

Responses to Comments
Cook Inlet NPDES General Permit (AKG315000)
Re-proposal of Six Produced Water Effluent Limits
October 2011

On May 20, 2011, the U.S. Environmental Protection Agency (EPA) issued a public notice for the re-proposal of six produced water effluent limitations in the Cook Inlet National Pollutant Discharge Elimination System (NPDES) General Permit (General Permit; Permit No. AKG315000). The public notice specifically limited the scope of the re-proposal and sought public comments on the following produced water effluent limits: mercury, copper, total aromatic hydrocarbons (TAH), total aqueous hydrocarbons (TAqH), silver, and whole effluent toxicity (WET).

The public notice also served as notice of the opportunity to comment on the draft Clean Water Act (CWA) Section 401 Certification (draft 401 certification), which included an antidegradation analysis, provided to EPA by the Alaska Department of Environmental Conservation (ADEC) on May 3, 2011.

The comment period for EPA's draft re-proposal of the six effluent limits and the ADEC draft 401 certification closed on June 20, 2011. This response to comments document addresses the comments EPA received on the permit re-proposal. ADEC has responded to comments on the draft 401 certification separately.

Comments were received from the following:

Kate Williams, Regulatory Affairs Representative, Alaska Oil and Gas Association (AOGA), Dale Haines, Manager, Oil and Gas Operations, Union Oil Company of California (Union Oil), William Muldoon, Director, Permits & Sciences, ConocoPhillips Alaska (ConocoPhillips), Nanwalek IRA Council (Nanwalek), Vicki Clark, Legal Director, Trustees for Alaska (Trustees), Jean, usacitizen1

1. The commenters agree with EPA that ADEC's antidegradation analysis satisfies the requirements of the exception to antibacksliding contained in CWA section 402, and that ADEC's analysis authorizes EPA to adopt re-proposed limits from 2007 General Permit. [AOGA, Union Oil, ConocoPhillips]

Response: Thank you for your comment.

2. The commenters do not agree that EPA has authority to question the substance of ADEC's antidegradation analysis. [AOGA, Union Oil]; ADEC's draft 401 certification and antidegradation analysis provide ample support for re-proposed 2007 permit limits, EPA may not second guess substantive findings. [Union Oil]

Response: EPA disagrees with commenters' assertion that EPA lacks the authority to review the antidegradation analysis contained in ADEC's draft 401 certification. Even where a state has provided EPA with a section 401 certification, EPA has an independent duty under CWA Section 301(b)(1)(C) to ensure that a permit it issues has water quality-based effluent limits that are as stringent as necessary to meet state water quality standards. *See* 33 U.S.C. § 1311(b)(1)(C); *see e.g., In re Ina Road*, NPDES Appeal No. 84-12 (1985); *In re City of Jacksonville*, NPDES Appeal No. 91-19 (1992). In addition, EPA has the duty to ensure that the State has facially satisfied the express requirements of section 401. *See City of Tacoma v. FERC*, 460 F. 3d 53, 68 (D.C. Cir. 2006). Here, ADEC's antidegradation analysis provides the basis for the produced water effluent limitations that are less stringent than the produced water effluent limitations contained in the previous Cook Inlet General Permit (AKG285000). EPA reviewed the Section 401 certification, including the antidegradation analysis, to ensure that the final permit contains conditions as stringent as necessary to meet water quality standards and to ensure that the express requirements of Section 401 of the Clean Water Act, including public notice requirements, have been followed.

EPA believes that ADEC's antidegradation analysis, based on the requirements of 18 AAC 70.015 and 40 C.F.R. § 131.12, is sufficient and consistent with the antidegradation policy. The antidegradation analysis indicates that the produced water effluent limits subject to the re-proposal (for mercury, copper, TAH, TAqH, silver and WET) in this final permit – which are less stringent than those in the prior permit – are consistent with the state's antidegradation policy, and thus justified under CWA Section 303(d)(4)(B). In addition, EPA believes that these effluent limits are as stringent as necessary to meet applicable state water quality standards, as required by CWA Section 301(b)(1)(C) and EPA's implementing regulations at 40 C.F.R §122.44(d)(1). As such, EPA is including these effluent limits in the final permit. These limits are the same as those in the 2007 Cook Inlet General Permit that was challenged by Trustees for Alaska, and partially remanded by the Ninth Circuit Court of Appeals to allow EPA to reconsider the less stringent effluent limits based on a revised antidegradation analysis. *Cook Inletkeeper, et al. v. U.S. EPA*, Memorandum, Case No. 07-72420, Ninth Circuit Court of Appeals (Oct. 21, 2010) (*Cook Inletkeeper*).

3. To the extent that EPA nevertheless undertakes substantive review of ADEC's antidegradation analysis, request that EPA consider enclosed comments on ADEC analysis. [Union Oil]

Response: EPA has reviewed the comments submitted to ADEC on the draft 401 certification and antidegradation analysis. EPA has also reviewed ADEC's response to comments document and has attached it to this document. As noted above in Response to Comment #2, EPA believes the antidegradation analysis is sufficient and generally agrees with ADEC's conclusions.

4. In EPA's final action on re-proposed effluent limits, the commenter requests that EPA reaffirm that neither mixing zones nor methods that EPA used to calculate the effluent limits are being reconsidered in this action. Both those elements are not part of Ninth Circuit remand. [Union Oil]

Response: EPA affirms that the size of the mixing zones and calculation of effluent limitations based on such mixing zones is not being reconsidered in this action. Rather, the purpose of the remand was to allow EPA to "reconsider those portions of the General Permit allowing less stringent limits, based on a more complete antidegradation analysis to be prepared and submitted by Alaska." *Cook Inletkeeper*, EPA Motion for Voluntary Remand at 4. The Ninth Circuit agreed with EPA's concession that Alaska's antidegradation analysis lacked sufficient public participation, and thus granted EPA's motion for voluntary remand to address this deficiency. *Cook Inletkeeper*, Memorandum at 5. Accordingly, the scope of EPA's action in this remand has been limited to assessing whether Alaska's new antidegradation analysis is sufficient to justify the less stringent effluent limits, per CWA Section 303(d)(4)(B), not to reassess the underlying calculation of those effluent limitations. Moreover, EPA notes that with respect to the remaining effluent limitations in the General Permit that were not subject to the remand, the Court specifically denied the petitioners' challenges to the determination of size of the mixing zones and methods for calculating the effluent limitations, which apply equally to the water quality-based effluent limits (WQBELs) subject to the remand. *See id.* at 6-7.

5. If EPA were to seriously consider reverting to the 1999 permit effluent limits (AKG285000), it could only do so after completing a far more detailed analysis that considers the following: (a) based on an additional decade of data whether the Cook Inlet facilities have a reasonable potential to exceed water quality standards for each parameter at each facility; (b) if there is reasonable potential for any of the affected parameters, whether the 1999 effluent limits are set at appropriate levels; and (c) prepare a new mixing zone analysis and obtain a new 401 certification. [Union Oil]

Response: EPA has decided that ADEC's antidegradation analysis is adequate to justify backsliding to the less stringent produced water effluent limitations. See EPA's Responses to Comments #2 and 3, above. As such, this comment is moot.

6. EPA cannot justify reverting to 1999 Permit effluent limits without evaluating applicability of two antibacksliding exceptions, material or substantial alterations to permitted facility, and events over which permittee has no control and for which no reasonably available remedy. [Union Oil]

Response: See EPA's Response to Comment #5, above.

7. The Fact sheet does not provide sufficient detail explaining rationale or authority under which EPA may impose more stringent 1999 effluent limits. Reversion to the 1999 limits would be the functional equivalent of a NPDES permit modification. [ConocoPhillips]

Response: See EPA's Response to Comment #5, above.

8. Oppose effluent standards being lowered in any way. Destruction because of greed needs to be stopped. [Jean, usacitizen1]

Response: Thank you for your comment.

9. Oppose the less stringent effluent limits and support reinstating more stringent 1999 permit limits. Our concerns include: [Nanwalek]
 - (a) State of Alaska's antidegradation analysis excludes local knowledge, impacts of less stringent limits on subsistence foods safety, long-term effects of consumption of subsistence foods, and tribal concerns;

Response: Please see Response to Comment #3, above.

- (b) EPA's lack of current information on water quality effects of less stringent limits;

Response: The produced water effluent limits being finalized in this action are supported by the data and information supporting the Cook Inlet General Permit, issued by EPA in July 2007, and subsequently partially remanded by the Ninth Circuit in October 2010. Thus, the permit limits in this action are based upon the information that existed at the time the 2007 Cook Inlet General Permit was prepared. This information includes data on the water quality effects of the less stringent limits in the 2007 General

Permit – which are the same as the limits being finalized in this action. EPA does not have reason to believe that this information has changed in any significant way.

In fact, data collected and analyzed since issuance of the 2007 General Permit have not shown any significant water quality effects associated with the less stringent limits, which went into effect on July 2, 2007, and remained in effect while EPA addressed the Ninth Circuit remand. As the commenter may be aware, the General Permit required operators discharging more than 100,000 gallons per day of produced water to collect sediment and water column samples to determine the ambient metals and hydrocarbon concentration in the vicinity of the discharges. Data samples were collected in 2008 and 2009 as part of a coordinated study to evaluate the chemical, biological, and physical environment of Cook Inlet. Generally, the study found that there was no evidence of enhancement of any contaminant concentrations in sediments from oil and gas production operations in Cook Inlet, that concentrations of dissolved metals measured at the Trading Bay Production Facility and East Foreland Treatment Facility are below the Alaska Water Quality Standards criteria for both aquatic life in marine water and for human health for consumption, and that produced water does not cause elevated values of particulate metals (associated with suspended sediments) in samples from Cook Inlet.

The final report, titled “*Produced Water Discharge Fate and Transport in Cook Inlet, 2008-2009, NPDES Permit No. AKG-31-5000,*” was submitted to EPA in July 2010. This report represents the Integrated Cook Inlet Environmental Monitoring and Assessment Program (ICIEMAP) and provides a comprehensive understanding of Cook Inlet’s marine water column and benthic environments. The report is available upon request.

- (c) EPA and ADEC’s reliance on tribal concerns taken in early-mid 2000;

Response: As noted above in Response to Comment #9b, the permit limits being finalized in this action were developed based on available information that existed at the time that the 2007 Cook Inlet General Permit was issued, and EPA does not have reason to believe that this information has substantially changed. EPA understands the tribal concerns associated with oil and gas industry discharges in Cook Inlet and the potential impacts to subsistence foods. However, multiple studies, including the study discussed above in response #9b, have indicated no evidence of elevated concentrations in water and sediment samples collected in the vicinity of the produced water discharges, no correlation of oil and gas discharges contributing to contaminants found in Cook Inlet and Cook Inlet biota, and public health hazard from consumption of subsistence foods are very low.

- (d) No new data samples on subsistence foods collected since less stringent levels have been utilized.

Response: See Responses to Comments #9b and 9c, above.

- 10. EPA's approach to re-propose the effluent limits and provide a back-up alternative is an unusual way to proceed. As a result, many of the previous legal issues regarding the effluent limits remain and new issues have also risen. They include: [Trustees]

- (a) EPA and ADEC continue to allow unlimited discharge volumes and the mixing zones provided by dischargers themselves, with no apparent independent verification;

Response: The determination of the size of the mixing zones and calculation of limits based on such mixing zones is not being reconsidered in this action. See comment #4.

- (b) EPA must exercise best professional judgment and impose more stringent technology-based effluent limits. In development of the Cook Inlet General Permit, EPA simply applied the Effluent Limitation Guidelines (ELGs) for oil and gas facilities operating in the coastal subcategory even though the ELGs do not apply to all of the toxic pollutants discharged under the General Permit. EPA should revisit all of the effluent limitations. The limits that require a technology-based effluent limit (TBEL) analysis under EPA's re-proposal approach are mercury and silver;

Response: The remand of the General Permit was limited to a reconsideration of the less stringent WQBELs in light of Alaska's revised antidegradation analysis; thus, the technology-based limits in the General Permit are outside the scope of this action. See response #4, above. Moreover, the commenter raised this argument with respect to technology-based limits in its legal challenge to the General Permit – and the Ninth Circuit specifically rejected it, finding that the petitioners had failed to raise this argument in comments and therefore it was waived. *Cook Inletkeeper*, Memorandum at 5-6. The Court noted that petitioners could raise its arguments regarding the technology-based limits “in the administrative process for the *next* Cook Inlet general permit” (emphasis added). *Id.* at 6. The limits being finalized in this action are the remanded limits for the 2007 General Permit – the very permit that was at issue in the Ninth Circuit decision.

- (c) Both the EPA Fact Sheet and 401 certification are silent regarding mixing zones for the re-proposed effluent limitations and the alternative reinstatement of the stricter 1999 effluent limitations. These scenarios are modifications of the General Permit's effluent limits, and if mixing zones are to be reauthorized, then they must be proposed and public input sought;

Response: See EPA Response to Comment # 10a, above.

- (d) If EPA determines that the 401 certification antidegradation analysis is insufficient and reinstates the more stringent effluent limits from the 1999 permit, no mixing zones are authorized for those effluent limits. As such, the 1999 effluent limits must be met at the end of pipe for all discharges under the General Permit.

Response: See Response to Comment #5, above.

- (e) The re-proposed effluent limits are legally flawed because they constitute backsliding in violation of section 402(o) of the CWA. The State has not promulgated a legal implementation plan for its antidegradation policy. As a result, the State cannot make the determination that relaxed mixing zones comply with the State's antidegradation policy;

Response: ADEC has established implementation procedures for its antidegradation policy. 40 C.F.R. § 131.12(a) requires states to adopt an antidegradation policy and to "identify" methods for implementing that policy. ADEC's methods for implementing Alaska's antidegradation policy found in 18 AAC 70.015 are identified in the ADEC's July 14, 2010, "Interim Antidegradation Implementation Methods" guidance. As explained in a letter from EPA to ADEC, (Michael A. Bussell, EPA to Lynn Kent, ADEC, July 15, 2010), and in the preamble to EPA's proposed antidegradation implementation methods for the State of Oregon (68 Federal Register 58,775 Oct. 10, 2003), EPA has interpreted the word "identify" to mean that states may develop antidegradation implementation methods in regulation or outside of regulation (e.g., in guidance). Since EPA does not interpret its antidegradation regulation to require states to develop antidegradation implementation methods in regulation, and since EPA believes that the interim methods developed by ADEC are consistent with 40 C.F.R. § 131.12, (see Mike A. Bussell, EPA to Lynn Kent, ADEC, July 15, 2010), EPA believes that Alaska has satisfied the requirement to identify methods to implement the State's antidegradation policy consistent with 40 C.F.R. § 131.12. (see also Michael A. Bussell, EPA to Brook Brisson, Trustees for Alaska, November 2, 2010).

- (f) The re-proposed effluent limits are legally flawed because they constitute backsliding in violation of section 402(o) of the CWA. In the case of new information, relaxed permit limitations may be allowed only where there is a "net reduction in pollutant loadings that are not the result of another discharger's elimination or substantial reduction of its discharge because of compliance with the CWA or for reasons unrelated to water quality."

Response: CWA § 402(o)(1) allows for backsliding from water-quality based effluent limitations if the requirements of CWA § 303(d)(4) are met. Under CWA § 303(d)(4)(B), which applies to attainment waters, water-quality based effluent limitations may be relaxed provided doing so is consistent with the State's antidegradation policy. The CWA 401 certification includes an antidegradation analysis for the re-proposed effluent limits based on the requirements of 18 AAC 70.015 and 40 C.F.R. § 131.12, which determined that changes to effluent limitations are consistent with the antidegradation policy and will not violate applicable state water quality standards. EPA has reviewed ADEC's antidegradation analysis and believes it is sufficient and agrees with ADEC's conclusions.

- (g) EPA must make an informed policy decision about whether facilities covered by the General Permit should even be allowed to discharge produced water and drilling fluids and cuttings. Zero discharge should be required, and is economically and technically feasible to do so.

Response: See EPA Response to Comment #10b, above. The scope of this current re-proposal is limited to the reconsideration of the specific WQBELs that were subject to the remand in light of Alaska's new antidegradation analysis. Accordingly, the issue of whether technology-based limits should require zero discharge is outside the scope of this action.