



THE STATE  
of **ALASKA**  
GOVERNOR BILL WALKER

Department of Environmental  
Conservation

DIVISION OF WATER  
Wastewater Discharge Authorization Program

555 Cordova Street  
Anchorage, Alaska 99501  
Main: 907.269.6285  
Fax: 907.269.3487  
www.dec.alaska.gov

April 19, 2016

Mr. Tom Enlow  
Unisea, Inc. – Dutch Harbor Facility  
P.O. Box 97019  
Redmond, WA 98073

DEC File No. WPC: 2661.54.001

**Re: Unisea, Inc. –Dutch Harbor Facility, Final Short-term Water Quality Variance for discharges to Unalaska Bay**

Dear Mr. Tom Enlow:

The Alaska Department of Environmental Conservation (Department or DEC) is issuing Unisea - Dutch Harbor facility a Short-term Water Quality Variance (WQV) for discharges of dredge materials to outer Unalaska Bay. The WQV sets limits and conditions for the discharge of dredged seafood processing waste deposits into outer Unalaska Bay. The attached Decision Document provides DEC's assessment of regulatory issues considered with respect to the requested WQV and discharges to outer Unalaska Bay. The described activities included in Unisea's WQV application includes dredging around Unisea's decommissioned Quad Outfalls and Pac Pearl Line Outfall, and active Outfalls 001 (A-E).

Unisea has developed a Waste Remediation Plan (WRP), a Water Quality Protection and Monitoring Plan (WQP&MP), as well as a pre- and post-dredge Seafloor Survey Plan for the dredging discharge area that establish sampling, monitoring and management practices.

Unisea may proceed with investigative pre-discharge seafloor survey activities as described in the WQV Application, Attachment 4 (Section 2.4) in order to establish baseline habitat and benthic conditions at the proposed discharge site. DEC recognizes the proposed survey dates are tentative based on survey vessel availability, weather conditions and water visibility. The pre-discharge seafloor survey is required to be performed prior to discharge.

If you have questions about the final WQV, please contact me via phone at 907-269-7580, or by email at [Wade.Strickland@alaska.gov](mailto:Wade.Strickland@alaska.gov). If you have questions about the technical merits of the final WQV, please contact Clynda Case by phone at 907-376-1865, or by e-mail at [Clynda.Case@alaska.gov](mailto:Clynda.Case@alaska.gov).

Sincerely,

A handwritten signature in blue ink that reads "Wade Strickland".

Wade Strickland  
Program Manager  
Wastewater Discharge Authorization Program

Enclosure: Final WQV and Decision Document

## **Final Decision:**

The Department did not receive written comments on the draft short-term WQV, nor was a public hearing requested. Accordingly, the conditions included in the draft short-term WQV have become the final short-term WQV conditions. This is DEC's final decision regarding the short-term WQV. The short-term WQV's effective date is the date it is issued.

The Department has a formal administrative appeal process for final decisions. A person aggrieved by the department's decision may request an adjudicatory hearing under 18 AAC 15.200. Interested persons can review 18 AAC 15.200 for the procedures and substantive requirements regarding a request for an adjudicatory hearing. See <http://www.dec.state.ak.us/commish/ReviewGuidance.htm> for information regarding appeals of Department decisions.

An adjudicatory hearing request must be delivered to the Commissioner of the Department within 30 days of the final decision. An adjudicatory hearing will be conducted by an administrative law judge in the Office of Administrative Hearings within the Department of Administration. A written request for an adjudicatory hearing shall be delivered to the Commissioner at the following address:

Commissioner Alaska Department of Environmental Conservation 410 Willoughby Street, Suite 303 Juneau AK, 99811-1800.
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## **Documents are Available**

The application and final short-term WQV documents can be obtained by visiting or contacting DEC between 8:00 a.m. and 4:30 p.m. Monday through Friday at the address below, or may be accessed from the Department's Wastewater Discharge Authorization Program website: <http://www.dec.state.ak.us/water/wwdp/index.htm>.

Alaska Department of Environmental Conservation Division of Water Wastewater Discharge Authorization Program 555 Cordova Street Anchorage, AK 99501 (907) 269-6285
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DEC complies with Title II of the Americans with Disabilities Act of 1990. If you are a person with a disability who may need a special accommodation in order to participate in this public process, please contact Natalie Wolfe at (907) 269-0291 or TDD Relay Service 1-800-770-8973/TTY or dial 711 within 15 days of publication of this notice to ensure that any necessary accommodations can be provided.



# Alaska Department of Environmental Conservation

## Division of Water

### Final Short-Term Water Quality Variance

#### AUTHORIZATION TO DISCHARGE UNDER A SHORT-TERM WATER QUALITY VARIANCE

**DEC File Number: 2661.54.001**

In accordance with the Short-term Water Quality Variance terms and conditions, sampling and monitoring requirements, and other conditions set forth herein:

This Short-term Water Quality Variance is issued under provisions of Alaska Statutes (AS) 46.03; Alaska Administrative Code (AAC) 18 AAC 70.200 as amended; and other applicable State laws and regulations.

The Short-term Water Quality Variance effective date is **April 19, 2016**.

This Short-term Water Quality Variance shall expire at midnight, **December 31, 2016**, or on the last day dredge waste discharge activity and submittal of all required reports. In no case shall this Short-term Water Quality Variance be extended past five years from the effective date.

Unisea shall post or maintain a copy of this Short-term Water Quality Variance on board the vessel, as well as at the facility, and it shall be made available to the public, employees, and subcontractors performing the discharge activity.

#### SECTION 1 – RESPONSIBLE PARTY INFORMATION

Issued to: **UNISEA, INC.**

#### SECTION 2 – FACILITY INFORMATION

Facility Name: **UNISEA, INC. – Dutch Harbor Facility**

Facility Location: 88 Salmon Way  
Dutch Harbor, AK 99692

Description of Discharge: Discharge of approximate 11,000 cubic yards of dredged seafood processing waste seafloor deposits to outer Unalaska Bay

#### SECTION 3 – REGULATED DISCHARGE – AREA OF OPERATION

Discharge Area	Latitude	Longitude
Outer Unalaska Bay – North Boundary	53° 59' 32.4903" N	166° 32' 46.5036" W
Outer Unalaska Bay – West Boundary	53° 58' 47.2357" N	166° 33' 38.6352" W
Outer Unalaska Bay – East Boundary	53° 58' 40.5031" N	166° 32' 17.8260" W
Outer Unalaska Bay – South Boundary	53° 57' 56.1496" N	166° 33' 05.6376" W

## **SECTION 4 – WATER QUALITY VARIANCE DISCHARGE TERMS AND CONDITIONS**

The Short-term Water Quality Variance (WQV) is limited in scope to those activities described in the March 3, 2016 WQV application and subsequent edits, including all attachments, as well as the Waste Remediation Plan (WRP). Discharge is limited to the Regulated Discharge – Area of Operation in **Section 3** above, and as depicted in WRP - Figure 5.5 (attached).

In accordance with 18 AAC 15.090, this WQV sets terms and conditions covering the discharge of dredge spoil materials to outer Unalaska Bay, Alaska that Unisea, its contractors and/or subcontractors are required to adhere to, including:

- 1) Fully implementing and following the November 2015 WRP, as well as implementing WQV application's Attachment 2 - 'Dredged Material Dewatering Analysis and Approach', implementing both documents' best management practices; and
- 2) Fully implementing and following Unisea's WQV Application sampling and monitoring plans, including:
  - a.) Attachment 2 - Dredged Material Dewatering and Analysis and Approach
  - b.) Attachment 3 - Water Quality Protection and Monitoring Plan (WQP&MP), including Attachment 3's - Appendices A, C & D;
  - c.) Attachment 4 - Pre- and Post-Dredge Seafloor Survey Plan, including Attachment 4's - Appendix A.

In accordance with 18 AAC 15.100(b), the variance, may not be assigned to another party without prior written approval of the Director of the Division of Water director. The Director will grant approval only upon finding the assignee has assumed the obligations of Unisea, Inc., and that the assignment will not result in an appreciable change in the operation.

In accordance with 18 AAC 15.100(c), the variance only authorizes the operation described in Unisea's Final Waste Remediation Plan, the supplemental WQV applications submitted March 3, 2016, and as specified in this variance. Any expansion, modification, or other change in an operation which might result in an increase in discharges, or might cause other detrimental environmental impacts from the operation, requires a new variance. Any other change in the operation, not provided for in the contingency planning by Unisea requires an amendment to the variance.

In accordance with 18 AAC 15.100(d), an application for a renewal of, or amendment to, the variance will be treated in the same manner as the initial application, except that public notice or hearing will not be provided for the application for renewal or amendment. Application for renewal or amendment must be made no later than 30 days before the expiration of variance, or 30 days prior the planned effective date of the amendment. The department will, however, approve an amendment to the variance on an emergency basis if necessary to protect public health, life, or property. The water quality variance effective term, including all requests for extension(s), will not exceed a total of five years from the date of issuance.

### **Water Quality Sampling Requirements**

Water Quality Sampling is required pre- and post-discharge as set out in the WQP&MP.

### **Seafloor Survey Monitoring Requirements**

Discharge Area Seafloor Survey Monitoring is required as set out in the Pre- and Post-Dredge Seafloor Survey Plan.

**SECTION 5 – LEGAL OBLIGATIONS AND REPORTING REQUIREMENTS**

This WQV does not relieve the applicant from the duty to obtain any other necessary permits from the Department or from other local, state, or federal agencies and to comply with the requirements contained in any such permits. All activities conducted implemented by the applicant pursuant to the terms of this WQV shall comply with all applicable local, state, and federal laws and regulations.

Copies of reports submitted to DEC shall be submitted to EPA, address as listed in the Consent Decree.

A copy of the final Waste Remediation Completion Report (WRCR) sent to EPA shall be sent to DEC.

Copies of Best Management Practices reports, QAPP reports, draft reporting documents and original lab sample analysis reports shall be kept on-site and made available to DEC upon request.

If you have questions regarding compliance with any WQV requirement, please contact Darren Stewart at [Darren.Stewart@alaska.gov](mailto:Darren.Stewart@alaska.gov) or 907-269-7550.

The two dedicated phone numbers are to be used for verbal notification within 24 hours of an incident of non-compliance. The required written follow-up notification can be provided via fax, email, or U.S. Postal Service.

Toll Free Nationwide: 1-877-569-4114

Anchorage or International: 1-907-269-4114

The Compliance fax number is: 1-907-269-4604

Emails can be sent to: [dec-wqreporting@alaska.gov](mailto:dec-wqreporting@alaska.gov)

**Mailing Address is:**

Alaska Department of Environmental Conservation

Attn: Compliance and Enforcement Program

555 Cordova Street

Anchorage, Alaska 99501

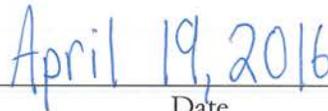
**SECTION 6 – CERTIFICATION/SIGNATURE**



Signature

Wade Strickland

Printed Name



Date

Program Manager

Title

**SECTION 7 – ATTACHMENTS**

1. WRP Figure 5.5
2. Decision Document

## DECISION DOCUMENT

Alaska Department of Environmental Conservation  
Division of Water  
Wastewater Discharge Authorization Program  
April 19, 2016

## WATER QUALITY VARIANCE

Unisea, Inc. – Dutch Harbor Facility  
Discharge to outer Unalaska Bay  
WPC: 2661.54.001

Unisea, Inc. – Dutch Harbor Facility submitted a Short-term Water Quality Variance (WQV) application March 3, 2016 for discharges of dredge materials to outer Unalaska Bay. The maps in Appendix A depict the locations of Unisea’s facility, its proposed dredging area(s) (Figures 1.2 and 1.3) and the discharge location (Figure 5.5) requested to be covered by a WQV.

This Decision Document presents an assessment of regulatory issues with respect to the requested WQV.

### APPLICANT

The Short-term Water Quality Variance is for the following entity:

Name of Facility:	Unisea, Inc. – Dutch Harbor Facility
APDES Permit Number:	AK0028657
Facility Location:	88 Salmon Way Dutch Harbor, AK, 99692
Mailing Address:	P.O. Box 97019 Redmond, WA 98073
Facility Contact:	Mr. Gregg Bishop

The maps in Appendix A show the location of the facility, the dredging area(s) (Figures 1.2 and 1.3) and the discharge location (Figure 5.5).

### BACKGROUND

The Environmental Protection Agency (EPA) Office of Compliance and Enforcement and Unisea entered into a Consent Decree (CD) on March 9, 2011. A component of the CD addresses unauthorized seafood waste deposits present on the seafloor adjacent to the Unisea Unalaska facility. The CD requires Unisea to prepare a benthic survey (CD, pg. 19), which in June 2012, Unisea completed. During the benthic survey as well as part of historic seafloor surveys, the extent and size of the seafood waste deposits were identified.

In October 2014, Unisea submitted a Seafood Waste Pile Alternatives Analysis document to EPA, which described a number of approaches to remediate the seafood waste pile(s). Unisea’s Alternative #3 titled, “Focused Dredging, Monitored Natural Recovery (MNR) and Source Controls” proposed the removal of seafood waste by dredging, implementation of source controls and MNR.

In a letter to Unisea dated April 27, 2015, EPA required Unisea to prepare the Waste Remediation Plan (WRP) to implement Alternative #3. As part of the CD and WRP, Unisea will be conducting dredging of seafood waste pile(s) residues. The dredging will be focusing on areas with waste depths of one foot or greater, with the dredged material to be placed on a barge and disposed of in the EPA-approved WRP location.

The WRP specifically discusses the removal of the seafood waste near the terminus of the current process Outfalls 001 A-E and decommissioned Quad lines and Pac Pearl outfall lines, as well as dewatering the dredged seafood waste and then transporting and discharging the material in outer Unalaska Bay.

DEC provided public comment period for the WQV March 17 – April 15, 2016. No written comments were received. No public hearing was requested. Accordingly, the draft conditions have become the final conditions.

## **BASIS FOR THE DEPARTMENT'S DECISION TO ISSUE A SHORT-TERM WATER QUALITY VARIANCE**

Federal regulations implementing the Clean Water Act (40 CFR 131.13) allow states to adopt variance provisions. Under 18 AAC 70.200(a)(2), which is approved for use by EPA, the Department of Environmental Conservation (DEC or Department) has the discretion to grant a WQV from the antidegradation policy standard of 18 AAC 70.015 or the water quality criteria of 18 AAC 70.020(b) for a temporary activity associated with the placement of dredged or fill material affecting a specific waterbody. DEC has determined that a WQV is an appropriate regulatory tool for the dredged-seafood waste discharge activity.

The following analysis provides DEC's regulatory step-through determination concluding that, as proposed in the application, the WQV is authorized.

### ***18 AAC 70.200(a)(2)***

As proposed, the activity meets 18 AAC 70.200(a)(2) in that it is a temporary dredge and placement activity proposed to span four to five weeks, with all work completed in 270 days. Unisea has submitted an updated schedule for actual work with its WQV application, dated March 3, 2016. The application included three attachments, identifying edits to the Waste Remediation Plan (WRP – EPA final November 2015), developing Water Quality Protection and Monitoring Plan (WQP&MP), as well as submitting a pre- and post-dredge Seafloor Survey Plan for the dredging discharge area.

***18 AAC 70.200(b)(1-3)*** DEC is satisfied through the review of the WQV application package and WRP, and through the implementation of the required WQV terms and conditions that the applicant has met the conditions of 18 AAC 70.020(b)(1-3).

***18 AAC 70.200(b)*** *The Department will grant a short-term variance only if an applicant shows to the department's satisfaction that:*

- ***18 AAC 70.200(b)(1)*** *wastes or substances that might adversely affect water quality are controlled, using methods the department finds most effective.* The WRP states the dredging of the waste will have short-term effects on water quality. The WRP proposes the dredging of the seafood waste deposits will result in improved water quality and near shore benthic habitat recovery for dredged area. In addressing dredge site settleable solids and turbidity, the November 2015 WRP established that the barge would be fitted with fabricated gates and geotextile fabric would be used to contain smaller particles. During the DEC's review of the WRP, the Department commented the size of filtering fabrics had not been established in the WRP. Additionally, the Department commented that Unisea discharges Surimi (washed minced fish) Production Wastewater from Outfall 001 A-E. The average particle size of Surimi wastewater is 0.15 mm. In the WQV application Attachment 2 – 'Dredged Material Dewatering Analysis and Approach', Unisea proposes the use of 0.15 millimeter sized geotextile fabric to minimize the impacts to water quality during dredging.
- ***18 AAC 70.200(b)(2)*** *the activity will be conducted in a manner to mitigate water quality impacts, using methods the Department finds most effective.* The WRP proposes several water quality protection measures and Best Management Practices in WRP Section 5.0. Unisea's WQV application includes Water Quality Protection and Monitoring Plan (WQP&MP) applicable to the disposal area that includes feedback loops for corrective actions to prevent effect adverse to water quality. The mitigation measures to be applied are applicable to the dredging site where Unisea proposes to restore benthic habitat at the nearshore location.
- ***18 AAC 70.200(b)(3)*** *the activity, when completed, will not cause a long-term, chronic, or recurring violation of the water quality standards* (See WQV application materials and WRP). The application package included development of the WQP&MP to verify that the proposal will not cause long-term, chronic or reoccurring water quality violations, as well as the submittal of a seafloor survey plan to verify that impacts to uses are short-term and are not recurring due to the discharge.

**18 AAC 70.200(c)** The Department has determined from the application that the geographic scope for this project is limited to a small discharge area in Unalaska Bay. The term of the WQV is as short as practicable and will expire when the project is completed. The CD requires work to be completed 270 days from the beginning of field work; the applicant's WRP and supplemental materials suggest completion of the WQV discharge activity to be completed in a shorter time frame by approximately October 1, 2016.

**18 AAC 70.200 (d)(1-5)** *A person seeking a short-term variance shall submit a written request and proceed in accordance with 18 AAC 15.020 - 18 AAC 15.100.* Unisea submitted a written WQV application March 3, 2016. *The request must state the:*

- **18 AAC 70.200(d)(1)** *location, time, duration, and type of activity for which the variance is sought;* Unisea has established a discharge location of outer Unalaska Bay, approximately 1.2 miles northeast of northeast of Eider Point. The proposed discharge location (WRP, Figure 5.5) is greater than one nautical mile from shore, as required per the CD. The time and duration of the discharge is proposed to tentatively begin mid-May 2016, with intermittent discharges for 4-5 weeks. The type of activity proposed is to discharge approximately 11,000 cubic yards of dredged seafloor residues, resulting from Unisea's seafood processing waste deposits.
- **18 AAC 70.200(d)(2)** *reasons why the activity is required* - Unisea identified that in response to the Alternatives Analysis, EPA directed Unisea, via a letter dated April 27, 2015 (EPA 2015), to dredge the seafood processing waste deposits located on the seafloor at the site in accordance with the CD, Paragraph 15. Unisea developed a WRP (Final Nov. 2015) meeting the requirements of the CD, where the seafood processing waste materials are to be dredged and then discharged to outer Unalaska Bay. The request for the WQV to discharge to outer Unalaska Bay consistent with the activities required by the CD is the reason why the activity is required.
- **18 AAC 70.200(d)(3)** *areal extent and quantified degree of variance from the applicable criteria;* Unisea has identified in the WRP and supplemental WQV application that approximately 3.4 acres of seafloor will be dredged removing seafood processing waste deposits to the resulting depth of no greater than one foot in thickness. The resulting dredge material to be removed is estimated to be 11,000 cubic yards of material to be discharged to outer Unalaska Bay (WRP Figure 5.5).
- **18 AAC 70.200(d)(4)** *detailed construction and operating plans, including water pollution control and mitigation measures;* Unisea's WRP and WQV application materials have provided DEC detailed operating plans and the WQP&MP provides sampling and best management practices documenting water pollution control measures to be implemented during the project. The mitigation measures to be applied are applicable to the dredging site where Unisea proposes to restore benthic habitat at the nearshore location.
- **18 AAC 70.200(d)(5)** *activity's estimated impact on the uses of the water involved, including recreation and use for habitat, rearing, growth, or migration by fish, shellfish, other aquatic life, and wildlife.* DEC's initial review of the WRP revealed the proposed plan did not contain a method of identifying the proposed discharge/disposal site's existing habitat, rearing, growth or migration by fish, shellfish or other aquatic life uses. As a result, DEC required the applicant to submit an analysis of the proposed discharge on water uses in outer Unalaska Bay and a pre- and post-seafloor survey plan. Unisea submitted the analysis as well as a pre-seafloor survey plan of the proposed discharge site to identify a baseline of existing uses prior the proposed discharge activity. Unisea has also proposed a post-seafloor survey to document that the discharge activity is not causing long-term, chronic, or recurring violations of the water quality standards.

## **BASIS FOR RECEIVING WATER SAMPLING AND MONITORING**

In accordance with 18 AAC 15.090, the Department may specify in a water quality variance the terms and conditions under which the waste material may be disposed. Terms and conditions include operational and discharge methods, monitoring, sampling and reporting requirements. Water quality protection, sampling and monitoring must be performed as described in:

- 1) Final Waste Remediation Plan, and its best management practices; and
- 2) Unisea's WQV application sampling and monitoring plans, including:
  - a.) Attachment 2 - Dredged Material Dewatering and Analysis and Approach;
  - b.) Attachment 3 - Water Quality Protection and Monitoring Plan (WQP&MP), including Attachment 3's - Appendices A, C & D;
  - c.) Attachment 4 - Pre- and Post-Dredge Seafloor Survey Plan; including Attachment 4's - Appendix A.

## **OTHER WATER QUALITY VARIANCE CONDITIONS**

### **Quality Assurance Project Plan (QAPP)**

Unisea is required to follow developed QAPP procedures to ensure that the monitoring data submitted are accurate and to explain data anomalies if they occur. The QAPP shall be followed including standard operating procedures Unisea must follow for collecting, handling, storing and shipping samples; laboratory analysis; and data reporting. The QAPP shall be retained on the vessel(s), facility site and made available to the Department upon request.

### **Best Management Practices Plan**

In accordance with 18 AAC 15.090, the Department may specify in a WQV the terms and conditions under which the waste material may be disposed. The WQV requires Unisea to follow the proposed Best Management Practices (BMP) Plan(s) in order to prevent or minimize the potential for the release of pollutants to waters of the State of Alaska. The BMP Plan must be kept on site and made available to the Department upon request.

### **State Requirements**

The Department separates wastewater and solid waste permitting. Unisea should contact the Department's Solid Waste Program for information regarding state regulations for disposal of solid waste should on-land disposal become necessary (instead of discharge to outer Unalaska Bay). Access to the Department's [Solid Waste Program web page](#) for more information and who to contact.

### **Water Quality Variance Expiration**

The WQV will expire no later than five years from the effective date of the final WQV or will terminate sooner upon submittal of the final documents required by the WQV, unless enforcement actions are pending as a result of the authorized activities.

# APPENDIX A

**Legend**

- Active Outfall
- Decommissioned Outfall

*Unalaska Bay*

Airport Beach Road

Arch Rock

Seafood Waste Extent  
(2015 0.5-inch thickness boundary)<sup>2</sup>

Decommissioned  
"Pac Pearl" Outfall  
(Approximate)

Decommissioned  
Quad Outfalls  
(Approximate)

Active Outfall 001E  
"Pac Pearl"

Active Quad Outfalls  
001A-D

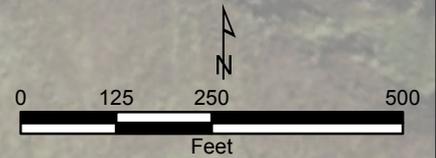
UniSea Facility

**Notes:**

1. Seafood waste extent data and bathymetry provided by Delphis and based on the May 2015 Seafloor Monitoring Survey, completed as part of NPDES Permit AK-002865-7 requirements.
  2. The Extent of seafood waste at the Site is defined as the area where seafood waste is greater than 1/2-inch in thickness and is, therefore, on the site map.
- Orthoimagery provided by Alaska Mapped program, 2014.

**Abbreviations:**

NPDES = National Pollutant Discharge Elimination System  
Site = UniSea Seafood Waste Area

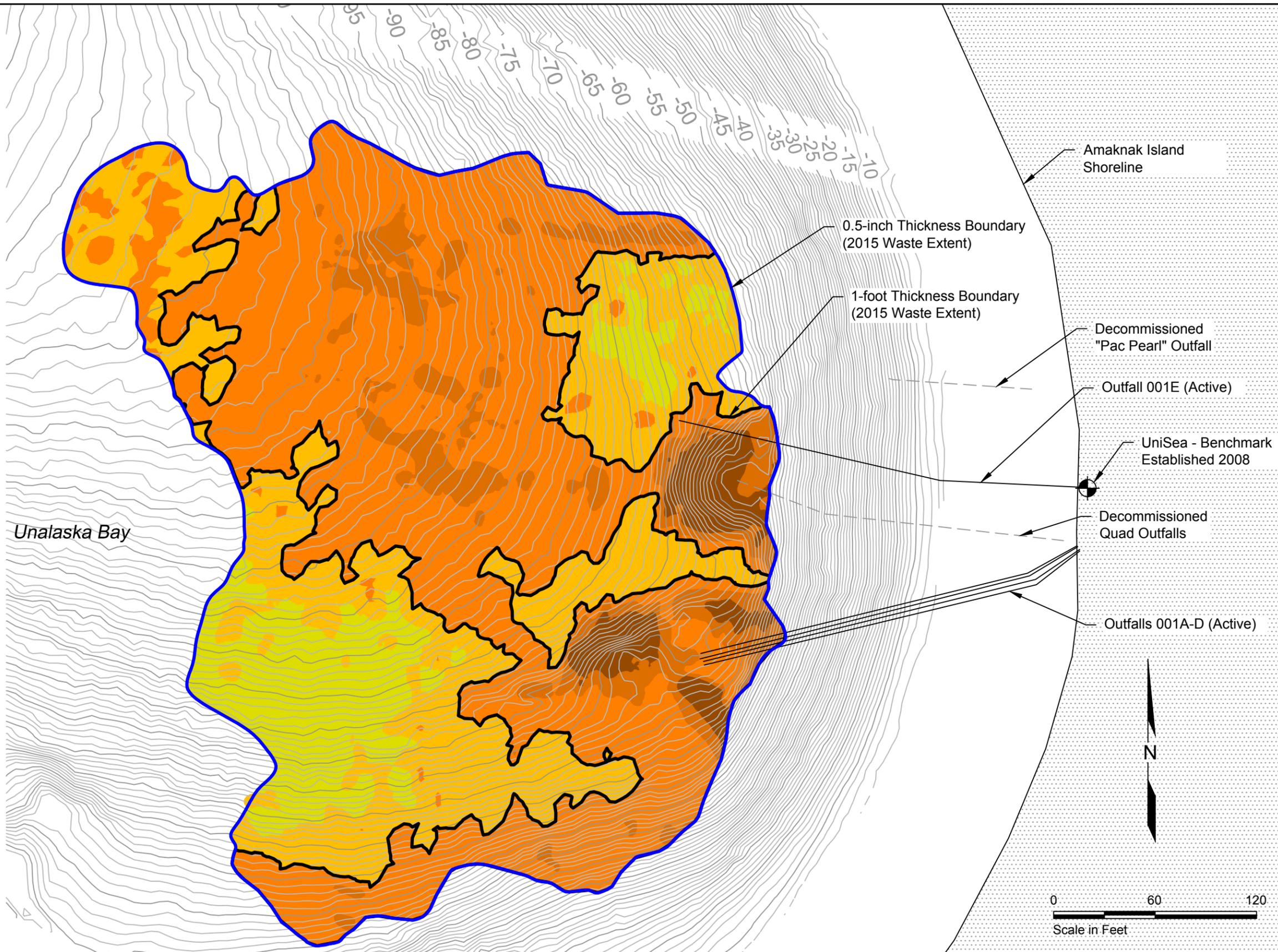
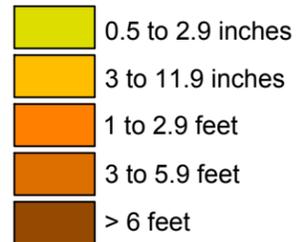


**FLOYD | SNIDER**  
strategy ■ science ■ engineering

**Waste Remediation Plan  
UniSea, Inc.  
Dutch Harbor, Alaska**

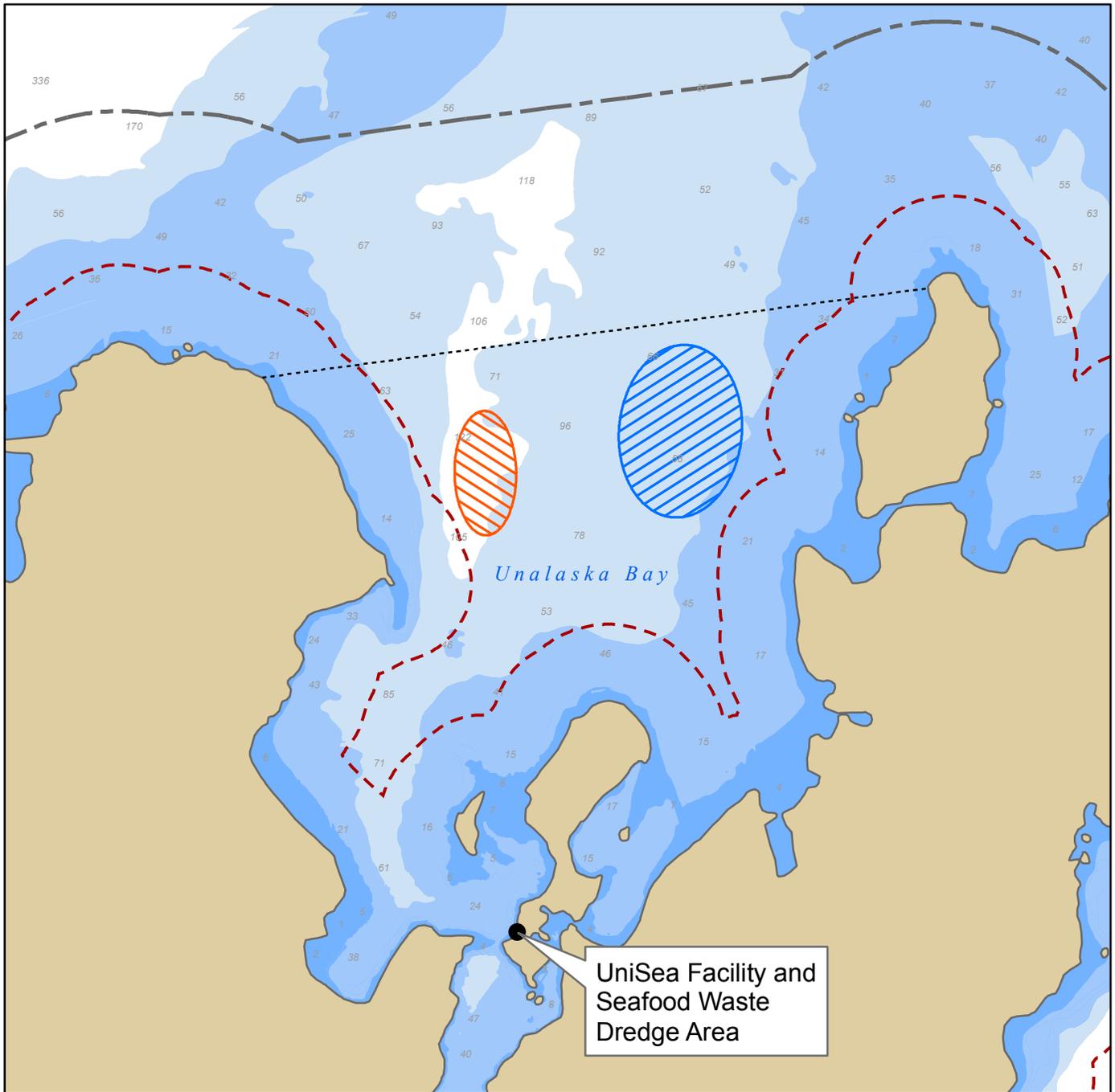
**Figure 1.2  
Site Map**

**Seafood Waste Thickness (2015)**



**Notes:**

- A sub-bottom profiler was used in 2007 to locate the seafloor under the waste extent. The thickness of the waste extent is the geophysical data interpretation between the top of the seafood waste extent and the native seabed or bottom of the waste extent.
- 2015 seafood waste thickness and extent data and bathymetry provided by Delphis and based on the May 2015 seafloor monitoring survey, completed as part of NPDES Permit AK-002865-7 requirements.
- Bathymetry shown in feet Mean Lower Low Water (MLLW).



**Legend**

-  Approximate Extent of At-Sea Discharge - Proposed Disposal Location<sup>1</sup>
-  Approximate Extent of At-Sea Discharge Location 004<sup>2</sup>
-  Baseline - Bay Closing Line
-  3-Nautical Mile Line
-  1-Nautical Mile Line
-  40 Sounding (Fathoms MLLW)

-  Land Area
- Depth Contours (Fathoms MLLW)**
-  0-10
-  11-50
-  51-100
-  > 100

**Notes:**

1. The approximate extent of the proposed disposal location is based on the anticipated area of disposal when the barge is being towed at the CD-required speed of at least three knots.
  2. Approximate extent of Discharge Location 004 is based on actual vessel track lines over multiple years of disposal.
- Basemap layers provided by NOAA.

**Abbreviations:**

MLLW = Mean Lower Low Water  
 NOAA = National Oceanic and Atmospheric Administration

