

**DIVISION OF AIR AND WATER QUALITY
WASTEWATER DISCHARGE PROGRAM**

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April 4, 2002

Mr. Larry Weaver, Utility Manager
City of Valdez
Wastewater Treatment Plant
800 South Sawmill Road
Valdez, AK 99686

**Certified Mail # 7099 3400 0015 5441 1298
Return Receipt Requested**

RE: State of Alaska, ADEC Final 401 Certification of NPDES Permit No. AK-002143-1

Dear Mr. Weaver;

In accordance with Section 401 of the Clean Water Act of 1977 and provisions of the Alaska Water Quality Standards, the Department of Environmental Conservation is issuing the enclosed Final Certificate of Reasonable Assurance for the renewal of the NPDES permit for discharges of secondary treated and disinfected wastewater from the City of Valdez Wastewater Treatment Facility located at Valdez, Alaska. This Department action represents only one element of the overall project level coastal management consistency determination issued by the Office of Management and Budget under AS 44.19 and 6 AAC 50.070.

Department of Environmental Conservation regulations provide that any person, who disagrees with any portion of the final decision, may request an adjudicatory hearing in accordance with 18 AAC 15.200-920. The request should be mailed to the Commissioner of the Alaska Department of Environmental Conservation, 410 Willoughby Avenue, Suite 303, Juneau, AK. 99801-1795 Failure to submit a hearing request within thirty days of receipt of the final determination letter shall constitute a waiver of that person's right to judicial review of this decision.

By copy of this letter we are advising the City of Valdez, the Environmental Protection Agency and the Division of Governmental Coordination of our actions and enclosing a copy of the Final certification for their use.

Sincerely,

SIGNATURE ON FILE

William D. McGee
Technical Lead

Enclosure: Final Certificate of Reasonable Assurance

cc:
Sharmon Stambough, ADEC, Anchorage
George Kinney, City Manager, Valdez
Tim Wingerter, ADEC, Fairbanks
Susan Poulosom, EPA Reg. X/Seattle, WA

ADF&G, Anchorage
ADNR, Anchorage
DGC, Anchorage
Robert Robechaud, EPA Region 10, Seattle

Clean Air, Clean Water

STATE OF ALASKA
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
FINAL CERTIFICATE OF REASONABLE ASSURANCE

A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, has been requested by the City of Valdez for the discharge of secondary treated and disinfected wastewater from the City of Valdez Wastewater Treatment Facility.

The activity is located at Latitude 61° 6' 45 N, Longitude 146° 16' 30" W, near Valdez, Alaska with discharges to a constructed drainage area which extends approximately 1,300 feet at M.L.L.W. to the Port of Valdez, in Prince William Sound.

Public notice of the application for this certification was made in accordance with 18 AAC 15.180.

Water quality certification is required for the activity, because the activity will be authorized by an Environmental Protection Agency Permit identified as NPDES Permit No. AK-002143-1 and a discharge will result from the activity.

After review of the public comments received in response to the public notice, the Alaska Department of Environmental Conservation certifies that there is reasonable assurance that the activity and the resulting discharge is in compliance with the requirements of Section 401 of the Clean Water Act, which includes the Alaska Water Quality Standards, 18 AAC 70, and the Standards of the Alaska Coastal Management Program, 6 AAC 80, provided that the following stipulations are adhered to. These stipulations were adopted pursuant to 6 AAC 50 (Project Consistency with the Alaska Coastal Management Program) and are necessary to ensure that the project is consistent with the ACMP:

- 1.) The Alaska Department of Fish and Game has declared that the receiving water is an anadromous fish spawning area. According to 18 AAC 70.255(g)(h)(1), the ADEC cannot allow a mixing zone for any parameter in an anadromous fish spawning area. The ADEC therefore must require that the effluent quality either meet all of the limitations for the parameters listed in the State of Alaska Water Quality Standards at the point of entry into the receiving water, or the discharge to this area must be discontinued.

The City of Valdez has verbally agreed to implement a solution as soon as reasonably possible and will submit progress reports to the Alaska Department of Fish and Game at least every six months. Since the discharge of treated wastewater has been occurring since shortly after the plant came on line, the ADF&G will not initiate enforcement actions provided the discharge is halted within 18 months, or provided due diligence is demonstrated by the City of Valdez and significant progress toward resolution is shown by the progress reports.

Since this is an existing discharge and the effluent quality is not anticipated to change significantly in the foreseeable future, the ADEC will not require the discharge to be stopped immediately, but instead will require the City of Valdez to implement the following steps and procedures:

- a. Study and decide on the course of action the City of Valdez will take to either improve the quality of the effluent or eliminate the discharge of the effluent to the current receiving area, within 18 months after the effective date of the NPDES permit. The department must be notified in writing within the 18-month time frame of the results of the study and final decision.
- b. Design and obtain plan approval from the ADEC for any additions or modifications to the facility within 24 months after the effective date of the NPDES permit.
- c. Construct and have operational any additions and/or modifications to the facility within 36 months from the effective date of the NPDES permit.

The ADEC will consider changes to the time schedule upon written request from the permittee. Any deviations from the above schedule must be agreed to in writing by both the ADEC and the permittee.

This permit will allow the discharge of treated effluent into the existing fresh water stream/ditch, for up to 36 months after the effective date of the NPDES permit, provided that the following conditions are met:

- a. The permittee must be in compliance with the time schedule.
- b. The permittee must be making satisfactory progress toward improvement of the quality of the effluent or the removal of the effluent from the small fresh water stream/ditch.
- c. The permittee must remain in compliance with the requirements of this certification.

Rationale: In accordance with Water Quality Standards, 18 AAC 70.910. If the department determines that more time is required for a facility to come into full compliance with the water quality standards under this chapter, and if the department determines that allowing a facility more time to come into full compliance will not harm or threaten public health or the environment, the department will include a compliance schedule as a condition of a permit, certification, or approval issued under this chapter.

- 2.) The ADEC designates a mixing zone (MZ) in the marine waters in the Port of Valdez for up to the first 36 months of the permit, (or less if the decided upon course of action is to meet water quality standards at the end of the pipe), and after the first 36 months of the permit if the effluent discharge is rerouted to marine water. The limitations must be met outside of the mixing zone boundary for the following parameters; fecal coliform bacteria, total chlorine, nutrients, metals, pH, dissolved oxygen and whole effluent toxicity. The mixing zone is defined as the area comprised of a semi circle in the receiving water with a radius extending 100 meters, (at M.L.L.W.) from the point of entry into the Port of Valdez. Computer modeling to determine the exact mixing zone size was not conducted for this discharge due to the unusual nature of the receiving area, however a dilution factor has been assigned for this discharge. The dilution factor is 20:1. The physical size of the mixing zone may be adjusted if it is later determined that the 20:1 dilution is not achieved within 100 meters of the entry point into the Port of Valdez.

Rationale: In accordance with State Regulations 18 AAC 70.240, the Department has authority to designate mixing zones in permits or certifications. This mixing zone will ensure that the most stringent water quality standard limitations for fecal coliform bacteria; 14 FC/100 ml, 30 day average, (not more than 10% of the samples may exceed 43 FC/100 ml.), is met at all points outside of the mixing zone.

3.) The ADEC also requires the following limitations during the life of the NPDES permit:

Discharges to the freshwater stream/ditch, (up to the first 36 months of the NPDES permit).

Flow - 1.5 million gallons per day (mgd), monthly average; 2.5 mgd, daily maximum
Biochemical oxygen demand, (BOD5), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total suspended solids, (TSS), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total chlorine – 0.04 mg/l, detection limit of 0.1 mg/l
Dissolved oxygen – 7 mg/l, minimum, 17 mg/l maximum
pH – 6.5-8.5 S.U.
Whole effluent toxicity – NOEC = 20 TUc (5 % effluent)
Nutrients - WQS's limits x 20:1 dilution factor
Metals - WQS's limits x 20:1 dilution factor
Oil and grease – no sheen
All other parameters – limits as per WQS's
Effluent fecal coliform bacteria – 200 FC/100 ml, monthly average
400 FC/100 ml, weekly average

Discharges directly to the Port of Valdez (after rerouting of the discharge to marine water).

Flow - 1.5 million gallons per day (mgd), monthly average; 2.5 mgd, daily maximum
Biochemical oxygen demand, (BOD5), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total suspended solids, (TSS), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total chlorine – 0.04 mg/l, detection limit of 0.1 mg/l
Dissolved oxygen – 2 mg/l, minimum, 17 mg/l maximum
pH – 6-9 S.U.
Whole effluent toxicity – NOEC = 20 TUc (5 % effluent)
Nutrients - WQS's limits x 20:1 dilution factor
Metals - WQS's limits x 20:1 dilution factor
Oil and grease – no sheen
All other parameters – limits as per WQS's
Effluent fecal coliform bacteria – 200 FC/100 ml, monthly average
400 FC/100 ml, weekly average
800 FC/100 ml, daily maximum

Discharges to the freshwater stream/ditch, (after 36 months of the NPDES permit if the discharge to fresh water continues).

Flow - 1.5 million gallons per day (mgd), monthly average; 2.5 mgd, daily maximum
Biochemical oxygen demand, (BOD5), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total suspended solids, (TSS), - 45 mg/l, monthly average; 65 mg/l, weekly average; the percent removal must be greater than 65 per cent
Total chlorine – 0.002 mg/l, detection limit of 0.1 mg/l
Dissolved oxygen – 7 mg/l, minimum, 17 mg/l maximum
pH – 6.5-8.5 S.U. and within 0.5 pH units of the receiving water
Whole effluent toxicity – NOEC = 1 TUc (100 % effluent)
Nutrients - WQS's limits
Metals - WQS's limits
Oil and grease – no sheen
Effluent fecal coliform bacteria – 20 FC/100 ml, monthly average
40 FC/100 ml, weekly average

Rationale: In accordance with State Regulations 18 AAC 70.245, the Department will consider the characteristics of the effluent, including flow rate, when determining the appropriateness and size of a mixing zone. Restricting the amount of flow will assure that the size of the mixing zone is appropriate and that the treatment capacity of the facilities is not exceeded.

In accordance with State Regulations 18 AAC 72.050(3) and 72.990(59,D) the minimum required level of treatment for this discharge is secondary treatment.

In accordance with State Regulations 18 AAC 15.090, the Department may attach terms and conditions to a permit, variance, or approval, including operating, monitoring, inspection, sampling, access to records and reporting requirements, and the posting of a performance bond or other surety, that it considers necessary to ensure that all applicable criteria will be met.

- 4.) The ADEC requires monitoring at the outside edge of the mixing zone for fecal coliform bacteria. A minimum of three samples for fecal coliform bacteria analysis shall be collected in each of the following months; June, July, August 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 two 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.

Rationale: In accordance with State Regulations 18 AAC 70.245, the Department has authority to ensure that existing uses of the waterbody outside the mixing zone are maintained and fully protected. The specified monitoring will provide evidence to the Department that the treatment and mixing zone size is adequate and also provide assurance to receiving water users that they may conduct their activities outside of the mixing zone without fear of damaging effects caused by the discharge.

- 5). The ADEC requires 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.

Rationale: In accordance with AS 46.03.110, (d), the department may specify in a permit the terms and conditions under which waste material may be disposed of. The notification requirement is intended to inform and provide assurances to the public that the wastewater is being treated in accordance with Alaska Water Quality Standards, 18 AAC 70.

April 4, 2002

Date

SIGNATURE ON FILE

William D. McGee

Technical Lead