Case No: 2024-0029 Date of visit: 27/02/2024

Time spent on site: 2 hours Main Inspector: [redacted]

Site No: FS1237 Site Name: Dumfries and Galloway
Business No: FB0544 Business Name: Scotland

Case Types: 1 PPI 2 3 4 5 6

Water Temp (°C): Thermometer No: FHI 045 completed

Observations: Region: DG Water type: B CoGP MA

Dead/weak/abnormally behaving fish present?		If yes, see additional information/clinical score sheet.
Clinical signs of disease observed?		If yes, see additional information/clinical score sheet.
Gross pathology observed?		If yes, see additional information/clinical score sheet.
Diagnostic samples taken?		

UNI/REG only - if unable to carry out intended visit detail reason below:

Additional Case Information:

[redacted]
[redacted]
Dundas Chemical Company (Mosspark) Ltd, Mosspark, Annan Road, Dumfries, DG1 4PH. Tel: 01387 252887 l Web: www.dundas-chemical.co.uk
M: [redacted] | E: [redacted]

Information supplied at application stage for mort disposal from BKD confirmed site, Chalmers Hope;" The disposal site is at Dumfries, this is our Category 1 Rendering Plant. Frequently receive salmon mortalities from various fish farms. The trucks would have no excessive waiting time. If we know a time of arrival, we can accommodate an immediate discharge from the delivery tanker. If any spillages were to occur. They would be dealt with immediately and the material scooped up and fed into the hopper. Cleaning and disinfection would take place. All this material would enter our Airlock building. We then open the roller doors to our hoppers. The vehicles tip straight into the hopper, there is no person interface. Once the material is in the hopper it is automatically fed into the rendering process, first stage is crushing then pump fed into disc drivers where the material is heat treated. Thereafter the oils are extracted and refined and the solid protein will form Meat and Bonemeal. Both these products are then transported for destruction. Tallow – oil biodiesel production. MBM – Power station, burned to generate electricity.
The tanker would then be cleaned and disinfected before exiting the tipping area. Our processing method is approved and we a regularly visited by APHA. We hold a contract with DEFRA for the emergency disposal of any disease control. We have been involved recently with a number of Avian Influenza cases."

All mort disposal from fish farms treated as Cat 1 material including whole carcasses and ensiled material.
Processing frames from PP also taken at the site but processed as cat 3 (frames - for pet food and processed differently).

Cat 1 waste discharged from tankers and skips into two large hoppers crushed to 30mm then put through large cooker heated to 130oc then pressurised to remove all moisture. Oils are drained off and sent to biodiesel plant. Meat and bone sent to power station for energy production. Oil is about 19% and meal 35% with the rest given off as moisture/vapour. Vapour is channelled to a thermal oxidiser and is burned off at 850oc - this is to reduce odours and is then passed through a large bio filter of wood chips.

Every shipment comes with waste disposal document under Animal by Products act - unique ID and details source and destination.

After discharge of load lorries are disinfected with Virkon. Only two shipments have been received from Chalmers Hope. Also receive morts from other operators but levels tend to be seasonal.

Case No: 2024-0029 Date of visit: 27/02/2024

Site No: FS1237 Inspector:

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp

Report Summary			
Case Type	Date	Insp	2nd Insp
No report	07/05/2024		

Case No:	2024-0041						
Time spent on site:	4.5hrs						
Site No:	FS0212	Site Name:			Invasion Bay		
Business No:	FB0119	Business Name:			Mowi Scotland Ltd		
Case Types:	1 ECI	2 CNI		3 SLI		4 VMD	
Water Temp (°C):	6.89	Thermometer No:				T308	
Observations:		Region:	HI			Water type:	
Dead/weak/abnormally behaving fish present?					Y	If yes, see ac	
Clinical signs of disease observed?					Y	If yes, see ac	
Gross pathology observed?					Y	If yes, see ac	
Diagnostic samples taken?					Y		

UNI/REG only - if unable to carry out intended visit detail reason below:

Date of visit: 21/02/2024

Main Inspector: [redacted]

5 DIA 6

FHI 045 completed

S CoGP MA: M-34

ditional information/clinical score sheet.
ditional information/clinical score sheet.
ditional information/clinical score sheet.

Additional Case Information:

Stock of salmon: Fanad from Loch Harport. Arrived on site with AGD (Risk assessments in place)

Mortalities are ensiled on site and taken away by billy bowie.

Cleanerfish mortality 2024:
Lumpfish- Wk6, 2.28%, 1307;Wk5,0.56%,510;Wk4,3.48%,1598;1.39%,649
Wrasse- Wk6, 4.42%,215;Wk5, 0.17%, 61;Wk4, 0.83%, 300; Wk3, 0.48%, 176
Elevated mortality: WRS, 2023 Wk38, 5.57%, 1800(fin damage); Wk41, 2.64%, 1037 (fin damage). LUM, 2024 Wk51, 2.75%, 1374 (fin damage and handling). 2023 Wk22, 5.49%, 1140 (fin damage and handling).

Treatments 2024:
Wk2, Wk4, Wk6 - thermolicer

Treatments 2023:

Florocol :Wk45 and Wk46 - only pens 6 & 8 (SRS, rickettsia), split into two pens to isolate the pen that was initally affacted 16.
Alphamax - wk48, only pen 13, caligus increased in one pen, treatment went well.

Cleanerfish origin:
lumpfish - ocean matters
wrasse- scotland wild caught. No imports of wrasse from Ireland since 2021.

Health manager/vet visits sites every month. Last visit in jan 2024.

Environets; net changes happen every 14 days. The figures of cleanerfish have been readjusted 30/01/2024. During treatment,original figures of cleanerfish were not seen therefore readjusted. Recommendations on noting readjustments should be noted.

Site has not had any wrasse movements from Ireland since last inspection, however possibility that such imports may occur in next production means the surveillance frequency remains high.

Paperwork inspected remotely on 14/02/2024. During site inspection, moribund fish were observed, some with large lesions. Two fish were able to be caught and removed for diagnostic sampling. In addition, one fish was removed for VMD sampling; it was observed to be healthy and in good condition.

Date records received and issues resolved on 12/09/2024.

Case No: 2024-0041 Site No: FS0212

Date of Visit: 21/02/2024 Inspector(s): [redacted]

Registration/Authorisation Details

1. Business/site details summary checked by site representative?	Y
2. Changes made to details?	N

Site Details (include cleaner fish for all sections)

Total No facilities	18	Facilities stocked	18	No facilities inspected	18			
Species	SAL	LUM	WRS					
Age group	2022	2023/2024	2023					
No Fish	349,590	55,717	4,604					
Mean Fish Wt	4.075kg	54g	mix					
Next Fallow Date (Site)	June/July 2024		Next Input Date (Site)	November 2024				
Recent (last 4 wks) disease problems?		N	Any escapes (since last visit)?		N			
If yes, detail:								

Movement Records

1. Movement records available for inspection?	Y
2. Date of last inspection:	08/03/2023
3. Are records complete and correctly entered?	Y
4. Are movement records available for dead fish and waste?	Y
5. Are records complete and correctly entered?	Y
6. Are health certificates for introductions (outwith GB) available?	N/A

Transport Records

1. Are any movements carried out by (or on behalf) of the business (not using a STB)?	N
If yes, is there a system in place for maintenance of transportation records?	

Mortality Records

1. Mortality records available for inspection?	Y
2. How are mortalities disposed of?	Ensiled - on site
If other detail:	
3. Mortality records complete and correctly entered?	N
4. Recent mortality (last 4 wks):	2024: Wk7, 0.29%, 1147; Wk6, 0.45%, 1804; Wk5, 0.25%, 986; Wk4, 0.44%, 1850; Wk3, 0.41%, 1783 (all due to poor performers and thermolicer treatment)
5. Evidence of recent increased/atypical mortalities?	N
If yes, facility nos/no mortality per facility/no stock per facility/reason:	
6. Any other peaks in mortality during period checked?	Y
If yes, detail:	2023: Wk25, 1.37%, 4552 (poor performers, PD); Wk26, 2.32%, 6935 (poor performers, PD, Gill Infections); Wk27, 2.02%, 5373(Gill Infections); Wk28, 3.05%, 7035 (Gill Infections); Wk29, 2.11%, 4426 (Gill Infections)
7. Have increased (unexplained) mortalities been reported to vet or FHI?	N/A
If yes, detail action:	
8. Have 'mortality events' been reported to FHI? If no, enter details on mortality events sheet.	Y

Treatments and Medicines Records

1. Recent treatments (see comment)?	Y
If yes, detail:	Thermolicer, T.M.S
If other, deta	
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)?	T.M.S
If other, deta	
6. Are medicines stored appropriately?	Y

Biosecurity Records

1. 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 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 disease is detected been included and *how* and *when* 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 higher health status, certification if required)?	Y
6. Have the husbandry and biosecurity measures implemented between each epidemiological unit to minimise transmission of disease been covered (movement of staff, visitors, equipment, live or dead fish etc.)?	Y
7. Is documentation available regarding the measures in place to maintain the physical containment of aquaculture animals held on site?	Y
8. Have the biosecurity procedures been adequately implemented on site?	Y
If no, detail:	

Results of Surveillance

1. 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?	N
If yes, detail (if not detailed under recent disease problems).	

Records checked between:	08/03/2023-21/02/2024

Case no:	2024-0041	Site No:	FS0212	Date of visit/ Sampling:	21/02/2024	21/(							
Priority samples:	VI		BA		PA		MG		HI				
Time sampling starts/ends:	10:50:00	11:35:00	Inspector:		VMD No.	4							
Environmental conditions:	1	Indoors	2		3		4		5				
Summary samples	HIST	Y	BA	Y	MG	Y	VI		PA		Total Samples		

Add Fish/Pools - click

	Pool/Fish No	1	2										
	Fish nos	F1	F2	F3									
	Pool Group	1	2										
Stock Details	Species	SAL	SAL	SAL									
	Average weight	4kg	4kg	4kg									
	Sex	N/A	N/A	N/A									
	Water Type	SW	SW	SW									
	Stock Origin	Loch Harport (FS0247)	Loch Harport (FS0247)	Loch Harport (FS0247)									
	Facility No	4	6	14									

04/2024 Additional Sample Information:

2 Total Tests assigned 5

Case no:	2024-0041	Site No:	FS0212	Method of killing:	Percussive
Date of visit:	21/02/2024	Inspector(s):	[redacted]	Sheet Relevant:	Y

S for strong presence: **M** for medium presence: **W** for weak presence

Fish Number		**1**	**2**								
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	**Moribund**										
	Lethargic	**S**	**S**								
	Hanging vertical										
	Spiralling		**S**								
	Flashing										
	Loss of equilibrium										
Body	**Dark**	**M**									
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	**Shortened**										
	Flared										
Haemorrhaging	**Throat**	**M**									
	Ventrum	**M**									
	Base of fins	**M**									
	Elsewhere	**M**									
Eyes	**Exophthalmic**										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	**Pale**										
	Zoned	**S**	**M**								
	Necrotic										
Lesions	**Flank**	**S**									
	Elsewhere	**S**									
Vent	**Inflamed**	**M**	**M**								
	Trailing faeces										
Lice Load	**Estimate numbers**	**8**	**4**								
Internal Signs											
Ascites	**Clear**										
	Bloody	**M**									
Oedema	**In tissues**										
Heart	**Pale/anaemic**										
	Granulomas										
	Deformed										
Liver	**Petechial haem**										
	Gross haem										
	Tissue breakdown										
	Enlarged										
	Colour number(s)										
	Granulomas										
	Lesions										
Pyloric caeca	**Petechial haem**										
	Tubules mauve										
	Lack of fat										
Spleen	**Enlarged**	**M**									
	Granulomas										
Gut	**No food present**										
	Yellow pseudo-faeces										
	External haem										
	Internal haem										
Body wall	**Haemorrhaging**										
Swim bladder	**Haemorrhaging**	**W**									
	Fluid filled										
Kidney	**Swollen**										
	Grey										
	Granular										
	Liquefied										
General	**Parasites present**										
	Anaemia										

Case no: 2024-0041

Date of visit: 21/02/2024

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

Fish Number											
Time sampled after death (if > 45 minutes)											
External Signs											
Behaviour	**Moribund**										
	Lethargic										
	Hanging vertical										
	Spiralling										
	Flashing										
	Loss of equilibrium										
Body	**Dark**										
	Distended abdomen										
	Anorexic										
	Scale Oedema										
Opercula	**Shortened**										
	Flared										
Haemorrhaging	**Throat**										
	Ventrum										
	Base of fins										
	Elsewhere										
Eyes	**Exophthalmic**										
	Enophthalmic (sunken)										
	Cataract										
	Haemorrhagic										
Gills	**Pale**										
	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										
	Tissue breakdown										
	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	**Swollen**										
	Grey										
	Granular										
	Liquefied										
General	**Parasites present**										
	Anaemia										

Additional comments:

Case Number:	2024-0041		Site No:	FS0212	Insp:	
Date of Visit	21/02/2024					

		No of movements/supp./dest.				Score
Live fish movements		**0**	**1-5**	**6-10**	**>10**	
Movements on (from out with GB) of susceptible species	Frequency of movements on from equivalent MS	0	5	10	14	
	Frequency of movements on from equivalent zone or compartment including third country	0	9	18	26	18
	Number of suppliers	0	5	10	14	5
Movements off	Frequency of movements off	0	3	6	10	10
	Number of destinations	0	3	6	10	3

Exposure via water	**Site contacts**	**0**	**1-5**	**6-10**		
Water contacts with other farms (holding species susceptible to same diseases)	Farm is protected (secure water supply through disinfection or borehole)	0				
	Farm is on-line or in a coastal zone with category I farms upstream or within 1 tidal excursion	1	2	4		1
	Farm is on-line or in a coastal zone with category III farms upstream or within 1 tidal excursion	1	3	6		
	Farm is on-line or in a coastal zone with category V farms upstream or 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		1
On farm processing within the rules of the directive	No on farm processing	0				0
	Processing own fish (re-cycling risk)	1				
	Processing fish from MS of equivalent status	2				
	Processing fish from zone or compartment of equivalent status	4				
	Processing fish from Category III farm	8				
	Processing fish from Category V farm	10				
Disposal of fish and fish by-products	Site's own waste only processed.	0				0
	Common processes with other farms	3				
	Collection point for waste from other farms	5				
Use of unpasteurised feeds	No feeding of unpasteurised feed	0				0
	Feeding unpasteurised feed	5				

Biosecurity	**Number of sites**	**1**	**2 or 3**	**≥ 4**		
Contacts with other sites	Sites operating from single shorebase	0	1	2		0
	Sites sharing staff and equipment	0	1	2		0
Disinfection of equipment between sites, use of footbaths etc	Yes	0				0
	No	1				
CoGP/Regulator						
Practices in accordance with regulator or industry code of practice	Yes	0				0
	No	3				
Platform access to cages	Yes	0				0
	No	2				

Total	**38**
Rank	**HIGH**

Case No: 2024-0041 Site No: FS0212

Sea Lice Inspection (Seawater Sites Only)

1. Has the site experienced sea lice problems in the previous 4 years?
2. Is the CoGP Farm Management Area (or equivalent) fallowed synchronously on a single year class basis?
3. Does the site have access to a range of licenced in-feed and bath sea lice medications (including deltamethrin, azamethiphos an benzoate) as well as access to suitable biological and/or mechanical control measures, and can these be deployed in a reasonable time?
4. Is there a signed documented farm management agreement or statement relevant to the site and CoGP Farm Management Area equivalent)?
5. Are sea lice count records available for inspection? (Legal SSI, CoGP Annex 6)
6. Do records adequately reflect the required standard specified in the SSI and the CoGP? (Legal SSI, CoGP Annex 6)
7. Are sea lice (*L. salmonis*) record levels below the suggested criteria for treatment in the CoGP during the period that records are (CoGP Annex 6)
8. Have average adult female sea lice (*L. salmonis*) numbers per fish been at a level of 3 or above (prior to w/b 10/6/19) or 2 or abo 10/6/19) during the period that records are inspected?

If yes, have these been reported to the Fish Health Inspectorate? If no, FHI see comment.

9. Is *C. elongatus* infestation at a level which is considered to cause significant welfare problems? (CoGP 4.3.81, 5.3.50)
10. Have therapeutic treatments been administered or other actions taken when *L. salmonis levels* have exceeded the suggested c treatment or where *C. elongatus* is considered to have welfare implications? (CoGP 4.3.82, 5.3.51)
11. Has any other action been taken (where applicable)?
12. Have therapeutic treatments or the actions taken had a significant impact upon the lice levels recorded?
13. Are treatments, where conducted, carried out in cooperation between participating farms?
14. Is there a harvesting strategy for the site, where fewer populations or part populations are held without treatment for sea lice?
15. Is there a site specific written lice management procedure with waypoints describing set actions to deal with recognised scenari escalation of a sea lice infestation?
16. Do the sea lice levels observed on stocks reflect sea lice count data? If no please detail reasons.

Containment Inspection

1. Has the site experienced equipment damage due to predators in the current or previous production cycles?
2. Are measures in place to mitigate against the predation experienced on site? (Detail below)

bird nets, tensioned nets

If other, detail below:

3. Have escape incidents or events been experienced on or in the vicinity of the site since the last FHI inspection?

If Yes proceed with questions 4 – 9. If No skip to question 10

4. Have these been reported to Scottish Ministers?
5. Have these been reported to local DSFB forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)
6. Have these been reported to the SSPO and local fisheries trusts forthwith (where they exist)? (CoGP – 4.4.37, 5.4.17)
7. Were methods (if any) used to recover escapees? If yes give detail
8. If gill nets were deployed was this action agreed with local wild fish interests and was permission given by Scottish Ministers? (Le 4.4.38, 5.4.18)
9. What action was taken to prevent and minimise the risk of further escapes? (Not covered in code but could be considered under satisfactory measures of the Act)
10. Is the site inspected as satisfactory with regards to containment? If no, please detail reason(s)

	N
	Y
d emamectin	Y
e period of	
a (or	Y
	Y
	Y
inspected?	Y
ove (from w/b	N
	N/A
	N
criteria for	N/A
	N/A
	Y
	Y
	Y
os during the	Y
	Y
	N
	Y
	N
egal, CoGP –	
	Y

Case No: 2024-0041 Site No: FS0212

Date of Visit: 21/02/2024 Inspector: [redacted]

Point of Compliance

1. Is the farm under inspection located within a farm management area?	Y

If N, no further questions require completion.

Points of Compliance for Both Farm Management Agreements and Statements

2. Has a current farm management agreement or statement (FMAg/S) been prepared?	Y
3. Is the current FMAg/S available for inspection?	Y
4. Does the FMAg/S identify the relevant farm management area?	Y
5. Does the FMAg/S identify the fish farm site(s) to which it applies?	Y
6. Does the FMAg/S identify the date of commencement of the agreement or statement?	Y
7. Does the FMAg/S identify the date of review?	Y

Arrangements for Fish Health Management

8. Does the FMAg/S identify the minimum health standards for the stocks to be introduced to the area or farm?	Y
9. Does the FMAg/S identify the vaccination requirements for stocks held in the area or farm?	Y
10. Does the FMAg/S identify the species of fish which may be stocked into the area or farm?	Y
11. Does the FMAg/S identify the maximum stocking density of any pen on any farm in the area or the individual farm?	Y
12. Does the FMAg/S identify the arrangements for the storage and disposal of any dead fish from any fish farm in the area or the individual farm?	Y

Arrangements for The Management of Sea Lice

13. Does the FMAg/S identify arrangements for the sharing of data on sea lice numbers and treatments?	Y
14. Does the FMAg/S identify the availability and the use of medicines on farms covered by the agreement of statement?	Y
15. Does the FMAg/S identify any requirements for the sensitivity testing of available treatments for sea lice on farms in the area or individual farms?	Y
16. Does the FMAg/S identify the circumstances under which biological controls and cleaner fish are to be used on farms in the area or individual farms?	Y
17. Does the FMAg/S identify the arrangements for synchronous treatments on farms within the area?	Y

Live Fish Movements

18. Does the FMAg/S identify the circumstances when live fish may be introduced or removed from the area or farm?	Y
19. Does the FMAg/S identify the arrangements for the movement of live fish on and off sites in the area or individual farms?	Y

Harvesting

20. Does the FMAg/S identify acceptable harvest practices on farms in the area or individual farms?	Y

Fallowing

21. Does the FMAg/S identify the dates by which the area or individual farm will be fallow and the earliest date when a farm or area may be restocked?	Y
22. Does the FMAg/S identify whether one or more year classes may be stocked onto sites covered by the agreement or statement?	Y
23. Does the FMAg/S identify whether broodstock or potential broodstock are to be kept on any site covered by the agreement or statement?	Y

Point of Compliance for Farm Management Agreements Only

24. Does the farm management agreement include arrangements for persons to become, or cease to be, parties to the agreement?	N/A

Management and operation

25. Is the fish farm being managed and operated in accordance with the agreement or statement?	Y
26. What is the version no/date of issue of the FMAg/S?	08/11/2023

Site No: FS0212

Case No: 2024-0041

Nature of non-compliance:

Action taken (FHI):

Non-compliance relevant to (delete): VirologyMolGen/Bacteriology/Histology/Parasitology

Case No: 2024-0041 Date of visit: 21/02/2024

Site No: FS0212 Inspector: [redacted]

Results Summary	Freq.	Date of Notification						
		Database	Insp	Phone	Insp	Writing	Insp	2nd Insp
MG_AGDQ	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_SAL_POX	1/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_PARA_THER_Q	1/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_IPN	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_VHS	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_IHNQ	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_ISA	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_SAV	0/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
MG_PMCV	1/2	28/02/2024	[redacted]	28/02/2024	[redacted]	26/03/2024	[redacted]	[redacted]
VVIS	1/2	06/03/2024	[redacted]	06/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
AERO	2/2	06/03/2024	[redacted]	06/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
VSPE	2/2	06/03/2024	[redacted]	06/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
GPAT	2/2	26/03/2024	[redacted]	26/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
HPAT	1/2	26/03/2024	[redacted]	26/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
SKIN	1/2	26/03/2024	[redacted]	26/03/2024	[redacted]	26/03/2024	[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]
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			[redacted]		[redacted]		[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]
			[redacted]		[redacted]		[redacted]	[redacted]

Report Summary			
Case Type	Date	Insp	2nd Insp
ECI,CNI,SLI,VMD	28/02/2024	[redacted]	[redacted]
DIAG	26/03/2024	[redacted]	[redacted]
case completion report	24/09/2024	[redacted]	[redacted]
		[redacted]	[redacted]
		[redacted]	[redacted]
		[redacted]	[redacted]
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		[redacted]	[redacted]
		[redacted]	[redacted]
		[redacted]	[redacted]

FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	21/02/2024
SITE NO	FS0212	**SITE NAME**	Invasion Bay
CASE NO	20240041	**INSPECTOR**	[redacted]

Inspection under the Aquatic Animal Health (Scotland) Regulations 2009

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

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 high. An inspection under the Aquatic Animal Health (Scotland) Regulations 2009 will be conducted annually. 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.

Mortality records were inspected and found to be inadequately maintained.

Mortality levels had exceeded the reporting criteria since the last inspection and had been reported to the Fish Health Inspectorate as required.

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

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

The following points were raised with the site representative during the inspection:

- Cleaner fish mortality records not adequately maintained. This is due to the discrepancies identified between the opening counts, stock inputs and mortality figures. Therefore, establishing the current stock on site for all cleaner fish accurately is not possible. Initial deadline is 10/04/2024, to be able to provide information on records and unaccounted for fish on site.

UKAS Accredited Testing Body – Type C No. 0269
Marine Laboratory, 375 Victoria Road, Aberdeen, AB11 9DB
Tel – 0131 244 3498 Email – ms.fishhealth@gov.scot
Website - https://www.gov.scot/policies/fish-health-inspectorate/

These must be addressed to ensure the conditions of authorisation for your Aquaculture Production Business (APB) are being met. Records or documentation demonstrating that these points have been addressed should be sent to the Fish Health Inspectorate (contact details below) within 30 days of the date this report was issued.

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), section 4A regarding fish farm management agreements and statements and section 5 regarding containment and escapes.

On this occasion the site was found to be satisfactory with regards to parasites, fish farm management agreements and statements and containment and escapes.

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

Signed: Date: 28/02/2024

Fish Health Inspector

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)

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	21/02/2024
SITE NO	FS0212	**SITE NAME**	Invasion Bay
CASE NO	20240041	**INSPECTOR**	[redacted]

Section 1: Summary

During a routine site inspection, a number of moribund Atlantic salmon with clinical signs of disease were observed. Two fish were removed for further examination and subsequent diagnostic sampling.

Histopathological examination revealed bacterial ulcerative lesions on the skin and very mild proliferative branchitis. *Moritella viscosa* was identified on plates from kidney material and lesion material of the sampled fish. The level and purity of growth observed would indicate that this bacterium would be implicated in the formation of the lesions sampled, and as a primary fish pathogen. In addition, one fish sampled tested positive for *Paranucleospora theridion*, salmon gill poxvirus piscine myocarditis virus (PMCV) by qPCR.

Vibrio sp. and a motile *Aeromonas* sp. were also identified. The level and purity of the growth would suggest that these bacteria are present as secondary pathogens in this case.

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

During a routine EC inspection of the site on 21/02/2024, fish displaying clinical signs of disease were observed and two fish were removed for diagnostic sampling. At the time of the visit, the site was stocked with 349,590 Atlantic salmon at an average weight of 4.075kg.

During the inspection of stocks, between 8-10 moribund fish were observed in a few pens. Many of these fish presented with lesions to the flanks. At the time of inspection, sea lice levels were observed to be low.

The two fish removed for sampling were moribund and lethargic prior to sampling. Externally F1 had a large lesion on its left flank and observed to be yellowish in colour. Raised boils were observed within this lesion but upon inspection were not fluid filled. The gills were slightly zoned in colour. F1 internally presented signs of petechial haemorrhaging on the inner flank as well as a swollen spleen.

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Samples

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

Fish number	Facility number	Species	Stage	Origin
F1	4	Atlantic salmon	4kg 2022	Loch Harport (FS0247)
F2	6	Atlantic salmon	4kg 2022	Loch Harport (FS0247)

Results

Bacteriology: Kidney, gill, and lesion material from F1-F2 were inoculated onto appropriate media for the isolation of bacteria.

The following bacteria were isolated:

Moritella viscosa: F1 (Kidney, Lesion)

Aeromonas sp.: F1 (Lesion, Gill);F2 (Gill);

Vibrio sp.: F1 (Lesion, Gill); F2 (Gill);

From the tests conducted for *Moritella viscosa*, 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).

Salmon gill poxvirus (SGPV)

Fish Number	**Endogenous control Cp value**	**Cp Values**			**Reported Result (PCR)**
F1	22.06	36.24	36.30	36.12	POSITIVE
F2		-	-	-	NEGATIVE

Piscine myocarditis virus (PMCV)

Fish Number	**Endogenous control Cp value**	**Cp Values**			**Reported Result (PCR)**
F1	17.13	21.24	21.35	21.51	POSITIVE
F2		-	-	-	NEGATIVE

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

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

Paranucleospora theridion

Fish Number	Endogenous control Cp value	Cp Values			Reported Result (PCR)
F1	22.06	39.18	40	39.37	POSITIVE
F2		-	-	-	NEGATIVE

The samples tested negative for *Neoparamoeba perurans* (AGD).

Histology: Tissue samples of gill, skin and skeletal muscle, heart, pyloric caeca, pancreas, hind gut, liver, spleen and kidney were taken from F1-F2. The tissue samples were fixed in 10% neutral buffered formalin.

Histopathological examination revealed the following:

Gill: Lamellar hyperplasia and fusion, mild, multifocal with inflammatory cell infiltrate and foci of cellular necrosis (F2). Minor bluntness of the gill filament tips (F1).

Skin & Muscle: F1 lesion: Absence of epidermis and mixed Gram-negative bacteria at the dermal outer layer and within dermis (F1). F1 displayed degeneration of few scattered white skeletal fibres.

Heart: Very mild focal myositis (F1). Very mild epicarditis (F1). F1 displayed few thrombi. F1 also exhibited an encysted Nematode-like parasite.

Gut and pyloric caeca: Peritonitis, moderate (F2).

Pancreas: Within the normal range.

Liver: Foci hepatocellular vacuolation (macrovesicles), mild (F1) and mild capsulitis (F1).

Kidney: Some, multifocal, inflammatory cell infiltrate observed in the interstitial cell (haematopoietic) (F1 & F2).

Spleen: Within the normal range.
Please contact myself or the duty inspector should you require any further information or have any queries regarding this report.

Signed: [redacted] Date: 08/04/2024

Fish Health Inspector

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FISH HEALTH INSPECTORATE VISIT REPORT

SUMMARY FOR INFORMATION OF SITE OPERATOR

BUSINESS NO	FB0119	**DATE OF VISIT**	21/02/2024
SITE NO	FS0212	**SITE NAME**	Invasion Bay
CASE NO	20240041	**INSPECTOR**	[redacted]

Case completion report

Recommendations in relation to the above case were made for implementation by 13/09/2024. Following submission of the required documentation, evidence has now been provided to the Fish Health Inspectorate to demonstrate that the recommendations have been implemented.

This case will now be closed. This site may be subject to further audit and recommendations in the future.

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

Signed: [redacted] Date: 24/09/2024

Fish Health Inspector

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Diagnostic case photos: 2024-0041

Figure 1 overview of fish 1 and fish 2

Figure 2 a) depicts lesion 1 on fish 1 and b) depicts lesion 2 on fish 1

Figure 4 Picture of the underside of fish 1. Swollen vent can be seen as well as slight haemorrhaging and pelvic fin damage

Figure 5 Picture of underside of fish 2.

Figure 3 a) picture of gill of fish 1 and b) picture of gill of fish 2.

Figure 7 Internal view of fish 1

Figure 6 Closer view of haemorrhaging of inner flank of fish 1

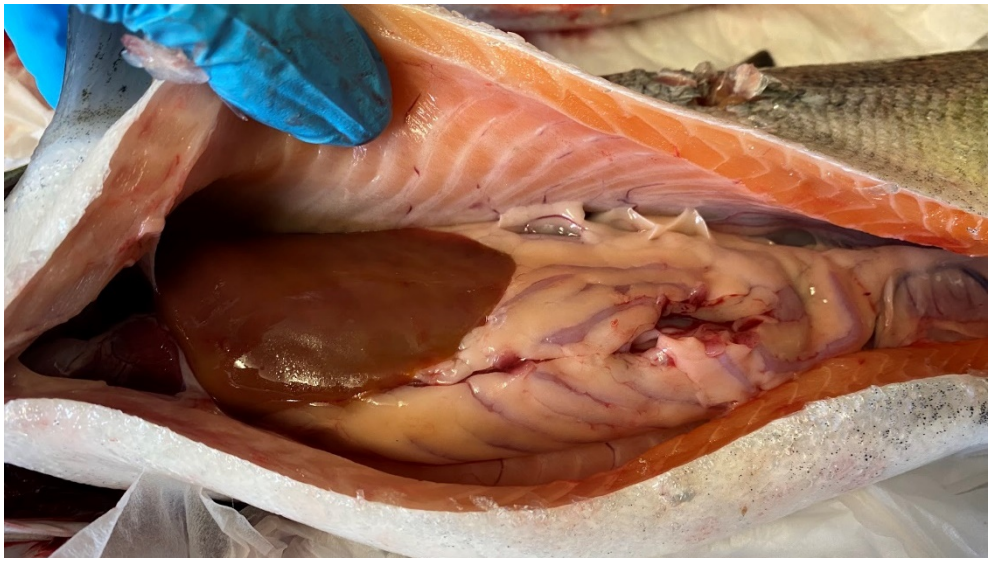

Figure 8 Internal view of fish 2