Trinity Consultants
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September 10, 2021

Air Permit Program Permit Intake Clerk
Alaska Department of Environmental Conservation
555 Cordova Street
Anchorage, AK 99501
DEC.AQ.airreports@alaska.gov

RE: Title V Air Operating Permit Renewal Application for UniSea, Inc. Dutch Harbor Seafood Processing Plant (No. AQ0088TVP04 Rev 1)

To Whom It May Concern:

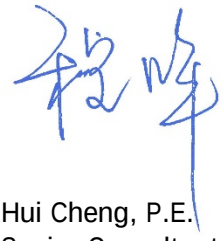
On behalf of UniSea, Inc. (UniSea), Trinity Consultants (Trinity) is submitting one certified copy of the attached Title V air operating permit renewal application for the Dutch Harbor Seafood Processing Plant. This submittal is made electronically.

One paper copy and one electronic copy are being submitted to EPA Region 10.

If you have any questions or comments about the information presented in this application, please do not hesitate to contact Shari Coleman at (907) 581-7305 or Shari.Coleman@unisea.com, or me at (253) 867-5600 ext. 4803 or hcheng@trinityconsultants.com.

Sincerely,

TRINITY CONSULTANTS



Hui Cheng, P.E.
Senior Consultant

Attachments

cc: Shari Coleman, UniSea

TITLE V PERMIT RENEWAL APPLICATION

UniSea, Inc. / Dutch Harbor Seafood Processing Facility

Prepared By:

Ashley Jones – Managing Consultant
Hui Cheng – Senior Consultant
John Neilsen – Associate Consultant

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September 2021

Trinity Consultants

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1. PERMIT RENEWAL INFORMATION

UniSea, Inc. (UniSea) owns and operates the Dutch Harbor Seafood Processing Plant (Dutch Harbor Plant), located in Dutch Harbor, Alaska. The facility currently operates under Title V Operating Permit No. AQ0088TVP04 Rev 1, which was issued by the Alaska Department of Environmental Conservation (ADEC) and expires on May 23, 2022. The permit was issued on March 12, 2018. This document serves as the application for the renewal of UniSea's Title V permit for the Dutch Harbor Plant, Operating Permit No. AQ0088TVP04 Rev 1.

1.1 Renewal Application Overview

Section 1 of this permit application contains information required for the renewal application: a summary of required application elements, a description of fees, compliance information, identification of insignificant sources based on emission rates, and a summary of Compliance Assurance Monitoring (CAM) applicability.

Section 2 contains a list of proposed updates to UniSea's existing Title V Permit No. AQ0088TVP04 Rev 1, issued on March 12, 2018. Red-lined version of the proposed changes are included in Appendix H.

The statement of UniSea's current compliance status with the existing Title V permit is included in Section 3, along with a signed certification statement. The methods by which UniSea assesses compliance with each of these conditions are documented in the 2020 Annual Compliance Certification for the Dutch Harbor Plant, which is provided in Appendix G.

Supporting documentation is contained in the appendices, including the required Title V renewal application forms (Appendix A), a facility plot plan (Appendix B), an emission unit inventory (Appendix C), emission calculations (Appendix D and Appendix E), a listing of categorically insignificant sources (Appendix F), a copy of the 2020 Annual Compliance Certification (Appendix G), which identifies the method by which UniSea evaluates compliance with existing operating permit requirements, a redlined version of the proposed Title V permit (Appendix H), and the most current Risk Management Plan Submission (Appendix I).

1.2 Required Renewal Application Elements

Per the application requirements of the Federal Operating Permit Program (40 CFR Part 71.5) and ADEC's Title V operating permit regulation (18 AAC 50.326), applications for the renewal of a Title V permit must contain the same information and level of review as the initial application. Table 1-1 lists the information that is required for submittal and the location of the required information within this report.

Table 1-1. Required Permit Application Elements [a]

Citation	Required Information	Location of Required Information
18 AAC 50.326(c), AS 46.14.150 & 40 CFR 71.5(a)	Timely and complete Application	This application was submitted prior to the November 23, 2021 deadline for the permit renewal.
40 CFR 71.5(a)(1)(iii)	Renewals	
18 AAC 50.326(c) & AS 46.14.520	Confidentiality of Information	UniSea has not requested confidentiality for this permit renewal application.

Citation	Required Information	Location of Required Information
40 CFR 71.5(c)(1) & (2)	Source Identification, Process and product description with alternative operating scenarios	Forms A1 and A4 (provided in Appendix A) contain general facility information. A facility plot plan is provided in Appendix B. Source information is also available in the current permit No. AQ0088TVP04 Rev 1 with a small proposed change to Table A.
40 CFR 71.5(c)(3)	Major emissions, emission points, emission rates, description of control equipment, and limitations of equipment. If applicable, the compliance assurance monitoring system submittal per 40 CFR 64.4	Form Series B (provided in Appendix A) contains a list of significant and insignificant emission units at the facility. Appendix C contains detailed information about each significant emission unit. Detailed emission calculations are provided in spreadsheet format in Appendix D in lieu of submitting Form Series D. The Fiscal Year 2021 Assessable Emissions Report is also included in Appendix D to satisfy the requirement to provide actual emissions from the facility. No change to the CAM applicability determination, as discussed in Section 1.8 of this report.
40 CFR 71.5(c)(4)	Air Pollution Control Requirements	Sections 3 through 11 of the current operating permit No. AQ0088TVP04 Rev 1 contain the state and federal operating requirements for the facility and specific equipment units. No changes to these requirements are requested.
18 AAC 50.326(c) & 18 AAC 50.400-430	Application Fees	A description of fee requirements is included in the current operating permit No. AQ0088TVP04 Rev 1.[1] UniSea is required to pay an annual permit fee of $1,720 and an annual compliance review fee of $2,491.
40 CFR 71.5(c)(5)	Information to determine applicability, implement and enforce other applicable requirements	The applicability of relevant requirements of the Clean Air Act, and information necessary to implement and enforce these requirements, is contained throughout the current operating permit No. AQ0088TVP04 Rev 1. No changes of these requirements are proposed.
40 CFR 71.5(c)(6)	Proposed exemption explanations	Section 10 of the current operating permit No. AQ0088TVP04 Rev 1 contains the permit shield for the facility.
40 CFR 71.5(c)(7) via 40 CFR 71.6(a)(9)	Terms and conditions for reasonably anticipated operating conditions	UniSea does not have any alternate operating scenarios for the Dutch Harbor Plant; the current operating permit contains terms and conditions for the normal operating scenario. No changes are proposed.
40 CFR 71.5(c)(7) via 40 CFR 71.6(a)(10)	Terms and conditions for the trading of emissions	UniSea does not use alternate operating scenarios that require trading emissions between sources at the Dutch Harbor Plant.

[1] Potential emission estimates are presented in Section 1.3; however, UniSea estimates its fees based on actual emissions for the 12-month period, rather than potential emissions.

Citation	Required Information	Location of Required Information
40 CFR 71.5(c)(8)	Compliance Plan	The current compliance status of the Dutch Harbor Plant is identified in Section 1.5 of this renewal application, along with the required compliance statements for current and upcoming requirements; the methods used to assess compliance with the current operating permit are described in Appendix G. The Dutch Harbor Plant does not have any outstanding compliance issues that necessitate the development and implementation of a compliance plan.
40 CFR 71.5(c)(9)	Certification of Accuracy and Completeness	The required signed certification statement, an explanation of methods used for determining compliance, and a schedule for the submission of compliance certifications during the renewal permit's term are contained in Section 3 and Appendix G of this renewal application.
18 AAC 50.326(d)	Insignificant Emission units (All Bases)	The current operating permit lists each requirement that applies to insignificant emission units at the Dutch Harbor Plant. These units are listed in Section 1.7and Appendix F of this report, along with a description of why each is insignificant. Supporting information to confirm these determinations is also presented in Appendix E. The compliance certifications described in the previous line item address insignificant units.
18 AAC 50.326(e)	Insignificant Emission units: Emission Rate Basis	Projected emissions for insignificant units, which are designated insignificant because of their emission rates, are presented in Section 1.7; detailed supporting information for these calculations is presented in Appendix E.
18 AAC 50.326(f)	Insignificant Emission units: Category Basis	A checklist of categorically insignificant units and activities at the Dutch Harbor Plant is contained in Appendix F.
18 AAC 50.326(g)	Insignificant Emission units: Size or Production Rate Basis	A checklist of categorically insignificant units and activities at the Dutch Harbor Plant is contained in Appendix F.
18 AAC 50.326(h)	Insignificant Emission units: Case-by-Case Basis	N/A
18 AAC 50.326(i)	Administratively Insignificant Emission units	A checklist of categorically insignificant units and activities at the Dutch Harbor Plant is contained in Appendix F.

a. If a spreadsheet or other alternative is submitted in lieu of a required form, the alternative contains all of the information required by the form, unless otherwise stated.

1.3 General Emissions Information

Appendix D contains the current potential to emit (PTE) calculations for regulated emission units at UniSea's Dutch Harbor Plant and identifies corresponding emission factors. These calculations have been revised since the previous submittal to reflect the emissions from storage tanks using the TankESP software.

An updated PTE emission inventory of applicable criteria pollutants, greenhouse gases (GHGs) and hazardous air pollutants (HAPs), using the most current operational information, is located in Appendix D. The significant emission sources at the Dutch Harbor Plant are comprised entirely of fuel combustion equipment. Emissions of NO_X, CO, PM, and VOC are estimated using source test results, manufacturer data, and default AP-42 emission factors. SO_2 emissions are estimated using a mass balance of sulfur, based on the sulfur content of the fuel and facility-wide fuel usage rates. Additionally, insignificant source demonstrations, including individual analyses of potential emissions from each of the fuel storage tanks using the TankESP software to estimate fugitive VOC emissions, are included in Appendix E.

Table 1-2 presents potential emissions estimates for the Dutch Harbor Plant. The potential HAP emission estimates confirm the Dutch Harbor Plant's status as an area source with respect to the National Emission Standards for Hazardous Air Pollutants (NESHAPs) regulations codified under 40 CFR Part 63.

Table 1-2. Potential Emissions Summary

Regulated Air Pollutant	Potential Emissions (tpy)
NO_X	738.7
SO_2	2.4
CO	62.4
PM_{10}	19.1
$PM_{2.5}$	19.1
VOCs	16.7
Total Criteria Pollutants [a]	839.4
GHGs (CO_2e) [b]	82,773
Maximum Single HAP	0.25
Total HAP	0.58

a. Since $PM_{2.5}$ is a subcategory of PM_{10}, only PM_{10} is included in the total criteria pollutant emissions estimate.
b. The GHG emission estimate includes both biogenic and nonbiogenic CO_2 emissions, and is expressed as CO_2 equivalent emissions (CO_2e). Biogenic CO_2 emissions are associated with fish oil combustion, while nonbiogenic CO_2 emissions are associated with diesel combustion.

1.4 Regulatory Review

There are no newly applicable New Source Performance Standards (NSPS) or NESHAP regulations that UniSea is required to comply with. No changes to the current applicable requirements are proposed.

1.5 Compliance Information

Table 1-3 provides a statement of compliance with each corresponding condition, term, or requirement in the current Title V permit. The condition-numbering scheme is reflective of the current Title V permit (No. AQ0088TVP04 Rev 1). The compliance demonstration methodology described in UniSea's 2020 Annual Compliance Certification (provided in Appendix G) is used to assess and confirm compliance with each permit requirement at the time of this application's submittal. Because Table 1-3 represents UniSea's current compliance status on the submittal date of this application, it does not reflect a particular reporting period. The next full period review of compliance will take place in early 2022 for the Reporting Year 2021 annual compliance certification. UniSea will continue to comply with these requirements and will achieve

compliance with any newly applicable requirements that become effective during the next permit term on a timely basis.

Table 1-3. Current Compliance Status for Title V Permit No. AQ0088TVP04 Rev 1

Condition No.	Current Compliance Status	Condition No.	Current Compliance Status
1	In Compliance	51	In Compliance
2	In Compliance	52	In Compliance
3	In Compliance	53	In Compliance
4	In Compliance	54	In Compliance
5	In Compliance	55	In Compliance
6	In Compliance	56	In Compliance
7	In Compliance	57	In Compliance
8	In Compliance	58	In Compliance
9	In Compliance	59	In Compliance
10	In Compliance	60	In Compliance
11	In Compliance	61	In Compliance
12	In Compliance	62	In Compliance
13	In Compliance	63	In Compliance
14	In Compliance	64	In Compliance
15	In Compliance	65	In Compliance
16	In Compliance	66	In Compliance
17	In Compliance	67	In Compliance
18	In Compliance	68	In Compliance
19	In Compliance	69	In Compliance
20	In Compliance	70	In Compliance
21	In Compliance	71	In Compliance
22	In Compliance	72	In Compliance
23	In Compliance	73	In Compliance
24	In Compliance	74	In Compliance
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35	In Compliance	85	In Compliance
36	In Compliance	86	In Compliance
37	In Compliance	87	In Compliance
38	In Compliance	88	In Compliance
39	In Compliance	89	In Compliance
40	In Compliance	90	In Compliance
41	In Compliance	91	In Compliance
42	In Compliance	92	In Compliance
43	In Compliance	93	In Compliance

Condition No.	Current Compliance Status	Condition No.	Current Compliance Status
44	In Compliance	94	In Compliance
45	In Compliance	95	In Compliance
46	In Compliance	96	In Compliance
47	In Compliance	97	In Compliance
48	In Compliance	98	In Compliance
49	In Compliance	99	In Compliance
50	In Compliance		

1.6 Permit Shield

There has not been any change to the facility since current permit No. AQ0088TVP04 Rev 1 issuance in March 2018. Therefore, UniSea is not requesting for any items to be added to the permit shield at this time.

1.7 Insignificant Emission Units

In addition to the information regarding insignificant emission units referenced in Table 1-1, Table 1-4 provides an itemized listing of the emission units determined to be insignificant on an emission rate basis (18 AAC 50.326(e)) along with appropriate quantitative justifications. The only insignificant emission units (on an emission rate basis) at the Dutch Harbor Plant are diesel fuel or fish oil storage tanks (EU IDs 19-22).[2] The TankESP software was used to determine emission rates for the storage tanks. In order to gauge a conservative estimate of tank emissions, it was assumed that the total annual fuel usage was passed through each storage tank individually. Conservative throughput values that were used in the 2017 renewal application are used.

As demonstrated in Table 1-4, EU IDs 19-22 are insignificant emission units given that the PTE of each unit is below the emission thresholds provided in 18 AAC 50.326(e). The input and output of the TankESP analysis is included in Appendix E. Additionally, an extensive listing of categorically insignificant emission units is provided in Appendix F.

Table 1-4. Insignificant Sources (Emission Rate Basis)

Pollutant	Estimated Maximum Annual Emission Rate (tpy)				Insignificant Threshold (tpy)
	EU ID 19	EU ID 20	EU ID 21	EU ID 22	
VOC	0.01	0.01	0.01	0.01	2.00

1.8 Control Equipment and CAM Applicability

As described and approved in the 2005 Title V renewal application and permit, UniSea's Dutch Harbor Plant has a number of emission units (with emission limitations and control devices) that could potentially be subject to the CAM rule (40 CFR §64.2). Control devices on potentially CAM-applicable sources include the following:

- Seawater scrubber used to control odors from the fish meal plant;
- Material transfer cyclones used to collect fish meal in the fish meal plant;

[2] EU ID 25 consists of 25 small residential boilers, with each individual rating is below the threshold in 18 AAC 50.236(g).

- Baghouse used to collect dust in the meal plant warehouse.

UniSea has evaluated the applicability of the CAM rule for the facility and has determined that CAM does not apply to any of its emission units. No change has made to these control devices or processes; therefore, an updated CAM applicability assessment is not performed.

1.9 Risk Management Plan

UniSea's Dutch Harbor Plant is subject to 40 CFR Part 68 for Chemical Accident Prevention Provisions. The facility is subject to Program Level 3 for anhydrous ammonia, which is used in their refrigeration system (G-1 ammonia system and G-2 ammonia system) to freeze seafood products. The facility has a current Risk Management Plan that was last updated and certified in 2021 to meet their full RMP re-submission deadline. Appendix I provides the 2021 RMP submission.

2. PROPOSED CHANGES AND SUPPORTING INFORMATION

2.1 Proposed Updates

2.1.1 Administrative Changes

2.1.1.1 Proposed Change

UniSea proposes to update the permit contact information in Section 1 of the permit. The proposed update is included in a red-lined page in Appendix H, and the required form in Appendix A.

2.1.1.2 Rationale

Contact information for the Dutch Harbor Plant has changed since the previous Title V renewal.

2.1.2 Updates to Table A

2.1.2.1 Proposed Change

The fuel types for the three Johnston boilers EU IDs 9-11 in Table A should include used oil, in addition to diesel or fish oil. The proposed update is included in a red-lined page in Appendix H, and the required form in Appendix A. UniSea also proposes to remove note 2 to Table A.

2.1.2.2 Rationale

Condition 16 of permit No. AQ0088TVP04 Rev 1 allows the use of used oil in EU IDs 9-11 and set forth the monitoring requirements for sulfur and ash concentration. UniSea is proposing to update Table A to reflect the correct fuel types that could be used in EU IDs 9-11.

Table Note 2 to Table A reads “Permittee did not install EU ID 16”. Since this EU has never been installed, UniSea proposes to remove this table note to avoid confusion.

3. COMPLIANCE CERTIFICATION

3.1 Certification of Truth, Accuracy, and Completeness

Based on the information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document, in addition to the documents and information referenced in Table 1-1, are true, accurate, and complete.

Signature of Responsible Official	Date
Tom Enlow	President and CEO
Printed Name	Title

APPENDIX A. TITLE V RENEWAL FORMS

FORM A1
Stationary Source (General Information)

GENERAL INFORMATION

1. Permittee:

Permittee Name:UniSea, Inc.

Mailing Address Line 1: P.O. Box 97019

Mailing Address Line 2

City: Redmond | State: WA | Zip Code: 98073-9179

2. Stationary Source Name: Dutch Harbor Seafood Processing Plant

3. Stationary Source Physical Address:

Physical Address Line 1: 88 Salmon Way

Physical Address Line 2

City: Dutch Harbor | State: AK | Zip Code: 99692

4. Location: Latitude: 53° 52' 45.5" | Longitude: 166° 33' 10.2"

5. Primary SIC Code: 2092 | SIC Code Description: Prepared Fresh or Frozen Fish and Seafood | ***Primary NAICS Code: 31171***

6. Current/Previous Title V Air Permit No.: AQ0088TVP04 Rev 1 | Expiration Date: May 23, 2022

7. Does this application contain confidential data? ☐ Yes ☒ No

8. APPLICATION IS BEING MADE FOR:

☐ Initial Title V Permit for this Stationary Source ☐ Modify Title V Permit (currently permitted) ☒ Title V Permit Renewal

9. CONTACT INFORMATION (Attach additional sheets if needed)

Owner:	***Operator:***
Name/Title: UniSea, Inc.	Name/Title: UniSea, Inc.
Mailing Address Line 1: P.O. Box 97019	Mailing Address Line 1: P.O. Box 97019
Mailing Address Line 2	Mailing Address Line 2
City: Redmond State: WA Zip Code: 98073-9179	City: Redmond State: WA Zip Code: 98073-9179
Permittee's Responsible Official:	***Designated Agent:***
Name/Title: Mr. Tom Enlow, President and CEO	Name/Title: CT Corporation System
Mailing Address Line 1: UniSea, Inc.	Mailing Address Line 1: 801 W. 10th Avenue, Suite 300
Mailing Address Line 2 P.O. Box 97019	Mailing Address Line 2
City: Redmond State: WA Zip Code: 98073-9179	City: Juneau State: AK Zip Code: 99801
Stationary Source and Building Contact:	***Fee Contact:***
Name/Title: Mr. Paul McGinnis, Maintenance Director	Name/Title: Ms. Emily Gibson, Environmental Compliance Manager
Mailing Address Line 1:UniSea, Inc.	Mailing Address Line 1: UniSea, Inc.
Mailing Address Line 2 P.O. Box 920008	Mailing Address Line 2 P.O. Box 920008
City: Dutch Harbor State: AK Zip Code: 99692	City: Dutch Harbor State: AK Zip Code: 99692
Phone: (907) 581-7274 Email: Paul.McGinnis@unisea.com	Phone: (907) 581-7373 Email: emily.gibson@unisea.com
Permit Contact:	***Person or Firm that Prepared Application:***
Name/Title: Ms. Emily Gibson, Environmental Compliance Manager	Name/Title: Hui Cheng, Senior Consultant
Mailing Address Line 1: UniSea, Inc.	Mailing Address Line 1: Trinity Consultants
Mailing Address Line 2 P.O. Box 920008	Mailing Address Line 2 20819 72nd Avenue South, Suite 610
City: Dutch Harbor State: AK Zip Code: 99692	City: Kent State: WA Zip Code: 98032
Phone: (907) 581-7373 Email: emily.gibson@unisea.com	Phone: (253) 867-5600 Email: hcheng@trinityconsultants.com

10. STATEMENT OF CERTIFICATION

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Name of Responsible Official (typed): Mr. Tom Enlow | Title: President and CEO

X Signature (blue ink): T Enlow | Date: Sept. 9th 2021

FORM A4
Title V Air Operating Permit Renewal Application Information

Permit Number: AQ0088TVP04 Rev 1

1.	Permit Contact: Name	Ms. Emily Gibson
	Title	Environmental Compliance Manager
	Mailing Address Line 1	P.O. Box 920008
	Mailing Address Line 2	Dutch Harbor, AK 99692
	Phone Number	(907) 581-7373
	Email	emily.gibson@unisea.com
2.	Were there any changes to stationary source General Information (Form A1)? If yes, complete and submit a Form A1.	Yes
3.	Were there any changes to the stationary source description (Form A2)? If yes, complete and submit a Form A2.	No
4.	Were there any off-permit changes? Reference any notifications provided to the Department, and attach copies of the notifications.	No
	If yes, integrate changes into renewal permit? [if no, explain]	N/A
5.	Have any Alaska Title I permits been issued to the stationary source since the most recent Title V permit or revision issuance?	No
	If yes, integrate changes into renewal permit? [If yes, please list. If no, explain]	N/A
6.	Will there be any changes to the operating scenario(s)? [if yes, describe and attach Form A3]	No
7.	Will there be any new, modified, or reconstructed emission units or air pollution control equipment? [if yes, attach appropriate forms from Form Series B, C, D, and E]	No
8.	Are the current emissions units correctly identified and defined in the permit? [if no, attach appropriate forms from Form Series B, C, D, and E]	Yes – other than updating Table A to include the correct fuel types for EU IDs 9-11
9.	Does the CAM rule [40 CFR Part 64] apply to any of the emissions units? [if yes, review the guidance provided for CAM in the Form A4 instructions for this item]	No
10.	Does the accidental release prevention regulation [40 CFR Part 68] apply to the facility? [if yes, provide the appropriate regulatory applicability document in detail.]	Yes. See latest RMP submission in Appendix I of this report.
11.	Are there any other new applicable requirements? [if yes, list the new applicable requirements, emissions units, and attach the appropriate Series E Form]	No

12.	Are there any requested changes in the assessable potential to emit other than those identified in item 9 above? [if yes, answer the following]	No
	Are the changes a result of having better emissions information such as a new emission factor from a recent source test? [if yes, complete and attach any applicable emissions forms from Series D. Attach additional information as necessary to fully document.]	No
	Are the changes due to an increase in production? [if yes, complete and attach the applicable emissions form from Series D. Attach additional information as necessary to fully document.]	No
13.	Is the stationary source in compliance with all of the conditions of the current permit? If yes, attach a compliance certification. If no, attach a compliance schedule and/or actions taken for any out-of-compliance emission units.	Yes. See Appendix G of attached Title V renewal report.
14.	Are there any requested changes to testing and/or monitoring conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
15.	Are there any requested changes to monitoring conditions other than those being replaced by CAM? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
16.	Are there any requested changes to recordkeeping conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
17.	Are there any requested changes to reporting conditions? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	No
18.	Are there any requested changes to the non-applicable requirements (i.e. permit shield)? [if yes, identify the emission unit, the requested change, and the reason in the appropriate Series B and/or D form. If the change applies stationary source-wide, complete the appropriate Series E form. Attach additional information as necessary to fully document.]	No
19.	Are there any other requested changes to any condition? [if yes, identify the condition, the requested change, and the reason. Attach additional information as necessary to fully document.]	Yes. See Form E3.

FORM A4

Title V Air Operating Permit Renewal Application Information

Statement of Certification:

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

Tom Enlow	President and CEO
Name of Responsible Official	**Title**
T Enlow	September 9th, 2021
Signature (blue ink)	**Date**

FORM B
Emission Unit Listing For This Application

Permit Number: AQ0088TVP04 Rev 1

EMISSION UNIT LISTING: New, Modified, Previously Unpermitted, Replaced, Deleted					
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Notes
Emission Units To Be ADDED By This Application (New, Previously Unpermitted, or Replacement)					
Emission Units To Be MODIFIED By This Application					
9	G2 Boiler No.1	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	400 bhp	1990	Added used oil which is a permitted fuel type
10	G2 Boiler No.2	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	400 bhp	1990	Added used oil which is a permitted fuel type
11	G2 Boiler No.3	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	400 bhp	1986	Added used oil which is a permitted fuel type
Emission Units To Be DELETED By This Application					

FORM B

Emission Unit Listing For This Application

SIGNIFICANT EMISSION UNIT LISTING: Title V permitted emission units that have not been modified				
Emission Unit ID Number	Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date
1	Powerhouse Generator No. 1	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	2,252 kW	1990
2	Powerhouse Generator No. 2	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	2,300 kW	1990
3	Powerhouse Generator No. 3	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	2,300 kW	1990
4	Powerhouse Generator No. 4	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	2,252 kW	1990
5	Powerhouse Generator No. 5	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	2,300 kW	1990
6	Powerhouse Generator No. 6	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	2,252 kW	1990
7B	G1 Cat Generator No. 1	Caterpillar (3512CDITA) Diesel 1,200 RPM	1,100 kW	2011
8B	G1 Cat Generator No. 2	Caterpillar (3512CDITA) Diesel 1,200 RPM	1,100 kW	2011
12	G1 Boiler No.1	Cleaver-Brooks (CB-200) Diesel/Fish Oil	200 bhp	1986
13	G1 Boiler No.2	Cleaver-Brooks (CB-200) Diesel/Fish Oil	200 bhp	1986
14	Meal Plant Dryer No. 1	Stord Int'l (SIDJ-LT 4.5t) Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	700 kg/hr Diesel fuel capacity (24.1 MMBtu/hr)	1990
15	Meal Plant Dryer No. 2	Stord Int'l (SIDJ-LT 4.5t) Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	700 kg/hr Diesel fuel capacity (24.1 MMBtu/hr)	1990
17	Emergency Generator	Cummins VT-28-G Diesel	400 kW	1990

FORM B

Emission Unit Listing For This Application

INSIGNIFICANT EMISSION UNIT LISTING: Insignificant Title V permitted emission units that have not been modified				
Emission Unit Name	Brief Emission Unit Description	Rating/Size	Construction Date	Basis for Insignificant Status
Powerhouse Main Tank No. 1	Diesel Fuel or Fish Oil Storage Tank	35,000 gallons	Post-1984	Emission rate
Powerhouse Main Tank No. 2	Diesel Fuel or Fish Oil Storage Tank	35,000 gallons	Post-1984	Emission rate
Powerhouse Main Tank No. 3	Diesel Fuel or Fish Oil Storage Tank	30,000 gallons	Post-1984	Emission rate
G1 Main Tank	Diesel Fuel or Fish Oil Storage Tank	30,000 gallons	Post-1984	Emission rate
Residential Boilers	25 Boilers, burning diesel or fish oil	Total 8.82 MMBtu/hr	Several	Emission Rate

FORM E3

Title V Condition Change Request

Permit Number: AQ0088TVP04 Rev 1

Title V Permit Information (*attach additional sheets as needed*):

Current Title V Operating Permit Condition Number	Type of change (revise or remove)	Reason for change	Requested Alaska Title V Operating Permit Condition
Section 1	Revise	Contact information for the Dutch Harbor Plant has changed since the previous Title V renewal.	UniSea proposes to update the permit contact information in Section 1 of the permit.
Section 2, Table A	Revise	EU IDs 9-11 were permitted to fire used oil per Condition 16 of permit AQ0088TVP04 Rev 1. EU ID 16 was never installed.	UniSea requests the update to the fuel types for the three Johnston boilers EU IDs 9-11 to include used oil, in addition to diesel and fish oil. UniSea also proposes to remove Table Note 2 to Table A.

FORM E4
Permit Shield Request

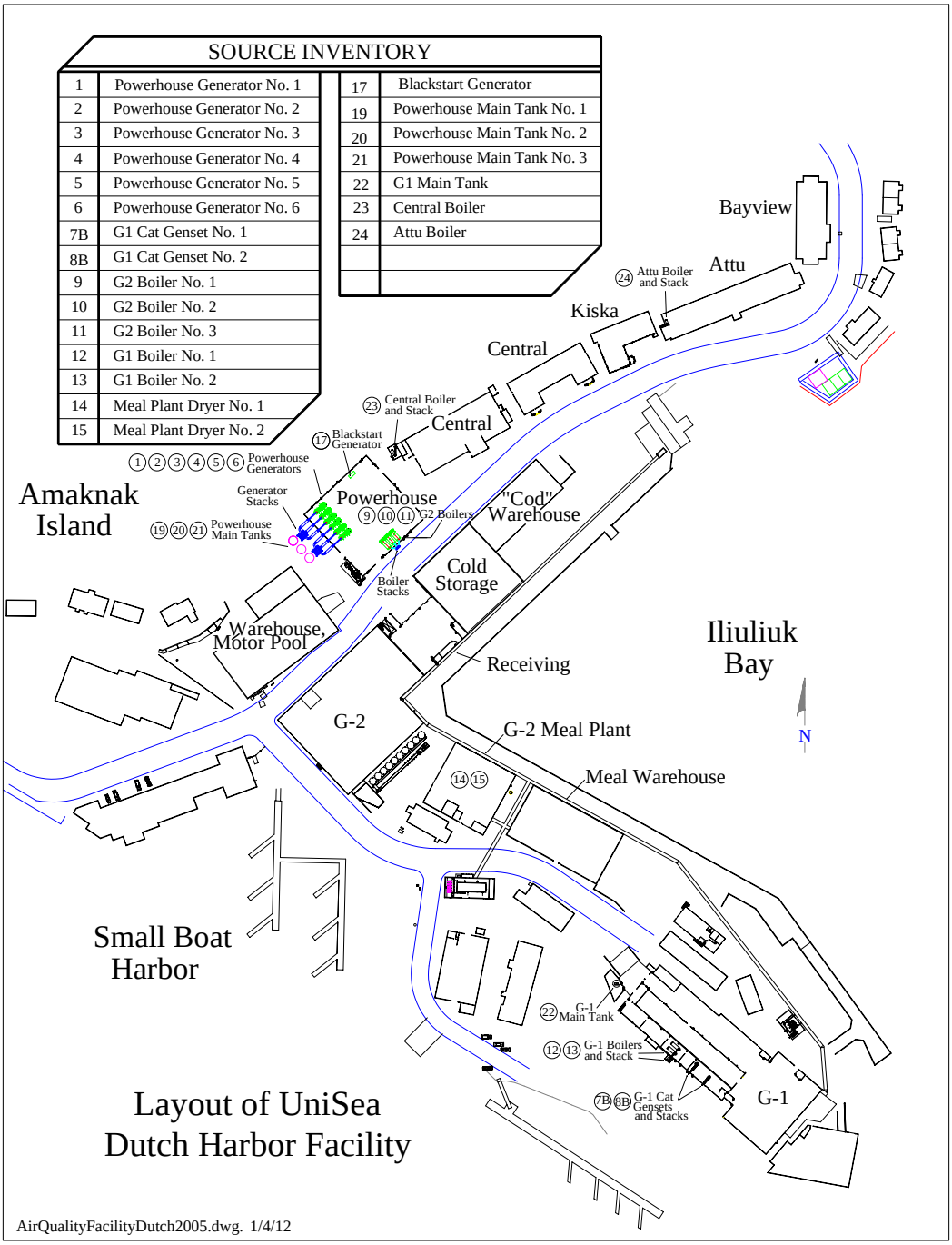
Permit Number: AQ0088TVP04 Rev 1

Non-applicable requirements (*attach additional sheets as needed*):

Non-Applicable Requirements[1]	Reason for non-applicability and citation/basis
No additional shield request this time, other than the existing permit shield established in Section 10 of permit AQ0088TVP04 Rev 1.	

[1] Citations must be specific. Include sub-paragraph level detail [e.g. 18 AAC 50.055(a)(1), or 40 C.F.R. 60.332(a)(2).]

APPENDIX B. FACILITY PLOT PLAN


SOURCE INVENTORY
1 Powerhouse Generator No. 1
2 Powerhouse Generator No. 2
3 Powerhouse Generator No. 3
4 Powerhouse Generator No. 4
5 Powerhouse Generator No. 5
6 Powerhouse Generator No. 6
7B G1 Cat Genset No. 1
8B G1 Cat Genset No. 2
9 G2 Boiler No. 1
10 G2 Boiler No. 2
11 G2 Boiler No. 3
12 G1 Boiler No. 1
13 G1 Boiler No. 2
14 Meal Plant Dryer No. 1
15 Meal Plant Dryer No. 2
17 Blackstart Generator
19 Powerhouse Main Tank No. 1
20 Powerhouse Main Tank No. 2
21 Powerhouse Main Tank No. 3
22 G1 Main Tank
23 Central Boiler
24 Attu Boiler
Bayview
Attu
Attu Boiler and Stack
Kiska
Central
Central Boiler and Stack
Central
Blackstart Generator
Powerhouse Generators
Amaknak Island
Generator Stacks
Powerhouse
G2 Boilers
"Cod" Warehouse
Powerhouse Main Tanks
Boiler Stacks
Cold Storage
Warehouse, Motor Pool
Receiving
Iliuliuk Bay
N
G-2
G-2 Meal Plant
Meal Warehouse
Small Boat Harbor
G-1 Main Tank
G-1 Boilers and Stack
G-1 Cat Gensets and Stacks
G-1
Layout of UniSea
Dutch Harbor Facility
AirQualityFacilityDutch2005.dwg. 1/4/12

APPENDIX C. EMISSION UNIT INVENTORY

Appendix C - Emission Unit Inventory

EU ID	Emission Unit Name	Emission Unit Description	Model Number	Serial Number	Rating/Size	Installation Date
1	Powerhouse Generator No. 1	Fairbanks Morse Diesel/Fish Oil 720 RPM	38TB8-1/8 OP	969874	2,252 kW	1990
2	Powerhouse Generator No. 2	Fairbanks Morse Diesel/Fish Oil 900 RPM	38TB8-1/8 OP	969875	2,300 kW	1990
3	Powerhouse Generator No. 3	Fairbanks Morse Diesel/Fish Oil 900 RPM	38TB8-1/8 OP	869062	2,300 kW	1990
4	Powerhouse Generator No. 4	Fairbanks Morse Diesel/Fish Oil 720 RPM	38TB8-1/8 OP	970291	2,252 kW	1990
5	Powerhouse Generator No. 5	Fairbanks Morse Diesel/Fish Oil 900 RPM	38TB8-1/8 OP	869063	2,300 kW	1990
6	Powerhouse Generator No. 6	Fairbanks Morse Diesel/Fish Oil 720 RPM	38TB8-1/8 OP	868037	2,252 kW	1990
7B	G1 Cat Generator No. 1	Caterpillar Diesel 1,200 RPM	3512CDITA	RMS00273	1,100 kW	2011
8B	G1 Cat Generator No. 2	Caterpillar Diesel 1,200 RPM	3512CDITA	RMS00274	1,100 kW	2011
9	G2 Boiler No. 1	Johnston Diesel/Fish Oil/Used Oil	PFTA-400-3LX- 150S	8688-01	400 bhp	1990
10	G2 Boiler No. 2	Johnston Diesel/Fish Oil/Used Oil	PFTA-400-3LX- 150S	8688-02	400 bhp	1990
11	G2 Boiler No. 3	Johnston Diesel/Fish Oil/Used Oil	PFTA-400-3LX- 150S	8296-01	400 bhp	1986
12	G1 Boiler No. 1	Cleaver-Brooks Diesel/Fish Oil	CB-200	L-63213	200 bhp	1986
13	G1 Boiler No. 2	Cleaver-Brooks Diesel/Fish Oil	CB-200	L-63212	200 bhp	1986
14	Meal Plant Dryer No. 1	Stord International Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	SIDJ-LT 4.5t	16873	700 kg/hr Diesel Fuel Capacity (24.1 MMBtu/hr)	1990
15	Meal Plant Dryer No. 2	Stord International Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	SIDJ-LT 4.5t	19874	700 kg/hr Diesel Fuel Capacity (24.1 MMBtu/hr)	1990
17	Emergency Generator	Cummins Diesel	VT-28-G	37107938	400 kW	1990
23	Central Boiler	Johnston Diesel/Fish Oil	PFTA 75-3	10899-01	2.5 MMBtu/yr	2011
24	Attu Boiler	Weil-Mclain Diesel/Fish Oil	Gordon-Piatt R 10.1-0	AD611876	2.4 MMBtu/yr	1993

APPENDIX D. POTENTIAL TO EMIT INVENTORY

Table 1. Maximum Fuel Usage for UniSea Combustion Sources

Unit ID	EU Description	Max Fuel Consumption Rate (gal/12-months)
1-6	G2 Generators	4,063,409 [a]
7B - 8B	G1 Generators	644,000 [b]
9 - 11	G2 Boilers	1,069,000 [c]
12 - 13	G1 Boilers	293,586 [d]
14 - 15	Meal Plant Dryers	965,000 [c]
17	Blackstart Generator	5,806 [e]
23	Central Boiler	178,000 [c]
24	Attu Boiler	113,000 [c]
Total Facility Fuel Consumption Rate		**7,331,801**

[a] Fuel consumption rate from December 2002 Construction Permit Application dispersion modeling analysis, which serves as the basis for the permitted NO_x emission limit for EU IDs 1 through 6 (624.4 tons/12-months per Condition 22 of Permit No. AQ0088TVP04 Rev 1).

Fuel consumption for EU IDs 1, 4, 6: 719,204 gal/yr
Fuel consumption for EU IDs 2, 3, 5: 635,266 gal/yr

[b] Fuel consumption limit established by Condition 9 Air Quality Control Minor Permit No. AQ0088MSS03.

[c] Fuel consumption limit established by Condition 20 of Air Quality Operating Permit No. AQ088TVP04 Rev 1.

[d] Fuel consumption limit established by Condition 1 of Minor Permit No. AQ0088MSS04.

[e] Fuel consumption limit based on maximum operational level that maintains the Blackstart Generator's (EU ID 17's) status as an insignificant emission unit on the basis of emission rates, per 18 AAC 50.326(e); however, as an insignificant source, this is not a permitted emission limit in Permit No. AQ0088TVP04 Rev 1.

Table 2. Facility-wide Potential to Emit

ID	Source Name	Potential to Emit Emission Estimates for Criteria Pollutants												Potential to Emit Emission Estimates for Greenhouse Gases						
		NO_x EF (lb/gal)	NO_x (tpy)	SO_2 EF (lb/gal)	SO_2 (tpy)	PM_{10} EF (lb/gal)	PM_{10} (tpy)	$PM_{2.5}$ EF (lb/gal)	$PM_{2.5}$ (tpy)	CO EF (lb/gal)	CO (tpy)	VOC EF (lb/gal)	VOC (tpy)	CO_2 EF (lb/gal)	CO_2 (tpy)	CH_4 EF (lb/gal)	CH_4 (tpy)	N_2O EF (lb/gal)	N_2O (tpy)	CO_2e (tpy)
1	Powerhouse Generator No. 1 [e, g]	0.333 [a]	119.75	0.00071 [b]	0.26	0.0084 [a]	3.02	0.0084 [a]	3.02	0.034 [a]	12.23	0.0074 [c]	2.66	22.5	8,092	0.0009	0.33	0.0002	0.07	8,120
2	Powerhouse Generator No. 2 [e, g]	0.272 [a]	86.40	0.00071 [b]	0.23	0.0079 [a]	2.51	0.0079 [a]	2.51	0.014 [a]	4.45	0.0066 [c]	2.10	22.5	7,147	0.0009	0.29	0.0002	0.06	7,172
3	Powerhouse Generator No. 3 [e, g]	0.272 [a]	86.40	0.00071 [b]	0.23	0.0079 [a]	2.51	0.0079 [a]	2.51	0.014 [a]	4.45	0.0066 [c]	2.10	22.5	7,147	0.0009	0.29	0.0002	0.06	7,172
4	Powerhouse Generator No. 4 [e, g]	0.333 [a]	119.75	0.00071 [b]	0.26	0.0084 [a]	3.02	0.0084 [a]	3.02	0.034 [a]	12.23	0.0074 [c]	2.66	22.5	8,092	0.0009	0.33	0.0002	0.07	8,120
5	Powerhouse Generator No. 5 [e, g]	0.272 [a]	86.40	0.00071 [b]	0.23	0.0079 [a]	2.51	0.0079 [a]	2.51	0.014 [a]	4.45	0.0066 [c]	2.10	22.5	7,147	0.0009	0.29	0.0002	0.06	7,172
6	Powerhouse Generator No. 6 [e, g]	0.333 [a]	119.75	0.00071 [b]	0.26	0.0084 [a]	3.02	0.0084 [a]	3.02	0.034 [a]	12.23	0.0074 [c]	2.66	22.5	8,092	0.0009	0.33	0.0002	0.07	8,120
7B	G1 Cat Genset No. 1 [e, l]	0.267 [i]	43.03	0.00021 [b]	0.03	0.0022 [i]	0.36	0.0022 [i]	0.36	0.008 [i]	1.30	0.0044 [i]	0.70	22.5	3,623	0.0009	0.15	0.0002	0.03	3,635
8B	G1 Cat Genset No. 2 [e, l]	0.267 [i]	43.03	0.00021 [b]	0.03	0.0022 [i]	0.36	0.0022 [i]	0.36	0.008 [i]	1.30	0.0044 [i]	0.70	22.5	3,623	0.0009	0.15	0.0002	0.03	3,635
9	G2 Boiler No. 1 [e, h]	0.027 [c]	4.88	0.00071 [b]	0.13	0.0007 [c]	0.12	0.0007 [c]	0.12	0.009 [c]	1.63	0.0014 [c]	0.24	22.5	4,009	0.0009	0.16	0.0002	0.03	4,023
10	G2 Boiler No. 2 [e, h]	0.027 [c]	4.88	0.00071 [b]	0.13	0.0007 [c]	0.12	0.0007 [c]	0.12	0.009 [c]	1.63	0.0014 [c]	0.24	22.5	4,009	0.0009	0.16	0.0002	0.03	4,023
11	G2 Boiler No. 3 [e, h]	0.027 [c]	4.88	0.00071 [b]	0.13	0.0007 [c]	0.12	0.0007 [c]	0.12	0.009 [c]	1.63	0.0014 [c]	0.24	22.5	4,009	0.0009	0.16	0.0002	0.03	4,023
12	G1 Boiler No. 1 [e, m]	0.034 [c]	2.51	0.00071 [b]	0.05	0.0033 [c]	0.24	0.0033 [c]	0.24	0.010 [c]	0.70	0.0003 [d]	0.02	22.5	1,652	0.0009	0.07	0.0002	0.01	1,657
13	G1 Boiler No. 2 [e, m]	0.034 [c]	2.51	0.00071 [b]	0.05	0.0033 [c]	0.24	0.0033 [c]	0.24	0.010 [c]	0.70	0.0003 [d]	0.02	22.5	1,652	0.0009	0.07	0.0002	0.01	1,657
14	Meal Plant Dryer No. 1 [e, h]	0.020 [d]	4.83	0.00071 [b]	0.17	0.0010 [d]	0.24	0.0010 [d]	0.24	0.005 [d]	1.21	0.0003 [d]	0.08	22.5	5,428	0.0009	0.22	0.0002	0.04	5,447
15	Meal Plant Dryer No. 2 [e, h]	0.020 [d]	4.83	0.00071 [b]	0.17	0.0010 [d]	0.24	0.0010 [d]	0.24	0.005 [d]	1.21	0.0003 [d]	0.08	22.5	5,428	0.0009	0.22	0.0002	0.04	5,447
17	Blackstart Generator [h]	0.689 [c]	2.00	0.00021 [b]	0.001	0.0200 [c]	0.06	0.0200 [c]	0.06	0.111 [c]	0.32	0.0093 [c]	0.03	22.5	65	0.0009	0.00	0.0002	0.00	66
19	Powerhouse Main Tank No. 1	--	--	--	--	--	--	--	--	--	--	-- [j]	0.01	--	--	--	--	--	--	--
20	Powerhouse Main Tank No. 2	--	--	--	--	--	--	--	--	--	--	-- [j]	0.01	--	--	--	--	--	--	--
21	Powerhouse Main Tank No. 3	--	--	--	--	--	--	--	--	--	--	-- [j]	0.01	--	--	--	--	--	--	--
22	G1 Main Tank	--	--	--	--	--	--	--	--	--	--	-- [j]	0.01	--	--	--	--	--	--	--
23	Central Boiler	0.020 [n]	1.78	0.00071 [b]	0.06	0.0033 [n]	0.29	0.0033 [n]	0.29	0.005 [n]	0.45	0.0002 [n]	0.02	22.5	2,002.63	0.0009	0.08	0.0002	0.02	2,010
24	Attu Boiler	0.020 [n]	1.13	0.00071 [b]	0.04	0.0024 [n]	0.13	0.0024 [n]	0.13	0.005 [n]	0.28	0.00034 [n]	0.02	22.5	1,271.33	0.0009	0.05	0.0002	0.01	1,276
Totals			**738.7**		**2.4**		**19.1**		**19.1**		**62.4**		**16.7**		**82,488**		**3.37**		**0.67**	**82,773**

[a] Emission factor determined from July 2002 Source Test Final Report, corresponds to the emission factor at a load of 65% for each unit (e.g., constant NOx emission factors from Condition 19 of AQ0088TVP02).

[b] Mass balance accounting for conversion of fuel sulfur to SO_2, assumes density of fuel is 7.1 lbs/gal; this calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw per Minor Permit No. AQ0088MSS03. All combustion units are permitted for the use of fish oil, with the exception of EU IDs 7B and 8B, which are limited to ULSD. Furthermore, UniSea only combusts ULSD in EU ID 17, which is designated as an insignificant unit.

[c] Manufacturer's emission factors at annual load, as documented in 2002 Construction Permit Application.

[d] Relevant AP-42 emission factor.

[e] For the purposes of estimating emissions from grouped sources with combined fuel consumption limits, each source in the group is assumed to combust identical amounts of fuel.

[f] Although not currently installed, emissions are also estimated from Source ID # 16 (Alfa-Laval dryer).

[g] Fuel usage in EU IDs 1 - 6 is based on the fuel consumption rate reflected in the dispersion modeling analysis presented in the 2002 Construction Permit Application (i.e., the fuel use that corresponds to the permitted limit of 624.4 tpy NOx for EU IDS 1 - 6).

[h] Fuel usage taken from Air Quality Operating Permit No. AQ088TVP02, Condition 17.

[i] Manufacturer's emission factor in units of g/kW-hr converted to lb/gal, using diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a brake-specific fuel consumption (BSFC) rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1).

[j] Minimal VOC emissions associated with fuel storage estimated using EPA's TANKS 4.0.9d software. Conservatively assumes that entire volume of fuel used at facility is stored in each tank. Emissions from diesel storage are assumed to equal emissions from fish oil storage.

[k] The Tier 1 calculation methodology prescribed in 40 CFR 98 Subpart C is used to calculate GHG emissions (Eq. C-1 for CO_2 emissions, Eq. C-8 for CH_4 and N_2O emissions). The worst-case emission factors between Distillate Fuel Oil No. 1, Distillate Fuel Oil No. 2, and Rendered Animal Fat are used, as provided in Table C-1 (CO_2, HHV) and Table C-2 (CH_4, N_2O) to 40 CFR 98. Emissions factors expressed in units of "lb/gal" were developed by scaling the Subpart C emission factor (in "kg/MMBtu") by the corresponding HHV ("MMBtu/gal") and converting from kilograms to pounds. This table does not distinguish between biogenic and nonbiogenic GHG emissions.

[l] Fuel usage taken from Condition 9 of Minor Permit No. AQ0088MSS03.

[m] Fuel usage taken from Condition 1 of Minor Permit No. AQ0088MSS04.

[n] Emission factors consistent with the Annual Assessable Emission calculations.

Table 3. HAP Emissions from External Combustion Sources

Combustion Units:	**Boilers (ID: 9-13, 23-24), Dryers (ID: 14-16)**		
Max. Firing Rate:	358,746.28	MMBtu/yr	
No. 2 Fuel Oil Heat Content:	137.00	MMBtu/Mgal	
Use Rate:	2,618.59	Mgal/yr	
Pollutant	**Emission Factor**	**Units**	**Emission Rate (tons/yr)**
POM	3.30E-03 [a]	lbs/Mgal (fuel input)	4.32E-03
Formaldehyde	6.10E-02 [a]	lbs/Mgal (fuel input)	7.99E-02
Arsenic	4.00E+00 [b]	lb/10^{12} Btu (fuel input)	7.17E-04
Beryllium	3.00E+00 [b]	lb/10^{12} Btu (fuel input)	5.38E-04
Cadmium	3.00E+00 [b]	lb/10^{12} Btu (fuel input)	5.38E-04
Chromium	3.00E+00 [b]	lb/10^{12} Btu (fuel input)	5.38E-04
Lead	9.00E+00 [b]	lb/10^{12} Btu (fuel input)	1.61E-03
Manganese	6.00E+00 [b]	lb/10^{12} Btu (fuel input)	1.08E-03
Mercury	3.00E+00 [b]	lb/10^{12} Btu (fuel input)	5.38E-04
Nickel	3.00E+00 [b]	lb/10^{12} Btu (fuel input)	5.38E-04
Selenium	1.50E+01 [b]	lb/10^{12} Btu (fuel input)	2.69E-03
Total HAP			**9.30E-02**

[a] U.S. EPA AP-42 Emission Factors, Table 1.3-8, 9/1998

[b] U.S. EPA AP-42 Emission Factors, Table 1.3-10, 9/1998

Table 4. HAP Emissions from Small Internal Combustion Sources

Combustion Unit:	**Blackstart Generator (ID: 17)**		
Max. Firing Rate:	795.42	MMBtu/yr	
No. 2 Fuel Oil Heat Content:	137.00	MMBtu/Mgal	
Use Rate:	5.81	Mgal/yr	
Pollutant	**Emission Factor**	**Units**	**Emission Rate (tons/yr)**
Benzene	9.33E-04 [a]	lb/MMBtu (fuel input)	3.71E-04
Toluene	4.09E-04 [a]	lb/MMBtu (fuel input)	1.63E-04
Xylenes	2.85E-04 [a]	lb/MMBtu (fuel input)	1.13E-04
1,3-Butadiene	3.91E-05 [a]	lb/MMBtu (fuel input)	1.56E-05
Formaldehyde	1.18E-03 [a]	lb/MMBtu (fuel input)	4.69E-04
Acetaldehyde	7.67E-04 [a]	lb/MMBtu (fuel input)	3.05E-04
Acrolein	9.25E-05 [a]	lb/MMBtu (fuel input)	3.68E-05
Naphthalene	8.48E-05 [a]	lb/MMBtu (fuel input)	3.37E-05
Total HAP			**1.51E-03**

[a] U.S. EPA AP-42 Emission Factors, Table 3.3-2, 10/1996

Table 5. HAP Emissions from Large Internal Combustion Sources

Combustion Unit:	**Generators (ID: 1-6, 7B-8B)**		
Max. Firing Rate:	644,915.03	MMBtu/yr	
No. 2 Fuel Oil Heat Content:	137	MMBtu/Mgal	
Use Rate:	4707.41	Mgal/yr	
Pollutant	**Emission Factor**	**Units**	**Emission Rate (tons/yr)**
Benzene	7.76E-04 [a]	lb/MMBtu (fuel input)	2.50E-01
Toluene	2.81E-04 [a]	lb/MMBtu (fuel input)	9.06E-02
Xylenes	1.93E-04 [a]	lb/MMBtu (fuel input)	6.22E-02
Formaldehyde	7.89E-05 [a]	lb/MMBtu (fuel input)	2.54E-02
Acetaldehyde	2.52E-05 [a]	lb/MMBtu (fuel input)	8.13E-03
Acrolein	7.88E-06 [a]	lb/MMBtu (fuel input)	2.54E-03
Naphthalene	1.30E-04 [b]	lb/MMBtu (fuel input)	4.19E-02
Total HAP			**4.81E-01**

[a] U.S. EPA AP-42 Emission Factors, Table 3.4-3, 10/1996
[b] U.S. EPA AP-42 Emission Factors, Table 3.4-4, 10/1996

Table 6. Potential to Emit Emission Estimates for HAP

Pollutant	Emissions (tons/12-months)
POM	0.0043
Arsenic	0.0007
Beryllium	0.0005
Cadmium	0.0005
Chromium	0.0005
Ethyl Benzene	0.0001
Hexane (n-)	0.00002
Lead	0.0016
Manganese	0.0011
Mercury	0.0005
Nickel	0.0005
Selenium	0.0027
Benzene	0.2507
Toluene	0.0920
Xylenes	0.0651
1,3-Butadiene	0.0000
Formaldehyde	0.1058
Acetaldehyde	0.0084
Acrolein	0.0026
Naphthalene	0.0420
Maximum Single HAP	**0.25**
Total HAPs	**0.58**

March 31, 2021

ADEC Air Permits Programs
ATTN: Assessable Emissions Estimate
410 Willoughby Ave., Suite 303
P.O. Box 111800
Juneau, AK 99811-1800

RE: UniSea, Inc. Dutch Harbor Plant, Permit No. AQ0088TVP04
Assessable Emissions Estimate – July 1, 2021 through June 30, 2022

To Whom It May Concern:

As required by Condition 62 and Condition 63 of Air Quality Permit No. AQ0088TVP04, UniSea, Inc. (UniSea) must pay an annual emissions fee to the Alaska Department of Environmental Conservation (ADEC) based on the Dutch Harbor Plant's assessable emissions. The assessable emissions estimate that serves as the basis for this annual fee is the lesser of the following:

- The Dutch Harbor Plant's assessable potential to emit, as established by Condition 62.1 of Air Quality Operating Permit No. AQ0088TVP04 (i.e., 871 tons per year); or
- The projected annual rate of emissions that will occur from July 1, 2021 to June 30, 2022, based upon actual annual emissions during the most recent calendar year (i.e., 2020) or another 12-month period approved in writing by ADEC, as described by Condition 62.2.

Per Condition 63 of UniSea's operating permit, ADEC will assess fees based on UniSea's estimate of assessable emissions, provided that this estimate is submitted to ADEC by March 31, 2021. The submittal must include all of the assumptions and calculations used to develop these emissions estimates in sufficient detail so that ADEC can verify the results.

Table 1 provides the projected annual rate of assessable emissions and corresponding emissions fees for UniSea's Dutch Harbor Plant for the 12-month period from July 1, 2021 through June 30, 2022. In accordance with 18 AAC 50.410(b)(1), fees are assessed at a rate of $42.95 per ton of each pollutant emitted during the 2020 calendar year in quantities greater than or equal to 10 tons per year.[1] Since the 2020 SO_2 and VOC emissions estimates for the Dutch Harbor Plant are less than 10 tons per year, a fee is not assessed on these pollutants.

[1] The current fee schedule for sources required to obtain an operating permit is established by 18 AAC 50.410(b)(1), as amended through January 8, 2020.

Table 1. Assessable Emissions and Corresponding Fees

Air Pollution	Assessable Emissions (tons)	Assessed Fee
NO_X	387.2	$16,630.24
SO_2	0.2	$-
CO	29.7	$1,275.62
PM_{10} [a]	11.7	$502.52
VOC	8.4	$-
Total [b]	428.6	$18,408.37

[a] PM_{10} emissions include both filterable and condensable PM_{10}.
[b] The emissions total presented in this table only includes emission quantities that exceed 10 tons per year and are thereby subject to fees.

The attached document includes a detailed description of the assessable emissions calculation methodology for each pollutant. Furthermore, Appendix A presents the facility operating data used to quantify emissions, Appendix B summarizes pollutant-specific emissions calculated for each source during each calendar month, and Appendix C identifies and provides references for all emission factors used in these calculations.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete. If you have any questions regarding this assessable emissions estimate for UniSea's Dutch Harbor Plant for the 12-month period from July 1, 2021 through June 30, 2022, please do not hesitate to contact me at 425-881-8181 or Emily Gibson (Emily.gibson@unisea.com) at 907-581-7373.

Sincerely,

UniSea, Inc.

Tom Enlow
President and CEO

cc: C. Plaisance, E. Gibson, S. Coleman (UniSea, Inc.)
A. Jones, J. Neilsen (Trinity Consultants)

ASSESSABLE EMISSIONS ESTIMATES

July 2021 – June 2022

UniSea Inc. / Dutch Harbor Seafood Processing Plant

Prepared By:

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March 29, 2021

Project 144801.0030

Trinity Consultants

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1. CALCULATION METHODOLOGY

In accordance with Condition 62 and Condition 63 of Air Quality Operating Permit No. AQ0088TVP04, UniSea, Inc. (UniSea) is submitting the following documentation along with its assessable emissions estimates, so that the Alaska Department of Environmental Conservation (ADEC) can verify these estimates. This documentation includes all relevant assumptions, emission factors, and calculation methodologies used to estimate emissions that will occur from July 1, 2021 through June 30, 2022, based primarily on recorded emissions from the Dutch Harbor Plant during the 2020 calendar year.

All permit condition numbers referenced in this document correspond to Permit No. AQ0088TVP04, issued May 23, 2017. The following sections identify the pollutant-specific calculation methodologies used for each group of emission units, along with corresponding emission factors. Sources are identified by their EU ID number, as listed in Table A of UniSea's operating permit.

Additionally, Appendix A presents the facility operating data used to quantify emissions, Appendix B summarizes pollutant-specific emissions calculated for each source during each calendar month, and Appendix C identifies and provides references for all emission factors and constants used in these calculations.

2. NITROGEN OXIDES (NO_X)

The results of the unit-specific monthly calculations presented in this section are summed for all months of the 2020 calendar year and for all emission units at the Dutch Harbor plant to estimate annual facility-wide NO_X emissions.

2.1 NO_X Emissions from EU IDs 1 – 6 (Average Load ≤ 65%)

The following equation and constants are used to calculate monthly NO_X emissions from EU IDs 1 through 6 when the monthly average load (PAVG) for a given unit, expressed as a percentage of the permitted load, is less than or equal to 65%. Per Condition 23 of UniSea's operating permit, a unit's average load is defined as the average load for the entire month, regardless of the fuel types consumed during that month. These calculations are based on the results of the monthly monitoring required by Condition 22. Monthly monitored parameters for each unit include operating hours, power generation, and fuel consumption (diesel fuel consumption and blended fuel consumption are tracked separately). In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The linear equation constants (i.e., emission factors) for the combustion of diesel fuel in EU IDs 1 through 6 are presented in Table 2.1, while the emission factors for the combustion of blended oil are presented in Table 2.2.

NO_X Emissions [tons/month] = A * (CD or CB) / (2,000 [pounds/ton])

where: CD = Source fuel consumption [gallons diesel fuel/month],
CB = Source fuel consumption [gallons blended oil/month], and
A = Fuel-specific linear equation constant, as defined in Table 1 and Table 2.

Table 2.1. NO_X Emission Factors for Burning Diesel Fuel in EU IDs 1 – 6 (P_{avg} ≤ 0.65)

EU IDs	Source Name	A [lb NO_X / gallon diesel]
1, 4, 6	Powerhouse Generator No. 1, 4, 6	0.333
2, 3, 5	Powerhouse Generator No. 2, 3, 5	0.272

Table 2.2. NO_X Emission Factors for Burning Blended Oil in EU IDs 1 – 6 (Pavg ≤ 0.65)

EU IDs	Source Name	A [lb NO_X / gallon blend]
1, 4, 6	Powerhouse Generator No. 1, 4, 6	0.298
2, 3, 5	Powerhouse Generator No. 2, 3, 5	0.247

2.2 NO_X Emissions from EU IDs 1 – 6 (Average Load > 65%)

The following polynomial equation and constants are used to calculate monthly NO_X emissions from EU IDs 1 through 6 when the monthly average load (PAVG) for a given unit, expressed as a percentage of the permitted load, exceeds 65%. Per Condition 23 of UniSea's operating permit, a unit's average load is defined as the average load for the entire month, regardless of the fuel types consumed during that month. These calculations are based on the results of the monthly monitoring required by Condition 22. Monthly monitored parameters for each unit include operating hours, power generation, and fuel consumption (diesel fuel consumption and blended fuel consumption are tracked separately). In instances of meter failure

or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The constants used in the polynomial equation for the combustion of diesel fuel in EU IDs 1 through 6 are presented in Table 2.3, while the constants for the combustion of blended oil are presented in Table 2.4.

NO_X Emissions [tons/month] = (D * P2 + E * P + F) * (CD or CB) / (2000 [pounds/ton])

where: CD = Source fuel consumption [gallons diesel fuel/month],
CB = Source fuel consumption [gallons blended oil/month],
P = PAVG [average power as fraction of permitted load],
PAVG = B / H / O,
B = Energy production for blended oil and diesel fuel [kWh/month],
H = Operating hours for blended oil and diesel fuel [hours/month],
O = Permitted capacity for blended oil and diesel fuel [kWe], as defined in Table 3 and Table 4, and
D, E, and F = Fuel-specific polynomial constants, as defined in Table 3 and Table 4.

Table 2.3. NO_X Emissions Constants for Burning Diesel Fuel in EU IDs 1 – 6 (P_{avg} > 0.65)

EU IDs	Source Name	Polynomial Constants [lb NO_X / gallon diesel fuel]			Power Constants [kWe]
		D	E	F	O
1, 4, 6	Powerhouse Generator No. 1, 4, 6	-0.14	0.55	0.035	2,252
2, 3, 5	Powerhouse Generator No. 2, 3, 5	-0.19	0.56	-0.012	2,300

Table 2.4. NO_X Emissions Constants for Burning Blended Oil in EU IDs 1 – 6 (P_{avg} > 0.65)

EU IDs	Source Name	Polynomial Constants [lb NO_X / gallon diesel fuel]			Power Constants [kWe]
		D	E	F	O
1, 4, 6	Powerhouse Generator No. 1, 4, 6	-0.41	0.95	-0.146	2,252
2, 3, 5	Powerhouse Generator No. 2, 3, 5	-0.24	0.58	-0.029	2,300

2.3 NO_X Emissions from EU IDs 7B – 17, 23 and 24

The following equation and constants are used to calculate monthly NO_X emissions from EU IDs 7B through 15, 17, 23, and 24. These calculations are based on the results of the monthly fuel consumption monitoring required by Condition 20 for these emission units, except EU 17, which is triggered by Condition 1.2. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The linear equation constants (i.e., emission factors) for the combustion of both diesel fuel and fish oil are presented in Table 2.5.[1]

[1] Only diesel fuel may be combusted in EU IDs 7B and 8B, per Condition 19 of Permit No. AQ0088TVP04.

NO_X Emissions [tons/month] = A * C / (2,000 [pounds/ton])

where: C = Source fuel consumption [gallons/month], and
A = Linear equation constant as defined in Table 2.5.

Table 2.5. NO_X Emission Factors for EU IDs 7 – 15, 17, 23 and 24

EU IDs	Source Name	A [lb NO_X / gallon]
7B	G1 Cat Genset No. 1	0.267244
8B	G1 Cat Genset No. 2	0.267244
9, 10, 11	G2 Boilers No. 1, 2, 3	0.0274
12, 13	G1 Boiler No. 1, 2	0.0343
14, 15	Meal Plant Dryer No. 1, 2	0.02
17	Blackstart Generator	0.689
23	Central Boiler	0.02
24	Attu Boiler	0.02

3. SULFUR DIOXIDE (SO_2)

The results of the unit-specific monthly calculations presented in this section are summed for all months of the 2020 calendar year and for all emission units at the Dutch Harbor plant to estimate annual facility-wide SO_2 emissions.

3.1 SO_2 Emissions From EU IDs 1 – 17, 23 and 24

The following equation is used to calculate monthly SO_2 emissions from EU IDs 1 through 17, 23, and 24. This mass balance calculation is based on the results of the monthly fuel consumption monitoring required by Condition 20 and available fuel sulfur data. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. Available fuel sulfur data includes analytical results for fish oil generated by the Dutch Harbor facility, as well as fuel sulfur concentration estimates provided by UniSea's fuel supplier for each shipment of diesel fuel delivered to the Dutch Harbor facility.

- For units that combust blended fuel (a combination of diesel fuel and fish oil), UniSea applies the monthly weighted average blended fuel sulfur content for the unit to the unit's blended fuel usage rate for that month. These unit-specific monthly weighted average blended fuel sulfur contents are reported in UniSea's semiannual facility operating reports.
- For units that combust pure diesel fuel, the diesel fuel supplier's sulfur content information for a given month is applied to the quantity of pure diesel fuel consumed by the unit in that month.
- For units that combust pure fish oil, the results of UniSea's fish oil sampling for each month are arithmetically averaged and applied to a unit's pure fish oil consumption rate for each month until the next sample is taken.[2]

SO_2 Emissions [tons/month] = $\sum ijk(Ci,j,k * Si,j,k)/1{,}000{,}000)* 7.1 * 2 / (2{,}000$ [pounds/ton])

where: C = Unit-specific fuel consumption rate, diesel (Ci), fish oil (Cj), or blend of diesel and fish oil (Ck)[3] [gallons/month],
S = Monthly average fuel sulfur content, diesel (Si), fish oil (Sj), or blend of diesel and fish oil (Sk) [ppmw],
7.1 = Density of fuel [pounds / gallon], and
2 = Ratio of molecular weights of SO_2 and S (64 lb SO_2/lb-mol) / (32 lb S/lb-mol).

Assumptions: The density of all fuel combusted at the facility is assumed to be 7.1 pounds/gallon.

[2] Two fish oil samples were taken in 2020 (8.3 ppm on January 26 and 5.6 ppm on June 16). 8.3 ppm was applied for January through May, and 5.6 ppm was applied for June through December.

[3] UniSea did not combust used oil during the 2020 calendar year; therefore, used oil consumption rates and sulfur content data are not included in these calculations.

4. CARBON MONOXIDE (CO)

The results of the unit-specific monthly calculations presented in this section are summed for all months of the 2020 calendar year and for all emission units at the Dutch Harbor plant to estimate annual facility-wide CO emissions.

4.1 CO Emissions From EU IDs 1 – 6

The following polynomial equation and constants are used to calculate monthly CO emissions from EU IDs 1 through 6 regardless of fuel type or the monthly average load (PAVG) for a given unit. These calculations are based on the results of the monthly monitoring required by Condition 22. Monthly monitored parameters for each unit include operating hours, power generation, and fuel consumption (though diesel and blended fuel consumption are tracked separately, the resulting quantities are summed to perform the monthly CO emissions calculation). Per Condition 23 of UniSea's operating permit, a unit's average load is defined as the average load for the entire month, regardless of the fuel types consumed during that month, expressed as a percentage of the permitted load. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The constants used in the polynomial equation for the calculation of CO emissions from the combustion of both diesel fuel and fish oil in EU IDs 1 through 6 are presented in Table 4.1.

CO Emissions [tons/month] = (J * P^2 + K * P + L) * C / (2,000 [pounds/ton])

where: C = Source fuel consumption [gallons total fuel/month],
P = PAVG [average power as fraction of permitted load],
PAVG = B / H / O,
B = Source energy production for blended oil and diesel fuel [kWh/month],
H = Source operating hours for blended oil and diesel fuel [hours/month],
O = Permitted capacity for blended oil and diesel fuel [kWe], and
J, K, and L = Polynomial constants, as defined in Table 4.1.

Table 4.1. CO Emissions Constants for Powerhouse Generators

EU IDs	Source Name	Polynomial Constants [lb CO / gallon fuel]			Power Constants [kWe]
		J	K	L	O
1, 4, 6	Powerhouse Generator No. 1, 4, 6	-0.1233	0.194	-0.0399	2,252
2, 3, 5	Powerhouse Generator No. 2, 3, 5	0.0064	-0.0131	0.0197	2,300

4.2 CO Emissions From EU IDs 7B – 15, 17, 23 and 24

The following equation and constants are used to calculate monthly CO emissions from EU IDs 7B through 15, 17, 23, and 24. The calculations for EU IDs 7B – 15, 23 and 24 are based on the results of the monthly fuel consumption monitoring required by Condition 20, except EU 17, which is triggered by Condition 1.2. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to

conservatively update fuel usage estimates based on reasonable inquiry. The linear equation constants (i.e., emission factors) for the combustion of both diesel fuel and fish oil are presented in Table 4.2.[4]

CO Emissions [tons/month] = C * G / (2,000 [pounds/ton])

where: C = Source fuel consumption [gallons/month], and
G = Linear equation constant as defined in Table 4.2

Table 4.2. CO Emission Factors for EU IDs 7B – 17, 23 and 24

EU IDs	Source Name	G [lb CO / gallon]
7B	G1 Cat Genset No. 1	0.008082
8B	G1 Cat Genset No. 2	0.008082
9, 10, 11	G2 Boilers No. 1, 2, 3	0.00914
12, 13	G1 Boilers No. 1, 2	0.0096
14, 15	Meal Plant Dryers No. 1, 2	0.005
17	Blackstart Generator	0.1111
23	Central Boiler	0.005
24	Attu Boiler	0.005

[4] Only diesel fuel may be combusted in EU IDs 7B and 8B, per Condition 19 of Permit No. AQ0088TVP04.

5. PARTICULATE MATTER ($PM_{2.5}$ / PM_{10})

The results of the unit-specific monthly calculations presented in this section are summed for all months of the 2020 calendar year and for all emission units at the Dutch Harbor plant to estimate annual facility-wide particulate matter ($PM_{2.5}$/PM_{10}) emissions.

5.1 $PM_{2.5}$ AND PM_{10} EMISSIONS FROM EU IDS 1 – 6

The following polynomial equation and constants are used to calculate monthly filterable $PM_{2.5}$ and PM_{10} emissions from EU IDs 1 through 6 regardless of fuel type or the monthly average load (PAVG) for a given unit. Since the combustion of diesel fuel and fish oil is assumed to result in only fine particulate emissions, the quantity of $PM_{2.5}$ equals the quantity of PM_{10} emitted by these sources. These calculations are based on the results of the monthly monitoring required by Condition 22 of UniSea's operating permit. Monthly monitored parameters for each unit include operating hours, power generation, and fuel consumption (though diesel and blended fuel consumption are tracked separately, the resulting quantities are summed to perform the monthly particulate matter emissions calculation). Per Condition 23 of UniSea's operating permit, a unit's average load is defined as the average load for the entire month, regardless of the fuel types consumed during that month, expressed as a percentage of the permitted load. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The constants used in the polynomial equation for the calculation of filterable $PM_{2.5}$ and PM_{10} emissions from the combustion of both diesel fuel and fish oil in EU IDs 1 through 6 are presented in Table 5.1.

Filterable $PM_{2.5}$ and PM_{10} Emissions [tons/month] = (M * P2 + N * P + W) * C / (2,000 [pounds/ton])

where: C = Source fuel consumption [gallons/month],
P = PAVG [average power as fraction of permitted load],
PAVG = B / H / O,
B = Source energy production for blended oil and diesel fuel [kWh/month],
H = Source operating hours for blended oil and diesel fuel [hours/month],
O = Permitted capacity for blended oil and diesel fuel [kWe], and
M, N, and W = Polynomial constants, as defined in Table 5.1.

Table 5.1. $PM_{2.5}$ and PM_{10} Emission Factors for EU IDs 1 – 6

EU IDs	Source Name	Polynomial Constants [lb $PM_{2.5/10}$ / gallon fuel]			Power Constants [kWe]
		D	E	F	O
1, 4, 6	Powerhouse Generator No. 1, 4, 6	-0.0064	0.0099	0.0049	2,252
2, 3, 5	Powerhouse Generator No. 2, 3, 5	-0.0415	0.0637	-0.0159	2,300

In addition, condensable $PM_{2.5}$ emissions from EU IDs 1-6 are calculated using the emission factor from AP-42 Chapter 3.4, Table 3.4-2 (1.05E-03 lb/gal fuel).

5.2 $PM_{2.5}$ and PM_{10} Emissions From EU IDs 7B – 15, 17, 23 and 24

The following equation and constants are used to calculate monthly filterable $PM_{2.5}$ and PM_{10} emissions from EU IDs 7B through 15, 17, 23, and 24. Since the combustion of diesel fuel and fish oil is assumed to result in only fine particulate emissions, the quantity of $PM_{2.5}$ equals the quantity of PM_{10} emitted by these sources. These calculations are based on the results of the monthly fuel consumption monitoring required by Condition 20, except EU 17, which is triggered by Condition 1.2. In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The linear equation constants (i.e., emission factors) for the combustion of both diesel fuel and fish oil are presented in Table 5.2.[5]

Filterable $PM_{2.5}$ and PM_{10} Emissions [tons/month] = C * Q / (2,000 [pounds/ton])

where: C = Source fuel consumption [gallons/month], and
Q = Linear equation constant as defined in Table 5.2.

Table 5.2. $PM_{2.5}$ and PM_{10} Emission Factors for EU IDs 7B – 17, 23 and 24

EU IDs	Source Name	Q [lb $PM_{2.5/10}$ / gallon]
7B	G1 Cat Genset No. 1	0.001193
8B	G1 Cat Genset No. 2	0.001193
9, 10, 11	G2 Boilers No. 1, 2, 3	0.000692
12, 13	G1 Boilers No. 1, 2	0.0033
14, 15	Meal Plant Dryers No. 1, 2	0.001
17	Blackstart Generator	0.020
23	Central Boiler	0.0033
24	Attu Boiler	0.00108

In addition, condensable $PM_{2.5}$ emissions from EU IDs 7B-8B, and 17 are calculated using the emission factor from AP-42 Chapter 3.4, Table 3.4-2 (1.05E-03 lb/gal fuel). Condensable $PM_{2.5}$ emissions from EU IDs 9-15 and 23-24 are calculated using the emission factor from AP-42 Chapter 1.3, Table 1.3-2 (1.30E-03 lb/gal fuel).

[5] Only diesel fuel may be combusted in EU IDs 7B and 8B, per Condition 19 of Permit No. AQ0088TVP04.

6. VOLATILE ORGANIC COMPOUNDS (VOC)

The results of the unit-specific monthly calculations presented in this section are summed for all months of the 2020 calendar year and for all emission units at the Dutch Harbor plant to estimate annual facility-wide VOC emissions.

6.1 VOC EMISSIONS FROM EU IDS 1– 17, 23, AND 24

The following equation and constants are used to calculate monthly VOC emissions from EU IDs 1 through 15, 17, 23, and 24. These calculations are based on the results of the monthly fuel consumption monitoring required by Conditions 1.2 (EU ID 17), 20 (EU IDs 7B-15, 23-24), and 22 (EU IDs 1-6). In instances of meter failure or when meter readings are suspect, UniSea corrects the meter readings to conservatively update fuel usage estimates based on reasonable inquiry. The linear equation constants (i.e., emission factors) for the combustion of both diesel fuel and fish oil are presented in Table 6.1.[6]

VOC Emissions [tons/month] = C * T / (2000 [pounds/ton])

where: C = Source fuel consumption [gallons/month], and
T = Linear equation constant as defined in Table 6.1.

Table 6.1. VOC Emission Factors for EU IDs 1 – 17, 23 and 24

EU IDs	Source Name	T [lb VOC / gallon]
1, 4, 6	Powerhouse Generator No. 1, 4, 6	0.0074
2, 3, 5	Powerhouse Generator No. 2, 3, 5	0.0066
7B	G1 Cat Genset No. 1	0.004372
8B	G1 Cat Genset No. 2	0.004372
9, 10, 11	G2 Boilers No. 1, 2, 3	0.00137
12, 13	G1 Boilers No. 1, 2	0.00034
14, 15	Meal Plant Dryers No. 1, 2	0.00034
17	Blackstart Generator	0.0093
23	Central Boiler	0.0002
24	Attu Boiler	0.00034

[6] Only diesel fuel may be combusted in EU IDs 7B and 8B, per Condition 19 of Permit No. AQ0088TVP04.

Table 1 - Source Operating Time in Hours [H]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	257.9	351.7	255.3	322.4	251.3	366.0	447.3	481.1	582.6	479.8	190.3	223.6	**4,209.3**
02	PH Gen No.2 (900)	162.0	347.3	223.4	32.1	5.5	0.8	40.3	43.4	11.2	3.6	0.7	0.0	**870.3**
03	PH Gen No.3 (900)	378.7	129.1	683.6	200.1	75.7	536.6	473.5	606.7	621.0	385.8	121.8	115.3	**4,327.9**
04	PH Gen No.4 (720)	180.0	580.0	474.6	148.7	309.9	53.2	204.5	151.6	46.2	43.5	294.1	156.6	**2,642.9**
05	PH Gen No.5 (900)	8.3	623.0	564.5	597.7	128.8	354.1	224.0	487.5	686.4	392.4	28.2	24.2	**4,119.1**
06	PH Gen No.6 (720)	0.0	59.0	11.3	7.1	0.0	0.0	0.0	177.6	135.6	42.0	89.7	249.8	**772.1**

Table 2 - Total Fuel Use in Gallons [C]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	30,093	40,451	28,254	34,429	27,321	39,212	48,893	52,184	63,457	53,308	20,652	23,561	**461,815**
02	PH Gen No.2 (900)	21,504	43,155	27,005	3,320	420	98	4,583	5,182	1,151	386	166	0	**106,970**
03	PH Gen No.3 (900)	49,829	15,941	85,905	24,934	8,979	65,713	59,747	76,286	79,057	49,710	15,635	14,093	**545,829**
04	PH Gen No.4 (720)	21,012	66,910	52,861	15,826	33,804	5,611	21,973	15,882	4,746	4,791	31,605	17,213	**292,234**
05	PH Gen No.5 (900)	901	81,950	72,545	76,217	15,737	44,449	29,208	63,460	90,889	50,952	3,681	2,939	**532,928**
06	PH Gen No.6 (720)	0	6,248	810	679	0	0	0	19,372	15,538	4,420	10,369	28,015	**85,451**
7B	G1 Gen No.1	9,523	18,548	21,291	901	0	14,416	14,462	10,912	12,642	16,924	8,853	19,150	**147,622**
8B	G1 Gen No.2	20,937	25,098	27,090	24,839	14,934	1,911	14,459	10,808	8,529	21,503	15,405	5,645	**191,158**
09	G2 Boiler No.1	11,930	41,317	43,465	19,547	6,502	18,484	22,492	36,537	42,423	23,084	8,659	8,555	**282,995**
10	G2 Boiler No.2	16,362	37,887	44,270	19,231	5,477	21,803	24,276	35,150	38,900	25,601	4,745	10,003	**283,705**
11	G2 Boiler No.3	9,823	36,115	35,081	12,344	5,739	14,868	16,691	24,158	32,968	18,917	7,071	1,216	**214,991**
12	G1 Boiler No.1	4,686	6,888	8,361	5,891	3,305	2,377	2,049	2,046	4,183	7,072	4,071	3,992	**54,921**
13	G1 Boiler No.2	4,406	8,916	7,119	5,064	2,799	2,960	2,679	3,243	4,470	8,217	5,465	4,271	**59,609**
14	MP Dryer No.1	2,580	16,094	9,776	2,272	0	4,626	4,776	10,046	43,111	10,966	0	206	**104,453**
15	MP Dryer No.2	7,518	50,111	53,733	19,151	0	18,951	26,638	47,524	33,105	21,263	0	0	**277,994**
17	Blackstart gen	5	3	5	3	3	5	3	4	3	3	5	3	**45**
23	Central(1) Boiler	6,033	5,733	6,380	5,108	4,387	3,599	264	0	0	3,747	3,733	3,997	**42,981**
24	Attu Boiler	2,958	3,161	3,311	2,964	2,384	1,977	1,762	1,807	1,929	2,251	2,151	2,522	**29,177**

Table 3 – Facility Fuel Use in Gallons (C_F)

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
1-24	Dutch Harbor Facility	220,100	504,526	527,262	272,720	131,791	261,060	294,955	414,601	477,101	323,115	142,266	145,381	**3,714,878**

Table 4 - Diesel Fuel Use in Gallons [C_D]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	30,093	40,451	28,254	34,429	27,321	39,212	48,893	52,184	55,648	53,308	20,652	23,561	**454,006**
02	PH Gen No.2 (900)	21,504	43,155	27,005	3,320	420	98	4,583	5,182	1,151	386	166	0	**106,970**
03	PH Gen No.3 (900)	49,829	15,941	85,905	24,934	8,979	65,713	59,747	76,286	69,792	49,710	15,635	14,093	**536,564**
04	PH Gen No.4 (720)	21,012	66,910	52,861	15,826	33,804	5,611	21,973	15,882	4,746	4,791	31,605	17,213	**292,234**
05	PH Gen No.5 (900)	901	81,950	72,545	76,217	15,737	44,449	29,208	63,460	81,096	50,952	3,681	2,939	**523,135**
06	PH Gen No.6 (720)	0	6,248	810	679	0	0	0	19,372	15,538	4,420	10,369	28,015	**85,451**
07B	G1 Gen No.1	9,523	18,548	21,291	901	0	14,416	14,462	10,912	12,642	16,924	8,853	19,150	**147,622**
08B	G1 Gen No.2	20,937	25,098	27,090	24,839	14,934	1,911	14,459	10,808	8,529	21,503	15,405	5,645	**191,158**
09	G2 Boiler No.1	11,930	0	0	19,547	6,502	0	22,492	0	0	23,084	8,659	8,555	**100,769**
10	G2 Boiler No.2	16,362	0	0	19,231	5,477	0	24,276	0	0	25,601	4,745	10,003	**105,695**
11	G2 Boiler No.3	9,823	0	0	12,344	5,739	0	16,691	0	0	18,917	7,071	1,216	**71,801**
12	G1 Boiler No.1	4,686	6,888	8,361	5,891	3,305	2,377	2,049	2,046	4,183	7,072	4,071	3,992	**54,921**
13	G1 Boiler No.2	4,406	8,916	7,119	5,064	2,799	2,960	2,679	3,243	4,470	8,217	5,465	4,271	**59,609**
14	MP Dryer No.1	2,580	12,097	9,776	2,272	0	4,626	4,776	7,014	43,111	10,966	0	206	**97,424**
15	MP Dryer No.2	7,518	34,010	53,733	18,005	0	18,951	26,638	35,408	32,000	21,263	0	0	**247,526**
17	Blackstart Gen	5	3	5	3	3	5	3	4	3	3	5	3	**45**
23	Central Boiler	6,033	5,733	6,380	5,108	4,387	3,599	264	0	0	3,747	3,733	3,997	**42,981**
24	Attu Boiler	2,958	3,161	3,311	2,964	2,384	1,977	1,762	1,807	1,929	2,251	2,151	2,522	**29,177**

Table 5 - Blended Oil Use in Gallons [C_B]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	0	0	0	0	0	0	0	0	7,809	0	0	0	**7,809**
02	PH Gen No.2 (900)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
03	PH Gen No.3 (900)	0	0	0	0	0	0	0	0	9,265	0	0	0	**9,265**
04	PH Gen No.4 (720)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
05	PH Gen No.5 (900)	0	0	0	0	0	0	0	0	9,793	0	0	0	**9,793**
06	PH Gen No.6 (720)	0	0	0	0	0	0	0	0	0	0	0	0	**0**
09	G2 Boiler No.1	0	41,317	43,465	0	0	18,484	0	36,537	42,423	0	0	0	**182,226**
10	G2 Boiler No.2	0	37,887	44,270	0	0	21,803	0	35,150	38,900	0	0	0	**178,010**
11	G2 Boiler No.3	0	36,115	35,081	0	0	14,868	0	24,158	32,968	0	0	0	**143,190**

Table 6 - Energy Production in kWh [B]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	450,000	599,000	415,000	509,000	410,000	582,000	730,000	793,000	963,000	806,000	311,000	355,000	**6,923,000**
02	PH Gen No.2 (900)	291,000	566,000	354,000	44,000	4,000	1,000	61,000	68,000	16,000	5,000	0	0	**1,410,000**
03	PH Gen No.3 (900)	661,000	210,000	1,107,000	321,000	120,000	872,000	784,000	1,011,000	1,045,000	659,000	207,000	186,000	**7,183,000**
04	PH Gen No.4 (720)	307,000	964,000	758,000	224,000	485,000	80,000	323,000	232,000	70,000	69,000	468,000	253,000	**4,233,000**
05	PH Gen No.5 (900)	15,000	1,077,000	935,000	977,000	201,000	575,000	371,000	827,000	1,184,000	673,000	48,000	40,000	**6,923,000**
06	PH Gen No.6 (720)	0	90,000	12,000	10,000	0	0	0	277,000	225,000	64,000	151,000	402,000	**1,231,000**

Table 7 – NO_x Emissions [tons]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (diesel)	5.7	7.5	5.1	6.1	4.9	6.9	8.8	9.5	10.1	9.8	3.7	4.2	**82.2**
01	PH Gen No.1 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	**1.3**
02	PH Gen No.2 (diesel)	3.3	6.2	3.8	0.5	0.1	0.0	0.6	0.7	0.2	0.1	0.0	0.0	**15.5**
02	PH Gen No.2 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
03	PH Gen No.3 (diesel)	7.6	2.3	12.4	3.6	1.3	9.5	8.7	11.2	10.3	7.4	2.3	2.0	**78.6**
03	PH Gen No.3 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0	0.0	**1.2**
04	PH Gen No.4 (diesel)	3.9	12.2	9.4	2.7	5.9	1.0	3.9	2.7	0.8	0.8	5.6	3.1	**52.0**
04	PH Gen No.4 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
05	PH Gen No.5 (diesel)	0.1	12.4	10.6	11.1	2.2	6.4	4.3	9.4	12.2	7.6	0.5	0.4	**77.3**
05	PH Gen No.5 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	**1.3**
06	PH Gen No.6 (diesel)	0.0	1.1	0.1	0.1	0.0	0.0	0.0	3.4	2.8	0.8	1.9	5.0	**15.2**
06	PH Gen No.6 (blend)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
07B	G1 Gen No.1	1.3	2.5	2.8	0.1	0.0	1.9	1.9	1.5	1.7	2.3	1.2	2.6	**19.7**
08B	G1 Gen No.2	2.8	3.4	3.6	3.3	2.0	0.3	1.9	1.4	1.1	2.9	2.1	0.8	**25.5**
09	G2 Boiler No.1	0.2	0.6	0.6	0.3	0.1	0.3	0.3	0.5	0.6	0.3	0.1	0.1	**3.9**
10	G2 Boiler No.2	0.2	0.5	0.6	0.3	0.1	0.3	0.3	0.5	0.5	0.4	0.1	0.1	**3.9**
11	G2 Boiler No.3	0.1	0.5	0.5	0.2	0.1	0.2	0.2	0.3	0.5	0.3	0.1	0.0	**2.9**
12	G1 Boiler No.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.1	0.1	**0.9**
13	G1 Boiler No.2	0.1	0.2	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	**1.0**
14	MP Dryer No.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.1	0.4	0.1	0.0	0.0	**1.0**
15	MP Dryer No.2	0.1	0.5	0.5	0.2	0.0	0.2	0.3	0.5	0.3	0.2	0.0	0.0	**2.8**
17	Blackstart Gen	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.0**
23	Central Boiler	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.4**
24	Attu Boiler	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	**0.3**
	TOTALS	**25.5**	**50.1**	**50.6**	**28.6**	**16.8**	**27.1**	**31.5**	**41.9**	**45.6**	**33.2**	**17.9**	**18.5**	**387.2**

Table 8 - SO_2 Emissions [tons]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	0.0014	0.0014	0.0009	0.0016	0.0007	0.0011	0.0031	0.0036	0.0036	0.0031	0.0010	0.0008	**0.022**
02	PH Gen No.2 (900)	0.0010	0.0015	0.0009	0.0002	0.0000	0.0000	0.0003	0.0004	0.0001	0.0000	0.0000	0.0000	**0.004**
03	PH Gen No.3 (900)	0.0024	0.0006	0.0027	0.0011	0.0002	0.0018	0.0037	0.0053	0.0045	0.0029	0.0007	0.0005	**0.027**
04	PH Gen No.4 (720)	0.0010	0.0023	0.0017	0.0007	0.0009	0.0002	0.0014	0.0011	0.0003	0.0003	0.0015	0.0006	**0.012**
05	PH Gen No.5 (900)	0.0000	0.0028	0.0023	0.0035	0.0004	0.0012	0.0018	0.0044	0.0052	0.0030	0.0002	0.0001	**0.025**
06	PH Gen No.6 (720)	0.0000	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000	0.0013	0.0009	0.0003	0.0005	0.0010	**0.004**
07B	G1 Gen No.1	0.0005	0.0006	0.0007	0.0000	0.0000	0.0004	0.0009	0.0008	0.0007	0.0010	0.0005	0.0007	**0.007**
08B	G1 Gen No.2	0.0010	0.0009	0.0009	0.0007	0.0004	0.0001	0.0009	0.0008	0.0005	0.0013	0.0008	0.0002	**0.008**
09	G2 Boiler No.1	0.0006	0.0000	0.0000	0.0009	0.0002	0.0007	0.0014	0.0018	0.0021	0.0013	0.0004	0.0003	**0.010**
10	G2 Boiler No.2	0.0008	0.0000	0.0000	0.0009	0.0001	0.0008	0.0015	0.0017	0.0019	0.0015	0.0002	0.0003	**0.010**
11	G2 Boiler No.3	0.0005	0.0000	0.0000	0.0006	0.0002	0.0006	0.0010	0.0012	0.0016	0.0011	0.0003	0.0000	**0.007**
12	G1 Boiler No.1	0.0002	0.0002	0.0003	0.0002	0.0001	0.0001	0.0001	0.0001	0.0002	0.0004	0.0002	0.0001	**0.002**
13	G1 Boiler No.2	0.0002	0.0003	0.0002	0.0002	0.0001	0.0001	0.0002	0.0002	0.0003	0.0005	0.0003	0.0001	**0.003**
14	MP Dryer No.1	0.0001	0.0007	0.0003	0.0001	0.0000	0.0001	0.0003	0.0006	0.0025	0.0006	0.0000	0.0000	**0.005**
15	MP Dryer No.2	0.0004	0.0021	0.0017	0.0009	0.0000	0.0005	0.0017	0.0029	0.0019	0.0012	0.0000	0.0000	**0.013**
17	Blackstart Gen	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	**0.000**
23	Central Boiler	0.0003	0.0002	0.0002	0.0002	0.0001	0.0001	0.0000	0.0000	0.0000	0.0002	0.0002	0.0001	**0.002**
24	Attu Boiler	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	0.0001	**0.001**
	TOTALS	**0.011**	**0.014**	**0.013**	**0.012**	**0.004**	**0.008**	**0.018**	**0.026**	**0.026**	**0.019**	**0.007**	**0.005**	**0.163**

* Monthly source specific blended fuel sulfur content is provided in the Facility Operating Reports submitted in July 2020 and January 2021.

Table 9 - CO Emissions [tons]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	0.55	0.73	0.51	0.61	0.49	0.70	0.88	0.94	1.14	0.97	0.37	0.42	**8.3**
02	PH Gen No.2 (900)	0.14	0.29	0.19	0.02	0.00	0.00	0.03	0.04	0.01	0.00	0.00	0.00	**0.7**
03	PH Gen No.3 (900)	0.33	0.11	0.59	0.17	0.06	0.45	0.41	0.52	0.54	0.34	0.11	0.10	**3.7**
04	PH Gen No.4 (720)	0.38	1.21	0.94	0.27	0.60	0.10	0.39	0.28	0.08	0.09	0.56	0.31	**5.2**
05	PH Gen No.5 (900)	0.01	0.55	0.49	0.52	0.11	0.30	0.20	0.43	0.61	0.34	0.02	0.02	**3.6**
06	PH Gen No.6 (720)	0.00	0.11	0.01	0.01	0.00	0.00	0.00	0.34	0.28	0.08	0.19	0.50	**1.5**
07B	G1 Gen No.1	0.04	0.07	0.09	0.00	0.00	0.06	0.06	0.04	0.05	0.07	0.04	0.08	**0.6**
08B	G1 Gen No.2	0.08	0.10	0.11	0.10	0.06	0.01	0.06	0.04	0.03	0.09	0.06	0.02	**0.8**
09	G2 Boiler No.1	0.05	0.19	0.20	0.09	0.03	0.08	0.10	0.17	0.19	0.11	0.04	0.04	**1.3**
10	G2 Boiler No.2	0.07	0.17	0.20	0.09	0.03	0.10	0.11	0.16	0.18	0.12	0.02	0.05	**1.3**
11	G2 Boiler No.3	0.04	0.17	0.16	0.06	0.03	0.07	0.08	0.11	0.15	0.09	0.03	0.01	**1.0**
12	G1 Boiler No.1	0.02	0.03	0.04	0.03	0.02	0.01	0.01	0.01	0.02	0.03	0.02	0.02	**0.3**
13	G1 Boiler No.2	0.02	0.04	0.03	0.02	0.01	0.01	0.01	0.02	0.02	0.04	0.03	0.02	**0.3**
14	MP Dryer No.1	0.01	0.04	0.02	0.01	0.00	0.01	0.01	0.03	0.11	0.03	0.00	0.00	**0.3**
15	MP Dryer No.2	0.02	0.13	0.13	0.05	0.00	0.05	0.07	0.12	0.08	0.05	0.00	0.00	**0.7**
17	Blackstart Gen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
23	Central Boiler	0.02	0.01	0.02	0.01	0.01	0.01	0.00	0.00	0.00	0.01	0.01	0.01	**0.1**
24	Attu Boiler	0.01	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.01	**0.1**
	TOTALS	**1.80**	**3.97**	**3.74**	**2.07**	**1.45**	**1.96**	**2.42**	**3.24**	**3.51**	**2.44**	**1.51**	**1.59**	**29.7**

Table 10 – Total (Filterable + Condensable) $PM_{2.5/10}$ Emissions [tons]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	0.15	0.20	0.14	0.17	0.13	0.19	0.24	0.25	0.31	0.26	0.10	0.11	**2.26**
02	PH Gen No.2 (900)	0.10	0.20	0.13	0.01	0.00	0.00	0.02	0.02	0.01	0.00	0.00	0.00	**0.50**
03	PH Gen No.3 (900)	0.24	0.08	0.41	0.12	0.04	0.31	0.28	0.36	0.38	0.24	0.07	0.07	**2.59**
04	PH Gen No.4 (720)	0.10	0.33	0.26	0.08	0.16	0.03	0.11	0.08	0.02	0.02	0.15	0.08	**1.43**
05	PH Gen No.5 (900)	0.00	0.39	0.34	0.36	0.07	0.21	0.14	0.30	0.44	0.24	0.02	0.01	**2.54**
06	PH Gen No.6 (720)	0.00	0.03	0.00	0.00	0.00	0.00	0.00	0.09	0.08	0.02	0.05	0.14	**0.42**
07B	G1 Gen No.1	0.01	0.02	0.02	0.00	0.00	0.02	0.02	0.01	0.01	0.02	0.01	0.02	**0.17**
08B	G1 Gen No.2	0.02	0.03	0.03	0.03	0.02	0.00	0.02	0.01	0.01	0.02	0.02	0.01	**0.21**
09	G2 Boiler No.1	0.01	0.04	0.04	0.02	0.01	0.02	0.02	0.04	0.04	0.02	0.01	0.01	**0.28**
10	G2 Boiler No.2	0.02	0.04	0.04	0.02	0.01	0.02	0.02	0.04	0.04	0.03	0.00	0.01	**0.28**
11	G2 Boiler No.3	0.01	0.04	0.03	0.01	0.01	0.01	0.02	0.02	0.03	0.02	0.01	0.00	**0.21**
12	G1 Boiler No.1	0.01	0.02	0.02	0.01	0.01	0.01	0.00	0.00	0.01	0.02	0.01	0.01	**0.13**
13	G1 Boiler No.2	0.01	0.02	0.02	0.01	0.01	0.01	0.01	0.01	0.01	0.02	0.01	0.01	**0.14**
14	MP Dryer No.1	0.00	0.02	0.01	0.00	0.00	0.01	0.01	0.01	0.05	0.01	0.00	0.00	**0.12**
15	MP Dryer No.2	0.01	0.06	0.06	0.02	0.00	0.02	0.03	0.05	0.04	0.02	0.00	0.00	**0.32**
17	Blackstart Gen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.00**
23	Central Boiler	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.04**
24	Attu Boiler	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.04**
	TOTALS	**0.71**	**1.52**	**1.57**	**0.88**	**0.47**	**0.86**	**0.93**	**1.32**	**1.47**	**0.98**	**0.47**	**0.49**	**11.68**

Table 11 - VOC Emissions [tons]

EU ID	SOURCE	Jan 20	Feb 20	Mar 20	Apr 20	May 20	Jun 20	Jul 20	Aug 20	Sep 20	Oct 20	Nov 20	Dec 20	2020 Totals
01	PH Gen No.1 (720)	0.11	0.15	0.10	0.13	0.10	0.15	0.18	0.19	0.23	0.20	0.08	0.09	**1.7**
02	PH Gen No.2 (900)	0.07	0.14	0.09	0.01	0.00	0.00	0.02	0.02	0.00	0.00	0.00	0.00	**0.4**
03	PH Gen No.3 (900)	0.16	0.05	0.28	0.08	0.03	0.22	0.20	0.25	0.26	0.16	0.05	0.05	**1.8**
04	PH Gen No.4 (720)	0.08	0.25	0.20	0.06	0.13	0.02	0.08	0.06	0.02	0.02	0.12	0.06	**1.1**
05	PH Gen No.5 (900)	0.00	0.27	0.24	0.25	0.05	0.15	0.10	0.21	0.30	0.17	0.01	0.01	**1.8**
06	PH Gen No.6 (720)	0.00	0.02	0.00	0.00	0.00	0.00	0.00	0.07	0.06	0.02	0.04	0.10	**0.3**
07B	G1 Gen No.1	0.02	0.04	0.05	0.00	0.00	0.03	0.03	0.02	0.03	0.04	0.02	0.04	**0.3**
08B	G1 Gen No.2	0.05	0.05	0.06	0.05	0.03	0.00	0.03	0.02	0.02	0.05	0.03	0.01	**0.4**
09	G2 Boiler No.1	0.01	0.03	0.03	0.01	0.00	0.01	0.02	0.03	0.03	0.02	0.01	0.01	**0.2**
10	G2 Boiler No.2	0.01	0.03	0.03	0.01	0.00	0.01	0.02	0.02	0.03	0.02	0.00	0.01	**0.2**
11	G2 Boiler No.3	0.01	0.02	0.02	0.01	0.00	0.01	0.01	0.02	0.02	0.01	0.00	0.00	**0.1**
12	G1 Boiler No.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
13	G1 Boiler No.2	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
14	MP Dryer No.1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	**0.0**
15	MP Dryer No.2	0.00	0.01	0.01	0.00	0.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	**0.0**
17	Blackstart Gen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
23	Central Boiler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
24	Attu Boiler	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	**0.0**
	TOTALS	**0.52**	**1.08**	**1.12**	**0.63**	**0.36**	**0.61**	**0.68**	**0.93**	**1.01**	**0.70**	**0.37**	**0.38**	**8.4**

APPENDIX C. EMISSION FACTOR REFERENCES

EU ID	Emission Unit	NOx				CO		PM_{10}		VOC		SO_2	
		Diesel		Fish Oil/Diesel Blend									
		Emission Factor	Reference	Emission Factor	Reference	Emission Factor	Reference	Emission Factor	Reference	Emission Factor	Reference	Emission Factor	Reference
1	**PH Gen No. 1 (720 RPM)**	P > 0.65, (-0.14 * P^2 + 0.55 * P + 0.035) [lbs/gal] P ≤ 0.65, 0.333 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.41 * P^2 + 0.95 * P - 0.146) [lbs/gal] P ≤ 0.65, 0.298 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	-0.1233 * P^2 + 0.194 * P - 0.0399 [lbs/gal]	July 2002 Source test report	-0.0064 * P^2 + 0.0099 * P + 0.0049 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,430 [bhp] * 2.205e-3 [lbs/g]] / 144.7 [gal/hr] = 0.0074 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
2	**PH Gen No. 2 (900 RPM)**	P > 0.65, (-0.19 * P^2 + 0.56 * P - 0.012) [lbs/gal] P ≤ 0.65, 0.272 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.24 * P^2 + 0.58 * P - 0.029) [lbs/gal] P ≤ 0.65, 0.247 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	0.0064 * P^2 - 0.0131 * P + 0.0197 [lbs/gal]	July 2002 Source test report	-0.0415 * P^2 + 0.0637 * P - 0.0159 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,482 [bhp] * 2.205e-3 [lbs/g]] / 165.2 [gal/hr] = 0.0066 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
3	**PH Gen No. 3 (900 RPM)**	P > 0.65, (-0.19 * P^2 + 0.56 * P - 0.012) [lbs/gal] P ≤ 0.65, 0.272 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.24 * P^2 + 0.58 * P - 0.029) [lbs/gal] P ≤ 0.65, 0.247 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	0.0064 * P^2 - 0.0131 * P + 0.0197 [lbs/gal]	July 2002 Source test report	-0.0415 * P^2 + 0.0637 * P - 0.0159 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,482 [bhp] * 2.205e-3 [lbs/g]] / 165.2 [gal/hr] = 0.0066 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
4	**PH Gen No. 4 (720 RPM)**	P > 0.65, (-0.14 * P^2 + 0.55 * P + 0.035) [lbs/gal] P ≤ 0.65, 0.333 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.41 * P^2 + 0.95 * P - 0.146) [lbs/gal] P ≤ 0.65, 0.298 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	-0.1233 * P^2 + 0.194 * P - 0.0399 [lbs/gal]	July 2002 Source test report	-0.0064 * P^2 + 0.0099 * P + 0.0049 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,430 [bhp] * 2.205e-3 [lbs/g]] / 144.7 [gal/hr] = 0.0074 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
5	**PH Gen No. 5 (900 RPM)**	P > 0.65, (-0.19 * P^2 + 0.56 * P - 0.012) [lbs/gal] P ≤ 0.65, 0.272 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.24 * P^2 + 0.58 * P - 0.029) [lbs/gal] P ≤ 0.65, 0.247 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	0.0064 * P^2 - 0.0131 * P + 0.0197 [lbs/gal]	July 2002 Source test report	-0.0415 * P^2 + 0.0637 * P - 0.0159 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,482 [bhp] * 2.205e-3 [lbs/g]] / 165.2 [gal/hr] = 0.0066 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
6	**PH Gen No. 6 (720 RPM)**	P > 0.65, (-0.14 * P^2 + 0.55 * P + 0.035) [lbs/gal] P ≤ 0.65, 0.333 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	P > 0.65, (-0.41 * P^2 + 0.95 * P - 0.146) [lbs/gal] P ≤ 0.65, 0.298 [lbs/gal]	July 2002 Source test report (emission factor established by Permit No. AQ0088TVP02)	-0.1233 * P^2 + 0.194*P - 0.0399 [lbs/gal]	July 2002 Source test report	-0.0064 * P^2 + 0.0099 * P + 0.0049 [lbs/gal]	July 2002 Source test report	[0.2 [g/bhp-hr] * 2,430 [bhp] * 2.205e-3 [lbs/g]] / 144.7 [gal/hr] = 0.0074 [lbs/gal]	Manufacturer's emission factor (Appendix E of December 2002 Construction permit application), 77% rated capacity, fuel rate @ annual load (Table 3-1, pg. 12 of 2002 construction permit application)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
7B	**G1 Gen No. 1**	8.306 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.267** [lbs/gal]	Manufacturer's EF given as 8.306 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a brake-specific fuel consumption (BSFC) rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)			0.251 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.008** [lbs/gal]	Manufacturer's EF given as 0.251 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a brake-specific fuel consumption (BSFC) rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	0.037 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.001** [lbs/gal]	Manufacturer's EF given as 0.037 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a brake-specific fuel consumption (BSFC) rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	0.136 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.004** [lbs/gal]	Manufacturer's EF given as 0.136 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a brake-specific fuel consumption (BSFC) rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw.
8B	**G1 Gen No. 2**	8.306 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.267** [lbs/gal]	Manufacturer's EF given as 8.306 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a BSFC rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)			0.251 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.008** [lbs/gal]	Manufacturer's EF given as 0.251 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a BSFC rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	0.037 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.001** [lbs/gal]	Manufacturer's EF given as 0.037 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a BSFC rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	0.136 [g/kW-hr] * 0.7457 [kW/hp] * 1/7000 [hp-hr/Btu] * 137,000 [Btu/gal] * 1/453.59 [lb/g] = **0.004** [lbs/gal]	Manufacturer's EF given as 0.136 g/kW-hr; to convert to lb/gal, used diesel fuel heating value of 137,000 Btu/gal (AP-42 Appendix A) and a BSFC rate of 7,000 Btu/hp-hr (AP-42, footnote (a) of Table 3.3-1)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw.
9	**G2 Boiler No. 1**	0.0274 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)			0.00914 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.000692 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.00137 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw. Used oil is no longer combusted at the Dutch Harbor Facility, and no plans for future used oil combustion exist.
10	**G2 Boiler No. 2**	0.0274 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)			0.00914 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.000692 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.00137 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw. Used oil is no longer combusted at the Dutch Harbor Facility, and no plans for future used oil combustion exist.
11	**G2 Boiler No. 3**	0.0274 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)			0.00914 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.000692 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	0.00137 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1 (calculated using emission rate and fuel use rate at annual load)	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw. Used oil is no longer combusted at the Dutch Harbor Facility, and no plans for future used oil combustion exist.
12	**G1 Boiler No. 1**	0.25 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0343 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1			0.07 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0096 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1	0.024 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0033 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1, emission rate at maximum short term load	0.00034 [lbs/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
13	**G1 Boiler No. 2**	0.25 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0343 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1			0.07 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0096 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1	0.024 [lbs/MMBtu] * 0.137 [MMBtu/gal] = 0.0033 [lbs/gal]	Manufacturer's emissions data, December 2002 Construction Permit application, Appendix E, Table 3-1, emission rate at maximum short term load	0.00034 [lbs/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
14	**MP Dryer No. 1**	0.02 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr			0.005 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr	0.001 [lbs/gal]	AP-42 Table 1.3-6, Uncontrolled, distillate oil fired industrial boilers, particle size ≤ 10 um	0.00034 [lbs/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
15	**MP Dryer No. 2**	0.02 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr			0.005 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr	0.001 [lbs/gal]	AP-42 Table 1.3-6, Uncontrolled, distillate oil fired industrial boilers, particle size ≤ 10 um	0.00034 [lbs/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
17	**Blackstart Gen**	(15.5 [g/bhp-hr] * 685 [bhp] * 2.205e-3 [lbs/g]) / 34 [gal/hr] = 0.689 [lbs/gal]	Manufacturer's emissions factor, continuous rated generator capacity, and maximum short term fuel rate -- all from Appendix E, Table 3-1 of December 2002 Construction Permit application			(2.5 [g/bhp-hr] * 685 [bhp] * 2.205e-3 [lbs/g]) / 34 [gal/hr] = 0.1111 [lbs/gal]	Manufacturer's emissions factor, continuous rated generator capacity, and maximum short term fuel rate all from Appendix E, Table 3-1 of 2003 construction permit application	(0.45 [g/bhp-hr] * 685 [bhp] * 2.205e-3 [lbs/g]) / 34 [gal/hr] = 0.020 [lbs/gal]	Manufacturer's emissions factor, continuous rated generator capacity, and maximum short term fuel rate all from Appendix E, Table 3-1 of December 2002 construction permit application	(0.21 [g/bhp-hr] * 685 [bhp] * 2.205e-3 [lbs/g]) / 34 [gal/hr] = 0.0093 [lbs/gal]	Manufacturer's emissions factor, continuous rated generator capacity, and maximum short term fuel rate all from Appendix E, Table 3-1 of December 2002 construction permit application	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw.
23	**Central Boiler**	0.02 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr			0.005 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr	0.0013+0.002 = 0.0033 [lbs/gal]	AP-42, sum of filterable PM factor for distillate oil fired in boiler <100 MMBtu/hr from Table 1.3-1 and total condensable PM factor for No. 2 oil fired from Table 1.3-2 (5/2010), per 1/20/2011 notification of boiler (EU 23) replacement to ADEC	0.0002 [lb/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.
24	**Attu Boiler**	0.02 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr			0.005 [lbs/gal]	AP-42 Table 1.3-1, Distillate oil fired boilers, < 100 MMBtu/hr	0.00108 +0.0013= 0.00238 [lbs/gal]	AP-42 Table 1.3-7, Uncontrolled distillate oil fire commercial boilers, particle size ≤ 10 µm and total condensable PM factor for No. 2 oil fired from Table 1.3-2 (5/2010)	0.00034 [lb/gal]	AP-42 Table 1.3-3, NMTOC for Distillate oil fired commercial combustors	7.1 [lbs fuel/gal fuel] * S [lbs-S/lbs-fuel] * 2 [lbs-SO2/lbs-S] = (14.2 * S [lbs-S/lbs-fuel]) [lbs/gal]	Mass balance accounting for conversion of fuel sulfur to SO2, assumes density of fuel is 7.1 lbs/gal; This calculation is based on the sulfur content of either Ultra Low Sulfur Diesel Fuel (ULSD), which is approximately 15 ppmw, or the sulfur content of fish oil, which is limited to 50 ppmw.

Notes: Emission Unit IDs 1 - 6, 9 - 15, are permitted to burn blends of fish oil and diesel fuel. In the absence of a specific fish oil/diesel blend emission factor, the appropriate emission factor for the combustion of diesel fuel is used.
Heating value of diesel fuel used in conversion is 0.137 MMBtu/gal (AP-42 Appendix A).
Density of fuel oil combusted at the Dutch Harbor Facility is assumed to be 7.1 lbs/gallon.

APPENDIX E. TANKESP OUTPUTS

TankSummaries for 2020 Annual

Site: Unisea, Dutch Harbor

Equations for this site: After 2019 AP-42 revisions H/D ratio: calculated

Tank ID	Tank Diameter (ft)	Height (ft)	Tank Type	Fixed Roof Type	Product	Throughput (gal)	Number of turnovers	Bulk Liquid Temperature (degF)
EU ID 19	16	24	FRT (no floating roof)	B (self supporting dome)	No. 2 Oil	7399014.84	290.26338	42.067257
EU ID 20	16	24	FRT (no floating roof)	B (self supporting dome)	No. 2 Oil	7399014.84	290.26338	42.067257
EU ID 21	16	20	FRT (no floating roof)	B (self supporting dome)	No. 2 Oil	7399014.84	290.26338	42.067257
EU ID 22	12.5	35	FRT (no floating roof)	B (self supporting dome)	No. 2 Oil	7399014.84	299.89146	42.067257

Tank ID	Avg. Liquid Surface Temp. (degF)	Avg. TVP (psia)	Shell Finish	Shell Condition (post-19)	Roof Finish	Roof Condition (post-19)	Estimated standing losses (lbs)
EU ID 19	43.012702	0.003632149	E (light gray)	Av	E (light gray)	Av	1.7826402
EU ID 20	43.012702	0.003632149	E (light gray)	Av	E (light gray)	Av	2.1924119
EU ID 21	43.062565	0.003638538	E (light gray)	Av	E (light gray)	Av	1.3365821
EU ID 22	42.863116	0.003613043	E (light gray)	Av	E (light gray)	Av	1.461493

Tank ID	Estimated working losses (lbs)	Routine Emissions (lbs)	Non Routine Emissions (lbs)	Total estimated emissions (lbs)	Benzene	Benzo(g,h,i)perylene	Ethylbenzene
EU ID 19	23.331976	25.114616	0	25.114616	0.057344934	3.15519E-15	0.072683035
EU ID 20	23.331976	25.524388	0	25.524388	0.058280578	3.20667E-15	0.073868935
EU ID 21	23.368388	24.704971	0	24.704971	0.056395063	3.11499E-15	0.071507123
EU ID 22	22.937654	24.399147	0	24.399147	0.055754306	3.03215E-15	0.070583863

Tank ID	Hexane (n-)	Naphthalene	PACs {Chrysene}	Toluene	Trimethylbenzene (1,2,4)	Xylene
EU ID 19	0.012069116	0.00810888	8.13658E-13	0.61155541	1.003971228	1.4055494
EU ID 20	0.012266037	0.008241185	8.26934E-13	0.62153358	1.020352085	1.4284824
EU ID 21	0.01186809	0.007982217	8.03016E-13	0.60153309	0.988010067	1.3828282
EU ID 22	0.011737644	0.007861288	7.82735E-13	0.594273	0.974141143	1.3649001

APPENDIX F. CATEGORICALLY INSIGNIFICANT EMISSION UNITS

Appendix F
Insignificant Emission Units

Section "A" (18 AAC 50.326 (f))			
Number	**Applications – insignificant emission units: category basis**	**Yes**	**No**
1	mobile transport tanks on vehicles, except for those containing asphalt or volatile liquids		X
2	lubricating oil storage tanks	X	
3	equipment used to mix, package, store, or handle soaps, lubricants, hydraulic fluid, vegetable oil, grease, animal fat, and aqueous salt solutions if covered in a manner that minimizes or prevents unintended emissions; this category does not include equipment used to mix or package powdered detergent, spray dryers, or any equipment that must have an emission control device	X	
4	pressurized storage of oxygen, nitrogen, carbon dioxide, air, or inert gasses	X	
5	vents from continuous emissions monitors and other analyzers		X
6	sampling connections used exclusively to withdraw materials for laboratory analyses and testing		X
7	sample gathering, preparation, and management	X	
8	equipment and instrumentation used for quality control, quality assurance, or inspection purposes	X	
9	laboratory calibration and maintenance equipment		X
10	individual laboratory hoods	X	
11	ventilating units used for human comfort that do not exhaust air pollutants into the ambient air from any manufacturing, industrial, or commercial process	X	
12	comfort air conditioning	X	
13	maintenance and upkeep activities such as routine housekeeping, grounds keeping, lawn and landscaping activities, general repairs, cleaning, painting, welding, plumbing, re-tarring roofs, applying insulation to buildings in accordance with applicable environmental and health and safety requirements, and paving or striping parking lots if these activities are not conducted as part of a manufacturing process, are not related to the primary business activity of the stationary source, and do not otherwise require a permit revision; this category does not include process control flares, spray paint equipment for rail cars or aircraft, or boilers or internal combustion engines used to provide electric power or heat	X	
14	portable solid waste containers such as dumpsters for municipal solid waste or office wastes	X	
15	structural changes that do not give rise to air pollutant emissions; this category does not include emissions from construction activities	X	
16	portable welding, brazing, cutting, and soldering operations used in incidental maintenance	X	
17	recreational fireplaces, including the use of barbecues, campfires, and ceremonial fires	X	
18	food preparation for human consumption including cafeterias, kitchen facilities, and barbecues located at a source for providing food service on the premises	X	
19	tobacco smoking rooms and areas	X	
20	emergency backup generators at single family or duplex residential locations		X
21	washers, dryers, extractors, and tumblers for fabrics using water solutions of bleach or detergents	X	
22	janitorial services and consumer use of janitorial products	X	

Appendix F
Insignificant Emission Units

Number	Applications – insignificant emission units: category basis	Yes	No
23	office activities	X	
24	materials and equipment used by, and activity related to, operation of an infirmary if the infirmary is not the stationary source's business activity; this category does not include medical waste incineration at military bases	X	
25	personal care activities	X	
26	bathroom and toilet vents	X	
27	septic sewer systems, not including active wastewater treatment facilities		X
28	cleaning and sweeping of streets and paved surfaces	X	
29	fuel and exhaust emissions from vehicles in parking lots	X	
30	flares used to indicate danger to the public		X
31	firefighting and similar safety equipment and equipment used to train firefighters		X
32	non-commercial smokehouses	X	
33	drop hammers or hydraulic presses for forging or metalworking	X	
34	blacksmith forges		X
35	inspection equipment for metal products	X	
36	conveying and storage of plastic pellets		X
37	plastic pipe welding	X	
38	tire buffing where a water spray is used with the particulate collection system to prevent smoke generation		X
39	wet sand and gravel screening		X
40	wax application		X
41	ultraviolet curing processes		X
42	hand-held applicator equipment for hot melt adhesives		X
43	steam cleaning operations	X	
44	steam sterilizers		X
45	portable drums and totes	X	
46	hand-held equipment for buffing, polishing, cutting, drilling, sawing, grinding, turning, or machining wood, metal, or plastic	X	
47	oxygen, nitrogen, or rare gas extraction and liquefaction equipment; this category does not include associated power generation equipment		X
48	equipment used exclusively to slaughter animals; this category does not include other equipment at slaughterhouses such as rendering cookers, boilers, heating plants, incinerators, and electrical power generating equipment	X	
49	ozonation equipment	X	
50	demineralization and oxygen scavenging (deaeration) of water	X	
51	pulse capacitors		X
52	laser trimmers using dust collection to prevent fugitive emissions		X
53	gas cabinets using only gasses that are not regulated air pollutants;		X
54	Carbon dioxide lasers used only on metals and other materials that do not emit hazardous air pollutants in the process		X

Number	Applications – insignificant emission units: category basis	Yes	No
55	photographic process equipment by which an image is reproduced upon material sensitized to radiant energy such as blueprint activity, photocopying, mimeograph, telefacsimile, photographic developing, and microfiche	X	
56	consumer use of paper trimmers and binders	X	
57	hydraulic and hydrostatic testing equipment		X
58	batteries and battery charging areas; this category does not apply to manufacturing or rebuilding facilities	X	
59	salt baths using nonvolatile salts that do not result in emissions of any regulated air contaminants	X	
60	shock chambers		X
61	mechanical wire strippers	X	
62	humidity chambers		X
63	solar simulators		X
64	environmental chambers that do not use hazardous air pollutant gasses		X
65	steam vents and safety relief valves not emitting process chemicals	X	
66	air compressors, pneumatically operated systems, and related hand tools	X	
67	digester chip feeders		X
68	process water and white water storage tanks	X	
69	demineralizer tanks		X
70	hydrogen peroxide tanks		X
71	dryers; this category is limited to Yankee, after dryer, curing systems, and cooling systems	X	
72	winders		X
73	chipping		X
74	debarking		X
75	pulp mill sludge dewatering and handling		X
76	screw press vents		X
77	pond dredging		X
78	polymer tanks and storage devices and associated pumping and handling equipment used for solids dewatering and flocculation		X
79	electrical circuit breakers, transformers, or switching equipment installation or operation	X	
80	electric or steam-heated drying ovens or autoclaves, excluding the articles or substances being processed in the ovens or autoclaves and the boilers delivering the steam	X	
81	sewer manholes, junction boxes, sumps, and lift stations associated with wastewater treatment systems at publicly owned treatment works		X
82	lube oil, seal oil, or hydraulic fluid storage tanks and equipment if those tanks and equipment do not emit volatile organic compounds (VOCs) or hazardous air pollutants	X	
83	natural gas pressure regulator vents; this category does not include venting at oil and gas production facilities		X
84	lubricating pumps, sumps, and systems	X	

Number	Applications – insignificant emission units: category basis	Yes	No
85	well service equipment		X
86	aircraft ground support equipment (AGE), lights, and heating, ventilation, and air conditioning (HVAC) support; this category does not include portable power generators		X
87	engine crankcase vents and equipment lubricating sumps	X	
88	tanks containing separated water produced from oil and gas operations		X
89	skimmer pits, oil-water separators, and maintenance of filter separators	X	
90	removal of sludge or sediment from pits, ponds, sumps, or wastewater conveyance facilities	X	
91	site assessment work, including the evaluation of waste disposal or remediation sites		X
92	instrument systems using air or natural gas	X	
93	drill site manifold and wellhead enclosures		X
94	vent emission from gas streams used as buffer or seal gas in rotating pump and compressor seals		X
95	natural gas odorizing activities		X
96	pneumatic starters on reciprocating engines, turbines, compressors, or other equipment	X	
97	pipeline maintenance pigging activities	X	
98	truck, car, or aircraft washing if equipment is not designed to vaporize hydrocarbons from the wash water	X	
99	nonroutine clean-out of tanks and equipment for the purpose of worker entry or in preparation for maintenance or decommissions	X	
100	fugitive emissions of jet fuels associated with aircraft fuel cell and fuel bladder repair		X
101	portable electrical generators that can be moved by hand from one location to another		X
102	natural gas and liquefied petroleum gas (LPG) vehicle fleet fueling facilities	X	
103	military field exercises, except emissions from permanent stationary sources		X
104	fire suppression	X	
105	storage of water-treating chemicals to be used in a drinking water system or a boiler water feedwater system	X	
Section "B" (18 AAC 50.326 (g))			
Number	**Applications – insignificant emission units: size or production rate basis**	**Yes**	**No**
1	operation, loading, and unloading of storage tanks and storage vessels with less than a 260-gallon capacity (35 cubic feet), with lids or other closure and heated only to the minimum extent necessary to avoid solidification	X	
2	operation, loading, and unloading of storage tanks with not greater than 1,100-gallon capacity, with lids or other closure not for use with hazardous air pollutants, and with a maximum true vapor pressure of 550 millimeters (mm) of mercury (Hg)	X	
3	operation, loading, and unloading of volatile liquid storage with 10,000-gallon capacity or less, with lids or other closure and storing liquid with a vapor pressure not greater than 80 millimeters (mm) of mercury (Hg) at 21 degrees Celsius		X
4	operation, loading, and unloading of butane, propane, or liquefied petroleum gas (LPG) storage tanks with vessel capacity under 40,000 gallons	X	

Number	Applications – insignificant emission units: size or production rate basis	Yes	No
5	a combustion emission unit with a rated capacity less than 4,000,000 Btu per hour exclusively using natural gas, butane, propane, or liquefied petroleum gas (LPG); emission units under this paragraph do not include internal combustion engines		X
6	a combustion emission unit with a rated capacity less than 350,000 Btu per hour using a commercial fuel containing less than 0.5 percent sulfur by weight for coal or less than 500,000 Btu per hour at one percent sulfur by weight for other fuels; emission units under this paragraph do not include internal combustion engines	X	
7	a combustion emission unit with a rated capacity less than 1,700,000 Btu per hour using kerosene, No. 1 fuel oil, or No. 2 fuel oil; emission units under this paragraph do not include internal combustion engines	X	
8	a combustion emission unit with a rated capacity less than 300,000 Btu per hour if burning used oil; emission units under this paragraph do not include internal combustion engines		X
9	a combustion emission unit with a rated capacity less than 450,000 Btu per hour if burning wood waste or waste paper; emission units under this paragraph do not include internal combustion engines		X
10	welding using not more than 50 pounds per day of welding rod	X	
11	foundry sand molds, unheated and using binders with less than 0.25 percent free phenol by sand weight		X
12	"paralyene" coaters using less than 500 gallons of coating per year		X
13	printing and silkscreening using less than two gallons per day of any combination of inks, coatings, adhesives, fountain solutions, thinners, retarders, or nonaqueous solutions if they do not contain hazardous air pollutants		X
14	comfort cooling towers and ponds that have a capacity not greater than 10,000 gallons per minute, that are not used with barometric jets or condensers, and that do not use chromium-based corrosion inhibitors		X
15	combustion turbines rated at less than 160 horsepower		X
16	batch distillation equipment with a batch capacity not greater than 55 gallons and used only for solvents that do not contain hazardous air pollutants		X
17	cleaning equipment with less than 10 square feet of air-vapor interface using solvent that does not contain a hazardous air pollutant with a vapor pressure not more than 30 millimeters (mm) of mercury (Hg) at 20 degrees Celsius		X
18	surface coating using less than two gallons per day of formulations not containing hazardous air pollutants		X
19	tanks, vessels, and pumping equipment with lids or other appropriate closure for storage or dispensing of aqueous solutions of inorganic salts, bases, and acids	X	
20	cleaning and stripping activities and equipment using solutions having less than one percent volatile organic compounds (VOCs) by weight; when used on metallic substances, acid solutions are not insignificant		X

Number	Applications – insignificant emission units: size or production rate basis	Yes	No
21	equipment with lids or other closures used exclusively to pump, load, unload, or store organic material that has an initial boiling point (IBP) not less than 150 degrees Celsius and a vapor pressure not more than 5 millimeters (mm) of mercury (Hg) at 21 degrees Celsius	X	
22	surface coating, aqueous solution, or suspension containing less than one percent volatile organic compounds (VOCs)		X
23	storage and handling of water-based lubricants for metal working if the organic content of the lubricant is less than 10 percent		X
24	municipal or industrial wastewater chlorination facilities of not greater than 1,000,000 gallons per day capacity		X
25	diesel engines of 250 horsepower or less being used to provide power for well servicing equipment		X
Section "C" (18 AAC 50.326 (h))			
Number	**Applications – insignificant emission units: case-by-case basis**	**Yes**	**No**
1	ponds and lagoons that are permitted under 33 U.S.C. 1342 (Federal Water Pollution Control Act, National Pollutant Discharge Elimination System), and that are used solely for settling suspended solids and skimming oil and grease		X
2	coffee roasters with a capacity of less than 15 pounds per day of coffee		X
Section "D" (18 AAC 50.326 (i))			
Number	**Applications – insignificant emission units: administratively insignificant sources**	**Yes**	**No**
1	the propulsion of mobile sources		X
2	general vehicle maintenance, including vehicle exhaust from repair stationary sources	X	
3	agricultural activities on the property of a stationary source that are not subject to review by the department under 18 AAC 50.306, 18 AAC 50.311, or 18 AAC 50.502 and are not under common control with the permitted stationary source		X

APPENDIX G. 2020 COMPLIANCE CERTIFICATION

ANNUAL COMPLIANCE CERTIFICATION

January 1, 2020 through December 31, 2020

FOR

AIR QUALITY OPERATING PERMIT #AQ0088TVP04

AT THE

UNISEA, INC.
DUTCH HARBOR FACILITY
DUTCH HARBOR, AK

PREPARED BY

UNISEA, INC.
88 SALMON WAY
P.O. BOX 920008
DUTCH HARBOR, AK 99692

March 2021

UniSea

March 31, 2021

ADEC
Air Permits Program
610 University Ave.
Fairbanks, AK 99709-3643
ATTN: Compliance Technician

Certified Mail: 7019 0700 0000 2404 3694
Return Receipt Requested

Re: UniSea, Inc. Dutch Harbor Annual Compliance Certification: January 1, 2020 through December 31, 2020, Air Quality Control Operating Permit No. AQ0088TVP04

To Whom It May Concern:

As required by Condition 87 of Air Quality Control Operating Permit No. AQ0088TVP04, UniSea, Inc. (UniSea) must compile and submit an Annual Compliance Certification (ACC) to the Alaska Department of Environmental Conservation (ADEC) for the Dutch Harbor Facility's annual operations. Please find enclosed the ACC satisfying the corresponding permit requirements for the facility's operations from January 1, 2020 through December 31, 2020. A copy of this report will be submitted directly to the EPA Region 10 office in Seattle, Washington, as required by Condition 87.3 of UniSea's permit.

Based on information and belief formed after reasonable inquiry, I certify that the statements and information in and attached to this document are true, accurate, and complete.

If you have any questions regarding this submission, please do not hesitate to contact me at (425) 881-8181.

Sincerely,
UNISEA, INC.

Tom Enlow
President and CEO

cc: EPA-Region 10
C. Plaisance, P. McGinnis, R. Kjorsvik, E. Gibson, S. Coleman (UniSea, Inc.)
A. Jones (Trinity Consultants)

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
1	In	Continuous	Condition 1.1 and 1.2 were satisfied.
1.1	In	Continuous	EU IDs 1-15 and 23 -24 emissions were monitored in accordance with Condition 2; records were kept in accordance with Condition 3; and reporting of the information was reported in accordance with Condition 4.
1.2	In	Continuous	EU ID 17 did not burn more than 5,805 gallons of diesel in a consecutive 12-month period during this compliance period; therefore, monitoring requirements for EU ID 17 are satisfied by this annual compliance certification (ACC), and documented by Conditions 1.2a and 1.2b.
1.2.a	In	Continuous	EU ID 17 fuel usage was monitored and recorded monthly, as well as the rolling 12-month totals for each month of this compliance period.
1.2.b	In	Continuous	EU ID 17 fuel usage was included in the operating reports required by Condition 86 that were submitted during this compliance period.
2	In	Continuous	Opacity levels of EU IDs 1-15 and 23-24 were monitored in accordance either with Conditions 2.3 or 2.4, as applicable. EU ID 17 did not trigger visible emissions monitoring during this compliance period. Although proper monitoring was conducted, note that intermittent compliance is reported for 2.3 for Method 9 test certification.
2.1	In	Continuous	Unisea's visible emissions monitoring plan was maintained; therefore, this Condition was not triggered during this compliance period.
2.2	In	Continuous	UniSea elected to continue the visible emissions monitoring schedule from the previous permit upon issuance of AQ0088TVP04.
2.3	In	Intermittent	Method 9 was followed for observations required by the Method 9 plan. EUs demonstrating compliance by the Smoke/No Smoke plan in Condition 2.4 did not require the Method 9 observation in this Condition. All 18-minute observations consisted of 72 consecutive 15-second opacity observations. Only Annual Method 9 observations were required to be performed during the compliance period covered by this ACC. However due to several factors related to the Covid-19 pandemic, including cancelled certification classes, travel restrictions, and interal safety policies, the observer that conducted all Method 9 observations had a lapsed certification. Two permit deviations were submitted for this Condition, one on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, and the other on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B.
2.3.a	In	Continuous	UniSea elected to continue the visible emissions monitoring schedule from the previous permit upon issuance of AQ0088TVP04; therefore this Condition and its subparts were not triggered during this compliance period.
2.3.a(i)	In	Continuous	There were no emission units replaced during this compliance period; therefore, this Condition was not triggered.
2.3.a(ii)	In	Continuous	EU ID 17 did not burn more than the allowable operational threshold established in Condition 1.2; therefore this Condition was not triggered during this compliance period.
2.3.b	In	Continuous	Only Annual Method 9 observations were required to be performed during the reporting period per 2.3.d, therefore this Condition was not triggered during this compliance period.
2.3.c	In	Continuous	Only Annual Method 9 observations were required to be performed during the reporting period per 2.3.d, therefore this Condition was not triggered during this compliance period.
2.3.c(i)	In	Continuous	Only Annual Method 9 observations were required to be performed during the reporting period per 2.3.d, therefore this Condition was not triggered during this compliance period.
2.3.c(ii)	In	Continuous	Only Annual Method 9 observations were required to be performed during the reporting period per 2.3.d, therefore this Condition was not triggered during this compliance period.
2.3.d	In	Intermittent	Annual Method 9 observations were performed for all applicable sources by the required compliance date in accordance with this permit Condition during this compliance period. However due to several factors related to the Covid-19 pandemic, including cancelled certification classes, travel restrictions, and interal safety policies, the observer that conducted all Method 9 observations had a lapsed certification. Two permit deviations were submitted for this Condition, one on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, and the other on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B.
2.3.d(i)	In	Continuous	Annual Method 9 observations were performed for all applicable sources within 12 months after the preceding observation as required by this Condition. After seeking guidance from ADEC permitting and compliance staff, UniSea proceeded with conducting Method 9 observations within the required timeline even though there was not a certified observer on site. Proper permit deviation reporting was followed for this issue.
2.3.d(ii)	In	Continuous	Intermittent EUs were observed during the scheduled operation immediately following twelve months after the preceding observation, as applicable, during this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
2.3.e	In	Continuous	The six-minute average opacity of applicable sources was not greater than 15%, nor were any observations greater than 20% for Method 9 observations; therefore, increased Method 9 observation frequency was not triggered for any source during this compliance period.
2.4	In	Continuous	Conditions 2.4.a through 2.4.c were satisfied for applicable Smoke/No-Smoke sources during this compliance period.
2.4.a	In	Continuous	UniSea elected to continue the visible emissions monitoring schedule from the previous permit upon issuance of AQ0088TVP04 as allowed by Condition 2.2; therefore, initial monitoring frequency was not required for emission units subject to the Smoke/No Smoke Plan during this compliance period.
2.4.b	In	Continuous	During this compliance period, the exhausts of emission units subject to the Smoke/No Smoke Plan were monitored at the reduced monthly monitoring frequency established by this Condition.
2.4.c	In	Continuous	Smoke was not observed from the exhaust of any applicable emission unit during this compliance period.
2.5.	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5 and its subparts.
2.5.a	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.a.
2.5.b	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.b.
2.5.c	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.c.
2.5.c(i)	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.c(i).
2.5.c(i)(A)	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.c(i)(A).
2.5.c(i)(B)	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.c(i)(B).
2.5.c(ii)	In	Continuous	Visible emissions were not identified as a result of Smoke/No Smoke observations during this compliance period; therefore corrective actions were not triggered under Condition 2.5.c(ii).
3	In	Continuous	Conditions 3 and its subparts were satisfied. None of EU IDs 1 - 15, 17, 23 or 24 were replaced at the Dutch Harbor facility during this compliance period.
3.1	In	Continuous	Conditions 3.1 and its subparts were satisfied for applicable Method 9 sources during this compliance period.
3.1.a	In	Intermittent	Conditions 3.1.a and all of its subparts were satisfied when conducting Method 9 observations on applicable sources during this compliance period. However due to several factors related to the Covid-19 pandemic, including cancelled certification classes, travel restrictions, and interal safety policies, the observer that conducted all Method 9 observations had a lapsed certification. Two permit deviations were submitted for this Condition, one on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, and the other on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B.
3.1.a(i)	In	Intermittent	For applicable Method 9 sources, the Visual Emissions Observation Form from Section 11 of Air Quality Operating Permit No. AQ0088TVP04 was completed with all requisite data for each Method 9 observation collected, therefore satisfying this Condition. The observer's name and affiliation were included in the Form, along with the most recent certification of April - October 2019, but the observer was not certified for the time period that the observations were conducted.
3.1.a(ii)	In	Continuous	For applicable Method 9 sources, the Visual Emissions Observation Form from Section 11 of Air Quality Operating Permit No. AQ0088TVP04 was completed with all requisite data for each Method 9 observation collected, therefore satisfying this Condition.
3.1.a(iii)	In	Continuous	For applicable Method 9 sources, the Visual Emissions Observation Form from Section 11 of Air Quality Operating Permit No. AQ0088TVP04 was completed with all requisite data for each Method 9 observation collected, therefore satisfying this Condition.
3.1.a(iv)	In	Continuous	For applicable Method 9 sources, the Visual Emissions Observation Form from Section 11 of Air Quality Operating Permit No. AQ0088TVP04 was completed with all requisite data for each Method 9 observation collected, therefore satisfying this Condition. Opacity observations were recorded to the nearest five percent at 15-second intervals.

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3.1.a(v)	In	Continuous	For applicable Method 9 sources, the Visual Emissions Observation Form from Section 11 of Air Quality Operating Permit No. AQ0088TVP04 was completed with all requisite data for each Method 9 observation collected, therefore satisfying this Condition. The opacity observations were recorded in accordance with Condition 2.3 of the Permit.
3.1.b	In	Continuous	For applicable Method 9 sources, the six-minute average opacity was calculated as outlined by this Condition.
3.1.c	In	Continuous	The highest 6-consecutive-minute and 18-consecutive-minute averages observed were calculated and reported for applicable Method 9 sources.
3.2	In	Continuous	Condition 3.2 and its subparts were satisfied for applicable Smoke/No Smoke units for this compliance period. UniSea prepared a log for sources using the Smoke/No-Smoke Plan of Condition 2.4 and included all requisite information from the subparts of this Condition.
3.2.a	In	Continuous	For applicable Smoke/No-Smoke sources, the date and time of each observation was recorded and reported.
3.2.b	In	Continuous	For applicable Smoke/No-Smoke sources, the IDs listed in Table A of Air Quality Operating Permit No. AQ0088TVP04 were used in recording observation data.
3.2.c	In	Continuous	For applicable Smoke/No-Smoke sources, the absence or presence of visual emissions in the exhaust was recorded for each observation performed.
3.2.d	In	Continuous	For applicable Smoke/No-Smoke sources, a description of the background to the exhaust during the observation was recorded for each observation performed.
3.2.e	In	Continuous	For applicable Smoke/No-Smoke sources, the start-up time of the source was recorded if the source had been started up that same day for observations performed.
3.2.f	In	Continuous	For applicable Smoke/No-Smoke sources, the name and title of the person making the observations was recorded for observations performed.
3.2.g	In	Continuous	For applicable Smoke/No-Smoke sources, the operating mode (load or fuel consumption rate) was recorded for observations performed.
4	In	Continuous	Conditions 4 and its subparts were satisfied. None of EU IDs 1 - 15, 17, 23 or 24 was replaced at the Dutch Harbor facility during this compliance period.
4.1	In	Continuous	All information applicable to Visible Emissions reporting for each of EU IDs 1-15, 17, and 23-24 for operations covered by the time period of this ACC, was specified in the corresponding 2020 Facility Operating Reports (FOR) as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.a	In	Continuous	The visual emissions plan applicable to each of EU IDs 1-15, 17, and 23-24 for operations covered by the time period of this ACC, was specified in the corresponding Facility Operating Reports (FOR) as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.b	In	Continuous	Conditions 4.1.b and its subparts were satisfied for each Method 9 Plan source during this compliance period.
4.1.b(i)	In	Continuous	Copies of all visible emissions observation results were submitted as part of the corresponding semiannual FOR for the current reporting period operations, as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.b(ii)	In	Continuous	Conditions 4.1.b(ii) and its subparts were satisfied for this compliance period.
4.1.b(ii)(A)	In	Continuous	The number of daily observations performed for applicable Method 9 sources was reported as part of the corresponding semiannual FOR for the current reporting period operations, as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.b(ii)(B)	In	Continuous	The highest 6-minute average and 18-consecutive-minute average observed for applicable Method 9 sources was reported as part of the corresponding semiannual FOR for the current reporting period operations, as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.b(ii)(C)	In	Continuous	Observations performed for applicable Method 9 sources did not trigger this Condition during this compliance period.
4.1.c	In	Continuous	The results of the Smoke/No-Smoke observations for applicable sources were reported as part of the corresponding semiannual FOR for the current reporting period, as required by Condition 86 of Permit No. AQ0088TVP04.
4.1.d	In	Continuous	All required monitoring and recordkeeping was completed for the facility in 2020; therefore, the summary required by this Condition was not triggered for this compliance period.
4.2	In	Continuous	UniSea's Dutch Harbor Facility reported two permit deviations of Condition 2.3 of Permit No. AQ0088TVP04 during this compliance period. Due to several factors related to the Covid-19 pandemic, including cancelled certification classes, travel restrictions, and interal safety policies, the observer that conducted all Method 9 observations had a lapsed certification. Two permit deviations were submitted for this Condition, one on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, and the other on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B.

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4.2.a	In	Continuous	Condition 4.2.a was not triggered during this compliance period.
4.2.b	In	Continuous	Monitoring per Condition 2 was conducted within the required timeframe, however monitoring was conducted by an observer with a lapsed certification. The permit deviations and the conditions surrounding these incidents were reported on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6 and on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B.
5	In	Continuous	Condition 5 and its subparts were satisfied during this compliance period. For EU IDs 1-15, 17, and 23 -24, UniSea completed the monitoring, recordkeeping and reporting requirements of Conditions 6 through 11 of Permit No. AQ0088TVP04. Although source testing was not triggered, UniSea's compliance with these associated requirements demonstrate compliance with the particulate matter emission limit of this Condition.
5.1	In	Continuous	The monitoring, recordkeeping, and the reporting requirements of Conditions 6 through 11 of Permit No. AQ0088TVP04 were satisfied during this compliance period for EU IDs 1-15, 23, and 24, as required by this Condition.
5.2	In	Continuous	EU ID 17 did not burn more than 5,805 gallons of diesel in a consecutive 12-month period during this compliance period; therefore, monitoring requirements for EU ID 17 are satisfied by this annual compliance certification.
5.2.a	In	Continuous	UniSea complied with Conditions 1.2.a and 1.2.b for EU ID 17 in 2020, therefore this Condition was satisfied for this compliance period.
6	In	Continuous	Conditions 6.1 through 6.4 were not triggered for EU IDs 1-8B and 17, during this compliance period. Based on the results of opacity observations, PM source testing was not triggered or conducted.
6.1	In	Continuous	Conditions 6.1 and its subparts were not triggered during this compliance period as neither of the criteria of Conditions 6.2.a. or 6.2.b were exceeded.
6.1.a	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition.
6.1.b	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition.
6.2	In	Continuous	Conditions 6.2.a and 6.2.b were not triggered during this compliance period.
6.2.a	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
6.2.b	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
6.3	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
6.4	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
7	In	Continuous	As PM Monitoring was not triggered or conducted per Condition 6 during this compliance period, Condition 7 and its subpart were not triggered for this same time period.
7.1	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8	In	Continuous	As PM Monitoring per Condition 6 and PM Recordkeeping per Condition 7 were not triggered or conducted during this compliance period, therefore Condition 8 and its subparts were not triggered under Permit No AQ0088TVP04 for this same period.
8.1	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.1.a	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.1.b	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.2	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.3	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.3.a	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.3.b	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
8.3.c	In	Continuous	Results of the Method 9 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
9	In	Continuous	Based on the results of opacity observations, PM source testing was not triggered or conducted in 2020, therefore Condition 9 and its subparts were not triggered for EU IDs 9-15, 23 and 24 during this compliance period under Permit No. AQ0088TVP04.
9.1	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
9.2	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
9.3	In	Continuous	Condition 9.3 and it subparts were not triggered under Permit No AQ0088TVP04.

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9.3.a	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
9.3.b	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
10	In	Continuous	As PM Monitoring was not triggered or conducted under Condition 9 during this compliance period, Condition 10 was not triggered for this same time period.
11	In	Continuous	As PM Monitoring per Condition 9 and PM Recordkeeping per Condition 10 were not triggered or conducted during this compliance period, Condition 11 and its subparts were not triggered under Permit No AQ0088TVP04 for this same period.
11.1	In	Continuous	Condition 11.1 and its subparts were not triggered under Permit No AQ0088TVP04 for this compliance period.
11.1.a	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
11.1.b	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
11.2	In	Continuous	Results of the Method 22 observations for applicable sources did not trigger this Condition during the compliance period of this ACC.
12	In	Continuous	Sulfur compound emissions from EU IDs 1-15, 17, 23, and 24 did not exceed 500ppm averaged over three hours at any point during the compliance period covered by this ACC and were operated in accordance with 18 AAC 50.055(c), and Condition 13 to demonstrate compliance.
13	In	Continuous	Conditions 13.1 and 13.2 were satisfied. EU IDs 7B and 8B burned only Ultra Low Sulfur Diesel (ULSD) during the compliance period covered by this ACC.
13.1	In	Continuous	All permitted units at the Dutch Harbor facility combusted ULSD. The fuel receipts from the fuel supplier certifying the maximum sulfur content of each fuel delivery were obtained and filed. UniSea's diesel fuel supplier certifications verify compliance with this limit.
13.2	In	Continuous	Fuel certifications and sulfur analyses required to satisfy Condition 13.1 were submitted with the corresponding semiannual FOR for each compliance period.
14	In	Continuous	EU IDs 1-6, 9-15, 17, 23 and 24 burned fuel with a sulfur content not exceeding 50 parts per million by weight (ppmw) during this compliance period.
14.1	In	Continuous	The fuel receipts from the fuel supplier certifying the maximum sulfur content of each fuel delivery were obtained and filed. UniSea's diesel fuel supplier certifications verify compliance with this limit and UniSea's diesel fuel supplier delivers only ULSD to the Dutch Harbor facility for use in permitted units.
14.2	In	Continuous	UniSea generates fish oil onsite and representative grab samples of fish oil were analyzed. The results of the fish oil sulfur analyses were submitted with the corresponding semiannual FOR for each compliance period and are filed onsite.
14.3	In	Continuous	No deliveries of diesel fuel with a sulfur concentration greater than 50 ppmw were received for this compliance period. No fish oil generated on site received an analyzed sulfur concentration greater than 50 ppmw during this compliance period. As no deliveries of diesel fuel and no fish oil generated onsite had a sulfur concentration exceeding 50 ppmw, no mandatory blending to reduce sulfur concentration was required during this compliance period.
14.3.a	In	Continuous	No deliveries of diesel fuel or on-site fish oil with a sulfur concentration greater than 50 ppmw were received/generated for this compliance period; therefore, blending was not required to maintain compliance and no blending calculations were completed.
14.3.b	In	Continuous	No deliveries of diesel fuel or on-site fish oil with a sulfur concentration greater than 50 ppmw were received/generated for this compliance period; therefore, blending was not required to maintain compliance and no blending calculations were completed.
14.4	In	Continuous	No deliveries of fuel or blended fuel with a sulfur concentration >0.75% by weight were received or generated in 2020, therefore this Condition was not triggered for this compliance period.
14.5	In	Continuous	See descriptions for 14.5.a and 14.5.b below.
14.5.a	In	Continuous	No deliveries of diesel fuel with a sulfur concentration >15 ppmw were received. No fish oil samples for fuel generated onsite were analyzed with a sulfur concentration > 10 ppmw for this compliance period. As such, no reports per Condition 85 were required.
14.5.b	In	Continuous	UniSea satisfied the reporting requirements of Condition 14.5.b and its subparts by including these required items in the corresponding semiannual FORs submitted for each compliance period under Permit No AQ0088TVP04.

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14.5.b(i)	In	Continuous	The FORs submitted for the current reporting period operations under this permit contained a list of fuel grades received by the Dutch Harbor facility during the corresponding compliance periods.
14.5.b(ii)	In	Continuous	The FORs submitted for the current reporting period operations under this permit included the sulfur content of the fuel received and generated on-site by the Dutch Harbor facility.
14.5.b(iii)	In	Continuous	Fuel certifications and sulfur analyses required to satisfy Condition 14.5.b(iii) were submitted with the corresponding semiannual FOR for this compliance period.
15	In	Continuous	Used oil was not combusted at the Dutch Harbor facility in EU IDs 9 through 11 in 2020; therefore, Condition 15 was not triggered during this compliance period.
15.1	In	Continuous	Used oil was not combusted at the Dutch Harbor facility in 2020; therefore, Condition 15.1 was not triggered under Permit No. AQ0088TVP04 during this compliance period.
16	In	Continuous	Used oil was not combusted at the Dutch Harbor facility in 2020; therefore, Condition 16 and its subparts were not triggered under Permit No. AQ0088TVP04 during this compliance period.
16.1	In	Continuous	Condition 16.1 and its subparts were not triggered during this compliance period.
16.1.a	In	Continuous	Condition 16.1.a was not triggered during this compliance period.
16.1.b	In	Continuous	Condition 16.1.b was not triggered during this compliance period.
17	In	Continuous	Used oil was not combusted at the Dutch Harbor facility in 2020; therefore, Condition 17 and its subparts were not triggered under Permit No. AQ0088TVP04 during this compliance period.
17.1	In	Continuous	Condition 17.1.a was not triggered during this compliance period.
17.2	In	Continuous	Condition 17.2 was not triggered during this compliance period.
17.3	In	Continuous	Condition 17.3 was not triggered during this compliance period.
18	In	Continuous	The stack heights for EU IDs 7B and 8B were maintained at least 32.8 feet above grade and without weather caps, in accordance with the as-built drawings submitted in the 2012 second half FOR, during the compliance period covered by this ACC.
19	In	Continuous	EU IDs 7B and 8B burned only ULSD fuel during this compliance period. Diesel (ULSD) fuel, fish oil, or a combination of these fuels were the only fuels combusted in EU IDs 1 - 6, 23 and 24 during this compliance period.
20	In	Continuous	Conditions 20 and its subparts were satisfied for this compliance period. The rolling 12-month fuel usage tables reported in the corresponding semiannual FOR for each reporting period demonstrate compliance with the limits established by Table C, "Fuel Consumption Limits," of Permit No. AQ0088TVP04.
20.1	In	Continuous	Fuel meters on each of EU IDs 7B-15, 23, and 24 were used to calculate fuel consumption rates. UniSea records the monthly number of gallons consumed by each emission unit in accordance with Condition 20.2. The installed fuel meters are certified by the vendor or calibrated to be accurate to within 5%. UniSea regularly replaces the used fuel meters with calibrated meters, and has installed strainers for the fuel prior to metering in order to minimize meter fouling and to help maintain the accuracy of the fuel meter. Calibration certifications for each fuel meter currently used to determine the fuel consumption rate of EU IDs 7B-15, 23 and 24 are maintained at the Dutch Harbor facility.
20.2	In	Continuous	Fuel meters on each of EU IDs 7B-15, 23, and 24 were used to calculate fuel consumption rates. UniSea recorded the monthly number of gallons consumed by each emission unit in accordance with this Condition during the compliance period.
20.3	In	Continuous	For EU IDs 7B-15, 23, and 24, monthly fuel consumption, the rolling 12-month consumption and a record of meter calibration and/or replacement are reported in the corresponding semiannual FORs submitted for the Dutch Harbor facility for each compliance period as required by Condition 86 of Permit No. AQ0088TVP04.
20.4	In	Continuous	As the fuel consumption limitations were not exceeded for any of the permitted EU IDs in this Condition, no fuel consumption limit exceedances were reported under Condition 85 of Permit AQ0088TVP04 during this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
21	In	Continuous	Conditions 21.1 and 21.2 were satisfied. EU IDs 1-6, 23, and 24 were operated in accordance with the fuel requirements set forth in Condition 19 and Table A of Permit No. AQ0088TVP04 during this compliance period.
21.1	In	Continuous	Monthly totals and 12-month rolling totals for both diesel fuel consumption and blended fuel consumption for EU IDs 1-6, 23, and 24 were monitored and recorded in accordance with Condition 20.2 for this compliance period.
21.2	In	Continuous	Monthly diesel fuel use and monthly blended fuel consumption for EU IDs 1-6, 23, and 24 were reported in the corresponding FOR for each compliance period, in accordance with Condition 20.3. As there were no fuel exceedances or permit deviations associated with Condition 19 or Table A for these emission units, reporting in accordance with Condition 20.4 was not required during this compliance period.
22	In	Continuous	Conditions 22 and its subparts were satisfied for this compliance period. By satisfying these conditions, UniSea demonstrated compliance with the NOx limit of 624.4 tons for each rolling 12-month timeframe covered by the compliance period of this ACC.
22.1	In	Continuous	The operating hours of EU IDs 1 - 6 were monitored and recorded manually using hour meters.
22.2	In	Continuous	The kilowatt-hours of EU IDs 1-6 were monitored and recorded manually using meters. The manufacturer states that the accuracy of the system metering watts is within 2%.
22.3	In	Continuous	Conditions 22.3 and its subparts were satisfied for this compliance period.
22.3.a	In	Continuous	Condition 22.3.a was satisfied for EU IDs 1-6 for diesel fuel, which requires a minimum of monthly monitoring for fuel consumption.
22.3.b	In	Continuous	Condition 22.3.b was satisfied for EU IDs 1-6 for blended fuel, which requires a minimum of monthly monitoring for fuel consumption.
22.4	In	Continuous	Total monthly operating hours and power generation (kilowatt-hours) for each of EU IDs 1-6 were recorded in UniSea's environmental database.
22.5	In	Continuous	The total monthly and 12-month rolling NOx emissions for each of EU IDs 1-6 were calculated (using the methodology outlined by Condition 23) and recorded in UniSea's environmental database.
22.6	In	Continuous	The total NOx emissions per 12-month rolling period for EU IDs 1-6 were calculated (by summing the monthly calculated NOx emissions determined by Condition 22.5) and recorded in UniSea's environmental database.
22.7	In	Continuous	The total NOx emissions per 12-month rolling period for EUs 1-6 were reported in the corresponding semiannual FOR for each compliance period, as required by Condition 86.
22.8	In	Continuous	Reporting under Condition 22.8 was not triggered, as the 12-month rolling NOx limit established by Condition 22 for EU IDs 1-6 was not exceeded during this compliance period.
23	In	Continuous	Monthly NOx emissions were calculated for each of EU IDs 1-6, for this compliance period, using the equations and instructions contained in Condition 23 and its subparts.
23.1	In	Continuous	For each of EU IDs 1, 4, and 6 operating on diesel fuel, the NOx emissions were calculated using the equations required by this Condition for the compliance period of this ACC.
23.2	In	Continuous	For each of EU IDs 2, 3, and 5 operating on diesel fuel, the NOx emissions were calculated using the equations required by this Condition for the compliance period of this ACC.
23.3	In	Continuous	For each of EU IDs 1, 4, and 6 operating on diesel/fish oil blended fuel, the NOx emissions were calculated using the equations required by this Condition for the compliance period of this ACC.
23.4	In	Continuous	For each of EU IDs 2, 3, and 5 operating on diesel/fish oil blended fuel, the NOx emissions were calculated using the equations required by this Condition for the compliance period of this ACC.
23.5	In	Continuous	During no period were monthly fuel consumption records not recorded or suspect. Therefore, reporting under this Condition was not triggered for the compliance period of this ACC.
24	In	Continuous	Condition 24 and its subpart were satisfied as the average fuel injection timing of EU IDs 1-6 was "set to no less than 41 degrees high cam after inner dead center lower crank", for the operating period covered by this ACC.
24.1	In	Continuous	Engine timing for EU IDs 1-6 was evaluated and certified according to Fairbanks-Morse recommended procedures. The corresponding certification statement is dated December 24, 2020 and was included in the corresponding semiannual FOR for this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
25	In	Continuous	Condition 25 and its subparts were satisfied for EU IDs 14 - 15 as the seawater scrubber pumps were operated at all times when raw material was being fed to the fishmeal plant cooker, during the operating period covered by this ACC.
25.1	In	Continuous	For EU IDs 14 - 15, verification that the seawater scrubber pumps and blower are energized and operational was conducted prior to feeding raw material into the cooker and at least once during each operational work shift. Records are maintained in accordance with this Condition and stored at the facility.
25.2	In	Continuous	Conditions 25.2.a and 25.2.b were satisfied for EU IDs 14 - 15 for the compliance period covered by this ACC.
25.2.a	In	Continuous	There were no instances of scrubber pump downtime while raw material was being fed to the fishmeal plant cooker; therefore, Condition 25.2.a was not triggered during this compliance period.
25.2.b	In	Continuous	There were no instances when the scrubber pumps were not operating or were malfunctioning while raw material was being fed to the fishmeal plant cooker; therefore, Condition 25.2.b was not triggered during this compliance period.
26	In	Continuous	Conditions 26.1 through 26.4 were satisfied for the insignificant emission units, EU IDs 19-22 and 25. The Dutch Harbor facility includes various categorically insignificant sources, which are not listed in this permit, but do comply with Condition 26 and its subparts.
26.1	In	Continuous	There is no evidence or reason to believe that an insignificant source violated the visibility requirements established by Condition 26.1 during this compliance period.
26.2	In	Continuous	There is no evidence or reason to believe that an insignificant source violated the particulate matter grain-loading limit established by Condition 26.2 during this compliance period.
26.3	In	Continuous	There is no evidence or reason to believe that an insignificant source violated the sulfur compound emission limit established by Condition 26.3 during the compliance period.
26.4	In	Continuous	Conditions 26.4 and its subparts were either satisfied or not triggered during this compliance period.
26.4.a	In	Continuous	Based on reasonable inquiry as described in Condition 26.4.a, there is no evidence or reason to believe that an insignificant emission unit is contributing to a violation of the emission limits contained in Conditions 26.1 through 26.3. UniSea submits this compliance certification for the insignificant emission units (EU IDs 19-22 and 25) at the Dutch Harbor facility based on reasonable inquiry.
26.4.b	In	Continuous	Condition 68 ("Air Pollution Prohibited") was satisfied for insignificant units at the Dutch Harbor facility during this compliance period.
26.4.c	In	Continuous	UniSea's operational records confirm that the insignificant emission units, as identified in Table B of Permit No. AQ0088TVP04, have remained insignificant on the basis of yearly emissions (i.e., the emissions from insignificant units did not exceed thresholds set forth in 18 AAC 50.326(e) during the reporting period). The status of these insignificant emission units was confirmed in the semiannual FORs submitted under Condition 86 for this compliance period.
26.4.d	In	Continuous	Condition 26.4.d was satisfied for this compliance period.
27	In	Continuous	Condition 27 and its subparts were either satisfied or not triggered during this compliance period. It should be noted that UniSea installed EU IDs 7B and 8B during the 2011 calendar year, and these units trigger NSPS Subpart IIII; however, the NSPS Subpart A notification requirements established by 40 CFR 60.7 and Condition 27 of the permit do not apply to these units based on their rated capacity, displacement, and model year (per 40 CFR 60.4214(a)).
27.1	In	Continuous	No affected facilities or existing facilities regulated under 40 CFR 60 have commenced construction in 2020; therefore, the reporting requirement of this Condition was not triggered for this compliance period.
27.2	In	Continuous	No affected facilities regulated under 40 CFR 60 have undertaken initial startup operations in 2020; therefore, the reporting requirement of this Condition was not triggered for this compliance period.
27.3	In	Continuous	No existing facilities regulated under 40 CFR 60 have experienced any physical or operational change which may increase the emission rate of any air pollutant to which a standard applies. Therefore, the reporting requirement of Condition 27 and its subparts were not triggered for this compliance period.
27.3.a	In	Continuous	Condition 27.3.a was not triggered during this compliance period.
27.3.b	In	Continuous	Condition 27.3.b was not triggered during this compliance period.
27.3.c	In	Continuous	Condition 27.3.c was not triggered during this compliance period.
27.3.d	In	Continuous	Condition 27.3.d was not triggered during this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
27.4	In	Continuous	No continuous monitoring systems have undergone a performance demonstration in 2020; therefore, the reporting requirement of this Condition was not triggered for this compliance period.
27.5	In	Continuous	No opacity observations required by 40 CFR 60.11(e)(1) were performed in 2020; therefore, the reporting requirement of this Condition was not triggered for this compliance period.
27.6	In	Continuous	Continuous opacity monitoring system (COMS) data results were not used to determine compliance with an applicable NSPS opacity standard during a performance test required in lieu of Method 9 observation data as allowed by 40 CFR 60.11(e)(5). Therefore, the reporting requirement of this Condition was not triggered during this compliance period.
27.7	In	Continuous	No existing facilities were replaced during the reporting period for which the fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable entirely new facility. Therefore, the reporting requirement of Condition 27.7 and its subparts were not triggered during this compliance period.
27.7.a	In	Continuous	Condition 27.7.a was not triggered during this compliance period.
27.7.b	In	Continuous	Condition 27.7.b was not triggered during this compliance period.
27.7.c	In	Continuous	Condition 27.7.c was not triggered during this compliance period.
27.7.d	In	Continuous	Condition 27.7.d was not triggered during this compliance period.
27.7.e	In	Continuous	Condition 27.7.e was not triggered during this compliance period.
27.7.f	In	Continuous	Condition 27.7.f was not triggered during this compliance period.
27.7.g	In	Continuous	Condition 27.7.g was not triggered during this compliance period.
28	In	Continuous	Required boiler operating records, including startup, shutdown, or malfunctions are maintained in the Boiler Operating Log books for EU IDs 9 and 10.
29	In	Continuous	Based on reasonable inquiry, EU IDs 9 and 10 were maintained and operated in a manner consistent with good air pollution control practice for minimizing emissions during this compliance period. Appropriate records are maintained in the Boiler Operating Log books for EU IDs 9 and 10. (According to Table 8 to NSPS Subpart IIII, the "compliance with standards and maintenance requirements" (40 CFR 60.11) of NSPS Subpart A does not apply to affected facilities under Subpart IIII. Instead of complying with the general provisions of Subpart A, Subpart IIII affected facilities must comply with the specific requirements established in 40 CFR 60 Subpart IIII.)
30	In	Continuous	All monitoring and recordkeeping during the reporting period indicates that the Permittee has been in continuous compliance with Conditions 32 and 34, the NSPS Dc notification and sulfur-content requirements, respectively. Because no credible evidence exists to the contrary, the Permittee has been in continuous compliance with all applicable NSPS requirements, and has therefore been in continuous compliance with this Condition.
31	In	Continuous	During this compliance period no modifications were made to EU IDs 9 or 10 that in any way impact or specifically attempt to, or inadvertently result in, the concealment of emissions.
32	In	Continuous	No events covered under 40 C.F.R. §60.7(a)(1)-(3) or 40 C.F.R. §60.48c(a)(1) that require notification occurred in 2020, therefore this Condition was not triggered during this compliance period.
32.1	In	Continuous	No events covered under 40 C.F.R. §60.7(a)(1)-(3) or 40 C.F.R. §60.48c(a)(1) that require notification occurred in 2020, therefore this Condition was not triggered during this compliance period.
32.2	In	Continuous	No events covered under 40 C.F.R. §60.7(a)(1)-(3) or 40 C.F.R. §60.48c(a)(1) that require notification occurred in 2020, therefore this Condition was not triggered during this compliance period.
33	In	Continuous	UniSea collects monthly fuel consumption data for EU IDs 9 and 10 in accordance with Condition 20, thereby satisfying the requirements of this Condition during this compliance period.
34	In	Continuous	Condition 34 and its subparts were satisfied. By satisfying the sulfur content limit of Condition 14 for EU IDs 9 and 10, compliance with this condition is assured.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
34.1	In	Continuous	Condition 14.1 and 14.2 were satisfied for EU IDs 9 and 10, which establish the same sulfur content monitoring requirements as this Condition; therefore Condition 34.1 was satisfied.
34.2	In	Continuous	Condition 34.2 and its subparts were satisfied during this compliance period. The monthly quantities of fuel combusted in EU IDs 9 and 10 have been recorded and maintained at the facility.
34.2.a	In	Continuous	As part of the FORs, UniSea submitted a certified statement signed by the facility's responsible official that the diesel fuel oil certifications referenced in Condition 34.2.b represent all of the diesel fuel combusted during the reporting period in EU IDs 9 and 10 in accordance with Condition 34.2.d.
34.2.b	In	Continuous	Condition 34.2.b and its subparts were satisfied during this compliance period.
34.2.b(i)	In	Continuous	UniSea's FORs contain copies of letters from Delta Western, Inc., UniSea's fuel supplier, for diesel fuel delivered to the Dutch Harbor facility during this compliance period.
34.2.b(ii)	In	Continuous	UniSea's FORs contain copies of letters certifying that the diesel fuel delivered to the Dutch Harbor facility during this compliance period complied with the specifications for DF-1 or DF-2 as defined by the American Society for Testing and Materials (ASTM) in ASTM D975 – Standards for Diesel Fuel Oil.
34.2.b(iii)	In	Continuous	The fuel supplier certifications list the sulfur content, or maximum sulfur content, of the fuel delivered.
34.2.c	In	Continuous	UniSea does not rely on an alternative monitoring protocol or waiver to comply with NSPS Dc requirements. UniSea generates fish oil on-site at the Dutch Harbor facility; however, the combustion of fish oil is not subject to regulation under 40 CFR 60 Subpart Dc. The sulfur content of fish oil is reported as part of the semiannual FORs.
34.2.d	In	Continuous	The semiannual FORs submitted to ADEC, which were also submitted to EPA, include the information required by Conditions 34.2.a and 34.2.b.
35	In	Continuous	Condition 35.1 is satisfied for EU IDs 7B and 8B. UniSea has complied with all requirements for stationary compression ignition (CI) internal combustion engines (ICEs) during this compliance period.
35.1	In	Continuous	UniSea has complied with all applicable provisions of Subpart A as specified in Table 8 to Subpart IIII of 40 CFR 60. The notification and recordkeeping (40 CFR 60.7), performance testing (40 CFR 60.8), standards and maintenance requirements (40 CFR 60.11), monitoring requirements (40 CFR 60.13), and general control device requirements (40 CFR 60.18) of NSPS Subpart A do not apply to EU IDs 7B and 8B per Table 8 of Subpart IIII.
36	In	Continuous	Condition 36 was satisfied by demonstrating compliance with Condition 37 ("NSPS Subpart IIII Compliance Requirements"). Condition 36 requires that EU IDs 7B and 8B comply with emission standards listed in Table D of Permit No AQ0088TVP04. This compliance was achieved by purchasing and operating certified engines as described in Condition 37.3.
36.1	In	Continuous	UniSea was not required to conduct any performance tests on EU IDs 7B and 8B in 2020, therefore this Condition was not triggered during this compliance period.
37	In	Continuous	Condition 37 and its subparts were satisfied for EU IDs 7B and 8B during this compliance period.
37.1	In	Continuous	EU IDs 7B and 8B were operated and maintained in accordance with the manufacturer's emission related instructions during the compliance period of this ACC.
37.2	In	Continuous	UniSea did not change, nor attempted to change, any emission-related settings on EU IDs 7B and 8B that are not permitted by the manufacturer during the compliance period of this ACC.
37.3	In	Continuous	EU IDs 7B and 8B were purchased from Caterpillar on March 22, 2010. The engines are both certified according to 40 CFR Part 89. These engines were installed and configured according to the manufacturer's emission-related specifications. Startup testing of these units started on April 7th and 9th, 2012. These units were placed into full service on May 15, 2012.
37.4	In	Continuous	EU IDs 7B and 8B were operated and maintained according to the manufacturer's emission related instructions in 2020, therefore Condition 37.4 and its subpart were not triggered during this compliance period.
37.4.a	In	Continuous	Condition 37.4.a was not triggered during this compliance period.
38	In	Continuous	UniSea has documentation on file, received from Caterpillar at the time of purchase of the engines, confirming that each engine is certified to meet the applicable emission standards of 40 CFR 89.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
39	In	Continuous	UniSea has complied with applicable requirements of 40 CFR 63 Subpart A for EU IDs 1 - 6, 7B, 8B, 9 - 13, 17, 23 and 24. Condition 39 and its subparts were satisfied for this compliance period.
39.1	In	Continuous	UniSea has complied with Table 8 of 40 CFR 63 Subpart ZZZZ for EU IDs 1 - 6, 7B, 8B, and 17 during this compliance period.
39.2	In	Continuous	UniSea has complied with Table 8 of 40 CFR 63 Subpart JJJJJJ for EU IDs 9 - 13, 23 and 24 during this compliance period.
40	In	Continuous	EU IDs 7B and 8B are subject to 40 CFR 63 Subpart ZZZZ. Conditions 35 through 38 were satisfied, demonstrating that EU IDs 7B and 8B meet the requirements of 40 CFR 60 Subpart IIII. No further requirements apply under Subpart ZZZZ.
41	In	Continuous	EU IDs 1 - 6 and 17 have complied with all applicable requirements for existing stationary RICE engines located at an area source of HAPs during this compliance period.
41.1	In	Continuous	EU IDs 1 - 6 have complied with the management practices detailed in Conditions 41.1.a through 41.1.c during this compliance period.
41.1.a	In	Continuous	For EU IDs 1 - 6 the Dutch Harbor Facility used an oil analysis program as described by 40 CFR 63.6625(i) to demonstrate compliance with this Condition during the compliance period covered by this ACC.
41.1.b	In	Continuous	Inspection of air cleaners associated with EU IDs 1 - 6 have occurred every 1,000 hours of operation or annually, whichever came first.
41.1.c	In	Continuous	Inspection of all hoses and belts associated with EU IDs 1 - 6 have occurred every 500 hours of operation or annually, whichever came first, and replaced as necessary.
41.2	In	Continuous	EU ID 17 has complied with the management practices detailed in Conditions 41.2.a through 41.2.c during the compliance period covered by this ACC.
41.2.a	In	Continuous	Oil and oil filters associated with EU ID 17 have been changed every 500 hours of operation or annually, whichever came first.
41.2.b	In	Continuous	Inspection of air cleaners associated with EU ID 17 have occurred every 1,000 hours of operation or annually, whichever came first.
41.2.c	In	Continuous	Inspection of all hoses and belts associated with EU ID 17 have occurred every 500 hours of operation or annually, whichever came first, and replaced as necessary.
42	In	Continuous	Condition 42 and its subparts were satisfied for the compliance period of this ACC.
42.1	In	Continuous	EU IDs 1-6 and 17 have been operated in a manner consistent with safety and good air pollution control practices during this compliance period.
42.2.a	In	Continuous	EU IDs 1-6 and 17 have been operated according to manufacturer's emission-related written instructions during this compliance period.
42.2.b	In	Continuous	EU IDs 1 - 6 have minimized time spent at idle during startup and no startup has lasted longer than 30 minutes during this compliance period.
42.3	In	Continuous	For EU IDs 1 - 6 the Dutch Harbor Facility used an oil analysis program as described by 40 CFR 63.6625(i) to demonstrate compliance with the oil change requirement in Condition 41.1.a and ensured the condemning limits and parameters described in this Condition were followed during this compliance period.
43	In	Continuous	EU ID 17 was compliant with all operational limitations listed in this Condition and its subparts during the compliance period of this ACC.
43.1	In	Continuous	Condition 43.1.and its subparts were satisfied during this compliance period.
43.1.a	In	Continuous	There were no emergency situations during this compliance period that resulted in EU ID 17 operating for extended periods of time.
43.1.b	In	Continuous	EU ID 17 was operated for less than 100 hours for the purpose of maintenance checks and readiness testing during this compliance period.
43.1.c	In	Continuous	EU ID 17 was operated for less than 50 hours of non-emergency use during this compliance period.
44	In	Continuous	Condition 44.1 and its subparts were satisfied during the compliance period covered by this ACC.
44.1	In	Continuous	Conditions 44.1.a through 44.1.c were satisfied.
44.1.a	In	Continuous	EU IDs 1-6 and 17 have been operated according to manufacturer's emission-related operation and maintenance instructions during the compliance period of this ACC.
44.1.b	In	Continuous	EU IDs 1-6 and 17 have been operated according to manufacturer's emission-related operation and maintenance instructions per Condition 44.1.a during the compliance period of this ACC.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
44.1.c	In	Continuous	No deviations from 40 CFR 63 Subpart ZZZZ for EU IDs 1-6 and 17 occurred in 2020, therefore this Condition was not triggered during this compliance period.
45	In	Continuous	All recordkeeping requirements for EU IDs 1-6 and 17 were satisfied during this compliance period.
45.1	In	Continuous	Records of all maintenance operations conducted on EU IDs 1-6 and 17 are kept onsite in hard copy or electronic format.
45.2	In	Continuous	Conditions 45.2 and its subparts were satisfied for maintenance records for EU IDs 1-6 and 17 during this compliance period.
45.2.a	In	Continuous	UniSea maintains all required records for at least 5 years following the date of occurrence.
45.2.b	In	Continuous	UniSea maintains all required records in readily accessible hard copy or electronic formats.
45.2.c	In	Continuous	UniSea maintains all required records in readily accessible hard copy or electronic formats.
46	In	Continuous	No deviations from 40 CFR 63 Subpart ZZZZ occurred during the reporting period for EU IDs 1-6 and 17, therefore none were reported in the FORs for this same period and this Condition was not triggered.
47	In	Continuous	EU IDs 9 - 13, 23 and 24 complied with all applicable requirements for oil-fired boilers located at an area source of HAPs during this compliance period.
48	In	Continuous	Condition 48 and its subparts were satisfied for this compliance period.
48.1	In	Continuous	EU IDs 9 - 13, 23 and 24 complied with all applicable requirements in Table 2 of 40 CFR 63 Subpart JJJJJJ. Conditions 48.1 and its subparts were satisfied during this compliance period.
48.1.a	In	Continuous	EU IDs 9-13 are subject to Biennial Performance tune ups. EU IDs 12 and 13 received biennial performance tune-ups on October 5, 2020 and EU IDs 9-11 will be subject to biennial performance tune-ups on or before April 17-19, 2021, respectively.
48.1.b	In	Continuous	EU IDs 23 and 24 are subject to performance tune ups every 5 years, or within 61 months of previous tune-up, and they both received performance tune ups in September 2018 and are therefore not subject to performance tune-ups until October 2023.
48.1.c	In	Continuous	Condition 48.1.c was not triggered during this compliance period as no units use an optimum air-to-fuel ratio to reduce the tune up requirement.
48.2	In	Continuous	EU IDs 9 - 13, 23 and 24 complied with all applicable requirements in Table 2 of 40 CFR 63 Subpart JJJJJJ, during startup and shutdown operations, for the compliance period covered by this ACC.
48.3	In	Continuous	EU IDs 9-13, 23 and 24 have been operated and maintained in a manner consistent with safety and good air pollution control practices for minimizing emissions. Emissions levels required by this standard have been achieved; therefore, UniSea is not required to make further efforts to reduce emissions.
49	In	Continuous	Conditions 49.1 through 49.7 were satisfied for this compliance period.
49.1	In	Continuous	UniSea conducted the initial tune up of EU IDs 9 through 13, 23 and 24 prior to the March 21, 2012 compliance date of this Condition.
49.2	In	Continuous	EU IDs 9-13, 23 and 24 did not switch fuels or make a physical change that resulted in the applicability of a different subcategory within NESHAP Subpart JJJJJJ in 2020. Therefore, Condition 49.2 was not triggered during this compliance period.
49.3	In	Continuous	EU IDs 9-13, 23 and 24 did not restart for the first time since the effective date of NESHAP Subpart JJJJJJ in 2020. Therefore, Condition 49.2 was not triggered during this compliance period.
49.4	In	Continuous	EU IDs 12-13 are subject to Biennial Performance Tune-ups, which were completed in October 2020. EU IDs 23 and 24 are subject to performance tune-ups every 5 years, or within 61 months of previous tune-up, and they both received performance tune-ups in September 2018. EU IDs 9-11 will be required to conduct biennial performance tune-ups on or before April 19, 2021. All boilers receiving performance tune-ups in 2020 were reported in the NESHAP annual compliance certification report required by Condition 52.1.
49.5	In	Continuous	Conditions 49.6 and 51 were satisfied for 2020 operations, therefore this Condition was satisfied for this compliance period. Tune-ups were conducted while burning the type of fuel that provided the majority of the heat input to the boiler over the previous 12 months.
49.6	In	Continuous	EU IDs 9-13 are subject to Biennial Performance Tune-ups, which were completed as cited above for Condition 49.4 and 48.1.a. Conditions 49.6 and its subparts were satisfied for all biennial performance tuneups conducted during this compliance period.
49.6.a	In	Continuous	Burner inspection, cleaning and replacement, as applicable, were performed as part of the biennial performance tune-ups in accordance with this Condition.

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49.6.b	In	Continuous	The flame patterns of the burners in EU IDs 9 - 13, 23 and 24 were inspected and were optimized with a method consistent with the manufacturer's specifications in accordance with this Condition.
49.6.c	In	Continuous	The air-fuel ratio control systems of EU IDs 9 - 13, 23 and 24 were inspected and were optimized with a method consistent with the manufacturer's specifications in accordance with this Condition.
49.6.d	In	Continuous	Carbon monoxide emissions from EU IDs 9 - 13, 23 and 24 were optimized with a method consistent with the manufacturer's specifications in accordance with this Condition.
49.6.e	In	Continuous	Carbon monoxide emissions from EU IDs 9 - 13, 23 and 24 were measured before and after adjustments were made in accordance with this Condition.
49.6.f	In	Continuous	UniSea maintains a report onsite for each biennial tune-up required during this compliance period and will submit to EPA or the Department if requested. Conditions 49.6.f and its subparts were satisfied for this compliance period.
49.6.f(i)	In	Continuous	The biennial tune-up report that UniSea maintains onsite contains a record of the concentrations of CO in ppmv emitted by each of EU IDs 9 - 13, 23 and 24 before and after the tune-up, as required by this Condition.
49.6.f(ii)	In	Continuous	The biennial tune-up report that UniSea maintains onsite contains a description of any corrective actions taken as part of the tune-up of EU IDs 9 - 13, 23 and 24, as required by this Condition.
49.6.f(iii)	In	Continuous	The biennial tune-up report that UniSea maintains onsite contains a record of types and amounts of fuel used in EU IDs 9 - 13, 23 and 24 each for the 12 months prior to that specific units tune-up, as required by this Condition.
49.6.g	In	Continuous	This Condition was not triggered for operations during this compliance period.
49.7	In	Continuous	There are no units that use an optimum air-to-fuel ratio to reduce the tune up requirements specified in Condition 49.6, therefore Condition 49.7 was not triggered during this compliance period.
50	In	Continuous	Conditions 50.1 through 50.4 were satisfied for EU IDs 9-13, 23 and 24 during this compliance period.
50.1	In	Continuous	UniSea is required to submit a Notification of Compliance Status within 120 days of the March 21, 2014 compliance date. The Notification of Compliance Status was submitted through the EPA's Central Data Exchange (CDX) program for Compliance and Emissions Data Reporting Interface (CEDRI).
50.2	In	Continuous	There were no units at the Dutch Harbor facility that became subject to NESHAP Subpart JJJJJJ in 2020, nor have any new units been constructed that would be subject to Subpart JJJJJJ in 2020, therefore this Condition was not triggered during this compliance period.
50.3	In	Continuous	UniSea did not commence combustion of solid waste in 2020, therefore this Condition was not triggered during this compliance period.
50.4	In	Continuous	EU IDs 9-13, 23 and 24 did not switch fuels or make a physical change that resulted in the applicability of a different subcategory within NESHAP Subpart JJJJJJ in 2020, therefore Condition 50.4 and its subparts were not triggered during this compliance period.
50.4.a	In	Continuous	Condition 50.4.a. was not triggered during this compliance period.
50.4.b	In	Continuous	Condition 50.4.b. was not triggered during this compliance period.
51	In	Continuous	Recordkeeping requirements for Condition 51 and its subparts were satisfied during this compliance period.
51.1	In	Continuous	Conditions 51.1.a through 5.1.g were satisfied for this compliance period.
51.1.a	In	Continuous	UniSea has kept a copy on file of each notification and report submitted to comply with Subpart JJJJJJ.
51.1.b	In	Continuous	UniSea has kept records to document conformance with the required work and management practices. These records identify the boilers by EU ID, the date of each tune-up, the procedures followed, and the manufacturer's specifications to which the boiler was tuned.
51.1.b(i)	In	Continuous	UniSea has kept records to document conformance with the required work and management practices. These records identify the boilers by EU ID, the date of each tune-up, the procedures followed, and the manufacturer's specifications to which the boiler was tuned.
51.1.b(ii)	In	Continuous	UniSea has kept records of energy assessment reports.
51.1.c	In	Continuous	UniSea does not have a mercury emission limit and this condition for fuel analysis documentation is not triggered during this compliance period.
51.1.d	In	Continuous	EU IDs 19-12, 23 and 24 did not have any periods of malfunction during this compliance period.
51.1.e	In	Continuous	EU IDs 19-12, 23 and 24 did not have any periods of malfunction during this compliance period.

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51.1.f	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(i)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(ii)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(iii)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(iv)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(v)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.f(vi)	In	Continuous	UniSea has kept records of all inspection and monitoring data, including the date, place, and time of the monitoring event, person conducting the monitoring, technique/method used, operating conditions during the activity, results, and corrective action taken (if applicable).
51.1.g	In	Continuous	UniSea does not use bag leak detection system for NESHAP JJJJJJ compliance for EU IDs 9-13, 23, 24, therefore Condition 51.1.g and its subparts were not triggered during this compliance period.
51.1.g(i)	In	Continuous	Condition 51.1.g(i) was not triggered for this compliance period.
51.1.g(ii)	In	Continuous	Condition 51.1.g(ii) was not triggered for this compliance period.
51.1.g(iii)	In	Continuous	Condition 51.1.g(iii) was not triggered for this compliance period.
51.2	In	Continuous	UniSea has kept all records readily available for review for 5 years following the date of the recorded action. Records are kept onsite for at least 2 years, and then records may be kept offsite for the remaining 3 years.
52	In	Continuous	UniSea prepared and submitted upon request all reports required under 40 CFR 63 Subpart JJJJJJ.
52.1	In	Continuous	UniSea is only subject to biennial and 5-year tune ups and therefore only biennial or 5-year compliance certifications reports are generated. The report contained the information specified in Conditions 52.1.a through 52.1.d by the March 1 deadline.
52.1.a	In	Continuous	The report included the company name and address.
52.1.b	In	Continuous	The NESHAP annual compliance certification report included the required statement by the responsible official and the certifications of compliance listed in Conditions 52.1.b(i) through 52.1.b(iii).
52.1.b(i)	In	Continuous	The NESHAP annual compliance certification included the required statement by the responsible official and the certifications of compliance listed in Conditions 52.1.b(i) through 52.1.b(iii).
52.1.b(ii)	In	Continuous	The NESHAP annual compliance certification included the required statement by the responsible official and the certifications of compliance listed in Conditions 52.1.b(i) through 52.1.b(iii).
52.1.b(iii)	In	Continuous	The NESHAP annual compliance certification included the required statement by the responsible official and the certifications of compliance listed in Conditions 52.1.b(i) through 52.1.b(iii).
52.1.c	In	Continuous	No deviations from 40 CFR 63 Subpart JJJJJJ occurred during this compliance period for EU IDs 9-13, 23 and 24.
52.1.d	In	Continuous	The boilers are not subject to emission limits, therefore this condition was not triggered for this compliance period.
52.2	In	Continuous	UniSea did not conduct any performance tests for EU IDs 9-13, 23 and 24 in 2020, therefore this condition was not triggered for this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
53	In	Continuous	There were no demolition or renovation activities subject to the requirements set forth in 40 CFR 61 for this compliance period. Accordingly, the requirements set forth in 40 CFR 61 were not applicable to any activities at the facility, and the facility was in continuous compliance with this Condition.
54	In	Continuous	UniSea has created, implemented, and updated (when necessary) a Risk Management Plan (RMP) to comply with the requirements of 40 CFR 68. Additionally, Conditions 54.1 through 54.2 were satisfied.
54.1	In	Continuous	Conditions 54.1 and its subparts were satisfied for this compliance period.
54.1.a	In	Continuous	This one time requirement was satisfied upon submittal of the first semiannual operating report required after issuance of Permit No. AQ088TVP04 (i.e., the first half 2017 FOR submitted to ADEC by August 1, 2017). A copy of UniSea's Risk Management Plan was included as part of that FOR submission.
54.1.b	In	Continuous	There were no changes to UniSea's Risk Management Plan in 2020 and therefore the plan was not included in any FOR submissions and Condition 54.1.b was not triggered for this compliance period. The RMP was submitted as noted in 54.1.a.
54.2	In	Continuous	UniSea certifies compliance with all the requirements of 40 CFR 68 during this compliance period, including the registration and submission of the Risk Management Plan.
55	In	Continuous	Conditions 55.1 through 55.3 were satisfied.
55.1	In	Continuous	UniSea has complied with standards for recycling and emission reduction of refrigerants set forth in 40 CFR 82, Subpart F (Refrigerant Recycling and Disposal) during this compliance period.
55.2	In	Continuous	UniSea has complied with applicable prohibitions set out in 40 CFR 82.174, Subpart G (Significant New Alternatives Policy) during this compliance period.
55.3	In	Continuous	No Halons were used at the facility during this compliance period; therefore, the requirements of this Condition did not apply.
56	In	Continuous	UniSea has evaluated the applicability of NESHAP standards. The Dutch Harbor facility is currently an area source of HAP emissions. UniSea's boilers became subject to certain operational and testing requirements under 40 CFR 63 Subpart JJJJJJ (National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources), which was published in the Federal Register on March 21, 2011. UniSea has complied with all applicable requirements of Subpart JJJJJJ by the corresponding compliance dates. UniSea maintains documentation of the Dutch Harbor facility's area source status, and other relevant NESHAP applicability determinations (including the applicability evaluation for Subpart JJJJJJ), onsite for the required time period. Lastly, EU IDs 7B and 8B became subject to NESHAP ZZZZ upon their installation; however, compliance with NESHAP ZZZZ is achieved by demonstrating compliance with relevant portions of NSPS IIII (and EU IDs 7B and 8B were in compliance with NSPS IIII during this compliance period).
56.1	In	Continuous	UniSea has not constructed any new affected sources or reconstructed any affected sources under 40 CFR 63 during this compliance period.
57	In	Continuous	Conditions 57.1 and 57.2 were satisfied.
57.1	In	Continuous	Any NSPS and NESHAP reports submitted to the U.S. EPA were included, or if submitted through CDX/CEDRI portal the date and brief description of the report was provided, in the FOR reports required in Condition 86 for this compliance period.
57.2	In	Continuous	There were no waivers granted by EPA in 2020 for any Conditions of Permit No. AQ0088TVP04, therefore Condition 57.2 was not triggered during this compliance period.
58	In	Continuous	UniSea views each permit term and Condition as independent of the permit as a whole. Additionally, UniSea will continually strive to satisfy each permit term and Condition regardless of a challenge to any other part of the permit.
59	In	Continuous	UniSea will continually strive to satisfy each permit term and Condition regardless of any request for modification, revocation and reissuance, or termination or notification of planned change or anticipated noncompliance.
60	In	Continuous	UniSea does not view this permit as conveying property right or any exclusive privilege.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
61	In	Continuous	All permit administration fees associated with Permit No. AQ0088TVP04 were paid in a timely fashion during this compliance period. Applicable invoices and receipts are maintained by UniSea's corporate accounting department.
62	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.1	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.2	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.2.a	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.2.b	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.2.c	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
62.2.d	In	Continuous	UniSea paid all annual emission fees based on the stationary source's assessable emissions for this compliance period.
63	In	Continuous	Assessable emissions estimates for this compliance period were submitted to ADEC on March 30, 2020.
63.1	In	Continuous	Assessable emissions estimates for this compliance period were submitted to ADEC on March 30, 2020.
63.2	In	Continuous	Assessable emissions estimates for this compliance period were submitted to ADEC on March 30, 2020.
64	In	Continuous	Conditions 64.1 through 64.3 were satisfied for EU IDs 14 and 15.
64.1	In	Continuous	Emission units to which Condition 64 applies were operated in a manner consistent with good air pollution control practice for minimizing emissions.
64.2	In	Continuous	UniSea performed no unusual maintenance on the emission units to which Condition 64 applies that would have had a significant effect on emissions.
64.3	In	Continuous	Copies of the manufacturer's maintenance recommendations/procedures are kept on file in hard copy or electronically at the facility for the emission units to which Condition 64 applies.
65	In	Continuous	UniSea certifies that UniSea's Dutch Harbor facility does not intentionally dilute emissions with air, or with any other substance. UniSea does not employ emission dilution as a method of achieving compliance with the terms of Permit No. AQ0088TVP04. Though not specifically required under Permit No. AQ0088TVP04, ductwork and exhaust systems will continue to be routinely checked for leaks and repaired, if necessary, at the facility. Records of inspections and applicable repairs are maintained at the facility.
66	In	Continuous	Condition 66 and its subparts were either satisfied or not triggered during this compliance period.
66.1	In	Continuous	Conditions 66.1.a and 66.1.b were satisfied for this compliance period.
66.1.a	In	Continuous	There were no complaints received by the Permittee and there is no record of complaints received by the Department that were conveyed to the Permittee of fugitive particulate matter in the ambient air in 2020. Therefore, Condition 66.1.a was not triggered during this compliance period.
66.1.b	In	Continuous	Conditions 66.1.b and its subparts were not triggered during this compliance period.
66.1.b(i)	In	Continuous	Condition 66.1.b(i) was not triggered during this compliance period.
66.1.b(ii)	In	Continuous	Condition 66.1.b(ii) was not triggered during this compliance period.
66.2	In	Continuous	Condition 66.2 was satisfied by Condition 68 during this compliance period.
67	In	Continuous	There were no releases of material other than process emissions, and products from combustion from any stack at any source constructed or modified after November 1, 1982, for this compliance period.
68	In	Continuous	There were no complaints received or activities conducted in 2020 that caused Air Pollution concerns; therefore, Condition 68 and its subparts were not triggered during this compliance period.
68.1	In	Continuous	Conditions 68.1 and its subparts were not triggered during this compliance period.
68.1.a	In	Continuous	Condition 68.1.a was not triggered during this compliance period.
68.1.b	In	Continuous	Condition 68.1.b was not triggered during this compliance period.
68.1.c	In	Continuous	Condition 68.1.c was not triggered during this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
68.1.c(i)	In	Continuous	Condition 68.1.c(i) was not triggered during this compliance period.
68.1.c(ii)	In	Continuous	Condition 68.1.c(ii) was not triggered during this compliance period.
68.1.d	In	Continuous	Condition 68.1.d was not triggered during this compliance period.
68.1.d(i)	In	Continuous	Condition 68.1.d(i) was not triggered during this compliance period.
68.1.d(ii)	In	Continuous	Condition 68.1.d(ii) was not triggered during this compliance period.
68.1.d(ii)	In	Continuous	Condition 68.1.d(iii) was not triggered during this compliance period.
68.1.d(iv)	In	Continuous	Condition 68.1.d(iv) was not triggered during this compliance period.
68.1.e	In	Continuous	There were no complaints received for the Dutch Harbor facility in 2020, therefore no summary reports of corrective actions were included in the Operating Reports of Condition 86, during this compliance period. Condition 68.1.e and its subparts were not triggered during this compliance period.
68.1.e(i)	In	Continuous	Condition 68.1.e(i) was not triggered during this compliance period.
68.1.e(ii)	In	Continuous	Condition 68.1.e(ii) was not triggered during this compliance period.
68.1.e(iii)	In	Continuous	Condition 68.1.e(i) was not triggered during this compliance period.
68.1.e(iv)	In	Continuous	Condition 68.1.e(iv) was not triggered during this compliance period.
68.1.f	In	Continuous	There were no complaints received for the Dutch Harbor facility in 2020, therefore no notifications were required to the Department and Condition 68.1.f was not triggered during this compliance period.
69	In	Continuous	There were no emergencies (unavoidable or otherwise), malfunctions, or non-routine repairs, as defined in 18 AAC 50.235 that caused emissions in excess of the limits established by Permit No AQ0088TVP04 in 2020, therefore Condition 69 and its subparts were not triggered during this compliance period.
69.1	In	Continuous	Condition 69.1 was not triggered for this compliance period.
69.2	In	Continuous	Condition 69.2 was not triggered for this compliance period.
70	In	Continuous	UniSea did not conduct open burning at the Dutch Harbor facility during the reporting period; therefore, Condition 70 and its subparts were not triggered.
70.1	In	Continuous	No open burning was performed at the facility during the reporting period; therefore, the requirements of this Condition did not apply.
70.2	In	Continuous	UniSea certifies that no open burning was performed at the facility during the reporting period.
71	In	Continuous	ADEC did not request any source testing in addition to that which is explicitly required by this permit; therefore, no additional source testing was conducted during this compliance period.
72	In	Continuous	Condition 72 and its subparts were not triggered for this compliance period.
72.1	In	Continuous	There was no requirement to perform source testing during the reporting period; no source testing was conducted at the Dutch Harbor facility.
72.2	In	Continuous	There was no requirement to perform source testing during the reporting period; no source testing was conducted at the Dutch Harbor facility.
73	In	Continuous	There was no requirement to perform source testing during the reporting period, as such no source testing was conducted at the Dutch Harbor facility. Condition 73 and its subparts were not triggered for this compliance period.
73.1	In	Continuous	Condition 73.1 was not triggered for this compliance period.
73.2	In	Continuous	Condition 73.2 was not triggered for this compliance period.
73.3	In	Continuous	Condition 73.3 was not triggered for this compliance period.
73.4	In	Continuous	Condition 73.4 was not triggered for this compliance period.
73.5	In	Continuous	Condition 73.5 was not triggered for this compliance period.
73.6	In	Continuous	Condition 73.6 was not triggered for this compliance period.
73.7	In	Continuous	Condition 73.7 was not triggered for this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
74	In	Continuous	Conditions 31 ("Concealment of Emissions") and Condition 65 ("Dilution") were satisfied and there was no requirement to perform source testing during this compliance period at the Dutch Harbor facility; therefore, it was not necessary to standardize exhaust gas volumes as required per Condition 74.
75	In	Continuous	Conditions 2.3 and 2.4 were satisfied for this compliance period, as applicable, for EU IDs 1-15, 17, 23 and 24. Therefore, EU IDs 1-15, 17, 23 and 24, as applicable, were not required to comply with Conditions 77, 78, and 79.
76	In	Continuous	There was no requirement to perform source testing during the reporting period; therefore, it was not necessary to request an extension to a source test deadline as required by this Condition to ADEC.
77	In	Continuous	There was no requirement to perform source testing during the reporting period; therefore, it was not necessary to submit any test plans as required by Condition 77 to ADEC. As provided for in Condition 75, Conditions 2.3 or 2.4 were satisfied for this compliance period, as applicable, for the units EU IDs 1-15, 17, 23 and 24, thus UniSea is not required to comply with this Condition.
78	In	Continuous	There was no requirement to perform source testing during the reporting period; therefore, it was not necessary to submit any test notifications as required by Condition 78 to ADEC. As provided for in Condition 75, Conditions 2.3 or 2.4 were satisfied for this compliance period, as applicable, for the units EU IDs 1-15, 17, 23 and 24, thus UniSea is not required to comply with this Condition.
79	In	Continuous	There was no requirement to perform source testing during the reporting period; therefore, it was not necessary to submit any test reports as required by Condition 79 to ADEC. As provided for in Condition 75, Conditions 2.3 or 2.4 were satisfied during this compliance period, as applicable, for the units EU IDs 1-15, 17, 23 and 24, thus UniSea is not required to comply with this Condition.
80	In	Continuous	There was no requirement to perform source testing during the reporting period and no source testing was conducted at the Dutch Harbor facility. Therefore, it was not necessary to submit any particulate matter calculations as required by this Condition to ADEC during this compliance period.
81	In	Continuous	UniSea has implemented a recordkeeping system at the Dutch Harbor facility to ensure compliance with the five-year record retention requirements of Condition 81.
81.1	In	Continuous	Condition 81.1 is satisfied by UniSea recordkeeping system.
81.2	In	Continuous	Condition 81.2 is satisfied by UniSea recordkeeping system.
81.2.a	In	Continuous	Condition 81.2.a is satisfied by UniSea recordkeeping system.
81.2.b	In	Continuous	Condition 81.2.b is satisfied by UniSea recordkeeping system.
81.2.c	In	Continuous	Condition 81.2.c is satisfied by UniSea recordkeeping system.
81.2.d	In	Continuous	Condition 81.2.d is satisfied by UniSea recordkeeping system.
81.2.e	In	Continuous	Condition 81.2.e is satisfied by UniSea recordkeeping system.
81.2.f	In	Continuous	Condition 81.2.f is satisfied by UniSea recordkeeping system.
82	In	Continuous	All reports, compliance certifications, and other submittals to ADEC required by the Title V permit have been certified in accordance with Condition 82. In situations where excess emission and permit deviation reports were submitted per Condition 85 and the certification statement was by someone other than a responsible official for the Dutch Harbor facility, these reports were certified by a responsible official in the FOR for the same six-month reporting period as allowed by Condition 82.
82.1	In	Continuous	Condition 82.1 was not triggered for this compliance period.
82.1.a	In	Continuous	Condition 82.1.a was not triggered for this compliance period.
82.1.b	In	Continuous	Condition 82.1.b was not triggered for this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
83	In	Continuous	Except where otherwise directed by ADEC, all documentation required by this permit has been submitted to the address listed in Condition 83.
83.1	In	Continuous	Except where otherwise directed by ADEC, all documentation required by this permit has been submitted to the address listed in Condition 83, or by electronic submittal listed in Condition 83.1.a and/or Condition 83.1.b.
83.1.a	In	Continuous	Except where otherwise directed by ADEC, all documentation required by this permit has been submitted to the address listed in Condition 83, or electronically at the email address listed in Condition 83.1.a.
83.1.b	In	Continuous	Except where otherwise directed by ADEC, all documentation required by this permit has been submitted to the address listed in Condition 83, or electronically at the Department's Air Online Services listed in Condition 83.1.b.
84	In	Continuous	All records requested by ADEC have been submitted in a timely fashion. UniSea received a Full Compliance Evaluation (FCE), Information Request from the Department on April 28, 2020 and responded with all requested documents and information to the Department on May 14, 2020. All additional correspondence that resulted from the 2020 FCE was completed within the Department allotted time frame.
85	In	Continuous	Conditions 85.1 through 85.3 were satisfied. UniSea reported two instances of permit deviations of Condition 2.3 in Permit No. AQ0088TVP04 during this compliance period. There were zero instances of excess emissions of Permit No. AQ0088TVP04 during this compliance period. Annual Method 9 observations were performed for all applicable sources by the required compliance date in accordance with this permit Condition during this compliance period. However due to several factors related to the Covid-19 pandemic, including cancelled certification classes, travel restrictions, and interal safety policies, the observer that conducted all Method 9 observations had a lapsed certification. Two permit deviations were submitted for this Condition, one on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, and the other on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B. These compliance issues were anticipated and communicated to ADEC compliance and permitting staff in advance, UniSea proceeded under the recommendations provided by ADEC staff, and submitted the "No Action Assurance Memorandum" issued by the ADEC on March 31, 2020, and the "Covid-19 Implications for EPA's Enforcement and Compliance Assurance Programs" issued by EPA on March 26, 2020 with both permit deviation notification submissions.
85.1	In	Continuous	The two instances of permit deviations that occurred during this time period were reported per Condition 85.1.c.(i). The remaining subparts of Condition 85.1 were not triggered for this compliance period.
85.1.a	In	Continuous	Condition 85.1.a and its subparts were not triggered for this compliance period.
85.1.a(i)	In	Continuous	Condition 85.1.a(i) was not triggered for this compliance period. The reported permit deviations were not due to emissions that presented a potential threat to human health or safety.
85.1.a(ii)	In	Continuous	Condition 85.1.a(ii) was not triggered for this compliance period. The reported permit deviations were not due to emissions that UniSea believes to be unavoidable.
85.1.b	In	Continuous	Condition 85.1.b was not triggered for this compliance period.
85.1.c	In	Continuous	The two instances of permit deviations that occurred during this time period were reported per Condition 85.1.c.(i). The remaining subparts of Condition 85.1.c were not triggered for this compliance period.
85.1.c(i)	In	Continuous	There were two instances of permit deviations of Condition 2.3 that were reported per Condition 85.1.c(i) during this compliance period. The first one was reported on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, that were conducted in April 2020. The second one was reported on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B that were conducted in May 2020.
85.1.c(ii)	In	Continuous	Condition 85.1.c(ii) was not triggered for this compliance period.
85.1.c(iii)	In	Continuous	Condition 85.1.c(iii) was not triggered for this compliance period.
85.2	In	Continuous	For both instances of permit deviations that were reported to the Department during this compliance period, the online form referenced in Condition 85.2 was completed and submitted to the Department.
85.3	In	Continuous	Condition 85.3 was not triggered for this compliance period. There was no additional follow-up documentation that was requested by, or provided to, the Department in regards to the two instances of permit deviation that were reported during this compliance period.
86	In	Continuous	Condition 86 and its subparts were either satisfied or not triggered for Operating Reports submitted to ADEC on or before the required compliance dates for this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
86.1	In	Continuous	FORs for the reporting period operations included all information required by other Conditions of the permit.
86.2	In	Continuous	There were two instances of permit deviations of Condition 2.3 that were reported per Condition 85.1.c(i) during this compliance period. The first one was reported on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, that were conducted in April 2020. The second one was reported on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B that were conducted in May 2020. Both of these permit deviations were described in the narrative portion of the 1st Half 2020 FOR submitted by August 1, 2020, as well as included as an Appendices in that report.
86.2.a	In	Continuous	Condition 86.2.a-e were satisfied for the two permit deviations that were reported in the 1st Half 2020 FOR submitted by August 1, 2020.
86.2.b	In	Continuous	Condition 86.2.a-e were satisfied for the two permit deviations that were reported in the 1st Half 2020 FOR submitted by August 1, 2020.
86.2.c	In	Continuous	Condition 86.2.a-e were satisfied for the two permit deviations that were reported in the 1st Half 2020 FOR submitted by August 1, 2020.
86.2.d	In	Continuous	Condition 86.2.a-e were satisfied for the two permit deviations that were reported in the 1st Half 2020 FOR submitted by August 1, 2020.
86.2.e	In	Continuous	Condition 86.2.a-e were satisfied for the two permit deviations that were reported in the 1st Half 2020 FOR submitted by August 1, 2020.
86.3	In	Continuous	There were two instances of permit deviations of Condition 2.3 that were reported per Condition 85.1.c(i) during this compliance period. The first one was reported on May 29, 2020 for Method 9 observations on EUIDs 1, 4-6, that were conducted in April 2020. The second one was reported on June 30, 2020 for Method 9 observations on EUIDs 2, 3, 7B-8B that were conducted in May 2020. Both of these permit deviations were described in the narrative portion of the 1st Half 2020 FOR submitted by August 1, 2020, as well as included as an Appendices in that report.
86.4	In	Continuous	Additional testing was not triggered during the reporting period based on the results of opacity observations required under Conditions 2.3.e and 2.4.c; therefore, Condition 86.4 and its subparts were not triggered for this compliance period.
86.4.a	In	Continuous	Condition 86.4.a was not triggered for this compliance period.
86.4.b	In	Continuous	Condition 86.4.b was not triggered for this compliance period.
86.4.c	In	Continuous	Condition 86.4.c was not triggered for this compliance period.
86.4.d	In	Continuous	Condition 86.4.d was not triggered for this compliance period.
86.5	In	Continuous	In 2020 there was not a transition from an expired permit to a new permit, therefore this Condition was not triggered for this compliance period.
87	In	Continuous	Condition 87 and its subparts were satisfied for previous years' Annual Compliance Certifications (ACC), which were all submitted on or before the deadline of March 31st of the proceeding calendar year. This ACC for 2020 operations under Permit No. AQ0088TVP04 will be submitted by March 31, 2021.
87.1	In	Continuous	Conditions 87.1.a through 87.1.d were satisfied.
87.1.a	In	Continuous	The ACC detailed herein certifies the compliance status for each term and Condition of this Permit over the preceding calendar year.
87.1.b	In	Continuous	This certification states for each term and Condition a brief description of the method used to determine the compliance status.
87.1.c	In	Continuous	This certification states for each term and Condition whether the compliance was intermittent or continuous.
87.1.d	In	Continuous	This ACC accounts for each deviation reported under Condition 85.
87.2	In	Continuous	In 2020 there was not a transition from an expired permit to a new permit, therefore this Condition was not triggered for this compliance period.
87.3	In	Continuous	A copy of each ACC was submitted to the EPA at the address in this permit Condition.
88	In	Continuous	UniSea is required to submit emission inventory reports every third year. The most recent Emission Inventory Report was submitted to the Department on April 30, 2018, for actual emissions by each emission unit for reporting year 2017. By April 30, 2021, the Emission Inventory report for 2020 operations will be submitted to the Department.
88.1	In	Continuous	UniSea's Dutch Harbor facility is required to submit emission inventory reports every third year, therefore this Condition was not triggered during this compliance period.
88.1.a	In	Continuous	Condition 88.1.a was not triggered during this compliance period.
88.1.b	In	Continuous	Condition 88.1.b was not triggered during this compliance period.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
88.2	In	Continuous	UniSea is required to submit emission inventory reports every third year. The most recent Emission Inventory Report was submitted to teh Department on April 30, 2018, for actual emissions by each emission unit for reporting year 2017. By April 30, 2021, the Emission Inventory report for 2020 operations will be submitted to the Department.
88.2.a	In	Continuous	Condition 88.2.a was not triggered during this compliance period.
88.2.b	In	Continuous	Condition 88.2.b was not triggered during this compliance period.
88.2.c	In	Continuous	Condition 88.2.c was not triggered during this compliance period.
88.3	In	Continuous	UniSea is required to submit emission inventory reports every third year. The Emissions Inventory report for calendar year 2017 was submitted on April 30, 2018, and the next report required by this Condition will be submitted by April 30, 2021 for calendar year 2020, in accordance with the Environmental Protection Agency set schedule.
88.4	In	Continuous	The required data elements within the form in Section 14 of Permit No AQ0088TVP04 were included in the Emission Inventory report submitted on April 30, 2018, and will be included in all future reports required by Condition 88.
89	In	Continuous	UniSea did not submit any permit applications or amendments in 2020, therefore Condition 89 and its subparts were not triggered during this compliance period.
89.1	In	Continuous	Condition 89.1 was not triggered.
89.2	In	Continuous	Condition 89.2 was not triggered.
89.3	In	Continuous	Condition 89.3 was not triggered.
89.4	In	Continuous	Condition 89.4 was not triggered.
90	In	Continuous	Condition 90 was not triggered under Permit No. AQ0088TVP04 for this compliance period.
91	In	Continuous	Off Permit Changes were not made to Permit No. AQ0088TVP04 for this compliance period, therefore Condition 91 and its subparts were not triggered.
91.1	In	Continuous	Condition 91.1 was not triggered for this compliance period.
91.2	In	Continuous	Condition 91.2 was not triggered for this compliance period.
91.3	In	Continuous	Condition 91.3 was not triggered for this compliance period.
91.4	In	Continuous	Condition 91.4 was not triggered for this compliance period.
92	In	Continuous	Condition 92 was not triggered under Permit No. AQ0088TVP04 for this compliance period.
92.1	In	Continuous	Condition 92.1 was not triggered for this compliance period.
92.2	In	Continuous	Condition 92.2 was not triggered for this compliance period.
92.3	In	Continuous	Condition 92.3 was not triggered for this compliance period.
93	In	Continuous	UniSea's renewal application submittal period for the Title V permit is from November 23, 2020 until November 23, 2021, as required by Condition 93. UniSea did not submit a renewal application from November 23, 2020 through December 31, 2020.
94	In	Continuous	Conditions 94.1 and 94.2 were satisfied for this compliance period.
94.1	In	Continuous	UniSea acknowledges that compliance with permit terms and Conditions is compliance with those requirements that are included and specifically identified in this permit.
94.2	In	Continuous	UniSea acknowledges that compliance with permit terms and Conditions is compliance with those requirements that are determined in writing in the permit to be inapplicable.
95	In	Continuous	This condition requires UniSea to comply with each permit term and Condition, which was satisfied for this compliance period.
95.1	In	Continuous	This condition does not identify any specific compliance requirements for UniSea, but rather identify the potential implications of noncompliance with a permit term or condition. For completeness, UniSea certifies continuous compliance with this condition.
95.2	In	Continuous	This condition does not identify any specific compliance requirements for UniSea, but rather identify the potential implications of noncompliance with a permit term or condition. For completeness, UniSea certifies continuous compliance with this condition.

Condition	Compliance Status	Compliance Duration	Method of Compliance for the Dutch Harbor Facility Regulated Under Air Quality Operating Permit No. AQ0088TVP04 for Operations from January 1, 2020 through December 31, 2020
95.3	In	Continuous	This condition does not identify any specific compliance requirements for UniSea, but rather identify the potential implications of noncompliance with a permit term or condition. For completeness, UniSea certifies continuous compliance with this condition.
96	In	Continuous	UniSea will continue to comply with applicable requirements with which the Dutch Harbor facility is in compliance.
97	In	Continuous	UniSea acknowledges that in an enforcement action, it is no defense to claim that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with a permit term or Condition.
98	In	Continuous	UniSea's Dutch Harbor facility did not receive any Title V or Air Quality on site inspections in 2020, therefore Condition 98 and its subparts were not triggered during this compliance period.
98.1	In	Continuous	UniSea's Dutch Harbor facility did not receive any Title V or Air Quality on site inspections in 2020, therefore Condition 98.1 was not triggered during this compliance period.
98.2	In	Continuous	UniSea's Dutch Harbor facility did not receive any Title V or Air Quality on site inspections in 2020, therefore Condition 98.2 was not triggered during this compliance period.
98.3	In	Continuous	UniSea's Dutch Harbor facility did not receive any Title V or Air Quality on site inspections in 2020, therefore Condition 98.3 was not triggered during this compliance period.
98.4	In	Continuous	UniSea's Dutch Harbor facility did not receive any Title V or Air Quality on site inspections in 2020, therefore Condition 98.4 was not triggered during this compliance period.
99	In	Continuous	This condition requires UniSea to comply with applicable requirements that become effective during the permit term on a timely basis. There were no new compliance requirements or applicable regulations that came into effect during this compliance period.

APPENDIX H. RED-LINED PERMIT PAGES

Section 1. Stationary Source Information

Identification

Permittee:		**UniSea, Inc** P.O. Box 97019 Redmond, WA, 98073-9179
Stationary Source Name:		**Dutch Harbor Seafood Processing Plant**
Location:		53º 52´ 45.5" North; 166º 33´ 10.2" West
Physical Address:		88 Salmon Way Dutch Harbor, AK, 99692
Owner:		**UniSea, Inc** P.O. Box 97019 Redmond, WA, 98073-9179
Operator:		UniSea, Inc. P.O. Box 97019 Redmond, WA, 98073-9179
Permittee's Responsible Official:		Mr. Tom Enlow, President and CEO UniSea, Inc. P.O. Box 97019 Redmond, WA, 98073-9179
Designated Agent:		CT Corporation System 801 W. 10th Avenue, Suite 300 Juneau, AK 99801
Stationary Source and Building Contact:		~~Mr. Art Aliment~~ Maintenance Engineering Director UniSea, Inc. P.O. Box 920008 Dutch Harbor, AK 99692 ~~(907) 581-7319, art.aliment@unisea.com~~ Mr. Paul McGinnis (907) 581-7274, Paul.McGinnis@unisea.com
Fee Contact:		Ms.Emily Gibson, Environmental Compliance Manager UniSea, Inc. P.O. Box 921169 Dutch Harbor, AK 99692 (907) 581-7373; emily.gibson@unisea.com
Permit Contact:		Ms.Emily Gibson, Environmental Compliance Manager UniSea, Inc. P.O. Box 921169 Dutch Harbor, AK 99692 (907) 581-7373; emily.gibson@unisea.com
Process Description:	SIC Code	2092 - Fresh or Frozen Packaged Fish
	NAICS Code:	311710: Seafood Product Preparation and Packaging

[18 AAC 50.040(j)(3) & 50.326(a)]
[40 C.F.R. 71.5(c)(1) & (2)]

Section 2. Emissions Unit Inventory and Description

Emissions units listed in Table A have specific monitoring, recordkeeping, or reporting conditions in this permit. Except as noted elsewhere in the permit, emissions unit descriptions and ratings are given for identification purposes only.

Table A - Emissions Unit Inventory

EU ID	Emission Unit Name	Emission Unit Description and Type of Fuel Burned	Serial Number	Rating/Size	Construction Date
1	Powerhouse Generator No. 1	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	969874	2,252 kW	1990
2	Powerhouse Generator No. 2	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	969875	2,300 kW	1990
3	Powerhouse Generator No. 3	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	869062	2,300 kW	1990
4	Powerhouse Generator No. 4	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	970291	2,252 kW	1990
5	Powerhouse Generator No. 5	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 900 RPM	869063	2,300 kW	1990
6	Powerhouse Generator No. 6	Fairbanks Morse (38TD8-1/8 OP) Diesel/Fish Oil 720 RPM	868037	2,252 kW	1990
7B	G1 Cat Generator No. 1	Caterpillar (3512CDITA) Diesel 1,200 RPM	RMS00273	1,100 kW	2011
8B	G1 Cat Generator No. 2	Caterpillar (3512CDITA) Diesel 1,200 RPM	RMS00274	1,100 kW	2011
9	G2 Boiler No. 1	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	8688-01	400 bhp	1990
10	G2 Boiler No. 2	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	8688-02	400 bhp	1990
11	G2 Boiler No. 3	Johnston (PFTA-400-3LX-150S) Diesel/Fish Oil/Used Oil	8296-01	400 bhp	1986
12	G1 Boiler No. 1	Cleaver-Brooks (CB-200) Diesel/Fish Oil	L-63213	200 bhp	1986
13	G1 Boiler No. 2	Cleaver-Brooks (CB-200) Diesel/Fish Oil	L-63212	200 bhp	1986
14	Meal Plant Dryer No. 1	Stord Int'l (SIDJ-LT 4.5t) Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	16873	24.1 MMBtu/hr	1990
15	Meal Plant Dryer No. 2	Stord Int'l (SIDJ-LT 4.5t) Peder Halvorsen PH VL 5.0 Diesel/Fish Oil	19874	24.1 MMBtu/hr	1990
17	Emergency Generator	Cummins VT-28-G Diesel	37107938	400 kW	1990
23	Central Boiler	Johnston (PFTA-75-3) Diesel/Fish Oil	10899-01	2.5 MMBtu/hr	2011
24	Attu Boiler	Weil-McLain (Gordon-Piattn R10.1-0) Diesel/Fish Oil	AD611876	2.4 MMBtu/hr	1993

Table Notes:

1. The generator output for EU IDs 1 - 6 are mechanically limited to the permitted ratings (kW electrical).

2. ~~Permittee did not install EU ID 16.~~

~~3.~~ EU IDs 7B and 8B are model year 2010 block construction date CI-ICE (see AQ0088MSS03 application).

APPENDIX I. RISK MANAGEMENT PLAN

Section 1. Registration Information

Reason for Resubmission	5-year update (40 CFR 68.190(b)(1))
1.1 Source Identification	
1.1.a. Facility Name	UniSea, Inc.
1.1.b. Parent Company #1 Name	Nippon SuiSan, USA
1.1.c. Parent Company #2 Name	
1.2 EPA Facility Identifier	100000054718
1.3 Other EPA Systems Facility Identifier	99692nsncpouch
1.4 Dun and Bradstreet Numbers (DUNS)	
1.4.a. Facility DUNS	069572279
1.4.b. Parent Company #1 DUNS	
1.4.c. Parent Company #2 DUNS	
1.5 Facility Location	
1.5.a. Street - Line 1	88 Salmon Way
1.5.b. Street - Line 2	
1.5.c. City	Dutch Harbor
1.5.d. State	AK
1.5.e. Zip Code - Zip +4 Code	99692
1.5.f. County	ALEUTIANS WEST (C)
1.5.g. Facility Latitude (in decimal degrees)	53.881513
1.5.h. Facility Longitude (in decimal degrees)	-166.551415
1.5.i. Method for determining Lat/Long	Address Matching - Street Centerline
1.5.j. Description of location identified by Lat/Long	Center of Facility
1.5.k. Horizontal Accuracy Measure (meters)	25
1.5.l. Horizontal Reference Datum Code	World Geodetic System of 1984
1.5.m. Source Map Scale Number	
1.6 Owner or Operator	
1.6.a. Name	UniSea, Inc.
1.6.b. Phone	(425) 881-8181
1.6.c. Street - Line 1	88 Salmon Way
1.6.d. Street - Line 2	
1.6.e. City	Dutch Harbor
1.6.f. State	AK
1.6.g. Zip Code - Zip +4 Code	99692
Foreign Country	
Foreign State/Province	
Foreign Zip/Postal Code	
1.7 Name, title and email address of person or position responsible for RMP (part 68) implementation	
1.7.a. Name of person	Tom Enlow
1.7.b. Title of person or position	President
1.7.c. Email address of person or position	tom.enlow@unisea.com

Section 1. Registration Information

1.8 Emergency Contact	
1.8.a. Name	Paul McGinnis
1.8.b. Title of person or position	Director of Maintenance
1.8.c. Phone	(907) 581-7274
1.8.d. 24-Hour Phone	(907) 581-7399
1.8.e. 24-Hour Phone Extension/PIN #	
1.8.f. Email address for emergency contact	paul.mcginnis@unisea.com
1.9 Other Points of Contact	
1.9.a. Facility or Parent Company E-mail Address	
1.9.b. Facility Public Contact Phone Number	(907) 581-1258
1.9.c. Facility or Parent Company WWW Homepage Address	www.unisea.com
1.10 Local Emergency Planning Committee (LEPC)	Aleutian LEPC
1.11 Number of fulltime equivalent (FTEs) employees on site	400
1.12 Covered by	
1.12.a. OSHA PSM	Y
1.12.b. EPCRA section 302	Y
1.12.c. CAA Title V Air Operating Permit Program	Y
1.12.d. Air Operating Permit ID #	AQ0088TVP04
1.13 OSHA Star or Merit Ranking	Y
1.14 Last Safety Inspection (by an External Agency) Date	03/11/2020
1.15 Last Safety Inspection Performed by an External Agency	OSHA
1.16 Will this RMP involve Predictive Filing?	
1.18 RMP Preparer Information	
1.18.a. Name	Maul Foster & Alongi, Inc.
1.18.b. Phone	(971) 544-2139
1.18.c. Street - Line 1	3140 NE Broadway
1.18.d. Street - Line 2	
1.18.e. City	Portland
1.18.f. State	OR
1.18.g. Zip	97232
Foreign Country	
Foreign State/Province	
Foreign Zip Code	

Section 1. Registration Information

Section 1.17 Process Specific Information

Process 1

Process ID #	1000117359		
Process Description	**G-2 Seafood Processing**		
1.17.a. Program Level	3		
1.17.b. NAICS Code(s)			
31171 (Seafood Product Preparation and Packaging)			
1.17.c. Chemical(s)			
	Chemical Name	**CAS Number**	**Quantity**
	Ammonia (anhydrous)	7664-41-7	43541

Section 1. Registration Information

Section 1.17 Process Specific Information

Process 2

Process ID #	1000117360		
Process Description	G-1 Seafood Processing		
1.17.a. Program Level	3		
1.17.b. NAICS Code(s)			
31171 (Seafood Product Preparation and Packaging)			
1.17.c. Chemical(s)			
	Chemical Name	CAS Number	Quantity
	Ammonia (anhydrous)	7664-41-7	27533

Section 2. Toxics: Worst Case

Scenario 1

Process Name	G-2 Seafood Processing
2.1 Chemical	
2.1.a. Name	Ammonia (anhydrous)
2.1.b. Percent Weight of Chemical	100
2.2 Physical State	Gas liquified by pressure
2.3 Model Used	EPA's RMP*Comp(TM)
2.4 Scenario	Liquid spill and vaporization
2.5 Quantity Released (lbs)	20000
2.6 Release Rate (lbs/min)	1100
2.7 Release Duration (mins)	10
2.8 Wind Speed (meters/sec)	1.5
2.9 Atmospheric stability class	F
2.10 Topography	Urban
2.11 Distance to endpoint (miles)	1.2
2.12 Estimated residential population within distance to endpoint (numbers)	4376
2.13 Public receptors within distance to endpoint	
2.13.a. Schools	Y
2.13.b. Residences	Y
2.13.c. Hospitals	Y
2.13.d. Prison/Correctional Facilities	Y
2.13.e. Recreational Areas	Y
2.13.f. Major commercial, office or industrial areas	Y
2.13.g. Other	
2.14 Environmental receptors within distance to endpoint	
2.14.a. National or State Parks, Forests or Monuments	
2.14.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	Y
2.14.c. Federal Wilderness Area	Y
2.14.d. Other	
2.15 Passive mitigation considered	
2.15.a. Dikes	
2.15.b. Enclosures	Y
2.15.c. Berms	
2.15.d. Drains	
2.15.e. Sumps	
2.15.f. Other	
2.16 Graphic file	Graphic file exists

Section 3. Toxics: Alternative Release

Scenario 1

Process Name	G-2 Seafood Processing
3.1 Chemical	
3.1.a. Name	Ammonia (anhydrous)
3.1.b. Percent Weight of Chemical	100
3.2 Physical State	Gas liquified by pressure
3.3 Model Used	EPA's RMP*Comp(TM)
3.4 Scenario	G2 Ammonia Bridge Collapse
3.5 Quantity Released (lbs)	3420
3.6 Release Rate (lbs/min)	114
3.7 Release Duration (mins)	30
3.8 Wind Speed (meters/sec)	3
3.9 Atmospheric stability class	D
3.10 Topography	Urban
3.11 Distance to endpoint (miles)	0.1
3.12 Estimated residential population within distance to endpoint (numbers)	50
3.13 Public receptors within distance to endpoint	
3.13.a. Schools	
3.13.b. Residences	Y
3.13.c. Hospitals	
3.13.d. Prison/Correctional Facilities	
3.13.e. Recreational Areas	Y
3.13.f. Major commercial, office or industrial areas	Y
3.13.g. Other	
3.14 Environmental receptors within distance to endpoint	
3.14.a. National or State Parks, Forests or Monuments	
3.14.b. Officially Designated Wildlife Sanctuaries, Preserves or Refuges	Y
3.14.c. Federal Wilderness Area	
3.14.d. Other	
3.15 Passive mitigation considered	
3.15.a. Dikes	
3.15.b. Enclosures	
3.15.c. Berms	
3.15.d. Drains	
3.15.e. Sumps	
3.15.f. Other	
3.16 Active mitigation considered	
3.16.a. Sprinkler systems	
3.16.b. Deluge systems	
3.16.c. Water curtain	
3.16.d. Neutralization	
3.16.e. Excess flow valve	

Section 3. Toxics: Alternative Release

3.16.f. Flares	
3.16.g. Scrubbers	
3.16.h. Emergency shutdown systems	Y
3.16.i. Other	
3.17 Graphic file	

Section 7. Prevention Program: Program Level 3

Program 1

Prevention Program Description: **Our process which is ammonia refrigeration used for freezing food products is covered by the OSHA PSM requirements. Our original gathering of process safety information was 09/28/1992. It has been reviewed several times since that date, and was last reviewed and updated on 6/19/12. Our latest PHA review process was completed with no significant changes noted. On 03/04/10 PermaCold Engineering, Inc. performed an audit to G-2 ammonia system charge. The system charge was calculated 37,744 lbs and added 4,997 lbs (W/O #: C120372) and 2,605 lbs (W/O #: C116472) into the system on 2010 from Bayview ammonia storage to maintained the inventory less than 10,000 lbs.**	
7.1 NAICS Code for process	
7.1.a. Process Name	1000117359 (G-2 Seafood Processing)
7.1.b. NAICS	31171 (Seafood Product Preparation and Packaging)
7.2 Chemicals	
Ammonia (anhydrous)	
7.3 Date on which the safety information was last reviewed or revised	11/08/2019
7.4 Process Hazard Analysis (PHA)	
7.4.a. Date of last PHA or PHA update	04/28/2021
7.4.b. Technique used	
7.4.b.1. What if	Y
7.4.b.2. Checklist	Y
7.4.b.3. What if/Checklist Combined	
7.4.b.4. HAZOP	
7.4.b.5. Failure mode & effects analysis	
7.4.b.6. Fault tree analysis	
7.4.b.7. Other	
7.4.c. Expected or actual date of completion of all changes resulting from last PHA or PHA update	04/28/2022
7.4.d. Major hazards identified	
7.4.d.1. Toxic release	Y
7.4.d.2. Fire	Y
7.4.d.3. Explosion	
7.4.d.4. Runaway reaction	
7.4.d.5. Polymerization	
7.4.d.6. Overpressurization	
7.4.d.7. Corrosion	Y
7.4.d.8. Overfilling	
7.4.d.9. Contamination	
7.4.d.10. Equipment failure	Y
7.4.d.11. Loss of cooling, heating, electricity, instrument air	Y
7.4.d.12. Earthquake	Y
7.4.d.13. Floods	
7.4.d.14. Tornado	
7.4.d.15. Hurricanes	Y
7.4.d.16. Other	Human factors

Section 7. Prevention Program: Program Level 3

7.4.e. Process controls in use	
7.4.e.1. Vents	Y
7.4.e.2. Relief valves	Y
7.4.e.3. Check valves	
7.4.e.4. Scrubbers	
7.4.e.5. Flares	
7.4.e.6. Manual shutoffs	Y
7.4.e.7. Automatic shutoffs	Y
7.4.e.8. Interlocks	Y
7.4.e.9. Alarms and procedures	Y
7.4.e.10. Keyed bypass	
7.4.e.11. Emergency air supply	
7.4.e.12. Emergency power	
7.4.e.13. Backup pump	
7.4.e.14. Grounding equipment	
7.4.e.15. Inhibitor additions	
7.4.e.16. Rupture disks	
7.4.e.17. Excess flow device	
7.4.e.18. Quench system	
7.4.e.19. Purge system	Y
7.4.e.20. None	
7.4.e.21. Other	
7.4.f. Mitigation systems in use	
7.4.f.1. Sprinkler system	Y
7.4.f.2. Dikes	
7.4.f.3. Fire walls	Y
7.4.f.4. Blast walls	
7.4.f.5. Deluge system	
7.4.f.6. Water curtain	
7.4.f.7. Enclosure	Y
7.4.f.8. Neutralization	
7.4.f.9. None	
7.4.f.10. Other	
7.4.g. Monitoring/detection systems in use	
7.4.g.1. Process area detectors	Y
7.4.g.2. Perimeter monitors	
7.4.g.3. None	
7.4.g.4. Other	Routine Inspection
7.4.h. Changes since last PHA update	
7.4.h.1. Reduction in chemical inventory	
7.4.h.2. Increase in chemical inventory	
7.4.h.3. Change in process parameters	
7.4.h.4. Installation of process controls	
7.4.h.5. Installation of process detection systems	
7.4.h.6. Installation of perimeter monitoring systems	
7.4.h.7. Installation of mitigation systems	

Section 7. Prevention Program: Program Level 3

7.4.h.8. None recommended	
7.4.h.9. None	Y
7.4.h.10. Other	
7.5 Date of most recent review or revision of operating procedures	08/03/2020
7.6 Training	
7.6.a. Date of most recent review or revision of training programs	06/12/2019
7.6.b. Type of training provided	
7.6.b.1. Classroom	Y
7.6.b.2. On the job	Y
7.6.b.3. Other	IIAR computer training and Garden City training
7.6.c. Type of competency testing used	
7.6.c.1. Written test	Y
7.6.c.2. Oral test	Y
7.6.c.3. Demonstration	Y
7.6.c.4. Observation	Y
7.6.c.5. Other	
7.7 Maintenance	
7.7.a. Date of most recent review or revision of maintenance procedures	08/03/2020
7.7.b. Date of most recent equipment inspection or test	07/07/2021
7.7.c. Equipment most recently inspected or tested (equipment list)	Compressors
7.8 Management of change	
7.8.a. Date of most recent changes that triggered management of change procedures	01/15/2020
7.8.b. Date of most recent review or revision of management of change procedures	06/16/2016
7.9 Date of most recent pre-startup review	06/01/2020
7.10 Compliance audits	
7.10.a. Date of most recent compliance audits	11/07/2019
7.10.b. Expected or actual date of completion of all changes resulting from the most recent compliance audits	11/07/2022
7.11 Incident investigation	
7.11.a. Date of most recent incident investigation	02/07/2020
7.11.b. Expected or actual date of completion of all changes resulting from the incident investigation	05/01/2020
7.12 Date of most recent review or revision of employee participation plans	05/25/2021
7.13 Date of most recent review or revision of hot work permit procedures	11/13/2020
7.14 Date of most recent review or revision of contractor safety procedures	10/25/2019
7.15 Date of most recent evaluation of contractor safety performance	09/29/2020

Section 7. Prevention Program: Program Level 3

Program 2

Prevention Program Description: **Our process which is ammonia refrigeration used for freezing food products is covered by the OSHA PSM requirements. Our original gathering of process safety information was 09/28/1992. It has been reviewed several times since that date, and was last reviewed and updated 06/19/12. Our latest PHA review process was completed with no significant changes noted. On 08/31/10 PermaCold Engineering, Inc. performed an audit to G-1 ammonia system charge. The system charge was calculated 25,881 lbs and added 1,625 lbs (W/O #: 120560) into the system on 11/1/10 from Bayview ammonia storage to maintained the inventory less than 10,000 lbs.**	
7.1 NAICS Code for process	
7.1.a. Process Name	1000117360 (G-1 Seafood Processing)
7.1.b. NAICS	31171 (Seafood Product Preparation and Packaging)
7.2 Chemicals	
Ammonia (anhydrous)	
7.3 Date on which the safety information was last reviewed or revised	11/08/2019
7.4 Process Hazard Analysis (PHA)	
7.4.a. Date of last PHA or PHA update	05/26/2021
7.4.b. Technique used	
7.4.b.1. What if	Y
7.4.b.2. Checklist	Y
7.4.b.3. What if/Checklist Combined	
7.4.b.4. HAZOP	
7.4.b.5. Failure mode & effects analysis	
7.4.b.6. Fault tree analysis	
7.4.b.7. Other	
7.4.c. Expected or actual date of completion of all changes resulting from last PHA or PHA update	05/26/2022
7.4.d. Major hazards identified	
7.4.d.1. Toxic release	Y
7.4.d.2. Fire	Y
7.4.d.3. Explosion	Y
7.4.d.4. Runaway reaction	
7.4.d.5. Polymerization	
7.4.d.6. Overpressurization	Y
7.4.d.7. Corrosion	Y
7.4.d.8. Overfilling	Y
7.4.d.9. Contamination	
7.4.d.10. Equipment failure	Y
7.4.d.11. Loss of cooling, heating, electricity, instrument air	Y
7.4.d.12. Earthquake	Y
7.4.d.13. Floods	Y
7.4.d.14. Tornado	
7.4.d.15. Hurricanes	Y
7.4.d.16. Other	Human factors

Section 7. Prevention Program: Program Level 3

7.4.e. Process controls in use	
7.4.e.1. Vents	Y
7.4.e.2. Relief valves	Y
7.4.e.3. Check valves	Y
7.4.e.4. Scrubbers	
7.4.e.5. Flares	
7.4.e.6. Manual shutoffs	Y
7.4.e.7. Automatic shutoffs	Y
7.4.e.8. Interlocks	Y
7.4.e.9. Alarms and procedures	Y
7.4.e.10. Keyed bypass	
7.4.e.11. Emergency air supply	
7.4.e.12. Emergency power	Y
7.4.e.13. Backup pump	Y
7.4.e.14. Grounding equipment	
7.4.e.15. Inhibitor additions	
7.4.e.16. Rupture disks	
7.4.e.17. Excess flow device	
7.4.e.18. Quench system	
7.4.e.19. Purge system	Y
7.4.e.20. None	
7.4.e.21. Other	
7.4.f. Mitigation systems in use	
7.4.f.1. Sprinkler system	Y
7.4.f.2. Dikes	
7.4.f.3. Fire walls	Y
7.4.f.4. Blast walls	
7.4.f.5. Deluge system	
7.4.f.6. Water curtain	
7.4.f.7. Enclosure	Y
7.4.f.8. Neutralization	
7.4.f.9. None	
7.4.f.10. Other	
7.4.g. Monitoring/detection systems in use	
7.4.g.1. Process area detectors	Y
7.4.g.2. Perimeter monitors	
7.4.g.3. None	
7.4.g.4. Other	Routine inspection
7.4.h. Changes since last PHA update	
7.4.h.1. Reduction in chemical inventory	
7.4.h.2. Increase in chemical inventory	
7.4.h.3. Change in process parameters	
7.4.h.4. Installation of process controls	
7.4.h.5. Installation of process detection systems	
7.4.h.6. Installation of perimeter monitoring systems	
7.4.h.7. Installation of mitigation systems	

Section 7. Prevention Program: Program Level 3

7.4.h.8. None recommended	
7.4.h.9. None	Y
7.4.h.10. Other	
7.5 Date of most recent review or revision of operating procedures	10/07/2020
7.6 Training	
7.6.a. Date of most recent review or revision of training programs	05/01/2019
7.6.b. Type of training provided	
7.6.b.1. Classroom	Y
7.6.b.2. On the job	Y
7.6.b.3. Other	IIAR computer training and Garden City training
7.6.c. Type of competency testing used	
7.6.c.1. Written test	Y
7.6.c.2. Oral test	Y
7.6.c.3. Demonstration	Y
7.6.c.4. Observation	Y
7.6.c.5. Other	
7.7 Maintenance	
7.7.a. Date of most recent review or revision of maintenance procedures	10/15/2019
7.7.b. Date of most recent equipment inspection or test	07/07/2021
7.7.c. Equipment most recently inspected or tested (equipment list)	Compressors
7.8 Management of change	
7.8.a. Date of most recent changes that triggered management of change procedures	10/15/2019
7.8.b. Date of most recent review or revision of management of change procedures	06/16/2016
7.9 Date of most recent pre-startup review	08/01/2020
7.10 Compliance audits	
7.10.a. Date of most recent compliance audits	11/08/2019
7.10.b. Expected or actual date of completion of all changes resulting from the most recent compliance audits	11/08/2022
7.11 Incident investigation	
7.11.a. Date of most recent incident investigation	07/26/2018
7.11.b. Expected or actual date of completion of all changes resulting from the incident investigation	08/31/2018
7.12 Date of most recent review or revision of employee participation plans	05/26/2021
7.13 Date of most recent review or revision of hot work permit procedures	11/13/2020
7.14 Date of most recent review or revision of contractor safety procedures	10/25/2019
7.15 Date of most recent evaluation of contractor safety performance	09/29/2020

Section 9. Emergency Response

9.1 Written emergency response (ER) plan	
9.1.a. Is your facility included in the written community emergency response plan?	Y
9.1.b. Does your facility have its own written emergency response plan?	Y
9.2 Does your facility's ER plan include specific actions to be taken in response to accidental releases of regulated substances?	Y
9.3 Does your facility's ER plan include procedures for informing the public and local agencies responding to accidental releases?	Y
9.4 Does your facility's ER plan include information on emergency health care?	Y
9.5 Date of most recent review or update of your facility's ER plan	11/13/2020
9.6 Date of most recent ER training for your facility's employees	10/16/2020
9.7 Local agency with which your facility's ER plan or response activities are coordinated	
9.7.a. Name of agency	Unalaska Public Safety
9.7.b. Phone number	(907) 581-1233
9.8 Subject to	
9.8.a. OSHA Regulations at 29 CFR 1910.38	Y
9.8.b. OSHA Regulations at 29 CFR 1910.120	Y
9.8.c. Clean Water Act Regulations at 40 CFR 112	Y
9.8.d. RCRA Regulations at 40 CFR 264, 265, 279.52	Y
9.8.e. OPA-90 Regulations at 40 CFR 112, 33 CFR 154, 49 CFR 194, 30 CFR 254	Y
9.8.f. State EPCRA Rules of Laws	Y
9.8.g. Other	Clean Air Title V Permit

Executive Summary

UniSea Dutch Harbor has a policy and programs in place so that there is no major release of chemicals. Being a food processing facility, UniSea has gone far and above requirements so that even a small incidental release is dealt with quickly, before any contamination of our product can occur.

We have been in the OSHA VPP process since 1996 and have achieved both MERIT and STAR status. We are covered by the OSHA PSM rule 20 CFR 1910.119 and have been using those required processes since 1992.

The chemical at our Dutch Harbor facility with the most concern is Ammonia. That is in a closed loop system. The ammonia is used solely as a refrigerant for the freezing of our seafood products. We believe that both the worst case and alternative scenarios attached are highly unlikely, given the procedures that are in place and the way the processes are laid out. We have detectors set in key areas, with detection limits at very low levels, computer or process logic controllers (PLC's) which are constantly monitoring the environment, along with trained response personnel and response equipment.

UniSea Dutch Harbor has had a significant release of ammonia and one injuries in the last Five (5) years.

We work closely with the local Department of Public Safety, State OSHA, Coast Guard and Federal OSHA, in program development and response capabilities. We have been under PSM since its adoption and have performed Process Hazards Analysis (PHA's) for Ammonia.

Our emergency response program involves several groups of employees in Dutch Harbor. From our Power Plant to our Security group, both of which operate 24 hours a day. Emergency response plans are at both locations along with several others. The plans are exercised on a regular basis, either through drills or actual responses or requests from outside sources.

We have instituted a change in our management process known to us as (EVERYDAY FOCUS), as part of that process every two weeks all managers must provide information to the executives as to their current departmental status. Part of that status requirement is injury information and upcoming changes that affect safety within our organization. This process has required managers and supervisors to become much more involved in the day to day issue of safety as they are now required to report occurrences, with solutions for remediation.

Certification Statement for Program Level 2 and 3 Process(es)

To the best of the undersigned's knowledge, information, and belief formed after reasonable inquiry, the information submitted is true, accurate, and complete.

Certifier's Name	Thomas Enlow
Facility Name and Location Address	UniSea, Inc. 88 Salmon Way Dutch Harbor, AK 99692
EPA Facility ID	1000 0005 4718
Certification Signed Date	07/22/2021
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