

November 6, 2001

Response to Comments

Draft NPDES Permit for:
City of Haines, Alaska
Municipal Wastewater Treatment Plant
NPDES No.: AK-002138-5

On August 9, 2001, the Environmental Protection Agency (EPA) reissued a draft National Pollutant Discharge Elimination System (NPDES) permit to the City of Haines, Alaska, for the discharge from the Haines Wastewater Treatment Plant. The City of Haines owns and operates the plant which treats domestic sewage from local residents and commercial establishments. The average monthly flow rate from the facility is approximately 0.6 million gallons per day (mgd). The city provides primary treatment to all wastewater prior to discharge to Portage Cove in Chikoot Inlet.

The public comment period for the draft permit extended from August 9 through September 10, 2001. EPA received comments on the draft NPDES permit from the following parties: 1) The City of Haines via a letter to Mr. Mike Lidgard, EPA, from Mr. Vince Hansen, City Administrator, dated September 5, 2001, 2) The State of Alaska via a letter to Mr. Mike Lidgard, EPA, from Ms. Clynda Luloff of the Alaska Department of Environmental Conservation, dated August 31, 2001, and 3) The U.S. Fish and Wildlife Service (FWS) via a letter to Mr. Robert Robichaud, EPA, from Ms. Teresa Woods, Field Supervisor, dated September 6, 2001. This document represents EPA's response to each of the comments received during the comment period. The comments are listed below followed by EPA's response.

Comment: Biochemical Oxygen Demand (BOD) limitations. During development of the draft permit the State had requested BOD limitations of a monthly average of 140 mg/L and a maximum daily limit of 200 mg/L. These limits were incorporated into the draft permit. In the comment letter from DEC on the draft permit the State request the BOD limits remain as proposed for the months of October 1 though April 30. During the summer months of May 1 through September 30, however, the State request a monthly average of 260 mg/L and a maximum daily of 300 mg/L. The State explains that the facility is far in excess of the 30% primary removal rates and that the facility has difficulty meeting the more stringent limitations during the summer months when greater loading is experienced. The City also commented on the BOD limitations and request identical limits as those requested by DEC.

Response. The previous permit had year-round BOD limits of a monthly average of 330 mg/L and a maximum daily limit of 330 mg/L. The limits proposed by DEC in the comment letter, and supported by the City, are significantly more stringent than the previous permit. EPA repeated the calculations that were provided in the fact sheet in order to determine the impact of the proposed BOD limits on dissolved oxygen concentrations in the receiving water. The calculations

show that the previous BOD limit of 330 mg/L resulted in a far-field dissolved oxygen (DO) depression of 0.62 mg/L. The 140 mg/L proposed for the winter months results in a DO far-field depression of 0.26 mg/L and the 260 mg/L proposed for the summer results in a 0.49 mg/L depression. Both of these limitations are improvements over the previous permit and are relatively minor impacts on ambient DO levels. Therefore, the BOD limitations as requested by the State and the City in the comment letters on the draft permit will be included in the final permit.

Comment: Temperature, DO, and pH effluent monitoring frequency. The State and the City both commented that effluent monitoring of temperature, DO, and pH at a frequency of five times per week is excessive given that these parameters do not fluctuate greatly and the size of the facility. Both commenters suggest that monitoring be reduced to once per week for these three parameters.

Response. EPA agrees that monitoring for these parameters can be conducted weekly given the size of the facility while still meeting the goals of the monitoring program. The final permit will be revised accordingly.

Comment: Fecal coliform ambient monitoring. The DEC request that fecal coliform monitoring in the ambient water be required four times per year during the first two years of the permit. If no violations of the state water quality standard are measured during the first two years of the permit, then the permit should allow monitoring to be decreased to once per year during the remaining years of the permit. The draft permit required fecal coliform monitoring four time per year during the life of the permit. The City of Haines request that the monitoring be conducted once per year.

Response. EPA agrees with DEC's ambient sampling plan for fecal coliform and will incorporate DEC's comment into the final permit. The State of Alaska stipulates the effluent limitations for fecal coliform and the appropriate mixing zone through the Clean Water Act Section 401 certification provided by the State. The State also has the authority to ensure that existing uses outside the mixing zone are maintained. The ambient monitoring provides evidence that the treatment of the wastewater and the mixing zone is adequate to maintain compliance with state standards. EPA agrees that the frequency as proposed in the DEC comment is reasonable considering the volume of the discharge and the level of treatment provided.

Comment: Whole effluent toxicity testing and benthic infauna and sediment analysis. The DEC request that the toxicity, benthic, and sediment analysis be conducted once during the permit cycle instead of twice as proposed. DEC states that testing twice during the permit will place a financial and personnel burden on the City of Haines, while not providing for a measurable increase in water quality by performing the testing. The City also request sampling be conducted once during the permit term. The City states that testing in the proposed permit is double the previous permit frequency. The City also provided information on cost estimates for conducting this testing along with logistical problems involved in transporting samples for toxicity testing from Haines to labs in Oregon. The City also cites previous test results that found "no adverse

effects” from previous surveys.

The Fish and Wildlife Service (FWS) commented that biomonitoring is a critical component of the permit and encourage EPA to include WET testing as a monitoring requirement. FWS recommends that if toxicity is detected in the first year of testing that additional WET tests be conducted in the following year.

Response. Given the volume of the Haines discharge, the fact that testing during the previous permit cycle found no adverse results from the discharge during benthic, sediment, and toxicity testing, and the comments provided on this issue, EPA will require WET, benthic, and sediment analysis be conducted once during the permit cycle. WET testing will be required in year 1 of the permit. Should WET testing find toxicity above the trigger level proposed in the permit, additional testing is required. Conducting WET testing early in the permit term provides the opportunity for more testing should the first test identify toxicity, as suggested by the FWS. Benthic and sediment testing will be required during the fourth year of the permit term. Conducting this testing during the fourth year of the permit will provided data that is necessary for reissuance of the permit.

Comment: Toxicity reduction evaluation (TRE) plan. The City request that the TRE plan requirements of the permit be dropped since there are no industrial users of toxics in Haines and that there is a public education requirement that is being implemented. If EPA retains the requirement the City requests guidance on preparing the plan.

Response. The initial TRE plan required under Section I.C.4. is intended to be a brief summary of how the permittee would respond to a positive toxicity test result. If the toxicity trigger in the permit is exceeded, the permittee would implement the initial TRE plan. If the TRE plan is successful and identifies the source of toxicity, then only one additional WET test is required. If the TRE does not identify the source, or if no TRE plan is implemented, six additional test are required. The TRE provides a means for a swift response and also a means to avoid additional testing, therefore, the TRE requirement will be retained in the final permit. EPA Region 10 will provide examples of initial TRE’s to the City of Haines.

Comment: Shoreline sign. The City request that the requirement to post a sign on the beach be eliminated from the permit. The City states that the sign will have a negative impact on an area that is in the center of the visitor district and that testing along the beach has shown no indication of environmental problems and, therefore, a sign is not necessary.

Response. The shoreline sign requirement of the permit is a direct copy of language required as a stipulation of the Clean Water Act Section 401 certification provided by the State. In the certification, the State cites its authority to specify permit terms and conditions under which waste material may be disposed of. The purpose of the notification requirement is to inform and provide assurance to the public that wastewater is being treated in accordance with State standards. The final permit includes the shoreline sign as required in the State certification.

Comment: Copper limitations. The FWS noted that the copper concentration projected at the zone of initial dilution in Appendix 1 of the fact sheet exceeds the copper marine criteria. The FWS recommends that EPA review the limitations required in the permit to assure that copper concentrations in the receiving water do not exceed criteria.

Response. EPA has reviewed the information presented in Appendix 1 of the fact sheet. The information in Appendix 1 is an analysis to determine which parameters in the discharge have a “reasonable potential” to exceed state water quality criterion. A positive result of the analysis requires EPA to develop limitations in the permit. Using the assumptions of Appendix 1, copper exceeded the most stringent marine criteria, therefore, a limit must be developed and included in the permit. Calculation of the copper limit itself is done in the body of the fact sheet and is essentially a function of the criteria and the dilution available from the mixing zone. After review of the limit included in the draft permit, EPA concludes that the limit is protective of the receiving water criteria and, therefore, the limit for copper is included in the final permit as proposed.

State of Alaska, 401 Final Certification of the Permit.

On November 2, 2001, Alaska DEC provided a final 401 certification of the permit which resulted in two minor changes to the draft permit which have not been discussed above. The first change was the inclusion of a maximum dissolved oxygen (DO) limitation for the effluent. ADEC requires a minimum limitation for DO of 2.0 mg/L and a maximum of 17 mg/L. This range was included in the final permit.

Item number 12 of the 401 certification stipulates how DEC may respond to exceedances of the fecal coliform bacteria limitations of the permit. Based upon a certain level of performance, as described in the certification, the state may require the facility to disinfect the wastewater. Since this stipulation describes how the State may respond to fecal exceedances, it was not necessary to include as a provision of the federal NPDES permit. Section III of the permit describes the permittee’s compliance responsibilities to all conditions of the permit.

One provision under item number 12 of the certification, however, was included in the final permit. At some point during the permit term the facility could be required by DEC to partially disinfect the wastewater. If chlorination is selected as the disinfection method, a chlorine limitation would be necessary for the permit in order to meet Alaska water quality standards. A requirement was added to the limitations section of the permit which establishes a total residual chlorine limit and monitoring frequency should the facility install chlorine disinfection. The limitation was taken directly from the state certification and accounts for dilution available from the approved zone of initial dilution.