ENVIRONMENTAL APPEALS BOARD
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C.

In re:	)	
	)	
UPPER BLACKSTONE WATER POLLUTION ABATEMENT DISTRICT, MILLBURY, MASSACHUSETTS	)	NPDES Appeal No. 08-11
	)	
NPDES Permit No. MA0102369	)	

PETITION FOR REVIEW OF REVISED PERMIT CONDITIONS AND MOTION OF THE PERMITTEE, UPPER BLACKSTONE WATER POLLUTION ABATEMENT DISTRICT, TO CONSOLIDATE THIS PETITION WITH OTHERS RELATED TO THIS PERMIT

The Upper Blackstone Water Pollution Abatement District (the "District"), pursuant to 40 C.F.R. §124.19(a), submits this petition for review of a final permit modification, dated April 20, 2009, which would impose a chronic aluminum effluent limitation and associated monitoring requirements (the "2009 Modification") in the final National Pollutant Discharge Elimination System ("NPDES") Permit No. MA0102369 (the "Permit") issued by the United States Environmental Protection Agency ("EPA"), Region 1 ("Region") on August 22, 2008. Filed simultaneously with this petition for review of the chronic aluminum effluent limitation (the "Aluminum Petition") is a Motion to Consolidate this petition with the District's other petition related to the Permit, NPDES Appeals Nos. 08-11, (the "Initial Petition"), currently under consideration by the Environmental Appeals Board (the "Board" or "EAB").

Petition for Review:

I. Introduction

Pursuant to 40 C.F.R. §124.19(a)(1), the District requests that the Board review the revised permit conditions imposing a chronic aluminum effluent limitation and associated monitoring requirements because these conditions are based upon clearly erroneous findings of fact. These errors have led the Region to conclude that it must impose a numeric aluminum limit and related reporting conditions to satisfy its obligation under 40 C.F.R. § 122.4 to regulate sources which may cause or contribute to a violation of water quality standards. Correcting the clear errors committed by the Region in the analysis of the relevant data from the District's discharge, and other data pertaining to the ambient levels of aluminum in and around the Blackstone River, will obviate the need for such permit conditions. As shown below, application of correct data demonstrates that it has not been shown that the District has the potential to cause or contribute to a violation of the water quality standards for aluminum.

The District also requests that the Board review the Region's improper imposition of a numeric aluminum limit of 87 µg/L using EPA's National Recommended Water Quality criterion. Proper analysis of the data demonstrates that ambient levels of aluminum upstream of the District's discharge exceed the Region's proposed numeric limit, indicating elevated naturally occurring aluminum. The EPA's National Recommended Water Quality criterion for aluminum would not apply as, pursuant to 314 CMR 4.05(5)(e), Massachusetts Department of Environmental Protection ("MA DEP") adopts the EPA criterion as the state water quality criterion, *except* where naturally occurring background concentrations are higher. The Massachusetts Surface Water Quality Standards state:

> For pollutants not otherwise listed in 314 CMR 4.00, the *National Recommended Water Quality Criteria: 2002, EPA 822R-02-047, November 2002* published by EPA pursuant to Section 304(a) of

> the Federal Water Pollution Control Act, are the allowable receiving water concentrations for the affected waters, unless the Department either establishes a site specific criterion or determines that naturally occurring background concentrations are higher. Where the Department determines that naturally occurring background concentrations are higher, those concentrations shall be the allowable receiving water concentrations.

[Emphasis added.] Because the naturally occurring background concentrations for aluminum exceed the EPA Recommended Water Quality criterion, the background concentration of aluminum becomes the relevant water quality criterion.

The District further requests that the Board review the revised aluminum conditions as the Region's decision to impose these limits involves an exercise of discretion and/or an important policy consideration that the Board should, in its discretion, address. More specifically, the Board should address the Region's dismissive posture towards criticism of its calculations. Coupled with the slip-shod nature of the permitting process, the result is a permit modification imposing a chronic aluminum effluent limitation and associated monitoring requirements less than six months after its issuance of a new permit which took the Region approximately two years to draft and finalize. The record in this matter indicates that the Region has pushed beyond the bounds of its permitting authority by responding to interest group pressures instead of implementing a meaningful scientific analysis to establish appropriate permit conditions.

The factual and policy issues addressed in this petition were raised by the District during the public comment period for the draft permit modification to impose the numeric aluminum limit, and the Region did not properly address or consider these issues in its response to comments on the draft permit modification ("Response to Comments") or in issuing the final permit, both of which were issued on April 20, 2009. Attached as Exhibit A to this petition are

the District's comments on the draft permit modification to impose a chronic aluminum limit in the District's NPDES permit as well as selections of other pertinent comments in the record.[1]

II. The Region Uses Incomplete and Incorrect Data, and Reaches Incorrect Conclusions

The Region, in proposing to add a chronic aluminum effluent limitation and associated monitoring requirements to the District's NPDES Permit, used and relied upon incomplete and incorrect data and as a result reached incorrect conclusions. The Region states that it used and relied on data from periods of low flow, but a careful review of the data shows that the Region selectively used some, while it ignored other data, irrespective of flow. The Region also used outliers and inappropriate values in place of non-detect readings levels, thereby artificially inflating the average concentration of aluminum in the effluent. Further, upstream levels of aluminum, including those measured at points above other municipal and industrial users, show a naturally occurring ambient level of aluminum in the Blackstone River which is higher than the unreasonable limits established by this permit modification. A thorough evaluation supports a conclusion that, if, when and where there are high aluminum levels in the river, the aluminum originates elsewhere - not from the District's discharge. As such, the District's discharge does not cause or contribute to the elevated aluminum in the Blackstone River and does not warrant a numeric aluminum limit in its NPDES permit.

A. The Region claims to base the aluminum limits on periods of critical low flow, but then selectively ignored data collected during such periods.

The Region purports to base its conclusions regarding the District's effluent levels of aluminum on low-flow conditions in order to assess conditions at seven consecutive day ten year

[1] The District included numerous exhibits in submitting its comments on the 2009 Modification, which it incorporates here by reference, in keeping with the purposes of the Paperwork Reduction Act (44 U.S.C. § 3501 et. seq.). The District understand these exhibits are a part of the Administrative Record to be provided by the Region, but reserves the right to supplement the record if necessary.

low flows (7Q10). However, the Region selectively used the District's whole effluent testing ("WET test") data, leaving out data from 2004, a portion of 2005, most of 2006, half of 2007, and most of 2008, which included several periods of low flow. This selective use of data allows the Region to form the erroneous conclusion that a chronic aluminum effluent limitation and associated monitoring requirements are needed in the District's NPDES permit. The Region, in justifying its choice in its Response to Comments regarding the District's objections to the aluminum permit modification, stated that:

> Because Massachusetts water quality standards require water quality criteria to be met even during severe hydrological conditions, *i.e.*, periods of critical low flow when the volume of the receiving water is able to provide relatively little dilution, we focused on that WET data that was collected during low flow conditions. In Massachusetts, NPDES permit limits for discharges to rivers and streams must be calculated based on the "7Q10," or "the lowest mean flow for seven consecutive days to be expected once in ten years." *See* 314 C.M.R.§ 4.03(3). When analyzing the reasonable potential to exceed an ambient criterion value under 7Q10 flow conditions, we targeted the data collected during the typical low flow period of June through October. We then checked the actual flow for the dates on which the WET tests were conducted during this period and used only the data collected during actual low flow conditions. This approach excluded the use of the October 2008 data, as they were not collected during low flow conditions.

Both District WET data for aluminum and Blackstone River flow data for the period between January 2004 and October 2008 are shown in Table 1, attached as Exhibit B. Highlighted data are those used by the Region. As noted above, the Region justifies its exclusion of the October 2008 data (when aluminum values were well below 87 µg/L) by asserting that said data was not collected during low flow conditions. However, as shown in the Table 1, the provisionally reported river flow in October 2008 was 508 cubic feet per second ("cfs"), which is well below the flow level for some data the Region chose to include in its analysis to justify the chronic aluminum effluent limitation and associated monitoring requirements. For instance, the

Region included data from October 2005, the second wettest month in Worcester since 1892, at which time flows were well in excess of 2000 cfs (and aluminum values exceeded 87 µg/L).[2] The Region's exercise of its discretion to exclude the October 2008 data, with reported aluminum levels well below the 87 µg/L standard, and include the October 2005 data, with reported aluminum levels above the 87 µg/L standard, indicates that, contrary to the Region's Response to Comments, flow volume was not the Region's primary consideration in evaluating and excluding data.

The Region also included data from July 2007 when the aluminum value reached 344 µg/L. This value, however, was taken during a plant upset, as reported in the District's monthly discharge monitoring report and cover letter, a copy of which is attached as Exhibit C. This outlier event biases the data, and should not be used in determining the normal low flow conditions for the facility. U.S. EPA guidance provides that data should be valid and representative. *See* Technical Support Document for Water Quality-based Toxics Control, EPA/505/2-90-001(March 1991), "The objective of an effluent or instream sampling program is to obtain a sample (or samples) from which a representative measure of the parameters of interest can be obtained." [Emphasis added.] *See also* Great Lakes Water Quality Guidance, 40 C.F.R. Part 132, Appendix F, "[T]he permitting authority shall use any valid, relevant, representative information that indicates a reasonable potential to exceed...." [Emphasis added.] In the case of the plant upset, the value is not representative of the normal discharge variability.

The Region's selective use of data, without any apparent scientific or regulatory justification, and the exclusion of data better suited to the analysis performed dramatically skews

[2] This storm event was designated a state of emergency in Massachusetts and was widely reported. Consequently, the Region knew or should have known this could not constitute low-flow test data. Indeed, how the Region determined that the October 2005 flows in the Blackstone River during one of its greatest floods of record were appropriate to the analysis of 7Q10 conditions "the lowest mean flow for seven consecutive days to be expected once in ten years." remains a mystery.

the results of the analysis toward imposition of an effluent limit. While the District will not speculate on the Region's motivations for selecting data in this capricious manner, the results of the Region's analysis are deceptive, hiding in plain sight the true impact of the District's effluent on chronic aluminum levels in the Blackstone River.

B. The Region uses outliers and inappropriate values in place of non-detect readings levels, thereby artificially inflating the average concentration of aluminum in the effluent.

Not only has the Region ignored much of the data during the time period it reviewed, but it also incorrectly used values for results that were below laboratory detection limits as equal to the detection limit value. Specifically, the Region reported values as 100 µg/L, the method detection limit, in June 2005 and October 2006 where the reported values were below detection limits. It would have been more appropriate either to exclude these values from the calculation or to use one-half the detection limit. In regard to use of values equal to the detection limit and average aluminum levels, the Region states in its Response to Comments from the District on the Draft Permit Modification:

> The commenter also questions EPA's assumption of a value equal to the detection limit for two WET results that were below the detection limit (i.e., reported as non-detect). We adopted a reasonably conservative approach given our mandate to ensure that discharges meet state water quality standards. However, even if we had excluded the results that were below the detection limit from our data base or assumed half the detection limit (as the commenter suggests), our conclusions would have been the same. Specifically, the upstream receiving water average concentration calculated in the statement of basis was 114 µg/l. The upstream receiving water average concentration when non-detects are excluded is 120 µg/l, and if non-detects were included with a value of one half the detection limit, the average value would be 100 µg/l. Similarly, the average concentration of aluminum detected in the wastewater treatment plant's effluent that was used in the calculations presented in the Fact Sheet is 127 µg/l. If non-detects are excluded, the average concentration is 124 µg/l, and if the non-detects are included and assigned a value equal to one half of the detection limit, the average value is 103 µg/l. Since the upstream

> concentration and the effluent concentration both exceed the applicable chronic criterion (87 µg/l) under any of these averaging methods, there is clearly reasonable potential for the discharge to cause or contribute to a violation of water quality standards.

Inclusion of the single and extreme plant upset values for aluminum in interpreting the data skews the conclusions toward this outlier event and results in the unreasonable and unnecessary imposition of the chronic aluminum effluent limit. The Region's use of data from an outlier event skews the data: if the plant upset values are excluded and only data for flows below 508 cfs are used, even including the contested detection limit values, the ambient river average value is 87 µg/L while the plant average is 81µg/L.

Similarly, inclusion of the detection limit values distorts the conclusions that might be drawn from the District's WET test data. If detection limit values are excluded the averages for ambient river and plant effluent become 72 and 67 µg/L, respectively. With a dataset of just seven tests, the Region's decisions to include the values from the one-time, extreme plant upset is a major factor in how the data are interpreted. Inclusion of the detection limit values further skew the conclusions that might be drawn from the WET test data. Even the difference between there having been two tests, as the Region notes in their above-quoted comments, or three tests, as there actually were, at non-detect levels, are significant in light of the small sample set. When outliers are excluded, and appropriate values substituted for non-detect readings, the averages show that plant effluent will dilute ambient river aluminum levels, rather than cause or contribute to a violation of water quality standards.

Indeed, if only data obtained when flow was less than 508 cfs are considered and the data taken during the plant upset are not used (six sets of WET tests), there is a distinct correlation between plant effluent and ambient river aluminum levels, as shown in Figure 1, attached as Exhibit D. As shown in Figure 2, attached as Exhibit E, this correlation is even more

pronounced if non-detect values are deleted or removed from consideration. These figures show a clear correlation between river aluminum and plant effluent aluminum levels. Both show coefficients of determination (R^2) that exceed 0.9. These equate to correlation coefficients of 0.95, which represents excellent correlation. If the database is expanded to include values for flows up to 1,000 cfs, a strong correlation is still observed, having an R^2 of 0.79. These figures also show that plant effluent aluminum levels are consistently lower than ambient river values, further indicating that plant effluent tends to reduce rather than exacerbate ambient river aluminum levels. When these inappropriate values are removed from consideration, the average concentration of aluminum in the District's effluent is below the 87µg/L National Recommended Water Quality Criteria such that it does not support imposition of the chronic aluminum effluent limitation and associated monitoring requirements in the District's permit. Consequently, no diligent review of these data could support a conclusion that District effluent causes or contributes to a violation of water quality standards.

C. Upstream levels of aluminum, including those measured at points above other municipal and industrial users, show a naturally occurring ambient level of aluminum in the Blackstone River which is higher than the unreasonable limits established by this permit modification.

Far from being the cause of aluminum loading in the Blackstone River, the District's effluent dilutes the naturally occurring ambient levels of aluminum. If normal low-flow conditions are used exclusively in the analysis, the levels of aluminum in the plant effluent mirror those in the pristine waters above the outfall, indicating that there is a natural source of aluminum, to which the District does not cause or contribute. As summarized in Table 2, attached as Exhibit F, when all of the WET testing data between January, 2004 and the present are properly evaluated (values below the detection limit being excluded), the resulting statistics are quite different from those utilized by the Region. The results obtained using a dataset

properly analyzed and including valid, representative data show that the District's effluent is consistently below ambient levels in the Blackstone River.

The data submitted as part of the District's comments on the 2009 Modification support its position that the chronic aluminum effluent limitation and associated monitoring requirements are inappropriate and unwarranted. As demonstrated by the data provided in Table 2, attached as Exhibit F, and supported by the complete data set attached as Exhibit B, the District's effluent values are typically below ambient river values for aluminum. In addition, the District's aluminum values vary with ambient conditions. Figure 3, attached as Exhibit G, depicts aluminum values from WET test plant effluent and ambient samples from the river above the District's discharge point. As Figure 3 shows and Figures 1 and 2 demonstrate, there is a strong correlation between elevated ambient aluminum levels and the District's effluent values for aluminum. Nonetheless, the Region dismissed the District's presentation of the correlation between the ambient levels of aluminum above the plant and plant effluent without any evaluation of whether it might be correct. *See* Response to Comments, p. 2-3.[3]

Moreover, the underlying hypothesis of one of the papers submitted by Trout Unlimited in its Petition to the Board for review of the District's Final NPDES Permit (NPDES Appeal No. 08-14)[4] is that acid rain is a likely cause of elevated Aluminum in New England waters. The Trout Unlimited petition and referenced paper are attached as Exhibit H. The authors start their article by saying:

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[3] "The commenter next suggests that there is a "direct correlation" between elevated ambient aluminum levels and UBWPAD's effluent values for aluminum and then offers a theory as to why the ambient conditions are high and why they should be considered naturally occurring. The commenter suggests that effluent levels are a function of ambient levels without any explanation beyond the presentation of a graph showing treatment plant and receiving water aluminum data. See Comments at Figure 1. As a preliminary matter, the graph does not demonstrate a direct correlation between elevated ambient aluminum levels and the District's effluent for aluminum. Moreover, we do not see any demonstration in the graph (or elsewhere in the comments) that the aluminum levels are naturally occurring."

[4] Said paper was also submitted as an exhibit to the District's comments on the Draft Permit Modification submitted to the Region on February 27, 2009.

> ...As a result of their underlying geology, many rivers and streams in these regions have low concentrations of base cations (Ca2+, Mg2+) and consequent poor buffering capacity making them vulnerable to increases in acidity during episodic acidification events such as spring snowmelts and fall storms. During episodic acidification, [aluminum] is mobilized from the soil and enters the surrounding water leading to elevated [aluminum] concentrations.[5]

And the authors conclude by saying:

> ...The heightened sensitivity of the smolt life-stage has substantial implications for salmon populations in regions affected by acid precipitation, as this critical developmental period occurs in the spring when episodic acidification due to seasonal rainfall and snowmelt may be greatest....[6]

Thus the District's WET testing data and references submitted by Trout Unlimited and the District provided ample information for the Region to thoughtfully consider evidence that the observed aluminum concentrations were not the result of the District's discharge, but rather reflected naturally occurring events in the watershed. The Region's failure to consider this information constitutes clear error.

In further support of the position that the upstream ambient levels of aluminum are naturally occurring, the District has collected data from the reservoir sampling program conducted by the Worcester Water Department (the "Department").[7] We offer this data in an effort to further illustrate and support the District's comments submitted to the Region during the comment period. The Department routinely collects samples for analysis at the transfer point between the Kendall Reservoir, and its Holden Reservoir number 1. As shown in the map and aerial photograph of the watershed, both attached as Exhibit I, the region tributary to this sampling point is largely undeveloped forested lands. Data collected from tributaries in April

[5] See Monette and McCormick in Aquatic Toxicology, 86 (2008) p 216

[6] Id, page 224

[7] In dismissing this hypothesis raised by the District in its comments on the 2009 Modification, the Region stated that the District had "not made a sufficient case that the ambient levels are naturally occurring." Response to Comments, page 3. We offer this data in an effort to further illustrate and support the District's comments submitted to the Region during the comment period.

and May 2009 is attached in Exhibit J. From 2004 through 2008, the Department collected 153 samples at the Kendall transfer point. The complete data set is produced in Exhibit K.

Figure 4, attached as Exhibit L, shows the minimum, average and maximum monthly values for aluminum at this Department location. As suggested by the Trout Unlimited references, Figure 4 shows the clear influence of spring and fall runoff and precipitation events, which lead to elevated aluminum levels approaching and exceeding 200 µg/L, far in excess of the 87 µg/L criterion. Under such circumstances, the EPA's National Recommended Water Quality criterion for aluminum would not apply since pursuant to 314 CMR 4.05(5)(e), MA DEP adopts the EPA criterion as the state water quality criterion, *except* where naturally occurring background concentrations are higher. Because "naturally occurring background concentrations are higher, those concentrations shall be the allowable receiving water concentrations." 314 CMR 4.05(5)(e) Thus, the Region must use the observed ambient values as the allowable receiving water concentration for the purpose of establishing permit limits. Based on the data contained in Exhibit K the applicable allowable receiving water concentration is 239 µg/L, not the 87 µg/L imposed by the Region.

Moreover, as illustrated above, the observed ambient levels of aluminum can be explained by natural phenomena. Episodic acidification of native soils, as hypothesized in Aquatic Toxicology by Monette and McCormick[8], leading to elevated aluminum is the effect observed in the Blackstone River, as shown by the information presented in Figures 3 and 4. One reasonable interpretation of Figures 3 and 4 is that acidic runoff is causing aluminum to leach from the aluminum-rich rock common to New England[9], a condition which the District

[8] Said article is part of the formal record for this petition as an exhibit to the District's comments on the 2009 Modification to the Region and was also attached to the Trout Unlimited petition to the Board.
[9] *See* Shacklette, Hansford T. and Josephine G. Boerngen, "Element Concentrations in Soils and Other Surficial Materials of the Coterminus United States", USGS Professional Paper 1270 (2007).

cannot control. Taken together, these facts suggest that such aluminum conditions are naturally occurring and pursuant to the Massachusetts Water Quality standards, the naturally occurring background concentration is the allowable receiving water concentration.

III. The EPA National Recommended Water Quality Criteria for Aluminum May Not Be Appropriate to Apply to the District's Discharge.

As the Region is aware, its own guidance indicates that the water quality criteria for aluminum may be significantly over-protective. *See* EPA's National Recommended Water Quality Criteria at footnote L, attached as Exhibit M.[10] The Region is also aware that other US EPA regional offices have approved revisions of the EPA's National Recommended Water Quality criterion for aluminum. *See* Letter of Jon M. Capacasa, Director, US EPA Region III Water Protection Division to Lisa McClung, Director Water and Waste Management Division, West Virginia Department of Environmental Protection dated January 9, 2006 and attached as Exhibit N. Further, the Region is aware that both water and wastewater utilities are concerned about such low limits because of the value of various aluminum salts in both water and wastewater treatment. Importantly, published studies of aluminum salts in water stand for the proposition that the EPA's National Recommended Water Quality Criteria for aluminum in water used to establish the 2009 Modification chronic aluminum limit on the District's discharge is too conservative, especially in colder climates. *See* Canada Gazette, Part I, Vol. 143, No. 6 Ottawa, Saturday February 7, 2009, attached as Exhibit O and Canadian Environmental Protection Act, 1999; Priority Substances List Assessment Report Follow-up to the State of Science Report, 2000; Aluminum Chloride, Aluminum Nitrate, Aluminum Sulphate, Chemical

[10]The District has attached two publications of the EPA's National Recommended Water Quality Criteria list. The first as published by the US EPA Office of Water, Office of Science and Technology, National Recommended Water Quality Criteria, 2006 (4304T); the second as presented on the US EPA website. Footnote L appears on pages 17 and 7 respectively.

Abstracts Service Registry Numbers 7446-70-0, 13473-90-0, 10043-01-3; Environment Canada and Health Canada, November 2008, attached as Exhibit P.

In addition, the District has acquired data from the Massachusetts Water Resources Authority on the levels of aluminum found in the Stillwater and Quinapoxet Rivers. A map of these sampling locations, the aluminum data taken at these locations and a graph of the data are attached as Exhibit Q. These two rivers are part of the same watershed as the Worcester Water Department's Kendall Reservoir and exhibit even more elevated concentrations of aluminum than are observed in the Kendall system. In dismissing this hypothesis raised by the District in its comments on the 2009 Modification, the Region stated that the District had "not made a sufficient case that the ambient levels are naturally occurring." Response to Comments, page 3. We offer this data in an effort to further illustrate and support the District's comments, submitted to the Region during the comment period, that EPA National Recommended Water Quality Criteria for aluminum may not be appropriate to apply to the District's discharge.

IV. The Region's Modification of the District's Final Permit Less Than Six Months After it was Issued Raises a Public Policy Question which the Board Should, in its Discretion, Review.

The Region's approach to establishing the chronic aluminum effluent limitation and associated monitoring requirements underscores the lack of equity with which the Region has handled the District's permitting. The Region has not only rendered rational capital planning impossible for the District, but also exceeded its permitting authority by setting permit limits in response to interest group pressures rather than meaningful scientific analysis.

The District has been working in good faith with the Region on developing an appropriate renewal permit since it first applied for a renewal in November 2005. Through more than two years of developing a final permit, the Region never indicated that it was inclined to impose a limit on aluminum at this time, but rather would impose monitoring to determine if and

when a limit might be necessary and appropriate. In the face of calls from Trout Unlimited for more stringent controls than were proposed in the draft permit, the Region merely noted that aluminum toxicity was a potential concern - one which would be addressed if monitoring indicated that this potential had been realized.[11] Responding to Rhode Island Department of Environmental Management's request for greater detail on bioassay monitoring, the Region noted the range of aluminum values observed from 2005 and 2006, and again indicated that if future monitoring showed a reasonable potential to exceed the criteria for aluminum, a permit limit would be imposed.[12] The Region, as of August 2008, was satisfied that, aside from the aberration of one plant upset, there had not yet been a showing that the District had reasonable potential to exceed the criteria for aluminum.[13] Yet, bowing to the pressure applied by the filing of the petition for review by Trout Unlimited on September 23, 2008, a review of the same data led the Region to conclude that a permit limit was now required a mere five months later.

Reduction of pollutants from the District's effluent necessarily has a long lead time. Such reductions require a scientific evaluation of the processes available and selection of the most appropriate one. Then implementation of that solution through capital investment requires budget planning, bonding or other public fundraising, requests for proposals to construct the infrastructure, an open bidding process, contract negotiation and construction. Such public construction processes are measured in years, not weeks. The District has already been frustrated by the Region's instance on altering the limits placed on the District under the 2001 Consent Agreement before reaching the completion date established under that compliance schedule. The Region has only compounded this frustration by changing the goals yet again, not six months after it established those in the "final" permit. The District cannot be expected to

[11] *See* Response to Comments for Final NPDES Permit, Response A7, August 22, 2008.
[12] *See* id., Response D2.
[13] *See* id., Response A7.

make the type of capital upgrades necessary to meet all of these challenges, when the metric by which the success will be judged can and often does change between when plans go out to bid and contracts are signed.

Moreover, it is vital to address effluent limits comprehensively, as the strategies for minimizing one element of the effluent may impact another. Imposition of an aluminum limit on the District following promulgation of stringent phosphorus limits severely restrains the options available to the District for phosphorus control. The principal metal salts available for achieving stringent phosphorus limits are aluminum or iron based. To achieve the strict aluminum limit, the District has few options. It will either be forced to use iron salts for phosphorus removal, which are becoming more and more difficult to obtain as the demand for the chemicals increases. Alternatively, the District will be forced to use highly energy intensive processes or similarly prohibitively expensive processes. The Region, in issuing this Permit, must consider the impact of all limits and has failed to acknowledge the negative environmental and technical interaction resulting from the proposed aluminum and phosphorus conditions. The Region's failure to address the competing environmental concerns exemplifies the reactive rather than analytical approach to permit drafting in this instance.

The Region's willingness to bow to interest group pressures, coupled with its refusal to engage in meaningful scientific analysis of appropriate permit limits and total disregard for agreed-upon timeframes, creates an untenable situation. While each deviation on its own might be within the bounds of the Region's discretion, collectively the Region's decisions combine to create a permitting process which is contrary to public policy.

V. Conclusion

For the foregoing reasons, the District respectfully requests that the Board grant this petition for review and establish a briefing schedule. After such review, the District requests the following relief:

1. An order vacating the aluminum permit limit imposed by the 2009 Modification; and
2. Remand to the Region for additional permitting procedures relative to aluminum.

The District further requests the opportunity to present an oral argument in this matter to assist the Board in its deliberations.

Motion to Consolidate:

The Permittee requests that the Board consolidate its consideration of the pending petition for review of the Permit (NPDES Appeal 08-11) with the Aluminum Petition now before it. As grounds for this motion, the Permittee states as follows:

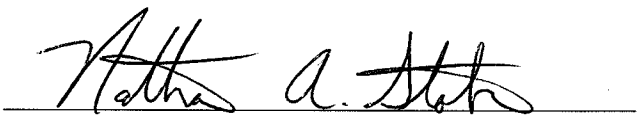
1. Both petitions relate to the same facility and same discharge. The Aluminum Petition appeals a condition to the Permit which was imposed subsequent to the filing of the Initial Petition.

2. Both petitions raise issues which are best addressed in a unified manner, as the issues related with reducing one type of effluent often impact the ability to reduce others.

3. Maintaining separate appeals would subject the Board to repetitive and overlapping briefs; thus, consolidating the appeals promotes administrative and adjudicative economy.

Should, however, the Board elect not to review NPDES Appeal No. 08-11, the District reserves its right for this permit appeal to be heard on its own, as a result of the Region's decision to promulgate the aluminum conditions separately from the rest of the permit.

Respectfully submitted,
UPPER BLACKSTONE WATER
POLLUTION ABATEMENT DISTRICT
By its attorneys,



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Dated: May 20, 2009

CERTIFICATE OF SERVICE

I, Nathan A. Stokes, hereby certify that I have served a copy of the foregoing on the following by mailing same, postage prepaid, this 20th day of May 2009, to:

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Dated: May 20, 2009