FHI 059, Version 13		Issued by: FHI	Date of i	issue: 12/05/2020
Case No: 2022-0483			Date of visit:	16/11/2022
Time spent on site:	h	Mai	n Inspector:	
Site No: FS1343 Business No: FB0579	Site Name: Business Name:	Culnacnoc Salmon F Organic Sea Harves		
Case Types: 1 ECI	2 CNI 3 SLI	4 DIA 5	6	
Water Temp (°C): 12.5	Thermometer No:	T173	FHI 045 comple	ted
Observations:	Region: HI	Water type:	CoGP MA:	
Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?	•	y If yes, see addit	ional information/clinical sco ional information/clinical sco ional information/clinical sco	ore sheet.
UNI/REG only - if unable to carry	out intended visit detai	I reason below:		
Observations:  Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?	Region: HI fish present? d?	Water type:  y If yes, see addit y If yes, see addit y If yes, see addit y	CoGP MA: ional information/clinical sci	ore sheet. ore sheet.

## **Additional Case Information:**

Micro jellyfish bloom during September, confirmed as Muggiaea atlantica. No morts directly attributed but some damage to gills likely.

AGD reported to be an issue with P4 being worst affected. A number of lethargic fish were observed in P4 and five were removed for diagnostic sampling. Site is below the mortality reporting threshold however it is likely that levels will be above the threshold by the end of the week.

All dead haul movements offsite.

FHI 059, Version 13			Issu	ed by: FHI			Date of issue	e: 12/05/2020
Case No:	2022-0483		Site No:	FS1343				
Date of Visit:		16/11/2022	2		Inspector(s):			
Registration/Autho								
<ol> <li>Business/site deta</li> <li>Changes made to</li> </ol>	•	checked by s	site representa	ative?			У	
2. Changes made to	uetalis						у	J
Site Details (includ	e cleaner fis	h for all sec	tions)					
Total No facilities		8	Facilities sto	cked	4	No facilitie	s inspected	8
Species	SAL	LUM						
Age group	2022 Q4	2022						
No Fish	583,874	30,000						
Mean Fish Wt	229g	N/A						
Next Fallow Date (Si	ite)	Feb 2024		Next Input Da	te (Site)	March 202	24	
Recent (last 4 wks) of	disease probl	ems?		Y	Any escapes	(since last	visit)?	N
If yes, detail:	Chronic AGI	confirmed l	oy gill swabs					
Marramant Dagarda								
Movement Records  1. Movement records		r inapaction?						V
2. Date of last inspec		i inspection?					04/11/2020	
3. Are records comp		actly antarod	2				04/11/2020	
4. Are movement red		•		)				Y
5. Are records comp								Y
6. Are health certifications		•		ahla?				N/A
o. Are nealth certifica		idelions (odi	with Obj availe	able:				14/7
<b>Transport Records</b>								
1. Are any movemen	nts carried ou	t by (or on be	ehalf) of the bu	usiness (not us	ing a STB)?			Y
If yes, is there a syst	tem in place f	or maintenar	nce of transpo	rtation records	?			Y
<b>Mortality Records</b>								
1. Mortality records a	available for i	nspection?						Y
2. How are mortalitie		•			Ensiled - on s	site		•
If other detail:								
3. Mortality records of	complete and	correctly ent	tered?					Y
			9368 1.58%	last four week	s (AGD) Pen f	our most af	fected. No iss	sues with
4. Recent mortality (	last 4 wks):		lumpfish not	ed.				
5. Evidence of recen	it increased/a	typical morta	ılities?					Y
If yes, facility nos/no	mortality per	facility/no sto	ock per facility	/reason:				
As above AGD								
6. Any other peaks in	n mortality du	ring period c	hecked?					N
If yes, detail:								
7. Have increased (u	unexplained)	mortalities be	een reported to	o vet or FHI?				N/A
If yes, detail action:								
8. Have 'mortality ev	3. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet. N/A							

Treatments and Medicines Records	- V
1. Recent treatments (see comment)?	'
If yes, detail: TMS	
If other, detail:	V
2. Medicines records available for inspection?	Y
3. Are records complete and correctly entered?	Y
4. Are fish in a withdrawal period?	Y
5. If yes, what treatment(s)?	
If other, detail:	
6. Are medicines stored appropriately?	Y
Biosecurity Records	
Biosecurity records available for inspection?	Y
2. Has the manner and frequency of mortality removal, recording and safe disposal been considered?	Y
3. Has the manner and period in which the APB will notify Scottish Ministers or veterinary professional of a	any
increased (unexplained) mortality at the site been included?	Y
4. Has the action that will be taken in the event that the presence or suspicion of the presence of a listed of	disease
is detected been included and <i>how</i> and <i>when</i> that will be notified to Scottish Ministers?	Y
5. Has the health status of aquaculture animals being stocked on the farm site been covered (equal or high	her Y
health status, certification if required)?	
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to mini	mise Y
transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?	
7. Is documentation available regarding the measures in place to maintain the physical containment of	Y
aquaculture animals held on site?	
8. Have the biosecurity procedures been adequately implemented on site?	Y
If no, detail:	
Results of Surveillance	
Has any animal health surveillance been carried out by, or on behalf of, the business?	Y
2. If yes, are results available for inspection?	Y
3. Any significant results?	Y
If yes, detail (if not detailed under recent disease problems).  AGD	
ir you, dotair (ir not detailed drider recent disease problems).	
Records checked between: 4/11/2020 to 16/11/2022	

П	11 059, VEISIOII 13							155	ueu by. Fni				
	Case no:	2022-04	183	Site No:		FS1343			Date of visit Sampling:	:/	16/1	1/2022	16/
	Priority samples:	VI		ВА		PA		MG	Sampling.	HI			
	Time sampling starts/ends:		00:00		0:00		Inspecto	or:			VMD No.	. [	0
	Environmental conditions:	1	Indoors	2		3		4		5			
	Summary samples	HIST	Y	ВА	Y	MG	Y	VI		РΑ		Total Sa	mples
A	dd Fish/Pools - click												
	Pool/Fish No	F1	F2	F3	F4	F5							
	Fish nos	1	2	3	4	5							
	Pool Group	P1	P1	P1	P1	P1							
	Species	SAL	SAL	SAL	SAL	SAL							
	Average weight	220g	220g	220g	220g	220g							
	Sex	N/A	N/A	N/A	N/A	N/A							
	Water Type	SW	SW	SW	SW	SW							
		O	ں	ပ	ပ	ပ							
Details		ea	ea	.ea	ea	.ea							
)eta		lq	l q	hbı	hbı	hbı							
大 디	0	Clachbreac	Clachbreac	Clachbreac	Clachbreac	Clachbreac	ı						
Stock	Stock Origin Facility No												
S	raciiity NO	4	4	4	4	4							

1111000, Versi							100	ueu by.		
11/2022 Addition	onal Sam	ple Infor	mation:							
5	Total To	ests ass	igned	3	1					

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Case no:	2022-0483		Site No	):	FS1343		Method of killing: Percussive				sive
Date of visit:	16/11/2022		Inspec	tor(s):				S	heet Re	elevant:	Υ
Date of Viole.	10/11/2022			, ,							
	ce: M for medium presence: W for v	veak pres									
Fish Number	1 1 00 45	1	2	3	4	5					
Time sampled after External Signs	er death (if > 45 minutes)										
Behaviour	Moribund										
Bellaviour	Lethargic	s	s	s	s	s					
	Hanging vertical										
	Spiralling										
	Flashing										
_	Loss of equilibrium										
Body	Dark										
	Distended abdomen Anorexic										
	Scale Oedema										
Opercula	Shortened										
	Flared										
Haemorrhaging	Throat										
	Ventrum										
	Base of fins										
Even	Elsewhere										
Eyes	Exophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	Pale	m	m	m	m	m					
	Zoned										
	Necrotic	m	m	m	m	m					
Lesions	Flank										
	Elsewhere										
Vent	Inflamed										
Lice Load	Trailing faeces Estimate numbers										
Lioc Loud	Estimate numbers										
Internal Signs											
Ascites	Clear										
	Bloody										
Oedema	In tissues										
Heart	Pale/anaemic Granulomas										
	Deformed										
Liver	Petechial haem										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
Pyloric caeca	Lesions Petechial haem										
. J.5.15 Gacca	Tubules mauve										
	Lack of fat										
Spleen	Enlarged										
	Granulomas										
Gut	No food present										
	Yellow pseudo-faeces										
	External haem Internal haem										
Body wall	Haemorrhaging										
Swim bladder	Haemorrhaging										
	Fluid filled										
Kidney	Swollen										
	Grey										
	Granular										
Conoral	Liquefied Parasites present										
General	Parasites present Anaemia										
	Mildelliid										

Case no: 2022-0483

Date of visit: 16/11/2022

Sign strong presence: Mi for medium presence: W for in Fish Number Time sampled after death (if > 45 minutes) Estatranal Signs Behaviour Morifund Lethargie Lethargie Spirafiling Flashing Flashing Flashing Loss of equilibrium Body Dark Distended abdomen Asteresid Asteresid Flashing	Date of visit:	16/11/2022	4					
Fish Number Time sampled after death (if > 45 minutes) External Signs Behaviour  Moribund  Lethargic Hanging vertical Spiraling Flashing Loss of equilibrium Body Dark Distended abdomen Acreeace Scale Coderna Opercula Flashing Fl	S for strong preser	nce: M for medium presence: W for	۸۸					
Time sampled after death (if > 45 minutes)  Behaviour  Moribund  Lethargic  Hanging vertical  Spirating  Flashing  Coss of equilibrium  Body  Dark  Ancroxic  Scale Ocdema  Opercula  Shortened  Hamorrhaging  Throat  Hamorrhaging  Throat  Base of fins  Elsewhere  Elsewhere  Collarez  Construct  Ancroxic  Scale Ocdema  Opercula  Shortened  Hamorrhaging  Throat  Base of fins  Elsewhere  Collarez  Collarez  Lesions  Flank  Elsewhere  Inflamed  Trailing fieces  Lice Load  Estewhere  Vent inflamed  Trailing fieces  Lice Load  Estewhere  Vant  Inflamed  Trailing fieces  Lice Load  Estewhere  Vent  Trailing fieces  Lice Load  Boody  Oddema  Hissues  Accides  Granulomas  Lice Load  Estewhere  Lice Load  Road  Ro		ice. Wi for medium presence. W for	VI	1	ı		ı	
External Signs		or death (if > 45 minutes)						
Behaviour   Mortbund		er death (if > 45 fillilidies)						
Lethargic		Maribund						
Hanging vertical	Dellavioui							
Spiralling								
Flashing								
Loss of equilibrium								
Body								
Distended abdomen	Rody							
Anorexic   Scale Oedema	Войу							
Scale Cedema								
Sportcola   Shortened   Sportcola   Spor								
Flared	Opercula							
Haemorrhaging   Throat	Орегоина							
Ventrum	Haemorrhaging							
Base of fins								
Elsewhere								
Export   E								
Enophthalmic (sunken)	Eves							
Cataract	_,							
Haemorrhagic								
Sills								
Zoned	Gills							
Necrotic	J							
Elsewhere								
Elsewhere	Lesions							
Vent         Inflamed								
Trailing faeces	Vent							
Lice Load								
Internal Signs	Lice Load							
Ascites   Clear								
Ascites   Clear	Internal Signs							
Bloody		Clear						
Dedema								
Heart	Oedema							
Deformed	Heart							
Liver		Granulomas						
Gross haem								
Gross haem	Liver	Petechial haem						
Enlarged								
Enlarged								
Colour number(s) Granulomas Lesions Pyloric caeca Petechial haem Tubules mauve Lack of fat Spleen Enlarged Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Granular Liquefied General								
Granulomas Lesions Pyloric caeca Petechial haem Tubules mauve Lack of fat Spleen Enlarged Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Granular Liquefied General								
Pyloric caeca Petechial haem Tubules mauve Lack of fat Spleen Enlarged Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Kidney Granular Liquefied General Parasites present								
Tubules mauve Lack of fat  Spleen Enlarged Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Grey Granular Liquefied General Parasites present								
Tubules mauve Lack of fat  Spleen Enlarged Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Grey Granular Liquefied General Parasites present	Pyloric caeca	Petechial haem						
Spleen         Enlarged								
Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Grey Granular Liquefied General Facility Swosen General Fluid filed Flu								
Granulomas Gut No food present Yellow pseudo-faeces External haem Internal haem Body wall Haemorrhaging Swim bladder Haemorrhaging Fluid filled Kidney Grey Granular Liquefied General Facility Swosen General Fluid filed Flu	Spleen							
Gut         No food present								
Yellow pseudo-faeces	Gut							
External haem								
Internal haem								
Body wall         Haemorrhaging								
Swim bladder Haemorrhaging Swim bladder Haemorrh	Body wall							
Fluid filled								
Kidney         Swollen								
Grey	Kidney							
Granular								
Liquefied Seneral Parasites present Seneral Se								
General Parasites present								
	General							
Anaemia		Anaemia						

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Additional comments:		
Gills showed signs of AGD, difficult to asse	ss due to lighting conditions. Adhesions we	re apparent in all fish examined.
No gross pathology observed. Artifacts like	ly in histo gill samples due to percussive stu	unning.
		1
		1
		1
		1

FHI 059, Version 13		Issued by: FHI			Date	of issue	: 12/05/2020
Case Number:	2022-0483		Site No:	FS1343		Insp:	
Date of Visit	16/11/2022		No of m	ovements/s	supp./dest.		Score
Live fish movements			0	1-5	6-10	>10	
Movements on (from out	Frequency of m	novements on from equivalent MS	0	5	10	14	0
with GB) of susceptible species		novements on from equivalent zone or	0	9	18	26	0
•	Number of supp	ocluding third country	0		10	14	0
Movements off	Frequency of m		1 0	3		10	0
Wovernerits on	Number of dest		0		6	10	0
Exposure via water	,	Site contacts	5 0	1-5	6-10		
Water contacts with other farms (holding species	disinfection or b	•	0				
susceptible to same diseases)		or in a coastal zone with category I or within 1 tidal excursion	1	2	4		2
,	Farm is on-line	or in a coastal zone with category III or within 1 tidal excursion	1	3	6		
	Farm is on-line	or in a coastal zone with category V nor within 1 tidal excursion	1	4	8		
Management practices			None	Secure	Unsecure		
Water contacts with processors	Any processing	plant discharging into adjacent waters	0	1	2		0
On farm processing within the rules of the directive	No on farm pro	cessing	0				
	Processing own	n fish (re-cycling risk)	1				0
	Processing fish	from MS of equivalent status	2				
	Processing fish equivalent statu	from zone or compartment of us	4				
	Processing fish	from Category III farm	8				
	Processing fish	from Category V farm	10				
Disposal of fish and fish by-	Site's own wast	te only processed.	0	1			0
products	Common proce	esses with other farms	3				3
	Collection point	for waste from other farms	5				
Use of unpasteurised feeds	No feeding of u	npasteurised feed	0				0
	Feeding unpas	teurised feed	5				
Biosecurity	•	Number of sites	s 1	2 or 3	≥ 4		
Contacts with other sites	Sites operating	from single shorebase	0	1	2		1
	Sites sharing st	taff and equipment	0	1	2		
Disinfection of equipment	Yes		0	]			
between sites, use of footbaths etc	No		1				1
CoGP/Regulator							
Practices in accordance with regulator or industry	Yes		0				0
code of practice	No		3				
Platform access to cages	Yes		0	1			0
	No		2				
					<b>Total</b> Rank		7 LOW

FHI 059, Version 13	Issued by	: FHI	Date of issu	ue: 12/05/2020
Case No: 2022-	0483	Site No:	FS1343	
<ol> <li>Is the CoGP Farm Manager</li> <li>Does the site have access to</li> </ol>	a lice problems in the previous 4 years? nent Area (or equivalent) fallowed synchro o a range of licenced in-feed and bath sea benzoate) as well as access to suitable b	a lice medications (inc	cluding deltamethrin,	N Y Y
• •	d farm management agreement or statem	nent relevant to the si	ite and CoGP Farm	Υ
5. Are sea lice count records a	vailable for inspection? (Legal SSI, CoGP of the required standard specified in the S	·	egal SSI, CoGP Annex 6)	Y Y
7. Are sea lice ( <i>L. salmonis</i> ) rerecords are inspected? (CoGF	cord levels below the suggested criteria for Annex 6)	or treatment in the Co	oGP during the period that	N
	sea lice ( <i>L. salmonis</i> ) numbers per fish be during the period that records are inspecte		above (prior to w/b 10/6/19) or	N
	ed to the Fish Health Inspectorate? If no, F t a level which is considered to cause sign		ems? (CoGP 4.3.81, 5.3.50)	N/A N
suggested criteria for treatment 11. Has any other action been 12. Have therapeutic treatment 13. Are treatments, where conducted 14. Is there a harvesting strate sea lice?  15. Is there a site specific writter scenarios during the escalation	es or the actions taken had a significant im ducted, carried out in cooperation between gy for the site, where fewer populations or en lice management procedure with waypon	have welfare implication pact upon the lice level participating farms? It part populations are coints describing set a	vels recorded?  held without treatment for actions to deal with recognised	N/A Y Y Y Y
2. Are measures in place to mi	uipment damage due to predators in the c tigate against the predation experienced c ned nets	•	•	N Y
If Yes proceed with questions 4 4. Have these been reported to 5. Have these been reported to		(CoGP – 4.4.37, 5.4	.17)	N
7. Were methods (if any) used	to recover escapees? If yes give detail			
Ministers? (Legal, CoGP – 4.4. 9. What action was taken to pr be considered under satisfa	event and minimise the risk of further esca	apes? (Not covered in	n code but could	Y

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Case No: 2022-0483	Site No: FS1343	
Date of Visit: 16/11/2022	Inspector:	
Point of Compliance  1. Is the farm under inspection located to	within a farm management area?	N
If N, no further questions require comple	•	IN
<ul><li>2. Has a current farm management agree</li><li>3. Is the current FMAg/S available for in</li><li>4. Does the FMAg/S identify the relevant</li><li>5. Does the FMAg/S identify the fish far</li></ul>	nt farm management area? m site(s) to which it applies? commencement of the agreement or statem	ed?
farm?  9. Does the FMAg/S identify the vaccination of the FMAg/S identify the specification. Does the FMAg/S identify the maximal individual farm?	um health standards for the stocks to be intro- ation requirements for stocks held in the area es of fish which may be stocked into the area mum stocking density of any pen on any farm gements for the storage and disposal of any	a or farm? a or farm? in the area or the
Arrangements for The Management of 13. Does the FMAg/S identify arrangement	of Sea Lice nents for the sharing of data on sea lice numb	pers and treatments?
of statement? 15. Does the FMAg/S identify any requi	ability and the use of medicines on farms cover	
lice on farms in the area or individual fa 16. Does the FMAg/S identify the circur used on farms in the area or individual fa	nstances under which biological controls and	
17. Does the FMAg/S identify the arrangement of the street	gements for synchronous treatments on farm	ns within the area?
area or farm?	nstances when live fish may be introduced or gements for the movement of live fish on and	
or individual farms?		

FHI 059, Version 13	Issued by: FHI	Date of issue: 12/05/2020
Harvesting 20. Does the FMAg/S identify acceptable	harvest practices on farms in the area or indiv	vidual farms?
date when a farm or area may be restock 22. Does the FMAg/S identify whether on agreement or statement?	y which the area or individual farm will be fallo ed? e or more year classes may be stocked onto s podstock or potential broodstock are to be kep	sites covered by the
Point of Compliance for Farm Manager 24. Does the farm management agreeme parties to the agreement?	ment Agreements Only ent include arrangements for persons to becon	me, or cease to be,
Management and operation  25. Is the fish farm being managed and o  26. What is the version no/date of issue of	perated in accordance with the agreement or of the FMAg/S?	statement?

Case No: Date of visit: 16/11/2022 2022-0483 Site No: FS1343 Inspector: Results Summary Freq. Date of Notification Writing 2<sup>nd</sup> Insp Database Insp Phone Insp Insp 23/11/2022 AGD 23/11/2022 5/5 09/12/2022 IHN 0/5 23/11/2022 09/12/2022 23/11/2022 IPN 4/5 23/11/2022 23/11/2022 09/12/2022 ISA 0/5 23/11/2022 23/11/2022 09/12/2022 Paranucleospora 5/5 23/11/2022 23/11/2022 theridion 09/12/2022 Salmon gill poxvirus 5/5 23/11/2022 23/11/2022 09/12/2022 SAV 0/5 23/11/2022 23/11/2022 09/12/2022 VHS 0/5 23/11/2022 23/11/2022 09/12/2022 09/12/2022 CMS 0/5 23/11/2022 23/11/2022 AGD histo 5/5 05/12/2022 05/12/2022 09/12/2022 **GPAT** 5/5 05/12/2022 05/12/2022 09/12/2022 09/12/2022 **Epitheliocystis** 5/5 05/12/2022 05/12/2022 09/12/2022 Adhesions/peritonitis 1/5 05/12/2022 05/12/2022 Vibrio species (culture) 3/5 05/12/2022 05/12/2022 09/12/2022 Report Summary 2<sup>nd</sup> Insp Case Type Date Insp ECI,CNI,SLI,VMD 05/12/2022 DIA 09/12/2022





# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

**BUSINESS NO** FB0579 **DATE OF VISIT** 16/11/2022

SITE No FS1343 SITE NAME Culnacnoc Salmon Farm

CASE NO 20220483 INSPECTOR

# **Section 1: Summary**

During a routine site inspection, a number of lethargic fish were observed in pen four, five fish were removed for further examination and subsequent diagnostic sampling.

Histopathology examination revealed marked hyperplasic branchitis. Epitheliocystis (likely Ca. Branchiomonas cysticola) and marked amoebic gill disease (AGD) were also observed. Moderate peritonitis (potentially associated with vaccine administration) was also observed.

Samples tested positive for gill related pathogens: *Paranucleospora theridion* (5/5), salmon gill poxvirus (SGPV) (5/5) and *Neoparamoeba perurans* (AGD) (5/5).

In addition, samples tested positive for Infectious pancreatic necrosis virus (IPNV) (4/5), this is not supported by the histology observations and is likely to have been isolated from the recent vaccination for IPN.

Please contact myself or the duty inspector should you require any further information, have any queries regarding this report or if any problems develop.

## **Section 2: Case Detail**

#### Observations

It was during a routine site inspection that the manger reported that there was a recent increase in mortality levels in pen four suspected to be due to AGD. On inspection a high number of lethargic fish were observed, five were removed for further examination and subsequent diagnostic sampling.

All five fish were lethargic and high in the water column. Externally all fish had pale, slightly necrotic gills with visible signs of AGD. Internally, adhesions were noted in all fish but no other gross pathology was noted.

#### Samples

Samples were collected from five fish according to the table below:

Fish numbe	Facility r number	Species	Stage	Origin
F1-F5	4	Atlantic salmon	2022 Q4	Clachbreac (FS0892)

### Results

**Bacteriology:** Kidney and gill material from F1-F5 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

- Vibrio sp. (Isolate A) found in fish: F1, F4 and F5 (kidney);
- Vibrio sp. (Isolate B) found in fish: F1, F4 and F5 (kidney);
- Vibrio sp. (Isolate C) found in fish: F1 and F4 (Kidney).

The level and purity of growth of the three isolates of *Vibrio* sp. identified, would not suggest these bacteria would be implicated in morbidity.

**Virology:** Tissue samples were tested for segments of nucleic acid indicative of the presence of the pathogens specified below using real-time PCR (qPCR).

Salmon gill poxvirus (SGPV)

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	21.46	25.77	25.93	26.07	POSITIVE
F2	20.93	25.76	26.28	26.14	POSITIVE
F3	21.53	28.81	29.04	28.98	POSITIVE
F4	20.36	25.61	25.71	25.56	POSITIVE
F5	20.32	24.80	25.01	24.75	POSITIVE

Infectious pancreatic necrosis virus (IPNV)

Fish Number	Endogenous control Cp value	,	Reported Result (PCR)		
F1	18.75	35.84	35.57	35.53	POSITIVE
F2	19.29	35.65	35.80	35.66	POSITIVE
F3	17.22	36.03	35.67	35.59	POSITIVE
F4	17.24	35.53	35.33	35.66	POSITIVE
F5	-	-	-	-	NEGATIVE

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV) and viral haemorrhagic septicemia virus (VHSV) and piscine myocarditis virus (PMCV).

**Parasitology:** Tissue samples were tested for segments of nucleic acid indicative of the presence of the parasites specified below using real-time PCR (qPCR).

Neoparamoeba perurans (AGD)

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	21.46	24.81	24.71	24.93	POSITIVE
F2	20.93	24.60	25.13	25.22	POSITIVE
F3	21.53	25.30	25.49	25.09	POSITIVE

F4	20.36	25.49	25.54	24.97	POSITIVE
<b>F</b> 5	20.32	25.60	25.80	25.61	POSITIVE

### Paranucleospora theridion

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	21.46	31.42	31.55	31.64	POSITIVE
F2	20.93	31.29	31.19	30.99	POSITIVE
F3	21.53	30.95	31.22	31.11	POSITIVE
F4	20.36	29.99	30.18	30.17	POSITIVE
F5	20.32	28.22	28.32	28.50	POSITIVE

**Histology:** Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F1-F5. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination by light microscopy revealed the following:

<u>Gill:</u> Filament hyperplasia and lamellar fusion marked, multifocal, filament branchitis, mild, multifocal (F1-F5). Presence of several amoeboid cells resembling Neoparamoeba perurans observed in all fish and few basophilic epithelial inclusions (likely epitheliocystis) (F1-F5). Lamellar telangiectasia with multifocal thrombosis and free blood among gill filaments (F1-F5). Bacteria observed associated with cell debris among gill filaments.

<u>Skin & Muscle:</u> Absence of epidermis (potentially associated with processing artefacts) (F4). <u>Heart:</u> Mild epicarditis (F1).

Gut and pyloric caeca: Peritonitis, mild to moderate, multifocal (F4).

Pancreas: Some peritonitis (F3).

Liver: Some cuffing (F3, F5).

<u>Kidney:</u> Slight increase of melanomacrophage (F3). Some renal tubules with hyaline droplets (F4 & F5).

Spleen: Peritonitis, mild (F1, F3). Some to moderate cuffing (F1, F2, F4).



Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Marine Scotland website at <a href="https://www.gov.scot/publications/fish-health-inspectorate-service-charter/">https://www.gov.scot/publications/fish-health-inspectorate-service-charter/</a>

Date: 09/12/2022





# FISH HEALTH INSPECTORATE VISIT REPORT

#### SUMMARY FOR INFORMATION OF SITE OPERATOR

**BUSINESS No** FB0579 **DATE OF VISIT** 16/11/2022

SITE NO FS1343 SITE NAME Culnacnoc Salmon Farm

CASE NO 20220483 INSPECTOR

# Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

The above site was inspected, in accordance with the Aquatic Animal Health (Scotland) Regulations 2009.

All epidemiological units were inspected.

Samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

#### Records

The surveillance frequency category of the site was assessed as low. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted every third year. The category of the site will be reassessed on a routine basis and updated as required.

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated. The following records were also inspected to ensure that the conditions of authorisation for your Aquaculture Production Business (APB) are being met:

Aquaculture animal and aquaculture animal product movement records were inspected and appeared to be adequately maintained.

Records in relation to aquaculture animals transported by the business were inspected and found to be adequately maintained.

Mortality records were inspected and found to be adequately maintained.

No mortality levels exceeding the reporting criteria have been recorded since the last inspection.

Reports detailing the results of animal health surveillance carried out by or on behalf of the business and/or Marine Scotland were available for inspection.

The biosecurity measures plan for the site was inspected and found to be adequately maintained and implemented.

# Inspection under the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015

Medicine records were inspected and found to be adequately maintained.

Samples were taken to be analysed for veterinary residues.

## Inspection under the Aquaculture and Fisheries (Scotland) Act 2007

The site was also inspected in accordance with the Aquaculture and Fisheries (Scotland) Act 2007, as amended, with respect to section 3 regarding parasites (sea lice) and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards to parasites, containment and escapes.

Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.



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