

**Department of Environmental Conservation  
Final Response to Comments**

**For**

**Alaska Pollutant Discharge Elimination System**

**Individual Permit AK0001155**

**ConocoPhillips Alaska, Inc.**

**Kenai Liquefied Natural Gas Facility**

**Public Noticed April 30, 2015 – May 30, 2015**

**June 10, 2015**



**Alaska Department of Environmental Conservation  
Wastewater Discharge Authorization Program  
555 Cordova Street  
Anchorage, AK 99501**

## **1 Introduction**

### **1.1 Summary of Facility / Permit**

The ConocoPhillips Alaska, Inc. (CPAI or permittee) Kenai Liquefied Natural Gas (LNG) Facility (Facility) is located at 48237 Kenai Spur Highway on the east shore of Cook Inlet, Alaska. The Facility receives natural gas from Cook Inlet and Kenai Peninsula wells and processes it into LNG for transport and sale to overseas markets. The Facility began operation in 1969 and discharges wastewater under Alaska Pollutant Discharge Elimination System (APDES) individual permit AK0001155 – CPAI, Kenai LNG Facility (Permit). The previous permit was issued by the U.S. Environmental Protection Agency (EPA) in 1974 and has been administratively extended since 1979. This will be the first reissuance of the Permit by the Alaska Department of Environmental Conservation (DEC or Department).

The Department is reissuing the Permit authorizing the discharge of non-domestic and domestic wastewater up to maximum daily rate of 350,000 gallons per day to Cook Inlet via Outfall 001 located at Latitude 60° 40' 41" North and Longitude 151° 23' 37" West. The Permit includes acute and chronic mixing zones for total residual chlorine, total aqueous hydrocarbons, ammonia, arsenic, copper, mercury, nickel, zinc and temperature. The dimensions and orientations of the mixing zones are described below:

- The acute mixing zone will extend from the sea surface to the sea floor with a length of 123 meters, a width of six meters, and an associated dilution factor of 95.
- The chronic mixing zone will extend from the sea surface to the sea floor with a length of 176 meters, a width of 14 meters and an associated dilution factor of 165.

Both the acute and chronic mixing zones are rectangular in shape with Outfall 001 positioned as the centroid, and are oriented with the longitudinal axis parallel to the nearest shoreline.

### **1.2 Opportunities for Public Participation**

The Department developed the permit in accordance with the requirements presented in the Alaska Administrative Code (AAC), specifically 18 AAC 15 – Administrative Procedures, 18 AAC 70 – Alaska Water Quality Standards (WQS), and 18 AAC 83 -- APDES Program. DEC proposes to reissue the Permit after considering all substantive public comments on the Draft Permit and Fact Sheet. To ensure public, agency, and tribal notification and opportunities for participation, the Department:

- identified the Permit on the annual Permit Issuance Plan posted online at: <http://www.dec.state.ak.us/water/wwdp/index.htm>;
- notified potentially affected tribes via letter, fax and/or email that the Department would be working on the Permit;
- posted the Preliminary Draft Permit and Fact Sheet on-line for a 10-day applicant review on April 9, 2015 and notified tribes, local governments and other agencies;
- posted the public notice on the Department's public notice web page for a 30-day public review of the Draft Permit, Fact Sheet, and related documents on April 30, 2015 and notified tribes, local governments and other agencies concurrently;
- posted the Proposed Final Permit on-line for a one-day applicant review ending June 8, 2015. The Proposed Final Permit review period was shortened upon request by the applicant per 18 AAC 83.120(m); and

- sent email notifications via the APDES Program List Serve when the Preliminary Draft, Draft, and Proposed Final Permits were available for review.

During the draft comment period the Department received comments on the Draft Permit, Fact Sheet, and supporting documents from the United States Fish and Wildlife Service (USFWS).

This document summarizes the comments submitted and the justification for any action taken or not taken by DEC in response to the comments.

### **1.3 Final Permit**

The Final Permit was adopted by the Department on June 10, 2015. There were minor changes from the draft permit documents after public notice to correct typographical and grammatical errors and to clarify information. However, there were no significant changes resulting from comments received in the Final Permit and Fact sheet.

## **2 General Support and Opposition for the Permit**

Comments in support of the Permit were received from the USFWS who applauded Department's efforts to evaluate the environmental effects of the proposed mixing zones through increased monitoring and toxicity testing through the stipulations in the Permit.

Response: The Department acknowledges USFWS's review comments and is appreciative of the agency's assistance during the permit development and review process.

## **3 Comment on Monitoring Requirements**

USFWS commented that the source of copper in the discharge is important because engineering solutions to reduce this effluent differ based on the source. As an example, USFWS noted it is possible that acidic source water is dissolving the plant infrastructure (e.g., copper pipes), thus contributing copper to the waste stream. This problem may have a relatively simple engineering solution, such as neutralizing the source water prior to intake into the plant. USFWS requested DEC explore this potential solution.

**Response:** The Department disagrees with the need to identify the source of, and implement methods to reduce, copper concentrations in the discharge at this time. The permittee is in the process of modifying the potable drinking water system and this may affect source levels of copper. Although the 11 existing analytical results for copper provided in the application are adequate for the Department's decisions in the Permit, additional data representative of the modified source water is necessary to determine if there is a significant issue with copper in the effluent to warrant a source reduction program. Therefore, the Permit requires monthly monitoring for copper during the next permit term to inform future Department decisions during the next Permit reissuance. Similarly, the Permit also requires sampling and analysis of copper in the receiving water to support the next application for reissuance. No changes to the Permit or Fact Sheet have been made as a result of this comment.

#### 4 Comment on Test Methods

USFWS comments also expressed support for the inclusion of whole effluent toxicity (WET) testing in the reissued Permit but recommended the use of native salmon species as WET testing targets, rather than or in addition to the proposed test species.

**Response:** The Permit establishes numeric limits and requires monitoring per WQS and APDES procedures that ensure protection of aquatic life such that specifying indigenous species for WET monitoring is not necessary and could be infeasible. While specifying local salmon species could provide useful site-specific information, it is not required by 18 AAC 70.030 or 18 AAC 83.435 and the specification of standard invertebrate species following EPA method *Short Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to West Coast Marine and Estuary Organisms (West Coast Methods)* is better suited to meet the intended purpose of the Permit requirement. The intended purpose of requiring WET monitoring in the Permit is to provide an estimate of baseline chronic toxicity (if present) using standard procedures in order to characterize the effluent to inform future Department decisions during the next reissuance of the Permit. The Permit specifies *Atherinops affinis* (Topsmelt) as the primary, and *Menidia beryllina* (inland silverside) as a substitute vertebrate test species because they are approved by EPA as chronic WET test species and are readily available from west coast vendors (i.e., standard species). In DEC's experience, the availability of species has a pronounced effect on implementing WET requirements in APDES permits and a permittee's ability to remain in permit compliance. Per *West Coast Methods*, if indigenous species are used there must be a side-by-side demonstration with an approved species for the referenced toxicants and/or effluents to ensure that the species selected are at least as sensitive as the approved species. This level of comparative analysis is not commensurate with the purpose of characterizing the effluent and suggests that a site-specific species could be invalidated as the appropriate test species pending the outcome of the test(s). Given the intended permit purpose of developing a baseline estimate of chronic toxicity to characterize the effluent, DEC has determined that the benefits of requiring testing for site-specific species is not appropriate because the site-specific species may not be readily available by vendors and would require a side-by-side comparison with an EPA-approved species, which could lead to invalidation after the fact due to not being the most sensitive species. No changes to the Permit or Fact Sheet have been made as a result of this comment.