

**BUREAU OF THE ENVIRONMENT
ENVIRONMENTAL QUALITY BOARD**

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**MINUTES
WEST VIRGINIA ENVIRONMENTAL QUALITY BOARD
JUNE 30th, 2000**

I. General

On June 30th, 2000, a quorum of the members of the Environmental Quality Board (hereinafter referred to as the "Board") met at its offices located at 1615 Washington St. E., Charleston, West Virginia. Don Tarter, Co-Chair, called the Environmental Quality Board meeting to order at 1:00 p.m.

Other Board members present were as follows:

Ed Snyder, Co-Chair
Charles Jenkins

Absent were Board members:

David Samuel
Betsy Dulin

Whereupon, the Board addressed the issues set forth in the agenda as follows:

II. Rulemaking

1. 46 CSR 1 - Requirements Governing Water Quality Standards

A. Little Boyd (Kempco) Remining Variance request:

Previously the Little Boyd Coal Company submitted a formal remining variance application to the Environmental Quality Board. During the April 21, 2000, Board meeting, the Board members decided to delay a decision on the Little Boyd remining variance application until the draft permit was completed.

In response to questions raised during the June 1st, 2000, Board meeting during the discussion of the Little Boyd Coal remining variance application, the Board members were provided with a summary of the Board's past remining variance decisions for their review. A copy of this summary is attached to and made a part of these minutes as Exhibit "A".

Ken Politan, Office of Mining and Reclamation, informed the Board that the draft permit has not yet been written. He anticipates that the draft permit will be completed by August 17, 2000, which is the next scheduled Board meeting. The Board will again address the remining variance application during that meeting.

Ms. Chatfield asked whether the reported dam failure at a Little Boyd Coal Company site is located in the area which is the subject of the project proposed by the Company in its remining variance application. Mr. Lantz Rankin, a representative of Little Boyd Coal Company, stated that the site of the dam failure was approximately five air miles away. He also stated that it was not a pond overflow but rather a situation where a sediment ditch was blocked by a slide which in turn prevented the water from reaching the outlet and caused an overflow. The situation has been corrected.

B. Finalize proposed amendments to 46CSR1 Requirements Governing Water Quality Standards

Ms. Chatfield informed the Board that the USEPA Region III had provided written comments on the Board's proposed Legislative rule which outlines some of their concerns about the document. The three main areas of concern are 1.) the "grand fathering" of existing sources from antidegradation review, 2.) the exemptions to Tier 2 antidegradation review where there are possible sources of stream degradation, and 3.) the lack of procedures for assuring that there is achieved the "highest statutory and regulatory requirements for all new and existing point sources and all cost-effect and reasonable best management practices for nonpoint source control."

The USEPA also submitted a version of Appendix F (antidegradation implementation procedure) which includes strike-outs and underlines, suggested language which incorporates their recommendations, and general EPA comments.

Whereupon, Dr. Jenkins moved and Dr. Snyder seconded that the Board proceed with the current document as prepared and approved by the Board. The Board will attach the USEPA's document to the proposed rule when it is sent out to public notice which will allow the general public to provide comments on the USEPA's recommendations as well as the Board's document. The Board will then address the USEPA's concerns when considering all of the other comments received in response to the proposed Legislative rule. The motion passed unanimously 3 to 0.

The Board directed Ms. Chatfield to contact the USEPA through a formal letter in order to inform them of this action and to obtain feedback and clarification on the USEPA's concerns and suggested changes to the Board's proposed Legislative rule.

The Board then reviewed Appendix F of the proposed Legislative rule. The document reflects all of the language previously approved by the Board. Ms. Chatfield reviewed all sections with the Board and addressed several matters which required further action by the Board.

During the June 2, 2000, Board meeting the Board voted to adopt the list of Tier 2.5 waters which had been prepared by the Office of Water Resources (default list) and to develop a procedure for removing waters from that list. Section 4D.6.c. (Reclassification of a Designated Water of Special Concern) contains the language which reflects this decision.

However, on June 13, 2000, the Board received a letter from Allyn Turner, Office of Water Resources, which requested that the Board reconsider the adoption of this preliminary stream list to identify Tier 2.5 waters. A copy of this letter is attached to and made a part of these minutes as Exhibit "B". Dr. Snyder moved and Dr. Jenkins seconded that the Board remove the default list of Tier 2.5 waters from the proposed Legislative rule and that the Board adopt the appropriate list of Tier 2.5 waters once it is created by the Office of Water resources and becomes available. The motion passed unanimously 3 to 0. The Board hopes to have an accurate list of Tier 2.5 waters for consideration during the upcoming triennial review.

Also included in section 4D.6.c. is the language regarding the reclassification of a designated water of special concern which was included in the proposed rule when

the default list was adopted during the previous meeting. Dr. Jenkins moved and Dr. Snyder seconded that although the default list of Tier 2.5 waters has been removed from the proposed rule, the Board retain this reclassification language, and the motion passed unanimously 3 to 0.

The Board then reviewed the other portions of the proposed Legislative rule and addressed issues which required additional action by the Board. Section 7.2.d.16.2 contains the Weirton Steel Variance as previously granted by the Board. Weirton Steel submitted language to the Board, which has been reviewed and approved by the DEP. After reviewing the proposed language Dr. Jenkins moved and Dr. Snyder seconded that the Weirton Steel Variance language read as follows:

7.2.d.16.2. Except that a socio-economic variance shall apply to that segment of Harmon Creek (0-97) from its confluence with the Ohio River to a point 2.2 miles upstream, which shall not have water use Category A designation, and which shall have the following instream criteria: ~~Free Cyanide 6.9 ug/l, Daily Maximum; Lead 14 ug/l, Daily Maximum, Total Phenolic Materials 10 ug/l, Daily Maximum, Zinc 181 ug/l, Daily Maximum, Temperature 100° F (monitored per Footnote 12 of the permit); Iron 4.0 mg/l, Monthly Average and 8.0 mg/l, Daily Maximum (monitored per Footnote 12 of the permit); Fluoride 3.1 mg/l, Daily Maximum (monitored per Footnote 12 of the permit).~~ Provided, however, that the criteria for ~~Free Cyanide, Lead, Total Phenolic Materials, Zinc, Temperature and Iron~~ shall not apply, and instead the state-wide criteria for these parameters shall apply, unless: Weirton Steel Corporation (1) submits to the Office of Water Resources on or before ~~March 1, 2000~~ January 31, 2001 a report setting forth the water quality of the discharge from Outlet 004 for these parameters during ~~the period from May 1, 1999 to February 1, 2000~~ calendar year 2000; (2) offers further proposals for any appropriate reductions in the above excepted levels; (3) provides any appropriate additional engineering analysis of potential alternatives for reducing further the concentrations of said parameters in the discharge toward achieving statewide criteria; and (4) continues to submit to the Office of Water Resources on a semi-annual basis ~~commencing on December 31, 1999,~~ summary reports on the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation during the prior six (6) months to improve the quality of said discharge. Additionally Weirton Steel must determine the water quality of Harmon Creek both immediately upstream of and below the discharge of outlet 004 at the Con Rail Bridge by sampling for Flow, pH, ~~Free Cyanide, Total and Dissolved Lead, Total Phenolic Materials, Total and Dissolved Zinc, Iron, Fluoride, Temperature, Turbidity, Oil and Grease~~ and Hardness on at least a monthly basis and submit the results to the Office of Water Resources with the semi-annual report ~~commencing December 31, 1999.~~ These exceptions shall be in effect until action by the Environmental Quality Board to revise such exceptions or until ~~June 29, 2001~~ June 29, 2004, whichever comes first.

and the motion passed unanimously 3 to 0. The Board was also provided with a copy of the Weirton Steel semi-annual summary report regarding the water quality of the discharge and the efforts by Weirton Steel to improve that quality. A copy of this report is attached to and made a part of these minutes as Exhibit "C".

The Board then reviewed the language of Appendix E of the proposed Legislative rule and addressed the issues which required additional action by the Board.

Randy Sovic, Office of Water Resources, stated that he felt that the numeric values used for trivalent chromium and pentachlorophenol are incorrect. Ms. Chatfield informed the Board that those values were taken from the USEPA's 1999 National Guidance Document. Dr. Snyder moved and Dr. Jenkins seconded that the numeric values for trivalent chromium and pentachlorophenol be removed from the document. The document will include only the equation or formula to be used for determining the concentration of these parameters. The motion passed unanimously 3 to 0.

After discussion Dr. Snyder moved and Dr. Jenkins seconded that the reference to fish tissue body burden be removed from section 8.22.1 of Appendix E of the proposed Legislative rule and the motion passed unanimously 3 to 0.

After discussion Dr. Jenkins moved and Dr. Snyder seconded that the Board include the USEPA's Human Health Values for chlorophenol in Appendix E of the proposed Legislative rule and the motion passed unanimously 3 to 0.

After discussion Dr. Snyder moved and Dr. Jenkins seconded that the phrase "not to exceed" be added to section 8.24.2. (2-chlorophenol) of Appendix E of the proposed Legislative rule, and the motion passed unanimously 3 to 0.

After discussion, Dr. Jenkins moved and Dr. Snyder seconded that the Board approve the Statement of Circumstance, the Fiscal Note, and the Summary of Proposed Changes. These documents must be filed with the proposed rule. The motion passed unanimously 3 to 0.

Ms. Chatfield informed the members that the Board received several comments regarding the proposed iron criteria in the rule. Copies of these comments were distributed to the Board members. Copies of these comments have been attached

to and made a part of these minutes as Exhibit "D". The Board also considered statements regarding the iron water quality standard given by Kathy Beckett, Scott Goldman, Wayne Appleton and Timothy Mallan. After discussion the Board decided to retain the iron water quality criteria in the proposed Legislative rule.

Ms. Chatfield informed the Board that the WV Municipal Water Quality Association submitted a written comment requesting that the Board update the statewide ammonia criteria in the proposed Legislative rule. A copy of this letter is attached to and made a part of these minutes as Exhibit "E". After discussion Dr. Jenkins moved and Dr. Snyder seconded that the Board adopt the most recent ammonia standard provided by the USEPA, apply the early life stages throughout the State and allow the applicant to demonstrate that no early life stages of aquatic life in their particular stretch of discharge impact exist. The motion passed unanimously 3 to 0.

Whereupon, Dr. Snyder moved and Dr. Jenkins seconded that the proposed Legislative rule as amended, with attachments, be filed with the Secretary of State's office. A notice of public hearing and public comment period will be published which will set a public hearing on August 3rd, and the end of the written comment period for August 16th, 2000, and the motion passed unanimously 3 to 0.

III. ADMINISTRATIVE MATTERS

1. Review and approval of the June 1st & 2nd, 2000, meeting minutes:

The minutes of the June 1st and 2nd Environmental Quality Board meeting were presented to the Board for consideration.

Whereupon, Dr. Snyder moved and Dr. Jenkins seconded that the minutes of the June 1st and June 2nd, 2000, Board meetings, as written, be adopted, and the motion passed unanimously 3 to 0.

2. Budget Report:

Ms. Coleman provided the Board with a budget update. The Board will have approximately \$4,000 remaining in the groundwater account at the end of the fiscal year 2000. These funds will remain in the "roll-over" account and can be used during the next fiscal year.

3. Computer:

The Board was informed the Office of Air Quality has loaned the Environmental Quality Board a computer router. However, in order to upgrade this router the Board would need to purchase an ethernet card for approximately \$500.00. Staff is hesitant to expend the funds to purchase the ethernet card for use in old equipment that does not belong to the Boards and for which there is no lease or rental agreement. Another option is for the Board to purchase a new router which contains a DSU and ethernet card. The staff has been told that the cost of this equipment would be approximately \$1,500. The Board directed the staff to purchase the new router if that cost is correct.

4. Legislative Audit:

The Board discussed the results of the Legislative audit and the final report issued by the Legislative Auditor's Office. Each member was provided with a memorandum which explains the steps which the office staff has taken to correct the issues raised in the audit report. One issue raised in the Legislative audit but not included in the final report, was the fact that the Board does not use the bidding process when retaining the services of a court reporter. The Board directed the staff to write the specifications for a contract for court reporting services and implement the use of the bidding process. A copy of the final audit report and the memo which addresses the report are attached to and made a part of these minutes as Exhibit "F".

IV. APPEALS

1. Appeal #00-01-EQB(Ripley) and Appeal #00-02-EQB(Ravenswood) consolidated:

Ms. Charles informed the Board that on August 17, 2000, an evidentiary hearing is scheduled on combined Appeal #00-01-EQB and #00-02-EQB. However, the Appellee has filed a Motion for Summary Judgement in both appeals. After discussion the Board decided to continue the hearing scheduled in these appeals in order to rule on the Summary Judgement motions on August 17, 2000. If the Board does not grant the Summary Judgement motions a new hearing date for the appeals will be set.

2. Appeal #99-09-EQB(McClung) and #99-11-EQB(Knouse Foods) consolidated:

Ms. Charles informed the Board the parties of Appeal #99-09 and Appeal #99-11 have reached a settlement agreement. After review, Dr. Jenkins moved and Dr. Snyder seconded that the Board approve the proposed settlement agreement, and the motion passed unanimously 3 to 0.

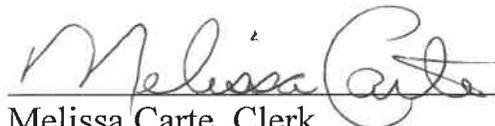
Ms. Charles reminded the Board that the remaining party to the consolidated appeal (99-10-EQB-Mason) was not involved in the settlement agreement. A hearing on that appeal was held on June 1, 2000, and a decision on the appeal will be made by the Board during the August 17th, 2000, Board meeting if the transcript of the hearing is received in a timely fashion.

V. Executive Session

Whereupon, Dr. Snyder moved and Dr. Jenkins seconded that the Board go into executive session to discuss personnel matters. When the Board reconvened, Dr. Tarter announced that no votes were taken while in executive session.

Whereupon, at 4:30 p.m. Dr. Jenkins moved and Dr. Snyder seconded that the June 30, 2000, Environmental Quality Board meeting be adjourned and the motion passed unanimously 3 to 0.

I hereby certify that the forgoing is a true and correct record of the proceedings of the meeting held on June 30, 2000, by the West Virginia Environmental Quality Board. The minutes were amended and approved by the Environmental Quality Board on August 17th, 2000.


Melissa Carte, Clerk



ENVIRONMENTAL QUALITY BOARD

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MEMORANDUM

To: Board Members
From: Libby Chatfield
Subject: Summary of Remining Variance Decisions
Date: June 23, 2000

In response to questions raised at the April 21st meeting during the discussion of the Little Boyd Coal remining variance application, the following is a summary of the alternate criteria in remining variances granted by the Board to date.

We anticipate that DEP's draft permits for Little Boyd will be completed by the June 30 meeting. Please let me know if you have questions about this information before the meeting.

1. Uphold Trucking Co. Unnamed tributary of Big Sandy Creek, Preston County

Alternate Criteria

Iron: 7.12 mg/l

Premining data established range of 0.1 to 8.9 with average of 3.9. Alternate criterion was established based on 20% improvement over the maximum recorded value.

Manganese: 5.76 mg/l

Premining data established range of 2.0 to 7.2 mg/l with an average of 4.0. Alternate criterion based on 20% improvement over maximum recorded value.

pH: 3.3 - 9.0 SU

— Exhibit "A"

Premining data established range of 2.85 to 3.6 SU with an average of 3.17. The low end of the range granted for the alternate criterion was based on 20% improvement of minimum recorded value.

Flow Information

Pertinent excerpt from application:

One complicating factor in the discharges of acid mine drainage is that when the drainage enters the stream the dissolved iron begins to oxidize and precipitate as ferric hydroxide. If the instream monitoring point is some distance downstream from the discharge point, the instream total dissolved iron load can actually be less than the total dissolved iron load coming out of the discharge. That is true in this case, where the instream monitoring point is approximately 1,000 feet downstream of the mine discharge monitoring point. **On average, the mine discharge S-6 (existing mine discharge to be affected by the remining operation) contributes about 25% of the total flow to the stream at S-2 (instream monitoring point).** There is also, on average, a 68% reduction in total dissolved iron load and an 80% reduction in total acid load between the discharge point and the upstream monitoring point.

Reclamation Methods

The following are pertinent excerpts from the application on prior reclamation in area; practices which are proposed to be employed in requested remining project:

The plan that was used involved placing coal ash material from fluidized-bed process type power plants in the pit areas prior to backfilling. After coal removal was completed the pit area was prepared for the ash placement. The pavement of each pit was scarified and ripped approximately two feet in depth prior to the ash placement. This was performed to allow exposure of the alkaline based pavement and intermixing of the ash material. The combination of these practices have resulted in an improvement of water quality discharges.

Regarding other reclamation options considered:

Limestone amendments were considered as a replacement for the coal ash material but at the request of the WVDEP OMR was later abandoned. The general opinion from past experience was that better results could be expected from the ash material.

2. Mepco, Inc Mays Run and Booths Creek, Monongalia County

Mays Run - Alternate Criteria

pH: 4.305 SU

Premining data established lowest pH value of 4.1; average was 4.8. Alternate pH minimum value granted represents a 5% improvement over the lowest recorded value.

Manganese: 2.08 mg/l

Premining data collection established the highest manganese value of 2.19; average was 1.2. Alternate manganese criterion granted represents 5% improvement over highest recorded value.

Booths Creek - Alternate Criteria

pH: 4.41 SU

Premining data collection established a low pH value of 4.2; average was 4.68. Alternate criterion granted represents a 5% improvement over lowest recorded value.

Manganese: 5.0 mg/l

Premining data collection established a maximum manganese value of 5.26 mg/l; average was 2.18. Alternate criterion granted represents a 5% improvement over highest recorded value.

Reclamation Method

Pertinent excerpt from application (also see Attachment #1):

Overburden with a positive potential acidity will be placed in the backfill where it is not in contact with the highwall of the pit pavement. Placement will be in such a location to eliminate water contact except for direct vertical or sub-

vertical infiltration of precipitation. The pavement will be cleaned after coal removal and the pit cleanings placed as potentially acidic material. After cleaning, the pit floor will be covered with a calcareous amendment such as fluidized bed ash.

Topsoiling and revegetation will occur contemporaneously with backfilling to the extent possible that weather will allow. This will minimize water and air filtration into the backfill. Revegetation will help seal the surface and increase runoff, thereby raising the carbon dioxide level in the backfill and the resultant solubility of carbonate materials (Sensindiver, 1982)

Flow Information

Excerpt from Mepco, Inc variance application (letter from Mepco dated February 17, 1998):

The discharges from the portion of proposed remining site, which flow into Mays Run, represent on the average only 17% of the total flow. The proposed portion of the remining operation, which flows into Booths Creek, is only 1% of the total flow entering this stream. Mepco, Inc. believes that the proposed alkaline additions and reclamation of the areas to be mined will have a beneficial effect on the quality of both streams.

3. Ali Co. Unnamed Tributary of Birds Creek, Preston County

Alternate criteria:

pH: 4.5 SU

Premining data established an average recorded value for pH of 4.9 SU. The alternate criterion represents the lowest recorded instream value for pH.

Manganese: 3.23 mg/l

Premining data collection established an average value for manganese of 1.99 mg/l. The alternate criterion represents the highest recorded value for manganese from premining data.

Reclamation Method:

Pertinent excerpts from the remining variance application: (also see Attachment #2)

Coal pavement at this site is potentially acidic and is the main area of concern. The operator shall seal the pit floor with a total of 26,136 tons of agricultural lime from Greer Industries' facility near Masontown, WV, providing a minimum 1.0' thick layer across the entire pit floor. This material will be placed on the pavement and compacted using dozers and loaders to inhibit water and air infiltration and potential degradation.

Also:

The Article III and Article XI permits submitted to the WV Division of Environmental Protection require an Alkaline Amendment to be applied to the pavement of the Bakerstown Coal Seam. The permit requirement to use an agricultural lime amendment, as proposed, represents the application of best technology that is economically achievable using best professional judgment.

4. D&L Coal Company Unnamed tributary of Emory Creek, Mineral County

Alternate Criteria

Iron = 3.44 mg/l

Premining data established range of 1.24 to 8.7 with an average of 3.62. Alternate criterion of 3.44 was established based on a 5% improvement of the average recorded value.

Manganese = 13.25 mg/l

Premining data established range of 6.9 to 23.9 with an average of 13.95. Alternate criterion based on 5% improvement of average recorded value.

pH: = 3.69 - 7.50 SU

Premining data established range of 3.14 to 3.98 with an average of 3.51. The low end of the alternate criterion range was based on 5% improvement of average recorded value from the premining data.

Reclamation Techniques

Excerpt from Remining Information Sheet (also see Attachment #3):

Practices expected to improve the instream concentrations of the parameters at issue include removal of abandoned working and elimination of the pre-existing drainage path within the mine headings. Coal fines and cleanings will be removed from the pit floor and elevated in the backfill to prevent contact with water following final reclamation of the mine site. Erosion protection practices, elimination of existing highwalls and reclamation practices are expected to improve water quality instream.

(Excerpt from the PHC of SOAP 220 and SMA 1008-96)

Hydrogeologic Environment

As previously discussed under the lithology section, pyrite in the overburden can oxidize when exposed to air and water during mining and in the reclaimed backfill and form AMD. The mining plan devised for the proposed operation should seek to limit the length of time that the overburden is left unreclaimed, thereby helping to reduce the pyrite oxidation in the backfill by reducing the degree to which the overburden is exposed to air and water.

The outcrops of the backfill are generally areas of increased aeration. This increased aeration results in a greater potential for acid generation. As the site in its present form has exposed coal seams, highwalls, and orphan spoil ridges, the old outcrops will be utilized and will result in a reduction in surface area subject to oxidation.

Overburden with a positive potential acidity[?] will be placed in the backfill where it is not in contact with the highwall or the pit pavement. Placement will be in such a location to eliminate water contact except for direct vertical or sub-vertical infiltration of precipitation. The pavement will be cleaned after coal removal and the pit cleanings placed as potentially acidic material. After cleaning, the pit floor will be covered with a calcareous amendment such as fluidized bed ash.

Topsoiling and revegetation will occur contemporaneously with backfilling to the extent possible that weather will allow. This will minimize water and air filtration into the[?] backfill. Revegetation will help seal the surface and increase runoff, thereby raising the carbon dioxide level in the backfill and the resultant solubility of carbonate materials. (Sensindiver, 1982).

The blasting plan will be devised to take into account the differences in the overburden strata. In other words, the blasting plan will be devised and conducted in a way which best ensures that maximum breakage is obtained. This will reduce the size of the resultant rock in the backfill, thereby reducing the size and number of voids through which water and oxygen may travel, which in turn should reduce the oxidation of pyrite.

If the above recommendations for improving the hydrogeologic environment of the backfill are followed, then the answer for our first consideration, 'Will acid mine drainage be produced and contaminate surface waters and/or ground waters?' when all factors are considered must be NO.

Conclusion

The data and attendant discussions show that no adverse effects on existing ground and surface water quality and quantity are expected to result from the surface mining of the proposed area apart from the possible production of acid mine drainage. Therefore, the ultimate determination of the probable hydrologic consequences for this operation can be distilled in one question, "Will acid mine drainage be produced by the operation?" A review of the data shows:

1. The MPA to NP ratio is .59 which falls within the .50 and .75 range suggested by Ziemkiewicz (1992) to produce neutral drainage.
2. Others suggest that the NP be two times the MPA. The NP is close to that requirement, but falls short 1.71 times the MPA.
3. At 2.56% the NP of the overburden exceeds the 1.0% minimum required for neutral discharge as suggested by diPreto and Rauch (1988).

4. The sulfur content of the overburden is .48% which is below the .50% level that Ziemkiewicz and Skousen (1992) see as the floor for the production of AMD.
5. The Soxlet Study showed that the leachate from the overburden will produce an alkaline discharge.
6. At 51.98% shale, the lithology of the proposed operational area exceeds the 37% minimum requirement suggested by diPretoro and Rauch (1987) by 1.4 times.
7. Drainage from an orphan surface mine on the south side of Mays Run (which like the proposed operation contains only surface mine drainage and not a mixture of underground and surface mine drainage as is the case with most AMD in the area) shows a neutral discharge. SEE WATER SAMPLES RM-1 and RM-2.

Of the seven above mentioned criteria, six show that the proposed operation will not produce AMD and that the drainage will be neutral to slightly alkaline (#1, #3, #4, #5, #6, and #7). Add to that a mining plan which emphasizes proper blasting techniques, proper placement of materials, a minimum exposure of overburden to oxygen and water, and an extensive topsoiling and revegetation plan, and the probability of neutral to alkaline drainage seems assured. However, MEPCO, Inc. also proposes the addition of Alkaline Fly Ash to the overburden as noted in the application and second Soxlet Study. This additional step WILL ENSURE an alkaline drainage from the proposed operational area.

Finally, it should be noted that although this writer believes without question that this operation will discharge alkaline drainage, this is a proposed mining operation which falls under

the drainage requirements of the remaining policy of the State of West Virginia. As such, it will only be required to meet the Best Professional Judgment standards as determined in the NPDES application. That it will be able to meet those standards is unquestionable.

The 9, 907 gallons per/day represent 2.2% of the total flow. Interestingly the calculated infiltration rates of 6.88 gpm correlates strongly to the 12 month measured average flow of 7.21 gpm at station #5.

Tritrated samples from site #8 and site #5 were analyzed to determine what effect an increase in alkalinity at the mine site would have on pH and manganese at sample site #8 and if that effect is detectable. The results of the Tritrated Analysis are attached.

REQUESTED CRITERIA

Based on the above information, **ALI Co.** requests that the alternative numeric water quality criteria at monitoring station #8 be modified for pH and manganese to reflect a report only numeric quality of pH and manganese.

Unnamed Tributary of Birds Creek

<u>SITE</u>	<u>PARAMETER</u>	<u>CRITERIA</u>
Sample Site #8	pH	Report Only
Sample Site #8	Manganese	Report Only

H. ABATEMENT PLAN

Ali Co. proposes to re-mine approximately 12 acres of a remaining Bakerstown mineral reserve which was previously surface mined in the 1950's. There is presently 1800 lineal feet of abandoned highwall surrounding the small hill top.

Exploratory drilling at the site indicates that there is approximately 62,712 tons of coal on the site with an average overburden height of twenty-four (24) feet. The cubic yard ratio of spoil to coal is 7 to 1 which indicates that the proposed operation is within current economic industry standards. The coal quality is typical of Bakerstown coal found in the region. Previous mining is believed to have ceased due to a dispute over coal ownership.

According to the mining plan, mining operations begin with the construction of the erosion and sediment control structures on the perimeter of the operation. The next step will be the construction of the access road utilizing sandstone overburden from the northern end of the mining area. The sandstone will make an excellent base for the road and its use in this manner places nearly 10% of the material high, dry and away from normal acid producing regions, such as the bottom of the pit floor.

The initial pit floor will be covered with a 1.0' thick layer of agricultural lime prior to placement of the overburden.

As the mining operation progresses, the overburden from the cut will be used to backfill the preceding cuts. Potentially acidic or toxic strata, as identified in Section I of the SMA application, will be segregated from the alkaline and non acidic / toxic material and placed as shown on the Material Handling Plan Map (Attachment MR-4-O-8, SMA 1002-98).

The coal pavement at this site is potentially acidic and is the main area of concern. The operator shall seal the pit floor with a total of 26,136 tons of agricultural lime from Greer Industries' facility near Masontown, WV, providing a minimum 1.0' thick layer across the entire pit floor. This material will be placed on the pavement and compacted using dozers and loaders to inhibit water and air infiltration and potential degradation.

The effectiveness of different acid preventive methods has been studied and documented by many individuals and academic institutions. Dr. Jeffrey G. Skousen and Dr. Paul F. Ziemkiewicz have reported the results of some of the studies in a 1995 publication by West Virginia University and National Mine Land Reclamation Center Titled Acid Mine Drainage Control and Treatment.

One of the most effective methods described for preventing AMD was the development of a proper seal over an acid producing material.

According to the procedures outlined in the above referenced publication, the estimate of the amount of limestone or alkalinity needed to neutralize an amount of AMD, the acid load must be determined.

$$\text{Flow in gpm} \times \text{acidity in mg/l} \times .0022 = \text{tons of acid/year}$$

Utilizing CaCO_3 tons acid/year $\times 1.0 =$ tons CaCO_3 needed to neutralize acid/year.
Calcium carbonate does not usually completely dissolve, so more is usually needed.

Sample Site #5

Average Flow 7.21 gpm \times 169.78 average acidity mg/l \times .0022 = 2.69 tons of acid/year.

2.69 tons of acid/year $\times 1.0 =$ 2.69 tons of CaCO_3 at 80%
 CaCO_3 content = an effective material content of 20,909 tons.

The life of the alkaline amendment can be determined by dividing the required 2.69 tons into 20,909 available tons. According to the calculation, this application has a life of 7,773 years. Based on this analysis sufficient material is being applied to neutralize the existing acid mine drainage discharges.

Potentially acidic or toxic material, including coal cleanings, sludge from sedimentation structures, and potentially acidic or toxic strata in the overburden will be segregated from the alkaline overburden. Upon backfilling operations, this potentially acidic or toxic material will be placed at a minimum 10 feet above the pit floor, 10 feet below the final surface elevation, and 10 feet away from the final highwall, should the operator cease mining before all mineral is removed. Where insufficient cover does not allow for proper placement and isolation of the potentially acidic / toxic material, as outlined above, the operator shall move this material towards the center of the site where sufficient cover will allow for the proper placement. Alkaline and non-acidic / toxic material will be placed below, above, and around this material and compacted to eliminate water and air infiltration to the potentially acidic or toxic material. The clay stratum identified in

Section I of this application will be used to cap this site. Upon completion of backfilling, the operator will redistribute and compact the clay stratum evenly across the site, followed by the placement of topsoil. Please see the attached Material Handling Plan Map (Attachment MR-4-O-8, SMA 1002-98).

The topsoils and subsoils will be used immediately in the reclamation process or stored within the permit area at the discretion of the operator and with the permission of the DEP inspector. Upon completion of backfilling and regrading, any topsoil stored on the permit area will be redistributed evenly on the reclaimed site. Lime will be added to topsoil at a rate of 2.8 tons per acre to raise the pH to 6.0.

HYDROLOGIC PROTECTION PLAN - The overburden evaluation indicates potentially toxic material as a negative net alkalinity. Potentially toxic zones have been identified at the shale units which lie immediately above the Redstone coal and the clay pavement of the Pittsburgh coal. Historically, coal cleanings left on the pavement within the abandoned deep workings (at the horizon of the Pittsburgh coal seam) result in samples with higher toxicity than the actual coal seam pavement. When exposed and generated during mining, coal cleanings shall be removed from the Pittsburgh pavement and elevated in lower portions of the backfill above the coal seam pavement to prevent contamination of groundwater. Prior to disposal of the potentially toxic zones in the backfill, a blanket (minimum thickness of 15 feet) of "clean" overburden shall be placed on the pavement. Clean overburden in this regard shall consist of any material with a minimum of excess calcium carbonate equivalent value of 20 tons/1,000 tons of calcium carbonate equivalent. Periodic laboratory testing of the "pad" material shall be conducted to determine adequate alkalinity requirements. Potential toxic material shall be placed in the backfill at least 40 feet from the final highwall. Supplemental water quality improvement is proposed by utilizing limestone as rock rip-rap for the ditches as indicated on the design details.



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

West Virginia Division of Environmental Protection

Cecil H. Underwood
 Governor

Michael C. Castle
 Director

June 13, 2000

Donald C. Tarter, Co-Chairman
 Edward M. Snyder, Co-Chairman
 Environmental Quality Board
 1655 Washington Street, East
 Charleston, West Virginia 25311



RE: Tier 2.5 Streams List

Dear Chairpersons:

Pursuant to a request made by the Anti-degradation Stakeholders during their March 14, 2000, meeting, the Division of Environmental Protection's Office of Water Resources (OWR) prepared a preliminary list of the streams in West Virginia that could potentially fall within the Tier 2.5 general description of Waters of Special Concern as described in 46 CSR 1, §4.1.c of the Board's anti-degradation policy. I am writing to ask the Board to reconsider its June 2, 2000, decision to adopt that preliminary stream list to identify Tier 2.5 waters.

As you know, the following streams are generally described as "Waters of Special Concern:"

- All Federally designated rivers under the "Wild and Scenic rivers Act" Public Law 95-542 as amended, 16 U.S. C. 1271, et seq.
- All naturally reproducing trout streams.
- All streams and other bodies of water in State and National Forests and Recreation Areas.
- National Rivers. "National Parks and Recreation Act of 1978." Public Law 95-625, as amended, 16 U.S. C. 1, et seq.

The preliminary list was not completed until after the final meeting of the Stakeholders, and thus was not evaluated or discussed by them prior to concluding their deliberations on

"To use all available resources to protect and restore West Virginia's environment in concert with the needs of present and future generations."



West Virginia
 Division of
 Environmental Protection

Exhibit "B" —

Donald C. Tarter
Edward M. Snyder
June 13, 2000
Page two

April 17, 2000. However, a copy of the preliminary list was provided to the Environmental Quality Board,¹ sponsor of the Stakeholder process, when it was completed.

To clarify, the list was a task that OWR agreed to undertake, with all stakeholders acknowledging at the time that the scope of the undertaking—both in time and scale—may result in complications and inaccuracies.

The list was prepared by OWR staff in consultation with the State TAGIS group based upon the only scale available (1:100,000). Staff prepared the list with the disclaimer that it had not been checked for accuracy and would require further evaluation and refinement.

The DEP favors creation of a process that allows the Board to begin listing streams in the regulation that warrant Tier 2.5 protection. In the interim, however, DEP proposes that the Board provide for case-by-case analysis of those streams or segments of streams that potentially fall within the broadly described Tier 2.5 areas.

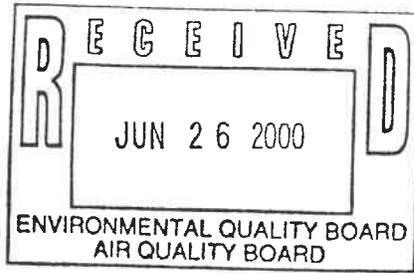
In order for DEP's permitting staff to efficiently implement the anti-degradation policy and new procedures, it is essential that an appropriate and well-defined list of Tier 2.5 waters be generated. Generation of such a list, though, should be the result of careful analysis and public input. The list that OWR provided to the Board was admittedly preliminary, and was not submitted to the Board as a final list of Tier 2.5 streams. I therefore urge the Board to reconsider its June 2, 2000, decision to adopt the preliminary stream list provided.

Very truly yours,


Allyn G. Turner

cc: Michael C. Castle, Director, DEP
John H. Johnston, Deputy Director, DEP
Elizabeth Chatfield, Esquire
Randolph M. Sovic, Tech. Ass't, OWR
Anti-degradation Stakeholder Group members

¹ The list was forwarded to Ms. Elizabeth Chatfield, Technical Advisor for the EQB, prior to the EQB's May 11, 2000, meeting.



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

Certified Mail

June 20, 2000

Ms. Allyn Turner, Chief
WV Division of Environmental Protection
Office of Water Resources
1201 Greenbrier Street
Charleston, WV 25301

Re: **Weirton Steel Corporation**
Harmon Creek Socio-Economic Variance
Semi-Annual Summary Report

Dear Ms. Turner:

This letter serves as the required semi-annual summary report regarding the water quality of the discharge from Outlet 004 and the efforts made by Weirton Steel Corporation (WSC) to improve the quality of this discharge during the previous six (6) months. As you are aware, Section 7.2.d.16.2 of Title 46, Series I of the West Virginia Environmental Quality Board's Legislative Rules Governing Water Quality Standards, require that WSC submit this information to the Office of Water Resources (OWR) on a semi-annual basis.

Water Quality from Outlet 004

A summary of the water quality of the discharge from Outlet 004 for the variance parameters during the period December 1, 1999 through May 31, 2000 is attached.

Efforts to Improve the Quality of the Discharge from Outlet 004

The following programs to improve the quality of the discharge from Outlet 004 are underway:

1. **Discharge from C&E Treatment System**

- The Company is presently finalizing detailed engineering and has initiated construction which will result in 15 oil cellar sumps in the Strip Steel Department (which presently discharges to the C&E or Hot Mill Wastewater Treatment Plants (WWTP)) being diverted to the on-site oil recovery facility (U.S. Filter) for subsequent processing and treatment. Removing the oil sources from the high flows which discharge to the C&E and Hot Mill WWTP should result in significant reductions in oil loadings to these facilities.

Exhibit "C"

- Bypasses at the scale pit were identified in January and were due to sluiceway leaks which allowed wastewater from the Hot Mill to enter a tunnel and discharge to a drain which emptied into the C&E sewer system. This was corrected by drilling three 10" holes in a three foot thick concrete wall and installing a riser pipe on the tunnel drain so that sluiceway leaks will be diverted to the scale pit for subsequent pumping to the Hot Mill treatment system.
- Fine scale particles not removed by the Hot Mill treatment system's rectangular sedimentation basins and gravity filters are being treated with various polymers to increase particle size. However, the Company continues to optimize this treatment program to avoid the formation of too large a particle that results in filter plugging and increased filter backwashing.

2. **Discharge from the Continuous Cooler Open Water System**

As required by the Consent Decree, this project, which is scheduled for completion on or before December 3, 2000, includes eliminating the discharge from Outlet 304 by reducing the blowdown from the cooling towers, collecting the deep bed filter backwash for treatment at the BOP scrubber and improving the oil removal system at the caster clarifiers. This project is currently under construction.

3. **Engineering Analysis**

WSC prepared a report in support of its request for a socio-economic variance at Harmon Creek from certain statewide water quality criteria. As part of that report, a preliminary engineering study was prepared which outlined the costs for modifications to the C&E WWTP for complying with the state-wide criteria for temperature, lead, zinc and iron. A copy of the report was previously provided to OWR.

The next semi-annual report will be submitted to the OWR on or before December 31, 2000. Should there be any questions regarding this matter, please contact this office.

Very truly yours,



Mark Vignovic
Director, Environmental Control

MV:eam
<mv\dep.turner.harmon.crk.summary>
Attachment

c: **Elizabeth Chatfield (EQB)**

Effluent Data from WSC NPDES Outlet 004

Date	Temp.	Phenols	Free Cyanide	Fluoride	Iron	Lead	Zinc
12/6/99	65	<2	1	0.59	5.29	7	30
12/13/99	62	<2	1	0.75	9.91	7	2
12/20/99	58	<2	1	0.70	10.43	4	30
12/27/99	55	<2	1	0.72	7.88	3	30
1/3/00	56	<2	1	0.47	16.93	4	70
1/10/00	56	<2	1	0.69	5.61	4	20
1/17/00	54	<2	3	1.22	16.16	4	50
1/27/00	50	<2	3	0.81	2.57	2	30
2/1/00		<2	1	0.46	4.45	9	100
2/7/00		<2	1	0.48	6.07	2	120
2/14/00	43	<2	3	0.45	14.18	6	70
2/22/00	46	4	1	0.64	7.56	12	130
2/28/00	55	<2	3	3.4	11.83	6	80
3/6/00	57	4	0	0.89	7.06	3	50
3/14/00	52	<2	1	0.88	3.96	2	10
3/20/00	57	<2	1	0.64	3.33	2	30
3/27/00	58	<2	1	0.64	7.61	3	30
4/3/00	61	<2	3	0.40	4.62	3	30
4/10/00	55	<2	1	0.93	7.59	7	60
4/17/00	63	<2	4	0.51	2.36	3	20
4/24/00	59	2	5	0.43	16.60	3	60
5/1/00	62	<2	1	0.55	7.73	5	70
5/8/00	76	<2	3	-	4.21	3	20
5/16/00	80	<2	1	-	2.32	4	40
5/22/00	77	<2	1	-	8.34	2	40
5/30/00	74	<2	4	-	2.51	6	40

Jun 28 00
Cedarville WV

EQB
Charleston WV

Re Little Kanawha Watershed

Dear Sirs:

I would urge you gentlemen to reconsider the standard of water quality, in relation to Little Kanawha River, due to the impact that the presently proposed standard would create. I request you re-study the iron standard as the failure of EQB to act will certainly be felt down the line to those living & trying to make a living in the area. My letter may be late but it was the best timing I could do. Respectively

John G. Muddick

NE36 BC296
Cedarville WV 26011-7501

Exhibit "D" -

6/27/2000

Ralph J Bame
Science Division
Glennville State College
Glennville, WV 26351



Dear Environmental Quality Board:

I am a long time Farm Bureau member and Geology-Earth Science professor. I have helped students conduct research on water chemistry for many years.

I do not agree with using iron content as a measure of water pollution. Pollution is defined as something mankind somehow causes, and is not natural to our environment.

High iron content is very common in drilled water wells and springs sampled in our area. Also, very potent below old coal mine drainage. Iron is not a problem in old dug wells. Since iron is in our ground water, it moves into permanent Rivers in dry times. Iron is put into solution during heavy rains from our red clay soils.

These natural events far outweigh the iron added by farmers and others disrupting the surface.

Please consider reducing or eliminating the iron standard.

I am willing to help monitor iron in watersheds near Glennville, with the help of our students, and your guidance

Thanks, Ralph J Bame (on summer vacation)

June 26, 2000

TO: Environmental Quality Board

FR: Alvin Engelke, President of Wirt County Farm Bureau

Re: TMDL – Little Kanawha River



Gentlemen:

As a lifelong resident of the Little Kanawha drainage I am writing you a letter of concern over proposed "pollution" regulations and subsequent infringement on private property rights by those who don't believe in private ownership of land.

In addition to a farm background and a philosophy of strong concern for the evils of erosion and sedimentation. I would note that I have a B.S. in chemistry. In graduate school I studied aquatic biology and biochemistry as well as plant physiology. I feel I can make reasonable scientific evaluations of situations.

My old botany teacher, who had a Ph.D. from Harvard, often referred to "pseudo science." I believe adding acid to river water that is turbid to dissolve the suspended (insoluble) iron and aluminum compounds would qualify as such.

Acid mine drainage and pollution from illegal dumping such as at the old R and P deep mine above Glenville are issues that should be addressed. The "night time" tanker traffic deserves serious attention.

Good farming practices, sustained yield forestry and oil and gas operations, as we well know them, have a minimal impact on water quality.

I would urge you to modify the standards and testing so that they would at least qualify for a high school science fair project. Thank You.

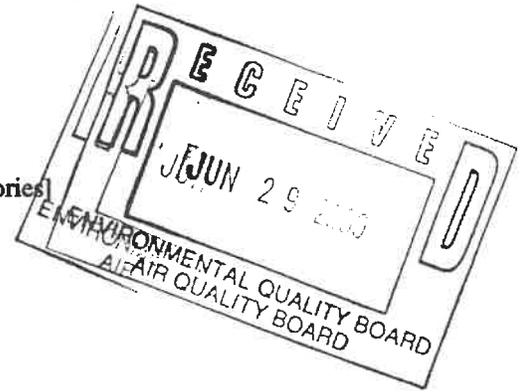
Sincerely Yours,

Alvin L. Engelke

ALE/sld

June 23, 2000

[Revised June 26, 2000 to include additional signatories]



West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25312

Re: Iron Water Quality Standard

Dear Members of the Board:

Since 1983 West Virginia's water quality standard for iron has been set at a level of 1.5 mg/l for warm-water fisheries and 0.5 mg/l for trout streams as measured by the "total" metals methodology. The Board has taken action with respect to all other water quality standards for metals to change those standards from a "total" basis to a "dissolved" basis. At the same time the United States Environmental Protection Agency ("EPA") has objected to the current iron water quality standard for West Virginia for the reason that that standard is inconsistent with EPA's water quality criteria document published in 1976.

For many years the undersigned organizations have been encouraging the Board to review and revise the manner in which it regulates iron as a water quality standard. For the reasons listed below, we renew our request for action to be taken on the iron water quality standard. Specifically we ask that the iron water quality standard be deleted in its entirety or, in the alternative, that the iron water quality standard be suspended while the basis for its development is made the subject of scientific scrutiny.

1. West Virginia is one of only a very few states in the nation that has a water quality standard for iron at all. The existence of this standard in West Virginia at a time when other states do not, places West Virginia at a significant competitive disadvantage to attract new business and retain current businesses. In addition, it causes our regulatory agencies to needlessly commit resources to address a water quality standard that is not being pursued by most of our neighboring states.

2. There is no EPA mandate for West Virginia or any state to have a water quality standard for iron. Recently the State of Ohio finalized a rulemaking action in which it deleted its iron water quality standard. In doing so the state of Ohio concluded "there are inadequate data to support the current criterion or to develop a valid alternative numerical value."

3. EPA has agreed with the Electric Power Research Institute to allow that organization to fund a review and possible revision of EPA's water quality criterion for iron which has not been updated since its development in 1976. That review is expected occur over the next two years.

4. In the meantime, the iron water quality standard is having significant regulatory impact on sources and regulatory agencies in West Virginia. This is particularly the case with respect to the significant efforts that are now being expended to develop and implement TMDL programs for several watersheds.

5. More specifically, the Little Kanawha watershed is currently the subject of the development of six TMDLs for the sole purpose of attempting to achieve compliance with the iron water quality standard. While initially the Little Kanawha TMDL process had also targeted the aluminum water quality standard, the Board's recent action changing the aluminum water quality standard to "dissolved" effectively moots the TMDL for aluminum. Should a total iron TMDL for the Little Kanawha be implemented, significant new restrictions will likely be placed on such non-traditional pollution sources as highways, farming, silvicultural activities, and activities of any other kind that involve mere surface disturbances. There are very few traditional point sources located in the Little Kanawha watershed. Hundreds of residents of the Little Kanawha watershed have already expressed their concern about the impact of this iron-based TMDL on their livelihoods and quality of life.

6. Because the NPDES permit program provides several bases for the regulation of sources other than through water quality based effluent limits, DEP would continue to have authority to regulate iron even with the elimination of the iron water quality standard. NPDES permits will continue to contain technology-based effluent limitations for iron where called for by effluent guidelines or best professional judgement. Should a source need to be regulated with respect to iron to correct an obvious pollution problem and technology limits either do not apply or are inadequate, DEP would continue to have the ability to place appropriate limits in the permit under the narrative "free-from" provisions of the regulations of the Board. Such limits would be determined on a case-by-case basis using appropriate scientific information available at the time of the action. In addition, any stream included on the state's 303(d) list or subject to a TMDL for any water quality standard other than iron would continue unchanged. In addition, past water quality - based permit conditions for iron would remain in effect in those permits that contain water quality based iron limits until those permits are renewed.

We believe that all parties concerned about this issues would benefit from dedicating available resources to supporting the EPRI/EPA review of the scientific basis for the iron criteria than to continue to implement a standard with such a questionable scientific basis.

Accordingly the undersigned organizations urge that the Board consider this matter at its first opportunity and to act by either: (1) deleting the iron water quality standard altogether; or (2) suspending the iron water quality standard pending the review of EPA's water quality criteria document for iron.

Very truly yours,

West Virginia Chamber of Commerce
By: David M. Flannery
David M. Flannery
Chair, Environmental Committee

West Virginia Farm Bureau
By: R. Steve Hannah
R. Steve Hannah
Executive Director

West Virginia Forestry Association
By: Richard Waybright
Richard Waybright
Executive Director

Independent Oil and Gas Association
of West Virginia
By: Robert Radabaugh
Robert Radabaugh
Chair, Envir. Committee

West Virginia Coal Association
By: William Raney
William Raney
President

Contractors Assn. of West Virginia
By: Michael Clowser
Michael Clowser
Executive Director

West Virginia Mining and Reclamation Assn.
By: Benjamin Greene
Benjamin Greene
President

West Virginia Manufacturers Assn.
By: Karen Price
Karen Price
President

cc: The Honorable Cecil H. Underwood
State Capitol Building
Charleston, WV 23505

Charles R. Jenkins, Ph.D.
432 Wilburn Street
Morgantown, WV 26505

David Samuel, Ph.D.
1 Harvest Drive
Morgantown, WV 26508

Edward M. Snyder, Ph.D.
P.O. Box 987
Shepherdstown, WV 25443

Donald C. Tarter, Ph.D.
38 Lynn Morr Drive
Huntington, WV 25705

Betsy E. Dulin, P.E.
3909 Kanawha Avenue
Charleston, WV 25304

Michael Castle, Esq.
John H. Johnston, Esq.
Edward L. Kropp, Esq.
Allyn Turner, Esq.

6-23-2000

W.V. State Environmental Quality Board,

I am requesting immediate action from the E. Q. B. in changing the iron standard for the Little Kanawha River.

I feel that failure of the E. Q. B. to act on this matter will have a detrimental affect on the farming, timber, oil-gas, construction and all other land use industries in our County. (Wood)

I also feel that the E. Q. B. needs to review the iron standard as it applies to water quality, and use good science in establishing standards for water quality goals.

yours truly,

Donald L. Wine





June 21, 2000

Environmental Quality Board
1650 Washington St., Suite 301
Charleston, WV 25311-2126

Dear Sirs,

On behalf of the Roane County Farm Bureau, I'm writing to express our concern with the water quality standards involving iron.

The Little Kanawha Watershed has been targeted by the US EPA for TMDLs because the WVDEP found levels of iron that exceeded the standards set by you, the Environmental Quality Board. Our understanding is that there is not any scientific evidence that naturally occurring iron is an environmental threat unless the water pH is lower than what you would find naturally in the Little Kanawha Watershed.

Please change the iron standard so that it will address any environmental threats to water quality based on scientific evidence. We ask this because the TMDLs would have a detrimental affect on the farming, timbering, oil and gas, construction and all other land use industries in our county without improving water quality.

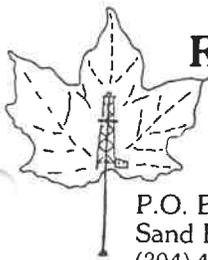
We want clean water and a healthy environment in which to work and live and would support what it takes for that to occur.

Thank you for your consideration.

Sincerely,

Jim Slingerland

Roane County Farm Bureau President



**Radabaugh
Environmental
Services**

P.O. Box 143
Sand Fork, WV 26430
(304) 462-7006



June 26 , 2000

Libby Chatfield / Technical Advisor
WV Environmental Quality Board
1615 Washington St. East
Charleston, WV 25312

RE: Iron Water Quality Standard

Dear Ms. Chatfield,

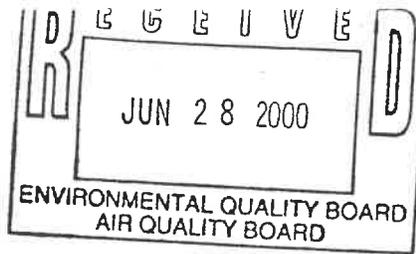
The recent action by the U.S. Environmental Protection Agency, in pursuing the TMDL for the Little Kanawha River Watershed, creates tremendous cause for concern that requires immediate action by the Board.

That TMDL is seeking to impose changes in farming, forestry, oil & gas, and roadway practices, all to achieve compliance with the Board's water quality standard for iron, a standard that has questionable scientific basis and a standard that has only been adopted by very few states across the country.

On June 22, 2000, the Independent Oil & Gas Association of WV and other trade organizations, filed a request with the Board asking that the iron water quality standard be deleted or suspended. I join in that request. Immediate action must be taken by the Board to avoid potentially disastrous consequences of the implementation of the current iron water quality standard.

Sincerely,

Bob Radabaugh
Environmental/Forest Technician



June 27, 2000

Dear Sir,

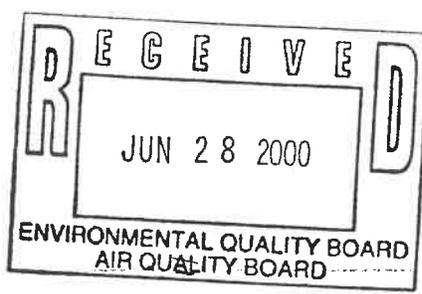
This is to express my concern with the water quality standards involving iron.

This action brought forth by EPA standards should be based on scientific evidence that naturally occurring iron is an environmental threat.

Please change the iron standards set by you so that it will address any environmental threats to water quality based on scientific data.

Thank you for your re-evaluation.

Jim Marshall
Farmer



June 27, 2000

Environmental Quality Board
1650 Washington St., Suite 301
Charleston, WV 25311-2126

Dear Luis,

I'm writing to express my concern with the water quality standards involving iron.

My understanding is that there is not any scientific evidence that naturally occurring iron is an environmental threat unless the water PH is lower than what you would find naturally in the Little Kanawha watershed.

Please change the iron standards set by you so that it will address any environmental threats to water quality based on scientific evidence. The current TMDL's will have a detrimental affect on our small farm operation and our way of life.

We want clean water for ourselves as well as for our neighbors.

Thank you for re-evaluation.

George Hannah

E. Q. B.



I believe iron in water hurt
anything. I have drank water with iron
is it all my life & it never hurt me
So I suggest you change the "iron"
standards in the "Little Kanawha River"
your E.P.A & E.Q.B. is ~~not~~ destroying
the country.

Warren E Kerly Jr.

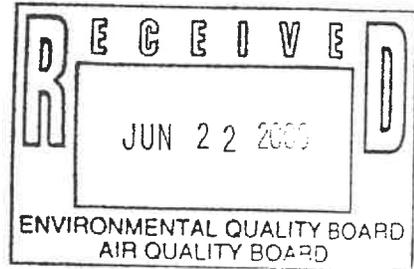
6-20-2000

To whom it may concern,
we would like for you to consider other options such as the measurements of the River's pH or acidity to determine whether or not the River meets water quality goals.

We are requesting that you review the iron standard as it applies to water quality and use good science in establishing standards for water quality goals.

Farm Bureau members

Robert Donaldine Van Horn

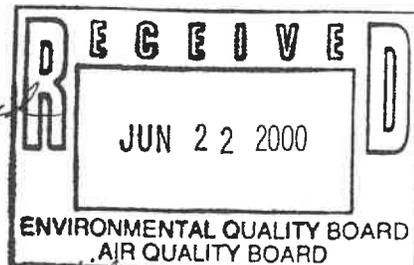


Ireland #2 26376

June 21, 2000

West Virginia -

State Environmental Quality Board



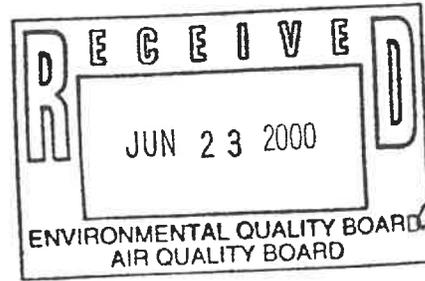
To whom it may concern:

I am writing concerning the quality standard you have set on rivers and streams in West Virginia. I am a landowner, timberman and farmer and have always been concerned about our environment and the quality of our water supply.

The E&QB should consider dropping the iron standard as a measurement of pollution because in its' natural state iron is not harmful to the environment. More accurate tests and relevant scientific studies need to be considered by the E&QB. Rules need to be followed, but we also need to use Common sense.

Please consider the detrimental affect on the farming, timbering, oil and gas business, construction, and all other land use industries in our County and state. This has financial as well as environmental affect on all of us.

Yours very truly,
Carl M. Lowther



6-22-00

Dear Sirs

I am writing this letter in regard to the EQB's standards on iron content in W.V. streams.

I feel the iron standards as a measurement of pollution should be dropped and the rivers PH or acidity should be used to determine whether or not the river meets water quality goals.

Failure of the EQB to act on this matter will have a detrimental effect on farming, oil and Gas, timber, construction and all other land use industries in our county.

Thank you.
Stephen H Freed
Rt 9 Box 331
Parkersburg WV
26101



06/21/00

Environmental Quality Board
1650 Washington Street
Suite 301
Charleston, WV 25311-2126

SUBJECT: Immediate Action in Changing Iron Standard

Dear Sir:

As a tax payer, a land owner, and a farmer, I am concerned with the iron standard as a measurement of pollution in the Little Kanawha River. I am requesting that you review the iron standard as it applies to water quality, and use good science in establishing standards for water quality goals.

Thanking you for your time,

A handwritten signature in cursive script that reads "Haskell E. Sinclair". The signature is written in dark ink and is positioned above the typed name.

Haskell E. Sinclair
Route #2 Box 104
Waverly, WV 26184

James R. Gardner
Rt 1 Box 153-2
Waverly WV 26184

Environmental Quality Board
1650 Washington Street
Suite 301
Charleston, WV 25311-2126



To Whom It Concerns:

I am writing to ask the Board to change the way in which the iron standard is being applied to the Little Kanawha river. If Dr. Louis McDonald of WVU is correct in his statement "that iron is not harmful unless the rivers PH drops to a very low level and creates an acid situation in the river", then testing the PH level seems to be a more accurate approach in determining if the Little Kanawha River meets the water quality goals.

I am very please to see that a Board such as this exist and hope that you are successful in helping to clean up our streams and rivers. One very important way you could help, is to have the Governor require that all the streams be cleaned out by the Corps of Engineers. Laurel and Worthington creeks are so full of dirt, trash and timber that the slightest of rains presents a flooding condition. If these creeks were cleaned out it would greatly reduce the amount of run off into the Little Kanawha and Ohio rivers.

Best of luck to you all, no matter what the board decides there will be someone that does not agree. Just keep all the people in the area in mind when you make you decisions and not just those with the most money or influence.

A Wood County resident

A handwritten signature in cursive script that reads "James R. Gardner".



June 21, 2000

Environmental Quality Board
1650 Washington St., Suite 301
Charleston, WV 25311-2126



Dear Sirs,

I'm writing to express my concern with the proposed TMDLs that will be imposed on the landowners in Roane County. Originally, Roane County was sited by the WVDEP as having excessive aluminum and iron levels which would have an adverse affect on water quality water. What truly disturbs me is that this conclusion is not base on science. Soluble aluminum and iron do have an adverse affect on water quality, but other non-soluble forms do not. When the WVDEP samples water for aluminum and iron, the first thing they do is add acid to the sample lowering the pH. This makes all forms of aluminum and iron in the sample soluble. So the results are actually the total amount of aluminum and iron occurring and not just the harmful forms. For aluminum and iron to become soluble, you need a pH of 3 and 5. The pH of the water in Roane County is not that low.

I understand that you have changed the standard for aluminum and that it is no longer a concern in the Little Kanawha watershed, but I don't understand why the standard for iron wasn't also changed. I've been told that the board is unbiased and immuned to political pressure. If that is the case, than your discussions should be based on scientific knowledge.

Some believe that the TMDLs should be inforced even if the science isn't there to back them up because it will still be good for the environment. I believe that the TMDLs will have no affect on the water quality and only be a financial hardship on those that live and work in Roane County. I've lived in Roane County my whole life and since the Clean Water Act of 1972 the water quality has improved greatly. My children and I can now caught bass out of Reedy Creek, something that wasn't possible when I was growing up. So why place the burden of TMDLs on the people of Roane County, knowing that it won't improve the water quality and will lower the quality of life, just so the US EPA can say they are doing something for the environment?

The board has the power to eliminate this potential injustice by changing the standard for iron and I asked that the board please do so.

Sincerely,

Tom McCutcheon

Roane County Extension Agent

Helping you put knowledge to work

June 23, 2000

West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25312

Re: Iron Water Quality Standard

Dear Members of the Board:

Since 1983 West Virginia's water quality standard for iron has been set at a level of 1.5 mg/l for warm-water fisheries and 0.5 mg/l for trout streams as measured by the "total" metals methodology. The Board has taken action with respect to all other water quality standards for metals to change those standards from a "total" basis to a "dissolved" basis. At the same time the United States Environmental Protection Agency ("EPA") has objected to the current iron water quality standard for West Virginia for the reason that that standard is inconsistent with EPA's water quality criteria document published in 1976.

For many years the undersigned organizations have been encouraging the Board to review and revise the manner in which it regulates iron as a water quality standard. For the reasons listed below, we renew our request for action to be taken on the iron water quality standard. Specifically we ask that the iron water quality standard be deleted in its entirety or, in the alternative, that the iron water quality standard be suspended while the basis for its development is made the subject of scientific scrutiny.

1. West Virginia is one of only a very few states in the nation that has a water quality standard for iron at all. The existence of this standard in West Virginia at a time when other states do not, places West Virginia at a significant competitive disadvantage to attract new business and retain current businesses. In addition, it causes our regulatory agencies to needlessly commit resources to address a water quality standard that is not being pursued by most of our neighboring states.

2. There is no EPA mandate for West Virginia or any state to have a water quality standard for iron. Recently the State of Ohio finalized a rulemaking action in which it deleted its iron water quality standard. In doing so the state of Ohio concluded "there are inadequate data to support the current criterion or to develop a valid alternative numerical value."

3. EPA has agreed with the Electric Power Research Institute to allow that organization to fund a review and possible revision of EPA's water quality criterion for iron which has not been updated since its development in 1976. That review is expected occur over the next two years.

4. In the meantime, the iron water quality standard is having significant regulatory impact on sources and regulatory agencies in West Virginia. This is particularly the case with respect to the significant efforts that are now being expended to develop and implement TMDL programs for several watersheds.

5. More specifically, the Little Kanawha watershed is currently the subject of the development of six TMDLs for the sole purpose of attempting to achieve compliance with the iron water quality standard. While initially the Little Kanawha TMDL process had also targeted the aluminum water quality standard, the Board's recent action changing the aluminum water quality standard to "dissolved" effectively moots the TMDL for aluminum. Should a total iron TMDL for the Little Kanawha be implemented, significant new restrictions will likely be placed on such non-traditional pollution sources as highways, farming, silvicultural activities, and activities of any other kind that involve mere surface disturbances. There are very few traditional point sources located in the Little Kanawha watershed. Hundreds of residents of the Little Kanawha watershed have already expressed their concern about the impact of this iron-based TMDL on their livelihoods and quality of life.

6. Because the NPDES permit program provides several bases for the regulation of sources other than through water quality based effluent limits, DEP would continue to have authority to regulate iron even with the elimination of the iron water quality standard. NPDES permits will continue to contain technology-based effluent limitations for iron where called for by effluent guidelines or best professional judgement. Should a source need to be regulated with respect to iron to correct an obvious pollution problem and technology limits either do not apply or are inadequate, DEP would continue to have the ability to place appropriate limits in the permit under the narrative "free-from" provisions of the regulations of the Board. Such limits would be determined on a case-by-case basis using appropriate scientific information available at the time of the action. In addition, any stream included on the state's 303(d) list or subject to a TMDL for any water quality standard other than iron would continue unchanged. In addition, past water quality - based permit conditions for iron would remain in effect in those permits that contain water quality based iron limits until those permits are renewed.

We believe that all parties concerned about this issues would benefit from dedicating available resources to supporting the EPRI/EPA review of the scientific basis for the iron criteria than to continue to implement a standard with such a questionable scientific basis.

Accordingly the undersigned organizations urge that the Board consider this matter at its first opportunity and to act by either: (1) deleting the iron water quality standard altogether; or (2) suspending the iron water quality standard pending the review of EPA's water quality criteria document for iron.

Very truly yours,

West Virginia Chamber of Commerce
By: David M. Flannery
David M. Flannery
Chair, Environmental Committee

West Virginia Farm Bureau
By: R. Steve Hannah
R. Steve Hannah
Executive Director

West Virginia Forestry Association

By: Richard Waybright
Richard Waybright
Executive Director

Independent Oil and Gas Association
of West Virginia

By: Robert Radabaugh
Robert Radabaugh
Chair, Envir. Committee

West Virginia Coal Association

By: William Raney
William Raney
President

Contractors Assn. of West Virginia

By: Michael Clowser
Michael Clowser
Executive Director

West Virginia Mining and Reclamation Assn.

By: Benjamin Green
Benjamin Green
President

cc: The Honorable Cecil H. Underwood
State Capitol Building
Charleston, WV 23505

Charles R. Jenkins, Ph.D.
432 Wilburn Street
Morgantown, WV 26505

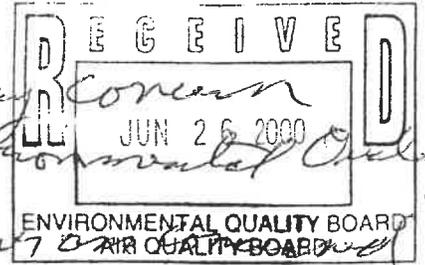
David Samuel, Ph.D.
1 Harvest Drive
Morgantown, WV 26508

Edward M. Snyder, Ph.D.
P.O.Box 987
Shepherdstown, WV 25443

Donald C. Tarter, Ph.D.
38 Lynn Morr Drive
Huntington, WV 25705

Betsy E. Dulin, P.E.
3909 Kanawha Avenue
Charleston, WV 25304

Michael Castle, Esq.
John H. Johnston, Esq.
Edward L. Kropp, Esq.
Allyn Turner, Esq.



To whom it may concern
WV State Environmental Quality
Board

Cl Beinga found
about what the WV State Environmental
Quality Board is should have immediate
action charging the iron standard for
the little Kanawha River. Because it is
going to put a lot of printers out of
business as well as out of gas construction
and all other land use industries
according to Dr. Louis and Donald of WV
that they should consider ~~the~~ dropping
the ~~iron~~ iron standard as a
measurement of pollution in the
natural state iron is not harmful.
The EQB should consider this standard.
These businesses cannot stand a lot
more of things. The drought and
high prices of fuel and everything
we buy are going to put us out of
business. Thank you
Cl Beinga

Locust Hill Farm
Rt. 1, Box 74
Jane Lew, WV 26378



Environmental Quality Board
1650 Washington Street, Suite 301
Charleston, WV 25311-2126

Dear Sirs:

This letter concerns Standards for Iron and Aluminum in streams in West Virginia, and in general other Standards imposed on water quality in West Virginia. I have a Ph. D. in Inorganic Chemistry from Kent State University, have done some Industrial Hygiene Consulting, taught college and high school, and also run an 85 cow farm here in Jane Lew.

In general, I want to protest standards that are not based on objective effects. That is, on tests not directly related to some chemical or civil engineering problem that needs to be controlled to provide health, safety or economic benefits. Better than most people who write to you, I understand the difficulty and the amount of work necessary to establish science-based standards. Standards which are directly related to the damage they are to prevent. If these standards are based on approximations, guesswork, response to pressure by special interests they can do great damage to production of food, fiber, timber and energy.

Iron and aluminum are important natural components of soils. At normal pH they are very slightly soluble due to the exceedingly small value of the K_{sp} of the hydroxides. There may be much iron and aluminum moving in a stream in *insoluble* form in particles suspended or being moved along the bottom by mechanical forces, but this metal has negligible effect on the biosphere. High, toxic, values of these metals in solution are obtained only in acid solution, such as might be present in acid mine drainage or some industrial waste. There are a lot of acid sources in the state.

To base the Standard on total iron or aluminum is folly. It would depend on rainfall, agitation of the sampling point, fall of the stream and other factors influencing suspension of particles from time to time and place to place. The bioactive iron and aluminum must enter organisms in solution, and so pH of the solution would have much greater influence on the toxicity of metals dissolved in water than the total amount present.

You really should get some advice from people that are expert in soil and water chemistry, and try to relate the Standards to what you are trying to protect.

Sincerely,

A handwritten signature in cursive script that reads "S. Thomas Bond".

S. Thomas Bond

6/27/2000
870 STOVER FORK
SPENCER, WV 25276



Environmental Quality Board
1650 Washington Street
Suite 301 Charleston, WV 25311-2126

Dear Sirs:

As a land owner and concerned citizen of the Little Kanawha River Watershed, I am concerned about a 1988 decision to include Little Kanawha as over-polluted, based on amount of iron in water.

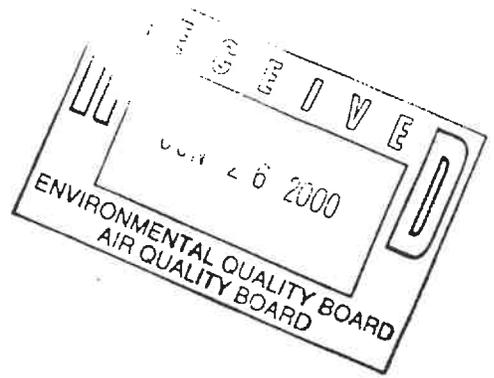
Iron is a natural component of our environment. It no doubt is high because of erosion of stream-banks along the tributaries.

Seems we should be more concerned with acidity or pH of the stream, or perhaps nitrates.

If you would review the ~~own~~ standard in regard to water quality goals I think it would be a good thing!

Water quality no doubt varies due to amount of rainfall in a given period.

Yours truly,
Lester C. Cummings



525 Tom's Run
Spencer, WV 25276
June 22, 2000

Environmental Quality Board
1650 Washington Street
Suite 301
Charleston, WV 25311-2126

Ladies and Gentlemen:

I urge you to review the the iron standard as it applies to water quality and to use good science in establishing standards for water quality goals. To use the old standard that was developed many years ago without good scientific evidence of the harm of iron in its natural state, in developing these new water quality standards will not result in improving water quality.

The old iron standard should be dropped and other options should be considered.

Sincerely yours,

Jerry L. Deardorff

Environmental Quality Board
1650 Washington Street - Suite
Charleston, W. Va. 25311-212

June 20, 2000



Sir;
We are writing to request
immediate action in changing the
iron standard for the "Little Kanawha
River".

If this is not done it will be
very detrimental to the farmers,
the gas & oil companies and forestry.

Thank you in advance.

Sincerely

Jim & Ethel Cooper
H.C. 78 - Box 23A
Tray, W. Va. 26443





WEST VIRGINIA MUNICIPAL WATER QUALITY ASSOCIATION

P. O. Box 3780

CHARLESTON, WEST VIRGINIA 25337

June 29, 2000

Dr. Edward Snyder and Dr. Donald Tartar
Co-Chairs
West Virginia Environmental Quality Board
1615 Washington Street, East
Charleston, West Virginia 25311-2126

Re: **Triennial Review of Water Quality Standards**

Dear Drs. Snyder and Tartar:

Our members recently reviewed the Board's proposed triennial review of water quality standards. We were particularly surprised and concerned over the Board's apparent decision not to adopt EPA's 1999 Addendum to the national Ammonia Criteria document, as we had urged in our comments.

We agree that the Board's first priority should be to address outstanding EPA disapprovals from the last triennial review. As an aside, we greatly appreciate the Board's patience as stakeholder groups, such as the antidegradation work group, have tried to achieve consensus on those issues.

However, we cannot understand why the Board would not also take this opportunity to address other priority issues, such as updating the statewide ammonia criteria. To our knowledge, EPA's Addendum to the criteria is not controversial and is being routinely adopted by other states at their earliest opportunity. We understand that DEP supports adoption of the Addendum, providing that discharges must demonstrate when early life stages are absent - an approach we fully support.

Almost all of our members have ammonia limits in their NPDES permits. These limits can be very difficult to achieve, particularly for facilities discharging to small receiving streams. Unless the updated Addendum to the criteria is adopted, many of these facilities face very expensive upgrades for ammonia control which are environmentally unnecessary. I hope we all can agree that the public resources that might otherwise be spent needlessly on ammonia control can be better spent on the many real water quality challenges we face statewide.

Accordingly, we again want to take the opportunity to urge you to update the statewide Ammonia Criteria as a part of this triennial review.

Thank you for considering our views. Please call if you have any questions or require additional information.

Sincerely,

Mike Saffel
Michael E. Saffel mw
President

cc: Ms. Libby Chatfield
Mr. Randy Sovic
MWQA Members

Telephone: (304) 344-8603

Facsimile: (304) 344-8604

Exhibit "E" -