not adequately address the concerns we have for protecting many high quality headwaters

and present as well as potential "private domestic water systems" (old Section 6.2.c.) or "all other surface water intakes where the water is used for human consumption" (old Section 6.2.d.). ...But that is a question for another day - once the Bureau is further along with its study.)

MANGANESE

While we realize the Board has not asked for comments about the Manganese criteria at this particular juncture, we also recognize that concerns about manganese are prime motivating factors in industry's push to weaken the application of Use Category A, Water Supply, Public. This of course was obvious in comments submitted by coal industry representatives at the public hearing last Monday, November 29, 1999

As with our support of the Board's maintaining its historic position with regard to Public A applying to all waters of the state, we also strongly urge the Board to maintain the current criteria for manganese in Public A waters.

We deeply regret the Board's decision at the last triennial review to drop the aquatic life criteria for manganese, but we realize no studies have turned up massive fish kills directly related to increases in manganese levels from, say, a particular mining operation Nor apparently have any studies been directed to evaluating specific changes to background aquatic life (not just fish species) caused by increased levels of manganese.

However, as industry now turns its attention to eliminating any criteria for manganese in waters assumed to be capable of supporting drinking water use, the Board must surely have enough reason for maintaining at least the current standard of 1mg/l for Category A.

At the risk of being overly repetitive, I must restate some of our comments to the Board from the 1997 Triennial Review (7/22/97). At that time we referred to the following assumptions presented by the EPA Guidance contained in the "Goldbook"

- "[manganese may not be toxic to plants] but, manganese is RARELY found in surface waters at concentrations greater than 1mg/l. ...Thus no specific criterion for manganese [in agricultural waters] is proposed."
- "Manganese at concentrations of about 10 to 20 ug/l is acceptable to most consumers. A criterion for domestic water supplies of 50ug/l should minimize the objectionable qualities."
- "The presence of low concentrations of iron may intensify the adverse effects of manganese." [Increased levels of iron, of course, often accompany manganese in mining discharges]
- "Most industrial users of water can operate successfully where the criterion proposed for public water supplies (50ug/l) is observed Examples of industrial tolerance of manganese in water are summarized for industries such as dyeing, milk processing, paper, textiles, photography and plastics (McKee

and Wolf, 1963). A MORE RESTRICTIVE CRITERION MAY BE NEEDED TO PROTECT OR ENSURE PRODUCT QUALITY."

- "...manganese is not removed in the conventional treatment of domestic waters."

As the above statements from the Goldbook indicate, though there may be little concern about the toxicity of manganese to fish or other aquatic life, there is certainly ample reason to be concerned about how levels of manganese above 1mg/l may impact the quality of life in rural West Virginia as well as the potential to attract diverse industries to some of the more isolated headwater areas in the state

Previous testimony before this Board has shown how increased treatment costs have been incurred at the Buckhannon Water Plant since the mid '80's due to increased levels of manganese from mining operations upstream. Costs such as these must not be passed on to the water users downstream, but rather must be borne by the company and/or industry creating the problem (and, of course, consequently shared by all the consumers of the product produced, i.e. more appropriately passed on as part of the cost of doing business).

As was mentioned at the public hearing November 29th, manganese has been considered an "indicator" for other metals in the effluent limit standards set for coal mining in the 1977 Surface Mining Act (SMCRA). Although that is more correctly a matter for consideration by OSM and EPA in the ongoing conversations with the coal industry with regard to changing those effluent limitations, water quality based effluents are required where instream water quality may not be adequately protected by the technology based limits. It is here, where water quality based effluents are more appropriate, where maintaining water quality demands more than the floor of protection provided by the technology based limits in SMCRA, that the Board must hold the line This is especially true with regard to the high quality waters of WV that are or can be used for drinking water supplies

While also attempting to persuade the federal regulatory agencies (OSM and EPA) that technology based effluent limits of 2-4 mg/l for manganese from coal mining sites is unreasonable, unsupportable and should be eliminated, the mining industry has successfully encouraged this Board to eliminate the manganese criteria for aquatic life from the state water quality standards so that now the imposition of more stringent water quality based effluent limits no longer include a numeric standard for manganese – except of course in waters where use Category A applies.

In turning their attention to overcoming this last hurdle of meeting somewhat demanding manganese standards, coal industry representatives refuse to acknowledge the existence of alternative treatment methodologies that are both possible and that would also prevent the negative outcomes of "overkill" and "overtreatment" that they now herald Reverse osmosis may well be a bit pricey for many operators, but another option, that of two stage treatment systems (first to raise the pH then to lower it thereby

addressing the various treatment required for appropriate reductions of Fe, Al, Mn, etc. in the discharge) are available and affordable.

Unless and until industry can prove it impossible (not just inconvenient or relatively uneconomical) to treat and remove manganese onsite we urge the Board to be sure that state standards do not allow the burden and cost of treatment to be passed on to other possible users of the waters in question.

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Over the past twenty years many changes have occurred in technology and our ability as humans to alter our environment for the progress society as a whole seems to desire But what has not changed since I began attending Board hearings in the late '70's is the underlying need for the Board to remain strong in its efforts to offer the highest degree of protection to the most precious water resources of the state. As pressures have mounted over the years your task has become most difficult. Nowhere is this more evident than in the current assaults on Public A and the antidegradation policy.

We applaud the current language proposed to clarify the Board's historic position that public drinking water supply use applies to all waters of the state unless that use is specifically removed We furthermore urge you to retain the current manganese criteria for use Category Public A.

Please contact me at the address and/or phone # below with any questions or need for clarification.

Sincerely,

Cindy Rank

Cindy Rank
HC 78, Box 227
Rock Cave, WV 26234

Phone: (304) 924-5802

cc. Frank Young, President WVHC
LeRoy Dixon, President FOLK
WV for Clean Water

(1)

Comments before the Environmental Quality Board on Public A waters given 11/29/99 on behalf of the West Virginia Manufacturers Association.

Thank you, I'm Wayne Appleton speaking on behalf of the West Virginia Manufacturers Association. I'm going to read my comments tonight so that there is no question as to my meaning or intent.

In 1998 the West Virginia Legislature mandated the Environmental Quality Board to study and justify the rationale for designating all of the state's waters as Category A Public Drinking Waters. Rather than performing any studies or analyses to determine whether it is indeed appropriate to continue to protect uses which do not exist, the Board has chosen to retain this designation despite an awareness of the problems that this causes.

The Board is aware that there are serious problems with designating all of our waters as Public A. The Board is aware of the differences that exist between the Water Quality Standards for Drinking Waters and those designed to protect Aquatic Life. The Board is aware of specific problems, such as manganese, where the application of the Human Health Criteria would require treatment which would be very detrimental to aquatic life downstreamand which degrade water quality substantially.

In designating all of the state's waters as Category A, the Board appears to be ignoring or underestimating the implications of their actions. By designating waters which have NO drinking water uses as "Drinking Water", the Board has arbitrarily determined that some of these waters will be designated as "impaired" for that non-existent use. This is despite the fact that many of these streams have vibrant healthy aquatic life and that no one is using these streams as potable water. The implication of defining these streams as impaired is that these streams will be inappropriately listed on the state's 303(d) list as impaired when in fact they are healthy. This then implies that a Total Maximum Daily Load (TMDL) will need to be established and corrective action taken to "fix" a non-existent problem.

(1)

The West Virginia Manufacturers Association strongly supports identifying those streams which are truly impaired and taking corrective action to remediate specific problems. We do not believe that West Virginia has the resources to do unnecessary TMDLs or to remediate problems which exist only because the Board's decision protects non-existent uses.

The West Virginia Manufacturers Association does not believe that the Board has met the mandate of the Legislature to explain and justify designating all of the state's waters as Category A. WVMA is unaware of any "Use Attainability Analyses" or other significant technical studies done by the Board's staff which support this arbitrary designation. WVMA believes that the Board must either reconsider this arbitrary designation OR provide the regulated community with a well-defined and practical means to change the designation for specific waters. If these issues are not adequately addressed by the Board, WVMA will find it necessary to take these issues to the Legislature in the upcoming session.

Comments of the West Virginia Manufacturers Association submitted to the Environmental Quality Board on the Designation of all state waters as Public A Drinking Water.

Submitted 12/3/99

The West Virginia Manufacturers Association is a trade organization representing over 200 member firms. The West Virginia Manufacturers Association thanks the Board for this opportunity to make public comments on behalf of the members of WVMA on the Emergency Rule issued by the Board defining all of the state's waters as Category A Drinking Water. We believe that this decision is bad public policy.

Protecting non-existent or unlawful uses of West Virginia's Waters

The designation of any stream or waterbody as Public A Drinking Water should mean that the water must meet human health criteria after conventional water treatment.. This designation is not intended to apply these criteria to "untreated" stream waters nor was it intended to apply to waters that do not have an existent use as potable water. The Board's change eliminates this requirement.

The argument of some environmental activists that "some people are drinking untreated stream waters therefore it is necessary to apply more stringent standards to all state waters" is a spurious one. The Board cannot and should not act to apply inappropriate Water Quality Standards based upon unlawful or non-existent uses. If there are people using these untreated waters for potable uses, this is a legal or "social welfare issue" which should be resolved through action by the Bureau for Public Health or the state's Health and Human Services agencies, not an environmental issue.

The Implications of the Boards Actions

The net effect of designating all of the state's waters as Category A waters will be to require that some waters be erroneously listed as "impaired" on the state's 303 (d) list although in fact they are **not** impaired for aquatic life or for any other actually existing use. Placing these streams, lakes and rivers on the 303 (d) list will require that a Total Maximum Daily Load (TMDL) be established (an expensive undertaking) and that remediation efforts be undertaken to correct a "problem" which exists only because of the Board's actions.

COMMENTS OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION PAGE 2

The West Virginia Manufacturers Association believes that this is bad public policy and that the financial costs to the state to perform unnecessary TMDLs and inappropriate remediation are an unacceptable drain on the resources of the taxpayers of the state and an impediment to future economic development.

Case in point—Manganese

The Board is aware through many discussions over a period of years of the issue created by Category A designation of waters that are above the Human Health Criteria standard for Manganese. Many of these waters, nevertheless, have healthy vibrant aquatic and benthic populations. The members of the Board are also aware that treating these waters to remove manganese requires treatments that significantly degrade the quality of the water for downstream aquatic life. The Board recently attempted to remedy this situation by crafting an exemption in the Emergency Rule that was removed by the West Virginia Secretary of State when he issued the rule. The Board is also aware, based on comments by Mary Kuo- USEPA Region III- that EPA would probably reject such an exemption when the final rule reached them since they would not approve exemptions to the Human Health Criteria standards. The West Virginia Manufacturers Association points out that this, and other possible negative consequences from the inappropriate application of Category A, arise directly from the Board's insistence on applying inappropriate standards based on non-existent or unlawful uses of the waters.

The Board has failed to meet the mandate of the EPA

It is the position of the West Virginia Manufacturers Association that designating the uses of any waterbody requires a positive determination of the current and historic uses of those waters and a demonstration that the waters actually meet or exceed the requirements for these designated uses. The Federal Clean Water Act REQUIRES the state to protect existent uses of all state waters. However, where the state has designated uses other than "fishable/swimable" it must do a Use Attainability Analysis. (40CFR

131.10 (j)). The Board has not done such a study before arbitrarily assigning a Public A designation for all waters.

The Board has failed to meet the mandate of the Legislature

The Environmental Quality Board was mandated by the West Virginia Legislature to determine the appropriateness of a numeric limit on the application of Category A designation such as a "5 mile rule". The members of the West Virginia Manufacturers Association do not believe that the limited actions of the Board and staff to study this issue meet either the spirit or the letter of that mandate. No scientific study was done to support the designation of the state's waters as Category A.

The West Virginia Manufacturers Association asks the Environmental Quality Board to withdraw the current Emergency Rule and to craft a rule which would allow for an accurate designation of which waters are, and which waters are **not**, Category A Drinking Waters and/or which would allow a simple and practical method to reclassify streams based on actual uses and stream quality data.

Rationale Document
46 CSR 1, Requirements Governing Water Quality Standards
January 14, 2000

The following is a summary of the comments received on the emergency rule filed with the Secretary of State's office in October 1999, and the Board's responses to those comments. Note that some additional comments were submitted discussing the proposal regarding limits to the application of the manganese human health criterion in Public A waters. That provision was not approved by the Secretary of State and is therefore not included in this filing. Responses to those comments, therefore, are limited.

SECTION 6.2.

This section outlines the application of Designated Use Category A - Water Supply, Public. It provides that the category describes waters, which, after conventional treatment, are used for human consumption and describes the types of water supply systems which may be protected.

Proposed Changes The Board's proposed amendments would remove the current language of this section and replace it with the following statement:

> "This use category shall apply to all waters of the state unless specifically removed as indicated in section 7.2.d., herein."

Additionally, the list of Public Drinking Water supplies in Appendix B is deleted.

In proposing these changes, the Board intends to clarify the interpretation which has been used by the Office of Water Resources of the DEP for some time. The Board further intends that upon completion of the delineation of Zones of Critical Concern ("ZCCs") by the Bureau for Public Health according to the Bureau's Source Water Protection Plan, that they will review those ZCCs and reconsider the definition of the Public A to correspond to the ZCCs.

Comments and Responses

1. Several commenters indicated support of the clarification of the current interpretation of the application of the use category to all waters.

The Board agrees that clarification was needed.

2. One commenter commends Board for retention of assumption that Category A applies to all waters based on awareness of and need to protect individual families across the state who are users of surface water for private domestic water systems. The commenter expressed a need for the Board to remain strong in its efforts to offer the highest degree of protection to the most precious water resources of the state.

The Board agrees with the commenter that the state's drinking waters are a very high priority. We intend to work with the Bureau for Public Health in reviewing the ZCCs and determine their appropriateness for the application of the drinking water designated use. Until then, the Board believes that the retention of the current implementation strategy is appropriate.

3. One commenter indicated support of the retention of application of Public A use category to all waters, and believes the Clean Water Act requirement to protect existing uses requires continued protection of all users of drinking water. The commenter believes that those profiting from use of states streams should be held accountable, and burden of treatment should not be shifted from them to the public. Shifting to use of Zones of Critical Concern (ZCCs) in future, however, may not be supportive of people who use surface waters and are not served by public service providers.

The Board intends to review the ZCCs upon completion of their delineation to determine whether they offer sufficient protection of the public drinking water supply and to work with the Bureau for Public Health to ensure that appropriate protection is provided through the category A use designation.

4 Some commenters supported the approach of adopting ZCCs, but suggested that the transition be a 5-mile protection zone above intakes rather than the Board's proposed application to all waters of the state.

In its review, the Board determined that retaining the existing protocol for the application of the Public A use ensures protection until the ZCCs are completed. Further, it will result in the least confusing transition as the Board reviews and amends the application of Category A to the designated ZCCs. A transition from a five mile zone to some other, possibly larger zone above an intake would cause confusion and additional work for the DEP.

5 One commenter indicated that a statement from environmental activists that "some people are drinking untreated stream waters therefore it is necessary to apply more stringent standards to all state waters" is spurious. The commenter believes that if such use is being made, this is a legal or "social welfare issue" which should be resolved by health agencies.

The Board intends to review the question regarding protection of those drinking directly from untreated streams to determine whether such use is an existing use according to the Federal Clean Water Act. If it is an existing use as defined by federal law, the Board will ensure that it is protected and implemented according to the provisions of the Clean Water Act.

6. One commenter believes that the effect of this designation will be to require that some waters be erroneously listed as "impaired" on 303(d) list, requiring TMDL and result in unnecessary remediation actions.

The Board recognized the commenters concern, however believes that the proposed change will

not affect the 303(d) listing process because it does not change the current application of the use designation and its implementation by the DEP.

7. Commenters indicated that the result of designation will be that human health manganese limits will result in treatment to remove manganese which will result in significant degradation of water quality downstream and impact aquatic life.

The Board has worked with the regulated community regarding the impact of manganese limits being included in NPDES permits. We intend to continue to work with them, as well as with the WV DEP, US EPA, WV Bureau for Public Health and other appropriate agencies to attempt to resolve the issue.

8. Some commenters indicated that the State must conduct a use attainability analysis prior to designation uses other than "fishable/swimmable". None has been conducted. Another commenter indicated that the Board's authority to assign Public A use to all streams could provide reasonable grounds for a legal challenge because of a failure to conduct a Use Attainability Analysis ("UAA") confirming existence of drinking water use.

Section j(1) of 40 CFR 131.10 outlines the situations where use attainability analyses are required to be conducted. The section pertinent to this discussion provides that a State must conduct a UAA when:

> The State designates or has designated uses that do not include the uses specified in section 101(a)(2) of the Act . . ."

The uses referred to are the so-called "fishable/swimmable" water uses. The Water Quality Standards rule includes designated uses protecting both aquatic life and recreation. These correspond to the fishable/swimmable uses.

The Board's understanding of the language outlined above is that UAAs are required only if a state does not adopt the fishable/swimmable uses required by the CWA. Because we have included aquatic life and recreation uses in our standards, no UAA would be required in order to adopt the drinking water use.

9. One commenter indicated that the Board has not addressed appropriateness of a numeric limit such as a "5 mile rule", as mandated by the legislature. Another commenter indicated that the Board did not analyze the need for distance prohibitors pursuant to the directive in HB2533.

The Board reviewed the option of adopting a five mile rule, and determined that the use of the ZCCs, or similar methods, would provide protection based on a more realistic watershed assessment rather than an arbitrary distance upstream of drinking water intakes. While other states have used this type of intake protection strategy, the Board believes that the watershed approach offered with the potential use of the ZCCs will provide a more scientific approach to

the application of the designation.

10. One commenter offered the following description of misconceptions regarding drinking water protection:

a. Only approximately 2% (possibly only 1% if consider multiple intakes on large rivers like the Ohio) of state's streams actually qualify for public drinking water use according to Bureau for Public Health statistics.

b. Raw surface waters should be safe for human consumption, and Public A designation will protect them.

c. Designating all waters of the state with Public A use will protect human health from manganese exposure.

As stated above, the Board intends to review the issue of protection of the those drinking directly from streams as an existing use under the Clean Water Act. Further, the Board intends to continue its assessment of the concerns raised about the manganese human health criteria.

11. One commenter provided the following summary of problems arising from statewide application:

a. DEP resources will be wasted to assess thousands of streams for compliance with category A numeric criteria.

b. DEP will be forced to place streams on 303(d) list of impaired waters to protect a use that does not exist.

c. Only relief mechanism to help discharger is a use removal which must go through a long and cumbersome regulatory and legislative process.

The Board believes that these concerns are minimized by the fact that statewide application is not a new application, but one that has been implemented by the DEP for a number of years. With regard to item c, while the legislative process can be lengthy, the showing that a stream is not being used for drinking water purposes is not particularly cumbersome. Upon review of local Health Department records and a survey of the stream, an applicant may proposed removal of the use if necessary. Removing the use on a case by case basis allows the majority of the State's waters to retain the drinking water designation, and it's concomitant protection, for future use, which is one of the goals of designated uses as provided in the federal CWA.

12. There is no presumption that category A should apply to all waters similar to the presumption that Category B and C do.

The Board agrees that prior to this proposed change the language in the rule did not provide such a presumption. However, the Office of Water Resources of the DEP has implemented the Public A use category as they have the Category B and C uses. The Board's intent is to clarify the rule to provide that the presumption does apply to the Public A use.

13. One commenter indicated that the Board did not promulgate the proposal as a legislative rule as required by the legislative directive.

The West Virginia Administrative Procedures Act provides a timeline for filing an emergency rule as a legislative rule with the Legislative Rule-Making Review Committee. Such filing with the LRRC must be accomplished within 90 days of the filing of the emergency rule. The Board intends to complete the legislative rule filing within that 90 day timeframe..

14. Several commenters urged the Board to adopt a 5-mile zone of protection instead of applying Category A to all streams.

See comments at # 9, above.

15. One-half mile rule in section 7.2.a.2 should be deleted.

The Board intends to review the need for the one-half mile rule as it reviews the ZCCs.

16. The following comments were submitted by the Bureau for Public Health regarding the use of ZCCs in the implementation of the public A use category. How will situations be handled where contaminants are allowed to be discharged in exceedance of water quality criteria above ZCCs (to ensure criteria are met at edge of ZCC?) How would the placement of new treatment facilities be accommodated into the scheme? Would use apply only to discharges located within the defined ZCC? How would DEP issue permits within and outside of the zones? Would BPH be involved in permitting?

The Board acknowledges the concerns expressed by the agency. We intend to review these issues and look forward to working with the Bureau as we consider amending the application of Category A to the ZCCs.

17. WV BPH commented on several concerns regarding manganese treatment. Presence of manganese can result in complications with chlorine treatment, causing that treatment to be less effective. Further, increased chlorine used to oxidize manganese may promote halogenation of naturally occurring organic compounds resulting in byproducts such as trihalomethanes and haloacetic acids, which are potential or known carcinogens. A federal Disinfect and/Disinfection Byproducts rule has been promulgated by EPA to address this concern,. Also, consideration should be given the issue of allowing a NPDES permit holder to discharge high levels of manganese and cause public water supply system consumers to pay for additional treatment required to eliminate it.

See #7 above. Note further that because the Office of the Secretary of State did not approve the manganese provision, the Board has not included that exemption in this proposed rule.

18. One commenter also urged Board to maintain the human health criteria for manganese based

on EPA Goldbook recommendations and due to use of manganese as an indicator of other metals in the effluent limit standards set for coal mining in the 1977 SMCRA. Commenter further indicates that treatment options are available for addressing problems with precipitating manganese such as reverse osmosis and use of two stage treatment systems.

See # 7 and #17, above.