

**Response to Alaska Department of Environmental Conservation's (ADEC)  
Certificate of Reasonable Assurance for  
City of Cordova Wastewater Treatment Plant  
NPDES PERMIT # AK-002154-7**

A draft National Pollutant Discharge Elimination System (NPDES) permit for the City of Cordova Wastewater Treatment Plant was issued for public notice on September 12, 2001. The Public Notice initiated a 30-day public comment period in which EPA did not receive any comments. The ADEC then provided a certificate of reasonable assurance pursuant to state regulations and section 401 of the Clean Water Act.

1. The Alaska Department of Environmental Conservation (ADEC) required a flow rate limitation of 0.8 million gallons per day (mgd) for a monthly average and 1.2 mgd for a daily maximum.

Response: In the most recent permit application (dated December 19, 2000) submitted by the city of Cordova, the design flow was specified as 0.7 million gallons per day (mgd). Therefore, this information was and will be used in the development of effluent limitations until such time as new information (ie. revised permit application) is submitted to the agency which specifies a revised design capacity of the facility.

2. The ADEC required the following effluent limits for biochemical oxygen demand, five day (BOD<sub>5</sub>):
  - a monthly average of 30 mg/l
  - a weekly average of 45 mg/l
  - a daily average of 60 mg/l

Response: As stated in Appendix C *Basis for Effluent Limitations* of the Fact Sheet which accompanied the draft permit, the City of Cordova WWTP is a secondary treatment facility that is subject to the federal technology-based requirements at 40 CFR 133.102 for BOD<sub>5</sub> and total suspended solids (TSS). These requirements specify that the monthly average shall not exceed 30 mg/l, the weekly average shall not exceed 45 mg/l, and the monthly average percent removal shall not be less than 85 percent. Daily limits for BOD<sub>5</sub> and TSS are based on the state regulations 18 AAC 72.990 relating to wastewater disposal. The final permit includes a monthly, weekly and daily effluent limitation for BOD<sub>5</sub> and TSS.

3. The ADEC required the following effluent limits for TSS:
  - a monthly average of 30 mg/l
  - a weekly average of 45 mg/l
  - a daily average of 60 mg/l

Response: see previous response.

4. The ADEC specified a maximum limitation of 0.2 mg/l for total chlorine, a detection limit of

0.1 mg/l and monitoring is not required if chlorine is not being added to the wastewater.

Response: The final permit includes a water quality-based effluent limit of 0.2 mg/l for total residual chlorine and conditions which specify that the permittee must use EPA approved test methods and monitoring requirements to determine compliance with applicable limits. Therefore, detection limits for total residual chlorine analysis and additional monitoring conditions are not included in the final permit.

5. The ADEC required a minimum limitation for dissolved oxygen (DO) of 2.0 mg/l and a maximum limitation of 17mg/l.

Response: Federal regulations 40 CFR 122.44(d)(1)(vii) specify that when developing water quality based effluent limits, the permitting authority shall ensure that the level of water quality to be achieved by limits on point sources established under this paragraph is derived from and complies with all applicable water quality standards. In addition, Section 301(b) of the Clean Water Act requires NPDES permits to include limits for all pollutants or parameters which “are or may be discharged at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard, including state narrative criteria for water quality.” Alaska water quality standards (18 AAC 70.020) protect Orca Inlet for several beneficial uses including water supply for aquaculture, seafood processing and industry and specify an allowable range of 6.0 to 17.0 mg/l for dissolved oxygen. To ensure that the discharge does not cause or contribute to an exceedance in the applicable water quality criteria, the final permit includes a range of 6.0 to 17.0 mg/l for dissolved oxygen.

6. The ADEC designated a zone of initial dilution (ZID) for the discharge which extends 5 meters in radius from the diffuser. The corresponding dilution ration is 100:1.

Response: Based on the preliminary comments from ADEC, a description of the zone of initial dilution was included in Section VII.A. *State Certification Requirements* of the Fact Sheet. The final permit includes effluent limitations which were derived using this zone of initial dilution (see Appendix C of the Fact Sheet).

7. The ADEC required maximum effluent limitations for fecal coliform bacteria of 100,000 fecal coliform bacteria (FC) per 100 ml of sample for a monthly average and 150,000 FC per 100 ml of sample for a daily maximum. ADEC also required that the effluent must be sampled at least one time per week.

Response: As stated in Appendix C *Basis for Effluent Limitations* of the Fact Sheet, the State modeled the fate and transport of this pollutant parameter in 1995 and determined a maximum daily limit of 10,000 fecal coliform bacteria per 100 ml based on the corresponding mixing zone of 3,200 meters by 200 meters. The State has not provided the agency with a technical justification (ie. additional modeling results) to increase the limits from 10,000 to 100,000 fecal coliform bacteria per 100 ml. In addition, federal regulations at

40 CFR 122.44(l) and Section 402(o) of the Clean Water Act prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit except under specific conditions including, but not limited to, new information available which was not available at the time of permit issuance and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. Also, under Section 303(d)(4)(B), water quality based effluent limits may only be relaxed where the action is consistent with the State's antidegradation policy. The final permit includes the previous effluent limitation of 10,000 organisms per 100 ml for fecal coliform bacteria.

8. The ADEC required an effluent limitation for pH of 6.0 to 9.0 standard units, (S.U.)

Response: As stated in Appendix C *Basis for Effluent Limitations* of the Fact Sheet, the draft permit specified a pH range of 6.0 to 9.0 standards units based on preliminary comments from the state (dated August 31, 2001). However, as previously stated, federal regulations at 40 CFR 122.44(l) and Section 402(o) of the Clean Water Act prohibit the renewal, reissuance or modification of an existing NPDES permit that contains effluent limits, permit conditions or standards that are less stringent than those established in the previous permit. In addition, state water quality standards at 18 AAC 70.020(b) specify an allowable pH range of 6.5 to 8.5 standard units. To ensure that the final permit is consistent with federal statutes and regulations and that the discharge does not cause or contribute to an exceedance of applicable water quality standards, the final permit specifies a pH range of 6.5 to 8.5 standard units.

9. The ADEC designates a mixing zone (MZ) for fecal coliform bacteria contained in the discharge from the City of Cordova Wastewater Treatment Facility.

Response: Based on preliminary comments from ADEC, the description of the mixing zone for fecal coliform was included in Section V.B. *Summary of Receiving Water Monitoring Requirements in Draft NPDES Permit* of the Fact Sheet. The final permit includes effluent limitations for fecal coliform which were based on the applicable mixing zone.

10. The ADEC required monitoring at the outside edge of the mixing zone for fecal coliform bacteria. A minimum of four samples for fecal coliform bacteria analysis shall be collected in the months of June, July, August and September and once during the time period December through March of each year of the permit. The monitoring may be decreased after two years if the results indicate that the quality of the discharge has not caused the State of Alaska Water Quality Standards to be exceeded outside of the mixing zone. The samples shall be collected from three down current sites and one up current site at the edge of the mixing zone. The sample collection should take place during varying tidal stages for each sampling event.

Response: The final permit includes the monitoring requirements, however the NPDES permit program is a point source program in which effluent limitations may only be established at the end of the pipe. The agency cannot enforce water quality criteria (e.g. 14

fecal coliform per 100 ml) within the receiving water, however the permitting authority can back calculate to determine acceptable levels at the point of discharge so that water quality standards are not exceeded outside of an applicable mixing zone.

11. The ADEC required that a sign be placed on the shoreline near the outfall line. The sign should state that secondary treated domestic wastewater is being discharged, the name and owner of the facility and the approximate location and size of the mixing zone. The signs should inform the public that certain activities, such as the harvesting of shellfish for raw consumption and bathing should not take place in the mixing zone and give a contact number for additional information.

Response: The final permit includes this requirement.