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Dennis J. McLerran, Regional Administrator
U.S. Environmental Protection Agency, Region 10
Regional Administrator's Office, RA-140
1200 Sixth Avenue, Suite 900
Seattle, WA 98101

Re: EPA's Watershed Assessment of the Kvichak and Nushagak drainages:
Docket # EPA-HQ-ORD-2012-0276

Dear Mr. McLerran:

I am submitting these comments as counsel to the tribal councils of Nondalton, New Koliganek, New Stuyahok, Ekwok and Levelock, and to the Alaska Independent Fishermen's Marketing Association. At the public meetings, EPA officials made clear that it is primarily interested in receiving comments on what it got "right" or "wrong" in the assessment. Although EPA has yet to decide whether to commence a § 404(c) process, I will assume that EPA may do so, and I will comment accordingly.

1. If the peer review finds that the conclusions of the assessment are sound, then EPA should commence promptly the § 404(c) process, even if underlying portions of the assessment being simultaneously edited and finalized.

Most people recognize that the assessment is a synthesis of, for the most part, existing information, and that the assessment is not a regulatory decision or a document required by law or policy. It is instead an exercise of EPA's sound discretion to assist its future decision-making.

Therefore, if the peer review in August finds that the conclusions of the assessment are sound, then EPA should promptly commence the 404(c) process in August, or as early as possible. That should be the case even if the peer review results in refining, bolstering and editing the underlying portions of the assessment. In that event, nothing that involves the finalization of an assessment that is not required by law or policy would prevent EPA from commencing the 404(c) process, such that it overlaps the finalization of the assessment.

2. EPA's conservative approach to certainty versus uncertainty.

a. EPA's approach makes sense, but EPA should be prepared to explain it to the public during a § 404(c) process and in a § 404(c) determination.

The assessment takes a conservative approach to asserting that something is certain. Doing so is appropriate because (1) no applications are pending, and (2) the 404(c) regulations

interpret Section 404(c) as requiring that an unacceptable adverse effect must be "likely" to occur in order invoke Section 404(c) and make a 404(c) determination.[1]

If EPA takes the next step of *commencing* a 404(c) process, then EPA will need to explain to the public how the agency deals with certainty and uncertainty in (1) the 404(c) process, (2) a 404(c) determination, and (3) applying a 404(c) determination to any permits applications to develop a metallic sulfide deposit if the 404(c) determination is a set of restrictions rather than an outright prohibition of mining metallic sulfide deposits in the Kvichak and Nushagak drainages. Because EPA could commence a 404(c) process soon (if the peer review finds the conclusions are sound), I'll offer my opinion about how to explain the role of certainty versus uncertainty.

First, at this stage, prior to a 404(c) process, the assessment does not need to (and does not) explain how the agency deals with certainty and uncertainty. However, the question of what is certain versus uncertain is central to the *quality* of the assessment for purposes of making a decision to enter into a 404(c) process. EPA's conservative approach to what is certain or likely, for purposes of the assessment, enhances the quality and certainty of future decisions about (1) whether to commence a 404(c) process, (2) the terms of any 404(c) determination, and (3) how to apply a 404(c) determination.

Second, if EPA decides to *commence* a 404(c) process, and if what is certain is *sufficient*, as it is in this case, for making a 404(c) determination, then issues concerning what is uncertain become *less relevant, marginalized, or irrelevant* to a decision to *issue* a 404(c) determination. That fact alone enhances the future *stability* of a 404(c) determination.

Third, if EPA *issues* a 404(c) determination, then the *terms* of a 404(c) determination will be shaped by what is certain or likely, and may be shaped, on appropriate issues, by the 404(b)(1) Guidelines with respect to at least some of what is uncertain. That latter is so because, with respect to uncertainty, the Guidelines provide that a discharge must be specified as failing to comply with the Guidelines where "[t]here does not exist sufficient information to make a reasonable judgment as to whether the proposed discharge will comply with these Guidelines."[2]

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[1] See 40 CFR § 231.2(e).

[2] 40 C.F.R. § 230.12(a)(3)(iv). Members of the public may be interested to know that the Alaska Board of Fisheries' Policy for the Management of Sustainable Salmon Fisheries, at 5 AAC 39.222, deals with uncertainty in essentially the same manner at the 404(b)(1) Guidelines at 40 C.F.R. § 230.12(a)(3)(iv). The Board's policy provides that "in the face of uncertainty" all "essential habitats shall be managed conservatively" through a "precautionary approach." Although that Board's policy is essentially advisory to land management agencies such as the Alaska Department of Natural Resources and does not enter into making 404(c) determination, pointing out the consistency promotes understanding of EPA deals with uncertainty. For a discussion of consistency between state and federal regulations on matters of certainty versus uncertainty, see G. Y. Parker, "Section 404(c) of the Clean Water Act and the History of State and Federal Efforts to Conserve the Kvichak and Nushagak Drainages of Alaska," *Seattle Journal of Environmental Law*, vol. 2, no. 1 (2012), pp. 271 – 273, available at http://www.sjel.org/images/pdf/2012/parker_history_kvichak_nushagak.pdf

That provision in the Guidelines may help EPA to shape some of the terms of a 404(c) determination with respect to some of what is uncertain.

Fourth, if the terms of a 404(c) determination is a set of rigorous *restrictions* (but not an express prohibition) regarding activities that would require 404 permits necessary to develop a metallic sulfide mine, and if a mining company thereafter files applications to develop based on a particular design and those restrictions, then EPA will *apply* the Guidelines to matters that are uncertain at that time.

In other words, reduced to essentials, EPA's conservative approach yields, conceptually, two groups of conclusions about unacceptable adverse effects that are likely to occur: (1) those that are certain or likely to occur in the "no-failure" and "failure" scenarios *without* employing the 404(b)(1) Guidelines, and (2) those that are deemed likely to occur in the "no-failure" and "failure" scenarios when the Guidelines are *applied* to issues characterized by uncertainty.

b. The assessment should discuss uncertainty regarding the design, operation and behavior of a mine before discussing uncertainty regarding the effects.

In general, the assessment is logically organized. However, an inconsistent sequence occurs at one point. On the one hand, in the Executive Summary, the section titled "Summary of Uncertainties in Mine Design and Operation" (p. ES-24) precedes the section titled "Summary of Uncertainties and Limitations in the Assessment" (p. ES-25). The former has a cause-and-effect relationship to the latter, so this organizational sequence makes sense. On the other hand, in the main body of the assessment, subchapter 8.5, which is titled "Summary of Uncertainties and Limitations in the Assessment" (pp. 8-10 – 8-12), precedes subchapter 8.6, which is titled "Summary of Uncertainties in Mine Design and Operation" (pp. 8-12 – 8-13). This sequence is reversed such that the cause-and-effect relationship is not clear. Hence, the Executive Summary, not the main body, is consistent with a logical sequence of discussion, and the main body should track the Executive Summary.

I'll belabor the point a bit further because this aspect of the organizational sequence is part of a larger sequence that will be more important in the context of making and implementing a 404(c) determination, which implicates the 404(b)(1) Guidelines with respect to uncertainty. The following may help.

(1) Let's assume for purposes of discussion that EPA makes a 404(c) determination that is essentially a set of rigorous restrictions but does not expressly bar applications under Section 404(a) for permits to develop a metallic sulfide deposit, and that such applications are submitted.
(2) In that event, some of what are currently uncertainties in *design* will be reduced or eliminated upon submission of applications for permits based on a design. Nevertheless, uncertainties regarding the potential *operation* of the mine, including risk of human error and failure of design, will remain after submission of a design.
(3) In addition, the *uncertainties and limitations in the assessment of the effects* that occur under the "no-failure" and "failure" scenarios will remain.

(4) At that point, the 404(b)(1) Guidelines will apply to assess those uncertainties which remain in steps (2) and (3). The Guidelines, including 40 C.F.R. § 230.12(a)(3)(iv) which deems lack of sufficient information to be non-compliance with the Guidelines, will help EPA decide whether those uncertainties related to the applications for 404(a) permits must be deemed likely to result in unacceptable adverse effects for purposes of the 404(c) determination.

This four-step sequence seems to put cause-and-effect relationships in a proper order, in the contexts of (1) the submission of a design, (2) the "no-failure" and "failure" scenarios, and (3) the use of the 404(b)(1) Guidelines. In sum, the organizational sequence of discussion is essential to understanding the entire picture. A sensible sequence will add clarity to how EPA deals with certainty and uncertainty in four arenas of decision-making: (1) whether to proceed with a 404(c) process, (2) the use of the 404(b)(1) Guidelines to shape some of the terms of a 404(c) determination, (3) the use of the Guidelines to evaluate any applications for 404(a) in the event that a 404(c) determination is a set of rigorous restrictions rather an express bar to applications, and (4) any litigation over a 404(c) determination. Because of the last, I recommend that your attorneys consider the sequence of discussion of certainty versus uncertainty, because ultimately it may involve clarity before a court.

3. The assessment should address fugitive dust from mining operations.

The assessment discusses fugitive dust only as it relates to roads. However, fugitive dust from mining operations can be a source of sulfuric acid mine drainage. A Pebble mine could have tens of thousands of explosions per year in an open pit, so the dust issue seems significant. It appears on the flow chart for impacts related to mining operations (Figure 3-2B), but it is not addressed in the text. If the matter is addressed, EPA should address it in the context of certainty versus uncertainty regarding both operations and effects. Finally, to a lay person like me, dust suppression may be feasible with respect to dust from roads, but dust suppression seems infeasible with respect to blasting in an open pit. So I think EPA needs to add text to address dust from blasting in an open pit.

4. Addressing the history of land management adds context and background.

Fundamentally, mining metallic sulfide deposits in the Kvichak and Nushagak drainages raises land management issues in terms of impacts on habitat and public uses of fish and game. In the assessment, Appendix A, at pages 10-18, addresses the historical and current management of the harvest of commercial and recreational fish stocks in the area, apparently to provide context and background for purposes of assessing effects of mining metallic sulfide deposits in these drainages. However, the assessment neglects the history of land management and the many federal, state, and local efforts to conserve these two drainages over the past forty-five years. That history, which is covered in a law review article I recently published, provides additional context and background for your appendices or any 404(c) process or determination.[3]

[3] See "Section 404(c) of the Clean Water Act and the History of State and Federal Efforts to Conserve the Kvichak and Nushagak Drainages of Alaska," *supra*.

5. The concept of "endpoints" could be better explained.

In Chapter 3, section 3.3 states:

> The assessment focuses on four endpoints in the Nushagak River and Kvichak River watersheds: (1) quality, quantity, and genetic diversity of salmon populations; (2) quality, quantity, and genetic diversity of non-anadromous fish populations; (3) quantity and diversity of wildlife (as affected by fisheries); and (4) Alaska Native cultures (human welfare as affected by fisheries).

The assessment does not appear to define the term "endpoints." I infer that the meaning is analogous to what most people would refer to as "sidebars" on a discussion of resultant effects. If so, that should be clearly stated, and the reason for the sidebars or "endpoints" should be clearly explained. I assume that the reason is that, as a practical matter, EPA simply has to have some sort of focus, and that the focus on the four "endpoints" or sidebars is driven by several factors, such as certainty versus uncertainty, direct versus indirect or secondary effects, and quantifiable versus unquantifiable effects. Nevertheless, a better explanation of the reasoning behind these "endpoints" in Chapter 3, section 3.3, would be helpful.

6. The assessment should recognize that secondary effects can be significant even though the quantification of them is uncertain.

Given the "endpoints" (or sidebars) mentioned above, Chapter 7, on cumulative effects, recognizes that they include direct, indirect and secondary effects. Chapter 7 then focuses its discussion of *cumulative* effects on the *direct* effects arising from additional mines (including roads) and additional impacts on habitat. In Chapter 7, section 7.4.5 states briefly and in a summary fashion that the *secondary* effects include the effects of increased population, access, and competition for fish and game resources, particularly with respect to subsistence and sport hunting and fishing. Section 7.4.5 then states that these secondary effects are beyond the scope of the assessment. This is understandable due to the focus on the "endpoints" stated above.

However, I am concerned that some readers may infer that the brevity of the discussion of secondary effect implies *less* significance of the secondary effects. I doubt that EPA would intend such an inference. I suggest that the assessment needs a disclaimer of such an inference and a clear statement that secondary effects are, in all probability, certain to occur, although they may be unquantifiable at this point in time.[4]

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[4] With respect to secondary and cumulative impacts on subsistence, the tribes' initial letter addresses increased competition for subsistence resources, in the context of the different state and federal subsistence laws with respect to Lake Clark and Katmai national parks and preserves and state lands. With respect to secondary impacts of increased road access on the sport fishing lodge industry, John Duffield's 2007 report discusses survey data of customers in the wilderness based fishing lodge industry in the Bristol Bay drainages and concludes that roads and industrial development would result in loss of much of the customer base.

7. A minor comment.

EPA should review and edit the appendices for occasions when an expert may address peripherally a topic outside of his or her expertise. For example, Appendix E is on economics, That appendix, at p. 173, states peripherally that "the construction of roads would result in marginal changes to the current condition of natural resources in the region," but could have significant effects on the values associated with public uses of fish and game. Many biologists would likely say that roads can have significant biological impacts, and in fact the assessment says as much.

8. Conclusion and a Compliment.

I hope these comments help. In particular, I hope that they help you and Administrator Jackson to decide to commence a 404(c) process promptly if the peer review finds that the conclusions of the assessment are sound.

Overall, your agency is doing a superb job. I am confident that many people appreciate the efforts of you, your staff, other officials and contractors, and the leadership of Ms. Jackson and others in and out of EPA. Thank you.

Sincerely yours,

Geoffrey Y. Parker