

**STATE OF ALASKA**  
**DEPARTMENT OF ENVIRONMENTAL CONSERVATION**

Division of Air and Water Quality  
Water Permits Program  
610 University Avenue  
Fairbanks, Alaska 99709-3643

**CERTIFICATE OF REASONABLE ASSURANCE**

A Certificate of Reasonable Assurance, as required by Section 401 of the Clean Water Act, has been requested for the **Westward Seafoods - Captains Bay Facility** by Westward Seafoods, Inc., 1111 3<sup>rd</sup> Ave, Suite 2250, Seattle, WA 98101.

The activities are located at Captains Bay, Unalaska Island, Alaska; Latitude 53.89333 ° N, Longitude 166.56528 ° W.

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

Water quality certification is required for these activities because the activities will be authorized by an Environmental Protection Agency National Pollutant Discharge Elimination System (NPDES) permit identified as NPDES Permit No. AK-004978-6, and discharges may result from these activities.

This final certification is for the NPDES permit which covers the disposal of the following discharges:

- A. Outfall 001 – Seafood Processing Wastewaters
- B. Outfall 002 – Non-contact Cooling Waters, Plant Scrubber Waters, and Barometric Condenser Waters
- C. Outfall 003 – At Sea Discharges, Primarily Stick Water From Fish Meal Plant

Having reviewed the Permittee's application and the NPDES permit prepared by U.S.EPA Region 10, the Alaska Department of Environmental Conservation provides by this certification that there is reasonable assurance that the activities to be authorized by the NPDES permit, as well as any discharges which may result, are in compliance with the requirements of Section 401 of the Clean Water Act, the Alaska Water Quality Standards, 18 AAC 70, and the Standards of the Alaska Coastal Management Program (ACMP), 6 AAC 80, provided that the terms and conditions of this certification are adhered to. The Department has reviewed the discharges with respect to the antidegradation policy of the Alaska Water Quality Standards and finds the reduction in water quality to be in accordance with the requirements of 18 AAC 70.015, provided that the terms and conditions of this certification are made part of the NPDES Permit.

These terms and conditions will be adopted pursuant to 6 AAC 50 (Project Consistency with the Alaska Coastal Management Program) and are necessary to ensure that projects that are authorized under the permit are consistent with the ACMP. Should significant changes be made in the NPDES permit, or if new information becomes available that affects the terms of this certification, the department reserves the right to modify the final certification accordingly.

In accordance with 40 CFR 124.53(e), this state certification will include conditions which are necessary to assure compliance with the applicable provisions of State law, including conditions which are more stringent than those in the NPDES permit, and the extent to which each condition of the NPDES permit can be made less stringent without violating the requirements of State law, including water quality standards.

Through this certification, in accordance with 18 AAC 15.120 ADOPTION OF NPDES PERMITS, the NPDES permit will constitute the permit required under AS 46.03.100 Waste Disposal Permit, provided that the terms and conditions of the certification are made part of the NPDES Permit. The department is specifying the following permit terms and conditions under authority of AS 46.03.110(d):

**I. Mixing Zones**

A. Mixing Zone for Outfall 001

The mixing zone for discharges from Outfall 001 is defined as follows:

- i.) A vertical cylinder of 100 foot radius from the point of discharge.
- ii.) Extends vertically up to the sea surface.
- iii.) Extends vertically down to the seabed.

Within the mixing zone for Outfall 001, the following water quality criteria may be exceeded:

18 AAC 70.020(b)(2)

Temperature

Color

Turbidity

pH

Residues

Dissolved Oxygen

Sediment

B. Mixing Zone for Outfall 002

The mixing zone for discharges from Outfall 002 is defined as follows:

- i.) A vertical cylinder of 300 foot radius from the point of discharge, with the shoreline as a boundary on one side.
- ii.) Extends vertically up to the sea surface.
- iii.) Extends vertically down to 10 meters, or the seabed where waters are less than 10 meters depth.

Within the Outfall 002 mixing zone, the following water quality criteria may be exceeded:

18 AAC 70.020(b)(2)

Temperature

Color

Turbidity

*Rationale: In accordance with 18 AAC 70.240 and 16 AAC 10.010, in applying the water quality criteria and limits set by or under 18 AAC 70 (Alaska Water Quality Standards) and 16 AAC 10 (Alaska Fish and Game Regulations), the department will, in its discretion, upon application, authorize a mixing zone in a discharge permit or certification, or order. Westward Seafoods applied for authorization of mixing zones for their Captains Bay facility in a letter to ADEC dated May 25, 1999, with additional information provided in a letter dated May 12, 2000. The department considered the requirements in 18 AAC 70.015 (Antidegradation) and 18 AAC 70.240-270 (Mixing Zones), in making the mixing zone determinations.*

*The department finds that the size of the mixing zones authorized for discharge in this certification are appropriate and provide reasonable assurance that existing uses of Captains Bay outside of the mixing zones are maintained and fully protected.*

C. Mixing Zone for Outfall 003

The mixing zone for discharges from Outfall 003 is a volume defined as follows:

- i.) 230 feet (100 feet to the starboard of the vessel, plus 100 feet to the port of the vessel, plus 30 feet as the width of the vessel)
- ii.) by 12,200 feet (distance that the vessel travels during the discharge).
- iii.) by 25 feet vertically down from the sea surface.

Within the Outfall 003 mixing zone, the following water quality criteria may be exceeded:

18 AAC 70.020(b)(2)

Residues

Dissolved Oxygen

PH

Color

Turbidity

*Rationale: In accordance with 18 AAC 70.240, in applying the water quality criteria and limits set by or under 18 AAC 70, Alaska Water Quality Standards, the department will, in its discretion, upon application, authorize a mixing zone in a discharge permit or certification, or order.*

*Westward Seafoods applied for authorization of mixing zones for their Captains Bay facility in a letter to ADEC dated May 25, 1999, with additional information provided in a letter dated May 12, 2000. The department considered the requirements in 18 AAC 70.015 (Antidegradation) and 18 AAC 70.240-270 (Mixing Zones), in making the mixing zone determinations.*

*The department finds that the size of the mixing zones authorized for discharge in this certification are appropriate and provide reasonable assurance that existing uses of an area one mile off shore within Unalaska Bay, and outside of the mixing zone are maintained and fully protected.*

## **II. Zone of Deposit for Outfall 001**

The department authorizes a zone of deposit of two (2) acres on the bottom of Captains Bay to allow deposit of substances from Westward Seafoods' Outfall 001. Within the two acre zone of deposit, the WQS's criteria for residues may be exceeded. Water quality standards may not be violated in the water column outside the zone of deposit by any action, including leaching from, or suspension of, deposited materials.

*Rationale: In accordance with 18 AAC 70.210, the department will, in its discretion, authorize a zone of deposit in a discharge permit or certification, or order. Westward Seafoods applied for authorization of a two acre zone of deposit for Outfall 001 at their Captains Bay facility in a letter to ADEC dated May 25, 1999, with additional information provided in a letter dated May 11, 2000. The department considered all aspects required in 18 AAC 70.015 (Antidegradation) and 18 AAC 70.210 (Zones of Deposit), including existing sea floor monitoring results and consideration of alternatives to the discharge of crab shell.*

*The department finds that the size of the zone of deposit authorized for Outfall 001 in this certification is appropriate and provides reasonable assurance that existing uses of Captains Bay outside of the zone of deposit will be maintained and fully protected. The two acre zone of deposit is site specific criterion based on the department's consideration of the bathymetry of the Bailey Ledge.*

## **III. Effluent Limits and Monitoring**

The Permittee is required to meet the limits and monitoring conditions for Outfalls 001, 002, and 003 in accordance with the NPDES Permit AK-004978-6, Section I. Effluent Limits and Monitoring, with the exception of the following minimum requirements for limitations on Biochemical Oxygen Demand, settleable solid process residues, increase in frequency of BOD5 monitoring between June 1 and October 31, and a maximum temperature limitation.

- A. Limitations on biochemical oxygen demand (as BOD5), Outfall 001. The minimum requirements to provide reasonable assurance of protecting the Water Quality Standards criterion for Dissolved Gas are as follows. The permittee shall not discharge more than the following limits from June 1 to October 31:
- Parameter: five-day biochemical oxygen demand, BOD5  
Average monthly limit: 83,028 lbs/day  
Maximum daily limit: 126,825 lbs/day
- B. Limitations on Settleable Solid Process Residues, Outfall 001. ADEC will not stipulate minimum requirements for limitations on Settleable Solid Process Residues from Discharge 001, but will stipulate monitoring requirements in accordance with the Proposed NPDES Permit AK-004978-6, Section I.B.6. requirement for monitoring settleable solids of ground and screened process wastes.
- C. Limitations on Effluent Temperature, Outfall 002. ADEC will stipulate a maximum limit of 20 degrees Centigrade on the effluent from Outfall 002.
- D. Effluent Monitoring Requirements Outfall 001.  
Parameter: Biological Oxygen Demand (BOD5; mg/l)  
Period: June 1 through October 31  
Frequency: 2 times per week  
Sample Type: 8 hour composite
- E. Effluent Monitoring Requirements Outfall 002.  
Parameter: Temperature (degrees Centigrade)  
Period: June 1 through October 31  
Frequency: 2 times per week  
Sample Type: reading from a calibrated (NIST traceable) thermometer

*Rationale: Alaska Water Quality Standards 18 AAC 70 must be satisfied for any discharge to waters of the state, including the antidegradation policy in 18 AAC 70.015 and the water quality criteria in 18 AAC 70.020(b)(2), applied in accordance with the remainder of 18 AAC 70. The department designates Captains Bay as an estuary for purposes of applying the Dissolved Gas criterion in 18 AAC 70.020(b)(2). Dissolved Oxygen concentrations in estuaries and tidal tributaries may not be less than 5.0 mg/L except where natural conditions cause this value to be depressed. In accordance with 40 CFR 124.53(e)(3), a state certification shall include a statement of the extent to which each condition of the permit can be made less stringent without violating the requirements of State law, including water quality standards.*

*Alaska Fish And Game Regulations 16 AAC 10 must be satisfied for any discharges to waters of the state that may 'render the waters uninhabitable for salmon spawning or propagation', 16 AAC 10.010(a)(3). Temperatures above 20 degrees Centigrade have been demonstrated to cause fish mortality in some salmonid species, Brett, J.R. 1952 Temperature tolerance in young Pacific Salmon, genus Oncorhynchus. J. Fish. Res. Bd. Can. 9(6):265-322.*

*The department has determined that the minimum requirements for meeting water quality standards criteria for Dissolved Gas will be met with the above specified limitations for biochemical oxygen demand (as BOD5). This determination is based on modeling described in the submittal "EPA-Region 10 Captains Bay WASP Model: Results for Increased BOD Loading; Prepared for Westward Seafoods, Inc. by Steve Costas (gdc) and David Wilson (CH2MHill); 11 May 2000."*

*The department considers the specified effluent limits and effluent monitoring terms of the permit, with these five stipulations, necessary to provide reasonable assurance that the water quality standards will be met.*

#### **IV. Best Management Practices (BMP) Plan**

Through implementation of the BMP Plan requirements of NPDES Permit AK-004978-6, Section II. Best Management Practices, the Permittee shall ensure that methods of pollution prevention, control, and treatment will be applied to all wastes and other substances to be discharged.

*Rationale: In accordance with 18 AAC 70.015, it is the state's antidegradation policy that existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected. It further states, at 18 AAC 70.015(a)(2)(D), "...the department will authorize a reduction in water quality only after the applicant submits evidence in support of the application and the department finds that the methods of pollution prevention, control, and treatment found by the department to be the most effective and reasonable will be applied to all wastes and other substances to be discharged." The department considers the BMP Plan requirement of the NPDES Permit necessary to ensure that the requirements of 18 AAC 70.015 are met.*

#### **V. Annual Report**

An annual report meeting the requirements of the NPDES Permit AK-004978-6, Section III. Annual Report shall be submitted to ADEC at the following address.

Alaska Department of Environmental Conservation  
Attn: Division of Air and Water Quality  
555 Cordova Street  
Anchorage, Alaska 99501

*Rationale: Receipt and review of the Discharge Monitoring Reports and other permit required submittals is necessary to ensure compliance with the state's antidegradation policy that existing water uses and the level of water quality necessary to protect existing uses must be maintained and protected. 18 AAC 70.015(a)(1).*

## VI. Environmental Monitoring

### A. Seafloor Monitoring

The permittee shall conduct a sea floor monitoring program on a biennial basis, starting with year two of the permit, to determine compliance with the Alaska Water Quality Standard for Residues in marine waters.

1. The seafloor monitoring program will determine the configuration, area, and maximum thickness of the continuous deposit of sludge, solid or emulsion on the bottom that is greater than one-half (0.5) inch thick and that persists throughout the year and the extent of any change in area and maximum thickness from the previous survey.
2. The permittee shall submit the survey plan to EPA and ADEC for review and approval at least thirty (30) days before the survey takes place. No response from EPA or ADEC will be interpreted as approval of the survey plan.

### B. Water Quality Monitoring

The permittee shall conduct a water quality monitoring program of the receiving water of Captains Bay to determine compliance with the Alaska Water Quality Standard for dissolved gas in marine waters. The department has designated Captains Bay as an estuary for application of the dissolved gas criterion. Alaska Administrative Code Part 18 AAC 70.020(b)(2) for Dissolved Gas states "...Dissolved oxygen concentrations in estuaries and tidal tributaries may not be less than 5.0 mg/l except where natural conditions cause this value to be depressed...."

1. Purpose and objectives: The permittee shall conduct a study of the effects of its seafood processing discharges on the levels of dissolved oxygen (D.O.) in the receiving water. The study shall achieve these objectives:
  - a. Provide weekly water quality measurements at the following stations.

Outfall station 3	OUT 3
Outfall station 4	OUT 4
Outfall station 5	OUT 5
South Channel	11, 12, 20, 21
West Amaknak Island	BAY13
Mid Bay Stations	BAY 9, BAY 10
West Bay Station	BAY 8
North Bay Station	BAY 14
Unalaska Bay Station (control)	BAY 18

- b. Provide measurements of D.O. concentrations, temperature, salinity, density, and depth at one (1) meter intervals throughout the water column from a point approximately one (1) meter below the surface to approximately one (1) meter above the bottom for each station on each day of monitoring. An initial reading will be taken at a point less than one (1) meter below the sea surface to characterize the surface layer.

Monitoring shall also report instances of noncompliance with the State water quality standard for dissolved gas.

2. Schedule. The permittee shall conduct the water quality monitoring study during the periods of operation and discharge in July – October annually.
3. Requirements for a Study Plan, Monitoring Report, Signatory Requirements, and Modification of the Monitoring Program shall be in accordance with NPDES Permit AK-004978-6, Section IV.C. Water Quality Monitoring, except that the Monitoring Report shall summarize data from the first four years of annual water quality monitoring and shall be submitted February 14<sup>th</sup> of the year following the fourth year of monitoring.

C. Mixing Zone, Outfall 002 Temperature Monitoring

1. Purpose and Objectives: The permittee shall conduct surface water quality monitoring for temperature to,
  - a. determine compliance with the authorized mixing zone for Outfall 002 with the marine criterion for temperature [18 AAC 70.020(b)(2)],
  - b. determine compliance with the authorized mixing zone for Outfall 002 with the Fish and Game regulations regarding interference with salmon propagation [16 AAC 10.010(a)(3)], and
  - c. collect information for review of the mixing zone during the next permit reissuance.

Water temperature observations will be made at intervals of approximately 50 feet, 100 feet, 200 feet and 300 feet distances from Outfall 002 at the station locations indicated on the Westward Seafoods, Inc., Outfall Observations Schematic, and at Water Quality Stations 10, 11, and 12 in Captains Bay. All observations will be completed within a 6 hour period. Observations shall be made of water temperature within 0-6 inches of the water surface. Observations may be made using a laboratory grade thermometer capable of measuring temperature differences to the nearest 0.5 centigrade degree. The same thermometer will be used for all observations conducted on any one date.

2. **Schedule.** In the first year following the effective date of the permit, observations will be conducted on one date during the winter season and on one date during the summer season at a time when both the electrical power plant and the fishmeal plant are in operation and wastewaters are being discharged.
  
3. **Monitoring Report.** A Monitoring Report shall be submitted to ADEC on February 14<sup>th</sup> of the year following completion of observations. The report shall describe station locations and temperature observations. Temperature data from the Outfall 002 stations shall be compared to temperature data from Water Quality Stations 10, 11 and 12.

*Rationale: The environmental monitoring requirements of this permit will provide information about water quality in Captains Bay for 1) Determining compliance with the applicable criteria for residues, temperature, and dissolved gasses in 18 AAC 70.020 outside the zone of deposit and mixing zones, and; 2) Determining that the resulting water quality in Captains Bay will be adequate to fully protect existing uses of the water, as required by the antidegradation policy in 18 AAC 70.015(a)(2)(C).*

## **VII. General Provisions**

If permit requirements are insufficient to achieve Alaska Water Quality Standards, the department will recommend to EPA that the permit be reopened to modify the permit to include more stringent effluent limitations and /or additional monitoring requirements in accordance with NPDES Permit AK-004978-6, Section VIII.J., Reopening of the Permit.

*Rationale: This stipulation is necessary to ensure that appropriate limitations are required in this discharge permit to achieve compliance with Alaska Water Quality Standards. Monitoring reports of the seafloor and ambient water quality will be reviewed by the department to determine if limitations of this permit are adequate to maintain water quality standards. 18 AAC 70.015(a)(2)(B) states that the department will authorize a mixing zone or zone of deposit only if the department finds that reducing water quality will not violate the applicable criteria of 18 AAC 70.020 (water quality criteria).*

### **SIGNATURE ON FILE**

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Date

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William D. McGee  
Technical Engineer