

November 20, 2001

Response to Comments

Draft NPDES Permit for:
City and Borough of Sitka, Alaska
Municipal Wastewater Treatment Plant
NPDES No.: AK-002147-4

On August 9, 2001, the Environmental Protection Agency (EPA) reissued a draft National Pollutant Discharge Elimination System (NPDES) permit to the City and Borough of Sitka (CBS), Alaska, for the discharge from the Sitka Wastewater Treatment Plant. The CBS 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 1.5 million gallons per day (mgd). The CBS facility provides primary treatment to all wastewater prior to discharge to the Middle Channel of Sitka Sound.

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 and Borough of Sitka via a letter to Mr. Mike Lidgard, EPA, from Mr. Mark Buggins, Environmental Superintendent, dated September 7, 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 (DEC), dated August 31, 2001, 3) Mr. Dick Caldwell of Northwestern Aquatic Sciences via an electronic mail forwarded from Mr. Mark Buggins to Mr. Mike Lidgard dated September 9, 2001, and 4) 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: Whole effluent toxicity (WET) testing. The DEC suggest that WET monitoring be conducted annually during the first and fourth year of the permit term and not quarterly as listed in Table 2, footnote 5, of the draft permit. The CBS provided an identical comment.

Response. Footnote 5 of Table 2 of the draft permit is in error. EPA intended WET testing to be conducted annually during the first and fourth year of the permit term and not quarterly as indicated in the footnote. The footnote in Table 2 of the final permit has been revised accordingly.

Comment: WET monitoring frequency. For the purposes of clarification of the permit frequency requirement for WET testing, the CBS suggests inserting the word "annual" in the last sentence of the first paragraph of Section C of the draft permit (page 13).

Response. EPA agrees with this suggestion and the final permit has been revised as suggested.

Comment: WET species selection and test dilution series. The CBS and Mr. Caldwell of Northwestern Aquatic Sciences requests replacing the sentence which refers to future WET testing being conducted with the purple urchin and instead allow the use of other EPA approved species as in the previous permit. The CBS suggest the following language “Species shall be selected based on availability of organisms in spawning condition”. Mr. Caldwell also suggest deleting the species *Mytilus edulis* and provided a suggestion for alternate species. Mr. Caldwell also points out the apparent discrepancy with the receiving water concentration (RWC) of 1.0% effluent and the 122 Tuc listed in the WET section of the draft permit.

Response. EPA agrees with the suggestion to replace the sentence which refers to WET testing being conducted with the purple urchin and will delete the sentence from the final permit. EPA also agrees with the comment regarding mussel species and will change the species name in the final permit to *Mytilus* sp. Finally, Section 3 of the WET section of the draft permit requires five dilutions with one at the receiving water concentration (RWC) and two dilutions above and two dilutions below the RWC. Since the dilution ratio is 122:1, the RWC is 0.82% and not 1.0% as presented in the draft permit. The final permit has been revised so the RWC equals 0.82%.

Comment: Toxicity testing. The Fish and Wildlife Service (FWS) commented that biomonitoring is a critical component of the permit and encourages 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. EPA agrees with the comment and WET testing is required twice during the permit term along with a trigger which requires additional testing should toxicity be identified.

Comment: Fecal coliform monthly limitations. The CBS request that the proposed monthly average discharge limit of 1,000,000 FC/100mL be revised to the current permit discharge limit of 1,500,000 FC/100mL. The CBS states that of the six samples collected in the year 2000, two samples were in excess of the proposed limit of 1,000,000 and the CBS expressed its concern that the new limit will result in permit violations. The CBS also discussed its efforts to reduce extraneous water (I&I) from entering the collection system and the fact that this effort will reduce water which acts to dilute the influent, and, therefore, will actually increase the concentration of parameters like fecal coliform. The CBS also discussed past ambient data which shows general compliance with water quality standards. The CBS also states that lowering the fecal limitation could lead to costly additional and unnecessary treatment.

Response. On November 19, 2001, the State of Alaska Department of Environmental Conservation (DEC) issued a final Clean Water Act Section 401 certification of the City of Sitka permit. Item 4 of the certification requires the permit to include effluent fecal coliform bacteria limitations of 1.0 million

colonies per 100 ml for a monthly average and 1.5 million per 100 ml for the daily maximum, sampled at least once per month. Since this limitation is included in the certification as necessary for the permit to comply with Alaska Water Quality Standards, EPA has included the limitation in the final permit. Furthermore, the State is requiring other similar sized municipal facilities in Southeast Alaska, which also provide primary treatment prior to discharge to marine waters, to meet the same effluent fecal limitations. EPA agrees with DEC that the fecal limitations as required by the certification and proposed in the draft permit are appropriate for this facility.

In light of the CBS's comments, EPA has reevaluated effluent fecal coliform monitoring results from the facility. Although concentrations do appear to have increased over the past year, the facility has generally been in compliance with the proposed daily maximum value of 1.5 million per 100mL. As the CBS stated in their comments, there have been daily values over the past year which exceed the proposed monthly average limitation. These samples, however, may not indicate a violation of the monthly limit since they represent a single day and not necessarily facility performance over a 30-day period. The facility does have the option of sampling more than the permit required frequency of once per month in order to calculate a monthly value for determination of compliance with the monthly average limit. By averaging the data by month over the most recent years, the facility has been in compliance with the proposed monthly average limitation.

Item number 10 of the Alaska DEC 401 certification of the permit 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 DEC 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 10 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

Comment. Toxic pollutants and pesticides monitoring frequency. The CBS request the following toxic pollutant monitoring frequency: "a tiered monitoring structure with analysis of Toxic Pollutant and Pesticides in the first permit year and follow up monitoring for benzidine in the fourth year if benzidine is detected in a concentration showing reasonable potential to violate water quality standards at the edge of the ZID in the first analysis". The CBS cites the fact that this scan was required only once in the previous permit term and that the cost is \$2500 for one set of analysis.

Response. As discussed in the fact sheet, benzidine was present in the last toxic pollutant scan and showed a potential to exceed criteria and is one reason for requiring the toxic scan frequency of twice during the permit term. EPA, however, is also interested in monitoring the other toxic pollutants that have potential to be present. The toxic scan assures EPA, other regulatory agencies, the public, and the permittee that the facility is not discharging toxic pollutants and pesticides in quantities that result in exceedances of the state water quality standards. Requiring two tests over a five year permit period is a reasonable frequency when considering the size of the facility and the fact that this is a Clean Water Act (CWA) Section 301(h) facility providing primary treatment of wastewater. The toxic pollutant scan frequency as proposed is retained in the final permit.

Comment. Operation and maintenance plan review. The permit requires development of an operation and maintenance plan within 180 days from permit issuance. Based on the small staff and limited budget, the CBS requests one year to perform the requirements of Section F of the permit.

Response. EPA believes 180 days is a reasonable period of time to complete the operation and maintenance plan review, however, additional time will be allowed in the final permit due to the circumstances cited in the comment.

Comment: Shoreline signs. The CBS expressed concern over the difficulty of maintaining shoreline signs as required by the proposed permit. The CBS expressed their understanding in the comment that they will be able to work closely with the State to select acceptable signage materials, sign location and other details.

Response. The permit language requiring the shoreline signs is verbatim from a state stipulation as provided in the Clean Water Act Section 401 state certification of the permit. The permit language does not speak to specifics such as the sign material, specific location, or other details and EPA encourages the CBS to work closely with the DEC when implementing this provision of the permit.

Comment: Reporting of monitoring results. The CBS requests that the monitoring report requirement remain the 15th day of the following month as previously required, not the 10th day as proposed.

Response. The final permit will be revised to require reporting by the 15th of the month.

Comment. The FWS noted that the copper and benzidine concentrations projected at the zone of initial dilution in Appendix 1 of the fact sheet exceed the marine criteria. The FWS recommends that EPA review the limitations required in the permit to assure that concentrations in the receiving water do not exceed criteria. The FWS was particularly concerned about copper concentrations since this metal can cause chronic toxicity to fish species in the area.

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, 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. Benzidine was also shown to have a potential to exceed criteria but, as discussed in the fact sheet, this was based on one sample result and there is no known or suspected source of the pollutant to the facility. Additional testing is proposed for benzidine in order to further quantify whether the parameter is present and if a limit is necessary.

Comment: Fact Sheet. Both the DEC and the CBS provided comments which update and correct information from the fact sheet supporting the permit. Many of the comments provided on the fact sheet pertain to changes in operation of the facility that have occurred in recent years. Any comments related to the fact sheet that affect the conditions of the permit have been listed above and have been addressed. The remaining comments, which are updates or corrections to the fact sheet, will be kept on file and included in the fact sheet during the next permit reissuance.

