

**Aquaculture Stewardship Council**

**Farm certification**

**Single and Multi-Site ASC Farm Audit Checklist**

**Report language: English**



**For company: Grieg Seafood BC Ltd. - Hecate**  
**Assessment date(s): 26-29 January 2021**

Scheme documents:

ASC Salmon standard v.1.3 - July 2019

ASC-Certification-and-Accreditation-Requirements-v.2.2 - April 2019

**SGS Product & Process Certification**



**SGS Checklist Version 4.1, effective from 21 April 2020**

**Form 3 - Public Disclosure Form**

*This form shall be submitted by the CAB no less than thirty (30) working days prior to any onsite audit. Any changes to this information shall be submitted to the ASC within five (5) days of the change and not later than 10 days before the planned audit. If later, a new announcement is submitted and another 30 days rule will apply.*

*The information on this form shall be public and should be posted on the ASC website within three (3) days of submission (except unannounced audits).*

*This form shall be written to be readable to the stakeholders and other interested parties.*

*This form should be translated into local languages when appropriate*

**PDF 1 Public Disclosure Form**

PDF 1.1 Name of CAB SGS Netherlands BV

PDF 1.2 Date of Submission 4-Dec-20

**PDF 1.3 CAB Contact Person**

PDF 1.3.1 Name of Contact Person Technical Management: Nikki den Boon  
/ Local Contact: Ramona Miclosanu

PDF 1.3.2 Position in the CAB's organisation ASC Program Manager / Key Account Specialist

PDF 1.3.3 Mailing address P.O. Box 200, 3200 AE Spijkenisse, The Netherlands

PDF 1.3.4 Email address [asc.reports@sgs.com](mailto:asc.reports@sgs.com) / [Ramona.Miclosanu@sgs.com](mailto:Ramona.Miclosanu@sgs.com)

PDF 1.3.5 Phone number +31 88 214 3271 / +1 (201) 508-3185

PDF 1.3.6 Other

**PDF 1.4 ASC Name of Client**

PDF 1.4.1 Name of the Client Grieg Seafood BC Ltd.

PDF 1.4.1.a Name of the unit of certification Hecate

PDF 1.4.2 Name of Contact Person Kristin Storry

PDF 1.4.3 Position in the client's organisation	Certification Manager
PDF 1.4.4 Mailing address	#106-1180 Ironwood St, Campbell River, BC V9W 5P7, Canada
PDF 1.4.5 Email address	<a href="mailto:Kristin.storry@griegseafood.com">Kristin.storry@griegseafood.com</a>
PDF 1.4.6 Phone number	250 286.0838 Ext.148
PDF 1.4.7 Other	

**PDF 1.5 Unit of Certification**

PDF 1.5.1 Single Site	X
PDF 1.5.2 Multi-site	N/A
PDF 1.5.2.a Ownership status	<i>Owned</i>
PDF 1.5.3 Group certification	N/A

**PDF 1.6 Sites to be audited**

Site Name	GPS Coordinates	List all species per site and indicate if they are in the scope of the standard	Ownership status (owned/ subcontracted)	Date of planned audit and type of audit (Initial, SA1, SA2, recertification, etc.)	Status (new, in production/ following /in harvest)
Hecate	49°52.1303, 126°45.4768	Atlantic Salmon (Salmo salar)	Owned	26-29 January 2021, IA, Remote	In production

**PDF 1.7 Species and Standards**

Standard	Species (scientific name) produced	Included in scope (Yes/No)	ASC endorsed standard to be used	Version Number
Salmon 1.3	Atlantic salmon (Salmo salar)	Yes	Salmon	1.3

**PDF 1.8 Planned Stakeholder Consultation(s) and How Stakeholders can Become Involved**

Name/organisation	Relevance for this audit	How to involve this stakeholder (in-person/phone interview/input submission)	When stakeholder may be contacted	How this stakeholder will be contacted
Village of Tahsis	Municipal Government	Input submission	In advance of the audit	By email
Village of Tahsis	Municipal Government	Input submission	In advance of the audit	By email
Village of Tahsis	Municipal Government	Input submission	In advance of the audit	By email
Village of Zeballos	Municipal Government	Input submission	In advance of the audit	By email
Village of Zeballos	Municipal Government	Input submission	In advance of the audit	By email
Uu-a-thluk Fisheries/Nuu-chah-nulth Tribal Council	First Nation representative	Input submission	In advance of the audit	By email
Nuchatlaht Tribe	First Nation	Input submission	In advance of the audit	By email
Ehattesaht Chinehkint	First Nation	Input submission	In advance of the audit	By email
Ehattesaht Chinehkint	First Nation	Input submission	In advance of the audit	By email
Tahsis Salmon Enhancement Society	Conservation Group	Input submission	In advance of the audit	By email
Tahsis Salmon Enhancement Society	Conservation Group	Input submission	In advance of the audit	By email
Department of Fisheries and Oceans - Conuma River Hatchery	Conservation Group	Input submission	In advance of the audit	By email
Moucha Bay Resort	Industry	Input submission	In advance of the audit	By email
Nootka Sound Watershed Society, West Coast Marine Terminals	Industry	Input submission	In advance of the audit	By email
Nootka Marina Adventures	Industry	Input submission	In advance of the audit	By email
Westview Marine	Industry	Input submission	In advance of the audit	By email
Cougar Creek Resort	Industry	Input submission	In advance of the audit	By email
Nootka Sound Services/Nootka Sound Marine	Industry	Input submission	In advance of the audit	By email
Air Nootka	Industry	Input submission	In advance of the audit	By email
Living Oceans	NGO	Input submission	In advance of the audit	By email

**PDF 1.9 Proposed Timeline**

PDF 1.9.1	Contract Signed:	11-Jun-20
PDF 1.9.2	Start of audit:	26th of January 2021 (remote)
PDF 1.9.3	Onsite Audit(s):	26th - 29th January 2021 - Remote
PDF 1.9.4	Determination/Decision:	Apr-21

**PDF 1.10 Audit Team**

	Column1	Name	ASC Registration
PDF 1.10.1	Lead Auditor	Paul Casburn	
PDF 1.10.2	Technical Experts ( <i>specify the activities to be implemented by the expert(s)</i> )		
PDF 1.10.3	Social Auditor	Robert Johnson	

## ASC Audit Report - Opening

### 1 Title Page

1.1 Name of Applicant	Grieg Seafood BC Ltd.
1.2 Report Title [e.g. Public Draft Certification Report/ Final certification report/Surveillance report]	Final Certification Report - Hecate
1.3 CAB name	SGS Netherlands BV
1.4 Name of Lead Auditor	Paul Casburn
1.5 Names and positions of report authors and reviewers	Paul Casburn, Lead auditor. Robert Johnson, Social auditor. Nikki den Boon, Reviewer and Certification Decision Manager.
1.6 Client's Contact person: Name and Title	Kristin Storry, Certification manager
1.7 Date	Monday, May 10, 2021

### 2 Table of Contents

1 Title Page
2 Table of Contents
3 Glossary
4 Summary
5 CAB Contact Information
6 Background on the Applicant
7 Scope
8 Audit Plan
9. Audit Template
10 Audit Report Traceability
11 Findings
12 Evaluation Results
13 Decision
14 Surveillance
Client Internal Management System - Multisite
Internal Auditors Requirements
List of Sites

### 3 Glossary

Terms and abbreviations that are specific to this audit report and that are not otherwise defined in the ASC glossary

GMO = Genetically modified Organism. ISA=Infectious salmonic anemia. PRV=Piscine rheovirus. BKD = Bacterial Kidney disease. DFO = Department of fisheries and Oceans.

#### 4 Summary

A concise summary of the report and findings. The summary shall be written to be readable to the stakeholders and other interested parties.

4.1	A brief description of the scope of the audit ( <i>including activities of the UoC being audited</i> )	The Scope is under the ASC salmon standard V1.3 and CAR V2.2 of the site called Hecate. The Scope includes all farming related activities of the farm. The audit evaluated the Environmental and Social compliance of the farm to the standard. The related management systems are also within the Scope of Audit and any associated site infrastructure.	
4.2	A brief description of the operations of the unit of certification	Farming of Atlantic salmon from smolt to harvest size.	
4.3	Type of unit of certification ( <i>select only one type of unit of certification in the list</i> )	Single Farm	
4.4	Type of audit ( <i>select all the types of audit that apply in the list</i> )	Initial audit	
4.4.1	Number of sites included in the unit of certification	Owned by client	Subcontracted by client
	Initial audit - 02/2021	1	0
	Surveillance audit 1 - mm/ yyyy		
	Surveillance audit 2 - mm/ yyyy		
	Recertification audit - mm/ yyyy		

4.5	A summary of the major findings	There were no major findings. See summary of findings sheet.
4.6	Did the audit include harvesting activities of the principle product to be audited?	No. Harvest was not witnessed.
4.7	If not, provide a justification for the alternative timing.	As this was a first audit the salmon onsite have not yet reached harvest size. It's the intention to witness harvesting in future audits and if the site achieve certification.
4.6	The Audit determination	The audit has been conducted remotely using submitted documents, pictures, video clips, distance interviews and real time camera reviews. Challenges and difficulties encountered conducting the remote audit included erratic wifi coverage due to remote site locations. The audit team confirms that the effectiveness of remote auditing activities resulted in achieving all audit objectives. Certification granted on 10-05-2021

### 5 CAB Contact Information

5.1	CAB Name	SGS Nederland BV
5.2	CAB Mailing Address	P.O. Box 200, 3200 AE Spijkenisse, The Netherlands
5.3	Email Address	<a href="mailto:asc.reports@sgs.com">asc.reports@sgs.com</a>
5.4	Other Contact Information	

### 6 Background on the Applicant

6.1	Information on the Public Disclosure Form (Form 3) except 1.2-1.3. All information updated as necessary to reflect the audit as conducted.	Yes
6.2	A description of the unit of certification ( <i>for initial audit</i> ) / changes, if any ( <i>for surveillance and recertification audits</i> )	The site called Hecate is located a Esperanza Inlet & Hecate Channel, on the Western side of Vancouver Island. It produces Atlantic salmon, from smolt to harvest size in 12 steel pens 30x30x20m in size.
6.3	Other certifications currently held by the unit of certification	GAA BAP certification as part of a Group certificate.
6.4	Other certification(s) obtained by the UoC before this audit	GAA BAP certification as part of a Group certificate.
6.5	Estimated annual production volumes of the unit of certification of the <u>current</u> year	1860 tons
6.6	<u>Actual</u> annual production volumes of the unit of certification of the <u>previous</u> year ( <i>mandatory for surveillance and recertification</i> )	0
6.7	Production system(s) employed within the unit of certification ( <i>select one or more in the list</i> )	Steel Marine pens

<b>6.8</b> Number of employees working at the unit of certification ( <i>see notes in comment to this cell</i> )	6 (2-3 onsite at a time)
<b>6.9</b> Size, and/or number of ponds, pens (if multi site, per site)	12 steel pens 30x30x20m in size.

**7 Scope**

<b>7.1</b> The Standard(s) against which the audit was conducted, including version number	ASC Salmon V1.3
<b>7.2</b> The species produced at the applicant farm ( <i>in English and Latin names</i> )	Atlantic salmon ( <i>Salmo salar</i> )
<b>7.3</b> A description of the scope of the audit including a description of whether the unit of certification covers all production or harvest areas (i.e. ponds) managed by the operation or located at the included sites, or whether only a sub-set of these are included in the unit of certification. If only a sub-set of production or harvest areas are included in the unit of certification these shall be clearly named.	The audit has been conducted remotely using submitted documents, pictures, video clips, distance interviews and real time camera reviews. The Scope includes all farming related activities of the farm site evaluating the Environmental and Social compliance of the farm site to the standard. The related management systems are also within the Scope of Audit. All the pens harvested are covered by the Scope.
<b>7.4</b> The names and addresses of any storage, processing, or distribution sites included in the operation (including subcontracted operations) that will potentially be handling certified products, up until the point where product enters further chain	Brown's Bay Packing Co. Ltd. 15007 Browns Bay Rd. Campbell River, British Columbia Canada V9H 1N9
<b>7.5</b> Description of the receiving water body(ies).	The site called Steamer is located a Esperanza Inlet & Hecate Channel, on the Western side of Vancouver Island.

**8 Audit Plan**

<b>8.1</b> The names of the auditors and the dates when each of the following were undertaken or completed: conducting the audit, writing of the report, reviewing the report, and taking the certification decision.	January 2021. Pre audit preparation. Paul Casburn January 26th to 29th 2021. Audit proper. Paul Casburn and Robert Johnson February 1st to 6th 2021. Audit report drafting. Paul Casburn and Robert Johnson. 15 February, 11th March 2021. Technical Review. 10th of May 2021. Certification Decision
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<b>8.2</b> Previous Audits (if applicable):	Standard	Closing deadline - status - closing date of each NC
	NC reference number	clause reference
8.2.1 Initial audit - 01/2021		See Summary of Findings
Surveillance audit 1 - mm/ yyyy		
Surveillance audit 2 - mm/ yyyy		
Recertification audit - mm/ yyyy		
Unannounced audit - mm/ yyyy		
NC close-out audit - mm/ yyyy		

Scope extension audit mm/ yyyy

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**8.3** Audit plan as implemented including:

	Dates	Locations
8.3.1 Desk Reviews	Jan-21	Auditor offices
8.3.2 Onsite audits	January 26th to 29th	The audit has been conducted remotely. Onsite realtime locations and clients home offices. Auditors in home offices.
8.3.3 Stakeholder interviews and Community meetings		None requested
8.3.4 Draft report sent to client	12-Mar-21	SGS Offices
8.3.5 Draft report sent to ASC	15-Mar-21	SGS Offices
8.3.6 Final report sent to Client and ASC	10-May-21	SGS Offices

**8.4** Names and affiliations of individuals consulted or otherwise involved in the audit including: representatives of the client, employees, contractors, stakeholders and any observers that participated in the audit.

Kristin Storry, Certification Manager, Grieg Seafood BC Ltd. David Minato, Certification Specialist, Grieg Seafood BC Ltd. Tim Hewison, Fish health manager, Grieg Seafood BC Ltd. Delia Harsan, HR dept, Grieg Seafood BC Ltd. Mihaela Cicocan, HR generalist, Grieg Seafood BC Ltd
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**8.5** Stakeholder submissions, including written or other documented information and CAB written responses to each submission at different stages of the certification process (audit notification, during on-sit audit, public comment period)

Name of stakeholder (if permission given to make name public)	Relevance to be contacted	Date of contact	CAB responded Yes/No	Brief summary of points Raised	Use of comment by CAB	Response sent to stakeholder
	None					

**8.6** E5.1.i List of sites exempted from the scope of an initial audit and how they meet conditions in E5.1.i

	NA
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**8.6** E5.1.ii Justification for auditing site(s) meeting conditions under E5.1.i

	NA
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**8.7** E5.1.1.i List of sites removed after the initial audit

	NA
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**8.7** E5.2.2 Reason for the removal of sites from the certificate.

	NA
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**8.8** E5.4 Map of sites included in the unit of certification has been attached

NA

**8.9** E5.5 Site(s) in following period included in the audit (*only for surveillance and re-certification audits*)

NA

Audit report- ASC Salmon Standard v.1.3 Corresponds to Salmon standard v. 1.3		PRINCIPLE 1: COMPLY WITH ALL APPLICABLE NATIONAL LAWS AND LOCAL REGULATIONS Criterion 1.1 Compliance with all applicable local and national legal requirements and regulations		Evaluation (Per indicator, select one category in the drop-down menu)	Description of NC Provide an explanation of the reason(s) for the classification of any NCs or non-applicability	Value/ Metric Provide values - If applicable for the respective Indicator
Indicator	Compliance Criteria (Use as guidance for audit only)	Audit evidence 1. Write down all audit evidence. Audit evidence (including evidence of conformity and nonconformity) should be recorded so that the audit can be repeated by a different audit team. 2. Replace explanatory text. 3. If you see any Compliance Criteria which is not listed below, please describe also in the cells below. A. Review compliance with applicable land and water use laws.				
1.1.1	<p><b>Indicator:</b> Presence of documents demonstrating compliance with local and national regulations and requirements on land and water use</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain digital or hard copies of applicable land and water use laws.</p> <p>b. Maintain original (or legalised copies of) lease agreements, land titles, or concession permit on file as applicable.</p> <p>c. Keep records of inspections for compliance with national and local laws and regulations (if such inspections are legally required in the country of operation).</p> <p>d. Obtain permits and maps showing that the farm does not conflict with national preservation areas.</p>	<p>Details of licencing provided in the form of original copies. No conflict with national preservation areas. Reference the supplied Impact assessment dated October 2020. This assessment included maps of all preservation areas. The closest marine provincial park is Nuchatlitz Park which is over 12km distance. Inspection by the Department of your aquaculture facility: Licence #122157, Hecate on September 16, 2020, at the time of inspection, the Department identified no deficiencies related to the Condition(s) of Licence that were assessed.</p> <p>Licence No: AQFF 122157 Date Issued: Aug 25, 2020. Expiry Date: Jun 30, 2022 Facility number: 1862# Pacific Fishery Management Area: 25 Pacific Fishery Management Sub-Area: 9 Landfile Number: 1411180# Site common name: Hecate, Hecate Channel# Licence Holder: Grieg Seafood BC Ltd.# Combined peak biomass: 4000 tons Species: Atlantic Salmon (Salmo salar)# Site specific conditions: The cumulative combined peak biomass associated with Grieg Seafood BC Ltd.'s Esperanza, Hecate, Steamer and Lutes Creek aquaculture facilities located in Hecate Channel shall not exceed 11,200 tonnes at any given time and the production at this farm (Facility Ref. No. 1862) shall not exceed the approved peak biomass authorized on the face page of this licence.</p>	Compliant		
1.1.2	<p><b>Indicator:</b> Presence of documents demonstrating compliance with all tax laws</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of tax payments to appropriate authorities (e.g. land use tax, water use tax, revenue tax). Note that CABs will not disclose confidential tax information unless client is required to or chooses to make it public.</p> <p>b. Maintain copies of tax laws for jurisdiction(s) where company operates.</p> <p>c. Register with national or local authorities as an "aquaculture activity".</p>	<p>Taxes include federal corporate income tax, federal and provincial consumer taxes, payroll taxes, property taxes most are filed monthly except the property taxes which are on an annual basis. A report from an independent company was easily retrievable both for taxes and for insurance purposes. Grieg was able to give a detailed explanation on the tax situation both federally and provincially.</p> <p>The company is registered. Aquaculture activities have tax benefits in British Columbia. Receipts were in place to revenue showing payment of property tax for all the Grieg site.</p> <p>Name of Company: GRIEG SEAFOOD B.C. LTD. Incorporation Number: BC1147456 Business licence number: 100545. Valid until February 27th 2021.</p>	Compliant		
1.1.3	<p><b>Indicator:</b> Presence of documents demonstrating compliance with all relevant national and local labor laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain copies of national labor codes and laws applicable to farm (scope is restricted to the farm sites within the unit certification.)</p> <p>b. Keep records of farm inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation).</p>	<p>The BC Employment Standards Act - this details minimum wages and rights for employees and collective agreements and bargaining. The Minister of Labour, Citizens Services and Open Government is the relevant Authority.</p> <p>Farm labour inspections are not required in BC. See full details in Principal 6 of this audit.</p> <p>The minimum wage in B.C. is \$14.60 per hour (as of June 1, 2020)</p>	Compliant		
1.1.4	<p><b>Indicator:</b> Presence of documents demonstrating compliance with regulations and permits concerning water quality impacts</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Obtain permits for water quality impacts where applicable.</p> <p>b. Compile list of and comply with all discharge laws or regulations.</p> <p>c. Maintain records of monitoring and compliance with discharge laws and regulations as required.</p>	<p>DFO have authored the Aquaculture Activities Regulations guidance document for Owners and operators August 2015. Annex 8 Program protocols for Marine Finfish environmental monitoring in BC. Sampling within 30 days of peak biomass. DEPOMOD is approved as a modelling tool. Sulphide is the required parameter to be monitored. The limits are &lt;1300 at 30 meters from cage edge and &lt;700 um at 125m from cage edge. If the bottom is hard then a video transect of the bottom is conducted from 80m to 140m from the cage edge looking for opportunistic worm colonies. Sample directions are on the dominant and subdominant direction of the current. Below the thresholds then the site can be re-stocked. If above the levels, then re-sampling must take place until levels are below the required metric and then re-stocking can take place.</p> <p>Letter from DFO, stating compliance to the benthic requirements, is sent to the company following sampling and results. Details in Principal 2 of this audit report.</p>	Compliant		
Footnote		[1] Closed production systems that can demonstrate that they collect and responsibly dispose of > 75% of solid nutrients from the production system are exempt from standards under Criterion 2.1. See Appendix VI for requirements on transparency for 2.1.1, 2.1.2 and 2.1.3.				
<p><b>Instruction to Clients and CABs on Criterion 2.1 - Modification of the Benthic Sampling Methodology</b></p> <p>For farms located in a jurisdiction where specific benthic sampling locations are required under law, clients may request to modify the benthic sampling methodology prescribed in Appendix I-1 to allow for sampling at different locations and/or changes in the total number of samples. Where modifications are sought, farms shall provide a full justification to the CAB for review. Requests for modification shall be supported by mapping of differences in sampling locations. In any event, the sampling locations must at a minimum include samples from the cage edge and samples taken from inside and outside of a defined AZE.</p> <p>CABs shall evaluate client requests to modify benthic methodology based on whether there is a risk that such changes would jeopardize the intent and rigor of the ASC Salmon Standard. If the CAB determines that proposed modifications are low risk, the CAB shall ensure that details of the modified benthic sampling methodology are fully described and justified in the audit report.</p>						
<p>Note: Under Indicator 2.1.1, farms can choose to measure redox potential (Option #1) or sulphide concentration (Option #2). Farms do not have to demonstrate that they meet both threshold values.</p>						

2.1.1	<p><b>Indicator:</b> Redox potential or [2] sulphide levels in sediment outside of the Allowable Zone of Effect (AZE) [3], following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> Redox potential &gt; 0 mV or Sulphide ≤ 1,500 µMol/L</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Prepare a map of the farm showing boundary of AZE (30 m) and GPS locations of all sediment collections stations. If the farm uses a site-specific AZE, provide justification [3] to the CAB.</p> <p>b. If benthos throughout the full AZE is hard bottom, provide evidence to the CAB and request an exemption from 2.1.1c-f, 2.1.2 and 2.1.3.</p> <p>c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.</p> <p>d. Collect sediment samples in accordance with the methodology in Appendix I-1 (i.e. at the time of peak cage biomass and at all required stations).</p> <p>e. For option #1, measure and record redox potential (mV) in sediment samples using an appropriate, nationally or internationally recognized testing method.</p> <p>f. For option #2, measure and record sulphide concentration (µM) using an appropriate, nationally or internationally recognized testing method.</p> <p>g. Submit test results to ASC as per Appendix VI at least once for each production cycle. If site has hard bottom and cannot complete tests, report this to ASC.</p>	<p>This site and its associated zone of effect is a mixed bottom. To that end the sulphides where possible and video transect surveys are measured to the DFO guidelines of measurement at peak biomass and up to 1 month later. A positive result is required to allow for the site to be re-stocked. Benthic results reported for the previous year class effects prior to stocking the site for the current stock on site. Survey date was September 4th 2019. Letter from DFO stating that 'No further monitoring is required prior to fish entry at this facility' and dated October 4th 2019. Mainstream biological conducted the sampling for the applicant. As this is an initial audit there are no results for Sulphides in the sediment outside the AZE, relative to the current onsite fish stock, as the site has yet to reach peak biomass.</p>	Minor	<p>As this is an initial audit there are no results for Sulphides in the sediment outside the AZE, relative to the current onsite fish stock, as the site has yet to reach peak biomass. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
Footnote	[2] Farm sites can choose whether to use redox or sulphide. Farms do not have to demonstrate that they meet both.					
Footnote	[3] Allowable Zone of Effect (AZE) is defined under this standard as 30 meters. For farm sites where a site-specific AZE has been defined using a robust and credible modeling system such as the SEPA AUTODEPOMOD and verified through monitoring, the site-specific AZE shall be used.					
2.1.2	<p><b>Indicator:</b> Faunal index score indicating good [4] to high ecological quality in sediment outside the AZE, following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> AZTI Marine Biotic Index (AMBI [5]) score ≤ 3.3, or Shannon-Wiener Index score &gt; 3, or Benthic Quality Index (BQI) score ≥ 15, or Infaunal Trophic Index (ITI) score ≥ 25</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Prepare a map showing the AZE (30 m or site specific) and sediment collections stations (see 2.1.1).</p> <p>b. Inform the CAB whether the farm chose option #1, #2, #3, or #4 to demonstrate compliance with the requirement.</p> <p>c. Collect sediment samples in accordance with Appendix I-1 (see 2.1.1).</p> <p>d. For option #1, measure, calculate and record AZTI Marine Biotic Index [5] score of sediment samples using the required method.</p> <p>e. For option #2, measure, calculate and record Shannon-Wiener Index score of sediment samples using the required method.</p> <p>f. For option #3, measure, calculate and record Benthic Quality Index (BQI) score of sediment samples using the required method.</p> <p>g. For option #4, measure, calculate and record Infaunal Trophic Index (ITI) score of sediment samples using the required method.</p> <p>h. Retain documentary evidence to show how scores were obtained. If samples were analyzed and index calculated by an independent laboratory, obtain copies of results.</p> <p>i. Submit faunal index scores to ASC (Appendix VI) at least once for each production cycle.</p>	<p>Notes: - Under Indicator 2.1.2, farms can choose one of four measurements to show compliance with the faunal index Requirement: AMBI (Option #1), Shannon-Wiener Index (Option #2), BQI (Option #3), or ITI (Option #4). Farms do not have to demonstrate that they meet all four threshold values. - If a farm is exempt due to hard bottom benthos (see 2.1.1b), then 2.1.2 does not apply and this shall be noted in the audit report.</p> <p>VR nr.224 approved November 2018 by ASC on indicator 2.1.2 and 2.1.3 Rationale for use: BC salmon farms have been granted a variance to Indicators 2.1.2 and 2.1.3 and instead rely on the scientifically proven and federally regulated sulphide surrogates.</p>	N/A	<p>Exempted by VR in the evidence.</p>	
Footnote	[4] "Good" Ecological Quality Classification: The level of diversity and abundance of invertebrate taxa is slightly outside the range associated with the type-specific conditions. Most of the sensitive taxa of the type-specific communities are present.					
Footnote	[5] <a href="http://www.azti.es/en/ambi-azti-marine-biotic-index.html">http://www.azti.es/en/ambi-azti-marine-biotic-index.html</a> .					
2.1.3	<p><b>Indicator:</b> Number of macrofaunal taxa in the sediment within the AZE, following the sampling methodology outlined in Appendix I-1</p> <p><b>Requirement:</b> ≥ 2 highly abundant [6] taxa that are not pollution indicator species</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Document appropriate sediment sample collection as for 2.1.1a and 2.1.1c, or exemption as per 2.1.1b.</p> <p>b. For sediment samples taken within the AZE, determine abundance and taxonomic composition of macrofauna using an appropriate testing method.</p> <p>c. Identify all highly abundant taxa [6] and specify which ones (if any) are pollution indicator species.</p> <p>d. Retain documentary evidence to show how taxa were identified and how counts were obtained. If samples were analyzed by an independent lab, obtain copies of results.</p> <p>e. Submit counts of macrofaunal taxa to ASC (Appendix VI) at least once for each production cycle.</p>	<p>VR nr.224 approved November 2018 by ASC on indicator 2.1.2 and 2.1.3 Rationale for use: BC salmon farms have been granted a variance to Indicators 2.1.2 and 2.1.3 and instead rely on the scientifically proven and federally regulated sulphide surrogates.</p>	N/A	<p>Exempted by VR in the evidence.</p>	
Footnote	[6] Highly abundant: Greater than 100 organisms per square meter (or equally high to reference site(s) if natural abundance is lower than this level).					

2.1.4	<p><b>Indicator:</b> Definition of a site-specific AZE based on a robust and credible modelling system</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [1]</p>	<p>a. Undertake an analysis to determine the site-specific AZE and depositional pattern.</p> <p>b. Maintain records to show how the analysis (in 2.1.4a) is robust and credible based on modeling using a multi-parameter approach [7].</p> <p>c. Maintain records to show that modeling results for the site-specific AZE have been verified with &gt; 6 months of monitoring data.</p>	<p>DEPOMOD is required by DFO on sites in British Columbia. These modelled zones of effect are shown on the site maps and used to establish sampling stations. Maps in place in the benthic report includes the Depomod site impact zones. Depomod is based on the amount of feed per cage per day. The Depomod was carried out in December 2020. There has been no change to the site since it was modelled and the stocking density and biomass has remained the same. The site is also in the same location. The model for this site was based on an average feed rate of 540kg/day. The DFO benthic survey requirement detailed in 2.1.1 uses DEPOMOD for survey design.</p>	Compliant	
<p>Footnote [7] Robust and credible: The SEPA AUTODEPOMOD modeling system is considered to be an example of a credible and robust system. The model must include a multi-parameter approach. Monitoring must be used to ground-truth the AZE proposed through the model.</p>					
<p style="text-align: center;"><i>Criterion 2.2 Water quality in and near the site of operation [8]</i></p>					
<p style="text-align: center;"><b>Compliance Criteria (Required Client Actions):</b>      <b>Auditor Evaluation (Required CAB Actions):</b></p>					
<p>Footnote [8] See Appendix VI for transparency requirements for 2.2.1, 2.2.2, 2.2.3 and 2.2.5.</p>					
2.2.1	<p><b>Indicator:</b> Weekly average percent saturation [9] of dissolved oxygen (DO) [10] on farm, calculated following methodology in Appendix I-4</p> <p><b>Requirement:</b> ≥ 70% [11]</p> <p><b>Applicability:</b> All farms except as noted in [11]</p>	<p>a. Monitor and record on-farm percent saturation of DO at a minimum of twice daily using a calibrated oxygen meter or equivalent method. For first audits, farm records must cover ≥ 6 months.</p> <p>b. Provide a written justification for any missed samples or deviations in sampling time.</p> <p>c. Calculate weekly average percent saturation based on data.</p> <p>d. If any weekly average DO values are &lt; 70%, or approaching that level, monitor and record DO at a reference site and compare to on-farm levels (see Instructions).</p> <p>e. Arrange for auditor to witness DO monitoring and calibration while on site.</p> <p>f. Submit results from monitoring of average weekly DO as per Appendix VI to ASC at least once per year.</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 2.2.1 - Monitoring Average Weekly Percent Saturation of Dissolved Oxygen</b></p> <p>Appendix I-4 presents the required methodology that farms must follow for sampling the average weekly percent saturation of dissolved oxygen (DO). Key points of the method are as follows:</p> <ul style="list-style-type: none"> <li>- measurements may be taken with a handheld oxygen meter or equivalent chemical method;</li> <li>- equipment is calibrated according to manufacturer's recommendations;</li> <li>- measurements are taken at least twice daily: once in the morning (6 -9 am) and once in the afternoon (3-6 pm ) as appropriate for the location and season;</li> <li>- salinity and temperature must also be measured when DO is sampled;</li> <li>- sampling should be done at 5 meters depth in water conditions that would be experienced by fish (e.g. at the downstream edge of a net pen array);</li> <li>- each week, all DO measurements are used in the calculation of a weekly average percent saturation.</li> </ul> <p>If monitoring deviates from prescribed sampling methodology, the farm shall provide the auditor with a written justification (e.g. when samples are missed due to bad weather). In limited and well-justified situations, farms may request that the CAB approve reduction of DO monitoring frequency to one sample per day.</p> <p><u>Exception [see footnote 12]</u> If a farm does not meet the minimum 70 percent weekly average saturation requirement, the farm must demonstrate the consistency of percent saturation with a reference site. The reference site shall be at least 500 meters from the edge of the net pen array, in a location that is understood to follow similar patterns in upwelling to the farm site and is not influenced by nutrient inputs from anthropogenic causes including aquaculture, agricultural runoff or nutrient releases from coastal communities. For any such exceptions, the auditor shall fully document in the audit report how the farm has demonstrated consistency with the reference site.</p> <p style="text-align: center;">Note 1: <i>Percent saturation</i> is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.</p> <p>Oxygen readings are taken daily and then averaged weekly for ASC requirements. Reference site Oxygen is taken daily also. As there are 3 sites within the water body, the same reference station is used and its located approximately equal distance from the 3 sites and all 3 sites show similar patterns to on site oxygen levels. Weekly averages were calculated and submitted to ASC. There were no missing samples during fish production. There are occasional low oxygen readings, which occur naturally in this geographic area. The site readings and reference station readings show good correlation between each other. There was only 1 readings below 70% during the current fish cycle. There were no missing samples during fish production. There are occasional low oxygen readings, which occur naturally in this geographic area. The site readings and reference station readings show good correlation between each other. Week 37 site weekly average was 68.36% and reference station was 76%. The difference makes sense when looking at the full range of readings that are provided in the transparency documents and consistency is met. Generally, the site is lower than the reference station as the fish is removing some of the background oxygen naturally. Average across the year was 86.8%. For two weeks the reference site itself fell below the 70% indicator threshold.</p>	Compliant	>70%
<p>Footnote [9] Percent saturation: Percent saturation is the amount of oxygen dissolved in the water sample compared to the maximum amount that could be present at the same temperature and salinity.</p>					
<p>Footnote [10] Averaged weekly from two daily measurements (proposed at 6 am and 3 pm).</p>					
<p>Footnote [11] An exception to this standard shall be made for farms that can demonstrate consistency with a reference site in the same water body.</p>					
2.2.2	<p><b>Indicator:</b> Maximum percentage of weekly samples from 2.2.1 that fall under 2 mg/L DO</p> <p><b>Requirement:</b> 5%</p> <p><b>Applicability:</b> All</p>	<p>a. Calculate the percentage of on-farm samples taken for 2.2.1a that fall under 2 mg/L DO.</p> <p>b. Submit results from 2.2.2a as per Appendix VI to ASC at least once per year.</p>	<p>There were no readings below 2mg/DO. Data was submitted to ASC.</p>	Compliant	
2.2.3	<p><b>Indicator:</b> For jurisdictions that have national or regional coastal water quality targets [12], demonstration through third-party analysis that the farm is in an area recently [13] classified as having "good" or "very good" water quality [14]</p> <p><b>Requirement:</b> Yes [15]</p> <p><b>Applicability:</b> All farms except as noted in [15]</p>	<p>a. Inform the CAB whether relevant targets and classification systems are applicable in the jurisdiction. If applicable, proceed to "2.2.3.b". If not applicable, take action as required under 2.2.4</p> <p>b. Compile a summary of relevant national or regional water quality targets and classifications, identifying the third-party responsible for the analysis and classification.</p> <p>c. Identify the most recent classification of water quality for the area in which the farm operates.</p>	<p>The company has commissioned a report into the water quality in the Esperanza farm sites area dated November 25th 2019 and carried out by Strategic Natural Resource Consultants. The report is a mixture of provincial historical sampling and site sampling over a 6 month period. The conclusion drawn from the report states "Water quality monitoring at the Esperanza, Hecate and Steamer farms, in Esperanza Inlet, over an eight month period from May - December 2018, showed that all regional and national objectives for water quality were met. All sampled total nitrate levels were below the maximum established by the Provincial Water Quality Guidelines (WQG), and well below those of the Canadian Council of Ministers of the Environment (CCME). This indicates that farming activities in Esperanza Inlet have had little impact on the water quality in the area. While the Water Quality Assessment Report for the Esperanza Farm Sites, shows little effect on the water body from the farming activity, sampling was from 2018. There is no evidence to show that the water body is still classified as having "good" or "very good" water quality.</p>	Minor	<p>While the Water Quality Assessment Report for the Esperanza Farm Sites, shows little effect on the water body from the farming activity, sampling was from 2018. There is no evidence to show that the water body is still classified as having "good" or "very good" water quality. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>
<p>Footnote [12] Related to nutrients (e.g., N, P, chlorophyll A).</p>					

Footnote	[13] Within the two years prior to the audit.					
Footnote	[14] Classifications of "good" and "very good" are used in the EU Water Framework Directive. Equivalent classification from other water quality monitoring systems in other jurisdictions are acceptable.					
Footnote	[15] Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients as well as > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt from standards 2.2.3 and 2.2.4.					
2.2.4	<p><b>Indicator:</b> For jurisdictions without national or regional coastal water quality targets, evidence of monitoring of nitrogen and phosphorous [16] levels on farm and at a reference site, following methodology in Appendix I-5</p> <p><b>Requirement:</b> Consistency with reference site</p> <p><b>Applicability:</b> All farms except as noted in [16]</p>	<p>a. Develop, implement, and document a weekly monitoring plan for N, NH4, NO3, total P, and ortho-P in compliance with Appendix I-5. For first audits, farm records must cover ≥ 6 months.</p> <p>b. Calibrate all equipment according to the manufacturer's recommendations.</p> <p>c. Submit data on N and P to ASC as per Appendix VI at least once per year.</p>	See 2.2.3		N/A	
Footnote	[16] Farms shall monitor total N, NH4, NO3, total P and Ortho-P in the water column. Results shall be submitted to the ASC database. Methods such as a Hach kit are acceptable.					
2.2.5	<p><b>Indicator:</b> Demonstration of calculation of biochemical oxygen demand (BOD [17]) of the farm on a production cycle basis</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 2.2.5 - Calculating Biochemical Oxygen Demand</b></p> <p>Biochemical Oxygen Demand (BOD) can be calculated based on cumulative inputs of N and C to the environment over the course of the production cycle.  <math>BOD = ((total\ N\ in\ feed - total\ N\ in\ fish) * 4.57) + ((total\ C\ in\ feed - total\ C\ in\ fish) * 2.67)</math>.</p> <ul style="list-style-type: none"> <li>A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, "fish" refers to harvested fish. In this case, farm must submit breakdown of N &amp; C captured/filtered/absorbed to ASC along with method used to estimate nutrient reduction.</li> <li>Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at <a href="http://web.uvic.ca/~gapi/explore-gapi/bod.html">http://web.uvic.ca/~gapi/explore-gapi/bod.html</a>.</li> </ul> <p>Note 1: Calculation requires a full production cycle of data and is required beginning with the production cycle first undergoing certification. If it is the first audit for the farm, the client is required to demonstrate to the CAB that data is being collected and an understanding of the calculations.</p> <p>Note 2: Farms may seek an exemption to Indicator 2.2.5 if: the farm collects BOD samples at least once every two weeks, samples are independently analyzed by an accredited laboratory, and the farm can show that BOD monitoring results do not deviate significantly from calculated annual BOD load.</p>				
		<p>a. Collect data throughout the course of the production cycle and calculate BOD according to formula in the instruction box.</p> <p>b. Submit calculated BOD as per Appendix VI to ASC for each production cycle.</p>	BOD is being calculated for the current cycle (In the water and not yet complete) and has been reported to ASC. The BOD to date is 2775 mT of O2.	Compliant		
Footnote	[17] BOD calculated as: $((total\ N\ in\ feed - total\ N\ in\ fish) * 4.57) + ((total\ C\ in\ feed - total\ C\ in\ fish) * 2.67)$ . A farm may deduct N or C that is captured, filtered or absorbed through approaches such as IMTA or through direct collection of nutrient wasted. In this equation, "fish" refers to harvested fish. Reference for calculation methodology: Boyd C. 2009. Estimating mechanical aeration requirement in shrimp ponds from the oxygen demand of feed. In: Proceedings of the World Aquaculture Society Meeting; Sept 25-29, 2009; VeraCruz, Mexico. And: Global Aquaculture Performance Index BOD calculation methodology available at <a href="http://web.uvic.ca/~gapi/explore-gapi/bod.html">http://web.uvic.ca/~gapi/explore-gapi/bod.html</a> .					
2.2.6	<p><b>Indicator:</b> Appropriate controls are in place that maintain good culture and hygienic conditions on the farm which extends to all chemicals, including veterinary drugs, thereby ensuring that adverse impacts on environmental quality are minimized.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Document control systems in good culture and hygiene that includes all appropriate elements.</p> <p>b. Apply the systems ensuring that staff are aware, qualified and trained to properly implement them.</p>	<p>site was reviewed during the audit taking fuels, chemical storage and spill preparedness into consideration. The site has adequate bunding for all chemicals and fuels. There are spill kits located about the storage areas. There is an annual spill drill exercise conducted annually on site. Staff are trained on chemical handling and hazard awareness. As of the 26th of January 2021 DATS showed the site was at a training level of 90% for all required training. The 5 staff members have all done the Fuel, Waste and Hazardous Materials Management SOP. The Emergency Preparedness &amp; Response SOP. Drill was carried out on the 24th January 2021.</p>	Compliant		
<i>Criterion 2.3 Nutrient release from production</i>						
<b>Compliance Criteria (Required Client Actions):</b>		<b>Auditor Evaluation (Required CAB Actions):</b>				
		Note: The methodology given in Appendix I-2 is used to determine the fines (dust and small fragments) in finished product of fish feed which has a diameter of 3 mm or more.				
2.3.1	<p><b>Indicator:</b> Percentage of fines [18] in the feed at point of entry to the farm [20] (calculated following methodology in Appendix I-2)</p> <p><b>Requirement:</b> &lt; 1% by weight of the feed</p> <p><b>Applicability:</b> All farms except as noted in [19]</p>	<p>a. Determine and document a schedule and location for quarterly testing of feed. If testing prior to delivery to farm site, document rationale behind not testing on site.</p> <p>b. If using a sieving machine, calibrate equipment according to manufacturer's recommendations.</p> <p>c. Conduct test according to detailed methodology in Appendix I-2 and record results for the pooled sample for each quarter. For first audits, farms must have test results from the last 3 months.</p>	<p>VR 246 approved 17.1.18 by ASC on indicator 2.3.1 ASC accept fines results produced by Skretting and as an acceptable proxy to farm-level sampling. The EWOS feed company is using the same VR as well as the site is using both feeds.</p> <p>EWOS feed</p> <p>RAPID S0 500 DERMIC 60A 1 1446344 0.03%</p> <p>DYNAMIC RED SHM 30C/30A 0.00%</p> <p>RAPID S1 500 50A 0.03%</p> <p>RAPID S1 1000 50A 0.12%</p> <p>Skretting</p> <p>GR Express 1000 0.1%</p> <p>GR Express 2000 0.07%</p> <p>GR Express 3500 0.1%</p>	Compliant	<1%	
Footnote	[18] Fines: Dust and fragments in the feed. Particles that separate from feed with a diameter of 5 mm or less when sieved through a 1 mm sieve, or particles that separate from feed with a diameter greater than 5 mm when sieved through a 2.36 mm sieve. To be measured at farm gate (e.g., from feed bags after they are delivered to farm).					
Footnote	[19] To be measured every quarter or every three months. Samples that are measured shall be chosen randomly. Feed may be sampled immediately prior to delivery to farm for sites with no feed storage where it is not possible to sample on farm. Closed production systems that can demonstrate the collection and responsible disposal of > 75% of solid nutrients and > 50% of dissolved nutrients (through biofiltration, settling and/or other technologies) are exempt.					
<i>Criterion 2.4 Interaction with critical or sensitive habitats and species</i>						
<b>Compliance Criteria (Required Client Actions):</b>		<b>Auditor Evaluation (Required CAB Actions):</b>				

2.4.1	<p><b>Indicator:</b> Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains at a minimum the components outlined in Appendix I-3</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>Note: If a farm has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may use such documents as evidence to demonstrate compliance with Indicator 2.4.1 as long as all components in Appendix I-3 are explicitly covered.</p> <p>a. Perform (or contract to have performed) a documented assessment of the farm's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3</p> <p>b. If the assessment (2.4.1a) identifies potential impact(s) of the farm on biodiversity or nearby critical, sensitive or protected habitats or species, prepare plan to address those potential impacts.</p> <p>c. Keep records to show how the farm implements plan(s) from 2.4.1b to minimize potential impacts to critical or sensitive habitats and species.</p>	<p>Assessment in place and titled 'Grieg Seafood Impact Assessment – Esperanza October 2020'. Species of animal and birds that are classed as endangered or critically endangered are listed. Also protected areas and maps showing the farm locations and layouts are in the assessment. The closest Marine park is over 12 miles away and is called Nuchaltitz Park. The report concludes that 'The biological impact from the site is not significant and is limited to potential interactions with species at risk and there are sufficient procedures in place to minimize these interactions.'</p> <p>Species noted in report:          Brachyramphus marmoratus <b>Marbled Murrelet Bird Endangered</b>          Enhydra lutris <b>Sea Otter Mammal Endangered</b>          Dermochelys coriacea <b>Leatherback Turtle Vulnerable</b>          Haliotis kamtschatkana <b>Northern Abalone Gastropod Endangered</b></p>	Compliant		
2.4.2	<p><b>Indicator:</b> Allowance for the farm to be sited in a protected area [20] or High Conservation Value Areas [21] (HCVAs)</p> <p><b>Requirement:</b> None [22]</p> <p><b>Applicability:</b> All farms except as noted in [22]</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 2.4.2 - Exceptions to Requirements that Farms are not sited within Protected Areas or HCVAs</b></p> <p style="text-align: center;">The following exceptions shall be made for Indicator 2.4.2:</p> <p>Exception #1: For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management).</p> <p>Exception #2: For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA.</p> <p>Exception #3: For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected.</p> <p style="text-align: center;"><b>Definitions</b></p> <p><b>Protected area:</b> "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values."</p> <p><b>High Conservation Value Areas (HCVA):</b> Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation values are maintained or enhanced</p>				
		<p>a. Provide Geographical Information System (GIS) files according to ASC guidelines (see note above) showing the boundaries of the farm relative to nearby protected areas or High Conservation Value Areas (HCVAs) as defined above (see also 1.1.1a).</p> <p>b. If the farm is <u>not</u> sited in a protected area or High Conservation Value Area as defined above, prepare a declaration attesting to this fact. In this case, the requirements of 2.4.2c-d do not apply.</p> <p>c. If the farm <u>is</u> sited in a protected area or HCVA, review the scope of applicability of Indicator 2.4.2 (see Instructions above) to determine if your farm is allowed an exception to the requirements. If yes, inform the CAB which exception (#1, #2, or #3) is allowed and provide supporting evidence.</p> <p>d. If the farm is sited in a protected area or HCVA and the exceptions provided for Indicator 2.4.2 <u>do not apply</u>, then the farm does not comply with the requirement and is ineligible for ASC certification.</p>	<p>Reviewed GIS file with all the layers in place showing the location of protected areas and HCVAs. The site is not in any of them. The site along with the other 3 Grieg sites in the water body were all established between 2006 and 2008.</p>	Compliant		
Footnote	<p>[20] Protected area: "A clearly defined geographical space, recognized, dedicated and managed through legal or other effective means, to achieve the long-term conservation of nature with associated ecosystem services and cultural values." Source: Dudley, N. (Editor) (2008), Guidelines for Applying Protected Area Management Categories, Gland, Switzerland: IUCN. x + 86pp.</p>					
Footnote	<p>[21] High Conservation Value Areas (HCVA): Natural habitats where conservation values are considered to be of outstanding significance or critical importance. HCVA are designated through a multi-stakeholder approach that provides a systematic basis for identifying critical conservation values—both social and environmental—and for planning ecosystem management in order to ensure that these high conservation values are maintained or enhanced (<a href="http://www.hcnetwork.org/">http://www.hcnetwork.org/</a>).</p>					
Footnote	<p>[22] The following exceptions shall be made for Standard 2.4.2:</p> <ul style="list-style-type: none"> <li>• For protected areas classified by the International Union for the Conservation of Nature (IUCN) as Category V or VI (these are areas preserved primarily for their landscapes or for sustainable resource management).</li> <li>• For HCVAs if the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the HCVA designation. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been identified as a HCVA.</li> <li>• For farms located in a protected area if it was designated as such after the farm was already in operation and provided the farm can demonstrate that its environmental impacts are compatible with the conservation objectives of the protected area and it is in compliance with any relevant conditions or regulations placed on the farm as a result of the formation/designation of the protected area. The burden of proof would be placed on the farm to demonstrate that it is not negatively impacting the core reason an area has been protected.</li> </ul>					

Criterion 2.5 Interaction with wildlife, including predators [23]

Compliance Criteria (Required Client Actions):		Auditor Evaluation (Required CAB Actions):				
Footnote	[23] See Appendix VI for transparency requirements for 2.5.2, 2.5.5 and 2.5.6.					
2.5.1	<p><b>Indicator:</b> Number of days in the production cycle when acoustic deterrent devices (ADDs) or acoustic harassment devices (AHDs) were used</p> <p><b>Requirement:</b> 0</p> <p><b>Applicability:</b> All</p>	<p>a. Compile documentary evidence to show that no ADDs or AHDs have been used by the farm.</p>	<p>This site was not visited directly during this audit due to Covid, however, no ADD's for marine mammals are allowed in British Columbia. The farm and company have declared that they do not use ADD's.</p>	Compliant	0	
2.5.2	<p><b>Indicator:</b> Number of mortalities [25] of endangered or red-listed [26] marine mammals or birds on the farm</p> <p><b>Requirement:</b> 0 (zero)</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a list of all predator control devices and their locations.</p> <p>b. Maintain a record of all predator incidents.</p> <p>c. Maintain a record of all mortalities of marine mammals and birds on the farm identifying the species, date, and apparent cause of death.</p> <p>d. Maintain an up-to-date list of endangered or red-listed marine mammals and birds in the area (see 2.4.1)</p>	<p>There are no predator control devices on site. The site is BAP certified as well and the site has a wildlife interactions plan and they log all interactions. Exclusion devices include top nets for bird exclusion. An electrified wire to stop sealion haul outs and an external predator net to prevent sealion and seal fish attacks. There have been no red listed animal or bird mortalities. List of endangered or red-listed marine mammals and birds in the area is present in the sites biodiversity assessment. The list is checked for updates annually.</p> <p>There have been 3 seagull mortalities in the past 2 years. There have been no mammals.</p> <p>In the event of an animal or bird incident, the company currently does not identify down to species level. This could impact on the cross referencing the list of endangered or red-listed marine mammals and birds in the area.</p>	Minor	<p>In the event of an animal or bird incident, the company currently does not identify down to species level. This could impact on the cross referencing the list of endangered or red-listed marine mammals and birds in the area. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	0
Footnote	[25] Mortalities: Includes animals intentionally killed through lethal action as well as accidental deaths through entanglement or other means.					
Footnote	[26] Species listed as endangered or critically endangered by the IUCN or on a national endangered species list.					
2.5.3	<p><b>Indicator:</b> Evidence that the following steps were taken prior to lethal action [27] against a predator:</p> <ol style="list-style-type: none"> <li>1. All other avenues were pursued prior to using lethal action</li> <li>2. Approval was given from a senior manager above the farm manager</li> <li>3. Explicit permission was granted to take lethal action against the specific animal from the relevant regulatory authority</li> </ol> <p><b>Requirement:</b> Yes [28]</p> <p><b>Applicability:</b> All except cases where human safety is endangered as noted in [28]</p>	<p>a. Provide a list of all lethal actions that the farm took against predators during the previous 12-month period. Note: "lethal action" is an action taken to deliberately kill an animal, including marine mammals and birds.</p> <p>b. For each lethal action identified in 2.5.4a, keep record of the following:</p> <ol style="list-style-type: none"> <li>1) a rationale showing how the farm pursued all other reasonable avenues prior to using lethal action;</li> <li>2) approval from a senior manager above the farm manager of the lethal action;</li> <li>3) where applicable, explicit permission was granted by the relevant regulatory authority to take lethal action.</li> </ol> <p>c. Provide documentary evidence that steps 1-3 above (in 2.5.4b) were taken prior to killing the animal. If human safety was endangered and urgent action necessary, provide documentary evidence as outlined in [28]</p>	<p>There have been no lethal actions taken against predators. See 2.5.2</p> <p>From the SOP on wildlife interactions and dated March 2020: 'Grieg Seafood BC Ltd endeavours to control the harmful effects of predators and pests on stock at all sites via non-lethal means. To that end, the company adopts the approaches of first, avoiding attraction of predators; and second, passive exclusion. Lethal control will only be considered when there is likely to be a breach of the containment structure, or if there is concern for human safety.'</p> <p>Also its stated that: 'A marine mammal may only be culled after consultation with Grieg head office and after it has been determined by DFO that the mammal is an imminent risk for human safety or harm to the infrastructure that could result in a significant fish escape event. Any lethal actions must be made in consultation, and upon the direction of DFO (with the involvement of the Regulatory Affairs Manager).'</p>	Compliant		
Footnote	[27] Lethal action: Action taken to deliberately kill an animal, including marine mammals and birds.					
Footnote	[28] Exception to these conditions may be made for a rare situation where human safety is endangered. Should this be required, post-incident approval from a senior manager should be made and relevant authorities must be informed.					
<p><b>Instruction to Clients and CABs on Indicators 2.5.4, 2.5.5, and 2.5.6 - Clarification about the ASC Definition of "Lethal Incident"</b></p> <p>The ASC Salmon Standard has defined "Lethal incident" to include all lethal actions as well as entanglements or other accidental mortalities of non-salmonids [footnote 29]. For the purpose of assisting farms and auditors with understanding how to evaluate compliance with Indicators 2.5.4, 2.5.5, and 2.5.6, ASC has clarified this definition further:</p> <p>Total number of lethal incidents = sum of all non-salmonid deaths arising from all lethal actions taken by the farm during a given time period</p> <p>There should be a 1:1 relationship between the number of animal deaths and the number of lethal incidents reported by the farm. For example, if a farm has taken one (1) lethal action in past last two years and that single lethal action resulted in killing three (3) birds, it is considered three (3) lethal incidents within a two year period.</p> <p>The term "non-salmonid" was intended to cover any predatory animals which are likely to try to feed upon farmed salmon. In practice these animals will usually be seals or birds.</p>						
2.5.4	<p><b>Indicator:</b> Evidence that information about any lethal incidents [30] on the farm has been made easily publicly available [29]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. For all lethal actions (see 2.5.3), keep records showing that the farm made the information available within 30 days of occurrence.</p> <p>a. For all lethal actions (see 2.5.3), keep records showing that the farm made the information available within 30 days of occurrence.</p> <p>b. Ensure that information about all lethal actions listed in 2.5.4a are made easily publicly available (e.g. on a website).</p>	<p>Records are available on the Grieg website at <a href="https://www.griegseafoodcanada.com/our-environment/information-sharing/">https://www.griegseafoodcanada.com/our-environment/information-sharing/</a></p> <p>The SOP on Wildlife interaction states: 'All mortality incidents must be posted to the Grieg website within 30 days of the incident.'</p>	Compliant		
Footnote	[29] Posting results on a public website is an example of "easily publicly available." Shall be made available within 30 days of the incident and see Appendix VI for transparency requirements.					

2.5.5	<p><b>Indicator:</b> Maximum number of lethal incidents [30] on the farm over the prior two years</p> <p><b>Requirement:</b> &lt; 9 lethal incidents [31], with no more than two of the incidents being marine mammals</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain log of lethal incidents (see 2.5.3a) for a minimum of two years. For first audit, &gt; 6 months of data are required.</p> <p>b. Calculate the total number of lethal incidents and the number of incidents involving marine mammals during the previous two year period.</p> <p>c. Send ASC the farm's data for all lethal incidents [30] of any species other than the salmon being farmed (e.g. lethal incidents involving predators such as birds or marine mammals). Data must be sent to ASC on an ongoing basis (i.e. at least once per year and for each</p>	<p>There have been 3 seagull mortalities in the past 2 years. There have been no marine animal mortalities. The information has been sent to ASC.</p>	Compliant	3 seagulls
Footnote	[30] Lethal incident: Includes all lethal actions as well as entanglements or other accidental mortalities of non-salmonids.				
Footnote	[31] Standard 2.5.6 applicable to incidents related to non-endangered and non-red-listed species. This standard complements, and does not contradict, 2.5.3.				
2.5.6	<p><b>Indicator:</b> In the event of a lethal incident, evidence that an assessment of the risk of lethal incident(s) has been undertaken and demonstration of concrete steps taken by the farm to reduce the risk of future incidences</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Keep records showing that the farm undertakes an assessment of risk following each lethal incident and how those risk assessments are used to identify concrete steps the farm takes to reduce the risk of future incidents.</p> <p>b. Provide documentary evidence that the farm implements those steps identified in 2.5.6a to reduce the risk of future lethal incidents.</p>	<p>Within the SOP on animal interaction's the farms are requested to report any interaction's with animals into the companies DATS reporting system. They are divided up into Bird mortality incidents and Marine Mortality incidents. There is also an 'Emergency Response SOP Mammal Incident' dated March 2020.</p> <p>The DATS reporting system, for bird and Marine Mammal lethal incidents, does not show details of concrete steps taken by the farm, that reduces the risk of future incidence</p>	Minor	<p>The DATS reporting system, for bird and Marine Mammal lethal incidents, does not show details of concrete steps taken by the farm, that reduces the risk of future incidences. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>
<b>PRINCIPLE 3: PROTECT THE HEALTH AND GENETIC INTEGRITY OF WILD POPULATIONS</b>					
<i>Criterion 3.1 Introduced or amplified parasites and pathogens [34, 35]</i>					
<b>Compliance Criteria (Required Client Actions):</b>			<b>Auditor Evaluation (Required CAB Actions):</b>		
Footnote	[32] Farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the standards under Criterion 3.1.				
Footnote	[33] See Appendix VI for transparency requirements for 3.1.1, 3.1.3, 3.1.4, 3.1.6 and 3.1.7.				
<b>Instruction to Clients and CABs on Exemptions to Criterion 3.1</b>					
<p>According to footnote [32], farm sites for which there is no release of water that may contain pathogens into the natural (freshwater or marine) environment are exempt from the requirements under Criterion 3.1. More specifically, farms are only eligible for exemption from Criterion 3.1 if it can be shown that either of the following holds:</p> <ol style="list-style-type: none"> <li>1) the farm does not release any water to the natural environment; or</li> <li>2) any effluent released by the farm to the natural environment has been effectively treated to kill pathogens (e.g. UV and/or chemical treatment of water with testing demonstrating efficacy).</li> </ol> <p>Auditors shall fully document the rationale for any such exemptions in the audit report.</p>					
3.1.1	<p><b>Indicator:</b> Participation in an Area-Based Management (ABM) scheme for managing disease and resistance to treatments that includes coordination of stocking, fallowing, therapeutic treatments and information-sharing. Detailed requirements are in Appendix II-1.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [32]</p>	<p>a. Keep record of farm's participation in an ABM scheme.</p> <p>b. Submit to the CAB a description of how the ABM (3.1.1a) coordinates management of disease and resistance to treatments, including:</p> <ul style="list-style-type: none"> <li>- coordination of stocking;</li> <li>- fallowing;</li> <li>- therapeutic treatments; and</li> <li>- information sharing.</li> </ul> <p>c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate the ABM's compliance with all requirements in Appendix II-1, including definition of area, minimum % participation in the scheme, components, and coordination requirements.</p> <p>d. Submit dates of fallowing period(s) as per Appendix VI to ASC at least once per year.</p>	<p>VR 146 approved by ASC on indicator 3.1.1. Rationale for use of the VR is to address the impact of disease transmission of salmon farms on wild salmon in a collective approach. There are a total of 4 GRIEG operated sites in the waterbody with no other companies within 75 miles. GRIEG internally co-ordinate the sites for stocking, fallowing and medicinal purposes if required.</p> <p>Fallow dates were 140 Days (7/16/2019-12/3/2019).</p>	Compliant	
3.1.2	<p><b>Indicator:</b> A demonstrated commitment [34] to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [32]</p>	<p>Note: Indicator 3.1.2 requires that farms demonstrate a commitment to collaborate with NGOs, academics and governments on areas of mutually agreed research to measure possible impacts on wild stocks. If the farm does not receive any requests to collaborate on such research projects, the farm may demonstrate compliance by showing evidence of commitment through other proactive means such as published policy statements or directed outreach to relevant organizations.</p> <p>a. Retain records to show how the farm and/or its operating company has communicated with external groups (NGOs, academics, governments) to agree on and collaborate towards areas of research to measure impacts on wild stocks, including records of requests for research support and collaboration and responses</p> <p>b. Provide non-financial support to research activities in 3.1.2a by either:</p> <ul style="list-style-type: none"> <li>- providing researchers with access to farm-level data;</li> <li>- granting researchers direct access to farm sites; or</li> <li>- facilitating research activities in some equivalent manner.</li> </ul> <p>c. When the farm and/or its operating company denies a request to collaborate on a research project, ensure that there is a written justification for rejecting the proposal.</p> <p>d. Maintain records from research collaborations (e.g. communications with researchers) to show that the farm has supported the research activities identified in 3.1.2a.</p>	<p>There are multiple areas of research that the company is engaged in. University of BC, University of PEI, Memorial university NF and Cargill they are looking at Complex Gill Disease in Salmon. The industry in BC is providing Crawford Revie with Sea Ice data to establish trends and make details publicly available. The applicant is looking at a request for environmental data from the University of Waterloo.</p> <p>The applicant is a member of the BC salmon farmers and has been and will be involved in any research conducted through that forum.</p>	Compliant	

Footnote	[34] Commitment: At a minimum, a farm and/or its operating company must demonstrate this commitment through providing farm-level data to researchers, granting researchers access to sites, or other similar non-financial support for research activities.				
3.1.3	<p><b>Indicator:</b> Establishment and annual review of a maximum sea lice load for the entire ABM and for the individual farm as outlined in Appendix II-2</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [32]</p>	<p>a. Keep records to show that a maximum sea lice load has been set for: - the entire ABM; and - the individual farm.</p> <p>b. Maintain evidence that the established maximum sea lice load (3.1.3a) is reviewed annually as outlined in Appendix II-2, incorporating feedback from the monitoring of wild salmon where applicable (See 3.1.4).</p> <p>c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the ABM has set (3.1.3a) and annually reviewed (3.1.3.b) maximum sea lice load in compliance with requirements in Appendix II-2.</p> <p>d. Submit the maximum sea lice load for the ABM to ASC as per Appendix VI at least once per year.</p>	<p>There are 4 Grief sites within the waterbody of which 3 are active. They are Esperanza, Hecate and Steamer. The sea lice load is declared as a maximum of 3 motile lice per fish and at full stocking density that would be 1,775,466 lice with a total ABM lice load of 6,204,927 motile lice.</p>	Compliant	
3.1.4	<p><b>Indicator:</b> Frequent [35] on-farm testing for sea lice, with test results made easily publicly available [36] within seven days of testing</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except farms that release no water as noted in [32]</p>	<p>a. Prepare an annual schedule for testing sea lice that identifies timeframes of routine testing frequency (at a minimum, monthly) and for high-frequency testing (weekly) due to sensitive periods for wild salmonids (e.g. during and immediately prior to outmigration of juveniles).</p> <p>b. Maintain records or results or on-farm testing for sea lice. If farm deviates from schedule due to weather [35] maintain documentation of event and document the methodology used for testing sea lice ('testing' includes both counting and identifying sea lice). The method must follow national or international norms, follows accepted minimum sample size, use random sampling, and record the species and life-stage of the sea lice. If farm uses a closed production system and would like to use an alternative method (i.e. video), farm shall provide the following information: d. Make the testing results from 3.1.4b easily publicly available (e.g. posted to the company's website) within seven days of testing. If requested, provide stakeholders access to hardcopies of test results.</p> <p>e. Keep records of when and where test results were made public.</p> <p>f. Submit test results to ASC (Appendix VI) at least once per year.</p>	<p>Counting of sea lice is carried out according to the SW SOP on Sea Lice counting dated September 2020 and according to the DFO licence requirements.</p> <p>Non-migration Window: July 1 – January 31. Sampling will be conducted once a month on every site unless an acceptable reason for not sampling is provided. Monthly sampling at each site will be conducted in three pens; a total of 20 fish per pen (site total = 60 fish). Sampling must be completed by the 20th of each month during this time period.</p> <p>Pre-migration Window: February 1 – February 28 (or 29). All stocked Containment Structures are assessed at least once by conducting two Counting Events (completed within a 5 day window), each of which includes a minimum of three Containment Structures.</p> <p>Out-migration Window: March 1 – June 30: During the period from March 1st to June 30th sampling frequency will be increased to once per week (60 fish per sample unless an acceptable reason for not sampling is provided and documented).</p> <p>– conduct Counting Events (counts completed within a 5 day window) on a minimum of three stocked Containment Structures within the first week of the Window, and once every two weeks thereafter throughout the Window; and – if the sea lice threshold is exceeded: – within 7 days Upon Discovery, conduct a Counting Event on all stocked Containment Structures</p> <p>It further quotes that 'Data must be entered within 24 hrs of sampling (for ASC it must be posted to the website within 7 days of sampling).'</p>	Compliant	
Footnote	[35] Testing must be weekly during and immediately prior to sensitive periods for wild salmonids, such as outmigration of wild juvenile salmon. Testing must be at least monthly during the rest of the year, unless water temperature is so cold that it would jeopardize farmed fish health to test for lice (below 4 degrees C). Within closed production systems, alternative methods for monitoring sea lice, such as video monitoring, may be used.				
Footnote	[36] Posting results on a public website is an example of "easily publicly available."				
3.1.5	<p><b>Indicator:</b> In areas with wild salmonids [37], evidence of data [38] and the farm's understanding of that data, around salmonid migration routes, migration timing and stock productivity in major waterways within 50 kilometers of the farm</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [32]</p>	<p>a. Identify all salmonid species that naturally occur within 75 km of the farm through literature search or by consulting with a reputable authority. If the farm is not in an area with wild salmonids, then 3.1.5b and c do not apply.</p> <p>b. For species listed in 3.1.5a, compile best available information on migration routes, migration timing (range of months for juvenile outmigration and returning salmon), life history timing for coastal resident salmonids, and stock productivity over time in major waterways within 50 km of the farm.</p> <p>c. From data in 3.1.5b, identify any sensitive periods for wild salmonids (e.g. periods of outmigration of juveniles) within 50 km of the farm.</p>	<p>There are 7 wild salmonid species, that at some stage are in the Marine environment, during the year. Some of the species are within the coastal waters all year round. 5 are Pacific salmon, one is the Rainbow trout and the last is the Cutthroat Trout. The government completely controls the salmon fishing seasons, the sensitive periods and monitors the runs of fish in order to inform the public and fishermen for each species. Sensitive periods have been established and extend for 3 months. All the staff are well aware of the salmon runs as they all fish for salmon for sport and food. Wild salmon migration information was made available through the website <a href="http://www.pac.dfo-mpo.gc.ca/fm-gp/salmon-saumon/facts-infos-eng.html">http://www.pac.dfo-mpo.gc.ca/fm-gp/salmon-saumon/facts-infos-eng.html</a></p>	Compliant	
Footnote	[37] For purposes of these standards, "areas with wild salmonids" are defined as areas within 75 kilometers of a wild salmonid migration route or habitat. This definition is expected to encompass all, or nearly all, of salmon-growing areas in the northern hemisphere.				
Footnote	[38] Farms do not need to conduct research on migration routes, timing and the health of wild stocks under this standard if general information is already available. Farms must demonstrate an understanding of this information at the general level for salmonid populations in their region, as such information is needed to make management decisions related to minimizing potential impact on those stocks.				

3.1.6	<p><b>Indicator:</b> In areas of wild salmonids, monitoring of sea lice levels on wild out-migrating salmon juveniles or on coastal sea trout or Arctic char, with results made publicly available. See requirements in Appendix III-1.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [32]</p>	<p>a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.6 does not apply.</p> <p>b. Keep records to show the farm participates in monitoring of sea lice on wild salmonids.</p> <p>c. Provide the CAB access to documentation which is sufficient for the auditor to evaluate whether the methodology used for monitoring of sea lice on wild salmonids is in compliance with the requirements in Appendix III-1.</p> <p>d. Make the results from 3.1.6b easily publicly available (e.g. posted to the company's website) within eight weeks of completion of monitoring.</p> <p>e. Submit to ASC the results from monitoring of sea lice levels on wild salmonids as per Appendix VI.</p>	<p>Wild Juvenile Salmonid, Monitoring Program 2020, Esperanza Inlet, BC, Report Date: July 2, 2020. Sample dates in March, April and May. The monitoring was carried out by Mainstream biological. The report states 'Beach seine sampling was conducted on behalf of Grieg Seafood at 10 sites in Esperanza Inlet, BC in 2020. Sampling was completed to monitor sea lice abundance, prevalence and intensity on juvenile wild salmon within Esperanza Inlet in support of the Aquaculture Stewardship Certification process for Grieg Seafood's finfish aquaculture sites in the area. This data report represents the seventh year of wild juvenile salmonid monitoring within Esperanza Inlet.'</p> <p>Furthermore, 'Chum salmon smolts were captured in significantly greater numbers than any other species. A total of 509 chum salmon were captured, representing 99.8% of all captured salmonids. Of the 509 chum captured, 311 were kept for lab analysis for sea lice infestation. A total of 21 chum smolts were found to be infested with a total of 36 lice resulting in a calculated prevalence of 6.8%, abundance of 0.12 and an average intensity of 1.7 for the chum salmon sample population. No sea lice were found on the single chinook salmon sample collected in Esperanza Inlet in 2020.'</p> <p>The report is posted on the companies website at <a href="https://www.griegseafoodcanada.com/our-environment/wild-salmon/">https://www.griegseafoodcanada.com/our-environment/wild-salmon/</a></p>	Compliant		
3.1.7	<p><b>Indicator:</b> In areas of wild salmonids, maximum on-farm lice levels during sensitive periods for wild fish [39]. See detailed requirements in Appendix II, subsection 2.</p> <p><b>Requirement:</b> 0.1 mature female lice per farmed fish</p> <p><b>Applicability:</b> All farms operating in areas with wild salmonids except farms that release no water as noted in [32]</p>	<p>a. Inform the CAB if the farm operates in an area of wild salmonids. If not, then Indicator 3.1.7 does not apply.</p> <p>b. Establish the sensitive periods [39] of wild salmonids in the area where the farm operates. Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.</p> <p>c. Maintain detailed records of monitoring on-farm lice levels (see 3.1.4) during sensitive periods as per Appendix II-2.</p> <p>d. Provide the CAB with evidence there is a 'feedback loop' between the targets for on-farm lice levels and the results of monitoring of lice levels on wild salmonids (Appendix II-2).</p>	<p>VR nr.141 approved 28.3.16 by ASC on indicator 3.1.7. Rationale for use of VR 141 during audit is that the DFO requirements for Lice levels on farmed salmon is accepted by ASC.</p> <p>The DFO requirements have a trigger level for lice set at 3 motile lice. Sensitive period in the region is set from March 1st to June 30th. Results show that for the count on June 23rd 2020 the lice count was over the trigger level at 4.05. However, by the following week the entire farm level was at 3.00. Under the DFO conditions the farms have 42 days to get the lice levels below trigger level when they are exceeded. The average lice levels over the entire sensitive period was well below 3 motile lice. A SLICE treatment was begun, for all pens, on the 23rd June 2020.</p>	Minor	<p>The farm was over the trigger level of 3 motile lice, on one occasion, during the sensitive period. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
Footnote		[39] Sensitive periods for migrating salmonids is during juvenile outmigration and approximately one month before.				
		<p align="center"><b>Compliance Criteria (Required Client Actions):</b>      <b>Auditor Evaluation (Required CAB Actions):</b></p> <p align="center"><i>Criterion 3.2 Introduction of non-native species</i></p>				
3.2.1	<p><b>Indicator:</b> If a non-native species is being produced, demonstration that the species was widely commercially produced in the area by the date of publication of the ASC Salmon standard</p> <p><b>Requirement:</b> Yes [40]</p> <p><b>Applicability:</b> All farms except as noted in [40]</p>	<p>a. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.1 does not apply.</p> <p>b. Provide documentary evidence that the non-native species was widely commercially produced in the area before June 13, 2012.</p> <p>c. If the farm cannot provide evidence for 3.2.1b, provide documentary evidence that the farm uses only 100% sterile fish that includes details on accuracy of sterility effectiveness.</p> <p>d. If the farm cannot provide evidence for 3.2.1b or 3.2.1c, provide documented evidence that the production system is closed to the natural environment and for each of the following:  1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained;  2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce [40]; and  3) barriers ensure there are no escapes of biological material that might survive and subsequently reproduce.</p>	<p>Note: For the purposes of Indicator 3.2.1, "area" is defined as a contiguous body of water with the bio-chemical and temperature profile required to support the farmed species' life and reproduction (e.g. the Northern Atlantic Coast of the U.S. and Canada). Appendix II-1A elaborates further on this definition: "The boundaries of an area should be defined, taking into account the zone in which key cumulative impacts on wild populations may occur, water movement and other relevant aspects of ecosystem structure and function." The intent is that the area relates to the spatial extent that is likely to be put at risk from the non-native salmon. Areas will only rarely coincide with the boundaries of countries.</p> <p>1972: First Atlantic salmon farm on the Pacific Coast established in Puget Sound by Conrad Mahnken and the National Marine Fisheries Service. The salmon were obtained from Canadian fish in the Gaspé Peninsula in the Gulf of St. Lawrence, from the Wizard Falls Hatchery in Oregon which had been raising salmon in ponds since the 1950s and using them to improve sport fishing in the area. Washington salmon farms obtained Atlantic eggs for their hatcheries from Mahnken's project and also from overseas broodstock from Western Europe. Ref 12 "The Net Pen Salmon Farming Industry in the Pacific Northwest." NOAA Technical Memorandum NMFS-NWFSC-49. Published September, 2001.</p>	Compliant		
Footnote		[40] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.				

		<p align="center"><b>Instruction to Clients for Indicator 3.2.2 - Exceptions to Allow Production of Non-Native Species</b></p> <p align="center">Farms have had five years to demonstrate compliance with this standard from the time of publication of the ASC Salmon Standard (i.e. full compliance by June 13, 2017). Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.</p> <p align="center">Note: For the purposes of Indicator 3.2.2, "jurisdiction" is defined the same as "area" in 3.2.1.</p>				
3.2.2	<p><b>Indicator:</b> If a non-native species is being produced, evidence of scientific research [41] completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction and these results submitted to ASC for review [42]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All [43]</p>	<p>a. Inform the ASC of the species in production (Appendix VI).</p> <p>b. Inform the CAB if the farm produces a non-native species. If not, then Indicator 3.2.2 does not apply.</p> <p>c. If yes to 3.2.2b, provide evidence of scientific research completed within the past five years that investigates the risk of establishment of the species within the farm's jurisdiction. Alternatively, the farm may request an exemption to 3.2.2c (see below).</p> <p>d. If applicable, submit to the CAB a request for exemption that shows how the farm meets all three conditions specified in instruction box above.</p> <p>e. Submit evidence from 3.2.2c to ASC for review.</p>	<p>ASC and the CAB have been informed that the fish farmed is Atlantic salmon which is a non-native species. The report "Wild Juvenile Salmonid Monitoring Program - Discovery Islands - 2017", prepared by Mainstream Biological Consulting Inc and signed by Lance Stewardson, member of the College of Applied Biology, showed no evidence of risk of establishment of the species. Also see the report on lice on wild juvenile salmon detailed in 3.1.6 where no juvenile Atlantic salmon were encountered.</p> <p>On the DFO website there is an exotic alert for Atlantic salmon with an id chart and telephone number for reporting. There is monitoring of the rivers by DFO on the makeup and abundance of species present on rivers in the area. The results published in Neville et al. (2016) show the majority of the catch being Pacific herring and Pacific salmon. The surveys conducted in the BC region from 2010-2017 captured about 250,000 fish by purse seine with approximately 150,000 of these identified as Pacific salmon or steelhead. In addition, over the same time period the trawl survey sampled more than 200,000 fish in this region with approximately 34,000 identified as Pacific salmon or steelhead. Over this seven year period there was no Atlantic salmon of any age class captured. From 1990 to 2004 there was an Atlantic Salmon Watch program run by DFO to look at potential interactions of Atlantic salmon in the area.</p> <p>Andres, B. 2015. Summary of reported Atlantic salmon (Salmon salar) catches and sightings in British Columbia and results of field work conducted in 2011 and 2012. Can. Tech. Rep. Fish. Aquatic. Sci. 3061: 19 p. Furthermore, according to the Monterey Bay Aquarium Seafood Watch, Atlantic Salmon, Canada British Columbia, Canada (Net Pens) Report, 2017: "Atlantic salmon are non-native in B.C., but evidence increasingly shows the species is a poor colonizer outside of its native range. Despite repeated, intentional efforts over more than a century to establish Atlantic salmon for sport fishing, plus the large numbers of escapes in decades past, there is no recent evidence of ecological establishment."</p>	Compliant		
Footnote	[41] The research must at a minimum include multi-year monitoring for non-native farmed species, use credible methodologies and analysis, and undergo peer review.					
Footnote	[42] If the review demonstrates there is increased risk, the ASC will consider prohibiting the certification of farming of non-native salmon in that jurisdiction under this standard. In the event that the risk tools demonstrate "high" risks, the SAD expects that the ASC will prohibit the certification of farming of non-native salmon in that jurisdiction. The ASC intends to bring this evidence into future revision of the standard and those results taken forward into the revision process.					
Footnote	[43] Farms are exempt from this standard if they are in a jurisdiction where the non-native species became established prior to farming activities in the area and the following three conditions are met: eradication would be impossible or have detrimental environmental effects; the introduction took place prior to 1993 (when the Convention on Biological Diversity (CBD) was ratified); the species is fully self-sustaining.					
3.2.3	<p><b>Indicator:</b> Use of non-native species for sea lice control for on-farm management purposes</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>a. Inform the CAB if the farm uses fish (e.g. cleaner fish or wrasse) for the control of sea lice.</p> <p>b. Maintain records (e.g. invoices) to show the species name and origin of all fish used by the farm for purposes of sea lice control.</p> <p>c. Collect documentary evidence or first hand accounts as evidence that the species used is not non-native to the region.</p>	None used.	N/A	None used.	
<i>Criterion 3.3 Introduction of transgenic species</i>						
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>			
3.3.1	<p><b>Indicator:</b> Use of transgenic [44] salmon by the farm</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a declaration stating that the farm does not use transgenic salmon.</p> <p>b. Maintain records for the origin of all cultured stocks including the supplier name, address and contact person(s) for stock purchases.</p> <p>c. Ensure purchase documents confirm that the culture stock is not transgenic.</p>	<p>The applicant is a member of the Canadian Aquaculture Industry Organisation and they state 'Salmon farmer members of the Canadian Aquaculture Industry Alliance (CAIA), representing virtually all farmed salmon in Canada, do not farm or sell GE farmed salmon, and are not growing or researching GE salmon.' Egg and juvenile suppliers are their own hatcheries and Cermaq Canada, both who are local positioned and are both BAP certified.</p>	Compliant		
Footnote	[44] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring (reference USDA).					

Criterion 3.4 Escapes [47]					
Footnote	Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):			
		[45] See Appendix VI for transparency requirements for 3.4.1, 3.4.2 and 3.4.3.			
3.4.1	<p><b>Indicator:</b> Maximum number of escapees [46] in the most recent production cycle</p> <p><b>Requirement:</b> 300 [47]</p> <p><b>Applicability:</b> All farms except as noted in [47]</p>	<p>a. Maintain monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.</p> <p>b. Aggregate cumulative escapes in the most recent production cycle.</p> <p>c. Maintain the monitoring records described in 3.4.1a for at least 10 years beginning with the production cycle for which farm is first applying for certification (necessary for farms to be eligible to apply for the exception noted in [47]).</p> <p>d. If an escape episode occurs (i.e. an incident where &gt; 300 fish escaped), the farm may request a rare exception to the Standard [47]. Requests must provide a full account of the episode and must document how the farm could not have predicted the events that caused the escape episode.</p> <p>e. Submit escape monitoring dataset to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>A review of the fish stock numbers was conducted. There is no evidence of any large escape. The company has, in the past, reported 1 smolt escaping to DFO. This was due to a presumed dead smolt flipping into the ocean. This was a company report as an example of good practice and not allocated to this site. No reports on the web relating to escapes attributed to the applicant in BC at this time.</p>	Compliant	0
Footnote	[46] Farms shall report all escapes; the total aggregate number of escapees per production cycle must be less than 300 fish. Data on date of escape episode(s), number of fish escaped and cause of escape episode shall be reported as outlined in Appendix VI.				
Footnote	[47] A rare exception to this standard may be made for an escape event that is clearly documented as being outside the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. See auditing guidance for additional details.				
3.4.2	<p><b>Indicator:</b> Accuracy [48] of the counting technology or counting method used for calculating stocking and harvest numbers</p> <p><b>Requirement:</b> ≥ 98%</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of accuracy of the counting technology used by the farm at times of stocking and harvest. Records include copies of spec sheets for counting machines and common estimates of error for hand-counts.</p> <p>b. If counting takes place off site (e.g. pre-smolt vaccination count), obtain and maintain documents from the supplier showing the accuracy of the counting method used (as above).</p> <p>c. During audits, arrange for the auditor to witness calibration of counting machines (if used by the farm).</p> <p>e. Submit counting technology accuracy to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>All Grieg hatcheries uses the smolt count after vaccination and the counting machine used is a Vaki Counter (micro and macro) – used with the auto vaccinating machine and its accuracy is stated as &gt;99%. The Cermaq hatchery also uses Automatic counters with the accuracy stated as greater than 98%. On the Grieg Sea sites, counts are conducted during activities such as Fish transfers, harvest, and Hydrogen Peroxide Treatments. The counter used is a Wing-Tech Fish Counter, which is located onboard the 'Ronja Islander' Well Boat and has an accuracy of 98%. The final count is from the processing plant.</p>	Compliant	>98%
Footnote	[48] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand-counts.				
	<p align="center"><b>Instruction to Clients for Indicator 3.4.3 - Calculation of Estimated Unexplained Loss</b></p> <p align="center">The Estimated Unexplained Loss (EUL) of fish is calculated at the end of each production cycle as follows:</p> <p align="center">EUL = (stocking count) - (harvest count) - (mortalities) - (recorded escapes)</p> <p align="center">Units for input variables are number of fish (i.e. counts) per production cycle. Where possible, farms should use the pre-smolt vaccination count as the stocking count. This formula is adapted from footnote 59 of the ASC Salmon Standard.</p>				

3.4.3	<p><b>Indicator:</b> Estimated unexplained loss [49] of farmed salmon is made publicly available</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain detailed records for mortalities, stocking count, harvest count, and escapes (as per 3.4.1).</p> <p>b. Calculate the estimated unexplained loss as described in the instructions (above) for the most recent full production cycle. For first audit, farm must demonstrate understanding of calculation and the requirement to disclose EUL after harvest of the current cycle.</p> <p>c. Make the results from 3.4.3b available publicly. Keep records of when and where results were made public (e.g. date posted to a company website) for all production cycles.</p> <p>d. Submit estimated unexplained loss to ASC as per Appendix VI for each production cycle.</p> <p>-</p>	<p>Detailed records of all fish numbers in all categories is done using the Fishtalk database. Counts are considered to be the Vaccination count and the harvest number. The applicant has recognised issues around the accuracy of counting the mortalities accurately especially for the smaller fish. The company is focusing on updating and training staff on daily mort uplifts and a re-focused SOP on mortality counting. There has been a recognition of smaller mortalities not all making their way down the bottom of the net to the uplift and this can cause fish to be totally decomposed resulting in them being missed from he counts. The applicant is trialling a new net with a different style of mesh on the bottom, to improve this issue.</p> <p>EUL are calculated properly and for the previous 2017 cycle was -5.77% (-37,983 Pieces). This data has been published on he companies website and has been provided to ASC as part of the transparency. As this is the farms initial audit the requirement is that it must demonstrate understanding of calculation and the requirement to disclose EUL after harvest of the current cycle. This it has clearly done and the EUL from the previous cycle is outside the scope of this audit. EUL for the existing year class will be calculated at the end of the cycle.</p>	Compliant	
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**Footnote** [49] Calculated at the end of the production cycle as: Unexplained loss = Stocking count – harvest count – mortalities – other known escapes. Where possible, use of the pre-smolt vaccination count as the stocking count is preferred.

3.4.4	<p><b>Indicator:</b> Evidence of escape prevention planning and related employee training, including: net strength testing; appropriate net mesh size; net traceability; system robustness; predator management; record keeping and reporting of risk events (e.g., holes, infrastructure issues, handling errors, reporting and follow up of escape events); and worker training on escape prevention and counting technologies</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare an Escape Prevention Plan and submit it to the CAB before the first audit. This plan may be part of a more comprehensive farm planning document as long as it addresses all required elements of Indicator 3.4.4.</p> <p>b. If the farm operates an open (net pen) system, ensure the plan (3.4.4a) covers the following areas:</p> <ul style="list-style-type: none"> <li>- net strength testing;</li> <li>- appropriate net mesh size;</li> <li>- net traceability;</li> <li>- system robustness;</li> <li>- predator management;</li> <li>- record keeping;</li> <li>- reporting risk events (e.g. holes, infrastructure issues, handling errors);</li> <li>- planning of staff training to cover all of the above areas; and</li> </ul> <p>c. If the farm operates a closed system, ensure the plan (3.4.4a) covers the following areas:</p> <ul style="list-style-type: none"> <li>- system robustness;</li> <li>- predator management;</li> <li>- record keeping;</li> <li>- reporting risk events (e.g. holes, infrastructure issues, handling errors);</li> <li>- planning of staff training to cover all of the above areas; and</li> </ul> <p>d. Maintain records as specified in the plan.</p> <p>e. Train staff on escape prevention planning as per the farm's plan.</p> <p>-</p>	<p>The applicant has a series of areas that are focused on as part of the overall management of escape prevention. This includes Emergency preparedness and response training, SOP on fish escape, SOP on anchor and array inspections, SOP on Net maintenance, training on inspection and monitoring.</p> <p>Between generations the applicant also removes all infrastructure from the site and re-sets it prior to the next generation. This means that any equipment that appears old or faulty will be repaired or replaced. There is an array sign off that is sent to DFO as required. The applicant had AKVA Chile inspected the pens in 2018 and anchor checks are routinely done by a company called Poseidon engineering.</p> <p>Each net is tagged and ID with a full history of the net available for inspection.</p> <p>The applicant also has an expectation that the sites carry out fish a fish escape drill in the first quarter annually. There has been a training module called 'Emergency Preparedness &amp; Response Training' dated 30/10/2019 where there are slides on fish escape and fish escape prevention. There is no reference to fish escape drills in this presentation.</p>	Minor	<p>In reference to the 'Preparedness &amp; Response Training' presentation dated 30/10/2019. There is no reference to fish escape drills in this presentation. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>
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**PRINCIPLE 4: USE RESOURCES IN AN ENVIRONMENTALLY EFFICIENT AND RESPONSIBLE MANNER**  
*Criterion 4.1 Traceability of raw materials in feed*

**Compliance Criteria (Required Client Actions):**      **Auditor Evaluation (Required CAB Actions):**

**Instruction to Clients for Indicators 4.1.1 through 4.4.2 - Sourcing of Responsibly Produced Salmon Feeds**

Farms must show that all feeds used by the farm are produced in compliance with the requirements of Indicators 4.1.1 through 4.4.4. To do so, farms must obtain documentary evidence that the feed producers (see note 1) are audited at regular intervals by an independent auditing firm or a conformity assessment body against a recognized standard which substantially incorporate requirements for traceability. Acceptable certification schemes include GlobalGAP or other schemes that have been acknowledged by the ASC (see 4.1.1c below). Results from these audits shall demonstrate that feed producers have robust information systems and information handling processes to allow the feed producers to be able to bring forward accurate information about their production and supply chains. Declarations from the feed producer that are provided to the farm to demonstrate compliance with these indicators must be supported by the audits. Farms must also show that all of their feed producers are duly informed of the requirements of the ASC Salmon Standard relating to sourcing of responsibly produced salmon feed (see 4.1.1b below).

In addition to the above, farms must also show that their feed suppliers comply with the more detailed requirements for traceability and ingredient sourcing that are specified under indicators 4.1.1 through 4.4.2. The ASC Salmon Standard allows farms to use one of two different methods to demonstrate compliance of feed producers:

**Method #1:** Farms may choose to source feed from feed producers who used only those ingredients allowed under the ASC Salmon Standards during the production of a given batch of feed. For example, the farm may request its feed supplier to produce a batch of feed according to farm specifications. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements.

**Method #2:** Farms may choose to source feed from feed producers who demonstrate compliance using a "mass-balance" method. In this method, feed producers show that the balance of all ingredients (both amount and type) used during a given feed production period meets ASC requirements. However, mixing of ingredients into the general silos and production lines is allowed during manufacturing. Audits of the feed producer will independently verify that manufacturing processes are in compliance with ASC requirements. The mass balance method can be applied, for example, to integrated feed production companies that handle all steps of feed manufacturing (purchasing of raw materials, processing to finished feed, and sales) under the management of a single legal entity.

**Note 1:** The term "feed producer" is used here to identify the organization that produces the fish feed (i.e. it is the "feed manufacturer"). In most cases, the organization supplying feed to a farm (i.e. the feed supplier) will be the same organization that produced the feed, but there may be instances where feed suppliers are not directly responsible for feed production. Regardless of whether the farm sources feeds directly from a feed producer or indirectly through an intermediary organization, it remains the farm's obligation to show evidence that all feeds used are in compliance with requirements.

4.1.1	<p><b>Indicator:</b> Evidence of traceability, demonstrated by the feed producer, of feed ingredients that make up more than 1% of the feed [50].</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain detailed records of all feed suppliers and purchases including contact information and purchase and delivery records.</p> <p>b. Inform each feed supplier in writing or ASC requirements pertaining to production of salmon feeds and send them a copy of the ASC Salmon Standard.</p> <p>c. For each feed producer used by the farm, confirm that an audit of the producer was recently done by an audit firm or CAB against an ASC-acknowledged certification scheme. Obtain a copy of the most recent audit report for each feed producer.</p> <p>d. For each feed producer, determine whether the farm will use method #1 or method #2 (see Instructions above) to show compliance of feed producers. Inform the CAB in writing.</p> <p>e. Obtain declaration from feed supplier(s) stating that the company can assure traceability of all feed ingredients that make up more than 1% of the feed to a level of detail required by the ASC Salmon Standard [50].</p>	<p>The feed company used is EWOS and Skretting. Both feed company's are aware of ASC standard as the company has informed them. Smolt suppliers are Gold River, Paradise Bay (Lena Creek) and Cermaq Little Bear</p> <p>EWOS has both BAP certification and Global GAP certification. The BAP code is M10028 and the certificate is valid until 22nd January 2021. Their Global GAP number is GGN/GLN: 4052852616218 and valid until August 2021.</p> <p>Skretting Also has both BAP and GGAP certification. The BAP certificate is valid until 22nd October 2021. The Global GAP number is GGN/GLN: 4052852980685 and valid until November 2021.</p> <p>Both BAP and GGAP standards includes traceability for ingredients. The feed company applies Method 1.</p>	Compliant		
Footnote [50] Traceability shall be at a level of detail that permits the feed producer to demonstrate compliance with the standards in this document (i.e., marine raw ingredients must be traced back to the fishery, soy to the region grown, etc.). Feed manufacturers will need to supply the farm with third-party documentation of the ingredients covered under this standard.						
<i>Criterion 4.2 Use of wild fish for feed [51]</i>						
<b>Compliance Criteria (Required Client Actions): Auditor Evaluation (Required CAB Actions):</b>						
Footnote [51] See Appendix VI for transparency requirements for 4.2.1 and 4.2.2.						
4.2.1	<p><b>Indicator:</b> Fishmeal Forage Fish Dependency Ratio (FFDRm) for grow-out (calculated using formulas in Appendix IV-1)</p> <p><b>Requirement:</b> &lt; 1.2</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain a detailed inventory of the feed used including:</p> <ul style="list-style-type: none"> <li>- Quantities used of each formulation (kg);</li> <li>- Percentage of fishmeal in each formulation used;</li> <li>- Source (fishery) of fishmeal in each formulation used;</li> <li>- Percentage of fishmeal in each formulation derived from trimmings; and</li> </ul> <p>b. For FFDRm calculation, exclude fishmeal derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery).</p> <p>c. Calculate eFCR using formula in Appendix IV-1 (use this calculation also in 4.2.2 option #1).</p> <p>d. Calculate FFDRm using formulas in Appendix IV-1.</p> <p>e. Submit FFDRm to ASC as per Appendix VI for each production cycle.</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 4.2.1 - Calculation of FFDRm</b></p> <p>Farms must calculate the Fishmeal Forage Fish Dependency Ratio (FFDRm) according to formula presented in Appendix IV-1 using data from the most recent complete production cycle. Farms must also show that they have maintained sufficient information in order to make an accurate calculation of FFDRm as outlined below. For first audits, farms may be exempted from compliance with Indicator 4.2.1 for the most recent complete production cycle (i.e. if the FFDRm of the most recent crop was &gt; 1.2) if the farm can satisfactorily demonstrate to the auditor that:</p> <ul style="list-style-type: none"> <li>- the client understands how to accurately calculate FFDRm;</li> <li>- the client maintains all information needed to accurately calculate FFDRm (i.e. all feed specs for &gt; 6 months) for the current production cycle; and</li> <li>- the client can show how feed used for the current production cycle will ensure that the farm will meet requirements at harvest (i.e. FFDRm &lt; 1.2).</li> </ul> <p>The company works closely with the feed companies to evaluate the FFDRm. Calculations exclude trimmings. eFCR is calculated by the fishtalk database that the applicant uses. This system also records all feed type and quantity. Data from the most recent complete production cycle.</p> <p>eFCR 1.14 FFDRm 0.3</p>	Compliant		0.3
Note: Under indicator 4.2.2, farms can choose to calculate FFDRo (Option #1) or EPA & DHA (Option #2). Farms do not have to demonstrate that they meet both threshold values. Client shall inform the CAB which option they will use.						
4.2.2	<p><b>Indicator:</b> Fish Oil Forage Fish Dependency Ratio (FFDRo) for grow-out (calculated using formulas in Appendix IV- 1), or, Maximum amount of EPA and DHA from direct marine sources [52] (calculated according to Appendix IV-2)</p> <p><b>Requirement:</b> FFDRo &lt; 2.52 or (EPA + DHA) &lt; 30 g/kg feed</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain a detailed inventory of the feed used as specified in 4.2.1a.</p> <p>b. For FFDRo and EPA+DHA calculations (either option #1 or option #2), exclude fish oil derived from rendering of seafood by-products (e.g. the "trimmings" from a human consumption fishery).</p> <p>c. Inform the CAB whether the farm chose option #1 or option #2 to demonstrate compliance with the requirements of the Standard.</p> <p>d. For option #1, calculate FFDRo using formulas in Appendix IV-1 and using the eFCR calculated under 4.2.1c.</p> <p>e. For option #2, calculate amount of EPA + DHA using formulas in Appendix IV-2.</p> <p>f. Submit FFDRo or EPA &amp; DHA to ASC as per Appendix VI for each production cycle.</p>	<p>Option 1 is chosen. All feed use is recorded into The company works closely with the feed companies to evaluate the FFDRm. Calculations exclude trimmings. eFCR is calculated by the fishtalk database that the applicant uses. This system also records all feed type and quantity.</p> <p>FFDRo 1.42</p>	Compliant		1.42

Footnote	[52] Calculation excludes DHA and EPA derived from fisheries by-products and trimmings. Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption. Fishmeal and fish oil that are produced from trimmings can be excluded from the calculation as long as the origin of the trimmings is not any species that are classified as critically endangered, endangered or vulnerable in the IUCN Red List of Threatened Species ( <a href="http://www.iucnredlist.org">http://www.iucnredlist.org</a> ).					
<i>Criterion 4.3 Source of marine raw materials</i>						
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>			
4.3.1	<p><b>Indicator:</b> Timeframe for all fishmeal and fish oil used in feed to come from fisheries [53] certified under a scheme that is an ISEAL member [54] and has guidelines that specifically promote responsible environmental management of small pelagic fisheries</p> <p><b>Requirement:</b> Not required</p> <p><b>Applicability:</b> N/A</p>	Not required.	Not required	N/A		
Footnote	[53] This standard and standard 4.3.2 applies to fishmeal and oil from forage fisheries, pelagic fisheries, or fisheries where the catch is directly reduced (including krill) and not to by-products or trimmings used in feed.					
Footnote	[54] Meets ISEAL guidelines as demonstrated through full membership in the ISEAL Alliance, or equivalent as determined by the Technical Advisory Group of the ASC.					
4.3.2	<p><b>Indicator:</b> Prior to achieving 4.3.1, the FishSource score [55] for the fishery(ies) from which all marine raw material in feed is derived</p> <p><b>Requirement:</b> All individual scores ≥ 6, and biomass score ≥ 6</p> <p><b>Applicability:</b> All</p>	<p><b>Instruction to Clients for Indicator 4.3.2 - FishSource Score of Fish Used in Feed</b></p> <p>To determine FishSource scores of the fish species used as feed ingredients, do the following:</p> <ul style="list-style-type: none"> <li>-go to <a href="http://www.fishsource.org/">http://www.fishsource.org/</a></li> <li>- type the species into the search function box and choose the accurate fishery</li> <li>-confirm that the search identifies the correct fishery then scroll down or click on the link from the menu on the left reads "Scores"</li> </ul> <p>For first audit, farms must have copies ready that</p> <p>a. Record FishSource score for each species from which fishmeal or fish oil was derived and used as a feed ingredient (all species listed in 4.2.1a).</p> <p>b. Confirm that each individual score ≥ 6 and the biomass score is ≥ 6.</p> <p>c. If the species is not on the website it means that a FishSource assessment is not available. Client can then take one or both of the following actions:</p> <ol style="list-style-type: none"> <li>1. Contact FishSource via Sustainable Fisheries Partnerships to identify the species as a priority for assessment.</li> <li>2. Contract a qualified independent third party to conduct the assessment using the FishSource methodology and provide the assessment and details.</li> </ol>	<p>The applicant reviews and keeps a Database of all the Marine Ingredients that are used by the 2 Feed companies. This oversight insures that the feeds are compliant to ASC requirements.</p> <p>EWOS feeds</p> <p>Alaska Pollock (Theragra Chalcogramma) East Bering Sea <b>USA</b> <b>II</b> &gt;6.9</p> <p>Peruvian Anchoveta (Engraulis Ringens) Southern Peru/Northern Chile <b>II</b> &gt;6</p> <p>Walleye Pollock (Gadus Chalcogrammus) Bering Sea and Aleutian Islands <b>10</b> <b>00</b> <b>0</b></p> <p>Skretting feed</p> <p>North Pacific Hake <b>NE</b> Pacific. All &gt;7.9</p> <p>Atlantic Herring <b>Skagerrak, Kattegat &amp; W. Baltic.</b> All &gt;6.9</p> <p>Sandeels nel <b>Central Eastern North Sea.</b> All ≥6</p>	Compliant		>6
Footnote	[55] Or equivalent score using the same methodology. See Appendix IV-3 for explanation of FishSource scoring.					
4.3.3	<p><b>Indicator:</b> Prior to achieving 4.3.1, demonstration of third-party verified chain of custody and traceability for the batches of fishmeal and fish oil which are in compliance with 4.3.2.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p><b>Instruction to Clients for Indicator 4.3.3 - Third-Party Verification of Traceability</b></p> <p>Indicator 4.3.3 requires that farms show that their feed producers can demonstrate chain of custody and traceability as verified through third-party audits. Farms may submit reports from audits of feed producers (see 4.1.1c) as evidence that traceability systems are in compliance. Alternatively, farms may show that their feed producers comply with traceability requirements of Indicator 4.3.3 by submitting evidence that suppliers, and the batches of fishmeal and oil, are certified to the International Fishmeal and Fish Oil Organization's Global Standard for Responsible Supply or to the Marine Stewardship Council Chain of Custody Standard.</p> <p>For the first audit, a minimum of 6 months of data on feed is required and evidence shall relate to species used in said dataset.</p> <p>a. Obtain from the feed supplier documentary evidence that the origin of all fishmeal and fish oil used in the feed is traceable via a third-party verified chain of custody or traceability program.</p> <p>b. Ensure evidence covers all the species used (as consistent with 4.3.2a, 4.2.1a, and 4.2.2a).</p>	<p>AS well as the feed companies havin BAP and GGAP certification, See 4.1.1, the applicant also retains a list of ingredients and their 3 party certifications.</p> <p><b>PRODUCT</b> <b>Certification</b> <b>SPECIES</b> <b>REGION</b></p> <p>Fish Oil <b>MSC</b> Alaska Pollock (Theragra Chalcogramma) East Bering Sea</p> <p>Fish Meal <b>Marin Trust</b> Peruvian Anchoveta (Engraulis Ringens) Southern Peru/Northern Chile</p> <p>Fish Oil <b>MSC</b> Walleye Pollock (Gadus Chalcogrammus) Bering Sea and Aleutian Islands</p> <p>Fish Meal <b>Marin Trust</b> Peruvian Anchoveta (Engraulis Ringens) Southern Peru/Northern Chile</p> <p>Fish Oil <b>MSC</b> Alaska Pollock (Theragra Chalcogramma) East Bering Sea</p> <p>Fish Meal <b>MSC</b> Alaska Pollock (Theragra Chalcogramma) East Bering Sea</p>	Compliant		

4.3.4	<p><b>Indicator:</b> Feed containing fishmeal and/or fish oil originating from by-products [56] or trimmings from IUU [57] catch or from fish species that are categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [58], whole fish and fish meal from the same species and family as the species being farmed</p> <p><b>Requirement:</b> None [59]</p> <p><b>Applicability:</b> All except as noted in [59]</p>	<p>a. Compile and maintain, consistent with 4.2.1a and 4.2.2a, a list of the fishery of origin for all fishmeal and fish oil originating from by-products and trimmings.</p> <p>b. Obtain a declaration from the feed supplier stating that no fishmeal or fish oil originating from IUU catch was used to produce the feed.</p> <p>c. Obtain from the feed supplier a declaration that the meal or oil did not originate from a species categorized as vulnerable, endangered or critically endangered, according to the IUCN Red List of Threatened Species [58] and explaining how they are able to demonstrate this (i.e. through other certification schemes or through their independent).</p> <p>d. If meal or oil originated from a species listed as "vulnerable" by IUCN, obtain documentary evidence to support the exception as outlined in [59].</p>	<p>Fisheries of Origin are maintained. See 4.3.3 and 4.3.2</p> <p>Both EWOS and Skretting have declared in their ASC submissions, that no IUU or IUCN has any relevance for their feeds. Species lists provided raise no issues in relation to either category.</p>	Compliant		
4.3.5	<p><b>Indicator:</b> Presence and evidence of a responsible sourcing policy for the feed manufacturer for marine ingredients that includes a commitment to continuous improvement of source fisheries</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a policy stating the company's support of efforts to shift feed manufacturers' purchases of fishmeal and fish oil to fisheries certified under a scheme that is an ISEAL member and has guidelines that specifically promote responsible environmental management of small pelagic fisheries and committing to continuous improvement of source fisheries.</p> <p>b. Prepare a letter stating the farm's intent to source feed containing fishmeal and fish oil originating from fisheries certified under the type of certification scheme noted in indicator 4.3.1.</p> <p>c. Compile a list of the origin of all fish products used as feed ingredients in all feed.</p>	<p>EWOS statements on Supplier Selection and Sustainable Sourcing of Raw Material in the audit pack dated January 2021. Responsible sourcing and sustainability policies and information, including the EWOS document Sustainable Seafood for Future Generations, is on the Cargill (i.e., parent company) website, <a href="http://www.cargill.com">www.cargill.com</a>, under section Sustainability.</p> <p>Skretting (Nutreco) has a supplier code of conduct that is online that includes no IUU and declares responsible sourcing and commitment to the environment. Nutreco participates in various sustainable partnerships such as the Round Table on Responsible Soy, the ProTerra Network, the Roundtable on Sustainable Palm Oil, the Aquaculture Stewardship Council and the International Fishmeal and Fish Oil Responsible Supply Standard' <a href="https://www.skretting.com/en-CA/sustainability/">https://www.skretting.com/en-CA/sustainability/</a></p>	Compliant		
Footnote	[56] Trimmings are defined as by-products when fish are processed for human consumption or if whole fish is rejected for use of human consumption because the quality at the time of landing does not meet official regulations with regard to fish suitable for human consumption.					
Footnote	[57] IUU: Illegal, Unregulated and Unreported.					
Footnote	[58] The International Union for the Conservation of Nature reference can be found at <a href="http://www.iucnredlist.org/">http://www.iucnredlist.org/</a> .					
Footnote	[59] For species listed as "vulnerable" by IUCN, an exception is made if a regional population of the species has been assessed to be not vulnerable in a National Red List process that is managed explicitly in the same science-based way as IUCN. In cases where a National Red List doesn't exist or isn't managed in accordance with IUCN guidelines, an exception is allowed when an assessment is conducted using IUCN's methodology and demonstrates that the population is not vulnerable.					
<i>Criterion 4.4 Source of non-marine raw materials in feed</i>						
<b>Compliance Criteria (Required Client Actions):</b>		<b>Auditor Evaluation (Required CAB Actions):</b>				
4.4.1	<p><b>Indicator:</b> Presence and evidence of a responsible sourcing policy for the feed manufacturer for feed ingredients that comply with recognized crop moratoriums [60] and local laws [61]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Compile and maintain a list of all feed suppliers with contact information. (See also 4.1.1a)</p> <p>b. Obtain from each feed manufacturer a copy of the manufacturer's responsible sourcing policy for feed ingredients showing how the company complies with recognized crop moratoriums and local laws.</p> <p>c. Confirm that third party audits of feed suppliers (4.1.1c) show evidence that supplier's responsible sourcing policies are implemented.</p>	<p>EWOS statements on Supplier Selection Auditing and Sustainable Sourcing of Raw Material was available with the audit pack dated January 2021.</p> <p>Skretting (Nutreco) has a supplier code of conduct that is online that includes no IUU and declares responsible sourcing and commitment to the environment. It states no IUU and sources must come from MSC or IFFO RS schemes or the fish source scores being greater than 6. Sustainable partnerships. It further states: 'Cooperation between value chain partners (business, government, science and NGOs) is a prerequisite to successfully addressing the sustainability challenges of our industry. Nutreco participates in various sustainable partnerships such as the Round Table on Responsible Soy, the ProTerra Network, the Roundtable on Sustainable Palm Oil, the Aquaculture Stewardship Council and the International Fishmeal and Fish Oil Responsible Supply Standard' <a href="https://www.skretting.com/en-CA/sustainability/">https://www.skretting.com/en-CA/sustainability/</a></p>	Compliant		
Footnote	[60] Moratorium: A period of time in which there is a suspension of a specific activity until future events warrant a removal of the suspension or issues regarding the activity have been resolved. In this context, moratoriums may refer to suspension of the growth of defined agricultural crops in defined geographical regions.					
Footnote	[61] Specifically, the policy shall include that vegetable ingredients, or products derived from vegetable ingredients, must not come from areas of the Amazon Biome that were deforested after July 24, 2006, as geographically defined by the Brazilian Soy Moratorium. Should the Brazilian Soy Moratorium be lifted, this specific requirement shall be reconsidered.					
4.4.2	<p><b>Indicator:</b> Percentage of soya or soya-derived ingredients in the feed that are certified by the Roundtable for Responsible Soy (RTRS) or equivalent [62]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a policy stating the company's support of efforts to shift feed manufacturers' purchases of soya to soya certified under the Roundtable for Responsible Soy (RTRS) or equivalent.</p> <p>b. Prepare a letter stating the farm's intent to source feed containing soya certified under the RTRS (or equivalent)</p> <p>c. Notify feed suppliers of the farm's intent (4.4.2b).</p> <p>d. Obtain and maintain declaration from feed supplier(s) detailing the origin of soya in the feed.</p> <p>e. Provide evidence that soya used in feed is certified by the Roundtable for Responsible Soy (RTRS) or equivalent [62]</p>	<p>EWOS statements on Supplier Selection Auditing and Sustainable Sourcing of Raw Material was available with the audit pack dated January 2021. Cargill Aquaculture nutrition have stated that they 'will source all of its Soy products from responsible supply chains audited to standards successfully benchmarked against FEFAC Soy sourcing guidelines by 2020.</p> <p>Skretting (Nutreco) has a supplier code of conduct that is online that includes no IUU and declares responsible sourcing and commitment to the environment. Nutreco participates in various sustainable partnerships such as the Round Table on Responsible Soy, the ProTerra Network, the Roundtable on Sustainable Palm Oil, the Aquaculture Stewardship Council and the International Fishmeal and Fish Oil Responsible Supply Standard' <a href="https://www.skretting.com/en-CA/sustainability/">https://www.skretting.com/en-CA/sustainability/</a></p> <p>Skretting Certificate on RTRS number RTRS-CTP-B002382. Certificate Number of the Certified Organisation selling the Credits RTRS-CUC-AGR-0002. Dated august 2020.</p>	Compliant		100%

Footnote	[62] Any alternate certification scheme would have to be approved as equivalent by the Technical Advisory Group of the ASC.				
4.4.3	<p><b>Indicator:</b> Evidence of disclosure to the buyer [63] of the salmon of inclusion of transgenic [64] plant raw material, or raw materials derived from transgenic plants, in the feed</p> <p><b>Requirement:</b> Yes, for each individual raw material containing &gt; 1% transgenic content [65]</p> <p><b>Applicability:</b> All</p>	<p>a. Obtain from feed supplier(s) a declaration detailing the content of soya and other plant raw materials in feed and whether it is transgenic.</p> <p>b. Disclose to the buyer(s) a list of any transgenic plant raw material in the feed and maintain documentary evidence of this disclosure. For first audits, farm records of disclosures must cover &gt; 6 months.</p> <p>c. Inform ASC whether feed contains transgenic ingredients (yes or no) as per Appendix VI for each production cycle.</p>	<p>Email supplied to auditor dated 11th January 2021, from Certification &amp; Regulatory Affairs Manager to the Sales division of Grieg and notification of the feed use is in the Fish CV's that are available to buyers.</p>	Compliant	
Footnote	[63] The company or entity to which the farm or the producing company is directly selling its product. This standard requires disclosure by the feed company to the farm and by the farm to the buyer of their salmon.				
Footnote	[64] Transgenic: Containing genes altered by insertion of DNA from an unrelated organism. Taking genes from one species and inserting them into another species to get that trait expressed in the offspring.				
Footnote	[65] See Appendix VI for transparency requirement for 4.4.3.				
	<p style="text-align: center;"><i>Criterion 4.5 Non-biological waste from production</i></p>				
4.5.1	<p><b>Indicator:</b> Presence and evidence of a functioning policy for proper and responsible [66] treatment of non-biological waste from production (e.g., disposal and recycling)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p><b>Compliance Criteria (Required Client Actions):</b></p> <p>a. Prepare a policy stating the farm's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the farm's policy is consistent with best practice in the area of operation.</p> <p>b. Prepare a declaration that the farm does not dump non-biological waste into the ocean.</p> <p>c. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of.</p> <p>d. Provide a description of the types of waste materials that are recycled by the farm.</p>	<p><b>Auditor Evaluation (Required CAB Actions):</b></p> <p>The applicant has an Environmental policy dated May 2019 that outlines the commitments on waste. This includes</p> <ul style="list-style-type: none"> <li>• Minimize our environmental footprint, including reducing greenhouse gas emissions, waste and plastic that may harm nature.</li> <li>• Ensure proper and responsible disposal of all waste associated with our operations, practices and facilities (e.g., no ocean dumping).</li> <li>• To apply practices and control technologies, wherever possible, that minimize and or prevent pollution.</li> </ul> <p>The applicant also has a Waste policy (June 2019) that specifically deals with aspects of waste that includes:</p> <p>Waste Characterization Waste Reduction Reuse and Recycling Off-site Disposal Monitoring and Evaluation</p>	Compliant	
Footnote	[66] Proper and responsible disposal will vary based on facilities available in the region and remoteness of farm sites. Disposal of non-biological waste shall be done in a manner consistent with best practice in the area. Dumping of non-biological waste into the ocean does not represent "proper and responsible" disposal.				

4.5.2	<p><b>Indicator:</b> Evidence that non-biological waste (including net pens) from grow-out site is either disposed of properly or recycled</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Provide a description of the most common production waste materials and how the farm ensures these waste materials are properly disposed of. (see also 4.5.1c)</p> <p>b. Provide a description of the types of waste materials that are recycled by the farm. (See also 4.5.1d)</p> <p>c. Inform the CAB of any infractions or fines for improper waste disposal received during the previous 12 months and corrective actions taken.</p> <p>d. Maintain records of disposal of waste materials including old nets and cage equipment.</p>	<p>The Waste management policy states: Grieg will record details regarding storage and movement of waste during regular operations; each shipment of waste removed from the site will include the requisite documentation (e.g. manifest), which will ensure traceability of the material to its final destination.</p> <p>Monitoring will be completed through daily visual inspections of the waste storage areas. Storage areas will be reviewed to ensure the material segregation, storage, and handling procedures are followed and confirm zero discharge to the environment. In addition to the visual inspections, a quarterly internal audit will be conducted to ensure the effective implementation of waste handling procedures and identify opportunities for continuous improvement of the waste process stream.</p> <p>Nootka sound service ltd. Invoice number 20164320 dated 31st October 2020 and included dumpsters, pallets, bags, oil and Batteries. Invoice covered the entire month.</p>	Compliant			
<p><i>Criterion 4.6 Energy consumption and greenhouse gas emissions on farms [67]</i></p>							
Footnote		<p><b>Compliance Criteria (Required Client Actions):</b> <b>Auditor Evaluation (Required CAB Actions):</b>  [67] See Appendix VI for transparency requirements for 4.6.1, 4.6.2 and 4.6.3.</p>					
4.6.1	<p><b>Indicator:</b> Presence of an energy use assessment verifying the energy consumption on the farm and representing the whole life cycle at sea, as outlined in Appendix V-1</p> <p><b>Requirement:</b> Yes, measured in kilojoule/mt fish produced/production cycle</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records for energy consumption by source (fuel, electricity) on the farm throughout each production cycle.</p> <p>b. Calculate the farm's total energy consumption in kilojoules (kj) during the last production cycle.</p> <p>c. Calculate the total weight of fish in metric tons (t) produced during the last production cycle.</p> <p>d. Using results from 4.6.1b and 4.6.1c, calculate energy consumption on the farm as required, reported as kilojoule/mt fish/production cycle.</p> <p>e. Submit results of energy use calculations (4.6.1d) to ASC as per Appendix VI for each production cycle.</p> <p>f. Ensure that the farm has undergone an energy use assessment that was done in compliance with requirements of Appendix V-1.</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 4.6.1 - Energy Use Assessment</b></p> <p>Indicator 4.6.1 requires that farms must have an assessment to verify energy consumption. The scope of this requirement is restricted to operational energy use for the farm site(s) that is applying for certification. Boundaries for operational energy use should correspond to the sources of Scope 1 and Scope 2 emissions (see Appendix V-1). Energy use corresponding to Scope 3 emissions (i.e. the energy used to fabricate materials that are purchased by the farm) is not required. However the SAD Steering Committee encourages companies to integrate energy use assessments across the board in the company.</p> <p>For the purposes of calculating energy consumption, the duration of the production cycle is the entire life cycle "at sea" - It does not include freshwater smolt production stages. Farms that have integrated smolt rearing should break out the grow-out stage portion of energy consumption if possible. Quantities of energy (fuel and electricity) are converted to kilojoules. Verification is done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details).</p> <p>Grieg is a stock exchange listed company and all elements of production are assessed and recorded and this includes energy use assessment. <a href="https://www.globenewswire.com/news-release/2020/04/08/2013555/0/en/Grieg-Seafood-ASA-Integrated-Annual-Report-2019.html">https://www.globenewswire.com/news-release/2020/04/08/2013555/0/en/Grieg-Seafood-ASA-Integrated-Annual-Report-2019.html</a></p> <p>For the 2017 year class the energy consumption was 200,445.24 kj / t fish produced  Tonnage produced was 2303 tons<sup>68</sup></p>	Compliant			
4.6.2	<p><b>Indicator:</b> Records of greenhouse gas (GHG [68]) emissions [69] on farm and evidence of an annual GHG assessment, as outlined in Appendix V-1</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of greenhouse gas emissions on the farm.</p> <p>b. At least annually, calculate all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.</p> <p>c. For GHG calculations, select the emission factors which are best suited to the farm's operation. Document the source of those emissions factors.</p> <p>d. For GHG calculations involving conversion of non-CO<sub>2</sub> gases to CO<sub>2</sub> equivalents, specify the Global Warming Potential (GWP) used and its source.</p> <p>e. Submit results of GHG calculations (4.6.2d) to ASC as per Appendix VI at least once per year.</p> <p>f. Ensure that the farm undergoes a GHG assessment as outlined in Appendix V-1 at least annually.</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 4.6.2 - Annual GHG Assessment</b></p> <p>Indicator 4.6.2 requires that farms must have an annual Greenhouse Gas (GHG) assessment. Detailed instructions are presented in Appendix V-1 and references therein. The scope of this requirement is restricted to operational boundaries for the farm site(s) that is applying for certification. However the SAD Steering Committee encourages companies to integrate GHG accounting practices across the board in the company. Verification may be done by internal or external assessment following either the GHG Protocol Corporate Standard or ISO 14064-1 (see Appendix V-1 for more details).</p> <p><b>Note:</b> For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>).</p> <p>All records are maintained on a site energy evaluation document. All scopes are listed and recorded. The key external sources used as a basis for the calculations are; International Energy Agency (IEA/DECD), Intergovernmental Panel on Climate Change (IPCC), UK Government; Greenhouse gas reporting: GHG were 1050 Tco2e - 5517 year class.</p>	Compliant			
Footnote		<p>[68] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO<sub>2</sub>); methane (CH<sub>4</sub>); nitrous oxide (N<sub>2</sub>O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF<sub>6</sub>).</p>					
Footnote		<p>[69] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V.</p>					

4.6.3	<p><b>Indicator:</b> Documentation of GHG emissions of the feed [70] used during the previous production cycle, as outlined in Appendix V, subsection 2</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 4.6.3 - GHG Emissions of Feed</b></p> <p>Indicator 4.6.3 requires that farms document the greenhouse gas emissions (GHG) associated with any feeds used during salmon production. Farms will need to obtain this information from their feed supplier(s) and thereafter maintain a continuous record of Feed GHG emissions throughout all production cycles. This requirement applies across the entire previous production cycle. Therefore farms should inform their feed supplier(s) and:</p> <ul style="list-style-type: none"> <li>- the farm provides its feed suppliers with detailed information about the requirements including a copy of the methodology outlined in Appendix V, subsection 2;</li> <li>- the farm explain what analyses must be done by feed suppliers; and</li> <li>- the farm explains to feed suppliers what documentary evidence will be required by the farm to demonstrate compliance.</li> </ul> <p>Note1: Farms may calculate GHG emissions of feed using the average raw material composition used to produce the salmon (by weight) rather than using feed composition on a lot-by-lot basis.</p> <p>Note2: Feed supplier's calculations must include Scope 1, Scope 2, and Scope 3 GHG emissions as specified in Appendix V, subsection 2.</p>	Compliant		
Footnote	[70] GHG emissions from feed can be given based on the average raw material composition used to produce the salmon (by weight) and not as documentation linked to each single product used during the production cycle. Feed manufacturer is responsible for calculating GHG emissions per unit feed. Farm site then shall use that information to calculate GHG emissions for the volume of feed they used in the prior production cycle.				
<i>Criterion 4.7 Non-therapeutic chemical inputs [71,72]</i>					
<b>Compliance Criteria (Required Client Actions):</b>		<b>Auditor Evaluation (Required CAB Actions):</b>			
Footnote	[71] Closed production systems that do not use nets and do not use antifoulants shall be considered exempt from standards under Criterion 4.7.				
Footnote	[72] See Appendix VI for transparency requirements for 4.7.1, 4.7.3 and 4.7.4.				
4.7.1	<p><b>Indicator:</b> For farms that use copper-treated nets [73], evidence that nets are not cleaned [74] or treated in situ in the marine environment</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [71]</p>	<p>a. Prepare a farm procedure for net cleaning and treatment that describes techniques, technologies, use of off-site facilities, and record keeping.</p> <p>b. Maintain records of antifoulants and other chemical treatments used on nets.</p> <p>c. Declare to the CAB whether copper-based treatments are used on nets.</p> <p>d. If copper-based treatments are used, maintain documentary evidence (see 4.7.1b) that farm policy and practice does not allow for heavy cleaning of copper-treated nets in situ.</p> <p>e. Inform ASC whether copper antifoulants are used on farm (yes or no) as per Appendix VI for each production cycle.</p>	None used.	N/A	
Footnote	[73] Under the SAD, "copper-treated net" is defined as a net that has been treated with any copper-containing substance (such as a copper-based antifoulant) during the previous 18 months, or has not undergone thorough cleaning at a land-based facility since the last treatment. Farms that use nets that have, at some point prior in their lifespan, been treated with copper may still consider nets as untreated so long as sufficient time and cleaning has elapsed as in this definition. This will allow farms to move away from use of copper without immediately having to purchase all new nets.				
Footnote	[74] Light cleaning of nets is allowed. Intent of the standard is that, for example, the high-pressure underwater washers could not be used on copper treated nets under this standard because of the risk of copper flaking off during this type of heavy or more thorough cleaning.				
4.7.2	<p><b>Indicator:</b> For any farm that cleans nets at on-land sites, evidence that net-cleaning sites have effluent treatment [75]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [71]</p>	<p>a. Declare to the CAB whether nets are cleaned on-land.</p> <p>b. If nets are cleaned on-land, obtain documentary evidence from each net-cleaning facility that effluent treatment is in place.</p> <p>c. If yes to 4.7.2b, obtain evidence that effluent treatment used at the cleaning site is an appropriate technology to capture of copper in effluents.</p>	Washed insitu using dedicate net washing devices.	Compliant	
Footnote	[75] Treatment must have appropriate technologies in place to capture copper if the farm uses copper-treated nets.				
4.7.3	<p><b>Indicator:</b> For farms that use copper nets or copper-treated nets, evidence of testing for copper level in the sediment outside of the AZE, following methodology in Appendix I-1</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [71]</p>	<p>a. Declare to the CAB whether the farm uses copper nets or copper-treated nets. (See also 4.7.1c). If "no", Indicator 4.7.3 does not apply.</p> <p>b. If "yes" in 4.7.3a, measure and record copper in sediment samples from the reference stations specified in 2.1.1d and 2.1.2c which lie outside the AZE.</p> <p>c. If "yes" in 4.7.3a, maintain records of testing methods, equipment, and laboratories used to test copper level in sediments from 4.7.3b.</p>	None used.	N/A	None used.
Note: If the benthos throughout and immediately outside the full AZE is hard bottom, provide evidence to the CAB and request an exemption from Indicator 4.7.3 (see 2.1.1c).					

4.7.4	<p><b>Indicator:</b> Evidence that copper levels [76] are &lt; 34 mg Cu/kg dry sediment weight, or, in instances where the Cu in the sediment exceeds 34 mg Cu/kg dry sediment weight, demonstration that the Cu concentration falls within the range of background concentrations as measured at three reference sites in the water body</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [71] and excluding those farms shown to be exempt from Indicator 4.7.3</p>	<p>a. Inform the CAB whether: 1) farm is exempt from Indicator 4.7.4 (as per 4.7.3a), or 2) Farm has conducted testing of copper levels in sediment</p> <p>b. Provide evidence from measurements taken in 4.7.3b that copper levels are &lt; 34 mg Cu/kg dry sediment weight</p> <p>c. If copper levels in 4.7.4b are ≥ 34 mg Cu/kg dry sediment weight, provide evidence the farm tested copper levels in sediments from reference sites as described in Appendix I-1 (also see Indicators 2.1.1 and 2.1.2).</p> <p>d. Analyze results from 4.7.4c to show the background copper concentrations as measured at three reference sites in the water body.</p> <p>e. Submit data on copper levels in sediments to ASC as per Appendix VI for each production cycle.</p>	None used.	N/A	None used.
Footnote	[76] According to testing required under 4.7.3. The standards related to testing of copper are only applicable to farms that use copper-based nets or copper-treated nets.				
4.7.5	<p><b>Indicator:</b> Evidence that the type of biocides used in net antifouling are approved according to legislation in the European Union, or the United States, or Australia</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms except as noted in [71]</p>	<p>a. Identify all biocides used by the farm in net antifouling.</p> <p>b. Compile documentary evidence to show that each chemical used in 4.7.5a is approved according to legislation in one or more of the following jurisdictions: the European Union, the United States, or Australia.</p>	None used.	N/A	None used.
<b>PRINCIPLE 5: MANAGE DISEASE AND PARASITES IN AN ENVIRONMENTALLY RESPONSIBLE MANNER</b>					
<i>Criterion 5.1 Survival and health of farmed fish [77]</i>					
<b>Compliance Criteria (Required Client Actions):</b>		<b>Auditor Evaluation (Required CAB Actions):</b>			
Footnote	[77] See Appendix VI for transparency requirements for 5.1.4, 5.1.5 and 5.1.6.				
5.1.1	<p><b>Indicator:</b> Evidence of a fish health management plan for the identification and monitoring of fish diseases, parasites and environmental conditions relevant for good fish health, including implementing corrective action when required</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a fish health management plan that incorporates components related to identification and monitoring of fish disease and parasites. This plan may be part of a more comprehensive farm planning document</p> <p>b. Ensure that the farm's current fish health management plan was reviewed and approved by the farm's designated veterinarian [78].</p>	<p>Fish health management in place. As well as the FHMP there are associated SOP's dealing with specific areas of fish health. There are three staff who undertake site visits including a Veterinarian. It's a licence requirement that Marine Farms submit a fish health plan to DFO for approval. Section 2.5 'keeping pathogens out'. 2.6 Monitoring Fish Health and Disease. 2.8 Fish Disease Outbreaks / Emergency. 2.6.3.2 Sea lice monitoring (Sea Lice Monitoring and Auditing Program in SOPs 2.7.2.2 of Grieg Seafood BC Ltd. SOP manual or Best Management Practices). This plan has been adopted by the Veterinarian and dated 11/1/2021.</p>	Compliant	
5.1.2	<p><b>Indicator:</b> Site visits by a designated veterinarian [78] at least four times a year, and by a fish health manager [79] at least once a month</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records or visits by the designated veterinarian [78] and fish health managers [82]. If schedule cannot be met, a risk assessment must be conducted</p> <p>b. Maintain a current list of personnel who are employed as the farm's designated veterinarian(s) [78] and fish health manager(s) [79].</p> <p>c. Maintain records of the qualifications of persons identified in 5.1.2b.</p>	<p>There are three staff who undertake site visits including the Veterinarian. List of site visits have been kept. Qualifications were made available to the auditor for review and no concerns are raised. Between December 2019 and December 2020 there have been a total of 14 fish health visits often by 2 fish health staff. The sites called Esperenza, Hecate and Steamer being so close together means that the fish health staff visit all 3 sites at the same time.</p>	Compliant	
Footnote	[78] A designated veterinarian is the professional responsible for health management on the farm who has the legal authority to diagnose disease and prescribe medication. In some countries such as Norway, a fish health biologist or other professional has equivalent professional qualifications and is equivalent to a veterinarian for purposes of these standards. This definition applies to all references to a veterinarian throughout the standards document.				
Footnote	[79] A fish health manager is someone with professional expertise in managing fish health, who may work for a farming company or for a veterinarian, but who does not necessarily have the authority to prescribe medicine.				
5.1.3	<p><b>Indicator:</b> Percentage of dead fish removed and disposed of in a responsible manner</p> <p><b>Requirement:</b> 100% [80]</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of mortality removals to show that dead fish are removed regularly and disposed of in a responsible manner.</p> <p>b. Collect documentation to show that disposal methods are in line with practices recommended by fish health managers and/or relevant legal authorities.</p> <p>c. For any exceptional mortality event where dead fish were not collected for post-mortem analysis, keep a written justification.</p>	<p>All dead fish are removed from site and disposed of through approved facilities such as Earth Bank System Resource Ltd. Detailed Invoice 10892 dated 31st July 2020 for various mortality disposals in July. Eg July 27th 6 x mort bins with 16.2 tons.</p>	Compliant	100%
Footnote	[80] The SAD recognizes that not all mortality events will result in dead fish present for collection and removal. However, such situations are considered the exception rather than the norm.				
<p>Note: Farms are required to maintain mortality records from the current and two previous production cycles. For first audit, records for the current and prior production cycle are required. It is recommended that farms maintain a compiled set of records to demonstrate compliance with 5.1.3 - 5.1.6.</p>					

5.1.4	<p><b>Indicator:</b> Percentage of mortalities that are recorded, classified and receive a post-mortem analysis</p> <p><b>Requirement:</b> 100% [81]</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain detailed records for all mortalities and post-mortem analyses including:  - date of mortality and date of post-mortem analysis;  - total number of mortalities and number receiving post-mortem analysis;  - name of the person or lab conducting the post-mortem analyses;  - qualifications of the individual (e.g. veterinarian [78], fish health manager [79]);  - cause of mortality (specify disease or pathogen) where known; and  - classification as 'unexplained' when cause of mortality is unknown (see 5.1.6).</p> <p>b. For each mortality event, ensure that post-mortem analyses are done on a statistically relevant number of fish and keep a record of the results.</p> <p>c. If on-site diagnosis is inconclusive and disease is suspected or results are inconclusive over a 1-2 week period, ensure that fish are sent to an off-site laboratory for diagnosis and keep a record of the results (5.1.4a).</p> <p>d. Using results from 5.1.3a-c, classify each mortality event and keep a record of those classifications.</p> <p>e. Provide additional evidence to show how farm records in 5.1.4a-d cover all mortalities from the current and previous two production cycles (as needed).</p> <p>f. Submit data on numbers and causes of mortalities to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>All mortalities get are recorded, classified and receive a post mortem analysis. The fish are removed from the pens daily and each fish is reviewed and recorded by the site staff. They have been trained in post mortem classification by the fish health team and this is done regularly when the fish health staff are onsite. Feedback from detailed fish death analysis helps determine mortality causes. Unusual mortality is brought to the attention of the fish health team immediately. Once the fish are recorded and classified the details are recorded into the companies recording database for analysis and the health team get the results daily. There are 30 standard causes of death that can be chosen from in the database. These reasons range from environmental causes to mechanical causes as well as possible disease such as mouth rot.</p>	Compliant		100%
<p>Footnote [81] If on-site diagnosis is inconclusive, this standard requires off-site laboratory diagnosis. A qualified professional must conduct all diagnosis. One hundred percent of mortality events shall receive a post-mortem analysis, not necessarily every fish. A statistically relevant number of fish from the mortality event shall be analyzed.</p>						
5.1.5	<p><b>Indicator:</b> Maximum viral disease-related mortality [82] on farm during the most recent production cycle</p> <p><b>Requirement:</b> ≤ 10%</p> <p><b>Applicability:</b> All</p>	<p>a. Calculate the total number of mortalities that were diagnosed (see 5.1.4) as being related to viral disease.</p> <p>b. Combine the results from 5.1.5a with the total number of unspecified and unexplained mortalities from the most recent complete production cycle. Divide this by the total number of fish produced in the production cycle (x100) to calculate percent</p> <p>c. Submit data on total mortality and viral disease-related mortality to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>Viral disease has been reported by the site as 0. Unexplained deaths have been reported by the site as 16,521 or 2.51%. Combined is the same figure for the 2017 year class.</p>	Compliant		2.51%
<p>Footnote [82] Viral disease-related mortality count shall include unspecified and unexplained mortality as it could be related to viral disease.</p>						
5.1.6	<p><b>Indicator:</b> Maximum unexplained mortality rate from each of the previous two production cycles, for farms with total mortality &gt; 6%</p> <p><b>Requirement:</b> ≤ 40% of total mortalities</p> <p><b>Applicability:</b> All farms with &gt; 6% total mortality in the most recent complete production cycle.</p>	<p>a. Use records in 5.1.4a to calculate the unexplained mortality rate (%) for the most recent full production cycle. If rate was ≤ 6%, then the requirement of 5.1.6 does not apply. If total mortality rate was &gt; 6%, proceed to 5.1.6b.</p> <p>b. Calculate the unexplained mortality rate (%) for each of the two production cycles immediately prior to the current cycle. For first audit, calculation must cover one full production cycle immediately prior to the current cycle.</p> <p>c. Submit data on maximum unexplained mortality to ASC as per Appendix VI for each production cycle.</p>	<p>Total mortality for the 2017 yearclass was 22.79%. The unexplained rate when compared to the total mortalities was 6.99%</p>	Compliant		6.99%
<p>Note: Farms have the option to integrate their farm-specific mortality reduction program into the farm's fish health management plan (5.1.1).</p>						
5.1.7	<p><b>Indicator:</b> A farm-specific mortalities reduction programme that includes defined annual targets for reductions in mortalities and reductions in unexplained mortalities</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Use records in 5.1.4a to assemble a time-series dataset on farm-specific mortalities rates and unexplained mortality rates.</p> <p>b. Use the data in 5.1.7a and advice from the veterinarian and/or fish health manager to develop a mortalities-reduction program that defines annual targets for reductions in total mortality and unexplained mortality.</p> <p>c. Ensure that farm management communicates with the veterinarian, fish health manager, and staff about annual targets and planned actions to meet targets.</p>	<p>The fish health manager was interviewed during the audit. The question of mort reduction was discussed. He confirmed that mortality trends from the previous yearclass is reviewed and the top 6 reasons for mortality are concentrated on. These reviews are followed up and discussed within the 'Spring meetings' the company has. Strategies are then formed for the next input of fish. These strategies include placing Tarps around each pen, Providing aeration, Focusing on Lice numbers and treatments and monitoring phytoplankton daily as examples.</p>	Compliant		

Criterion 5.2 Therapeutic treatments [83]						
Compliance Criteria (Required Client Actions):		Auditor Evaluation (Required CAB Actions):				
Footnote		[83] See Appendix VI for transparency requirements for 5.2.1, 5.2.5, 5.2.6 and 5.2.10.				
<b>Instruction to Clients and CABs for Criterion 5.2 - Records Related to Therapeutic Treatments</b>						
Indicator 5.2.1 requires that farms maintain detailed record of all chemical and therapeutic use. Those records maintained for compliance with 5.2.1, if all consolidated into a single place, can be used to demonstrate performance against subsequent Indicators (5.2.1 through 5.2.10) under Criterion 5.2.						
5.2.1	<p><b>Indicator:</b> On-farm documentation that includes, at a minimum, detailed information on all chemicals [84] and therapeutants used during the most recent production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing, and all disease and pathogens detected on the site</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain a detailed record of all chemical and therapeutant use that includes:</p> <ul style="list-style-type: none"> <li>- name of the veterinarian prescribing treatment;</li> <li>- product name and chemical name;</li> <li>- reason for use (specific disease)</li> <li>- date(s) of treatment;</li> <li>- amount (g) of product used;</li> <li>- dosage;</li> <li>- t of fish treated;</li> <li>- the WHO classification of antibiotics (also see note under 5.2.8); and</li> <li>- the supplier of the chemical or therapeutant.</li> </ul> <p>b. If not already available, assemble records of chemical and therapeutant use to address all points in 5.2.1a for the previous two production cycles. For first audits, available records must cover one full production cycle immediately prior to the current cycle.</p> <p>c. Submit information on therapeutant use (data from 5.2.1a) to ASC as per Appendix VI on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>Records are maintained by means of the prescriptions used and in the day sheets and on farm database. It's a legal requirement for all sites to retain a copy of prescriptions onsite for DFO review.</p> <p>Aquaflor treatment for Yellowmouth / Mouth rot. Dated February 26th 2020.</p> <p>Prescription reviewed 20-23PW. Pen 1, 2, 4, 7, 9 and 10. N=547,938 and average weight 305g. Biomass = 167,123kg. Licence number AQFF 115377. Skretting 4mm feed and a total of 13,200 kg. Active ingredient 2g/kg of feed. Feed rate of 0.5% fish body weight per day over a 10 day period. Withdrawal period 15 days.</p>	Compliant		
Footnote		[84] Chemicals used for the treatment of fish.				
5.2.2	<p><b>Indicator:</b> Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [85] in any of the primary salmon producing or importing countries [86]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a list of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in [86].</p> <p>b. Maintain records of voluntary and/or mandatory chemical residue testing conducted or commissioned by the farm from the prior and current production cycles.</p>	<p>Dated April 2019, There is a document called ' List of Veterinary Drugs that are Authorized for Sale by Health Canada for Use in Food-Producing Aquatic Animals - Health Canada'. These list the allowed therapeutants. The list includes: Florfenicol, Oxytetracycline, Emmeactin Benzoate, Sulfadimethoxine and Ormetoprim, Trimethoprim and Sulfadiazine Powder. Nothing else is allowed.</p> <p>Residue testing is carried out at the site prior to harvest. AS well as medicinal residues, heavy metals, chemical dyes and toxins are tested for. The CFIA aquaculture therapeutant residue monitoring list - Canadian Food Inspection Agency is followed. A lot of fish is considered unacceptable when residues of a substance found in the product exceed the action level specified in this list.</p>	Compliant		
Footnote		[85] "Banned" means proactively prohibited by a government entity because of concerns around the substance. A substance banned in any of the primary salmon-producing or importing countries, as defined here, cannot be used in any salmon farm certified under the SAD, regardless of country of production or destination of the product. The SAD recommends that ASC maintain a list of a banned therapeutants.				
Footnote		[86] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.				
5.2.3	<p><b>Indicator:</b> Percentage of medication events that are prescribed by a veterinarian</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>a. Obtain prescription for all therapeutant use in advance of application from the farm veterinarian (or equivalent, see [78] for definition of veterinarian).</p> <p>b. Maintain copies of all prescriptions and records of veterinarian responsible for all medication events. Records can be kept in conjunction with those for 5.2.1 and should be kept for the current and two prior production cycles.</p>	<p>All medicated events reviewed, retained on the site in the form of detailed prescriptions and signed by the Veterinarian. DFO monitor compliance with their visits to the site.</p>	Compliant		100%
5.2.4	<p><b>Indicator:</b> Compliance with all withholding periods after treatments</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Incorporate withholding periods into the farm's fish health management plan (see 5.1.1a).</p> <p>b. Compile and maintain documentation on legally required withholding periods for all treatments used on-farm. Withholding period is the time interval after the withdrawal of a drug from the treatment of the salmon before the salmon can be harvested for use as food.</p> <p>c. Show compliance with all withholding periods by providing treatment records (see 5.2.1a) and harvest dates for the most recent production cycle.</p>	<p>Withholding periods are noted within the prescriptions that are drawn up by the company Veterinarian. These withdrawal periods are then logged into the Fish talk system that notifies the company that the site cannot be selected for harvest during the withdrawal period. For Aquaflor the withdrawal period was noted to be 15 days.</p> <p>Within the prescription template for Florfenicol, there is a sentence that states 'withdrawal recommendation may vary by destination country'. Its not clear how this 'other possible withdrawal period' can be captured within the fish talk system.</p>	Minor	<p>Within the prescription template for Florfenicol, there is a sentence that states 'withdrawal recommendation may vary by destination country'. Its not clear how this 'other possible withdrawal period' can be captured within the fish talk system. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
5.2.5	<p><b>Indicator:</b> The farm shall publicly report (via Appendix VI) the:</p> <ol style="list-style-type: none"> <li>1. Weighted Number of Medicinal Treatments (see Appendix VII) for each production cycle</li> <li>2. The parasiticide load for each agent over the production cycle</li> <li>3. The benthic parasiticide residue levels</li> </ol> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Using farm data for therapeutants usage (5.2.1a) and the calculation presented in Appendix VII, calculate the Weighted Number of Medicinal Treatments (WNMT) score for the most recent production cycle. Calculation should be made and updated on an ongoing basis throughout the cycle by</p> <p>b. Provide the auditor with access to records showing how the farm calculated the WMNT score.</p> <p>c. Submit data on farm level WMNT score to ASC as per Appendix VI for each production cycle.</p>	<p>The current score for the Weighted number for medicinal treatments is 4.083.</p> <p>Records were provided and the calculations are correct.</p> <p>The data was submitted as part of the ASC transparency requirement.</p>	Compliant		

5.2.6	<p><b>Indicator:</b> The Weighted Number of Medicinal Treatments shall be at or below the country Entry Level (see Appendix VII)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Review WNMT scores from 5.2.5a to determine if the score is at or below the Country Entry Level (see Appendix VII)</p> <p>b. As applicable, submit data to ASC on WNMT score for the most recent production cycle (Appendix VI).</p>	<p>From ASC interpretation Q+A 97. Farms in British Columbia - as the set EL (i.e. 1 WNMT) sits below the set GL (i.e. 3 WNMT), farms in BC are required to meet ≤GL. The parasitic treatments are 1 x SLICE and 3 x H2O2 plus 1 x cage treated with H2O2. The site is about to treat again with H2O2 to comply with the DFO requirement of having lice numbers low prior to the outmigration period.</p> <p>The company is required by DFO to insure that low levels of Lice are maintained especially prior to the outward migration period which runs from the beginning of March until the end of June. This is a 4 month period. The licence states "During the Pre-migration Window, the Licence Holder must:</p> <p>(b) within 48 hours Upon Discovery of threshold 6.2 (3 motile lice) being exceeded, notify the Department using Appendix VI-B, and describe the measures that will be taken to ensure that the sea lice levels are below the threshold by the start of the Out-migration Window;</p> <p>To this end and in keeping with directions from the company Veterinarian on maintaining animal welfare, the company uses H2O2 treatments to control lice levels at this time. The site is just about to start another H2O2 treatment to comply with lice levels in the outward migrating period.</p> <p>As the Global entry level is 3 and the site has declared a Weighted Number of Medicinal Treatments of 4.083 the site exceeds the Global entry level set by the standard.</p>	Minor	<p>As the Global entry level is 3 and the site has declared a Weighted Number of Medicinal Treatments of 4, the site exceeds the Global entry level set by the standard. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
5.2.7	<p><b>Indicator:</b> The farm shall reduce the Weighted Number of Medicinal Treatments, after achieving indicator 5.2.6, with 25% per 2 years until the WNMT is at or below the Global Level (see Appendix VII).</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Every 2 years after achieving 5.2.6, check the WNMT score calculated 2 years before as above (5.2.5a). Calculate the percent difference in WNMT score between current cycle and cycle of 2 years before.</p> <p>b. As applicable, submit data to ASC on WMNT score for the most recent production cycle and the two previous production cycles (Appendix VI).</p>	<p>This is an initial audit and 5.2.7 will be evaluated at future audits.</p>	NA		
5.2.8	<p><b>Indicator:</b> The farm shall implement Integrated Pest Management (IPM) according to the guidance in Appendix VII.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Implement Integrated Pest Management (IPM) into farm management plans (see Appendix VII).</p> <p>b. Review and update IPM on a production cycle basis to reflect the effectiveness of applied methods and to determine next approaches.</p>	<p>The company is in the process of drafting an IPM along with the other salmon producing farms in the Vancouver Island area. There are also many facets of Pest management within the company's management system. These include a sea lice management plan. A sea lice mitigation process and a BC Salmon Aquaculture: Innovation and technology report that includes 'Sea lice prevention and treatment'. There are discussions on new technologies such as physical removal of lice and the company has conducted trials on this using a hydrolicer from another company.</p>	Compliant		

5.2.9	<p><b>Indicator:</b> The farm shall public present (e.g. via company website) the IPM-measures that the company applies which need to be approved by a authorised veterinarian.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Ensure the latest version of the IPM is public on the company website</p> <p>b. Ensure the IPM is signed-off by an authorized veterinarian.</p>	<p>The company is in the process of drafting an IPM along with the other salmon producing farms in the Vancouver Island area. There are also many facets of Pest management within the companies management system. This includes a sea lice management plan dating from September 2019. Currently there is no IPM posted on the companies website.</p>	Minor	<p>Currently there is no IPM posted on the companies website. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
5.2.10	<p><b>Indicator:</b> The farm shall monitor parasiticide residue levels annually in the benthic sediment directly outside the AZE.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a map of the farm showing boundary of AZE (30 m) and GPS locations of all sediment collections stations. If the farm uses a site-specific AZE, provide justification [3] to the CAB.</p> <p>b. If benthos throughout the full AZE is hard bottom, provide evidence to the CAB and request an exemption from 5.2.10</p> <p>c. Submit test results to ASC as per Appendix VI at least once for each production cycle. If site has hard bottom and cannot complete tests, report this to ASC.</p> <p>d. Retain documentary evidence to show how scores were obtained. If samples were analysed an independent laboratory, obtain copies of results.</p>	<p>Through this interpretation, and considering that the effective date of version 1.3 of the standard was the past 26 of December 2019, ASC wants to clarify that while the referred guidance is pending, the compliance with the indicator is not required and auditors shall mark its evaluation as non-applicable (n/a) in the Audit Report. The guidance, when published, will establish the effective implementation date of indicator 5.2.10.</p>	N/A		
5.2.11	<p><b>Indicator:</b> Allowance for prophylactic use of antimicrobial treatments</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records for all purchases of antibiotics (invoices, prescriptions) for the current and prior production cycles.</p> <p>b. Maintain a detailed log of all medication-related events (see also 5.2.1a and 5.2.3)</p> <p>c. Calculate the total amount (g) and treatments (#) of antibiotics used during the current and prior production cycles (see also 5.2.13).</p>	<p>All antibiotic use is only authorised with a Veterinarian diagnosis and a prescription. All treatments are recorded in the Fishtalk system and then on the fish CV's used for generational history.</p> <p>Log of medicinal use is in place and there are regular audits by DFO on site that includes prescription review and records of use.</p> <p>The total amount of application of antibiotic for the current cycle is 257,589g. The number of Prescriptions is 16 but this covers different pens at different times, where one prescription might cover just one pen and another may cover a series of pens. The Veterinarian has declared that there was one treatment. See 5.2.13. The previous application level was 68,729g</p>	Complinat		
5.2.12	<p><b>Indicator:</b> Allowance for use of antibiotics listed as critically important for human medicine by the World Health Organization (WHO )</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain a current version of the WHO list of antimicrobials critically and highly important for human health [89].</p> <p>b. If the farm has <u>not</u> used any antibiotics listed as critically important (5.2.12a) in the current production cycle, inform the CAB and proceed to schedule the audit.</p> <p>c. If the farm <u>has</u> used antibiotics listed as critically important (5.2.12a) to treat any fish during the current production cycle, inform the CAB prior to scheduling audit.</p> <p>d. If yes to 5.2.12c, request an exemption from the CAB to certify only a portion of the farm. Prior to the audit, provide the CAB with records sufficient to establish details of treatment, which pens were treated, and how the farm will ensure full tracea</p>	<p>The applicant has accessed the WHO list online and downloaded a version,</p> <p>No critically important anti biotics used. Only Florfenicol which complies with the CFIA - Canadian Food Inspection Agency is followed. See 5.2.2</p> <p>None used.</p> <p>Not applicable.</p>	Compliant		

5.2.13	<p><b>Indicator:</b> Number of treatments of antibiotics over the most recent production cycle</p> <p><b>Requirement:</b> ≤ 3</p> <p><b>Applicability:</b> All</p>	<p>a. Maintain records of all treatments of antibiotics (see 5.2.1a). For first audits, farm records must cover the current and immediately prior production cycles in a verifiable statement.</p> <p>b. Calculate the total number of treatments of antibiotics over the most recent production cycle and supply a verifiable statement of this calculation.</p>	<p>The applicant has supplied records of all antibiotic use and relevant prescriptions that number 16 on antibiotic use. The site has had one condition that has required treatment and that condition has been mouth rot which is endemic in British Columbia. The condition has been treated with one antibiotic and that is Florfenicol or Aquaflor. There have been multiple prescriptions warranted due to different necessary applications of the treatment such as different size fish, requiring different feed sizes. The ongoing outbreak, which in the case of all mouthrot (yellowmouth), is difficult to get under control, when the fish are small. The site also requires multiple prescriptions to comply with both DFO and ASC (5.2.11) requirements of not prophylactically treating fish without continuing diagnosis that the disease is still present.</p> <p>DFO require that all treatments be uploaded to them using an online reporting system. The company has provided a copy of a report, showing that for the question on Tab 2 'Report Details' the Veterinarian has selected 'Ongoing' as the answer to the 'Occurrence Category'. DFO in Tab 3 provide use guidance that states 'if mitigation (ie treatment) for mouth-rot was still taking place 30 days after the initial report then another FHE would need to be submitted as an ongoing "occurrence", and every 30 days thereafter another "occurrence" FHE would require submitting etc...'. The applicant supplied a signed declaration from the farm's Veterinarian that is available to the CAB. It states that 'The treatment schedule is always under the direction of the Veterinarian and based upon the monitoring of the pen mortality rates'. Also, 'the management of yellowmouth is to follow a treatment cycle repeated several times on a course of treatment based upon mortality rate and as determined by the Veterinarian. This course of treatment would be considered a continuing therapy rather than a new dose'.</p> <p>Furthermore, there are the following point that have been taken into account.</p> <p>•ASC Q+A 35 states: Rationale from ASC: Interpretation Request (ASC Salmon Standard – Criteria 5.2.10: Therapeutic treatments) ASC considers that the rationale presented by Mowi Canada West on this topic is in line with the rationale presented on the approved VR 101 in regard to the management of an ubiquitous nature bacteria, without jeopardizing fish health and welfare, the deference to veterinary advice regarding antibiotic treatments, the negligible effect of florfenicol on the environment, demonstrated by the sediment sampling results presented on the updated information requested by ASC, and the fact that treatments with this antimicrobial ensures that the lowest active ingredient content is required. Within this context, and in understanding that vaccine control is beyond the direct reign of influence of the farm, ASC recommends CABs to adhere to the above-outlined interpretation. ASC will take notice of this scenario and will consider it into future reviews, and revisions, where needed.</p> <p>•ASC VR 110 states: Rationale from ASC. Considering the fact that the veterinary advised to extend the number of days of therapy the following sentence, it provides the basis for accepting the variance. It was recommended by the veterinarian and is a continuing therapy, not a new dose.</p> <p>•The applicant has been reviewing sediment samples for excess Florfenicol and Florfenicol amine. To date no florfenicol has been detected above the detection rates of 2.00ng/g and 5.00ng/g respectively. Sediment testing during the peak ASC surveys at the ASC sampling stations (where there is sediment).</p>	Compliant	1
5.2.14	<p><b>Indicator:</b> If more than one antibiotic treatment is used in the most recent production cycle, demonstration that the antibiotic load is at least 15% less than of the average of the two previous production cycles</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Use results from 5.2.13b to show whether more than one antibiotic treatment was used in the most recent production cycle. If not, then the requirement of 5.2.14 does not apply. If yes, then proceed to 5.2.14b.</p> <p>b. Calculate antibiotic load (antibiotic load = the sum of the total amount of active ingredient of antibiotic used in kg) for most recent production cycle and for the two previous production cycles. For first audit, calculation must cover one full production cycle.</p> <p>c. Provide the auditor with calculations showing that the antibiotic load of the most recent production cycle is at least 15% less than that of the average of the two previous production cycles.</p> <p>d. Submit data on antibiotic load to ASC as per Appendix VI (if applicable) for each production cycle.</p>	<p>The farm has only used on antibiotic treatment for Mouth Rot. See 5.2.13. Detailed results have been submitted to ASC. Regardless of this the farm has made a full transparent declaration to ASC within the transparency documents, that the site has used 257.6.8kg of Florfenicol active ingredient during this current yearclass. The previous yearclass was also for 1 treatment resulting in 68.73kg of active ingredient.</p>	NA	1 antibiotic treatment used.
5.2.15	<p><b>Indicator:</b> Presence of documents demonstrating that the farm has provided buyers of its salmon a list of all therapeutants used in production</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Prepare a procedure which outlines how the farm provides buyers [94] of its salmon with a list of all therapeutants used in production (see 4.4.3b).</p> <p>b. Maintain records showing the farm has informed all buyers of its salmon about all therapeutants used in production.</p>	<p>Seawater SOP dated September 2020. Appropriate required records of last medication treatment (Harvest Declaration Form) will accompany fish to processing plant and transferred to plant staff. These must be reviewed by at least 2 site personnel to ensure the accuracy of these records.</p> <p>SUPPLIERS QUALITY ASSURANCE LETTER, Grieg Seafood BC Ltd. – Brown's Bay Packing Co. Ltd, January 2020 supplied for review.</p>	Compliant	

		Criterion 5.3 Resistance of parasites, viruses and bacteria to medicinal treatments			
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):		
		<p align="center"><b>Instruction to Clients for Indicator 5.3.1 - Identifying the 'Expected Effect' of Medicinal Treatment</b></p> <p>Indicator 5.3.1 requires that farms identify treatments that have not produced the expected effect. The SAD Steering Committee recognizes that the "expected effect" will vary with health condition and type of medicinal treatment. Therefore farms and auditors will need to review the pre- and post-treatment condition of fish in order to understand and evaluate the impact of treatment.</p> <p align="center"><u>Example: sea lice treatment with emamectin benzoate</u></p> <p>The SAD SC recommends that a typical baseline for effectiveness of emamectin benzoate is a minimum of 90 percent reduction in abundance of lice on the farmed fish. To determine whether treatment has produced the expected effect, farm and auditor must review pre- and post-treatment lice counts. If the calculated percent reduction in lice is &lt; 90% then the treatment did not produce the expected effect and a bio-assay should be performed to determine whether sea lice have developed resistance.</p> <p>Note: If field-based bio-assays for determining resistance are ineffective or unavailable, the farm shall have samples analyzed by an independent laboratory to determine resistance formation. The auditor shall record in the audit report why field-based bio-assays were deemed ineffective and shall include results from the laboratory analyses of resistance formation.</p>			
5.3.1	<p><b>Indicator:</b> Bio-assay analysis to determine resistance when two applications of a treatment have not produced the expected effect</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. In addition to recording all therapeutic treatments (5.2.1b), keep a record of all cases where the farm uses two successive medicinal treatments.</p> <p>b. Whenever the farm uses two successive treatments, keep records showing how the farm evaluates the observed effect of treatment against the expected effect of treatment.</p> <p>c. For any result of 5.3.1b that did not produce the expected effect, ensure that a bio-assay analysis of resistance is conducted.</p> <p>d. Keep a record of all results arising from 5.3.1c.</p>	<p>Bioassays are carried out prior to any treatments in order to ascertain if the treatment will work in the first place. If the treatment is ineffective then something else will be used. To date no resistance has been detected.</p>	Compliant	
5.3.2	<p><b>Indicator:</b> When bio-assay tests determine resistance is forming, use of an alternative, permitted treatment, or an immediate harvest of all fish on the site</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Review results of bio-assay tests (5.3.1d) for evidence that resistance has formed. If yes, proceed to 5.3.2b. If no, then Indicator 5.3.2 is not applicable.</p> <p>b. When bio-assay tests show evidence that resistance has formed, keep records showing that the farm took one of two actions:  - used an alternative treatment (if permitted in the area of operation); or  - immediately harvested all fish on site.</p>	<p>Not applicable as no resistance to pesticide use has been detected.</p> <p>None detected. Alternates are being trialled such as the physical removal of lice from fish using high pressure.</p>	Compliant	
5.3.3	<p><b>Indicator:</b> Specific rotation, providing that the farm has &gt;1 effective medicinal treatment product available, every third treatment must belong to a different family of drugs.</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Determine how many effective medicinal treatment products the farm uses.</p> <p>b. If farm uses &gt;1 effective medicinal treatment product, ensure every third treatment belongs to a different family of drugs.</p>	<p>Internal medicinal treatments allowed in Canada, for Lice is just one and that's Emamectin benzoate or SLICE. The only other allowed pesticide is Hydrogen peroxide baths H2O2.</p> <p>The site does rotate where possible and generally uses the in feed treatment for small fish. H2O2 is considered a pesticide and does not require a prescription. Reference Pesticide Use Permit No. 877 -0002 -17/20 authorizing the use of hydrogen peroxide in the Esperanza region</p>	Compliant	
		Criterion 5.4 Biosecurity management [95]			
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):		
Footnote		[95] See Appendix VI for transparency requirements for 5.4.2 and 5.4.4.			
5.4.1	<p><b>Indicator:</b> Evidence that all salmon on the site are a single-year class [96]</p> <p><b>Requirement:</b> 100% [97]</p> <p><b>Applicability:</b> All farms except as noted in [97]</p>	<p>a. Keep records of the start and end dates of periods when the site is fully fallow after harvest.</p> <p>b. Provide evidence of stocking dates (purchase receipts, delivery records) to show that there were no gaps &gt; 6 months for smolt inputs for the current production cycle.</p> <p>-</p>	<p>In section 2.2.1 of the sites Fish health management plan: Single year-class farms Containment arrays (i.e. production farms, not including broodstock holding facilities) ideally contain a single year-class of finfish livestock to minimize the transmission of pathogens between age classes of fish. In other words, an 'all stock in; all stock out' approach is encouraged. First stocking date was 20/11/2019. Fallowing period was for 140 Days (7/16/2019-12/3/2019)</p>	Compliant	100%
Footnote		[96] Gaps of up to six months between inputs of smolts derived from the same stripping are acceptable as long as there remains a period of time when the site is fully fallow after harvest.			
Footnote		<p>[97] Exception is allowed for:</p> <p>1) farm sites that have closed, contained production units where there is complete separation of water between units and no sharing of filtration systems or other systems that could spread disease, or,</p> <p>2) farm sites that have ≥95% water recirculation, a pre-entry disease screening protocol, dedicated quarantine capability and biosecurity measures for waste to ensure there is no discharge of live biological material to the natural environment (e.g. UV or other effective treatment of effluent).</p>			

5.4.2	<p><b>Indicator:</b> Evidence that if the farm suspects an unidentifiable transmissible agent, or if the farm experiences unexplained increased mortality, [98] the farm has:</p> <ol style="list-style-type: none"> <li>1. Reported the issue to the ABM and to the appropriate regulatory authority</li> <li>2. Increased monitoring and surveillance [99] on the farm and within the ABM</li> <li>3. Promptly [100] made findings publicly available</li> </ol> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. For mortality events logged in 5.1.4a, show evidence that the farm promptly evaluated each to determine whether it was a statistically significant increase over background mortality rate on a monthly basis [98]. The accepted level of significance (for <del>ascertain the OIE</del>) should be stated between 5.1.4a and 5.1.4b.</p> <p>b. For mortality events logged in 5.1.4a, record whether the farm did or did not suspect (yes or no) an unidentified transmissible agent.</p> <p>c. Proceed to 5.4.2d if, during the most recent production cycle, either:</p> <ul style="list-style-type: none"> <li>- results from 5.4.2a showed a statistically significant increase in unexplained mortalities; or</li> <li>- the answer to 5.4.2b was 'yes'.</li> </ul> <p>Otherwise, Indicator 5.4.2 is not applicable.</p> <p>d. If required, ensure that the farm takes and records the following steps:</p> <ol style="list-style-type: none"> <li>1) Report the issue to the ABM and to the appropriate regulatory authority;</li> <li>2) Increase monitoring and surveillance [99] on the farm and within the ABM; and</li> <li>3) <del>Re-monitor (within one month) water fractions.</del></li> </ol> <p>e. As applicable, submit data to ASC as per Appendix VI about unidentified transmissible agents or unexplained increases in mortality. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>Farms in BC are required to inform the authorities of significant mortality events. "Mortality event" means: (a) fish mortalities equivalent to 4000 kg or more, or losses reaching 2% of the current facility inventory, within a 24 hour period; or (b) fish mortalities equivalent to 10,000 kg or more, or losses reaching 5%, within a five day period.</p> <p>The company is constantly keeping itself informed of research into potential unknown viral diseases. Fish are tested routinely each month. Samples are sent to the likes of the BC Centre for Aquatic Health Sciences (BC CAHS) located in Campbell River. No unidentifiable transmissible agent has been suspected.</p>	Compliant		
Footnote	[98] Increased mortality: A statistically significant increase over background rate on a monthly basis.					
Footnote	[99] Primary aim of monitoring and surveillance is to investigate whether a new or adapted disease is present in the area.					
Footnote	[100] Within one month.					
5.4.3	<p><b>Indicator:</b> Evidence of compliance [101] with the OIE Aquatic Animal Health Code [102]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 5.4.3 - Compliance with the OIE Aquatic Animal Health Code</b></p> <p>Indicator 5.4.3 requires that farms show evidence of compliance with the OIE Aquatic Animal Health Code (see <a href="http://www.oie.int/index.php?id=171">http://www.oie.int/index.php?id=171</a>). Compliance is defined as farm practices consistent with the intentions of the Code. For purposes of the ASC Salmon Standard, this means that the farm must have written procedures stating how the farm will initiate an aggressive response to detection of an exotic OIE-notifiable disease on the farm ['exotic' = not previously found in the area or had been fully eradicated (area declared free of the pathogen)]. An aggressive response will involve, at a minimum, the following actions:</p> <ul style="list-style-type: none"> <li>- depopulation of the infected site;</li> <li>- implementation of quarantine zones (see note below) in accordance with guidelines from OIE for the specific pathogen; and</li> <li>- additional actions as required under Indicator 5.4.4.</li> </ul> <p>To demonstrate compliance with Indicator 5.4.3, clients have the option to describe how farm practices are consistent with the intentions of the OIE Aquatic Animal Health Code by developing relevant policies and procedures and integrating them into the farm's fish health management plan.</p> <p>Note: The Steering Committee recognizes that establishment of quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM.</p>	<p>On review the fish health management plan is consistent with the OIE animal health code. The OIE health code is available online and this is known by relevant staff.</p>	Compliant		
Footnote	[101] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Quarantine zones will likely incorporate mandatory depopulation of sites close to the infected site and affect some, though not necessarily all, of the ABM. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).					
Footnote	[102] OIE 2011. Aquatic Animal Health Code. <a href="http://www.oie.int/index.php?id=171">http://www.oie.int/index.php?id=171</a> .					
5.4.4	<p><b>Indicator:</b> If an OIE-notifiable disease [103] is confirmed on the farm, evidence that:</p> <ol style="list-style-type: none"> <li>1. the farm, at a minimum, immediately culled the pen(s) in which the disease was detected</li> <li>2. the farm immediately notified the other farms in the ABM [104]</li> <li>3. the farm and the ABM enhanced monitoring and conducted rigorous testing for the disease</li> <li>4. the farm promptly [105] made findings publicly available</li> </ol> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>a. Ensure that farm policies and procedures in 5.4.3a describe the four actions required under Indicator 5.4.4 in response to an OIE-notifiable disease on the farm.</p> <p>b. Inform the CAB if an OIE-notifiable disease has been confirmed on the farm during the current production cycle or the two previous production cycles. If yes, proceed to 5.4.4c. If no, then 5.4.4c and 5.4.4d do not apply.</p> <p>c. If an OIE-notifiable disease was confirmed on the farm (see 5.4.4b), then retain documentary evidence to show that the farm:</p> <ol style="list-style-type: none"> <li>1) immediately culled the pen(s) in which the disease was detected;</li> <li>2) immediately notified the other farms in the ABM [104]</li> <li>3) enhanced monitoring and conducted rigorous testing for the disease</li> </ol> <p>d. As applicable, submit data to ASC as per Appendix VI about any OIE-notifiable disease that was confirmed on the farm. If applicable, then data are to be sent to ASC on an ongoing basis (i.e. at least once per year and for each production cycle).</p>	<p>VR nr. 89 approved 27.9.15 by ASC on indicator 5.4.4. Rationale for use of VR 89 during audit is that VHS is endemic in BC and does not require compulsory culling.</p> <p>VR nr. 91 approved 27.9.15 by ASC on indicator 5.4.4. Rationale for use of VR 91 during audit is that VHS is endemic in BC and does not require compulsory culling.</p> <p>There have been no notifiable diseases detected onsite.</p>	Compliant		
Footnote	[103] At the time of publication of the final draft standards, OIE-notifiable diseases relevant to salmon aquaculture were: Epizootic haematopoietic necrosis, Infectious haematopoietic necrosis (IHN), Infectious salmon anemia (ISA), Viral hemorrhagic septicemia (VHS) and Gyrodactylus (Gyrodactylus salaris).					

Footnote	[104] This is in addition to any notifications to regulatory bodies required under law and the OIE Aquatic Animal Health Code.				
Footnote	[105] Within one month.				
<b>Social requirements in the standards shall be audited by an individual who is a lead auditor in conformity with SAAS Procedure 200 section 3.1.</b>					
<b>PRINCIPLE 6: DEVELOP AND OPERATE FARMS IN A SOCIALLY RESPONSIBLE MANNER</b>		<b>6.1 Freedom of association and collective bargaining [106]</b>			
<b>Compliance Criteria</b>					
Footnote	[106] Bargain collectively: A voluntary negotiation between employers and organizations of workers in order to establish the terms and conditions of employment by means of collective (written) agreements.				
6.1.1	<p><b>Indicator:</b> Evidence that workers have access to trade unions (if they exist) and union representative(s) chosen by themselves without managerial interference</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>No trade unions are present at the site. The Code of Conduct is provided to all employees, with signed acknowledging acceptance, and they are tested to show they have understood the information it contains. Code of Conduct – GRIEG – Care for People – Privacy and Rights – We are committed to respecting the privacy of individuals and handle personal data responsibly and in compliance with applicable laws. We recognize the right to organize to promote and defend occupational interests.</p> <p>Employees, during private interviews confirmed that they signed the Contract of Employment and felt that their rights are not affected. Employees signed receiving and accepting a copy of the Employee Handbook and an effective open-door policy for communication in Code of Conduct – Our Values/Our Vision.</p>	Compliant		
6.1.2	<p><b>Indicator:</b> Evidence that workers are free to form organizations, including unions, to advocate for and protect their rights</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>GRIEG – Revised Code of Conduct – Care for People – Privacy and Rights – We are committed to respecting the privacy of individuals and handle personal data responsibly and in compliance with applicable laws. We recognize the right to organize to promote and defend occupational interests. Right to Organize – We expect all Grieg Seafood Employees to: a. Know and understand all local or applicable legal obligations in relation to labor and collective bargaining. B. Engage in open and free dialogue concerning conduct of labor and labor relations in Grieg Seafood.</p> <p>Employees, during private interviews confirmed that they signed the Contract of Employment and felt that their rights are not affected. Employees signed receiving and accepting a copy of the Employee Handbook &amp; Code of Conduct.</p>	Compliant		
6.1.3	<p><b>Indicator:</b> Evidence that workers are free and able to bargain collectively for their rights</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>GRIEG – Code of Conduct – Right to Organize – All Grieg Seafood Employees: a. Know and understand all local or applicable legal obligations in relation to labor and collective bargaining. B. Engage in open and free dialogue concerning conduct of labor and labor relations in Grieg Seafood.</p> <p>The employer has explicitly communicated a commitment to ensure the collective bargaining rights of all workers as stated in 6.1.1 &amp; 6.1.2. The documentary evidence shows that workers are free and able to bargain collectively. Detailed in the Code of Conduct and training records, maintained in DATS.</p>	Compliant		
<b>Compliance Criteria</b>					
<i>Criterion 6.2 Child labor</i>					
6.2.1	<p><b>Indicator:</b> Number of incidences of child [107] labor [108]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All except as noted in [107]</p>	<p>Grieg Seafood - Ages of all workers stored on Human Resources management system. There are no persons employed under the age of 18. Age of hire is at a minimum age of 18 years of age, nothing younger. Facility will not hire anyone under age 16, but for barge work, it will be 18 years old as a minimum age. Grieg Code of Conduct – Care for People – Fair Employment – All activities shall be conducted with respect for individuals as individuals and without discrimination. We do not tolerate any form of forced labor and are committed to the abolition of child labor. Check of random selected employees from the 3 farm locations, reviewed during audit and none were below 18 years old at time of hire.</p> <p>Identification is held on file for all farm employees and is signed and verified by senior Management at the point of employment. Required checks of personal Social Insurance Number, which is a 9-digit number required to work in Canada. Reviewed all randomly selected personnel on all 3 sites of the scope of the audit with the check of hire date and age, was found that youngest of the sampled was age 18 at time of hire.</p>	Compliant		
Footnote	[107] Child: Any person under 15 years of age. A higher age would apply if the minimum age law of an area stipulates a higher age for work or mandatory schooling. Minimum age may be 14 if the country allows it under the developing country exceptions in ILO convention 138.				
Footnote	[108] Child Labor: Any work by a child younger than the age specified in the definition of a child.				
6.2.2	<p><b>Indicator:</b> Percentage of young workers [109] that are protected [110]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>Ages of all workers stored on Human Resources management system. There are no persons employed under the age of 18. Age of hire is at a minimum age of 18 years of age, nothing younger. At time of hire, two forms of identification is reviewed, which is normally the SIN Number and another form of ID, such as a Drivers License or Passport. Facility will not hire anyone under age 16, but for barge work, it will be 18 years old as a minimum age. No young workers employed at the time of the audit. During tour of the areas of work, no workers had the appearance of being under age, and review of personnel files confirmed compliance. Youngest randomly sampled employee was age 18 at the time of hiring.</p>	Compliant		100%
Footnote	[109] Young Worker: Any worker between the age of a child, as defined above, and under the age of 18.				
Footnote	[110] Protected: Workers between 15 and 18 years of age will not be exposed to hazardous health and safety conditions; working hours shall not interfere with their education and the combined daily transportation time and school time, and work time shall not exceed 10 hours.				
Footnote	[111] Hazard: The inherent potential to cause injury or damage to a person's health (e.g., unequipped to handle heavy machinery safely, and unprotected exposure to harmful chemicals).				
Footnote	[112] Hazardous work: Work that, by its nature or the circumstances in which it is carried out, is likely to harm the health, safety or morals of workers (e.g., heavy lifting disproportionate to a person's body size, operating heavy machinery, exposure to toxic chemicals).				

Compliance Criteria						Criterion 6.3 Forced, bonded or compulsory labor	
6.3.1	<p><b>Indicator:</b> Number of incidences of forced, [113] bonded [114] or compulsory labor</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>All employees are provided with contracts of employment, that are signed by both the employee and the company, and this was confirmed during the private interviews of randomly selected employees. Employees can keep a copy of the contract and the employer retains a signed copy. Original identity documents are not kept by the company and are returned to the employees after verification. Documentation checks confirmed that all working hours is conducted on a voluntary basis. The employer does not withhold any part of workers' salaries, benefits, property or documents to oblige them to continue working for the employer.</p> <p>As noted in the Grieg Code of Conduct that all employees that work is voluntary and that employees are free to leave upon reasonable notice. All employees understand and comply with all applicable laws and international conventions on labor practices to which Grieg Seafood subscribes and supports.</p> <p>No employees are repaying debt. The randomly selected employees confirmed all the above during the interview process with no issues raised.</p>	Compliant				
Footnote	[113] Forced (Compulsory) labor: All work or service that is extracted from any person under the menace of any penalty for which a person has not offered himself/herself voluntarily or for which such work or service is demanded as a repayment of debt. "Penalty" can imply monetary sanctions, physical punishment, or the loss of rights and privileges or restriction of movement (e.g., withholding of identity documents).						
Footnote	[114] Bonded labor: When a person is forced by the employer or creditor to work to repay a financial debt to the crediting agency.						
Compliance Criteria						Criterion 6.4 Discrimination [118]	
Footnote	[115] Discrimination: Any distinction, exclusion or preference that has the effect of nullifying or impairing equality of opportunity or treatment. Not every distinction, exclusion or preference constitutes discrimination. For instance, a merit- or performance-based pay increase or bonus is not by itself discriminatory. Positive discrimination in favor of people from certain underrepresented groups may be legal in some countries.						
6.4.1	<p><b>Indicator:</b> Evidence of comprehensive [116] and proactive anti-discrimination policies, procedures and practices</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>The anti-discrimination policy that is in place, indicates that the company does not treat people as members of a class, based on race, ethnicity, national or other origin, disability, age, gender, sexual orientation, language, religion, or any other characteristics. Base employment decisions on job qualifications and merit. Positive discrimination is tolerated in order to achieve equality and diversity. Provide a work environment free from harassment and bullying.</p> <p>All employees are respected with regards equal treatment as confirmed during the private and confidential interview process. All managers have been trained in equality and diversity, and evidence of the training is recorded on DATS, which has required annual recertification.</p>	Compliant				
Footnote	[116] Employers shall have written anti-discrimination policies stating that the company does not engage in or support discrimination in hiring, remuneration, access to training, promotion, termination or retirement based on race, caste, national origin, religion, disability, gender, sexual orientation, union membership, political affiliation, age or any other condition that may give rise to discrimination.						
6.4.2	<p><b>Indicator:</b> Number of incidences of discrimination</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>The facility has a procedure in place to document all discrimination complaints. To date, there are no current any open complaints. When asked during the private interview process with randomly selected employees, there was no issues mentioned by the employees. All the employees commented on the fairness and stable work environment, regardless of length of employment.</p>	Compliant				
Compliance Criteria						Criterion 6.5 Work environment health and safety	
6.5.1	<p><b>Indicator:</b> Percentage of workers trained in health and safety practices, procedures [117] and policies on a yearly basis</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>Grieg Seafood Management Control Program Specifics:</p> <p>Grieg Seafood has a comprehensive OHS Management System based on the federal and provincial health and safety requirements (WorkSafeBC, Transport Canada etc.) The program includes Grieg's Health and Safety Policy, Standards, and various work procedures. Grieg's Management Control Program integrates Occupational Health and Safety and Environmental Management System under GSE (Grieg Seafood Excellence) Program and is documented and controlled using an electronic system DATS (Digital Action Tracking System).</p> <p>Grieg's OHS Management System was audited under a provincial safety standard of excellence OSSE (Occupational Safety Standard of Excellence) and was awarded in 2019 with the OSSE Certification. This certification is granted to companies who have successfully developed and implemented a comprehensive Health &amp; Safety Management System to OSSE standards. To maintain this certification the OHS Management System is audited every year, between re-certifications.</p> <p>Employees are trained on:</p> <ul style="list-style-type: none"> <li>•STD – Emergency Preparedness and Response</li> <li>•STD – Training &amp; Instruction, App. 1 – Training Matrix</li> <li>•STD – Hazard Identification &amp; Risk Assessments</li> <li>•STD – Investigating and Reporting of Hazards and Unwanted Events (new updated standard under implementation)</li> <li>•STD – PPE (Personal Protective Equipment)</li> <li>•STD – WHMIS (Work Hazardous Material Information Sheet)</li> <li>•DATS •Beacate:</li> </ul> <p>!Sep 4, 2020, Evacuation: Fire, Medical, Spill and Tsunami Drills. !Jan 24, 2021, Evacuation: Fire Drills.</p>	Compliant		100%		
Footnote	[117] Health and safety training shall include emergency response procedures and practices.						

6.5.2	<p><b>Indicator:</b> Evidence that workers use Personal Protective Equipment (PPE) effectively</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<ul style="list-style-type: none"> <li>•Safety Data Sheets (SDS) readily available for workers.</li> <li>•We are transitioning to an online SDS portal named CHEMSCAPE that will provide high quality controls over Grieg's SDS database.</li> </ul> <p>Our PPE (Personal Protective Equipment) Standard outlines training and wearing requirements for employees and contractors who perform work in any of Grieg's operational areas. Risk assessments tools like ICR (Identification of Critical Risk) and JHA (Job Hazard Assessment) are used to identify, control (reduce or eliminate) and rank the risks at Grieg Seafood BC. Health and safety Standard and procedures that outlines roles, responsibilities, and training requirements around risk assessments and PPE:</p> <ul style="list-style-type: none"> <li>•STD – WHMIS</li> <li>•STD – Hazard Identification &amp; Risk Assessments</li> <li>•PPE (Personal Protective Equipment) Standard</li> <li>•STD - Inspections &amp; Monitoring</li> <li>•BORM – Identification of Critical Risks</li> <li>•BORM – Job Hazard Assessment (JHA)</li> <li>•SOPs (Standard Operating Procedures) based on assessing the risk associated with the task</li> </ul>	Compliant		
6.5.3	<p><b>Indicator:</b> Presence of a health and safety risk assessment and evidence of preventive actions taken</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>STD – Hazard Identification &amp; Risk Assessments, outlines requirements for formal risk assessments.</p> <p>Risks are formally evaluated and categorized using a risk matrix through two risk processes at Grieg Seafood:</p> <ul style="list-style-type: none"> <li>• Identification of Critical Risks (ICR), and</li> <li>• Job Hazard Assessment (JHA).</li> </ul> <p>These risk assessment processes are used to categorize risks and determine whether controls are adequate, or if a job may proceed.</p> <p>STD-Inspections and Monitoring that outlines requirements for inspection frequency and expectations for identifying and implementing corrective actions.</p> <p>Monthly inspections: done by department management.</p> <p>Quarterly inspections: done by Health &amp; Safety Management Team in conjunction with JOHSC (Joint Occupational Health and Safety Committee)</p>	Compliant		
6.5.4	<p><b>Indicator:</b> Evidence that all health- and safety-related accidents and violations are recorded and corrective actions are taken when necessary</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>New Standard for Investigating and Reporting of Hazards and Unwanted Events. This Standard is under implementation at the time of the audit. Follow up update of the implementation status will be provided by the HS manager to the next ASC audit.</p> <p>The HS Department provides Health and Safety Performance Metrics to the Senior Management Team and across the organisation on a quarterly base, starting with 2020. The metrics include leading and lagging safety indicators (lost time incidents, lost time incident rate, close calls etc.). Starting this year HS Department plans to extend the leading indicators pool by tracking (number of completed tasks associated with the monthly inspections, number of SOPs reviewed by the department etc. 4 incidents: 2 close calls, 2 first aids.), Sept 4, July 29, July 4, June 20, 2020</p>	Compliant		

6.5.5	<p><b>Indicator:</b> Evidence of employer responsibility and/or proof of insurance (accident or injury) for 100% of worker costs in a job-related accident or injury when not covered under national law</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>Insurance is available for all workers to ensure that they are compensated to cover costs related to occupational accidents. Public liability insurance is also available to cover all over parties. Workers Compensation Act – is posted in the upstairs office. WorkSafe BC Part 3, Division 3 – General Duties of Employer, workers and others. This is posted and all employees are covered. Interviewed employees confirmed 100% coverage of all medical costs associated with on-job injuries. 3rd party injury support company - TekMed, Inc. This company supports employees through return to work process.</p>	Compliant		
6.5.6	<p><b>Indicator:</b> Evidence that all diving operations are conducted by divers who are certified</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>Note: If the farm outsources its diving operations to an independent company, the farm shall ensure that auditors have access to specified information sufficient to demonstrate compliance with Indicator 6.5.6. It is the farm's responsibility to obtain copies of relevant documentation (e.g. certificates) from the dive company.</p> <p>Employer keeps records of all farm diving operation. All external divers are given full details of the operations that are required. Auditor reviewed the dive certifications, and all maintained as noted. Dive Certifications – last reviewed each dive certification from both dive companies updated 2019 forms, and all maintained prior to each proposed dive dates.</p> <p>The BC Government operate an approved contractor scheme called Work Safe, all contractors used must be continually registered. Reviewed WorkSafe BC certifications for these authorized companies, along with the specific divers' certifications are maintained.</p> <p>Employer keeps records of the farm diving operations. All external diving personnel are from Dive Co and All Pen – These are the only two companies authorized to perform diving operations – All certifications are reviewed and updated annually.</p> <p>All work for divers is required to be through the Underwater Diving Plan (Document 1.1) for all contractors at Grieg Seafood. All Contracted work must have certification prior to work beginning, no exceptions as referenced in WorkSafe BC OHS Regulation Part 24.</p>	Compliant		
<b>Compliance Criteria</b> <i>Criterion 6.6 Wages</i>					
6.6.1	<p><b>Indicator:</b> The percentage of workers whose basic wage [118] (before overtime and bonuses) is below the minimum wage [119]</p> <p><b>Requirement:</b> 0 (None)</p> <p><b>Applicability:</b> All</p>	<p>Wages are detailed in the Contract of Employment, which was reviewed by the auditor in the HR system maintaining signed contracts and does note the pay being established and is accepted by all employees at time of employment. Employees receive wage payments biweekly by direct deposit. All interviewed workers stated they were clear on wages rates and had no issues with payments. Overtime Standard/Policies are noted in the HR Manual and in the employee Handbook, and available in DATS</p>	Compliant		0
Footnote	[118] Basic wage: The wages paid for a standard working week (no more than 48 hours).				
Footnote	[119] If there is no legal minimum wage in a country, basic wages must meet the industry-standard minimum wage.				
6.6.2	<p><b>Indicator:</b> Evidence that the employer is working toward the payment of basic needs wage [120]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>There is no nationally recognized Living Wage in Canada. Grieg Seafood uses information from 1. Statistics Canada, (unemployment rate, consumer price index), 2. Korn Ferry – Market detail review with the Canadian Market to assist with setting pay levels. Minimum wages at this facility are higher than the average wage for the area and Grieg starting rate is \$18 per hour. This was confirmed with sampled employees interviewed. Minimum wage for BC Canada is \$14.60</p>	Compliant		
Footnote	[120] Basic needs wage: A wage that covers the basic needs of an individual or family, including housing, food and transport. This concept differs from a minimum wage, which is set by law and may or may not cover the basic needs of workers.				
6.6.3	<p><b>Indicator:</b> Evidence of transparency in wage-setting and rendering [121]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>Wages are detailed in the Contract of Employment, which was reviewed in the HR system maintaining signed contracts by auditor and does note the pay being established and accepted. Employees receive wage payments biweekly by direct deposit. All interviewed workers stated they were clear on wages rates and had no issues with payments. Pay is at a minimum of \$18.00 per hour, and lowest of the sampled employees was \$18.00 per hour.</p>	Compliant		
Footnote	[121] Payments shall be rendered to workers in a convenient manner.				
<b>Compliance Criteria</b> <i>Criterion 6.7 Contracts (labor) including subcontracting</i>					
6.7.1	<p><b>Indicator:</b> Percentage of workers who have contracts [122]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	<p>All employees are provided with a contract of employment, and a copy of the contract was available in the sampled personnel files. CONFIRMED WITH HR Generalist – Reviewed on 1/29/2021</p> <p>There was no evidence of labor only contracts or false apprenticeships. This was confirmed with a review with Grieg Seafood HR Management files for the randomly selected personnel. Interviewed personnel confirmed.</p>	Compliant		100%
Footnote	[122] Labor-only contracting relationships or false apprenticeship schemes are not acceptable. This includes revolving/consecutive labor contracts to deny benefit accrual or equitable remuneration. False Apprenticeship Scheme: The practice of hiring workers under apprenticeship terms without stipulating terms of the apprenticeship or wages under contract. It is a "false" apprenticeship if its purpose is to underpay people, avoid legal obligations or employ underage workers. Labor-only contracting arrangement: The practice of hiring workers without establishing a formal employment relationship for the purpose of avoiding payment of regular wages or the provision of legally required benefits, such as health and safety protections.				

6.7.2	<p><b>Indicator:</b> Evidence of a policy to ensure social compliance of its suppliers and contractors</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	Grieg Seafood Code of Conduct details the policy for working with third parties who amongst other things must adhere to values and principles that are consistent with Grieg Seafood expectations. Grieg Seafood keeps a list of approved suppliers and contractors, which is maintained and updated as required to maintain permits and licenses for work performed on behalf of Grieg Seafood.	Compliant		
<i>Criterion 6.8 Conflict resolution</i>					
<b>Compliance Criteria</b>					
6.8.1	<p><b>Indicator:</b> Evidence of worker access to effective, fair and confidential grievance procedures</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	The Workplace Bullying, Harassment, Violence and Improper Activity or Behavior - May 2019 latest version. This policy is available for all personnel. Employees have access to all HR policies through the intranet, and during interviews with the randomly selected employees confirmed they were aware of this. These complaints or issues are NOT commonly maintained within an employee's personnel file and are removed and deleted from HR files as they are closed out. This was confirmed with communication with HR Management during the audit.	Compliant		
6.8.2	<p><b>Indicator:</b> Percentage of grievances handled that are addressed [123] within a 90-day timeframe</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All</p>	As per HR Generalist, all issues are resolved within a 14 day as a average. Reviewed some documented grievances and all seem to be properly documented and completed. The Workplace Bullying, Harassment, Violence and Improper Activity or Behavior - May 2019 latest version. Any grievances that are raised are recorded and maintained within a confidential file within the HR system. Interviewed employees confirmed knowledge of these procedures and there is a formal grievance system available for all employees, but none have been raised to submitted.	Compliant		100%
Footnote	[123] Addressed: Acknowledged and received, moving through the company's process for grievances, corrective action taken when necessary.				
<i>Criterion 6.9 Disciplinary practices</i>					
<b>Compliance criteria</b>					
6.9.1	<p><b>Indicator:</b> Incidences of excessive or abusive disciplinary actions</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	Grieg Seafood Employee Handbook, June 2020 version, page 33 – Performance Management – Disciplinary Actions does not use any threatening, humiliating or punishing disciplinary practices that negatively impact a worker's physical and mental health or dignity. The disciplinary procedure is fair and legitimate as confirmed during worker's interview at each site. All employees sign and acknowledge these policies in DATS.	Compliant		
Footnote	[124] Mental Abuse: Characterized by the intentional use of power, including verbal abuse, isolation, sexual or racial harassment, intimidation or threat of physical force.				
6.9.2	<p><b>Indicator:</b> Evidence of a functioning disciplinary action policy whose aim is to improve the worker [125]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	Covered in the Grieg EMPLOYEE HANDBOOK – Page 33 – Progressive improvement to the worker in becoming a better employee. The company's disciplinary policy explicitly states that its aim is to improve the worker. The company has also established a performance management policy to be noted alongside the disciplinary policy, the aim of this policy is to develop the worker's performance to bring behaviors up to an acceptable standard. For the review of the sampled employees, there is the procedure, but no active disciplinary action on file.	Compliant		
Footnote	[125] If disciplinary action is required, progressive verbal and written warnings shall be engaged. The aim shall always be to improve the worker; dismissal shall be the last resort. Policies for bonuses, incentives, access to training and promotions are clearly stated and understood, and not used arbitrarily. Fines or basic wage deductions shall not be acceptable disciplinary practices.				
<i>Criterion 6.10 Working hours and overtime</i>					
<b>Compliance criteria</b>					
6.10.1	<p><b>Indicator:</b> Incidences, violations or abuse of working hours and overtime laws [126]</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>Note: Working hours, night work and rest periods for workers in agriculture should be in accordance with national laws and regulations or collective agreements (e.g. The Safety and Health in Agriculture Convention, 2001). Additional information can be found on the website of the International Labour Organization (<a href="http://www.ilo.org">www.ilo.org</a>).</p> <p>The company holds documentation for Employment Standards Act for BC for working regulations. The working shift pattern at the site is carried out over two weeks. The working day is 10 hours. The shift pattern consists of 8 days on and 6 days off. The averaged hours over the 2 weeks is 40 hours per week. s.</p>	Compliant		
Footnote	[126] In cases where local legislation on working hours and overtime exceed internationally accepted recommendations (48 regular hours, 12 hours overtime), the international standards will apply.				
6.10.2	<p><b>Indicator:</b> Overtime is limited, voluntary [127], paid at a premium rate [128] and restricted to exceptional circumstances</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All except as noted in [130]</p>	<p>The employees are paid a premium rate for overtime hours. Employees are paid 150% of standard pay for the first 2 hours of overtime above 10 hours in any 24 hours pay period and 200% of standard pay for any hours worked over 12 hours in any 24 hours. This is agreed to in the contract that all employees sign and accept.</p> <p>The time and attendance system confirmed that overtime is infrequent. Overtime is worked on a voluntary basis as confirmed during the interview process, and then with payroll review of the payroll dates selected by the auditor in January 2021 pay period.</p>	Compliant		
Footnote	[127] Compulsory overtime is permitted if previously agreed to under a collective bargaining agreement.				
Footnote	[128] Premium rate: A rate of pay higher than the regular work week rate. Must comply with national laws/regulations and/or industry standards.				
<i>Criterion 6.11 Education and training</i>					
<b>Compliance criteria</b>					
6.11.1	<p><b>Indicator:</b> Evidence that the company regularly performs training of staff in fish husbandry, general farm and fish escape management and health and safety procedures</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>All training records are maintained on the DATS system. Emergency Preparedness &amp; Response Training - 100% of completion for this mandatory training. Posters covering all these areas available for all employees.</p> <p>Workers confirmed that they are encouraged to learn and be involved with training courses. Other than compulsory health and safety training workers dictate the speed of additional training.</p>	Compliant		

Compliance criteria		Criterion 6.12 Corporate policies for social responsibility		
6.12.1	<p><b>Indicator:</b> Demonstration of company-level [129] policies in line with the standards under 6.1 to 6.11 above</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	Grieg Seafood Code of Conduct and HR Policies are in line with all social and labor requirements. The Senior Management Team approves corporate policy and specific local requirements at Corporate Offices in Campbell River. The scope of all corporate policies covers all company operations. All requested documentation was provided and reviewed.	Compliant	
Footnote	[129] Applies to the headquarters of the company in a region or country where the site applying for certification is located. The policy shall relate to all of the company's operations in the region or country, including grow-out, smolt production and processing facilities.			
Social requirements in the standards shall be audited by an individual who is a lead auditor in conformity with SAAS Procedure 200 section 3.1.				
PRINCIPLE 7: BE A GOOD NEIGHBOR AND CONSCIENTIOUS CITIZEN		Criterion 7.1 Community engagement		
7.1.1	<p><b>Indicator:</b> Evidence of regular and meaningful [130] consultation and engagement with community representatives and organizations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	Grieg regularly engages with community members and the local municipality, particularly the Mayors and Councillors via online meetings, phone calls and email communications. It has established relationships with two local governments for the communities of Zeballos and Tahsis. In 2020, Grieg twice donated fresh salmon to these communities after travel restrictions and access to fresh food on a weekly basis became restricted during the COVID Pandemic. In the coastal town of Tahsis, Grieg donated to the local salmon derby which annually raises more than \$20,000 in support of two salmon enhancement organizations (Nootka Sound Watershed Society and Tahsis Salmon Society). In early 2020 prior to COVID, Grieg donated travel funds to the elementary school in Zeballos so that students could participate in an exchange with another province. Grieg is currently in the process of working with the Ehattesaht Chinehkint and local community of Zeballos to share the costs of upgrading the Nation's dock facilities and offer a complete blood water catchment system during fish offload from Grieg's farms. Grieg also independently contributed to costs of upgrading the dock to better accommodate its contractor's harvest vessel. This allowed fish from the Esperanza Inlet farms which previously were offloaded through another community dock outside of the Nation's territory, so they could now be moved through the Ehattesaht Chinehkint docking facilities, providing a long-term economic benefit to both the remote Indigenous community and adjacent municipal community. With regards to the ongoing spill of fuel from the sunken MV Schiedyke near Bligh Island in Nootka Sound, Grieg continues to provide assistance and support for spill clean up efforts, donating \$20,000 in mooring equipment to date.	Compliant	
Footnote	[130] Regular and meaningful: Meetings shall be held at least bi-annually with elected representatives of affected communities. The agenda for the meetings should in part be set by the community representatives. Participatory Social Impact Assessment methods may be one option to consider here.			
7.1.2	<p><b>Indicator:</b> Presence and evidence of an effective [131] policy and mechanism for the presentation, treatment and resolution of complaints by community stakeholders and organizations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	From the Grieg Seafood External complaints resolution policy dated June 2019. This policy sets out direction for Grieg Seafood BC Ltd. ("Grieg BC") to receive, respond to, and resolve complaints received externally to the company. Complaints will be handled by the Director of Indigenous & Community Relations who may determine that a complaint may be transferred for response by another representative of Grieg BC. The recipient must acknowledge to the original recipient of the complaint that he/she has received it and will act on it. On receiving the complaint, the Director will initiate Grieg BC's complaint examination process. A complaint file is created, which will contain the complainant's name, phone number and email, the outcome of the investigation process, and all written correspondences to the complainant. It is stated that there have been no complaints.	Compliant	
Footnote	[131] Effective: In order to demonstrate that the mechanism is effective, evidence of resolutions of complaints can be given.			
7.1.3	<p><b>Indicator:</b> Evidence that the farm has posted visible notice [132] at the farm during times of therapeutic treatments and has, as part of consultation with communities under 7.1.1, communicated about potential health risks from treatments</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	Signage posted on farms and record of consultations attached for the Pesticide Use Permits. Dated June 9th 2020: A Letter from a first nation rightsholder to Ministry of Environment showing that the company informs the first nations rightsholders of their intention to treat when this is needed, within the Esperanza Inlet.	Compliant	
Footnote	[132] Signage shall be visible to mariners and, for example, to fishermen passing by the farm.			
Compliance Criteria		Criterion 7.2 Respect for indigenous and aboriginal cultures and traditional territories		
<p><b>Instruction to Clients and CABs on Criterion 7.2 - Traditional Territories of Indigenous Groups</b></p> <p>The ASC Salmon Standard requires that farms must be respectful of the traditional territories of indigenous groups. The Indicators listed under Criterion 7.2 were designed to fulfill this purpose in a manner consistent with the United Nations Declaration on the Rights of Indigenous Peoples. In many locales, the territorial boundaries of indigenous groups have a defined legal status according to local or national law. In such cases, it is straightforward to know whether a farm is operating in close proximity to indigenous people. However, when boundaries of indigenous territories are undefined or unknown, there is no simple way to establish whether the farm is operating in close proximity to indigenous groups. Here ASC provides the following guidance.</p> <p>The intent behind the ASC Salmon Standard is that the farm will identify all neighboring groups who are potentially negatively impacted by the farm's activities. The actual physical distance between the farm and an indigenous group is less important than understanding whether the farm is having a detrimental impact upon its neighbors. Effective community consultations are one of the best ways to identify such impacts to neighbor groups. Through a transparent process of consultation, indigenous groups who are put under "stress" by the farm will identify themselves and voice their concerns about the nature of the farm's impacts. Continued consultations between farm and neighbors should create a forum where any key issue can be discussed and resolved.</p>				
7.2.1	<p><b>Indicator:</b> Evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]</p>	<p>All farms operate in indigenous territories (see SOE reports).</p> <p>Two licences are issued by government; the federal government issues the Marine Finfish Aquaculture Licence under the Fisheries Act and the province issues the Provincial tenure. Grieg is aware of Local, national laws and regulations for each First Nation.</p> <p>Grieg demonstrates proactive engagement and supports government consultation. In its ongoing efforts to recognize the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP), the Province of BC's Bill 41 and Canada's steps towards reconciliation, Grieg Seafood BC has created a new position – the Director of Reconciliation and Partnerships, whose role is to reach out to Elders and Chiefs of each Nation for which Grieg has a benefits agreement, to understand the cultural and historical effects of companies operating in their traditional territories. <a href="https://www.griegseafoodcanada.com/2020/02/grieg-seafood-bc-adds-new-role-of-director-of-reconciliation/">https://www.griegseafoodcanada.com/2020/02/grieg-seafood-bc-adds-new-role-of-director-of-reconciliation/</a></p> <p>No representatives made themselves available for the audit.</p>	Compliant	

7.2.2	<p><b>Indicator:</b> Evidence that the farm has undertaken proactive consultation with indigenous communities</p> <p><b>Requirement:</b> Yes [133]</p> <p><b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]</p>	<p>In relation to consultations: For treatments there is signage posted on farms and record of consultations attached for the Pesticide Use Permits.</p> <p>From the Grieg Impact assessment they state "Grieg has good working relationship and agreement with the Ehattesaht First Nation who are rights holders of Esperanza Inlet/ Hecate Channel, the area in which we operate. They have provided information regarding the location of any significant or critically important, culturally sensitive or resource use areas, which the sea sites are not located near nor impede access to. We are also engaging Nuchatlaht First Nation who are also rights holders of the area."</p> <p>Also see 7.1.3</p>	Compliant			
Footnote [133] All standards related to indigenous rights only apply where relevant, based on proximity of indigenous territories.						
7.2.3	<p><b>Indicator:</b> Evidence of a protocol agreement, or an active process [134] to establish a protocol agreement, with indigenous communities</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All farms that operate in indigenous territories or in proximity to indigenous or aboriginal people [133]</p>	<p>Grieg have provided SOE reports that were provided by the provincial government. Environmental Reporting BC provides access to scientific data and information about the environment and how it relates to British Columbians. This includes first nations rights holders in the licenced areas. These first nation rightsholders were consulted and are consulted about the farm sites activities. Licenceing would not have been possible without these indigeneous communities being onboard with the activities.</p>	Compliant			
Footnote [134] To demonstrate an active process, a farm must show ongoing efforts to communicate with indigenous communities, an understanding of key community concerns and responsiveness to key community concerns through adaptive farm management and other actions.						
<b>Compliance Criteria</b> <i>Criterion 7.3 Access to resources</i>						
7.3.1	<p><b>Indicator:</b> Changes undertaken restricting access to vital community resources [135] without community approval</p> <p><b>Requirement:</b> None</p> <p><b>Applicability:</b> All</p>	<p>From Page 4 and 5 of the Grieg Impact assessments on the Esperanza Inlet dated October 2020:</p> <p><b>OTHER USER GROUPS</b> The area is frequented by recreational and guided fishing groups and recreational tourism groups (Nootka CLUP), none of the sites block access to fishing grounds nor impede local boat traffic Appendix 1 – Recreational Maps. The sites have authorizations issued by Nav Canada under the Navigation Protection Act as an obstruction.</p> <p><b>INDIGENOUS STAKEHOLDERS</b> Grieg has good working relationship and agreement with First Nations who are rights holders of Esperanza Inlet/ Hecate Channel, the area in which we operate. They have provided information regarding the location of any significant or critically important, culturally sensitive or resource use areas, which the sea sites are not located near nor impede access to. They are also engaging Nuchatlaht First Nation who are also rights holders of the area.</p>	Compliant			
Footnote [135] Vital community resources can include freshwater, land or other natural resources that communities rely on for their livelihood. If a farm site were to block, for example, a community's sole access point to a needed freshwater resource, this would be unacceptable under the Dialogue standard.						
7.3.2	<p><b>Indicator:</b> Evidence of assessments of company's impact on access to resources</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All</p>	<p>From the Grieg Impact assessments on the Esperanza Inlet dated October 2020:</p> <p>There are commercial fisheries area indicated for crab areas in the inlet, the sites do not impede access to these areas. There are no other commercial fisheries, dive sites, marine campsites, kayak interest locations, or other uses identified in the provincial databases. Appendix 1 – Maps for the location of the Commercial Crab Fisheries, Appendix 1 – Maps for Recreational Areas. The area is used by herring which been identified as an important commercial and cultural species. There are annual spawns in area 253 (Esperanza Inlet) that is located just west of the Steamer Point site. Refer to Appendix 1 – Maps for the 252 Herring Spawn areas. The aquaculture industry does not generally impact the fishery (Wild Fish Predation Project).</p>	Compliant			
<b>INDICATORS AND STANDARDS FOR SMOLT PRODUCTION</b>						
A farm seeking certification must have documentation from all of its smolt suppliers to demonstrate compliance with the following standards. The requirements are, in general, a subset of the standards in Principles 1 through 7, focusing on the impacts that are most relevant for smolt facilities. In addition, specific standards are applied to open systems (net pens), and to closed and semi-closed systems (recirculation and flow-through). [136]						
Footnote [136] The SAD SC proposes this approach to addressing environmental and social performance during the smolt phase of production. In the medium term, the SC anticipates a system to audit smolt production facilities on site. In the meantime, farms will need to work with their smolt suppliers to generate the necessary documentation to demonstrate compliance with the standards. The documentation will be reviewed as part of the audit at the grow-out facility.						
<b>SECTION 8: STANDARDS FOR SUPPLIERS OF SMOLT</b> <i>Standards related to Principle 1</i>						
8.1	<p><b>Indicator:</b> Compliance with local and national regulations on water use and discharge, specifically providing permits related to water quality</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p><b>Compliance Criteria (Required Client Actions):</b></p> <p>a. Identify all of the farm's smolt suppliers. For each supplier, identify the type of smolt production system used (e.g. open, semi or closed systems) and submit this information to ASC (Appendix VI).</p> <p>b. Where legal authorisation related to water quality are required, obtain copies of smolt suppliers' permits.</p> <p>c. Obtain records from smolt suppliers showing monitoring and compliance with discharge laws, regulations, and permit requirements as required.</p>	<p><b>Auditor Evaluation (Required CAB Actions):</b></p> <p>3 Hatcheries are used for stocking this area. Gold River owned by GRIEG, Lena Creek who GRIEG are the only customer. The final hatchery is Cermaq's Little Bear Bay hatchery (Which has been the subject of multiple ASC audits on Cermaq's own ASC site audits.</p> <p>GRIEG: Gold River Hatchery: Freshwater/Land-based Aquaculture Licence Under the Fisheries Act, Licence No. AQFW 115270 2015/2024, issued by DFO and expiring June 18, 2024.</p> <p>Permit PE17245 issued by the BC Ministry of Environment, Lands and Parks specifying effluent volume and load limits and requiring annual reporting of monitoring data.</p> <p>Lena Creek Hatchery. (Paradise Trading Corporation) Freshwater/Land-based Aquaculture Licence Under the Fisheries Act, Licence No. AQFW 112782 2015/2024, issued by DFO and expiring June 18, 2024.</p> <p>Permit PE8138 issued April, 2017 by the BC Ministry of Environment, Lands and Parks specifying effluent volume and load limits and requiring annual reporting of monitoring data.</p> <p>CERMAQ: Little Bear DFO reference number 506, AQFW 115447 2015/2024 valid until Jun 18th 2024.</p>	Compliant		
8.2	<p><b>Indicator:</b> Compliance with labor laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain declarations from smolt suppliers affirming compliance with labor laws and regulations.</p> <p>b. Keep records of supplier inspections for compliance with national labor laws and codes (only if such inspections are legally required in the country of operation; see 1.1.3a)</p>	<p>Principle 6 of this audit report covers both Grieg hatcheries of Gold River and Lena Creek. The Cermaq hatchery has been covered in multiple ASC audits and the site is certified under BAP.</p>	Compliant		

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):			
8.3	<p><b>Indicator:</b> Evidence of an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>Note: If the smolt facility has previously undertaken an independent assessment of biodiversity impact (e.g. as part of the regulatory permitting process), the farm may obtain and use such documents as evidence to demonstrate compliance with Indicator 8.3 as long as all components are covered.</p> <p>a. Obtain from the smolt supplier(s) a documented assessment of the smolt site's potential impact on biodiversity and nearby ecosystems. The assessment must address all components outlined in Appendix I-3.</p> <p>b. Obtain from the smolt supplier(s) a declaration confirming they have developed and are implementing a plan to address potential impacts identified in the assessment.</p>	<p>The Cermaq hatchery supplied an Environmental risk assessment that covers the requirement of Appendix I-3.</p> <p>The GRIEG hatcheries do not have an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 and as outlined in Appendix I-3.</p>	Minor	<p>The GRIEG hatcheries do not have an assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 and as outlined in Appendix I-3. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	
8.4	<p><b>Indicator:</b> Maximum total amount of phosphorus released into the environment per metric ton (mt) of fish produced over a 12-month period (see Appendix VIII-1)</p> <p><b>Requirement:</b> 4 kg/t of fish produced over a 12-month period</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain records from smolt suppliers showing amount and type of feeds used for smolt production during the past 12 months.</p> <p>b. For all feeds used by the smolt suppliers (result from 8.4a), keep records showing phosphorus content as determined by chemical analysis or based on feed supplier declaration (Appendix VIII-1).</p> <p>c. Using the equation from Appendix VIII-1 and results from 8.4a and b, calculate the total amount of phosphorus added as feed during the last 12 months of smolt production.</p> <p>d. Obtain from smolt suppliers records for stocking, harvest and mortality which are sufficient to calculate the amount of biomass produced (formula in Appendix VIII-1) during the past 12 months.</p> <p>e. Calculate the amount of phosphorus in fish biomass produced (result from 8.4d) using the formula in Appendix VIII-1.</p> <p>f. If applicable, obtain records from smolt suppliers showing the total amount of P removed as sludge (formula in Appendix VIII-1) during the past 12 months.</p> <p>g. Using the formula in Appendix VIII-1 and results from 8.4a-f (above), calculate total phosphorus released per ton of smolt produced and verify that the smolt supplier is in compliance with requirements.</p>	<p><b>Instruction to Clients for Indicator 8.4 - Calculating Total Phosphorus Released per Ton of Fish Produced</b></p> <p>Farms must confirm that each of their smolt suppliers complies with the requirement of indicator 8.4. This specifies the maximum amount of phosphorus that a smolt production facility can release into the environment per metric ton (mt) of fish produced over a 12-month period. The requirement is set at 4 kg/mt. The calculation of total phosphorus released is made using a "mass balance" approach. Detailed instructions and formulas are given in Appendix VIII-1.</p> <p>If applicable, farms may take account of any physical removals of phosphorus in the form of sludge provided there is evidence to show:</p> <ul style="list-style-type: none"> <li>- the smolt supplier has records showing the total quantity of sludge removed from site over the relevant time period;</li> <li>- the supplier determined phosphorus concentration (% P) in removed sludge by sampling and analyzing representative batches; and</li> <li>- the sludge was properly disposed off site and in accordance with the farm's biosolid management plan.</li> </ul> <p>Sludge calculations reviewed and verified.</p> <p>Grieg Gold River: Exempt from this indicator as the site discharges to the Marine environment. See VR's below.</p> <p>Grieg Lena Creek: Discharges almost to the sea as the discharge point is less than 40m from the Marine environment. Total Phosphorus released per weight of fish produced was 0.85kg/t fish production.</p> <p>Cermaq Little Bear hatchery provided calculations that show the results as being 1.6 kg/t fish production of Phosphorus released.</p> <p>VR nr .39 approved 15.09.2014 by ASC on phosphorus release from smolt producer. Rationale for use of VR 39 during audit is that as for accepted VR 39 the smolt producers effluent is seawater not freshwater</p> <p>VR nr .92 approved 23.9.15 by ASC on indicator 8.4. Rationale for use of VR 92 during audit is the smolt producers discharge effluent to seawater not freshwater.</p> <p>VR nr .231 approved 14.7.17 by ASC on indicator 8.4. Rationale for use of VR 231 during audit is the sampling of Phosphorus in the effluent water instead of the sludge</p>	Compliant		<4kg/t

Standards related to Principle 3

		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):			
8.5	<p><b>Indicator:</b> If a non-native species is being produced, the species shall have been widely commercially produced in the area prior to the publication of the ASC Salmon Standard</p> <p><b>Requirement:</b> Yes [137]</p> <p><b>Applicability:</b> All Smolt Producers except as noted in [137]</p>	<p>a. Obtain written evidence showing whether the smolt supplier produces a non-native species or not. If not, then indicator 8.5 does not apply.</p> <p>b. Provide the farm with documentary evidence that the non-native species was widely commercially produced in the area before publication of the ASC Salmon Standard. (See definition of area under 3.2.1)</p> <p>c. If the smolt supplier cannot provide the farm with evidence for 8.5b, provide documentary evidence that the farm uses only 100% sterile fish.</p> <p>d. If the smolt supplier cannot provide the farm with evidence for 8.5b or 8.5c, provide documented evidence for each of the following:</p> <ol style="list-style-type: none"> <li>1) non-native species are separated from wild fish by effective physical barriers that are in place and well maintained;</li> <li>2) barriers ensure there are no escapes of reared fish specimens that might survive and subsequently reproduce; and</li> <li>3) <del>barriers ensure there are no escapes of biological material.</del></li> </ol> <p>e. Retain evidence as described in 8.5a-d necessary to show compliance of each facility supplying smolt to the farm.</p>	<p>Non-native Atlantic salmon are farmed. Evidence provided on the DFO website shows egg importations to British Columbia occurring first, from Scotland, in 1985. The hatcheries have drum filters, in tank filters and in trough filters for all the hatcheries involved.</p>	Compliant		
Footnote	[137] Exceptions shall be made for production systems that use 100 percent sterile fish or systems that demonstrate separation from the wild by effective physical barriers that are in place and well-maintained to ensure no escapes of reared specimens or biological material that might survive and subsequently reproduce.					
8.6	<p><b>Indicator:</b> Maximum number of escapees [138] in the most recent production cycle</p> <p><b>Requirement:</b> 300 fish [139]</p> <p><b>Applicability:</b> All Smolt Producers except as noted in [139]</p>	<p>a. Obtain documentary evidence to show that smolt suppliers maintained monitoring records of all incidences of confirmed or suspected escapes, specifying date, cause, and estimated number of escapees.</p> <p>b. Using smolt supplier records from 8.6a, determine the total number of fish that escaped. Verify that there were fewer than 300 escapees from the smolt production facility in the most recent production cycle.</p> <p>c. <del>From smolt suppliers in writing that monitoring records described in 8.6a must be maintained for at least 10 years beginning with the production cycle for which the farm is first applying for certification (necessary for farms to be eligible to apply for the ASC Salmon Standard).</del></p> <p>d. If an escape episode occurs at the smolt production facility (i.e. an incident where &gt; 300 fish escaped), the farm may request a rare exception to the Standard [139]. Requests must provide a full account of the episode and must document how the smolt producer could not have predicted the events that caused the escape episode.</p>	<p>There have been no reported escapes from Lena Creek or Little Bear. There has been a reported escape of 100 fry and parr at 2g average in July 2020 from Gold River. The escape report states 'As a result of the RAS 34 construction project effluent from Fry and Parr unit plumbing was changed. New plumbing arrangement needed an additional screen installed'. As this hatchery discharges to the Marine environment its very unlikely any fish survived as they were not capable of living in the seawater environment at this stage of their lifecycle. DFO were informed and a full report was made by the applicant.</p>	Compliant		100
Footnote	[138] Farms shall report all escapes; the total aggregated number of escapees per production cycle must be less than 300 fish.					
Footnote	[139] A rare exception to this standard may be made for an escape event that is clearly documented as being outside of the farm's control. Only one such exceptional episode is allowed in a 10-year period for the purposes of this standard. The 10-year period starts at the beginning of the production cycle for which the farm is applying for certification. The farmer must demonstrate that there was no reasonable way to predict the events that caused the episode. Extreme weather (e.g., 100-year storms) or accidents caused by farms located near high-traffic waterways are not intended to be covered under this exception.					
8.7	<p><b>Indicator:</b> Accuracy [140] of the counting technology or counting method used for calculating the number of fish</p> <p><b>Requirement:</b> ≥98%</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain records showing the accuracy of the counting technology used by smolt suppliers. Records must include copies of spec sheets for counting machines and common estimates of error for hand-counts.</p> <p>b. Review records to verify that accuracy of the smolt supplier's counting technology or counting method is ≥ 98%.</p>	<p>The Gold River and Lena Creek Hatchery uses the smolt count after vaccination and the counting machine used is a Vaki Counter (micro and macro) – used with the auto vaccinating machine and its accuracy is stated as &gt;99%.</p> <p>Cermaq Canada hatcheries use the VAKI counters with stated 98%-100% accuracy.</p>	Compliant		>98%
Footnote	[140] Accuracy shall be determined by the spec sheet for counting machines and through common estimates of error for any hand counts.					
Standards related to Principle 4						
		Compliance Criteria (Required Client Actions):	Auditor Evaluation (Required CAB Actions):			
8.8	<p><b>Indicator:</b> Evidence of a functioning policy for proper and responsible treatment of non-biological waste from production (e.g., disposal and recycling)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. From each smolt supplier obtain a policy which states the supplier's commitment to proper and responsible treatment of non-biological waste from production. It must explain how the supplier's policy is consistent with best practice in the area of operation.</p>	<p>The policy for the Grieg hatchery's are the same as for the Marine sites.</p> <p>From Cermaq "Cermaq Canada is committed to the proper and responsible treatment of non-biological waste from production. Where facilities exist, Cermaq Canada will recycle or reuse equipment and materials whenever possible." The company's Freshwater Program has Section 1.4.9, Waste Management. The hatchery is BAP certified where waste is also reviewed.</p>	Compliant		
Note: see instructions for Indicator 4.6.1.						

8.9	<p><b>Indicator:</b> Presence of an energy-use assessment verifying the energy consumption at the smolt production facility (see Appendix V subsection 1 for guidance and required components of the records and assessment)</p> <p><b>Requirement:</b> Yes, measured in kilojoule/mt fish/production cycle</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain records from the smolt supplier for energy consumption by source (fuel, electricity) at the supplier's facility throughout each year.</p> <p>b. Confirm that the smolt supplier calculates total energy consumption in kilojoules (kj) during the last year.</p> <p>c. Obtain records to show the smolt supplier calculated the total weight of fish in metric tons (mt) produced during the last year.</p> <p>d. Confirm that the smolt supplier used results from 8.9b and 8.9c to calculate energy consumption on the supplier's facility as required and that the units are reported as kilojoule/mt fish/production cycle.</p> <p>e. Obtain evidence to show that smolt supplier has undergone an energy use assessment in compliance with requirements of Appendix V-1. Can take the form of a declaration detailing a-e.</p>	<p>Full records on all energy use is done monthly. The records presented here are for the last year class of fish that are a complete cycle which was 2019. The applicant also reports annual consumption and emission. The recording of the energy use at hatcheries is done in the same manner as for the marine farms. Energy use is calculated and recorded monthly, annually and at the end of the production cycle.</p> <p>Little Bear : Total energy consumption (kj) 13,090,837,787 kj  Gold River: Total energy consumption (kj) 43,282,265 kj  Lena Creek: Total energy consumption (kj): 0 kj as the site produces its own electricity from water turbine and is self sufficient.</p> <p>Little Bear : Total kj/ton production 70,113,402kj  Gold River: Total kj/ton production 81,205kj  Lena Creek: Total kj/ton production: 0 kj as the site produces its own electricity from water turbine and is self sufficient.</p>	Compliant		
Note: see instructions for Indicator 4.6.2.						
8.10	<p><b>Indicator:</b> Records of greenhouse gas (GHG [141]) emissions [142] at the smolt production facility and evidence of an annual GHG assessment (See Appendix V, subsection 1)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain records of greenhouse gas emissions from the smolt supplier's facility.</p> <p>b. Confirm that, on at least an annual basis, the smolt supplier calculates all scope 1 and scope 2 GHG emissions in compliance with Appendix V-1.</p> <p>c. For GHG calculations, confirm that the smolt supplier selects the emission factors which are best suited to the supplier's operation. Confirm that the supplier documents the source of the emissions factors.</p> <p>d. For GHG calculations involving conversion of non-CO2 gases to CO2 equivalents, confirm that the smolt suppliers specify the Global Warming Potential (GWP) used and its source.</p> <p>e. Obtain evidence to show that the smolt supplier has undergone a GHG assessment in compliance with requirements Appendix V-1 at least annually.</p>	<p>All Grieg scopes are evaluated the same as the Marine sites (See 4.6.2). GHG assessments are done monthly, and emissions factors and GWP are the same as used by marine farms. Grieg also report GHG's and CO2 as the hatchery has been audited in multiple ASC audits. For 2019 the results show Total CO2 for Little Bear are 811,774 kg/CO2 equivalents.  Total CO2 for Gold River are 2,190,709 kg/CO2 equivalents.  Total CO2 for Lena Creek are 0 kg/CO2 equivalents as the site produces its own electricity from water turbine.</p>	Compliant		
Footnote	[141] For the purposes of this standard, GHGs are defined as the six gases listed in the Kyoto Protocol: carbon dioxide (CO <sub>2</sub> ); methane (CH <sub>4</sub> ); nitrous oxide (N <sub>2</sub> O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF <sub>6</sub> ).					
Footnote	[142] GHG emissions must be recorded using recognized methods, standards and records as outlined in Appendix V. Standards related to Principle 5					
		<b>Compliance Criteria (Required Client Actions):</b>	<b>Auditor Evaluation (Required CAB Actions):</b>			
8.11	<p><b>Indicator:</b> Evidence of a fish health management plan, approved by the designated veterinarian, for the identification and monitoring of fish diseases and parasites</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain a copy of the supplier's fish health management plan for the identification and monitoring of fish disease and parasites.</p> <p>b. Keep documentary evidence to show that the smolt supplier's health plans were approved by the supplier's designated veterinarian.</p>	<p>The company does have various SOP's on managing its Freshwater hatcheries. This includes compliance and oversight on freshwater diseases. The companies Fish health management team covers the fish health at its hatcheries. There is no fresh water fish health management plan for the Grieg Hatcheries. The CERMAQ hatchery has a fish health management plan as its both Freshwater and Marine with the same team covering both.</p>	Minor	There is no fresh water fish health management plan for the Grieg Hatcheries. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.	
8.12	<p><b>Indicator:</b> Percentage of fish that are vaccinated for selected diseases that are known to present a significant risk in the region and for which an effective vaccine exists [143]</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Maintain a list of diseases that are known to present a significant risk in the region, developed by farm veterinarian and supported by scientific evidence.</p> <p>b. Maintain a list of diseases for which effective vaccines exist for the region, developed by the farm veterinarian and supported by scientific evidence.</p> <p>c. Obtain from the smolt supplier(s) a declaration detailing the vaccines the fish received.</p> <p>d. Demonstrate, using the lists from 8.12a-c above, that all salmon on the farm received vaccination against all selected diseases known to present a significant risk in the regions for which an effective vaccine exists.</p>	<p>Fish are vaccinated according to site requirements. List of important diseases are referenced on the DFO website. All smolts are vaccinated in all hatcheries. Vaccines are Alphaject Micro 4, Alphaject 5-3, Apex-IHN, Ermogen-Dip and Vibrogen dip, Rennogen and Furogen-Dip.</p>	Compliant		100%
Footnote	[143] The farm's designated veterinarian is responsible for undertaking and providing written documentation of the analysis of the diseases that pose a risk in the region and the vaccines that are effective. The veterinarian shall determine which vaccinations to use and demonstrate to the auditor that this decision is consistent with the analysis.					

8.13	<p><b>Indicator:</b> Percentage of smolt groups [144] tested for select diseases of regional concern prior to entering the grow-out phase on farm</p> <p><b>Requirement:</b> 100%</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p style="text-align: center;"><b>Instruction to Clients for Indicator 8.13 – Testing of Smolt for Select Diseases</b></p> <p>The farm is responsible for developing and maintaining a list of diseases of regional concern for which each smolt group should be tested. The list of diseases shall include diseases that originate in freshwater and are proven or suspected to occur in seawater (and for which seawater fish-to-fish transmission is a concern).</p> <p>The designated veterinarian <u>to the smolt supplier</u> is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. The analysis must be available to the CAB upon request.</p> <p style="text-align: center;">Note: A "smolt group" is defined as a population that shares disease risk, including environment, husbandry, and host factors that might contribute to sharing disease agents for each group.</p> <p>a. Obtain from the smolt supplier a list of diseases of regional concern for which smolt should be tested. List shall be supported by scientific analysis as described in the instruction above.</p> <p>b. Obtain from the smolt supplier(s) a declaration and records confirming that each smolt group received by the farm has been tested for the diseases in the list (8.13a).</p>	Compliant		100%	
Footnote	<p>[144] A smolt group is any population that shares disease risk, including environment, husbandry and host factors that might contribute to sharing disease agents for each group. Only diseases that are proven, or suspected, as occurring in seawater (and for which seawater fish-to-fish transmission is a concern) but originating in freshwater should be on the list of diseases tested. The designated veterinarian to the smolt farm is required to evaluate, based on scientific criteria and publicly available information, which diseases should be tested for. This analysis shall include an evaluation of whether clinical disease or a pathogen carrier state in fresh water is deemed to have a negative impact on the grow-out phase, thereby disqualifying a smolt group from being transferred. A written analysis must be available to the certifier on demand.</p>					
8.14	<p><b>Indicator:</b> Detailed information, provided by the designated veterinarian, of all chemicals and therapeutants used during the smolt production cycle, the amounts used (including grams per ton of fish produced), the dates used, which group of fish were treated and against which diseases, proof of proper dosing and all disease and pathogens detected on the site</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain from the smolt supplier(s) a detailed record of all chemical and therapeutant use for the fish sold to the farm that is signed by their veterinarian and includes:</p> <ul style="list-style-type: none"> <li>- name of the veterinarian prescribing treatment;</li> <li>- product name and chemical name;</li> <li>- reason for use (specific disease)</li> <li>- date(s) of treatment;</li> <li>- amount (g) of product used;</li> <li>- dosage;</li> <li>- mt of fish treated;</li> <li>- the WHO classification of antibiotics (also see note under 5.2.8); and</li> <li>- the supplier of the chemical or therapeutant.</li> </ul>	<p>All Grieg treatments are done following Veterinarian guidance and using a prescription, if such a treatment is required. There have been no medicinal treatments.</p> <p>For Cermaq any treatments from the hatchery is recorded and used to generate the product CV. No chemicals or therapeutants were used at Boot Lagoon prior to transfer other than vaccines.</p>	Compliant		
8.15	<p><b>Indicator:</b> Allowance for use of therapeutic treatments that include antibiotics or chemicals that are banned [145] in any of the primary salmon producing or importing countries [146]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Provide to the smolt supplier the list (see 5.2.2a) of therapeutants, including antibiotics and chemicals, that are proactively banned for use in food fish for the primary salmon producing and importing countries listed in 11.6.1</p> <p>b. Inform smolt supplier that the treatments on the list cannot be used on fish sold to a farm with ASC certification.</p> <p>c. Compare therapeutant records from smolt supplier (8.14) to the list (8.15a) and confirm that no therapeutants appearing on the list (8.15a) were used on the smolt purchased by the farm.</p>	<p>The hatcheries follow the CFIA Therapeutants Monitoring List (<a href="http://www.inspection.gc.ca/food/fish-and-seafood/manuals/standards-and-methods/eng/1348608971859/1348609209602?chap=7&amp;w17c7">http://www.inspection.gc.ca/food/fish-and-seafood/manuals/standards-and-methods/eng/1348608971859/1348609209602?chap=7&amp;w17c7</a>). No antibiotic treatments have been used in any of the hatcheries.</p>	Compliant		
Footnote	<p>[145] "Banned" means proactively prohibited by a government entity because of concerns around the substance.</p>					
Footnote	<p>[146] For purposes of this standard, those countries are Norway, the UK, Canada, Chile, the United States, Japan and France.</p>					
8.16	<p><b>Indicator:</b> Number of treatments of antibiotics over the most recent production cycle</p> <p><b>Requirement:</b> ≤ 3</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain from the smolt supplier records of all treatments of antibiotics (see 8.14a).</p> <p>b. Calculate the total number of treatments of antibiotics from their most recent production cycle.</p>	<p>No antibiotic treatments used.</p>	Compliant		0
8.17	<p><b>Indicator:</b> Allowance for use of antibiotics listed as critically important for human medicine by the WHO [147]</p> <p><b>Requirement:</b> None [148]</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Provide to smolt supplier(s) a current version of the WHO list of antimicrobials critically and highly important for human health [147].</p> <p>b. Inform smolt supplier that the antibiotics on the WHO list (8.17a) cannot be used on fish sold to a farm with ASC certification.</p> <p>c. Compare smolt supplier's records for antibiotic usage (8.14, 8.15a) with the WHO list (8.17a) to confirm that no antibiotics listed as critically important for human medicine by the WHO were used on fish purchased by the farm.</p>	<p>None used. See 8.16</p>	Compliant		0
Footnote	<p>[147] The 3rd edition of the WHO list of critically and highly important antimicrobials was released in 2009 and is available at: <a href="http://www.who.int/foodborne_disease/resistance/CIA_3.pdf">http://www.who.int/foodborne_disease/resistance/CIA_3.pdf</a>.</p>					
Footnote	<p>[148] If the antibiotic treatment is applied to only a portion of the pens on a farm site, fish from pens that did not receive treatment are still eligible for certification.</p>					
8.18	<p><b>Indicator:</b> Evidence of compliance [149] with the OIE Aquatic Animal Health Code [150]</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Provide the smolt supplier with a current version of the OIE Aquatic Animal Health Code (or inform the supplier how to access it from the internet).</p> <p>b. Inform the supplier that an ASC certified farm can only source smolt from a facility with policies and procedures that ensure that its smolt production practices are compliant with the OIE Aquatic Animal Health Code.</p> <p>c. Obtain a declaration from the supplier stating their intent to comply with the OIE Code and copies of the smolt suppliers policies and procedures that are relevant to demonstrate compliance with the OIE Aquatic Animal Health Code.</p>	<p style="text-align: center;">Note: see instructions for Indicator 5.4.3 regarding evidence of compliance with the OIE Aquatic Animal Health Code.</p> <p>The hatcheries are a part of Grieg Canada and Cermaq Canada. The OIE Aquatic Animal Health Code is available online in DATS for Grieg. Relevant staff know how to locate it.</p> <p>Cermaq state that it complies with OIE Aquatic Animal Health Code and the WHO list of antimicrobials critically important for human health, as per each facility's Freshwater/Land-based Aquaculture License under the Fisheries Act, Fish Health Management Plan Section 7 Fish Health Appendix VIII.</p>	Compliant		

Footnote	[149] Compliance is defined as farm practices consistent with the intentions of the Code, to be further outlined in auditing guidance. For purposes of this standard, this includes an aggressive response to detection of an exotic OIE-notifiable disease on the farm, which includes depopulating the infected site and implementation of quarantine zones in accordance with guidelines from OIE for the specific pathogen. Exotic signifies not previously found in the area or had been fully eradicated (area declared free of the pathogen).					
Footnote	[150] OIE 2011. Aquatic Animal Health Code. <a href="http://www.oie.int/index.php?id=171">http://www.oie.int/index.php?id=171</a> . Standards related to Principle 6					
8.19	<p><b>Indicator:</b> Evidence of company-level policies and procedures in line with the labor standards under 6.1 to 6.11</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p><b>Compliance Criteria (Required Client Actions):</b></p> <p>a. Obtain copies of smolt supplier's company-level policies and procedures and a declaration of compliance with the labor standards under 6.1 to 6.11</p> <p>b. Review the documentation and declaration from 8.19a to verify that smolt supplier's policies and procedures are in compliance with the requirements of labor standards under 6.1 to 6.11.</p>	<p><b>Auditor Evaluation (Required CAB Actions):</b></p> <p>See principle 6. Grieg owns the hatchery Gold River and are the only customer of Lena Creek and the same conditions on the marine sites are applied to the hatcheries.</p>		Compliant	
Standards related to Principle 7						
8.20	<p><b>Indicator:</b> Evidence of regular consultation and engagement with community representatives and organizations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p><b>Compliance Criteria (Required Client Actions):</b></p> <p>a. From each smolt supplier obtain documentary evidence of consultations and engagement with the community.</p> <p>b. Review documentation from 8.20a to verify that the smolt supplier's consultations and community engagement complied with requirements.</p>	<p><b>Auditor Evaluation (Required CAB Actions):</b></p> <p>Grieg has a field office in Gold River (currently closed due to COVID). Grieg has a strong presence in the Gold River community by making contributions in donations or other sponsorships of activities or events in the area. Grieg is also a member of the Nootka Sound Watershed Society. This is equally applicable in Lena Creek. For the Grieg hatcheries refer to P7 of the audit.</p> <p>Cermaq hatchery has been audited multiple times to the ASC standard and certificates are still valid.</p>	<p><b>Instruction to Clients for Indicator 8.20 - Consultation and Engagement with Community Representatives</b></p> <p>Farms must comply with Indicator 7.1.1 which requires that farms engage in regular consultation and engagement with community representatives and organizations. Under Indicator 8.20, farms must show how each of their smolt suppliers complies with an equivalent requirement. Farms are obligated to maintain evidence that is sufficient to show their suppliers remain in full compliance. Evidence shall be documentary (e.g. meeting agenda, minutes, report) and will substantiate the following:</p> <ul style="list-style-type: none"> <li>- the smolt supplier engaged in "regular" consultations with the local community at least twice every year (bi-annually);</li> <li>- the supplier's consultations were effective (e.g. using participatory Social Impact Assessment (pSIA) or similar methods); and</li> <li>- the supplier's consultations included participation by elected representatives from the local community who were asked to contribute to the agenda.</li> </ul>		Compliant
8.21	<p><b>Indicator:</b> Evidence of a policy for the presentation, treatment and resolution of complaints by community stakeholders and organizations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain a copy of the smolt supplier's policy for presentation, treatment and resolution of complaints by community stakeholders and organizations.</p>	<p>For the Grieg hatcheries refer to P7 of the audit – Complaints policy/ no complaints to date.</p> <p>Cermaq hatchery has been audited multiple times to the ASC standard and certificates are still valid.</p>		Compliant	
8.22	<p><b>Indicator:</b> Where relevant, evidence that indigenous groups were consulted as required by relevant local and/or national laws and regulations</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. Obtain documentary evidence showing that the smolt supplier does or does not operate in an indigenous territory (to include farms that operate in proximity to indigenous or aboriginal people (see Indicator 7.2.1). If not then the requirements of 8.22 do not apply.</p> <p>b. Obtain documentation to demonstrate that, as required by law in the jurisdiction: smolt supplier consulted with indigenous groups and retains documentary evidence (e.g. meeting minutes, summaries) to show how the process complies with 7.2.1b; OR smolt supplier confirms that government-to-government consultation occurred and obtain</p>	<p>Gold River Hatchery is operating in Mowachaht Muchalaht territory. There is a 25-year agreement in place with the Nation for the sea sites. Revisions are currently being negotiated and include conditions regarding the hatchery. Recent Applications to DFO and MoE have been shared with the Nation. The Lena Creek hatchery is about to go through permit review that will include reviews by First Nations, Forestry, Water licencing, and Crown Land Tenures. The local band is called the Shishálh.</p> <p>Cermaq hatchery has been audited multiple times to the ASC standard and certificates are still valid.</p>		Compliant	
8.23	<p><b>Indicator:</b> Where relevant, evidence that the farm has undertaken proactive consultation with indigenous communities</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers</p>	<p>a. See results of 8.22a (above) to determine whether the requirements of 8.23 apply to the smolt supplier.</p> <p>b. Where relevant, obtain documentary evidence that smolt suppliers undertake proactive consultations with indigenous communities.</p>	<p>By holding federal aquaculture licenses for its facilities, it demonstrates that the hatcheries have satisfied its duty to consult with indigenous communities.</p> <p>Cermaq hatchery has been audited multiple times to the ASC standard and certificates are still valid.</p>		Compliant	
<b>ADDITIONAL REQUIREMENTS FOR OPEN (NET-PEN) PRODUCTION OF SMOLT</b>						
In addition to the requirements above, if the smolt is produced in an open system, evidence shall be provided that the following are met:						
8.24	<p><b>Indicator:</b> Allowance for stocking smolts produced in cage-culture</p> <p><b>Requirement:</b> Permitted only if supplying farms are 1) operated in a region where indigenous salmonids are present of the same species being cultivated and 2) the farm is certified to th</p>	<p>suppliers operates in a region where indigenous salmonids are present of the same species being cultivated.</p> <p>b. Obtain documentary evidence that the smolt supplier is certified to the ASC Freshwater trout Standard</p>	<p>Not a net pen system.</p>		N/A	Not a net pen system.
<b>ADDITIONAL REQUIREMENTS FOR SEMI-CLOSED AND CLOSED PRODUCTION OF SMOLTS</b>						
Additionally, if the smolt is produced in a closed or semi-closed system (flow through or recirculation) that discharges into freshwater, evidence shall be provided that the following are met [157]:						
8.25	<p><b>Indicator:</b> Water quality monitoring matrix completed and submitted to ASC (see Appendix VIII-2)</p> <p><b>Requirement:</b> Yes [155]</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Obtain records from smolt suppliers showing that water quality monitoring was conducted at least quarterly (i.e. once every 3 months) over the last 12 months.</p> <p>b. Obtain water quality monitoring matrix from smolt suppliers and review for completeness.</p> <p>c. Submit the smolt supplier's water quality monitoring matrix to ASC as per Appendix VIII-2 and Appendix VI at least once per year.</p>	<p>Water quality matrix has been supplied by all hatcheries. Detailed monitoring of Phosphorus, BOD and Oxygen supplied from Cermaq. DO, pH and P details from Lena. Gold River is NA as the facility discharges to the marine environment.</p> <p>Reviewed and complete.</p> <p>Have been submitted to ASC except for the Gold River hatchery as the facility discharges to the marine environment.</p>		Compliant	
Footnote	[155] See Appendix VI for transparency requirements for 8.25.					

8.26	<p><b>Indicator:</b> Minimum oxygen saturation in the outflow (methodology in Appendix VIII-2)</p> <p><b>Requirement:</b> 60% [156,157]</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Obtain the water quality monitoring matrix from each smolt supplier (see 8.32b).</p> <p>b. Review the results (8.33a) for percentage dissolved oxygen saturation in the effluent to confirm that no measurements fall below 60% saturation.</p> <p>c. If a single DO reading (as reported in 8.33a) fell below 60%, obtain evidence that the smolt supplier performed daily continuous monitoring with an [156] A single oxygen reading below 60 percent would require daily continuous monitoring with an electronic probe and recorder for at least a week demonstrating a minimum 60 percent saturation at all times.</p>	<p>Results have been supplied to the auditor.</p> <p>All results show that the levels for all hatcheries are above 60%.</p> <p>All were above 60%</p>	Compliant		>60%
Footnote	[157] See Appendix VI for transparency requirements for 8.33.					
8.27	<p><b>Indicator:</b> Macro-invertebrate surveys downstream from the farm's effluent discharge demonstrate benthic health that is similar or better than surveys upstream from the discharge (methodology in Appendix VIII-3)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Obtain documentation from smolt supplier(s) showing the results of macro-invertebrate surveys.</p> <p>b. Review supplier documents (8.34a) to confirm that the surveys followed the prescribed methodology (Appendix VIII-3).</p> <p>c. Review supplier documents (8.34a) to confirm the survey results show that benthic health is similar to or better than upstream of the supplier's discharge.</p>	<p>The CERMAQ hatchery is ASC reviewed in its own company ASC certifications. It therefore complies.</p> <p>Gold River discharges to the sea and therefore this indicator does not apply.</p> <p>The Lena Creek hatchery has only 40m between the steam discharge and the Marine environment. It also takes water from a lake and not a river. The benthic report dated June 2020 shows that there are more species of invertebrate downstream than upstream.</p>	Compliant		
8.28	<p><b>Indicator:</b> Evidence of implementation of biosolids (sludge) Best Management Practices (BMPs) (Appendix VIII-4)</p> <p><b>Requirement:</b> Yes</p> <p><b>Applicability:</b> All Smolt Producers Using Semi-Closed or Closed Production Systems</p>	<p>a. Maintain a copy of smolt supplier's biosolids (sludge) management plan and confirm that the plan addresses all requirements in Appendix VIII-2.</p> <p>b. Obtain from smolt suppliers a process flow diagram (detailed in Appendix VIII-2) showing how the farm is dealing with biosolids responsibly.</p> <p>c. Obtain a declaration from smolt supplier stating that no biosolids were discharged into natural water bodies in the past 12 months.</p> <p>d. Obtain records from smolt suppliers showing monitoring of biosolid (sludge) cleaning maintenance, and disposal as described in Appendix VIII-2.</p>	<p>The CERMAQ hatchery has a biosolids management plan as part of its management system and this includes removal of Sludge.</p> <p>Gold river has provided Sludge receipts Invoice number 40453 dated Dec 17th 2020.</p> <p>The hatchery called Lena Creek does not have a documented biosolids (sludge) Best Management Practices (BMPs) plan.</p>	Minor	<p>The hatchery called Lena Creek does not have a documented biosolids (sludge) Best Management Practices (BMPs) plan. This is classified as a minor finding as it is not compliant to the indicator, but is not sufficiently serious to warrant a major finding, as it does not threaten the integrity of the standard.</p>	

<b>11 Findings</b>	<b>11.1</b>	<b>DELETE ANY COLUMN</b>
11.2		call population from the species checklist/audit manual
11.3		standard indicator or a CAR requirement
11.4		is to your file (e.g. grading, status, closure deadline, etc)

11.5		Add new rows as needed
11.6		Adjust the column width as needed - to show the whole text

NC reference	Indicator	Grade of NC	Description of NC	Evidence	Date of detection	Status	Related VR (s)	Root cause (by client)	Corrective/preventive actions proposed by UoC and accepted by CAB	Deadline for NC close-out	Evaluation by CAB (including evidence)	Actual date of close-out
1	2.1.1	Minor	As this is an initial audit there are no results for Sulphides in the sediment outside the AZE, relative to the current onsite fish stock, as the site has yet to reach peak biomass.	This site and its associated zone of effect is a mixed bottom. To that end the sulphides where possible and video transect surveys are measured to the DFO guidelines of measurement at peak biomass and up to 1 month later. A positive result is required to allow for the site to be re-audited. Benthic results reported for the previous year class effects prior to stocking the site for the current stock on site. Survey data was September 4th 2021, later from DFO stating that "No further monitoring is required prior to fish entry at this facility" and dated October 4th 2020. Mainstream biological conducted the sampling for the applicant. As this is an initial audit there are no results for Sulphides in the sediment outside the AZE, relative to the current onsite fish stock, as the site has yet to reach peak biomass.	1/29/2021	Closed	NA	Under the conditions of the Aquaculture License, a benthic survey must be completed within 30 days of peak biomass. The ASC benthic survey is completed at the same time for cost efficiencies.	The Benthic survey was completed Mainstream Biological Consulting on February 11, 12 and 17th 2021. Sediment was collected from 40 stations outside the Allowable Zone of Effect (AZE) on transects A, B, or C.	2/04/2021 or by agreed plan	ASC Benthic Report Heate - February 2021 Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
2	2.2.3	Minor	While the Water Quality Assessment Report for the Esperanza Farm Sites, shows little effect on the water body from the farming activity, sampling was from 2018. There is no evidence to show that the water body is still classified as having "good" or "very good" water quality.	The company has commissioned a report into the water quality in the Esperanza farm sites area dated November 25th 2019 and carried out by Stephen Johnston, BSc and Cindy Hannah, WRB. The report is a mixture of provincial historical sampling and site sampling over a 6 month period. The conclusion drawn from the report states "Water quality monitoring at the Esperanza, Heate and Steamer Farms, in Esperanza Inlet, over an eight month period from May - December 2018, showed that all regional and national objectives for water quality were met. All sampled total nitrate levels were below the maximum established by the Provincial Water Quality Guidelines (WQGL), and well below those of the Canadian Council of Ministers of the Environment (CCME). This indicates that farming activities in Esperanza Inlet have had little impact on the water quality in the area. While the Water Quality Assessment Report for the Esperanza Farm Sites, shows little effect on the water body from the farming activity, sampling was from 2018. There is no evidence to show that the water body is still classified as having "good" or "very good" water quality.	1/29/2021	Closed	NA	Grig Seafood was not aware of the ongoing monitoring requirement under 2.2.3	Mainstream Biological Consulting has been retained to complete a water sampling program concurrent with the Wild Juvenile Salmon Sea Lice Monitoring Program. They will prepare a report at the completion of the program to meet the requirements of 2.2.3. This approach adds value to the wild monitoring program and additional data that can be shared publicly for stakeholders. A farm sampling program is not our preference as tests such as Hach kits are typically not sensitive enough to detect the low levels expected and may not allow for meaningful discussion of the results.	2/04/2021 or by agreed plan	Grig Marine Water Quality Work Plan Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
3	2.5.2	Minor	In the event of an animal or bird incident, the company currently does not identify down to species level. This could impact on the cross referencing the list of endangered or red-listed marine mammals and birds in the area.	There are no predator control devices on site. The site is BAP certified as well and the site has a wildlife interaction plan and they log all interactions. Exclusion devices include leg nets for bird exclusion. An electrified wire to stop sealion haulboats and an external predator net to prevent sealion and seal fish attacks. There have been no red-listed animal or bird mortalities. List of endangered or red-listed marine mammals and birds in the area is present in the biodiversity assessment. The list is checked for updates annually. There have been 3 seagull mortalities in the past 2 years. There have been no mammals.	1/29/2021	Closed	NA	Grig Seafood was not aware of the requirement to identify down to the species level.	All bird mortalities are reported in DATS. During the next Management System update (April 2021) the report will be updated to: 1. Review the drop-down tab that lists the common names of the birds to include the scientific name; 2. Add a Gull Identification Guide into the report; 3. Add links to the Duck and Gull Identification guides into the reports. A mock up of the changes have been developed in DATS for final review before implementation.	2/04/2021 or by agreed plan	DATS Example Bird Mortality Report; Duck and Adult Gull Identification Sheets Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
4	2.5.6	Minor	The DATS reporting system, for bird and Marine Mammal lethal incidents, does not show details of concrete steps taken by the farm, that reduces the risk of future incidences.	Within the SOP on animal interactions the farms are requested to report any interactions with animals into the companies DATS reporting system. They are divided up into Bird mortality incidents and Marine Mammal Incidents. There is also an 'Emergency Response SOP Mammal Incident' dated March 2020. The DATS reporting system, for bird and Marine Mammal lethal incidents, does not show details of concrete steps taken by the farm, that reduces the risk of future incidence.	1/29/2021	Closed	NA	Grig has already identified bird mortality investigations as an area for improvement and is currently implementing a revision to their Reporting and Investigation Standards. As our Management System was only developed and implemented two years ago, it is still undergoing revisions as we continually work to improve the system. In addition the Certification and Regulatory team did not have adequate training in Incident Investigations to adequately support the Site Managers to complete the investigations.	The Certification and Regulatory Team participated in an Environmental Investigation workshop in October 2020. The Incident Reporting and Investigation Standard is expected to be implemented in Q2 2021 and will include an update in the DATS report to better support the Site Managers during the investigations. These updates will include example causes and corrective actions for likely deficiencies that may result in a bird mortality.	2/04/2021 or by agreed plan	STND- Investigating and Reporting of Hazards and Unwanted Events, Environmental Investigation Workshop Slides; DATS Investigation Guide for Bird Mortalities Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
5	3.1.7	Minor	The farm was over the trigger level of 3 motile lice, on one occasion, during the sensitive period.	VR nr. 141 approved 28.3.16 by ASC on indicator 3.1.7. Rationale for use of VR 141 during audit is that the DFO requirements for Lice levels on farmed salmon is accepted by ASC. The DFO requirements have a trigger level for lice set at 3 motile lice. Sensitive period in the region is set from March 1st to June 30th. Results show that for the count on June 23rd 2020 the lice count was over the trigger level at 4.05, however, by the following week the entire farm level was at 3.00. Under the DFO conditions the farms have 42 days to get the lice levels below trigger level when they are exceeded. The average lice levels over the entire sensitive period was well below 3 motile lice. A SLICE treatment was begun, for all pens, on the 23rd June 2020.	2/16/2021	Closed	NA	Although the ASC standard considers any threshold exceedance a non-conformance, we do not consider this exceedance to be the result of an ineffective management strategy. The Grig Fish Health team is continually monitoring the sea lice levels at the sites and based on the numbers and known historical patterns of wild salmon in the area. SLICE was administered on June 13th and the threshold exceedance occurred after SLICE was fully administered. The SLICE treatment was effective, hydrogen peroxide is also used to control the sea lice at the sites, however our well boat was not available in June 2020 and considering the efficacy of SLICE treatments it 70 days, it was the preferred treatment. At this time, Grig does not own any mechanical treatment vessels.	Grig recognizes that an effective sea lice management plan for all sites is crucial to not only maintain compliance with the ASC standard but to maintain the social licence to continue operating on the BC coast. Grig, Cermaq Canada Ltd and Mowi Canada West are collaborating to develop a Memorandum of Understanding regarding the Integrative Pest Management (IPM) of sea lice. The implementation of this MOU, which details the collaboration of mechanical and medicinal resources amongst the companies, and the addition of a mechanical treatment option, currently under construction for Grig (work vessel equipped with a Skankin System scheduled to arrive Nov 2021), will only strengthen our sea lice management capabilities while reducing the number of medicinal treatments required. Grig has also developed a house sea lice prediction model to ensure that we plan effectively timed treatments to meet our internal threshold of 1.5 motile lice.	2/04/2021 or by agreed plan	Esperanza Area Sea Lice Model; BCSEA Industry IPM MOU Final; New Grig Mechanical Treatment Vessel Specs Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
6	3.4.4	Minor	In reference to the 'Preparedness & Response Training' presentation dated 30/10/2019. There is no reference to fish escape drills in this presentation.	The applicant has a series of areas that are focused on as part of the overall management of escape prevention. This includes: Emergency preparedness and response training, SOP on fish escape, SOP on anchor and array inspections, SOP on net maintenance, training on inspection and monitoring. Between generations the applicant also removes all infrastructure from the site and re-sets it prior to the next generation. This means that any equipment that appears old or faulty will be repaired or replaced. There is an array staff that is sent to DFO as required. The applicant had ANVA Chile inspected the pens in 2018 and anchor checks are routinely done by a company called Position engineering. Each net is tagged and used with a full history of the net and any inspection. The applicant also has an expectation that the site carry out fish & fish escape drills in the first quarter annually. There has been a training module called 'Emergency Preparedness & Response Training' dated 30/10/2019 where there are slides on fish escape and fish escape prevention. In reference to the 'Preparedness & Response Training' presentation dated 30/10/2019. There is no reference to fish escape drills in this presentation, nor is it clear that the site staff have been made aware of or verified their understanding of this training presentation.	1/29/2021	Closed	NA	Again, as our Management System was only developed and implemented two years ago, it is still undergoing revisions as we continually work to improve the system. Improvements to conducting drills with defined scenarios has been identified as a priority update in DATS and the Certification and OES teams are working collaboratively to improve this process.	Drills are currently in the Meetings module in DATS which make it difficult to search (not linked to an asset) and there is no auto population of dates. The drills will be moved to the Inspections module with one inspection with a drop down tab for all 4 drills (Spill, Tsunami, Fire/Evacuation, Fish escape). We will be developing a detailed internal project plan to review the DATS system, get stakeholder feedback on the suggested revisions in the meeting minutes and develop an implementation plan to roll out the changes to the sites. The Emergency Response Training slide has been revised to include the escape drill review during orientation and the annual drill requirement. The training module will be updated during the next management system quarterly update in April 2021.	2/04/2021 or by agreed plan	DATS Review regarding Drills; Updated EPRP Escape Prevention Slide Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
7	5.2.4	Minor	Within the prescription template for Florfenicol, there is a sentence that states 'withdrawal recommendation may vary by destination country'. It is not clear how this 'other possible withdrawal period' can be captured within the fish talk system.	Withholding periods are noted within the prescriptions that are drawn up by the company Veterinarian. These withholding periods are then logged into the Fish talk system that notify the company that the site cannot be selected for harvest during the withholding period. For Aquafur the withholding period was noted to be 35 days. Within the prescription template for Florfenicol, there is a sentence that states 'withdrawal recommendation may vary by destination country'. It is not clear how this 'other possible withdrawal period' can be captured within the fish talk system.	1/29/2021	Closed	NA	The template used for prescriptions was developed by the previous veterinarian and the components of the template have remained unchanged under the new veterinarian.	The template has been revised to remove the comment regarding the withdrawal recommendations by country.	2/04/2021 or by agreed plan	Site script template Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21
8	5.2.6	Minor	As the Global entry level is 3 and the site has declared a Weighted Number of Medicinal Treatments of 4.083 the site exceeds the Global entry level set by the standard.	From ASC interpretation Qv4-97. Farms in British Columbia - at the set E1 (i.e. 1 WNMNT) site below the set G1 (i.e. 3 WNMNT) farms in BC are required to meet sSL. The parasitic treatments are 1x SLICE and 3x H2O2 plus 1 cage treated with H2O2. The site is about to treat again with H2O2 to comply with the DFO requirement of having lice numbers low prior to the outmigration period. The company is required by DFO to have lice maintained especially prior to the outward migration period which runs from the beginning of March until the end of June. This is a 4 month period. The licence states 'During the Out-migration Window, the Licence holder must: (b) within 48 hours Upon Discovery of threshold 6.2 (motile lice) being exceeded, notify the Department using Appendix V16, and describe the measures that will be taken to ensure that the sea lice levels are below the threshold by the start of the Out-migration Window; To this end and in keeping with directions from the company veterinarians on maintaining animal welfare, the company uses H2O2 treatments to control lice levels at this time. The site is just about to start another H2O2 treatment to comply with lice levels in the outward migrating period. As the Global entry level is 3 and the site has declared a Weighted Number of Medicinal Treatments of 4.083 the site exceeds the Global entry level set by the standard.	1/29/2021	Closed	NA	Grig Seafood currently has only two forms of "treatments" to manage sea lice - SLICE and hydrogen peroxide baths which are both medicinal. We have set an internal treatment threshold of an average of 1.5 motile lice at a site which increases the number of treatments required. We did collaborate with Cermaq to use their hydrocider, when it was available, in the region and was successful at completing one round of medicinal treatments.	Grig, Cermaq Canada Ltd. and Mowi Canada West are collaborating to develop a Memorandum of Understanding regarding the Integrative Pest Management (IPM) of sea lice. The implementation of this MOU, which details the collaboration of mechanical and medicinal resources amongst the companies, and the addition of a mechanical treatment option, currently under construction for Grig (work vessel equipped with a Skankin System scheduled to arrive Nov 2021), will only strengthen our sea lice management capabilities while reducing the number of medicinal treatments required.	2/04/2021 or by agreed plan	BCSEA Industry IPM MOU Final; New Grig Mechanical Treatment Vessel Specs Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	2/24/21

9	5.2.9	Minor	Currently there is no IPM posted on the companies website.	The company is in the process of drafting an IPM along with the other salmon producing farms in the Vancouver Island area. There are also many facets of Pest management within the companies management system. This includes a sea lice management plan dating from September 2019. Currently there is no IPM posted on the companies website.	1/29/2021	Closed	NA	The non-conformity was immediately acknowledged by the Certification Manager during the ASC audit. As a member company of the BC Salmon Farmers Association, Grieg Seafood is waiting for the completion of the BCSEA IPM MOU and will post immediately after all parties sign the document.	Grieg, Cermaq Canada Ltd. and Mowat Canada West are collaborating to develop a Memorandum of Understanding regarding the Integrative Pest Management (IPM) of sea lice. This MOU has been signed and the appendices are in the final stages of review and will be posted on the webpage as soon as it is released.	29/04/2021 or by agreed plan	BCSEA Industry IPM MOU Final. E-mail from BCSEA re IPM MOU Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	22/4/21
10	8.3	Minor	The GREG hatcheries do not have a assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 and as outlined in Appendix I.3.	The Cermaq hatchery supplied an Environmental risk assessment that covers the requirement of Appendix I.3. The GREG hatcheries do not have a assessment of the farm's potential impacts on biodiversity and nearby ecosystems that contains the same components as the assessment for grow-out facilities under 2.4.1 and as outlined in Appendix I.3.	1/29/2021	Closed	NA	Both hatcheries, Gold River and Lena Creek (contract facility) have Biodiversity Impact Assessments which document interactions with wildlife, including impacts to known species at risk habitats in the area. These species at risk are not presented according to Appendix I.3 and are not reviewed on a consistent basis.	Addendums or revisions detailing the species at risk required to capture the potential impacts on biodiversity and nearby ecosystems will be added to the impact assessments and reviewed on an ongoing basis. The Lena Creek Addendum has already been prepared by Grieg and as a Biological Assessment is currently being completed for the Gold River Hatchery, it will be included in the Assessment.	29/04/2021 or by agreed plan	E-mail Instructions for Mainstream to include SAR in GRH BIA; ASC SAR Addendum - Lena Creek (March 2021) Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	22/4/21
11	8.11	Minor	There is no fresh water fish health management plan for the Grieg Hatcheries.	The CERMAQ hatchery has its Fish Health Management plan incorporated into the companies FHMP, that also covers the Marine sites. The Fish Health Section is responsible for both the Marine and Freshwater health within the company. The GREG owned and managed hatcheries have a similar situation where there is one fish health department, with the staff covering both Marine and Freshwater sites. While there is a Marine fish health management plan, which is also legally required, there is no freshwater management plan. This is currently not legally required but that is changing and the DFO will require a Freshwater FHMP shortly. There is no fresh water fish health management plan for the Grieg hatcheries.	1/29/2021	Closed	NA	There is not a current legal requirement for a freshwater health management plan. Current Freshwater /Land-based commercial licenses expire in 2024. All licenses issued in 2024 will require Facility Management Plans (FMP) & Health Management Plans (HMP).	Lena Creek does in fact have a HMP that is signed by the vet, however, it was not produced during the audit. It was reviewed and re-signed by the vet. They are currently reviewing the HMP to ensure that they meet the HMP requirements for licence renewal in 2024. The Gold River Hatchery is currently undergoing a major construction project to build a large RAS system to produce larger smolts. As a requirement of the DFO license, an amendment application is required to be submitted. With the application an HMP must be submitted to meet the requirement for licence renewal in 2024. It has been developed and signed by the Vet.	29/04/2021 or by agreed plan	Grieg - HMP AQFW Land (March 2021); PF (Lena Creek) FHMP 2018 Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	22/4/21
12	8.29	Minor	The Grieg hatchery called Lena Creek does not have a documented bioisolds (sludge) Best Management Practices (BMP) plan.	The CERMAQ hatchery has a bioisolds management plan as part of its management system and this includes removal of Sludge. Invoice dated February 2020 from GFL Environmental Inc for 4500 litres of sludge. Invoice number 711079. Second invoice from Earth Land and Sea Compost corporation. Invoice number 1408 and dated March 2020 for 3 loads of fish waste from Boot Lagoon. Gold river has provided Sludge receipts Invoice number 4043 dated Dec. 17th, 2020. The Grieg hatchery called Lena Creek does not have a documented bioisolds (sludge) Best Management Practices (BMP) plan.	1/29/2021	Closed	NA	The Lena Creek hatchery is a contract hatchery raising smolt for Grieg's sea water production. The operational activities of sludge management have been documented in Mainstream Biological Consulting's Biodiversity Impact Assessment, dated December 2020; however, the operational activities have not been consolidated into a comprehensive SOP.	A Sludge Management SOP has been drafted that details the current sludge management practices. It is under final Review by the Hatchery Manager.	29/04/2021 or by agreed plan	SOP X3 - Bioisolds Management Plan DRAFT Reviewed evidence by Lead Auditor and plan accepted. PC 22/4/21	22/4/21

### ASC Audit Report - Traceability

10	Traceability Factor	Description of risk factor if present.	Describe any traceability, segregation, or other systems in place to manage the risk.
10.1	The possibility of mixing or substitution of certified and non-certified product, including product of the same or similar appearance or species, produced within the same operation.	There is low risk of substitution as all the fish pens on site are within the unit of certification. All the Grieg production sites are aiming for ASC certification which will reduce the risk further.	Automated tracking system enables tracking of product, both forward and back, of all fish, including: hatchery sources, through to grow-out sites, harvesting, transportation, processing and distribution. This is done using documents such as Fish CV giving the full history of the fish being grown by yearclass, site and batch. The company also has BAP group certification for all its sites. The processing facility is certified to ASC Chain of Custody (ASC-C-01170, Brown's Bay Packing Co. Ltd) and Best Aquaculture Practices. Both standards require effective traceability and input-output reconciliation (mass balance), and these elements are verified during third-party audits. Grieg's sales company also has ASC certification (ASC-C-02787 Grieg Seafood Sales North America Inc).
10.2	The possibility of mixing or substitution of certified and non-certified product, including product of the same or similar appearance or species, present during production, harvest, transport, storage, or processing activities.	Risk includes only substitution or mis labelling at the processing plant. Very low risk overall.	Grieg harvesting, transport and storage activities preclude the risk of substitution. The pen or pens harvested on a given day are identified in advance and on all paperwork associated with the harvest, transport and reception of fish at contracted processing facility. Fish from different pens are held in separate holds on well boats. At processing facility, incoming lots are assigned a lot number which remains with the lot throughout processing, packing and distribution, and by which products can be traced forward as well as back to farm and cage. The processing facility has only one lot of fish in production at a time and completely runs through a lot before another lot enters production.
10.3	The possibility of subcontractors being used to handle, transport, store, or process certified products.	The harvesting vessel, the transport trailers and the processing facility are subcontracted. The processing plant only processes a company on a daily basis so a Grieg harvest will be on a set day with no other processing taking place. The transport company has described how mixing is not possible as the tank trailers have to be filled with water for safety and the off take is only located at the processing plant.	Following the harvesting of the fish documents are given to the harvest boat that detail the fish harvested including the treatment history for the fish, the site the fish are from and the pen they were harvested from.
10.4	Any other opportunities where certified product could potentially be mixed, substituted, or mislabelled with non-certified product before the point where product enters	None	None
		<b>Owned by client</b>	<b>Subcontracted by client</b>
10.4.a	Total number of sites owned/subcontracted by client producing the same species that is included in the scope of certification	1	0
	Number of sites included in the unit of certification	1	0
		<b>Site name(s)</b>	<b>Reason(s)</b>
10.4.b	Site(s) within UoC that has product to be excluded from entering the chain of custody	None	None
10.5	Detail description of the flow of certified product within the operation and the associated traceability system which allows product to be traced from final sale back to the unit of certification	Fish are seined and pumped aboard a vessel contracted to Grieg. Harvest is carried out by stun and bleed and the fish are stored in the harvest boat in refrigerated Seawater tanks. The harvest boats land nearby and the fish are transferred into Tank trailers that require full filling to prevent dangerous weight shifting. Using these tank trailers, the fish are transported to contracted processing plant, Brown's Bay Packing Co. Ltd. Activities are controlled by Grieg, and fish can be traced with the use of electronic systems from hatchery to farm to processing and distribution.	

**10.6 Traceability Determination:**

<p>10.6.1 The traceability and segregation systems in the operation are sufficient to ensure all products identified and sold as certified by the operation originate from the unit of certification, or</p>	<p>Yes</p>
<p>10.6.2 The traceability and segregation systems are not sufficient and a separate chain of custody certification is required for the operation before products can be sold as ASC-certified or can be eligible to carry the ASC logo.</p>	<p>NA</p>
<p>10.6.3 The point from which chain of custody is required to begin</p>	<p>Chain of custody begins at the contracted processing plant, Brown's Bay Packing Co. Ltd. This is where the company and site loses direct control of the fish.</p>
<p>10.6.4 If a separate chain of custody certificate is required for the unit of certification</p>	<p>No</p>

## ASC Audit Report - Closing

### 12 Evaluation Results

<p>12.1 A report of the results of the audit of the operation against the specific elements in the standard and guidance documents</p>	<p>The audit was carried out remotely, using TEAMS, supplied documents, photographs, video clips and realtime video and interview. The audit was carried out to a level to where the audit team was happy to proceed and sign off the audit with its indicators all complete.</p>
<p>12.2 A clear statement on whether or not the audited unit of certification has the capability to consistently meet the objectives of the relevant standard(s)</p>	<p>Hecate Grieg Canada West site capability to consistently meet the objectives of the ASC Salmon Standard is expected for the future. The unit of certification has a limited numbers of Minor NCs at this audit, all of which can be addressed.</p>
<p>12.3 In cases where BEIA or PSIA is available, it shall be added in full to the audit report. IF these documents are not in English, then a synopsis in English shall be added to the report.</p>	<p>NA</p>

### 13 Decision

<p>13.1 Has a certificate been issued? (yes/no)</p>	<p>Yes</p>
<p>13.2 The Eligibility Date (if applicable)</p>	<p>n/a</p>

13.3 Is a separate CoC certificate required for the producer? (yes/no)

No. Not for the unit of certification.

13.4 If a certificate has been issued this section shall include:

13.4.1 The date of issue and date of expiry of the certificate.

Date of issue: 10-05-2021, date of expiry: 09-05-2024

13.4.2 The scope of the certificate

Production of Atlantic salmon (*Salmo salar*) from smolt to harvest size on the site called Hecate.

13.4.3 Instructions to stakeholders that any complaints or objections to the CAB decision are to be subject to the CAB's complaints procedure. This section shall include information on where to review the procedure and where further information on complaints can be found.

All complaints and/or objections should be submitted in writing to [asc.reports@sgs.com](mailto:asc.reports@sgs.com). The related procedures can be found at [www.sgs.com](http://www.sgs.com).

**14 Surveillance**

14.1 Next planned Surveillance

14.1.1 Planned date

March / April 2022

14.1.2 Planned site

Hecate

14.2 Next audit type

14.2.1 Surveillance 1

X

14.2.2 Surveillance 2

14.2.3

Re-certification

14.2.4 Other (specify type)