



THE STATE
of **ALASKA**
GOVERNOR SEAN PARNELL

Department of Environmental
Conservation

DIVISION OF WATER
Compliance Program

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<http://dec.alaska.gov/water/Compliance/index.htm>

November 12, 2014

Samantha Stoughtenger
City and Borough of Juneau
Auke Bay Wastewater Treatment Plant
2009 Radcliffe Road
Juneau, AK 99801

SUBJECT: Alaska Pollutant Discharge Elimination System (APDES) Facility Inspection Report.
Authorization Number AKG572004 for the City and Borough of Juneau, Auke Bay Wastewater
Treatment Plant.

Dear Ms. Stoughtenger:

On September 17, 2014 The Alaska Department of Environmental Conservation (ADEC) inspectors Jeff Hoagland, Willow Weimer, and Shilo Williams conducted an inspection of your facility.

The Auke Bay Wastewater Treatment Plant has been found ***In-Compliance*** with all terms and conditions that were evaluated for this inspection under APDES Authorization Number AKG572004.

The Department would like to extend its gratitude for making representatives of your facility available during the inspection and thank you for your cooperation and your assistance in protecting public health and the environment. If you have any questions, please feel free to contact me directly at (907) 465-5276 or by e-mail at jeff.hoagland@alaska.gov.

Sincerely,

A handwritten signature in blue ink, appearing to read "Jeff Hoagland".

Jeff Hoagland
Environmental Program Specialist II

Enclosure: APDES Inspection Report

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APDES INSPECTION REPORT

Alaska Department of Environmental Conservation (ADEC)

Division of Water

410 Willoughby Ave., Ste 303 - Juneau, AK 99801

Section 1: General Data

Permit Number	Announced/ Unannounced	Facility Type	Receiving Waters	Weather	Inspection Date
AKG572004	Announced	Domestic Wastewater	Auke Bay	Partly Cloudy ~50F	September 17, 2014

Section 2: Facility Data

Name of Facility: City and Borough of Juneau Auke Bay Wastewater Treatment Plant	Entry Time: 12:30pm	Permit Effective: November 1, 2012
	Exit Time: 2:00pm	Permit Expiration: October 31, 2017
Physical Address: 11825 Glacier Highway Juneau, AK 99801 58 23' 15.0"N 134 38' 54.5"W (Google Earth)	Mailing Address: Mendenhall Wastewater Treatment Plant, Central Office 2009 Radcliffe Road Juneau, AK 99801	
On-Site Representative: Name: Catherine Carlson, Level 3 Plant Operator Address: 11825 Glacier Highway Phone: (907) 723-0327 Email: catherine_carlson@ci.juneau.ak.us	Responsible Party: Name: Samantha Stoughtenger, Utility Superintendent Address: 2009 Radcliffe Road, Juneau, AK 99801 Phone: (907) 586-0393 Email: samantha_stoughtenger@ci.juneau.ak.us	
Additional Inspection Participants: Don Dodson, CH2MHill Willow Weimer, ADEC Shilo Williams, ADEC	Other:	

Section 3: Findings

Background

The Auke Bay Wastewater Treatment Plant (WWTP) is a publically owned domestic wastewater treatment facility operated by the City and Borough of Juneau (CBJ). The plant operates year-round and utilizes activated sludge secondary treatment and chlorine disinfection. There is an approved 30 meter-radius mixing zone discharging into Auke Bay. The 2009 Notice of Intent reported a design capacity of 160,000 gallons per day (gpd), an average flow of 68,000 gpd, with maximum flows exceeding 100,000gpd.

Regulatory Status/Compliance History

The Auke Bay WWTP is authorized to discharge under the Alaska Pollutant Discharge Elimination System (APDES) General Permit AKG572000 for Publicly Owned Treatment Works (POTW's). The facility was previously permitted under the National Pollutant Discharge Elimination System (NPDES) General Permit AKG571000 for POTW's which expired July 20, 2009. ADEC conducted an inspection of this facility in 2004 with no resulting enforcement actions.

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Field Inspection

Upon arrival at the Auke Bay facility, introductions were exchanged and inspector credentials (Weimer) were presented to the on-site representatives; Ms. Catherine Carlson and Mr. Don Dodson. After introductions, a general plan was discussed for the initial interview, records review, facility walk-through, and closing interview.

The following information was provided verbally by on-site representatives:

- The facility was constructed in the early 1970's. The exact year of construction was unknown.
- A new clarifier was built in 1998. The old clarifier, currently offline, can be brought back online when needed for cleaning, maintenance, or for emergency purposes.
- Ms. Carlson is the only full-time permanent employee staffed at the facility and works five days a week from 6:30am to 3:00pm. During weekends, on-call CBJ employees respond in the event of a call-out. Ms. Carlson has worked at the Auke Bay WWTP since June 30, 2014 and has been with CBJ for 20 years. Ms. Carlson is a Level 3 Operator and is responsible for routine operation and maintenance, on-site monitoring, and general housekeeping at the facility.
- CH2MHill, represented by Mr. Dobson, has been hired as a consultant to address operational parameters.
- Hilary Poole, Administrative Assistant, maintains records for all of CBJ's WWTP's.
- Karen Sewell is responsible for submitting APDES required reporting. Their filing system is in the process of reorganization.
- Testing for pH, temperature, dissolved oxygen (DO), and residual chlorine are done in-house. At the time of the inspection, all other compliance samples were being shipped to Admiralty Environmental. All samples are acquired via grab sampling.
- An Orion Star A326 handheld meter is used for measuring pH, temperature, and DO. A Hach pocket colorimeter is used to measure residual chlorine. Deionized water for washing comes from the Mendenhall WWTP. The pH/DO meter is calibrated daily and the chlorine meter is calibrated weekly.
- Antero software is used in tasking and recordkeeping of the operations and maintenance (O&M) program.
- An auto-dialer is in place to send alarms to an on-call operator.
- There have been no recent spills, accidental discharges, or upsets.
- Overflow and bypass discharges are not designed into the system.
- In the event of a power outage, there is no backup electricity but primary treatment, chlorine disinfection, and de-chlorination would still occur via passive gravity flow through the plant. Although there is an influent shutoff valve, flow within the facility cannot be stopped until head pressures equalize.
- It was unknown how many lift stations are part of the collection system for this facility.
- A 0.25 inch bar screen in the headworks is raked daily, or more if needed. Grit and screenings are collected and trucked to the Mendenhall WWTP where they are eventually taken to the city landfill for disposal.
- Waste sludge is transported via tanker truck to the Mendenhall WWTP where it is dewatered and prepared for barge transport and disposal out of state.
- Disinfection takes place in a contact chamber where a chlorine solution is created using a tablet feeder. The solution is injected into the contact chamber via manifold.
- Effluent travels through an inline trough tablet feeder for de-chlorination using sodium sulfite (Na_2SO_3).
- There is a "clean-out" port installed in the effluent line just outside of the building for managing potential blockage between treatment and the point of discharge.
- The outfall line is constructed of 10 inch diameter ductile iron with the point of discharge approximately 30 feet below Mean Lower Low Water. It was unknown if any maintenance or repairs have been done to the outfall.

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The following observations were made by ADEC inspectors during the facility walk-through:

- A facility sign was posted at the entrance to the wastewater treatment plant.
- An outfall sign was posted on the shoreline nearest the point of discharge.
- No abnormal odors, leakages, or spills were detected during the inspection.
- The treatment facility and lab appeared clean, maintained, and in good order.

Sampling

Sampling did not occur as part of the inspection.

Records Review

The following records were reviewed and are considered complete:

- A copy of APDES General Permit AKG572000 for POTW's
- Notice of Intent, dated December 18, 2008
- Authorization to Discharge, dated October 1, 2012
- Discharge Monitoring Reports
- Calibration, operations, and maintenance records

The following records were not available during the inspection:

- Quality Assurance Project Plan (QAPP)

Section 4: Compliance

Violations

Permit part 2.7.7 states that a copy of the QAPP must be kept on site and made available to ADEC upon request.

- At the time of inspection, on-site representatives were not able to provide a copy of the QAPP.
- The violation was considered null when it became known that a QAPP has been submitted by CBJ to ADEC and is pending review by the Division of Water, Quality Assurance Officer/ADEC Project Management.
- Permit parts 2.7.1 through 2.7.6 outlines development and implementation of a QAPP. Further information and assistance on QAPP's can be found on the ADEC website at:
http://dec.alaska.gov/water/wqapp/wqapp_index.htm

Section 5: Appendixes

1. Photo Addendum

Signatures


Jeff Hoagland - Environmental Program Specialist
Division of Water - Compliance Program
Phone: (907) 465-5276
E-mail: jeff.hoagland@alaska.gov

X

Date: November 12, 2014

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Photo Addendum	
<p>Photo 1</p>  <p>Copy of POTW General Permit</p>	<p>Photo 2</p>  <p>Analytical Equipment</p>
<p>Photo 3</p>  <p>pH Meter Calibration Standards</p>	<p>Photo 4</p>  <p>Chlorine Meter Calibration Standard</p>
<p>Photo 5</p>  <p>Influent Valve, Grit Chamber, and 0.25" Bar Screen</p>	<p>Photo 6</p>  <p>Aeration Chamber and Chlorine Tablet Feeder/Injector</p>

NOV 18 2014

Photo Addendum

Photo 7



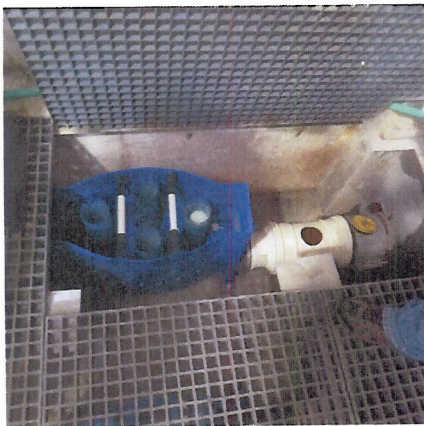
Chlorine Injector Control

Photo 8



Clarifier

Photo 9



In-line Sodium Sulfite Tablet Feeder and Sampling Port

Photo 10



Sodium Sulfite Supply

Photo 11



Discharge Pipe Clean-out Port

Photo 12



Outfall Signage