



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10

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MAY 7 2010

OFFICE OF
WATER AND WATERSHEDS

Mr. Barry Burnell
Water Quality Programs Administrator
Idaho Department of Environmental Quality
1410 North Hilton
Boise, Idaho 83706-1255

Re: EPA Disapproval of a Variance to Water Quality Standards for Ammonia, Chlorine, Cadmium, Lead and Zinc from the Page wastewater treatment plant to the West Page Swamp - Docket No. 58-0102-0002

Dear Mr. Burnell:

The Environmental Protection Agency has reviewed Idaho's revised water quality standards at IDAPA 58.01.02.260.02.a. and b., pursuant to our authority under section 303(c) of the Clean Water Act (CWA) and the implementing regulations at 40 CFR Part 131. Section 303(c)(2) of the CWA requires States and authorized Tribes to submit new or revised water quality standards to EPA for review and approval/disapproval action. Under section 303(c) of the CWA and its implementing regulations found at 40 CFR Part 131.5, EPA is to review water quality standards revisions to ensure that the adopted designated water uses are consistent with the CWA, the adopted criteria protect the designated water uses, and the State has followed its own legal procedures for adopting such standards.

In accordance with these authorities, EPA disapproves Idaho's revised water quality standards at IDAPA 58.01.02.260.02 a. and b. granting variances to the South Fork Coeur d'Alene River Sewer District's Page wastewater treatment plant discharge to the West Page Swamp. The information and analysis presented by the Idaho Department of Environmental Quality, (DEQ) does not demonstrate that the requirements for granting a variance have been met. Therefore, the revised provisions are inconsistent with the CWA and the federal water quality standards regulations at 40 CFR Part 131.

As you are aware, EPA staff has been working with DEQ staff regarding this variance for a number of years. In 2006, EPA had informed DEQ that the proposal to re-route the Page wastewater treatment plant effluent to the West Page Swamp is no longer being pursued by EPA Region 10's Office of Environmental Cleanup. As a result, DEQ acknowledges there is no longer a need to consider granting a variance to Page wastewater treatment plant into the West Page Swamp. EPA and DEQ have discussed how best to address this submittal and DEQ is aware of EPA's concerns and our reason for disapproval at this time.

Background

The variance to the cold water aquatic life use and the applicable water quality criteria for ammonia, chlorine, cadmium, lead and zinc in the West Page Swamp was premised on a proposed remedial action being considered by EPA Region 10's Office of Environmental Cleanup (ECL/Superfund Program) for the Page Pond area of the Bunker Hill Superfund Site. Over the years, ECL has been evaluating various options for closure of the Page Pond area of the Bunker Hill Superfund site. One of the options was "wet closure" of the West Page Swamp. As a component of this option, ECL considered how best to maintain a minimum water level such that the material in the West Page Swamp would remain flooded throughout the year, which is commonly referred to as "wet closure". To accomplish "wet closure," it was proposed that the South Fork Coeur d'Alene River Sewer District's Page wastewater treatment plant effluent be re-routed from the South Fork Coeur d'Alene River to the West Page Swamp. Addition of the effluent to the swamp would keep the remaining contaminated tailings, which could not be feasibly removed from the area, continually submerged beneath at least two feet of water.

EPA Region 10 ECL and Office of Water and Watersheds staff met to discuss and evaluate this proposal. After these discussions, it became apparent that the re-routing of the Page wastewater treatment plant effluent would not meet the long-term needs of the Superfund site cleanup. By letter dated May 5, 2006, from EPA Region 10 Directors of OWW and ECL to Mr. Ross Stout, District Manager of the South Fork Coeur d'Alene River Sewer District, EPA informed Mr. Stout that the "wet closure" approach did not provide sufficient flexibility and that ECL had decided to move forward with an evaluation of an alternate closure of the West Page Swamp. This decision was reached subsequent to DEQ's adoption of a variance for the Page wastewater treatment facility in 2001. As a result of Region 10's decision to pursue an alternate closure of the West Page Swamp, DEQ's adoption of a variance for the Page wastewater treatment facility was no longer necessary.

DEQ Rulemaking

On July 21, 2000, DEQ published a proposed rule revising certain water quality standards. Included in this proposed rulemaking was a five-year variance for the water quality standards for ammonia, chlorine, cadmium, lead and zinc for an anticipated relocation of the Page wastewater treatment plant effluent discharge pipe from the South Fork Coeur d'Alene River to the West Page Swamp. DEQ provided an opportunity for public comment on the proposed rule from July 21, 2000 until September 27, 2000. The rule was then adopted by the Idaho Board of Environmental Quality on November 9, 2000. The final rule was approved by the Idaho Legislature in March 2001. By letter dated May 29, 2003, DEQ submitted these revised water quality standards, contained in Docket 58-0102-0002, to EPA for review.

EPA Review

The federal water quality standards regulation at 40 CFR 131.13 authorizes States to include variances in their water quality standards and provides that States may include general policies in their State standards affecting their application and implementation. Such policies are required to be submitted to EPA for review and approval. In addition, States must include

individual variances as part of their water quality standards and each variance is subject to public review. Each individual variance represents a temporary downgrade in water quality standards. Therefore, individual variances are a change to water quality standards and States and Tribes are required to submit them to EPA for review and approval/disapproval. Variances are not effective for CWA purposes until approved by EPA.

Requirements for Granting Variances

A variance is a temporary downgrade to the designated use and associated water quality criteria that would otherwise apply. It is based on a use attainability demonstration and targets achievement of the highest attainable use and associated criteria during the variance period. Modifying the use through a variance process allows the State to limit the applicability of a specific criterion and to identify an alternative designated use and associated criteria to be met during the term of the variance. Therefore, individual variances are a change to water quality standards and States and Tribes are required to submit them to EPA for review and approval or disapproval. As with all water quality standards submitted to EPA for review, the minimum requirements for water quality standards submissions include appropriate supporting justification and certification by the State Attorney General that the variance is legal according to State law (40 CFR § 131.6). All other applicable water quality standards not specifically modified by the variance remain applicable (e.g., any other criteria adopted to protect the designated use).

EPA explained its position on approving variances in its Water Quality Standards Handbook (Second Edition, 1994) and reiterated this position in the 1998 Advanced Notice of Proposed Rulemaking (63 FR No. 129, July 7, 1998). The legal basis for granting a variance is that the State has fulfilled the same regulatory requirement for removing a designated use (the complete legal history is found in Section 5.3 of EPA's Water Quality Standards Handbook, 1994). As such, a variance is a revised water quality standard that must be based on one of the factors specified in 40.CFR § 131.10(g), and requires EPA review and approval before it can be effective for CWA purposes (40 CFR § 131.21(c)). Federal regulations (40 CFR §§ 131.6(a) and (c), 131.10 and 131.11) require States to specify uses and criteria to support those uses in a water body at all times. As such, a variance must identify the applicable designated use and associated criteria to be in place for at least the term of the variance to ensure the highest level of water quality is attained. In addition, every three years, the State must consider whether there is any new information that may indicate that a CWA 101(a)(2) use is attainable (assuming the variance does not retain a 101(a)(2) use), and if so, revise the water quality standards accordingly (40 CFR § 131.20(a)).

A variance may be appropriate when a designated use is not attainable in the short-term, but might be attainable in the long-term. Variances are effective means of retaining an underlying designated use (and many criteria protective of that underlying use) in the long-term while addressing specific challenges that affect full attainability of some of the criteria in the near-term. A variance may modify a designated use and associated criteria for a limited period of time, but the underlying long-term designated use remains in place. In the typical case, upon expiration of a variance, the underlying designated use and associated water quality criteria once again apply (unless the variance is renewed or another variance is adopted).

According to EPA guidance in making an approval/disapproval decision on a variance, EPA will consider the following two items in a State's submittal:

1. the demonstration that meeting the standard is unattainable based on one or more of the factors in 131.10 (g); and
2. the justification includes documentation that treatment more advanced than that required by sections 301(b)(1)(b) and 306 of the CWA has been carefully considered and that alternative effluent control strategies have been evaluated.

As described in Section 5.3 of the EPA Water Quality Standards Handbook (Second Edition, 1994), variances involve the same substantive and procedural requirements as removing a designated use, but must additionally identify the applicable discharger(s), pollutant(s), and time limit. As explained above, the substantive and procedural requirements include a use attainability demonstration UAA identifying one of the factors listed in federal regulations (40 CFR § 131.10(g)) for removing a designated use and target achievement of the highest attainable use and associated criteria during the variance period. The State must demonstrate that the designated use is unattainable for one or more of the following reasons as set out in 40 CFR 131.10(g):

1. Naturally occurring pollutant concentrations prevent the attainment of the standard.
2. Natural, ephemeral, intermittent, or low flow conditions or water levels prevent the attainment of the standard.
3. Human caused conditions or sources of pollution prevent the attainment of the standard and cannot be remedied or would cause more environmental damage to correct than to leave in place.
4. Dams, diversions or other types of hydrologic modifications preclude the attainment of the standard, and it is not feasible to restore the water body to its original condition or to operate such modification in a way that would result in attainment of the standard.
5. Physical conditions related to the natural features of the water body, unrelated to water quality, preclude attainment of the standard.
6. Controls more stringent than technology-based effluent limitations would result in substantial and widespread economic and social impacts.

DEQ's Process and Criteria for Granting Variances

DEQ's policy and procedures for granting variance are described in Idaho's water quality standards regulations at IDAPA 58.01.02.260. The regulations provide that a variance may be granted if the applicant demonstrates to DEQ that meeting the standard is unattainable based on one or more of the same six factors contained in 40 CFR 131.10(g), as described above. In addition, the discharger must submit to DEQ documentation that treatment more advanced than

that required by technology-based effluent limitation has been considered and that alternative effluent control strategies have been evaluated (IDAPA 58.01.02.260.01.c.).

EPA reviewed DEQ's submission granting a variance to the Page wastewater treatment plant at IDAPA 58.01.02.260.a. and b. for consistency with EPA guidance on variances and Idaho's variance policy and procedures described in IDAPA 58.01.02.260. DEQ's submission included a document containing supporting analyses for the revised standards entitled "Supporting Analyses for Docket 58-0102-0002" (Supporting Analysis document). This document provides supporting information for revisions to Idaho's water quality standards which included the West Page Swamp variance as well as bull trout temperature criteria, seasonal cold criteria, and UAAs. DEQ's justification for the West Page Swamp variance consists of two pages of discussion contained on pages 16 and 17 of the Supporting Analysis document. The two pages in the Supporting Analysis document provide background information, a summary of the Page Pond tailings repository and EPA's Record of Decision regarding the Page Pond area associated with the remediation work on the "wet closure" design.

In addition, several appended reports relevant to the West Page Swamp variance were included in the submittal. These appended reports, listed below, contain analyses of the Page Pond closure:

- EPA's Record of Decision for the Bunker Hill Mining and Metallurgical Complex
- EPA's Bunker Hill Remedial Design and remedial action, Area I, Statement of Work. Attachment B to Consent Decree
- Technical Memorandum to EPA from CH2M Hill on the Page Pond monitoring recommendations
- Page Pond Closure Final Remedial Design Report
- Final Technical Memorandum on the Diversion of the Page Pond Wastewater Treatment Plan Effluent to West Page Swamp prepared by McCulley, Frick and Gilman for the Upstream Mining Group

These documents contain information and discussions regarding a proposed approach for remediation actions at the Page Pond part of the Bunker Hill Superfund site. EPA reviewed these reports and has determined that they do not provide an adequate justification for approval of the variance. Although there is useful information regarding a potential design for closure of the Page Pond area, the reports do not provide the analysis and demonstration required for granting a variance.

DEQ's discussion on page 16 of the Supporting Analyses document states: "Analyses and decision making seemed to have been focused on environmental tradeoffs, overall cost/benefits of the action, and feasibility. Less consideration was made of regulatory complications such as what regulatory beneficial uses and water quality standards apply to wetlands, especially human enhanced wetlands..." This statement provides DEQ's perspective of the Page Pond closure documents; however, it does not provide an analysis or basis for granting a variance. The Supporting Analyses document does not discuss, describe, or clarify the water quality standards currently applicable or the water quality standards that would be applicable under a variance in

the West Page Swamp and the regulatory requirements which must be met in order for a variance to be granted.

The final statement on page 17 states that DEQ concludes "...that the historical tailings and sewage effluent represent human caused conditions or sources of pollution that prevent attainment of the standards for ammonia, chlorine, cadmium, lead and zinc within the West Page Swamp and remediating the tailings and effluent would cause more environmental damage than to leave in place." However, the State failed to submit an analysis to support this conclusion.

EPA Decision

Based on our review of the materials contained in DEQ's submission package, EPA has determined that DEQ's granting of a variance for the Page wastewater treatment plant's discharge to the West Page Swamp is inconsistent with CWA Section 303(c), the implementing federal water quality standards regulations at 40 CFR § 131.13 and EPA guidance on variances as described in the Water Quality Standards Handbook (Second Edition, 1994). In addition, DEQ's granting of this variance is inconsistent with Idaho's variance policy as described in Idaho's water quality standards. The submission does not contain a demonstration that the designated use is not attainable, treatment more advanced than that required by technology-based effluent limitation has been considered and that alternative effluent control strategies have been evaluated (IDAPA 58.01.02.260.01.b. and c.).

The principle demonstration in obtaining a variance is the whether or not the applicable designated use is attainable. The West Page Swamp is not specifically designated in the table of water body use designations in Idaho's water quality standards at IDAPA 58.01.02.110 through 160. Therefore, based on Idaho's undesignated provision at IDAPA 58.01.02.23, the West Page Swamp is by default, protected for cold water aquatic life and either primary or secondary contact recreation.

The information provided in DEQ's submittal, including the summary and appended reports, does not provide sufficient analysis as to whether or not the cold water aquatic life and/or recreation uses are unattainable. Further, the submittal lacks an analysis demonstrating why attainment of the cold water aquatic life use designation is not feasible in the West Page Swamp. DEQ's conclusion that human caused pollution prevents the attainment of the designated use and remediating the tailings/effluent would cause more environmental damage than to leave in place is not supported by or consistent with Idaho's variance provision at IDAPA 58.01.02.260.

As stated above, a justification for a variance should include documentation that the variance secures the highest level of water quality attainable short of achieving the standard, and that advanced treatment and alternative effluent control strategies have been considered and evaluated. In addition, conditions of a variance include reasonable and further progress towards achieving water quality standards and the actions which will occur in order to meet these conditions. DEQ's supporting documentation does not include a discussion of these requirements.

EPA has determined that DEQ's conclusion that the cold water aquatic life use in West Page Swamp is unattainable and therefore, the Page wastewater treatment plant qualifies for a variance is not supported by the documentation provided in the submission. DEQ's submission lacks an analysis and discussion of the applicable water quality standards for the West Page Swamp, as well as an analysis of the Page wastewater treatment effluent and the concentrations of ammonia, chlorine, cadmium, lead and zinc which are currently discharged. The supporting documentation does not include an alternatives analysis discussing attainment of the standards. Such a discussion would include an analysis and evaluation of the alternative treatment controls and the feasibility of implementation of the various treatment options. In addition, the supporting documentation lacks an analysis of the condition of the West Page Swamp and why the beneficial use is not attainable, e.g., what is contributing to non-attainment, what measures can be put in place to address this, what is the contribution of the Page wastewater treatment plant, and what the Page wastewater treatment plant can do in terms of treatment in order to meet the water quality standards. Finally, the submission does not include a discussion of the measures that the Page wastewater treatment plant will implement over the next five years to demonstrate reasonable and further progress is being made so that compliance with the ammonia, chlorine, cadmium, lead and zinc effluent limits for aquatic life protection will be achieved.

In summary, based on our review of the supporting documentation contained in the submission, EPA has determined that DEQ has neither demonstrated the need for nor provided the necessary justification required for granting a variance.

Effect of Disapproval

Under CWA Section 303(c)(3) and EPA's regulations at 40 CFR Parts 131.21 and 131.22, if EPA disapproves a State's new or revised water quality standards, EPA must "specify the changes" necessary to meet the applicable requirements of the CWA and EPA's regulations. If the State does not adopt the changes, EPA shall propose and promulgate a standard including the changes. Since a variance is not a required element of Idaho's water quality standards, it is not necessary for EPA to promulgate alternative provisions in response to this disapproval. Because EPA has not approved the revised water quality standards at IDAPA 58.01.02.260.a. and b. these provisions are not in effect for CWA purposes.

Remedies to Address EPA's Disapproval

The federal water quality standards regulations at 40 CFR Part 131.21 state in part that when EPA disapproves a State's water quality standards, EPA shall specify changes which are needed to assure compliance with the requirements of Section 303(c) of the CWA and federal water quality standards regulations.

EPA recommends Idaho address this disapproval by deleting the provisions at IDAPA 58.01.02.260.a. and b, since the re-routing of the discharge is no longer being pursued, and thus a variance to the West Page Swamp is no longer needed.

Please feel free to contact me at 206-533-4198 if you have questions concerning this letter or Lisa Macchio, Idaho Water Quality Standards Coordinator at 206-553-1834.

Sincerely,

A handwritten signature in black ink, appearing to read "M. Bussell", written in a cursive style.

Michael A. Bussell, Director
Office of Water and Watersheds

cc: Mr. Michael McIntyre, IDEQ
Mr. Don Essig, IDEQ