

**WEST VIRGINIA
SECRETARY OF STATE**

KEN HECHLER

ADMINISTRATIVE LAW DIVISION

Form #3

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

Department of Commerce, Labor & Environmental
AGENCY: Resources - State Water Resources Board TITLE NUMBER: 46

CITE AUTHORITY WV Code § 20-5M-4 and 20-5-5

AMENDMENT TO AN EXISTING RULE: YES NO

IF YES, SERIES NUMBER OF RULE BEING AMENDED: _____

TITLE OF RULE BEING AMENDED: _____

IF NO, SERIES NUMBER OF NEW RULE BEING PROPOSED: 12

TITLE OF RULE BEING PROPOSED: Requirements Governing Groundwater
Standards

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

Frances E. Hechler

9.90

DATE: September 18, 1992

TO: Legislative Rule-Making Review Committee

FROM: Frances E. Hunter, Executive Secretary - State Water Resources Board

LEGISLATIVE RULE TITLE: Requirements Governing Groundwater Standards

1. Authorizing statute(s) citation WV Code § 20-5M-4 and 20-5-5

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

June 30, 1992

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

Published in Charleston Newspapers July 3, 1992; on July 22,

1992 filed another notice that was published in the State

Register July 24, 1992.

c. Date of hearing(s): August 3, 1992

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)

September 18, 1992

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

Frances E. Hunter - 558-4002

Libby M. Chatfield - 558-4002

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

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

N/A

b. Date of hearing: n?a

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

N/A

d. Attach findings and determinations and reasons:

Attached N/A

PROPOSED

Title 46 - Series 12

WEST VIRGINIA LEGISLATIVE RULES

State Water Resources Board

1992

REQUIREMENTS GOVERNING GROUNDWATER STANDARDS

Department of Commerce, Labor and Environmental Resources
STATE WATER RESOURCES BOARD
1615 Washington Street, East
Charleston, West Virginia 25311-2126
(304) 558-4002

NOTE: This is an entirely new series, nothing has been underscored.

PROPOSED
TITLE 46
LEGISLATIVE RULES
WATER RESOURCES BOARD
REQUIREMENTS GOVERNING GROUNDWATER STANDARDS
Series 12
1992

46-12-1. General

1.1. Scope and Purpose - The purpose of this Legislative rule is to establish minimum standards of purity and quality for groundwater located within this State.

1.2. Authority - W. Va. Code § 20-5M-4 and 20-5-5.

1.3. Filing Date -

1.4. Effective Date -

46-12-2. Definitions - As used in this rule:

2.1. "Act" means the Groundwater Protection Act.

2.2. "Board" means the State Water Resources Board.

2.3. "Constituent" means any chemical or biological substance found in groundwater due to either natural or man-made conditions.

2.4. "Groundwater" means the water occurring in the zone of saturation beneath the seasonal high water table, or any perched water zones.

2.5. "Person" means any industrial user, public or private corporation, institution, association, firm or company organized or existing under the laws of this or any other state or country; State of West Virginia; governmental agency, including federal facilities; political subdivision; county commission; municipal corporation; industry; sanitary district; public service district; soil conservation district; watershed improvement district; partnership; trust; estate; person or individual; group of persons or individuals acting individually or as a group; or any legal entity whatever.

46-12-3. Groundwater Standards

3.1. Except as provided in Sections 3.2 and 3.3, the standards of purity and quality for groundwater in the state shall be the constituent concentrations found in Appendix A.

3.2. Where the concentration of a constituent exceeds an otherwise applicable groundwater quality standard as a result of natural conditions, the naturally occurring level of that constituent shall become the groundwater quality standard for the affected area.

3.2.a. Where the concentration of a certain constituent exceeds an otherwise applicable groundwater quality standard due to human-induced contamination, no further contamination by that constituent shall be allowed, and every reasonable effort shall be made to identify, remove or mitigate the source of such contamination, and to strive where practical to reduce the level of contamination over time to support drinking water use.

3.3. Constituents in groundwater shall not cause a violation of the standards found at 46 CSR Series 1 in any surface water.

3.4. Groundwater quality standards do not apply:

3.4.a. Within areas of geologic formations which are site specific to site production or storage zones of crude oil or natural gas and which are utilized for the exploration, development or production of crude oil or natural gas permitted pursuant to W. Va. Code 22B; and

3.4.b. Within areas of geologic formations which are site specific to the injection zones of Class II or III or wells permitted pursuant to the statutes and regulations governing the underground injection control program.

3.4.c. To any constituent or any class of activities for which a variance from groundwater quality standards has been granted by the Director pursuant to W. Va. Code § 20-5M-5(1).

3.4.d. To coal extraction and earth disturbing activities directly involved in coal extraction that are subject to W. Va. Code § Chapter 22A, Article 3 or Chapter 20, Article 5A.

3.5. Measurement of inorganic compounds. Compliance with inorganic groundwater protection standards shall be determined in terms of dissolved concentration rather than total concentration.

APPENDIX A

<u>Constituent</u>	<u>Not To Exceed (in mg/l, except where noted)</u>
Alachlor	0.002
Antimony	0.006
Asbestos (fibers/l less than 10 ug/l)	7MFL*
Atrazine	0.003
Barium	2.0
Benzene	0.005
Benzo(a)pyrene (PAH)	0.0002
Beryllium	0.004
Cadmium	0.005
Carbofuran	0.04
Carbon Tetrachloride	0.005
Chlordane	0.002
Chromium (total)	0.1
Cyanide	0.2
2,4-D	0.07
Dalapon	0.2
Di[2-ethylhexyl]adipate	0.4
Di[2-ethylhexyl]phthalate	0.006
Dibromochloropropane (DBCP)	0.0002
Dichlorobenzene p-	0.075
Dichlorobenzene o-	0.6
Dichlorobenzene m-	0.6
Dichloroethane (1,2)	0.005
Dichloroethylene (1,1-)	0.007
Dichloroethylene (cis-1,2-)	0.07

Dichloroethylene (trans-1,2-)	0.1
Dichloromethane	0.005
Dichloropropane (1,2-)	0.005
Dinoseb	0.007
Diquat	0.02
Endothall	0.1
Endrin	0.002
Ethylbenzene	0.7
Ethylene dibromide (EDB)	0.00005
Fluoride	4.0
Glyphosate	0.7
Heptachlor	0.0004
Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001
Hexachlorocyclopentadiene	0.05
Lead	0.015
Lindane	0.0002
Mercury (inorganic)	0.002
Methoxychlor	0.04
Monochlorobenzene	0.1
Nickel	0.1
Nitrate (as N)	10.0
Nitrite (as N)	1.0
Total Nitrate and Nitrite (both as N)	10.0
Oxamyl (Vydate)	0.2
Pentachlorophenol	0.001

Picloram	0.5
Polychlorinated biphenyls	0.0005
Selenium	0.05
Simazine	0.004
Styrene	0.1
2,3,7,8-TCDD (Dioxin)	0.000000005
Tetrachlorethylene	0.005
Thallium	0.002
Toluene	1.0
Toxaphene	0.003
2,4,5-TP (Silvex)	0.05
Trichlorobenzene (1,2,4-)	0.07
Trichloroethane (1,1,1-)	0.2
Trichloroethane (1,1,2-)	0.005
Trichloroethylene	0.005
Vinyl Chloride	0.002
Xylenes (total)	10.0
Radionuclides	
Beta particle and photon activity	4 mrem**
Gross alpha particle activity	15 pCi/L***

*MFL = million fibers per liter

** mrem = millirem (rem = roentgen-equivalent-man)

*** pCi = picocurie

THE STATE WATER RESOURCES BOARD

OF

WEST VIRGINIA

RATIONALE DOCUMENT

for

Legislative Rules

Title 46 - Series 12

Requirements Governing Groundwater Standards

September 18, 1992

INTRODUCTION AND STATEMENT OF PURPOSE

This rationale document is compiled and submitted as the basis for the Board's decisions in preparing its Legislative Rule requirements Governing Groundwater Quality Standards. The Board is authorized to promulgate this rule by the West Virginia Groundwater Protection Act ("Act") W. Va. Code § 20-5M-4(a). This rule establishes the standards of purity and quality for groundwater which are to serve as the maximum contaminant levels permitted in the State's groundwater.

This rule was drafted with input from various state agencies including the Division of Natural Resources (now Division of Environmental Protection), Department of Agriculture and Division of Health as required by § 20-5M-4(e) of the Act, as well as interested members of the public.

In accordance with West Virginia Code § 29A-3 the Board filed a notice of proposed rulemaking with the Office of the Secretary of State on June 30, 1992 and published similar notice in the Charleston Newspapers on June 12 and July 3, 1992. The public notice stated that the proposed rule was available by contacting the Board Office and written comments would be received by the Board until August 7, 1992. A public hearing was held to provide an opportunity for oral comments on August 3, 1992 at 7:00 P.M. The proceedings at that hearing were recorded and transcribed by a court

reporter. Both written and oral comments were compiled and studied by the Board in its deliberations regarding this rule.

This document and the final revised rule are the result of the process described above. The Board approved the proposed rule on September 16, 1992.

RATIONALE

46-12-1. General.

Proposed Rule

Section 1.1. Explains the scope and purpose of the rules.

Section 1.2. States statutory authority for the rules.

Section 1.3, 1.4. State filing date and effective date of rules.

Comments and Responses

None received.

Board Action

Section adopted as proposed.

46-12-2. Definitions.

Proposed Rule

This section provides definitions for terms used in this rule.

Comments and Responses

One comment was received concerning section 3.3 of the proposed rule suggesting that the definition of "constituent" in this section be changed to reflect human influences only, because naturally occurring substances cannot be controlled.

The definition of "constituent" as proposed in this rule is identical to the definition of the term in the Groundwater Protection Act (WV Code 20-5M-3(c)). Because of the frequent use of

the term in the Act, the Board finds that the suggested change would create an unnecessary inconsistency between the Act and these rules.

Board Action

Section adopted as proposed.

46-12-3. Groundwater Standards.

Section 3.1. This section proposes specific constituent concentrations (in attached Appendix A) as the standards of purity and quality for the groundwater in the state. The proposed constituent concentrations are the Maximum Contaminant Levels ("MCL's"), adopted by the U.S. Environmental Protection Agency ("EPA") in their Drinking Water Regulations, which became effective on July 30, 1992, and those published by EPA in the Phase V Rule in the Federal Register on July 17, 1992 (57 FR 31776).

Comments and Responses

Dioxin - 2,3,7,8 TCDD (Dioxin)

Numerous comments were received regarding the proposed concentration level of the constituent 2,3,7,8-TCDD (Dioxin). The concentration proposed by the Board is 0.00000003 mg/L (3×10^{-8} mg/L). Dioxin is classified by EPA as a probable human carcinogen.

One commentor expressed concern that the concentration level proposed for dioxin is not fully protective of human health. The concentration proposed is based on the final Maximum Contaminant Level adopted by EPA in its Phase V Rule (57 FR 31776). The comment indicated that according to EPA, the MCL concentration of 3×10^{-8}

equates to an estimated lifetime risk of 1.3×10^{-4} , or the possibility of 1.3 cancer incidents per 10,000 people, which the commentor noted, contravenes EPA's own cancer risk limit of 1.0×10^{-4} or 1 cancer per 10,000 people. The commentor proposed setting the groundwater quality standard for dioxin at the concentration at which its presence can be detected in water. This would result in a concentration level closer to EPA's Drinking Water Maximum Contaminant Level Goal ("MCLG") for dioxin which is zero. MCLG is defined as "the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety" (40 CFR 141.2).

The commentor proposed using EPA's Method Detection Limit ("MDL") as the groundwater quality standard for dioxin. The MDL is defined as the minimum concentration of a substance that can be measured and reported with 99 percent confidence that the analytic concentration is greater than zero (56 FR 230, p. 60952, see also 40 CFR Part 136, Appendix 8). EPA's MDL for dioxin is 5.0×10^{-9} mg/L using Method 1613 (57 FR 60952).

Numerous comments were received supporting the above comment and requesting the Board to change its proposed dioxin standard to the detection limit of 5.0×10^{-9} mg/L.

In deliberating on these comments the Board reviewed the current scientific literature regarding the effects of dioxin on human health. Although information regarding the detrimental

effects of dioxin on human health and the environment is accumulating at a rapid pace; the scientific community has not yet determined whether there is a certain "safe" level of dioxin which can be ingested by humans without health risks.

EPA's Office of Research and Development has undertaken a reassessment of dioxin, which includes a review of the carcinogenicity of the chemical, as well as its effects on human reproductive and immune systems. As part of this reassessment, EPA will prepare a risk characterization of dioxin and dioxin-related chemicals. Clearly, the reassessment will provide important information which will serve as a basis for evaluating the State's water quality standards for dioxin.

In proposing the final MCL for dioxin, EPA, while acknowledging the ongoing reassessment, chose to use current risk assessment information (56 FR 60953).

The Board feels that in light of the current lack of critical health information concerning dioxin, that setting the groundwater quality standard at 5×10^{-9} mg/L will provide an appropriate margin of safety for protection of the State's groundwater and its users.

Board Action

The Board withdraws the proposed groundwater quality standard of 3×10^{-8} mg/L for 2,3,7,8-TCDD (dioxin) and replaces it with a standard of 5×10^{-9} mg/L.

Comments and Responses on Other Groundwater Standards

One commentor indicated that constituents for which final MCL's have been adopted by EPA were not included in Appendix A: arsenic, copper, monochlorobenzene, pentachlorophenol, polychlorinated biphenyls, styrene, barium, fluoride and 2 radionuclides. The comment also indicated that aldicarb sulfone, aldicarb sulfoxide, atrazine which are listed as "reserved" in Appendix A, have final values in the current EPA Drinking Water Standards.

The Board disagrees with the comment regarding aldicarb, aldicarb sulfone and aldicarb sulfoxide; although final MCL values were promulgated by EPA, they were subsequently stayed by the agency in 57 FR 102 p. 22178. In addition, final MCL's have not been promulgated by EPA for copper and arsenic.

Board Action

The Board agrees with the comment in part and amends Appendix A of the proposed rule to include EPA's final MCL's for the following constituents which were inadvertently omitted from the proposed rule: atrazine, barium, hexachlorocyclopentadiene, monochlorobenzene, pentachlorophenol, polychlorinated biphenyls, and the following radionuclides; beta particles and photon activity and gross alpha particle activity.

Section 3.2.

This section repeats language from WV Code 20-5M-4(b) regarding situations where the groundwater quality standards are exceeded due

to naturally occurring conditions, and states that in such cases the naturally occurring concentrations shall become the standard.

Comments and Responses

None received.

Board Action

Section adopted as proposed.

Section 3.2(a).

This section addresses situations where human-induced contamination results in exceedance of a standard. The section states that in such cases the contaminated concentration shall become the standard where the appropriate regulatory agency finds that requirements stated in the last sentence of WV Code 20-5M-4(b) have been met.

Comments Received

One commentor stated that the language in this section distorts the intent of WV Code 20-5M-4(b) by allowing separate standards to be set in instances where human-induced contamination causes an exceedance of the standards. Further, the commentor indicated that Section 20-5M-4(b) provides specific requirements for handling such situations stating that no further contamination shall be allowed, the source shall be identified, removed or mitigated and reduction of the level of contamination to support drinking water use will be strived for. Another commentor indicated that the language of the last sentence of WV Code Section 20-5M-4(b) be written out in the regulation rather than referred to by code section.

The Board agrees with the first commentor that the proposed language alters the intent of Section 20-5M-4(b) of the Act. The Board believes that the Act provides sufficient direction via variance procedures and the language of Section 20-5M-4(b) for situations of human induced contamination.

Board Action

The Board withdraws the proposed language of Section 3.2.a. and replaces it with language conforming with the intent of the last sentence of WV Code 20-5M-4(b) which states:

Where the concentration of a certain constituent exceeds such standard due to human-induced contamination, no further contamination by that constituent shall be allowed, and every reasonable effort shall be made to identify, remove or mitigate the source of such contamination, and to strive where practical to reduce the level of contamination over time to support drinking water use.

Section 3.3.

This section states that constituents in groundwater shall not cause a violation of the surface water standards promulgated by the Board. This section was included to address the mandate of WV Code 20-5M-4(d) which requires the Board in its promulgation of groundwater quality standards to recognize the hydrologic connection between groundwater and surface water.

Comments and Responses

One comment received acknowledged the statutory mandate for including such language but suggested that a clearer definition is necessary as it will be the basis of future regulatory decisions.

Rationale (continued)

While the Board acknowledges that clearer definition might be helpful, it believes that this section as written is sufficient. Once it is implemented and specific situations regarding this relationship can be articulated the Board will consider amending the rule to address them.

Board Action

The section is adopted as proposed.

Section 3.4.

This section outlines the areas and activities to which the groundwater standards do not apply.

Comments

No comments were received on subsections a, b and d of this section.

One commentor objected to the language of Section 3.4.c., indicating that the language "to any person" was not specific enough and that the section needed to clarify that standards would apply except for the specific activities and constituents for which variance have been granted.

Board Action

The Board agrees with the commentor that clarification of this section would be helpful. The Board withdraws the proposed language and replaces it with the following:

"To those classes of activities and constituents for which a variance from groundwater standards has specifically been granted by the Director

purusant to WV Code 20-5M-5(1)."

Section 3.5.

This section states that compliance with groundwater standards for inorganic substances be measured based on dissolved concentration of the constituent rather than total concentration.

Comments and Recommendations

Several comments were received objecting to this provision. Comments noted that measurement of dissolved concentration requires filtering the sample, which may result in the removal of undetermined amounts of the inorganic substances and cause the concentration of those substances in groundwater to be underestimated. Such underreporting, the commentor noted would result in human health risks. Another comment indicated that including this provision goes beyond the scope of W. Va. Code 20-5M-2(3). Other comments noted that requiring compliance based on dissolved concentration is inconsistant with the State's Solid Waste Management rules, NPDES rules, and the federal Resources, Conservation and Recovery Act ("RCRA").

One comment was received in support of this requirement. The commentor indicated that unless the sample is filtered metals and other inorganics which occur in the suspended material in the monitoring well, but not in the actual groundwater, are included in the measurement, resulting in an overestimate of those substances in the groundwater.

The Board reviewed these comments carefully in its deliberations. In response to the comment regarding the scope of W. Va. Code § 20-5M-2(3), the Board disagrees that it has been exceeded by including this requirement. The commentor provided no data to support the contention that requiring filtration of samples will result in the need to provide treated drinking water supplies to rural households.

The Board realizes that neither method provides an absolutely accurate measure of the inorganic constituents present in groundwater. However, the Board believes that without requiring sample filtration it will be extremely difficult to obtain reliable and consistent groundwater quality data for metals because the test results will be dependent on the amount of suspended solids in the sample, which may vary widely, depending upon the sampling technique used.

Regarding the inconsistencies with State and Federal regulations, the Board notes that the EPA is considering lifting the RCRA ban on field filtering water samples. EPA has stated that it will publish a notice of proposed rulemaking by October 31, 1992 on whether to lift the field filtering ban. Further, the Board is not convinced that requiring a method different than State Solid Waste Management regulations and NPDES rules will result in irreconcilable conflict.

Board Action

The Board adopts the section as proposed.

BEFORE THE STATE WATER RESOURCES BOARD

AT CHARLESTON

Transcript of public hearing had on the
3rd day of August, 1992, in Conference Room C, Building 7,
State Capitol Complex, 1900 Kanawha Boulevard, East,
Charleston, West Virginia, commencing at 7:00 p.m..

BEFORE: SARAH LEE NEAL, Member

STAFF: ELIZABETH M. CHATFIELD, Technical Advisor;
FRANCES E. HUNTER, Executive Secretary.

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COURT REPORTER
ROUTE 2, BOX 9
ALUM CREEK, WEST VIRGINIA 25003-9601
PHONES: (304) 756-3302 OR 756-3611

DATE: 8/10/92
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
ALUM CREEK, WEST VIRGINIA 25003
PHONE (304) 756-3302 756-3611

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MS. CHATFIELD: Welcome. Thank you for coming through the rain to get here today. My name is Libby Chatfield. I'm the technical advisor for the state Water Resources Board. And present tonight for this meeting is Board member Sarah Lee Neal.

We are here this evening to provide an opportunity for public comment on three sets of legislative rules that have been proposed by the state Water Resources Board. These rules include Title 46 Series 12, Requirements Governing Groundwater Standards, Title 46 Series 9, Underground Injection Control, and Title 46 Series 2, Rules Governing the National Pollutant Discharge Elimination System, or NPDES Program.

Public notice of this hearing was given on June 12th in a Class I legal advertisement in the Charleston newspapers, then rescheduled and noticed again on July 3, 1992. The Board has also filed the rules and that notice with the Office of the Secretary of State of West Virginia.

There will be an opportunity to provide written comments on these rules through August 7th. That's this Friday. So if you don't chose to make a statement this evening but want to provide written comment, you can submit those to our office in Charleston until, through August 7th.

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Because of the limited number of Board members that we have here with us tonight, we're going to limit this session to public comment, and we have several speakers that have indicated a desire to get something on the record here orally. If you have any questions or further comments about the rules, you can contact me or Fran Hunter, who is with us here tonight, who is the executive secretary, or contact us at the Water Resources Board office until the end of the public comment period.

MS. NEAL: Give them the address of the office, because they don't know what it is.

MS. CHATFIELD: The new address for our office is 1615 Washington Street, East. We're down in the old DEP building. We've moved off of the hill.

I'm going to take the speakers in order that you signed up. I'll call your name. And if anybody has not signed up on the sheet, we'll, we'll take you after these speakers.

Thanks for coming.

The first speaker we have is Robert L. Fisher.

MS. NEAL: Foster.

MS. CHATFIELD: Well, I can't read.

MR. FOSTER: Which one are we doing it on? All of them

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or?

MS. CHATFIELD: We can-- Yeah. I guess-- Let's start with groundwater rules.

MR. FOSTER: Okay.

MS. CHATFIELD: Do you have comments on all of them?

MR. FOSTER: (Indicating.)

MS. CHATFIELD: Let's start with groundwater rules.

MR. FOSTER: Okay. My name is Bob Foster, and I'm here today on behalf of the West Virginia Manufacturers' Association regarding the Board's proposed groundwater quality standards. The association believes that the Board has done a good job of complying with the mandate of the Groundwater Protection Act to develop groundwater quality standards which are as stringent as maximum contaminant levels established under the Safe Drinking Water Act and are protective of surface water quality standards.

The association would suggest, however, some minor changes to the Board's regulation to better reflect the language and the intent of the Groundwater Protection Act. The first change that the Association would suggest is a change in the language in Section 3.2.a to better reflect the statutory requirements of Subsection 4.b of the act.

The language in Subsection 4.b was discussed

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at some length by the group that negotiated the act, and in fairness to their efforts, it should be adopted as completely as possible into the proposed regulation. It represents a recognition that reasonable efforts must be made to remediate existing areas of groundwater contamination while at the same time providing that the appropriate remediation may be best accomplished by natural continuation over time.

The association also suggests that the standards contain a provision that would effectively suspend groundwater quality standards where groundwater contamination is discovered in order to provide a reasonable amount of time in which the person who is responsible for the contamination can demonstrate to the appropriate groundwater regulatory agency that it's making reasonable efforts to remediate the groundwater. Otherwise, when these groundwater standards go into effect, there will be many sites throughout the state which are in violation of the groundwater quality standards until such time as they can submit evidence that they are engaging in reasonable remediation efforts and the appropriate agency can take action, can act on that situation.

The association would also like to comment

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about the groundwater quality standards for one particular constituent, dioxin. The association believes, or continues to believe, that the risk of dioxin has been overstated and that this position will be borne out after the EPA's re-evaluation of dioxin.

However, the association recognizes that the MCL has been set for dioxin and that according to the act that MCL must become the groundwater standard. Accordingly, the association would not object to that standard at this time.

With regard to the statutory requirement that MCL's be adopted as groundwater quality standards, the association would observe that the number of MCL's has grown tremendously in the eighteen months since the Groundwater Protection Act has been negotiated and that there may be hundreds of MCL's promulgated by EPA during the next few years. These MCL's could have a tremendous impact on, for example, use of septic tanks in the state and points out that, the need for a varianced regulation for classes of activity which must be exempt to some degree from these standards.

The association may at some point in the future seek promulgation of a varianced regulation by the

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director of the Division of Environmental Protection to address this matter.

I want to thank you for the opportunity to present these oral comments, and we will be presenting you written comments later this evening. Thank you.

MS. CHATFIELD: Thank you.

Jackie, did you have comments on groundwater?

MS. HALLINAN: Yes.

My name is Jackie Hallinan, and I'm appearing representing the Affiliated Construction Trade Foundation, and I'm here to comment on the dioxin standard in the proposed groundwater regulations.

According to our research, no state has yet adopted a specific dioxin drinking water standard. Instead of this presently proposed standard for groundwater, ACT requests the Board to adopt a standard of no detectible dioxin in groundwater.

I have been told that the rationale for this standard is based on the federal Safe Drinking Water Act standard for dioxin. The underlying goal of the federal Safe Drinking Water Act is to protect the public from adverse health effects due to drinking water contaminants. The method that EPA has chosen to accomplish the mandate of

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the Safe Drinking Water Act is to establish Maximum Contaminant Level Goals (MCLG's) and Maximum Contaminant Levels (MCL's).

A maximum contaminant level is defined by EPA at 40 CFR 141.2 as, quote, the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety, unquote. That is, EPA sets the MCLG at a level where there is reasonable certainty that no adverse health impact will occur. Conversely, at levels greater than the MCLG, human impacts can occur. Because it is a carcinogen, EPA has established the MCLG for dioxin should be zero. Therefore, zero is the level that EPA has determined that no adverse effects on the health of persons will occur. Therefore, at any dioxin level greater than zero, a human health effect can occur.

An MCL, a maximum contaminant level, is defined by EPA as, quote, the maximum permissible level of a contaminant in water which is delivered to the user of any public water system, unquote.

As opposed to MCLG's, MCL's do not entirely protect persons from known or anticipated adverse effects.

JANET T. SURFACE

COURT REPORTER

ROUTE 2, BOX 9

ALUM CREEK, WEST VIRGINIA 25003-9601

PHONES: (304) 756-3302 OR 756-3611

Rather, they establish, quote, acceptable risks, unquote, to human health. Among the factors which EPA considers in setting MCL's are: 1) the technological capability to treat or remove the particular contaminant from drinking water, 2) the cost of the technology, 3) the ability of a laboratory to measure the contaminant reliably, and, 4) the health risks associated with various contaminant levels.

In the case of dioxin, and according to the final rule, the overriding factor that EPA considered in setting the MCL was their assessment of the analytical capability to reliably measure its concentration in drinking water. The final MCL for dioxin has been set at 3 times 10 to the eighth power, which is equivalent to 30 parts per quadrillion. According to EPA, this final MCL of 30 ppq equates to a, an estimated lifetime cancer risk of 1.3 times 10 to the fourth, that is, 1.3 cancers per ten thousand persons. These can be expected to be occurred, to occur with the dioxin MCL set at 30 ppq.

In general, EPA considers a target risk of 10 to the fourth power to 10 to the sixth power to be protective of public health. Therefore, by setting the dioxin MCL at 30 ppq, which corresponds to a cancer risk of greater than 10 to the minus fourth power, EPA is

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contradicting its own policy. This is particularly unfortunate because the MCL was apparently set strictly at a level where EPA determined that dioxin could reliably be quantified, not at a level where the public health could be insured. Because the MCLG, that is, the level at which no adverse effect will occur, is zero, it is more important to consider whether dioxin is present in drinking water than it is to consider how much is present. And because adverse health effects can occur at dioxin levels greater than zero, it is appropriate to set the MCL at the limit of dioxin detection in drinking water using approved analytical methods, rather than at the level at which the dioxin concentration can be quantified.

West Virginia is now establishing groundwater standards and has the opportunity to protect its citizens from dioxin contamination. The most protective approach to setting the standard for dioxin is to set it as close as possible to the MCL level goal of zero. Because detecting dioxin in drinking water would indicate that an adverse health risk exists for persons consuming the water, it is recommended that the standard be set at, quote, non-detectible.

Currently, non-detectible can be defined as a

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concentration less than 5 ppq because EPA has demonstrated that the Method Detection Limit for dioxin is equal to 5 ppq using Method 1613. In the future, as analytic methods are enhanced and instruments improved, MCL's which approach the MCLG of zero can be anticipated.

In practice, setting a standard of, quote, non-detectible, unquote, will allow water systems and distributors that do detect dioxin in their drinking water to take immediate actions to provide a safe alternate source of drinking water to their consumers. Relative to many other states, West Virginia is blessed with water resources. There is no good reason for West Virginia's citizens to be exposed to the cancer risk posed by consuming dioxin contaminated water. The standard for dioxin in drinking water should, therefore, be set at non-detectible.

MS. CHATFIELD: Thank you.

Those are the only two names on our list, but we had a couple other folks come in, delayed by the rain storm. We're taking comments on groundwater standards first. And then we're going to go through the other two series. Anybody have any comments?

MS. WOLVERTON: My name is Missy Wolverton. I'm with the West Virginia Citizen Action Group, and I'm sorry that I

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came in late. It's pouring rain out there, and I was in another hearing. I apologize for not being on time.

I would just like to supplement what Jackie said or basically say the same thing. I've been looking at the dioxin issue for the last two or three years. And we know right now the EPA and scientists around the world are, are relooking at the issue of the toxicity of dioxin. And as far as we know now, there's no known threshold below which dioxin is considered safe.

So it would be, it would be ludicrous to say thirty parts per quadrillion as opposed to the detect limit of five parts per quadrillion. Let's err on the side of safety for the citizens. And as the tests get better and we can find zero detect, we need to go with that.

Thank you very much.

MS. CHATFIELD: Thanks. And I'll reiterate, we are providing opportunity to provide written comments through August 7th, through Friday, if you want to do that.

Any other comments on groundwater standards?

(No response.)

MS. CHATFIELD: Any comments on underground injection control?

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MR. FOSTER: (Indicating.)

MS. CHATFIELD: Mr. Foster.

MR. FOSTER: Again, my name is Bob Foster. I'm representing the West Virginia Manufacturers' Association.

The primary comment that I have regarding underground injection control programs for West Virginia is that I would like to encourage the Board to adopt existing federal underground injection control programs by reference.

The majority of existing UIC wells are, are oil and gas related Class II wells and are currently regulated by federal rules incorporating, currently regulated by federal rules incorporated by reference. These rules are incorporated by the former Department of Energy. And solution mining wells, which are Class III wells, are also regulated under the same program.

Incorporating the federal standard by reference will avoid reinventing the wheel and will, and will result in less confusion and more efficient administration than if the entire new series is enacted. The Water Resources Board thinks that the-- Or if the Water Resources Board thinks that the stricter standards are required in certain instances, it's quite easy to modify the document incorporated by reference to reflect more stringent

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requirements. Also incorporating by reference assures the state that the minimum federal standards are met.

Again, thank you for the opportunity for presenting these comments. We will submit some written ones to you at the end of the evening.

MS. CHATFIELD: Great. Thank you.

Any other comments on the UIC proposed rules?

(No response.)

MS. CHATFIELD: Next is the NPDES permit rules. And we've gone through our list of folks that have signed up. Do we have any comments on those rules?

(No response.)

MS. CHATFIELD: Well, since we've had-- Yeah. Since we've had a few people come in since we started, we'll start all over again. We're here just to allow public comment for three sets of rules. If any, if anyone has any comments on either the groundwater standards, the UIC rules or the NPDES rules, you have that opportunity right now. Stand up and speak.

(No response.)

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MS. CHATFIELD: And if not, we, we're finished for this evening-- Did you have comments on NPDES?

MR. FOSTER: Yes.

MS. CHATFIELD: Oh, I'm sorry.

MR. FOSTER: You ready?

MS. CHATFIELD: We're ready for you.

MR. FOSTER: Isn't anybody else talking?

MS. CHATFIELD: No.

MR. FOSTER: Okay. Guess who.

MS. CHATFIELD: I'm sorry.

MR. FOSTER: Again, I'm presenting comments regarding the Board's proposed changes in the National Pollutant Discharge Elimination System regulations relating to POTW's.

As a preliminary matter, the West Virginia Manufacturers' Association believes that the Board should take a new look at the changes it has made to Series 2 and decide whether it wishes to incorporate by reference those federal regulations which apply to POTW's, and if so, should do so as clearly as possible. If that is what the Board intends to do, it should revise current regulations to eliminate references to the federal POTW regulations. Both Section 14.1 and Section 15 of Series 2 appear to incorporate by reference the POTW regulation found in 40 CFR

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Article 403, but this is something that's called into question by the fact that Section 14.1.a identifies specific types of prohibited discharges which are also found in 40 CFR Section 403 25.b.

If the Board intended to incorporate by reference the provisions of Part 403, there's no need to restate specific prohibition from the federal rule in the state rule. If, on the other hand, the Board does wish to incorporate by reference the provision of Part 403, the Board should revise Section 14 so that it identifies the type of facilities to which Part 403 regulations apply and by adding definitions necessary for the state program. For example, the Board would need to identify terms such as "approval authority" and "control authority."

The Manufacturers' Association encourages the Board to withdraw this proposed rule and resubmit a rule that more clearly identifies and indicates its intention in regards to the POTW regulation.

And, again, we will submit written comments to you.

MS. CHATFIELD: All right. Great. Thanks again.

Any further comments on any of the rules proposed?

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(No response.)

MS. NEAL: We encourage them to speak.

MS. CHATFIELD: Yeah. This is your opportunity. Again, we will provide an opportunity for submission of written comments until August 7th. That's Friday. Please feel free to bring them to the office.

And if there are no further comments, we'll close for this evening and go off the record. Thank you for coming through the rain.

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STATE OF WEST VIRGINIA

COUNTY OF KANAWHA

I, the undersigned, Deborah A. Dickens,
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 public
hearing on the 3rd day of August, 1992.

Given under my hand this 10th day of August,
1992.

Deborah A. Dickens

Reporter

JANET T. SURFACE
COURT REPORTER
ROUTE 2, BOX 9
ALUM CREEK, WEST VIRGINIA 25003-9601
PHONES: (304) 756-3302 OR 756-3611

Please sign this sheet if
you will be giving an oral
comment. 8-3-92
WRB Rules Hearing

<u>Name</u>	<u>Representing/Organization</u>
Robert L. Foster	WV Manufacturers Assoc
Jackie Hallinan	Affiliated Construction Trades
Bob [unclear]	Steph [unclear]

16 attending -

WRB Public Hearing
8-3-93
Attendee List

Name

Organization

Michael J. Stratton	WV DEP - Water Resources
Robert G. Foster	Chas Ryan Assoc.
Richard Hood	Allegheny Power Service
Jerome Cibrik	Union Carbide
Patrick Campbell	WV DEP
Brad McElhinney	Gannette
Ted Street	WV DEP
Dave Yauson	Robinson & McElwee
Barb Smith	WV Dept. Agric.
Jimmy Smith	Technical Tests, Labs
DAVE MONTALI	WV DEP - WATER RES.
Bill Chambers	Dames & Moore
Mike Cleary	
Beck Thompson	W.V. Home Bed & Bath
Ben Greene	WV MRA
Bill Raney	WV Coal Assoc.

**COMMENTS OF MONONGAHELA POWER COMPANY AND
THE POTOMAC EDISON COMPANY ON
REQUIREMENTS GOVERNING GROUNDWATER STANDARDS**

Monongahela Power Company and The Potomac Edison Company are electric utilities generating, transmitting and providing electric service to customers in northern and central West Virginia among other areas. Our comments are very limited because the proposed rule is generally well written and acceptable.

Section 3.2.a. It is requested that the following sentence be added at the end of this provision: "No person will be required to remediate if contamination is or was caused or controlled by another person." The rationale for this modification is that a person should not be required to remediate a problem which he/she did not create or have responsibility for causing.

Section 3.3. It is requested that the phrase "unless naturally occurring" be inserted after the word "groundwater" and before the word "shall" in Section 3.3. Such a modification addresses the fact that naturally occurring concentrations in groundwater may cause violations of the surface water quality standards.

Section 3.5. The Companies support the provision of Section 3.5 requiring that measurement of groundwater quality should be in dissolved concentration form rather than total concentration. The dissolved method is a more accurate measurement of actual groundwater contamination because only the dissolved fraction of constituents is mobile in the aquifer. This is a critical issue for permittees because almost all groundwater monitoring wells in the state contain at least some amount of suspended solids. These solids, when subjected to a total metal analysis, contribute additional metal ions to a sample, therefore yielding artificially high metal concentrations.

Monongahela Power Company and The Potomac Edison Company reserve the right to make additional comments and to amend, modify or delete the comments herein prior to issuance of acceptable final rules. The submission of these comments is not intended as a waiver of any rights or privileges to which Monongahela Power Company and The Potomac Edison Company may be entitled by law, equity, practice or court order.

Monongahela Power Company and The Potomac Edison Company appreciate the opportunity to comment.

Respectfully submitted,

Monongahela Power Company and
The Potomac Edison Company

By Counsel:

Gary A. Jack

July ____, 1992

Water Resources Board
1615 Washington Street East
Charleston, West Virginia 25301

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
concerning the proposed standard for 2,3,7,8-TCDF (Dioxin)

My name is CT. McDERMOTT, representing
MACE. I wish to adopt by reference and
incorporate herein the comments of Affiliated Construction Trades
Foundation regarding the proposed dioxin standard. I have reviewed
these comments and I support and endorse the views expressed
therein. I urge the Board to adopt a MCL of "non-detectable" for
dioxin.

L. G. McDermott

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WATER RESOURCES BOARD

August 6, 1992

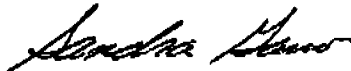
Water Resources Board
1615 Washington Street East
Charleston, WV 25301

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
Concerning the Proposed Standard for 1,3,7,8-TCDD (Dioxin)

My name is Sandra Gano, and I represent the Eastern Panhandle Citizens Against Out of State Waste, Inc.

I wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and I support and endorse the views expressed therein.

I urge the Board to adopt an MCL of "non-detectable" for dioxin.



Sandra Gano, President
Eastern Panhandle Citizens
Against Out of State Waste, Inc.
P.O. Box 994
Hedgesville, WV 25427

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WATER RESOURCES BOARD

6 August 1992

Water Resources Board
1615 Washington Street East
Charleston, WV 25301

SUBJECT: Proposed Groundwater Regulation 46 C,S,R,12,3,1
Concerning the Standard for 2,3,7,8-TCDD Dioxin

I wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and I support and endorse the views expressed therein. I urge the Board to adopt a MCL of "non-detectable" for dioxin.

Anne Hite

Anne M. Hite
Rt.2 Box 102
Letart, WV 25253

August
~~July~~ 4, 1992

Water Resources Board
1615 Washington Street East
Charleston, West Virginia 25301

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

My name is Allen Crockett, representing
P.R.O.T.E.C.T. I wish to adopt by reference and
incorporate herein the comments of Affiliated Construction Trades
Foundation regarding the proposed dioxin standard. I have reviewed
these comments and I support and endorse the views expressed
therein. I urge the Board to adopt a MCL of "non-detectable" for
dioxin.

Allen Crockett - Co. Chairman
P.R.O.T.E.C.T.
P.O. Box 774
Elkins, WV 25070
586-9093

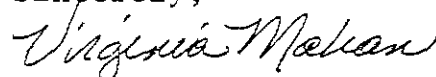
August 5, 1992

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
concerning the proposed standard for 2.3.7.6-TCDD (Dioxin)

As a concerned West Virginian, I wish to adopt by reference and incorporate herein the comments of the Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and support and endorse the views they express. I strongly recommend and sincerely hope that the Board adopt a MCL of "Non-Detectable" for dioxin.

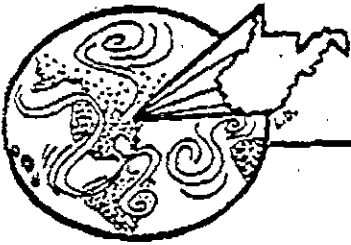
Too many unanswered questions about this substance should prompt the Board to act on behalf of the protection of the State's waterways, workers and citizens in general.

Sincerely,



Virginia Mahan
Talking Trees
P.O. Box 44
Elton, WV 25965

Telephone: 466-0534



West Virginia Environmental Council

August 5, 1992

Water Resources Board
1615 Washington Street, East
Charleston, West Virginia 25301

Comments on Proposed Groundwater Regulation 46 C.S.R. 12.3.1
concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

My name is Perry McDaniel, President of the West Virginia Environmental Council. We wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. We have reviewed these comments and we support and endorse the views expressed therein. We urge the Board to adopt a MCL of "non-detectable" for dioxin.

Perry McDaniel
WVEC
1324 Virginia Street, East
Charleston, WV 25301

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WATER RESOURCES BOARD

O.V.E.C.

Ohio Valley Environmental Coalition

P.O. Box 970
Proctorville, OH 45669

August 6, 1992

Water Resources Board
1615 Washington Street East
Charleston, WV 25301

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

My name is Kim Baker, representing the Ohio (River) Valley Environmental Coalition. OVEC is a membership-based grass roots organization which deals with environmental problems in the West Virginia/Kentucky/Ohio Tri-State area. I wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and I support and endorse the views expressed therein. I urge the Board to adopt a MCL of "non-detectable" for dioxin.

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WATER RESOURCES BOARD

Kim Baker

Kim Baker
OVEC Organizer

Comments of Affiliated Construction Trade (ACT) Foundation on
Proposed Groundwater Regulation 46 C.S.R. 12.3.1 concerning the
proposed standard for 2,3,7,8-TCDD (DIOXIN), August 3, 1992

My name is Jacqueline Hallinan, appearing representing the Affiliated Construction Trade Foundation, to comment on the dioxin standard in these proposed groundwater regulations.

According to our research, no state has as yet adopted a specific dioxin drinking water standard. Instead of this presently proposed standard, ACT requests the Board to adopt a standard of no detectable dioxin in groundwater.

I have been told that the rationale for this standard is based on the federal Safe Drinking Water Act standard for dioxin. The underlying goal of the federal Safe Drinking Water Act is to protect the public from adverse health effects due to drinking water contaminants (57 FR 31816). The method that EPA has chosen to accomplish the mandate of the SDWA is to establish Maximum Contaminant Level Goals (MCLG's) and Maximum Contaminant Levels (MCL's).

A Maximum Contaminant Level Goal is defined by EPA at 40 CFR 141.2 as "the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety." That is, EPA sets the MCLG at a level where there is reasonable certainty that no adverse health impact will occur. Conversely, at levels greater than the MCLG, human impacts can occur. Because it is a carcinogen, EPA has established the MCLG for dioxin at zero. Therefore, zero is the level that EPA has determined that no adverse effect on the health of persons will occur; at any dioxin level other than zero, a human health effect can occur.

A Maximum Contaminant Level (MCL) is defined by EPA at 40 CFR 141.2 as "the maximum permissible level of a contaminant in water which is delivered to any user of a public water system."

As opposed to MCLG's, MCL's do not entirely protect persons from known or anticipated adverse effects. Rather, they establish "acceptable risks" to human health. Among the factors which EPA considers in setting MCL's are: 1) the technological capability to treat or remove the particular contaminant from drinking water, 2) the cost of the technology, 3) the ability of a laboratory to measure the contaminant reliably, and, 4) the health risks associated with various contaminant levels.

In the case of dioxin, and according to the final rule (57 FR 31776), the overriding factor which EPA considered in setting the MCL was their assessment of the analytical capability to reliably measure its concentration in drinking water. The Final MCL for dioxin has been set at 3×10^{-8} mg/l which is equivalent

to 30 parts per quadrillion (ppq). According to EPA, the Final MCL of 30 PPQ equates to an estimated lifetime cancer risk of 1.3×10^{-4} (57 FR 31816). That is, 1.3 cancers per 10,000 persons can be expected to occur with the dioxin MCL set at 30 ppq.

In general, EPA considers a target risk range of 10-fourth power to 10-sixth power to be protective of public health (57 FR 31825). Therefore, by setting the dioxin MCL at 30 ppq, which corresponds to a cancer risk of greater than 1×10^{-4} , EPA has contravened its own policy. This is particularly unfortunate because the MCL was apparently set strictly at a level where EPA determined that dioxin could reliably be quantified; not at a level where the public health could be insured. Because the MCLG, that is, the level at which no adverse effect will occur, is zero, it is more important to consider whether dioxin is present in drinking water than to consider how much is present. And, because adverse health effects can occur at dioxin levels greater than zero, it is appropriate to set the MCL at the limit of dioxin detection in drinking water using approved analytical methods, rather than at the level at which the dioxin concentration can be quantified.

West Virginia is now establishing groundwater standards and has the opportunity to protect its citizens from dioxin contamination. The most protective approach to setting the standard for dioxin is to set it as close as possible to the Maximum Contaminant Level Goal of zero. Because detecting dioxin in drinking water would indicate that an adverse health risk exists for those person consuming the water, it is recommended that the standard be set as "non-detectable."

Currently, "non-detectable" can be defined as a concentration less than 5 ppq because EPA has demonstrated that the Method Detection Limit (MDL) for dioxin is equal to 5 ppq using Method 1613 (57 FR 31805). In the future, as analytic methods are enhanced and instruments improved, MDL's which approach the MCLG of zero can be anticipated.

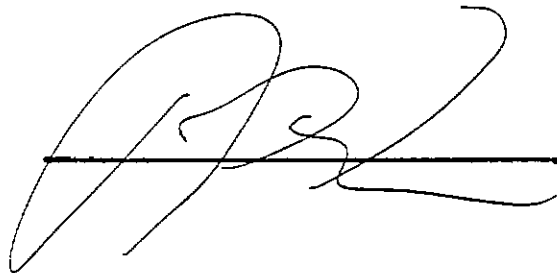
In practice, setting a standard of "non-detectable" will allow water systems and distributors that do detect dioxin in their drinking water to take immediate actions to provide a safe alternate source of drinking water to their consumers. Relative to many other states, West Virginia is blessed with water resources. There is no good reason for West Virginia's citizens to be exposed to the cancer risk posed by consuming dioxin contaminated water. The standard for dioxin in drinking water should, therefore, be set at "non-detectable."

August 6, 1992

Water Resources Board
1615 Washington Street East
Charleston, West Virginia 25301

Comments on Proposed Groundwater Regulation 46 C.S.R.12.3.1
concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

My name is Robert D. Forman, representing myself & MS Forman. I wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and I support and endorse the views expressed therein. I urge the Board to adopt a MCL of "non-detectable" for dioxin.



6 August 1992

Water Resources Board
1615 Washington Street East
Charleston, WV 25301

SUBJECT: Proposed Groundwater Regulation 46 C,S,R,12,3,1
Concerning the Standard for 2,3,7,8-TCDD Dioxin

I wish to adopt by reference and incorporate herein
the comments of Affiliated Construction Trades
Foundation regarding the proposed dioxin standard. I
have reviewed these comments and I support and endorse
the views expressed therein. I urge the Board to adopt
a MCL of "non-detectable" for dioxin.

Anne Hite

Anne M. Hite
Rt.2 Box 102
Letart, WV 25253

August 7, 1992

Water Resources Board
1615 Washington St., E.
Charleston, WV 25301

Comments on Proposed Groundwater Regulation 46 C.S.R 12.3.1
concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

My name is Carolyn Taft representing the Potomac Highlands Environmental Network (PHEN). I wish to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. I have reviewed these comments and I strongly support and endorse the views expressed therein. I urge the Board to adopt a MCL of "non-detectable" for dioxin. West Virginia can set examples in the care of its finite resources and its people's well being. Any detectable contamination is too much.

Carolyn Taft

Carolyn Taft
P. O. Box 1120
Ft. Ashby, WV 26719
(304)298-3917

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AUG 10 1992
WATER RESOURCES BOARD



Water Resources Board
1615 Washington Street East
Charleston, WV 25301

August 6, 1992

Re: Comments on Proposed Groundwater Regulation 46 C.S.R. 12.3.1
Concerning the proposed standard for 2,3,7,8-TCDD (Dioxin)

To Whom It May Concern:

My name is Philip J. Rossano and I am president of the Mountaineer Chapter of Trout Unlimited. Our chapter wishes to adopt by reference and incorporate herein the comments of Affiliated Construction Trades Foundation regarding the proposed dioxin standard. We have reviewed those comments and support and endorse the views expressed therein. We urge the Board to adopt a MCL of "non-detectable" for dioxin.

The Mountaineer Chapter of Trout Unlimited is a non-profit, volunteer organization dedicated to the preservation, protection, enhancement and restoration of West Virginia's coldwater fisheries and their watersheds. We have more than 200 members from Buckhannon, Clarksburg, and the surrounding vicinity.

Sincerely,

Philip J. Rossano
President
Mountaineer Chapter Trout Unlimited
Rt. 2, Box 375-1
Buckhannon, WV 26201

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WATER RESOURCES BOARD

Sent Via Fax



WEST VIRGINIA MOUNTAIN STREAM MONITORS
264 HIGH STREET, ROOM 204
MORGANTOWN, WEST VIRGINIA 26505
TEL (304) 296-8611
FAX (304) 296-8623

August 7, 1992

by FAX

Water Resources Board
1260 Greenbrier Street
Charleston WV 25311

Re: Requirements Governing Groundwater Standards
Title 46, Series 12 -- 2,3,7,8-TCDD (Dioxin)

Dear Board Members:

I write in my capacity as Technical Director of the Living Streams Project of WV Mountain Stream Monitors.

We concur with the points raised by Ms. Hallinan in her comments to you dated August 3 and we add the following.

Researchers have discovered that dioxin causes other serious health effects in addition to cancer. In particular, dioxin appears to act as an environmental hormone, disrupting sexual development of offspring during pregnancy and lactation. And workers exposed to high levels of dioxin have abnormally low levels of testosterone.

As researchers study dioxin more, they find more varied and serious detrimental effects. And, significantly, even very small doses cause some of those effects. No level has yet been identified below which no adverse effects occur.

Sufficient justification does not exist for any standard other than "non-detectable" for this most potent of artificial substances.

Sincerely,

Richard S. diPretoro

LIVING STREAMS PROJECT



**WEST VIRGINIA
MANUFACTURERS ASSOCIATION**

SUITE 503
405 CAPITOL STREET
CHARLESTON, WV 25301
TELEPHONE (304) 342-2123

August 7, 1992

Mrs. Frances E. Hunter
Executive Secretary
State Water Resources Board
1615 Washington Street, East
Charleston, WV 25311

Re: Comments on Water Resources Board's
Regulatory Proposals

Dear Fran:

Enclosed please find the West Virginia Manufacturers Association's comments regarding the West Virginia Water Resources Board's proposed amendments to 46 Series 2 (NPDES) and 9 (Underground Injection Control) and the Board's promulgation of a new Series 12 (Groundwater Quality Standards).

We hope the Water Resources Board will give these comments careful consideration.

Sincerely yours,

Robert L. Foster

RLF:shb

Enclosures

cc: Ms. Karen Price
M. Ann Bradley, Esq.

RECEIVED

AUG 07 1992

WATER RESOURCES BOARD

**COMMENTS REGARDING THE
WEST VIRGINIA WATER RESOURCES BOARD'S
GROUNDWATER QUALITY STANDARDS
TITLE 46, SERIES 12**

**SUBMITTED ON BEHALF OF THE
WEST VIRGINIA MANUFACTURERS ASSOCIATION**

AUGUST 3, 1992

Prepared By

**ROBINSON & McELWEE
600 United Center
P. O. Box 1791
Charleston, WV 25326
(304) 344-5800**

RECEIVED

AUG 07 1992

WATER RESOURCES BOARD

**COMMENTS REGARDING THE
WEST VIRGINIA WATER RESOURCES BOARD'S
GROUNDWATER QUALITY STANDARDS
TITLE 46, SERIES 12**

I. INTRODUCTION

The West Virginia Manufacturers Association (WVMA) is a nonprofit organization comprised of approximately 250 West Virginia manufacturing companies and ancillary businesses with a vital interest in the state regulation of industrial activities in West Virginia. The WVMA comments on all regulations which could affect its members' operations in an attempt to help develop fair and equitable environmental regulation in West Virginia. The WVMA continues this constructive role by offering the following comments regarding the West Virginia Water Resources Board's groundwater quality standards, proposed for inclusion in the Code of State Regulations at Title 46, Series 12.

II. COMMENTS

The WVMA agrees that the proposed rule is, for the most part, a reasonable response to the statutory requirement of setting groundwater quality standards. The following changes are suggested to make the rule more flexible while still following the legislative directives found in the Groundwater Protection Act W.Va. Code §20-5M-1 et seq. ("the Act").

1. The Act sets out the precise situation in which groundwater quality standards are changed as a result of groundwater remediation efforts. We suggest that this section incorporate the language of W.Va. Code §20-5M-4(b) rather than merely refer to that section. If changed, paragraph 3.2.a. would read as follows:

Where the concentration of a constituent exceeds an otherwise applicable water quality standard under this rule due to human-induced contamination, such higher concentration shall become the applicable groundwater quality standard only where the appropriate groundwater regulatory agency has determined that additional contamination of the groundwater by that constituent has been prevented and every reasonable effort will be made to identify, remove or mitigate the source of such contamination and to strive where practical to reduce the level of contamination over time to support drinking water use.

2. When the groundwater quality standards become effective many facilities will be in violation of the standards as a result of lawful activities conducted before these standards were promulgated. The Board's rule should recognize that such facilities must have a reasonable amount of time in which to demonstrate to the appropriate groundwater regulatory agency that further contamination has ended and appropriate and reasonable remedial steps have been taken, as allowed under §3.2.a. Consequently, the WVMA suggests the following language be added to the rule, which would provide a reasonable amount of time in which persons could qualify for the alternate groundwater quality standard allowed under paragraph 3.2.a.

No person shall be deemed in violation of any applicable groundwater quality standard until such person has had a reasonable opportunity to make a demonstration to the appropriate groundwater regulatory agency to support the determination described in paragraph 3.2.a of this rule and action has been taken by such agency pursuant to such demonstration.

3. A standard method of referring to the W.Va. Code should be adopted, since it is referred to in slightly different manners in subsections 3.4.a, 3.4.4.c and 3.4.d.

4. The second "or" should be deleted from subsection 3.4.b.

5. The WVMA objects to the Fiscal Note for this proposed rule, which states that it is impossible to determine the cost of complying with the groundwater quality standards. While it may be difficult to calculate exactly how much the rule will cost individuals, municipalities, state agencies, and industry, the figure will surely be in the millions of dollars. The cost of remediating groundwater to the levels specified in these rules, and the expense associated with altering equipment and activities to comply with the standards, will be enormous. These facts should be recognized and the Fiscal Note revised accordingly.

III. CONCLUSION

The groundwater quality standards developed by the Board represent a reasonable approach to implementing the Act, and the WVMA looks forward to working with the Board further on these and other groundwater regulations.

Respectfully submitted this 7th day of August, 1992.

WEST VIRGINIA MANUFACTURERS ASSOCIATION

STATEMENT OF ROBERT L. FOSTER
ON BEHALF OF THE WEST VIRGINIA MANUFACTURERS ASSOCIATION
REGARDING PROPOSED GROUNDWATER QUALITY STANDARDS

My name is Robert L. Foster and I am here today on behalf of the West Virginia Manufacturers Association, regarding the Board's proposed groundwater quality standards. The WVMA believes the Board has done a good job of complying with the mandate of the Groundwater Protection Act to develop groundwater quality standards which are as stringent as Maximum Contaminant Levels established under the Safe Drinking Water Act and are protective of surface water quality standards. The WVMA would suggest, however, some minor changes in the Board's regulation to better reflect the language and intent of the Groundwater Protection Act.

The first change the WVMA would suggest is changing the language in Section 3.2.a to better reflect the statutory requirements of Subsection 4(b) of the Act. The language in Subsection 4(b) was discussed at some length by the group that negotiated the Act, and in fairness to their efforts it should be adopted as completely as possible into the proposed regulation. It represents a recognition that reasonable efforts must be made to remediate existing areas of groundwater contamination, while at the same time providing that the appropriate remediation may be best be accomplished by natural attenuation over time.

The WVMA also suggests that the standards contain a provision that would effectively suspend the groundwater quality standards where groundwater contamination is discovered in order to provide a reasonable amount of time in which the person who is responsible for the contamination can demonstrate to the

appropriate groundwater regulatory agency that is making reasonable efforts to remediate the groundwater. Otherwise, when these groundwater quality standards go into effect, there will be many sites throughout the state which are in violation of groundwater quality standards until such time as they can submit evidence that they are engaging in reasonable remediation efforts, and the appropriate agency can act on that showing.

The WVMA would also like to comment about the groundwater quality standard for one particular constituent, dioxin. The WVMA continues to believe that the risk of dioxin has been overstated and that this position will be borne out after the EPA's reevaluation of dioxin. However, the WVMA recognizes that a MCL has been set for dioxin and that, according to the Act, that MCL must become the groundwater quality standard. Accordingly, the WVMA will not object to that standard at this time.

With regard to the statutory requirement that MCL's be adopted as groundwater quality standards, the WVMA would observe that the number of MCL's has grown tremendously in the eighteen months since the Groundwater Protection Act was being negotiated, and that there may be hundreds of MCL's promulgated by EPA during the next few years. These MCL's could have a tremendous impact on, for example, use of septic systems in the state, and points out the need for a variance regulation for classes of activity which must be exempt to some degree from the standards. The WVMA may, at some point in the future, seek promulgation of a variance regulation by

the Director of the Division of Environmental Protection to address this matter.

Thank you for the opportunity to present these oral comments today. We are also submitting written comments on these proposed regulations.



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1201 Greenbrier Street
Charleston, WV 25311-1088

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

July 30, 1992

David E. Samuel, Ph.D.
Chairman
State Water Resources Board
1615 Washington St. East
Charleston, WV 25311

RECEIVED

AUG 07 1992

WATER RESOURCES BOARD

Dear Dr. *David* Samuel:

Enclosed please find the West Virginia Division of Environmental Protection, Office of Water Resources's comments on the Board's proposed Requirements Governing Groundwater Standards. (Title 46, Series 12)

These comments incorporate input from the technical members of my staff who will ultimately be making important decisions based upon the proposed rule. For your convenience the comments have been prepared sequentially and follow the proposed rule's format.

I trust that you understand the importance of these rules to my Section and will carefully consider the issues we have raised. Do not hesitate to contact me if you have questions or if I can be of further assistance.

Sincerely,

OFFICE OF WATER RESOURCES

Laidley E. McCoy
Laidley E. McCoy, Ph.D.
Chief

August 04, 1992

DIVISION OF ENVIRONMENTAL PROTECTION (DEP) - OFFICE OF WATER
RESOURCES (OWR) COMMENTS ON PROPOSED GROUNDWATER STANDARDS
TITLE 46, SERIES 12

Section 3.2.a.

OWR suggests that the reference to 20-5M-4 (b) be deleted and simply include the last sentence of 20-5M-4 (b) into the regulation so as to enhance interpretation of the rule.

Section 3.3.

OWR realizes that this section was included to express the intent of the Act, however as many regulatory decisions may be ultimately based upon this section we feel it should be more clearly defined in the regulation. Does this section automatically mean that surface water standards take precedence over groundwater standards, when the surface water standard is more stringent; what is the point of compliance, in the well, where the groundwater meets the surface water, in the stream, etc.; and if we do not have a groundwater standard for a certain constituent and we do have a surface water standard, do surface water standards then apply to groundwater for the constituents in question, and if so, what is the point of compliance for the standards?

If Section 3.3. is not expanded OWR suggests that, at a minimum, a minor change be made to eliminate the conflict that exists as a result of the definition in 2.3. Constituent is defined as any natural or man made substance found in groundwater. Since the impacts by nature cannot be controlled OWR suggests Section 3.3. be changed to reflect human influence(s) only.

Section 3.5.

3.5. states that groundwater standards for inorganic constituents shall apply to dissolved readings only.

OWR contends that allowing groundwater standards for inorganics to only apply to dissolved inorganics is not protective of the environment and goes beyond the scope of the statute. The statute {20-5M-2 (3)} clearly states that "...maintaining this lifestyle depends upon protecting groundwater to avoid increased expenses associated with providing treated drinking water to rural households."

A test for dissolved inorganics that reveals a value less than a standard would cause a regulatory agency to issue a ruling that the groundwater is not contaminated when in fact if the suspended inorganics were also included in the analysis a contamination event may exist.

If we, as regulatory agencies, are to protect the resource we must know the total quantity of inorganics in the system. Rural well owners who do not filter their water (and most do not) could potentially be subject to harmful concentrations of inorganics if we base our decisions on dissolved concentrations alone. The statute states in the policy that it is the intent to avoid providing treated drinking water (filtered/purified).

OWR understands why some would argue for the section in question to be included in the standards. The section allows persons to continue to use improperly constructed monitoring wells which have high turbidity values leading to high concentrations of inorganics in a total analysis. OWR maintains that the proposed monitoring well driller certification program will limit, if not eliminate, the number of monitoring wells which produce a turbid sample. Secondly, even if a monitoring well is constructed properly, and turbidity values in the sample approach zero, there can be suspended inorganics in the sample sufficient to cause a standard violation and thus be harmful to both human health and the environment.

Based on the above statements the OWR urges the Water Resources Board to remove section 3.5. If the section must remain, OWR urges that language from the Solid Waste Management Regulations be adopted which states that if a facility chooses to do analysis for dissolved inorganics then they must also do analysis for total inorganics. Then allow the regulatory agency, based on its expertise and experience to determine if in fact a standard violation has occurred.

Also the Section as currently written is in direct conflict with both the Solid Waste Management Regulations and Title 46 Series 2 (NPDES Regulations) which both require analysis for total inorganics.

Sections 46-12-(4-6)

OWR questions the need for these reserved Sections, if they do not include, at a minimum, a subject heading.

Appendix A

OWR notes that the following constituents, and their associated standard values are absent from the regulation, and urges their insertion into the rule: arsenic, copper (EPA action level 1.3 mg/l), monochlorobenzene, pentachlorophenol, polychlorinated biphenyls (PCB's), styrene, barium, and fluorides.

OWR notes that no radionuclides are listed in the regulation. Currently there exists two radionuclides which have federal standards.

OWR notes that acrylamide, and epichlorohydrin have treatment technology limits in EPA's Drinking Water Standards and urges the Board to adopt this treatment technology criteria into its standards.

Reserved constituents aldicarb sulfone, aldicarb sulfoxide, and atrazine have actual values in current EPA Drinking Water Standards.

OWR notes that the value for heptachlor is incorrect.

Trichlorobenzene (1,2,4-) is only proposed as a standard in EPA's Drinking Water Standards.

The value for antimony may be incorrect.

Comment on Nonspecific Sections

OWR notes that the regulation does not state where the point of application of groundwater standards would be. Is it in the monitoring wells, the closest monitoring point to the contamination site, at a property boundary, etc.? Furthermore the regulation does not explain what constitutes a standard violation: (examples) One sample that has values that exceed the standard, a statistically significant increase over upgradient well concentrations, Two or more samplings of the same well which exhibits values in excess of the standard(s), etc.

OWR notes that no mention is made that existing quality is actually what the Act is structured around. Section 20-5M-5 (e) states that groundwater regulatory agencies shall take such action as may be necessary to maintain groundwater at existing quality. OWR believes it necessary to repeat Section 20-5M-5 (e) near the beginning of the rule. The rule should clearly explain that the standards should only become an issue if a deviation from existing quality has been granted by the Director.

Finally OWR suggests the insertion of a severability clause. Such a clause protects from voiding the entire rule if a section is determined to be invalid. OWR has used language similar to that found in 20-5M-16.

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AUG 07 1992

WATER RESOURCES BOARD



west
virginia
highlands
conservancy

MAILING ADDRESS • P.O. Box 306 • Charleston, West Virginia 25321

Publishers of the Highlands Voice and the Monongahela National Forest Hiking Guide

August 6, 1992

Charles R. Jenkins, Chairman
W.V. Water Resources Board
1615 Washington Street, East
Charleston, WV 25311

Dear Dr. Jenkins,

Enclosed are comments on the proposed Requirements Governing Groundwater Standards (Title 46 - Series 12). I submit them on behalf of the W.V. Highlands Conservancy and myself as a member of the Groundwater Task Force.

Due to my involvement in a Legislative Hearing on proposed surface mine regulations Monday, August 3rd, I was unable to attend the Board's public hearing scheduled for the same time.

I did, however, speak with your technical advisor beforehand, communicated to her several of our concerns about the proposed regulations, and told her I would send these written comments by the end of the week.

Thank you for the opportunity to comment. We look forward to communicating further with you, especially regarding proposed Section 3.2.a. on human induced contamination. Representatives of the environmental community who served on the Governor's Groundwater Task Force are greatly concerned that the proposed language in this section seriously weakens the intent of the W.V. Groundwater Protection Act.

Sincerely,

Cindy Rank, President

cc: Mary Wimmer, Task Force Member
Richard di Pretoro, Task Force Member
Norm Steenstra, Task Force Member
Ann Spaner, Task Force Chair
Eli McCoy, Chief, Water Resources

COMMENTS

=====

TO: W.V. Water Resources Board
RE: Proposed Requirements Governing Groundwater Standards
(Title 46 - Series 12)
FROM: Cindy Rank, President, W.V. Highlands Conservancy
HC 78, Box 227, Rock Cave, W.V. 26234 (phone: 924-5802)
DATE: August 6, 1992

I. 3.2. More Restrictive Standards & Contaminants Not Regulated

While other portions of Section 4(b) of the Groundwater Protection Act are addressed by proposed language, i.e. 3.1 addresses 4(b) sentence #1, 3.2 addresses sentence #4, and 3.2.a. addresses sentence #5, there is no language that addresses sentences 2 and 3 of 20-5M-4(b):

"The Board may set standards more restrictive than the maximum contaminant levels where it finds that such standards are necessary to protect drinking water use where scientifically supportable evidence reflects factors unique to West Virginia or some area thereof, or to protect other beneficial uses of the groundwater.

For contaminants not regulated by the federal Safe Drinking Water Act, standards for such contaminants shall be established by the board to be no less stringent than may be reasonable and prudent to protect drinking water or any other beneficial use."

Granted, there may not have been sufficient time for the Board to thoroughly analyze the actual need to set specific standards more restrictive than the MCL's of the Federal Safe Drinking Water Act (SDWA), or to create regulations for constituents not included in the SDWA, but such needs do exist and should at least be recognized and referenced in the proposed regulations. For instance, from a presentation at one of the early Board meetings dealing with these standards, it is my understanding that the trade association for the bottled water industry recommends standards that are in some instances more stringent than SDWA MCL's. Certainly Monroe county would head the list of W.V. counties to benefit from attention to these recommendations.

Short of setting additional standards at this time, it is important to include the language of 20-5M-4(b), sentences 2 & 3, perhaps just as section 3.2 repeats sentence 4, to acknowledge and to set forth the clear authority of the Board to expand these standards in future revisions of these regulations..

II. EPA Revisions of MCL's

Discussions took place at meetings earlier in the year about the question of how to incorporate changes in MCL's as EPA reviews, revises and updates their Drinking Water Regulations.

As MCL's are changed at the federal level, W.V. is authorized to maintain any of the state's current standards that are more stringent, but is also required by 20-5M to adopt any standards that are strengthened by EPA. Should there not be language in the proposed series 12 that indicates any standards set forth in Appendix A that are strengthened by EPA will be adopted as authorized by 20-5M-4(b)?

III. 3.2.a. Human Induced Contamination

3.2.a. totally distorts the intent of 20-5M-4(b), and seriously damages the core of the Groundwater Protection Act as it applies to existing sources of pollution.

20-5M-4(b) does NOT authorize setting additional standards for human induced contaminants.

20-5M-4(b) DOES authorize direct action 1) to stop the infusion of any human induced contaminant, to stop the plume of contamination; 2) to eliminate current sources of pollution by removing or mitigating (pumping, etc.) those sources, and 3) over time, and where practical, to reduce that level of contamination to support drinking water use.

The proposed language in 3.2.a. does the opposite of what the Act intends:

- It allows for someone, i.e. "the appropriate groundwater regulatory agency" (?), to bless current levels of contamination, allowing the plume of pollution to move. (Theoretically this could become a new standard over the entire state of WV as the plume moves outward.) Pollution of groundwater is not a beneficial use and the Act clearly states this in 20-5M-3(b).

- It creates a procedure for variances from standards on a site by site basis for existing facilities, a procedure that was neither contemplated nor authorized by the Groundwater-Act. This procedure even surpasses the authority provided to the director in 20-5M-5(1) for promulgating rules for "variances" for "classes of activities which by their very nature cannot be conducted in compliance with the requirements of the standards section of the Act". Furthermore, even this duly authorized variance procedure, in 5(1) involves full public and legislative involvement. 3.2.a. circumvents this entire procedure that was so painfully extracted during the last few days of the Task Force.

IV. Section 3.5 Contaminant Concentrations as Dissolved or Total

This is an entirely new subsection that has been added since the initial three drafts of the regulations that I had reviewed. It is unacceptable to use "dissolved" rather than "total" levels as a measure of compliance for inorganic compounds.

From discussions of these testing methods during reviews of standards and criteria for surface water these past fifteen years it is my understanding that measuring "total" values for inorganic compounds may yield high levels of that compound due to suspended solids resulting from rainfall events, etc, and that measuring the "dissolved" concentration will, on the other hand, filter out all suspended solids and yield unnaturally low levels.

- The more cautious approach is most appropriate for the purposes of the W.V. Groundwater Act which recognizes the importance of protecting groundwater resources to avoid increased expense associated with providing treated (i.e. filtered, etc.) drinking water supplies to rural households (20-5M-2(a)(3)).

- Assuming, as many seem to, that it is often poor well construction that contributes to a higher level of solids in samples, we must then be careful to design the new monitoring well drilling and certification procedures to minimize the likelihood of contamination from the drilling process.

V. APPENDIX A - STANDARDS

1) Dioxin In the case of 2,3,7,8-TCDD (DIOXIN), zero (0) must be the standard. -- If, where, and when dioxin is detected it must be eliminated. I understand Jacqueline Hallinan of the Affiliated Construction Trade Association made an excellent presentation at the public hearing on the dioxin issue. I have read the paper and it states more clearly than I can the rationale for setting the dioxin standard at zero or non-detect. Furthermore, the intense scientific debates over the real and/or potential dangers from dioxin are enough to warrant extreme caution by the Board at this point in time.

2) Lead Some of the first drafts of these regs contained a lead standard of .005 mg/l apparently based on suggestions from the Office of Water Resources at meetings in February and March. What are the reasons now to choose a less stringent .015 rather than the .005 recommended by Water Resources?

3) Other Constituents The original drafts also contained standards for other constituents not listed in the currently proposed Appendix A, eg. Arsenic, Barium, etc. These were in WV Health Department regulations for Public Water Supplies for years. Why have these been removed?



DEPARTMENT OF COMMERCE, LABOR & ENVIRONMENTAL RESOURCES
DIVISION OF ENVIRONMENTAL PROTECTION

1356 Hansford Street
Charleston, WV 25301-1401

Gaston Caperton
Governor

John M. Ranson
Cabinet Secretary

David C. Callaghan
Director

Ann A. Spaner
Deputy Director

August 5, 1992

MEMORANDUM TO: Libby Chatfield
Water Resources Board

RE: Proposed Requirements Governing
Groundwater Standards

As discussed by telephone, I am providing you comment regarding the above referenced standards. In general, the proposal for standards based on dissolved concentrations (filtered sample) versus total concentration (unfiltered sample) conflicts with current groundwater monitoring practices utilized in several regulatory programs.

Current practice/policy for groundwater monitoring at industrial landfill sites stipulates sampling for total concentrations. The Solid Waste Management Regulations (4.11.2.b.A) also stipulate total concentrations be determined in the groundwater monitoring activities at municipal solid waste landfills.

I have attached detailed comments received from Environmental Enforcement and Waste Management staff regarding these proposed standards. Don't hesitate to contact me at 558-2497 should you have any questions.

Michael A. Zeto
Chief Inspector
Environmental Enforcement

MAZ/jlh

Attachments

cc: Max Robertson, Chief, OWM
Eli McCoy, Chief, OWR



STATE OF WEST VIRGINIA
DEPARTMENT OF COMMERCE, LABOR AND ENVIRONMENTAL RESOURCES
DIVISION OF NATURAL RESOURCES
Office of Environmental Enforcement

1356 Hansford Street
Charleston, West Virginia 25301
Telephone (304)348-2497

July 9, 1992

GASTON CAPERTON
Governor

J. EDWARD HAMRICK III
Director

ANN A. SPANER
Deputy Director

MEMORANDUM TO: Mike Zeto
FROM: Charlie Moses *cm*
SUBJECT: Comments on Proposed Requirements
Governing Groundwater Standards

Attached is a copy of the proposed groundwater standards by the Water Resources Board. Section 3.5 on page 2 discusses establishing dissolved concentrations (filtered samples) as the standards for inorganic compounds (I assume they are talking metals here). Some comments are as follows:

- (1) Presently metal sampling requirements for industrial landfill sites are for total metals (unfiltered samples). Our present policy states that the permittee is to report results for total metals but if they wish also to report results for dissolved metals (filtered samples), then they may do so. If these new proposed requirements to filter metals are approved, then we will have a lot of past data that may be of little value when trying to calculate future trends in groundwater quality at various sites.
- (2) If these new standards are approved for "inorganic compounds" are we saying that this is metals only or does it cover cyanide also that is listed in Appendix A.
- (3) If indeed cyanide is included in this "inorganic compound" group, filtration of this sample is not stipulated in the Federal Register or in the 17th Edition of Standard Methods. All past data generated by DNR-DEP for cyanide, whether it is surface or groundwater samples, has been on unfiltered samples.
- (4) The parameters covered under "inorganic compounds" should be specifically listed so there is no question as to which individual parameters are to be filtered.

Memo To: Mike Zeto
Page Two
July 9, 1992

- (5) If indeed these standards are approved, then it should also list the filter size to be used so every one is consistent in their sampling/preservation procedures. The membrane filters should be composed of polycarbonate or cellulose acetate and have a pore size of 0.4 to 0.45 um. - Reference 17th Edition of Standard Methods.
- (6) It should be stipulated that all filtered samples must be filtered in the field and not back at the laboratory because "plating out" of metals on the container walls may occur.
- (7) It should be stipulated that filtered metal samples must be preserved with concentrated HNO_3 to a pH of 2 after filtration in the field.
- (8) Nitrate, Nitrite parameters are also listed in Appendix A. These are nonmetallic inorganic compounds but are the proposed standards requiring filtering of these samples? At present, these samples are not required to be filtered by the Federal Register.

CAM/tlm

Attachment



STATE OF WEST VIRGINIA
DEPARTMENT OF COMMERCE, LABOR AND ENVIRONMENTAL RESOURCES
WASTE MANAGEMENT SECTION
1356 Hansford Street
Charleston, West Virginia 25301
Telephone (304)348-5929

GASTON CAPERTON
Governor

J. EDWARD HAMRICK III
Director

ANN A. SPANER
Deputy Director

July 23, 1992

MEMORANDUM TO: Ken Ellison
FROM: Mike Dorsey *MD*
SUBJECT: Comments on Groundwater Standards (46CSR12)

2.4 The definition of groundwater needs to be clarified so that there is no question that perched water zones are intended to be covered. Suggestion "...seasonal high water table. Perched water zones are also considered groundwater."

3.4.a.F.3.4.b "Site specific" needs to be defined. How large an area does this involve.

3.5 Why dissolved concentration rather than total concentration. A compound does not need to be dissolved to be harmful.

kw

LAW OFFICES

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FAX: (304) 755-8739

August 6, 1992

Libby Chatfield
Water Resources Board
1615 Washington Street East
Charleston, West Virginia

Dear Libby,

As we discussed, please revise my submitted testimony, in the paragraph which begins "In the case of dioxin," in line five, by adding a minus sign before the word "eighth", and in line seven, by adding a minus sign after the term "1.3x10".

Thank you for your consideration in this matter.

Very truly yours,



Jackie Hallinan

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AUG 07 1992
WATER RESOURCES BOARD



Comments of Affiliated Construction Trade (ACT) Foundation on
Proposed Groundwater Regulation 46 C.S.R. 12.3.1 concerning the
proposed standard for 2,3,7,8-TCDD (DIOXIN), August 3, 1992

My name is Jacqueline Hallinan, appearing representing the Affiliated Construction Trade Foundation, to comment on the dioxin standard in these proposed groundwater regulations.

According to our research, no state has as yet adopted a specific dioxin drinking water standard. Instead of this presently proposed standard, ACT requests the Board to adopt a standard of no detectable dioxin in groundwater.

I have been told that the rationale for this standard is based on the federal Safe Drinking Water Act standard for dioxin. The underlying goal of the federal Safe Drinking Water Act is to protect the public from adverse health effects due to drinking water contaminants (57 FR 31816). The method that EPA has chosen to accomplish the mandate of the SDWA is to establish Maximum Contaminant Level Goals (MCLG's) and Maximum Contaminant Levels (MCL's).

A Maximum Contaminant Level Goal is defined by EPA at 40 CFR 141.2 as "the maximum level of a contaminant in drinking water at which no known or anticipated adverse effect on the health of persons would occur, and which allows an adequate margin of safety." That is, EPA sets the MCLG at a level where there is reasonable certainty that no adverse health impact will occur. Conversely, at levels greater than the MCLG, human impacts can occur. Because it is a carcinogen, EPA has established the MCLG for dioxin at zero. Therefore, zero is the level that EPA has determined that no adverse effect on the health of persons will occur; at any dioxin level other than zero, a human health effect can occur.

A Maximum Contaminant Level (MCL) is defined by EPA at 40 CFR 141.2 as "the maximum permissible level of a contaminant in water which is delivered to any user of a public water system."

As opposed to MCLG's, MCL's do not entirely protect persons from known or anticipated adverse effects. Rather, they establish "acceptable risks" to human health. Among the factors which EPA considers in setting MCL's are: 1) the technological capability to treat or remove the particular contaminant from drinking water, 2) the cost of the technology, 3) the ability of a laboratory to measure the contaminant reliably, and, 4) the health risks associated with various contaminant levels.

In the case of dioxin, and according to the final rule (57 FR 31776), the overriding factor which EPA considered in setting the MCL was their assessment of the analytical capability to reliably measure its concentration in drinking water. The Final MCL for dioxin has been set at 3×10^{-8} mg/l which is equivalent

to 30 parts per quadrillion (ppq). According to EPA, the Final MCL of 30 PPQ equates to an estimated lifetime cancer risk of 1.3×10^{-4} fourth power (57 FR 31816). That is, 1.3 cancers per 10,000 persons can be expected to occur with the dioxin MCL set at 30 ppq.

In general, EPA considers a target risk range of 10-fourth power to 10-sixth power to be protective of public health (57 FR 31825). Therefore, by setting the dioxin MCL at 30 ppq, which corresponds to a cancer risk of greater than 1×10^{-4} fourth power, EPA has contravened its own policy. This is particularly unfortunate because the MCL was apparently set strictly at a level where EPA determined that dioxin could reliably be quantified; not at a level where the public health could be insured. Because the MCLG, that is, the level at which no adverse effect will occur, is zero, it is more important to consider whether dioxin is present in drinking water than to consider how much is present. And, because adverse health effects can occur at dioxin levels greater than zero, it is appropriate to set the MCL at the limit of dioxin detection in drinking water using approved analytical methods, rather than at the level at which the dioxin concentration can be quantified.

West Virginia is now establishing groundwater standards and has the opportunity to protect its citizens from dioxin contamination. The most protective approach to setting the standard for dioxin is to set it as close as possible to the Maximum Contaminant Level Goal of zero. Because detecting dioxin in drinking water would indicate that an adverse health risk exists for those person consuming the water, it is recommended that the standard be set as "non-detectable."

Currently, "non-detectable" can be defined as a concentration less than 5 ppq because EPA has demonstrated that the Method Detection Limit (MDL) for dioxin is equal to 5 ppq using Method 1613 (57 FR 31805). In the future, as analytic methods are enhanced and instruments improved, MDL's which approach the MCLG of zero can be anticipated.

In practice, setting a standard of "non-detectable" will allow water systems and distributors that do detect dioxin in their drinking water to take immediate actions to provide a safe alternate source of drinking water to their consumers. Relative to many other states, West Virginia is blessed with water resources. There is no good reason for West Virginia's citizens to be exposed to the cancer risk posed by consuming dioxin contaminated water. The standard for dioxin in drinking water should, therefore, be set at "non-detectable."

August 7, 1992

TO: West Virginia Water Resources Board

FROM: West Virginia resident Douglas Imbrogno, a citizen's comments in regard to proposals to increase dioxin emission levels in West Virginia.

I am offering these comments as part of the public input over the Water Board's consideration of allowing higher dioxin levels in state waterways.

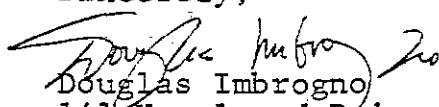
I have lived in West Virginia since 1980, moving here from Cincinnati. I have made West Virginia my home, and now live near Huntington with my wife and two-year-old son.

I urge the water board to set limits for dioxin emissions below the federal EPA standards, much less allowing those limits to increase some eighty-fold. Despite the recent, perhaps industry-pushed attempts to downplay the danger posed by dioxin, continuing research has shown it to be a poison of the highest order that remains in the ecosystem. Time after time, industries release environmental toxins into waterways and airways and afterwards we are told that there was "no danger to the public." Cumulatively, these releases add up in addition to the dangers they pose at the time. We do not need any more poisons added to the water we use and the air we breathe, not especially one that appears to be so persistent and toxic to living things as dioxin.

News reports indicate the push to allow higher dioxin emissions into West Virginia waterways is an attempt to lure a huge Alabama pulp plant to the state. This would be a short-term benefit with long-term health and environmental consequences. Making paper with techniques that produce dioxin is being phased out or banned in other countries. West Virginia should refuse to sign onto a paper-making plant which will be an environmental hazard well into the 21st century, using a poisonous technology other countries have had the sense to ban. By voting to allow large increases in dioxin emissions, each of you members of the water board will be tying that albatross around the necks of current and future citizens of this state. By choosing to lower dioxin emissions as low as possible, you will be taking a stand for the health and well-being of your neighbors, and the health and well-being of this state.

As people partly responsible for such a significant resource as water quality, you are stewards of that resource for all of us. And you are stewards of that resource for our children, and theirs.

Sincerely,


Douglas Imbrogno

141 Hazelwood Drive, Huntington, WV 25705
737-2995



LEAGUE OF WOMEN VOTERS OF WEST VIRGINIA

1127 MONTROSE DRIVE • SOUTH CHARLESTON, WV 25303 • TELEPHONE 304-744-8787

August 6, 1992

To: Water Resources Board
1615 Washington Street East
Charleston, WV 25301

Re: Comments on Proposed Groundwater Regulation on the proposed
standard for 2,3,7,8-TCDD (Dioxin)

The League of Women Voters of West Virginia believes that the standard for 2,3,7,8-TCDD should be strict enough to ensure the protection of human and aquatic health and life. The public must be assured that West Virginia's standard meets EPA's Maximum Contaminant Level Goals.

There have been efforts to establish that dioxin does not have the deleterious effects as first thought. But the most recent studies show that dioxins are more dangerous to human health than originally perceived. In addition to the potential of cancer, the effects of dioxins and associated toxins may include suppression of the immune system, atrophy of various organs, severe skin diseases, birth defects, and many other wasting diseases. The January 11, 1992 issue of Science News reported on new research which makes the case that the suppression of the immune system from dioxin is "its greatest threat to public health." The extreme toxicity, persistence, and bioaccumulative potential of dioxin makes even low level exposure a significant health threat.

By establishing a strict standard now, a company such as the proposed pulp plant can plan its facility with processes appropriate for meeting the strong standard rather than having to meet stronger regulations later. Many pulp mills are using technology other than chlorine bleaching, resulting in a safer environment. Other countries are recognizing the environmental problems that come from chlorine bleaching and are requiring substantial pollution reductions in already operating pulp mills.

When a company wishes to produce paper from recycled paper processed with chlorine bleaching, it has to deal with a product that can result in producing dioxins in its waste. Furthermore, if there is any incineration of chlorine bleached paper, the resulting air emissions contain dioxins. Thus, producing chlorine bleached pulp continues to cause dioxin problems indefinitely.

The presence of dioxins and associated toxics in our waters results in higher drinking water costs for consumers downstream because of increased laboratory costs and expensive disposal costs of the contaminated filter media and other wastes.

The League of Women Voters urges the Water Resources Board to establish protections that ensure the health and safety of all humans and animals who will be affected by processes that produce dioxins and their associated toxins.

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