FHI 059, Version 13	lse	sued by: FHI	Date of issue: 12/05/2020
Case No: 2024-0433			Date of visit: 13/11/2024
Time spent on site:	I.5hrs	Main Inspect	or:
Site No: FS0608 Business No: FB0125	Site Name: Business Name:	Vidlin North Scottish Sea Farms Ltd	
Case Types: 1 REP	2 DIA 3 VMD	4 5	6
Water Temp (°C): 10.6	Thermometer No:	T148	FHI 045 completed N/A
Observations:	Region: SH	Water type: S	CoGP MA S-5
Dead/weak/abnormally behaving Clinical signs of disease observe Gross pathology observed? Diagnostic samples taken?	; fish present? ed?	 Y If yes, see additional info Y If yes, see additional info Y If yes, see additional info Y 	rmation/clinical score sheet. rmation/clinical score sheet. rmation/clinical score sheet.
UNI/REG only - if unable to carry	y out intended visit detail re	eason below:	

FHI 059, Version 13

Additional Case Information:

Site was inspected following reports to the FHI of mortalities above the reporting threshold. The mortalities reported were attributed to environmental and CGD/ gill health issues. Reported mortality events to the FHI - 07/10/2024; 1.2%(3860) environmental, gill health, CGD. 14/10/2024; 2.3%(7352) environmental, gill health, CGD, harvest. 21/10/2024; 2.3%(6736) environmental, gill health, CGD, harvest.

During the summer months the site was experiencing high numbers of jellyfish and low oxygen levels. Site had conducted net washing of the inner and outer nets on all pens to help increase oxygen levels.

Site had conducted FW/ FLS treatments between 17/09/2024 to 23/09/2024 and 25/10/2024 to 08/10/2024. FW/ FLS treatments was conducted over 12hrs per cage. Site representative suggested the length of treatment has attributed to some of the mortalities across site.

Cages 8, 10 and 18 had the highest mortalities across the site. Wk40; cage 8- 530 (1.82%) - due to this high mortality site started with FW/ FLS treatment. Wk41; cage 10- 642 (2.63%). Wk42; cage 8- 884 (3.13%), cage 10- 6891 (3.75%), cage 6- 885 (2.76%). wk43; cage 8- 736 (2.69%), cage 10- 1253 (5.48%). wk44; this all cages were being treated with FW/ FLS during this week all cages had low mortalities. wk45; cage 8- 1155 (4.34%), cage 10- 440 (2.04%), pen 18- 361 (1.44%)

The site was preparing to harvest pen 8 on the day of the inspection. Site is currently reducing stock on site through harvest to relieve stocking density pressures to help with mortalities. Stock is live haul via well boat to Lerwick processing plant to be harvested.

Company vet has advised site to be on starve for 10 days starting from 12/11/2024 whilst site is being harvested. Although, due to pen 8 experiencing the highest mortalities they have been on starve for approximately a week at time of inspection.

Health surveillance report conducted by company vet on 12/11/2024 observed some stock to have damage from sea lice but is healing well, although sea lice levels are low. No external signs of disease or infection were observed. Haemorrhaging in the swim bladder and very occasional signs of AGD in the gills were observed. Some Aeromonas sp was also observed. In the report there was suggestions of furunculosis and Yersinia ruckeri (bacterial infection). Histology and PCR samples were taken and awaiting results. Histology results from 19/10/2024 found no significant results - it was observed in the histology samples moderate levels of liver necrosis and moderate gill necrosis and haemorrhaging/ inflammation.

General population were swimming and shoaling and were observed to be in good body condition. It was observed that some of the general population had physical damage that was healing. In the observed cages there were a high number of lethargic fish hanging close to the net. 3 moribund and 1 runt was observed across the inspected cages. In pen 10 it was observed that there was a moderate number of fish with sea lice damage on their heads but healing well - note no sea lice was observed on sampled fish. 3 fish were removed for diagnostic sampling (2 moribund and 1 healthy fish (healthy fish was also sampled for VMD). The 3 fish sampled internally were observed to have no clinical signs, note there was strong adhesions around the spleen and fish 2 had haemorrhaging on the swim bladder.

Inspection and paper	perwork was conducted on site by	whilst sup	ervised by	Diagnostic sampling and	VMD sampling
conducted by	whilst supervised by				

FHI 059, Version 13	i		Issue	ed by: FHI			Date of issu	e: 12/05/2020
Case No:	2024-0433		Site No:	FS0608	3			
Date of Visit:		13/11/2024	9		Inspector(s):			I
Registration/Autho	orisation Det	ails	ito roproconta	tivo?			V	,
2. Changes made to	o details?	checked by s	site representa				n N	
		L C	•					-
Site Details (Includ	te cleaner fis	sh for all sect	lions)	a lua al	10			5
Total No facilities		12	Facilities sto	скеа	12	NO TACILITIE	s inspected	5
Age group	SAL							
Age group	2023 Q3					_		
	280,913							
Mean Fish Wt	6.1kg							
Next Fallow Date (S	Site)	march 2025		Next Input Da	ate (Site)	august 202	25	
Recent (last 4 wks)	disease prob	lems?		Y	Any escapes	s (since last v	visit)?	N
If yes, detail:	suspected b	acterial/ AGD	due to low o2	2 during summ	er months an	d recent FW	/FLS treatme	nts
Movement Record	c							
1 Movement record	s Is available fo	r inspection?						Y
2 Date of last inspe	action.	inspection:					10/07/2024	
2. Date of last inspe	olete and corr	ectly entered?	2				10/01/2024	V
4. Are movement re	oorde availab	ectly entered	: h and wasta?					
4. Are movement re	corus availau		anu waste :					
5. Are records comp	plete and corr	ectly entered		- L- O				T NI/A
6. Are nealth certific	ates for intro	ductions (outv	vith GB) avalla	ible?				IN/A
Transport Records	5							
1. Are any moveme	nts carried ou	it by (or on be	half) of the bu	siness (not us	ing a STB)?			
If yes, is there a sys	tem in place	for maintenan	ce of transpor	tation records	?			
Mortality Records								
1. Mortality records	available for i	inspection?						Y
2. How are mortaliti	es disposed o	of?			Ensiled - on	site		
If other detail:	Ensiled onsi	ite, then to Pe	lagia					
3. Mortality records	complete and	d correctly ent	ered?					Y
			wk42 - 7352	(2.26%), wk43	3 - 6736 (2.28	%), wk44 - 6	691 (0.24%), v	wk45 -4357
4. Recent mortality	(last 4 wks):		(1.51%)					
5. Evidence of receiption	nt increased/a	atypical morta	lities?					Y
If yes, facility nos/no	o mortality per	r facility/no sto	ock per facility/	reason:				
See additional inform	mation							
6. Any other peaks	in mortality dι	uring period cl	necked?					N
If yes, detail:								
7. Have increased (unexplained)	mortalities be	en reported to	vet or FHI?				N/A
If yes, detail action:								
8 Have 'mortality ev	vents' been re	eported to FHI	? If no, enter of	details on mor	tality events s	heet.		Y

Treatments and Medicines Red	cords			
1. Recent treatments (see comm	ient)?			Y
If yes, detail:	FW/FLS treatment, Optom	nease 04/11/20	024	
If other, detail:				
2. Medicines records available for	or inspection?			Y
3. Are records complete and cor	rectly entered?			Y
4. Are fish in a withdrawal period	?			N
5. If yes, what treatment(s)?				
If other, detail:				
6. Are medicines stored appropri	iately?			Y
Biosecurity Records				
1. Biosecurity records available t	or inspection?	-line and onfo	-l'an and have accessidered?	
2. Has the manner and frequence	y of mortality removal, record	ding and sale	disposal been considered?	
3. Has the manner and period in	which the APB will notity Sc	ottish Minister	s or veterinary protessional of any	
Increased (unexplained) mortain	ty at the site been included?		in a filler warmen of a listed discourse	
4. Has the action that will be take	an in the event that the prese	tified to Soottic	Ion of the presence of a listed disease	
5 Has the health status of aguar	ow and when that will be no	d on the form	site heep covered (equal or higher	
5. Has the field in status of aquat	ired)?		Sile been covered (equal or higher	
	lieu):			
6. Have the husbandry and biose	ecurity measures implement	ed between ea	ach epidemiological unit to minimise	
transmission of disease been co	vered (movement of staff, vi	sitors, equipm	ent, live or dead fish etc.)?	
7. Is documentation available reg	parding the measures in place	e to maintain	the physical containment of	
aquaculture animals held on site	?			
8. Have the biosecurity procedur	es been adequately impleme	ented on site?		
If no, detail:				
Results of Surveillance				
1. Has any animal health surveill	ance been carried out by, or	on behalf of, t	the business?	Y
2. If yes, are results available for	inspection?			Y
3. Any significant results?				Y
If yes, detail (if not detailed unde	r recent disease problems).		See additional information	
Records che	cked between:	10/07/2024 -	13/11/2024	

₽	II 059, Version 13							lss	ued by:	FHI			
	Case no:	2024-04	133	Site No:		FS0608			Date of	visit/	13/	11/2024	13/
	Priority samples:	VI		BA		PA		MG	Sampiir	ng: HI			
	Time sampling starts/ends:	10:4	5:00	12:4	5:00	l	Inspecto	or:		I	VMD No	b .	5
	Environmental conditions:	1	Indoors	2		3		4		5			
	Summary samples	HIST	Y	BA	Y	MG	Y	VI		PA		Total Sa	amples
Ac	Id Fish/Pools - click	F1	F2	F3									
_	Fish nos	1	2	3									
_	Pool Group		-	J. J									
	Species	SAL	SAL	SAL									
	Average weight	6.1kg	6.1kg	6.1kg									
	Sex	Female	Female	Male									
	Water Type	SW	SW	SW									
tock Details	Stock Origin	barcaldine (FS1328)	Barcaldine (FS1328)	barcaldine (FS1328)									
3	Facility NO	8	18	0									

F3 was sampled for for VMD - dispatched via pecrussion.	1/2024 Additional Sample Information:													
3 Total Tests assigned 3 - <td></td> <td colspan="10">F3 was sampled for for VMD - dispatched via pecrussion.</td>		F3 was sampled for for VMD - dispatched via pecrussion.												
	3	I	Total T	ests ass	igned	3	l							
Image: state of the state														

FHI 059, Version 13			Issued by: FHI				Date of issue: 12/05/20					5/2020
Case no:	2024-0433		Site No: FS0608				M	ethod o	f killing:	Percus	sive	l
Date of visit:	13/11/20	024	Inspec	tor(s):				s	heet R	elevant:	Y	1
S for strong preser	nce: M for medium presence: W	for weak pres	ence									
Fish Number		1	2	3								1
Time sampled aft	er death (if > 45 minutes)	50	90	100								
External Signs												
Behaviour	Moribund											
	Lethargic	IVI	M									
	Hanging vertical											
	Spiraling	_										
	Loss of equilibrium	-										
Body	Dark											
,	Distended abdomen											1
	Anorexic											
	Scale Oedema											
Opercula	Shortened											
	Flared											1
Haemorrhaging	Throat											1
	ventrum Rece of fire											1
	Elsewhere											1
Eves	Exophthalmic											1
	Enophthalmic (sunken)											1
	Cataract											
	Haemorrhagic											1
Gills	Pale	М	М	М								1
	Zoned		W									
	Necrotic			W								
Lesions	Flank											
	Elsewhere											
Vent	Inflamed	_										
LiceLoad	Estimate numbers	-										
Lice Loau												
Internal Signs												
Ascites	Clear											1
	Bloody											1
Oedema	In tissues											
Heart	Pale/anaemic											
	Granulomas											
1.5	Deformed	_										
Liver	Cross beem	_			_							
		_										
	Enlarged											1
	Colour number(s)	6	6	5								1
	Granulomas											1
	Lesions											
Pyloric caeca	Petechial haem											1
	Tubules mauve			e								1
Coloor	Lack of fat			3								1
opieen	Granulomae			IVI								4
Gut	No food present	S		W								1
	Yellow pseudo-faeces	_	w									1
	External haem											1
	Internal haem											1
Body wall	Haemorrhaging											
Swim bladder	Haemorrhaging		М									
	Fluid filled											1
Kidney	Swollen											1
	Grey											4
	Granular											1
General	Parasites present											1
	Anaemia											1

FHI 059, Version 13

Case no:	2024-0433
Date of visit:	1

Date of visit:

13/11/2024

S for strong presence: M for medium presence: W for w

Fish Number						
Time sampled afte	er death (if > 45 minutes)					
External Signs						
Behaviour	Moribund					
Dellavioui	L othorgio					
	Hanging vortical					
	Spiralling					
	Flashing					
	Loss of equilibrium					
Body	Dark					
	Distended abdomen					
	Anorexic					
	Scale Oedema					
Opercula	Shortened					
	Flared					
Haemorrhaging	Throat					
	Ventrum					
	Base of fins					
	Flsewhere					
Eves	Exonhthalmic					
Lycs	Enophthalmic (sunker)					
	Cataraot					
0:11-	naemorrnagic					
GIIIS	Tale Zamad					
	Zoned					
	Necrotic					
Lesions	Flank					
	Elsewhere					
Vent	Inflamed					
	Trailing faeces					
Lice Load	Estimate numbers					
Internal Signs						
Ascites	Clear					
	Bloody					
Oedema	In tissues					
Heart	Pale/anaemic					
	Granulomas					
	Deformed					
Liver	Petechial haem					
	Gross haem					
	Enlarged					
	Colour number(e)					
	Cranulomac					
	Granulomas					
Pularia asses	Detechial beem					
r ylone caeca						
	Tubules mauve					
Calcor	Lack of fat					
spieen						
0	Granulomas					
Gut	No food present					
	Yellow pseudo-faeces					
	External haem					
	Internal haem					
Body wall	Haemorrhaging					
Swim bladder	Haemorrhaging					
	Fluid filled					
Kidney	Swollen					
	Grey					
	Granular					
	Liquefied					
General	Parasites present					
	Anaemia					

Additional comments:

F1 - melanisation on fat tissue around spleen with strong adhesions, caudal fin had physical damage. F2 - strong adhesions around spleen. F3- mature male enlarged spleen and strong adhesions around the hind gut

Case No:	2024-0433	Date of visit: 13/11/2024
Site No:	FS0608	Inspector:

Results Summary	Freq.	Date of Notification								
	· ·	Database	Insp	Phone	Insp	Writing	Insp	2 nd Insp		
Piscine myocarditis virus (CMS) (PCR) - PMVP	2/3	19/11/2024		19/11/2024						
AGD (Neoparamoeba perurans) (PCR) - AGDQ	0/3	19/11/2024		19/11/2024						
Paranucleospora theridion (PCR) - PNST	0/3	19/11/2024		19/11/2024						
IHN (PCR) - IHNP	0/3	19/11/2024		19/11/2024						
Salmon gill poxvirus (PCR) - SPVP	0/3	19/11/2024		19/11/2024						
Salmonid alphavirus (SAV) (PCR) - SALP	0/3	19/11/2024		19/11/2024						
IPN (PCR) - IPNM	0/3	19/11/2024		19/11/2024						
ISA (real time qPCR - heart & kidney) - ISAQ	0/3	19/11/2024		19/11/2024						
VHS (PCR) - VHSP	0/3	19/11/2024		19/11/2024						
Aeromonas salmonicida (Furunculosis) - ASAL	3/3	25/11/2024		25/11/2024						
Aeromonas histology - AERH	2/3	05/12/2024		05/12/2024						
Postmortem changes - PMCH	1/3	05/12/2024		05/12/2024						
Gill pathology - GPAT	3/3	05/12/2024		05/12/2024						
Heart path HPAT	2/3	05/12/2024		05/12/2024						
Kidney path KPAT	2/3	05/12/2024		05/12/2024						
Spleen path SPAT	2/3	05/12/2024		05/12/2024						
	ļ									

Report Summary			
Case Type	Date	Insp	2 nd Insp
REP, DIA	11/12/2024		
VMD	25/11/2024		



FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS No
 FB0125

 SITE NO
 FS0608

 CASE NO
 20240433

DATE OF VISIT13/11/2024SITE NAMEVidlin NorthINSPECTORInspector

Section 1: Summary

The site was inspected following reports to the Fish Health Inspectorate (FHI) of mortalities above the reporting threshold. The increase in mortalities was attributed to environmental conditions and complex gill disease (CGD)/ gill health issues. At time of the inspection the general population were swimming and shoaling well, it was observed there were a high number of lethargic fish hanging close to the net. Three fish were removed for diagnostic sampling.

Histopathology examinations revealed features consistent with the presence *Aeromonas* salmonicida (furuncolosis), which was also isolated on bacteriology plates

Samples were also screened and tested positive by qPCR for piscine myocarditis virus, the causative agent of cardio myopathy syndrome (CMS).

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

The site was inspected following reports to the FHI of mortalities above the reporting threshold. The increase in mortalities was attributed by the business to environmental conditions and CGD/ gill health issues. The business representative had reported the following weekly mortality event notifications to the FHI;

- 07/10/2024; 1.2% (3860) environmental, gill health, CGD.
- 14/10/2024; 2.3% (7352) environmental, gill health, CGD, harvest.
- 21/10/2024; 2.3% (6736) environmental, gill health, CGD, harvest.

At the time of inspection there had been three mortality event notifications reported the FHI. The highest mortality had been observed in cages 8, 10 and 18. During the summer months the site had experienced low oxygen and high jellyfish numbers.

The site had conducted fresh water and FLS treatments between 17/09/2024 to 23/09/2024 and 25/10/2024 to 08/10/2024. These treatments were conducted over 12hrs per cage. The site



representative suggested the length of treatment has contributed to some of the mortalities across site.

The general population was swimming and shoaling well and was observed to be in good body condition. Some of the general population had physical damage that was healing well. In the observed cages there were a high number of lethargic fish hanging close to the net. Three moribund and one runt were observed across the inspected cages. In cage 10 there was a moderate number of fish with sea lice damage on their heads but healing well - note no sea lice was observed on sampled fish. Three fish were removed for diagnostic sampling. F1 and F2 were lethargic. F1 had physical damage on caudal fin. F3 was in good condition and had been swimming well.

F1 and F2 were female. F3 was a mature male. All fish sampled had moderately pale gills, F2 had some zoning on the gills and F3 had some necrotic areas on gills. F3 had an enlarged spleen with strong adhesions around the hind gut and spleen. F3 had very little fat around the pyloric caeca. F1 had melanisation on fat tissue around spleen with strong adhesions. F2 had strong adhesions around spleen with haemorrhaging on the swim bladder.

Samples

Fish number	Facility number	Species	Stage	Origin	
F1	8	Atlantic salmon	2023 Q3, 6.1kg	Barcaldine smolt unit (FS1328)	
F2	18	Atlantic salmon	2023 Q3, 6.1kg	Barcaldine smolt unit (FS1328)	
F3	6	Atlantic salmon	2023 Q3, 6.1kg	Barcaldine smolt unit (FS1328)	

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

Results

Bacteriology: Kidney and gill from F1-F3 inoculated onto appropriate media for the isolation of bacteria.

• Aeromonas salmonicida: F1-F2 (kidney); F1-F3 (gills)

Aeromonas salmonicida is a known fish pathogen and the level and purity of growth would suggest that it would be implicated as the primary source of morbidity in F1 and F2.

From the tests conducted, we do not have evidence of resistance to amoxycillin, oxytetracycline, sulphamethoxazole/trimethoprim or florfenicol.



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

Fish Number	Endogenous control Cp value		Reported Result (PCR)		
F1	-	-	-	-	Negative
F2	15.43	19.76	19.77	19.75	POSITIVE
F3	16.71	30.80	30.70	30.86	POSITIVE

Piscine myocarditis virus (PMCV)

The samples tested negative for infectious haematopoietic necrosis virus (IHNV), infectious pancreatic necrosis virus (IPNV), infectious salmon anaemia virus (ISAV), salmonid alphavirus (SAV), viral haemorrhagic septicemia virus (VHSV) and salmon gill poxvirus (SGPV).

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

The samples tested negative for Neoparamoeba perurans (AGD) and Paranucleospora theridion.

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney and brain were taken from F1 to F3. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

<u>Gill</u>: Few scattered lamellae with epithelial thickness (F1). Several scattered aneurysmal dilation/telangiectasia (F1). F2 reading by autolytic artefacts, however few dense aggregates of Gram-negative rod-shape bacteria were observed. F3 displayed some branchitis.

Skin & Muscle: Within the normal range.

<u>Heart</u>: Several areas with dense aggregates of Gram-negative rod-shape bacteria (F2) and F3 displayed small foci of cellular infiltration.

<u>Gut and pyloric caeca</u>: F3 displayed absence of abdominal adipose tissue. Marked cellular sloughing potentially associated with autolysis artefacts (F2).

Pancreas: Within the normal range.

<u>Liver</u>: Hepatocellular necrosis, focal, very mild (F2) with few Gram-negative rod-shaped bacteria (F2). Hepatocellular vacuolation (macrovesicles), mild, multifocal (F3).



<u>Kidney</u>: Interstitial cell (haemopoietic) necrosis with few small aggregates of Gram-negative rodshape bacteria (F1, F2).

<u>Spleen</u>: Necrosis, mild, multifocal with aggregates of Gram-negative rod-shape bacteria (F1, F2). Some cuffing observed in F1 and F2. Slightly congested F3.

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

Signed:

Date: 05/12/2024

Fish Health Inspector

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at <u>Fish Health Inspectorate Service Charter - gov.scot</u> (www.gov.scot)



FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

 BUSINESS No
 FB0125

 SITE NO
 FS0608

 CASE NO
 20240433

DATE OF VISIT13/11/2024SITE NAMEVidlin NorthINSPECTORInspector

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

The above site was visited in accordance with the Animals and Animal Products (Examination for Residues and Maximum Residue Limits) (England and Scotland) Regulations 2015.

Samples were taken to be analysed for veterinary residues.

In addition, samples were taken for diagnostic purposes. A separate report will be issued detailing the results of these tests.

Records

The information required for the public record of aquaculture production businesses regarding this site was verified and where necessary updated.

Medicine records were inspected and found to be adequately maintained.

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

Mortality records were inspected and found to be adequately maintained.

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

Signed:

Fish Health Inspector

Date: 25.11.2024

The Fish Health Inspectorate Service Charter detailing standards of service is available on the Scottish Government website at Fish Health Inspectorate Service Charter - gov.scot (www.gov.scot)

F1 – Cage 3









F2 – Cage 18





F3 – Cage 6







