

\$camon \$cotland, 7 November 2022

**‘Explosive’ Scottish Salmon Exposed via FOI from SEPA**

- Toxic gases spewing from Bakkafrost (The Scottish Salmon Company) feed barge off Portree in “explosive range” [reported Marine Masters in September 2022](#)
- Salvage operation by Briggs Marine suspended in August due to dangerous levels of Hydrogen Sulphide gases at 55,000 ppm (the “lower explosion limit” is 43,000 ppm)
  - ‘Exclusion zone’ & guard patrol in place off Skye since August with a ‘Notice to Mariners’ but no warning issued to the general public
- Fire Brigade, Police & NHS notified due to risk of explosion and threat to public safety
- [FOI disclosure by Maritime & Coastguard Agency](#) reports that the salvage operation (by Marine Masters) is expected to be completed “during November 2022”

A [Freedom of Information disclosure by the Scottish Environment Protection Agency \(4 November 2022\)](#) has lifted the lid on the “explosive” nature of the sunken feed barge off Portree on the Isle of Skye. Campaigners are calling for the ‘time-bomb’ of Scottish salmon farming to be closed down as a matter of urgency.

SEPA told \$camon \$cotland via F0194491 (4 November 2022):

On 27 November 2021, SEPA was informed, in an email from The Scottish Salmon Company, that the feed barge for their Loch Portree sites had sunk the previous day during a storm. SEPA is unable to confirm if this is the feed barge which was installed in 2018/19.

A multi-agency group was set up on 30 November 2021 in response to the incident, involving SEPA, the Maritime and Coastguard Agency, Marine Scotland, Highland Council, and other organisations.

Fuel and oil from the barge were safely removed by December 2021 and posed no further risk to the local water environment. SEPA continued to work with partners to ensure that the waste feed within the barge was recovered or disposed of in accordance with waste management legislation.

The feed was sealed into the barge whilst arrangements were put in place to recover the barge. Please see attached emails which give details of the gas which was produced as a result of decomposition of the feed within the silos, the venting plan for the gases and the current situation with regards to the completion of the initial recovery stage.

- **Email 1\_Update from Barge Recovery Works**
- **Email 2\_Notification on Barge at Portree**
- **Email 3\_Portree Barge Gas Venting Plan Update**
- **Document\_Salmon Feeder Barge Gas Purging - Attachment**
- **Email 4\_Bakkafrost Statement**

The Scottish Salmon Company (Bakkafrost) emailed SEPA – and other parties including HM Coastguard, the Crown Estate, Highland Council, Briggs Environmental, the Maritime &

Coastguard Agency, the Northern Lighthouse Board and the Scottish Government – on 5 August 2022 to report leaking gas (Hydrogen Sulphide) with an ‘exclusion zone’ in place, a ‘Notice to Mariners’ and reference to the ‘2020 Emergency Response Guidebook’:

As previously advised and predicted we have readings and samples, from our contractor, that suggest that the feed remaining and sealed in the barge, has begun to naturally decompose and is producing gas. Our investigations to date would suggest that the gas is Hydrogen Sulphide. There also appears to be a small leakage of gas through the concrete wall of a feed silo. As a result of those investigations and to ensure that the issue is dealt with swiftly, we have taken the safety precaution of pausing operations, while our contractor and specialist advisors assess and determine the appropriate technical and safe operational solutions

Our advisors are making use of various risk management/guidance materials, including the internationally recognised ‘2020 Emergency Response Guidebook’

Given the nature and the scale of works undertaken to prepare for the recovery operation, we have put an exclusion zone in place and a Notice to Mariners has been issued for the site on that basis. We will now extend the active time period for the Notice to Mariners

Additional monitoring will be put in place as a priority, and our contractor and specialist advisors are expecting to update on readings and technical advice daily

A follow up email from The Scottish Salmon Company (Bakkafrost) dated 12 August 2022 reported “high levels of H2S within one of the sealed silos (55,000 ppm) and low levels on the site (2 ppm)”:

*We have had a dive team onsite today to carry out some works to prepare for the venting of the barge; sample readings were taken by our specialist contractor during this operation, which have registered high levels of H2S within one of the sealed silos (55,000 ppm) and low levels on the site (2 ppm), due to the small amount being released at present. The team are working on a solution to introduce an inert gas during the venting portion of the operation to reduce risk. We are working to carry out this operation out as soon as possible given this latest information.*

*Given the nature and the scale of works needing to be undertaken to prepare for the recovery operation, we will put an exclusion zone in place and a Notice to Mariners will be issued advising of this, we hope to have this updated today with assistance from [REDACTED]. Additional monitoring can only be carried out while the dive vessel is onsite, and our contractor and specialist advisers are expecting to update on readings and technical advice daily*

*We will provide a further update once the venting works by our contractor and specialist advisors is ready to begin.*

A document authored by Marine Masters in the Netherlands (who are understood to have taken over the salvage/venting operation from Briggs Marine on 26 August 2022) was circulated by The Scottish Salmon Company (Bakkafrost) on 6 September 2022 to SEPA – and other parties now also including Police Scotland and NHS Highland. The [15-page document](#) disclosed by SEPA detailed how the Hydrogen Sulphide gas trapped inside the salmon feed barge off Portree would be purged:



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3284 WC Zuid Beijerland  
T: +31686 813 413 (24/7)  
info@marinemasters.nl

## “SALMON FEEDER BARGE”

### H<sub>2</sub>S GAS PURGING



“There was concern over the possibility of an uncontrolled release of the pent up gases and oils or structural harm to the barge as cracks were identified by the emission of the gases,” stated the [report by Marine Masters in the Netherlands](#). “During the relief of the gas and oils from the silos it became apparent that the gases were toxic in composition with Hydrogen Sulphide (H<sub>2</sub>S) and Methane (CH<sub>4</sub>) detected. During diving operations, a gas sample was collected directly from the sunken barge itself, and analysed by a Marine Chemist which provided the results of the presence of H<sub>2</sub>S in concentrations of 55,000 ppm which puts the gas into explosive range”.

#### 1.1. Background

The Seamate 450 fish feed barge supplying pellet food to the salmon farm in Portree Harbour, Isle of Skye sank during Storm Arwen in Q4 2021 with approximately 400t of feed on board. Owners, Scottish Salmon Company (SSC), instructed Briggs Marine Contractors (BMC) shortly thereafter to secure the feed silos with temporary hatch covers to control and prevent the emission of feed oils that are part of the feed pellets from being emitted to the environment. In May 2022 BMC was awarded the contract to recover the barge. An ROV survey was conducted in June 2022 to aid the preparation of the salvage plan. Preliminary diving work started on site July 2022 with the aim of preparing the barge for recovery August 2022. During these works it was noticed that gas bubbles were escaping from the temporary hatch covers and from previously unidentified cracks in the concrete wall of the accommodation block on the starboard stern. These gas bubbles had not been identified during the ROV survey or during the early preparatory works.

Hoses, pumps, and two IBCs were supplied to allow the relief of the unknown pressure within the silos as there was concern over the possibility of an uncontrolled release of the pent up gases and oils or structural harm to the barge as cracks were identified by the emission of the gases. During the relief of the gas and oils from the silos it became apparent that the gases were toxic in composition with Hydrogen Sulphide (H<sub>2</sub>S) and Methane (CH<sub>4</sub>) detected. During diving operations, a gas sample was collected directly from the sunken barge itself, and analysed by a Marine Chemist which provided the results of the presence of H<sub>2</sub>S in concentrations of 55,000 ppm which puts the gas into explosive range but only when oxygen is introduced as levels in the silos for O<sub>2</sub> are very low at 2.4% volume.

Actual readings from silo test below -

O2	:2,4 %vol
CO	:1580 PPM
H2S	:5,5 % vol (55000 PPM)
LEL	: 100 % (not accurate O2 <8 % vol)
VOC	: 231 PPM (PID)

Please note the lower explosion limit of H<sub>2</sub>S is 4,3 % vol

A [FOI disclosure by the Maritime & Coastguard Agency \(1 November 2022\)](#) reported that “it is expected that the barge will be lifted to the surface during November 2022”:

On the morning of Saturday 27 November 2021, Stornoway Maritime Rescue Co-Ordination Centre (MRCC) were advised by a member of the Scottish Salmon Company (Bakkafrost), that their 400 tonne Fish Farm Feed Barge had sunk on its mooring the previous evening during Storm Arwen. The co-ordinates were given as 57 25.077N 006 09.309W.

This location is wholly within the Portree Harbour area of responsibility and consequently it is the responsibility of Highland Council, as owners of the harbour, to ensure the barges removal.

As part of our notification process, all relevant stakeholders were advised of the sinking on Saturday 27 November 2021. This included Marine Scotland, Nature Scot, Highland Council, Portree Harbour and SEPA.

Bakkafrost implemented recovery and containment measures, which included the recovery of all loose debris (boxes and pipes) and 2 x fuel cubes. Sealed containers of hydraulic oil were also recovered. Divers were deployed to check the integrity of the hull and also recover fuel from the onboard tanks. Once this was carried out, the tank breathers were also sealed to prevent the loss of any small volumes of residual fuel. The silos on the barge still contained fish farm feed and these were sealed by a specialist contractor to prevent any seepage of nutrients into the marine environment.

The tendering process for recovery of the barge was carried out and an initial timeframe of August 2022 was identified for the operation to commence.

At the beginning of July 2022, the initial preparation for recovery works was ongoing when levels of Hydrogen Sulphide were identified within the feed silos. It is believed that the natural decomposition of the fish feed was causing the production of the gas. Consequently, operations were halted while a technical solution to reduce the gas levels was sought. A number of multi-agency meetings involving the previously mentioned stakeholders, Local Councillors, Emergency Services and the NHS were convened to identify a solution and ensure public safety was maintained. An exclusion zone was put in place and a guard vessel was deployed to patrol the area.

Specialist contractors commenced works to vent the silos and this work was completed in September 2022, when the gas levels were reduced, allowing the recovery operations to re-commence. It is expected that the barge will be lifted to the surface during November 2022 and removed from site for processing. The Maritime & Coastguard Agency and other environmental stakeholders will continue to monitor the operation until its full completion.

The Owners of the barge, Bakkafrost, continue to lead the recovery operation, with assistance and engagement from all other stakeholders as appropriate.

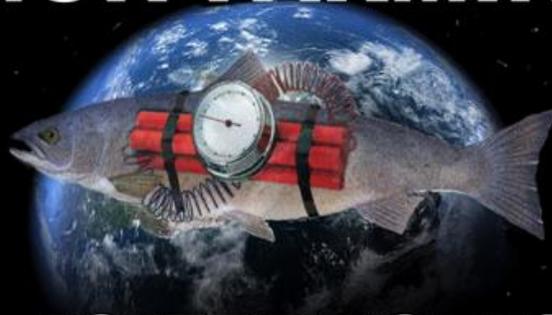
The Secretary of State's Representative for Maritime Salvage & Intervention (SOSREP) has been engaged in the process from the outset and is also monitoring the recovery operation.

“Scottish salmon is an unexploded time-bomb ready to go off at any moment,” said Don Staniford, [Director of \\$camon \\$cotland](#) (who was first to [break the news of the toxic gas leak in late August 2022 following a tip-off from a whistleblower](#)). “Toxic gases, mass mortalities, infectious diseases, lice infestations and rising community resistance across the Highlands and Islands will blow salmon farming in Scotland out of the water. How long will the public tolerate an industry which spews dangerous gases as well as spewing fake news about the safety and sustainability of ‘healthy’ Scottish salmon? The Scottish Government must shut down toxic salmon farming as a matter of urgency.”

**SALMON FARMING**

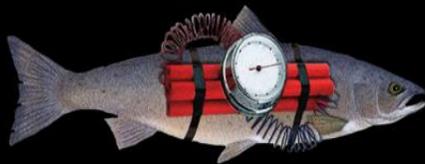
**IS**

**AQUATIC TERRORISM**



**SALMON FARMING**

**SALMON FARMING**



**IS A TIME BOMB**

**IS DESTRUCTIVE**

Read more via:

[Toxic Salmon Barge Salvaged This Month Off Portree \(as revealed by FOI disclosure by the Maritime & Coastguard Agency\)](#)

[500m exclusion zone near Portree Harbour in Skye as barge gives off rotten eggs smell](#)

[P&J: "Exclusion zone set up around Skye barge giving off rotten eggs smell"](#)

["Experts tackle lethal gas leaking from sunken feed barge" \(Fish Farming Expert\)](#)

[BBC News: "'Rotten egg' gas leaking from fish feed barge wreck - 500m exclusion zone placed near Portree on Skye"](#)

[Toxic Gasses Spew From The Scottish Salmon Company \(Bakkafrost Scotland\) Off Portree](#)



Don Staniford  
@TheGAAIA · Follow

Breaking News: potentially lethal toxic gasses leaking from a sunken feed barge at Bakkafrost salmon farm off Portree suspend salvage operation with 24 hour guard & exclusion zone [@briggsmarine](#)  
Why has the public not been informed of the risks?  
[@ScottishEPA](#) [@MairiMcAllan](#) [@H\\_S\\_E](#)

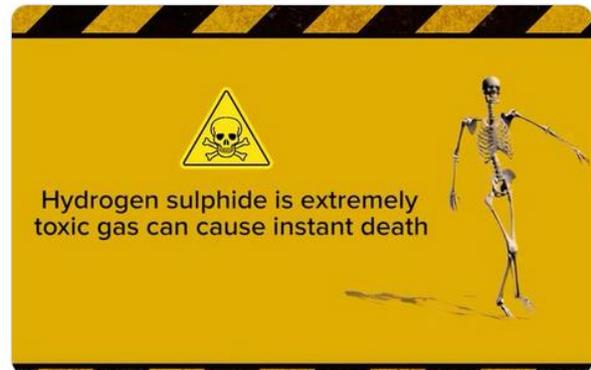


7:28 AM · Aug 30, 2022



Don Staniford  
@TheGAAIA

WARNING: Dangerous Scottish Salmon - toxic gases containing Hydrogen Sulphide - known as 'swamp gas' - are spewing from Bakkafrost Scotland's salmon farm off Portree [tinyurl.com/3dpm8x8t](#)  
Avoid Toxic Scottish Salmon! [@ScotlandSalmon](#)  
[@\\_KateForbes](#) [@Ianblackford\\_MP](#) [@ScottishEPA](#)



WHFP and 9 others

10:59 AM · Aug 30, 2022 · Twitter Web App



Don Staniford  
@TheGAAIA

How many miles is the safety exclusion area around Bakkafrost Scotland's Portree salmon farm?  
When cruise ships such as 'The World' visit Skye how far away from toxic Scottish salmon do they steer?  
[@MCA\\_media](#) [@H\\_S\\_E](#) [@scotgov](#) #Toxic #Scottish #Salmon [tinyurl.com/3dpm8x8t](#)



VisitScotland and 3 others

9:44 AM · Aug 30, 2022 · Twitter Web App



Don Staniford  
@TheGAAIA

Is this the sun setting on the booming tourist industry on the Isle of Skye? An exclusion zone - due to dangerous toxic gasses - around the salmon farm off Portree is not good for business!  
[@\\_KateForbes](#) [@Ianblackford\\_MP](#) [@SkyeforAll](#)  
[@VisitScotland](#) [@VisitScotNews](#) [@MairiGougeon](#)



WHFP and 4 others

**SEPA FOI Disclosure (4 November 2022) re. Toxic Gases Spewing from The Scottish Salmon Company/Bakkafrost's Feed Barge Off Portree (Isle of Skye)**

From: **Access to Information Enquiries** <foi@sepa.org.uk>  
Date: Fri, Nov 4, 2022 at 4:56 PM  
Subject: SEPA Access to Information Request – Response – F0194491  
To: salmonfarmingkills@gmail.com <salmonfarmingkills@gmail.com>  
Cc: Access to Information Enquiries <foi@sepa.org.uk>

**OFFICIAL**

Dear Don

**REQUEST FOR INFORMATION – RESPONSE**

Please see the attached response to your request F014491. Please quote this in any future contact with us about your request.

**Your rights**

If you are not satisfied you have the right to request a Formal Review from SEPA at [foi@sepa.org.uk](mailto:foi@sepa.org.uk). Guidance on your rights and how to ask for a review is on the Scottish Information Commissioner's website. <http://itspublicknowledge.info/YourRights/Askingforareview.aspx>

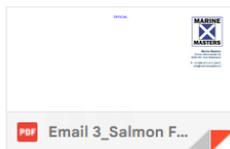
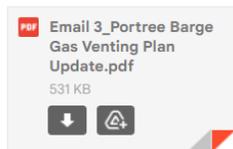
Karen Leask

Access to Information  
Scottish Environment Protection Agency (SEPA)



You can find latest information on our current service status and recovery from a significant cyber-attack on our website [www.sepa.org.uk](http://www.sepa.org.uk)

6 Attachments • Scanned by Gmail



## RESPONSE TO F0194491

### Request Timeline

Date	Status
29/08/2022	EIR Request received [statutory deadline 26/09/2022]
27/09/2022	Apology Email Issued
04/11/2022	EIR Response issued

### Requested Information

[...] an incident regarding a sunken barge at Bakkafrust Scotland (The Scottish Salmon Company) off Portree on the Isle of Skye [...]

Could you please provide information on the alleged incident at Bakkafrust Scotland's Portree salmon farm?

[...] It appears that Bakkafrust Scotland (when named The Scottish Salmon Company) launched a new feed barge off Portree in 2019/2018. [...]

[...] presumably, if there has been a toxic leak, then SEPA would have been notified and would have been involved.

[...]Further information on this alleged pollution incident would be much appreciated.

### Response

We can confirm that we have handled your request under the terms of the Environmental Information (Scotland) Regulations 2004 (EIRs).

We apologise for the delay in providing this response.

SEPA Access to Information Team began working remotely on 17 March 2020 due to COVID-19. In addition, there was continued disruption due to a sophisticated criminal cyber-attack on Christmas Eve 2020 which have significantly affected SEPA's ability to respond to Access to Information enquiries. More information about SEPA's response and service status can be found here: <https://www.sepa.org.uk/about-us/cyber-attack>

On 27 November 2021, SEPA was informed, in an email from The Scottish Salmon Company, that the feed barge for their Loch Portree sites had sunk the previous day during a storm. SEPA is unable to confirm if this is the feed barge which was installed in 2018/19.

A multi-agency group was set up on 30 November 2021 in response to the incident, involving SEPA, the Maritime and Coastguard Agency, Marine Scotland, Highland Council, and other organisations.

Fuel and oil from the barge were safely removed by December 2021 and posed no further risk to the local water environment. SEPA continued to work with partners to ensure that the waste feed within the barge was recovered or disposed of in accordance with waste management legislation.

The feed was sealed into the barge whilst arrangements were put in place to recover the barge. Please see attached emails which give details of the gas which was produced as a result of decomposition of the feed within the silos, the venting plan for the gases and the current situation with regards to the completion of the initial recovery stage.

- **Email 1\_Update from Barge Recovery Works**
- **Email 2\_Notification on Barge at Portree**
- **Email 3\_Portree Barge Gas Venting Plan Update**
- **Document\_Salmon Feeder Barge Gas Purging - Attachment**
- **Email 4\_Bakkafrost Statement**

Further information regarding the regulations/ exceptions applied to this information can be found below.

## Application of Regulations/Exceptions

### Section 39(2)

We have applied the exemption under Section 39(2) of the Freedom of Information (Scotland) Act 2002 as we have determined that the information sought in your request is environmental information. We are therefore handling your request under the terms of the Environmental Information (Scotland) Regulations 2004 (EIRs). In this case the public interest in maintaining this exemption and in dealing with the request in line with the requirements of the EIRs outweighs any public interest in disclosing the information under FOISA.

### Regulation 11(2) – Personal data

Personal data relating to SEPA staff and private individuals has been redacted from the released documents in accordance with Regulation 11(2) of the EIRs and Data Protection Principles. SEPA has not withheld complete documents which contain such personal data and have released all other information within the document.

### **What to expect when making a Request for Information**

Each request for information, under The Environmental Information (Scotland) Regulations 2004 or the Freedom of Information (Scotland) Act 2002, is formally logged by the authority. The request falls within a process that has two internal stages carried out by the authority; a right of appeal to the Scottish Information Commissioner followed by an appeal to the Court of Session on a point of law only.

- Stage 1 – Request for information
- Stage 2 – Formal Review
- Stage 3 – Appeal for decision by Scottish Information Commissioner (OSIC)
- Stage 4 – Appeal to the Court of Session on a point of law only.

Each enquiry will have a unique Reference Number which should be quoted when you contact us.

### **How you will be kept informed**

You will receive an acknowledgement for your request and Formal Review. We aim to reply to all enquiries promptly, within 20 working days. You will receive a response along with the requested information and/or an explanation regarding any withheld information. We may also contact you if we require clarification or if we are issuing a fees notice.

### **What happens once your enquiry has been responded to?**

If you are not happy with the response or have failed to receive a response, you have the right to request a Formal Review from SEPA.

Guidance on your rights and how to ask for a review is on the Scottish Information Commissioner's website; <http://itspublicknowledge.info/YourRights/Askingforareview.aspx>

We will ensure that all personal data is processed, recorded and retained in accordance with the requirements of the Data Protection Act 2018 throughout the handling of each request. You have a right to see information about yourself via submitting a Subject Access Request under the Data Protection Act 2018.

### **What to do if you are not happy with how your enquiry and review were handled**

If you are unsatisfied with our Formal Review response or have failed to receive a response, you can then appeal to the Scottish Information Commissioner via the links below.

[www.itspublicknowledge.info/appeal](http://www.itspublicknowledge.info/appeal)

<http://www.itspublicknowledge.info/home/ContactUs/ContactUs.aspx>

Should you wish to appeal against the Scottish Information Commissioner's decision, you have the right to appeal to the Court of Session on a point of law only. Any such appeal must be made within 42 days after the date of intimation of the decision.

**Document #1:**

**Email 1\_Update From Barge Recovery works.... (553K)**



Document #2:

**Email 2\_Notification on Barge at Portree.pdf (714K)**

**From:** [REDACTED]@scottishsalmon.com>  
**Sent:** 12 August 2022 16:34  
**To:** SEPA [REDACTED]; [REDACTED]@crownstatescotland.com; [REDACTED]@highland.gov.uk; Dundee fire serviceHQ; [REDACTED]@mcga.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@highland.gov.uk; [REDACTED]@highland.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@nlb.org.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@nlb.org.uk; rody; [REDACTED]@gov.scot; [REDACTED]@highland.gov.uk; [REDACTED]@highland.gov.uk; [REDACTED]@hmcg.gov.uk  
**Cc:**  
**Subject:** Notification on Barge at portree  
All

*Following from my previous email, from our ongoing correspondence with you, we have been carrying out lifting and fish feed removal works on the sunken feed barge at Portree*

*We have had a dive team onsite today to carry out some works to prepare for the venting of the barge; sample readings were taken by our specialist contractor during this operation, which have registered high levels of H2S within one of the sealed silos (55,000 ppm) and low levels on the site (2 ppm), due to the small amount being released at present. The team are working on a solution to introduce an inert gas during the venting portion of the operation to reduce risk. We are working to carry out this operation out as soon as possible given this latest information.*

*Given the nature and the scale of works needing to be undertaken to prepare for the recovery operation, we will put an exclusion zone in place and a Notice to Mariners will be issued advising of this, we hope to have this updated today with assistance from [REDACTED]. Additional monitoring can only be carried out while the dive vessel is onsite, and our contractor and specialist advisers are expecting to update on readings and technical advice daily*

*We will provide a further update once the venting works by our contractor and specialist advisers is ready to begin.*

*In the meantime, if there is any further information that you require then please do not hesitate to contact me.*

[REDACTED]  
[REDACTED]

[REDACTED]  
Tel: +44 (0)131 718 8500  
[REDACTED]  
[www.scottishsalmon.com](http://www.scottishsalmon.com)  
[shop.scottishsalmon.com](http://shop.scottishsalmon.com)

Document #3:

Email 3\_Portree Barge Gas Venting Plan Upd... (532K)

**From:** [REDACTED]@bakkafrost.com>  
**Sent:** 06 September 2022 13:23  
**To:** SEPA; [REDACTED]@crownstatescotland.com; [REDACTED]; Dundee fire serviceHQ; [REDACTED]@mcga.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@highland.gov.uk; [REDACTED]@mcga.gov.uk; [REDACTED]@nlb.org.uk; [REDACTED]@nlb.org.uk; [REDACTED]@gov.scot; [REDACTED]@highland.gov.uk; [REDACTED]@hmcg.gov.uk; [REDACTED]@scotland.pnn.police.uk; [REDACTED]@scotland.pnn.police.uk; [REDACTED]@nhs.scot; [REDACTED]@highland.gov.uk; [REDACTED]@highland.gov.uk; [REDACTED]@scotland.police.uk; [REDACTED]@firescotland.gov.uk; [REDACTED] (NHS HIGHLAND); [REDACTED]@gov.scot; [REDACTED]@gov.scot; [REDACTED] (NHS Highland); [REDACTED] (NHS Highland); [REDACTED]@gov.scot

**Subject:** Portree Barge Gas Venting plan :update  
**Attachments:** Salmon Feeder Barge Gas Purging.docx

All

See updated document from marine masters, a few minor changes

[REDACTED]  
[REDACTED]

Document #4:

Email 3\_Salmon Feeder Barge Gas Purging\_A... (946K)

OFFICIAL



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3284 WC Zuid Beijerland

T: +31686 813 413 (24/7)  
info@marinemasters.nl

# “SALMON FEEDER BARGE”

## H<sub>2</sub>S GAS PURGING



Portree, Scotland

For



OFFICIAL

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**3. BRIEFING RECORD ..... ERROR! BOOKMARK NOT DEFINED.**

**1 INTRODUCTION**

**1.1. Background**

The Seamate 450 fish feed barge supplying pellet food to the salmon farm in Portree Harbour, Isle of Skye sank during Storm Arwen in Q4 2021 with approximately 400t of feed on board. Owners, Scottish Salmon Company (SSC), instructed Briggs Marine Contractors (BMC) shortly thereafter to secure the feed silos with temporary hatch covers to control and prevent the emission of feed oils that are part of the feed pellets from being emitted to the environment. In May 2022 BMC was awarded the contract to recover the barge. An ROV survey was conducted in June 2022 to aid the preparation of the salvage plan. Preliminary diving work started on site July 2022 with the aim of preparing the barge for recovery August 2022. During these works it was noticed that gas bubbles were escaping from the temporary hatch covers and from previously unidentified cracks in the concrete wall of the accommodation block on the starboard stern. These gas bubbles had not been identified during the ROV survey or during the early preparatory works.

Hoses, pumps, and two IBCs were supplied to allow the relief of the unknown pressure within the silos as there was concern over the possibility of an uncontrolled release of the pent up gases and oils or structural harm to the barge as cracks were identified by the emission of the gases. During the relief of the gas and oils from the silos it became apparent that the gases were toxic in composition with Hydrogen Sulphide (H<sub>2</sub>S) and Methane (CH<sub>4</sub>) detected. During diving operations, a gas sample was collected directly from the sunken barge itself, and analysed by a Marine Chemist which provided the results of the presence of H<sub>2</sub>S in concentrations of 55,000 ppm which puts the gas into explosive range but only when oxygen is introduced as levels in the silos for O<sub>2</sub> are very low at 2.4% volume.

Actual readings from silo test below -

O2	:2,4 %vol
CO	:1580 PPM
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LEL	: 100 % (not accurate O2 <8 % vol)
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Please note the lower explosion limit of H<sub>2</sub>S is 4,3 % vol

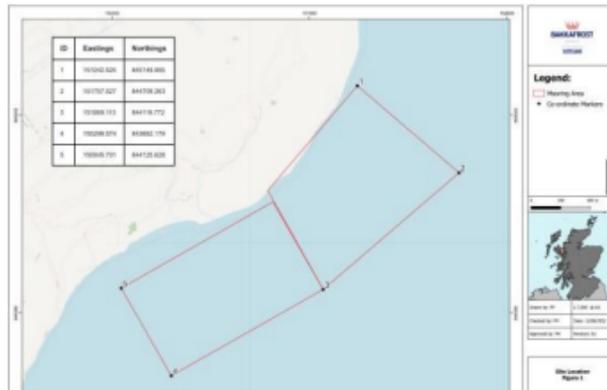
At August 26 BMC was released of their duties and a different contractor was brought in to assist SSC with the gas purging works.

The [15-page document](#) includes:

## 2 OIL AND GAS REMOVAL

The following steps describe the procedure for venting and removing the oil from the silos subsea and the monitoring of gases around the casualty area

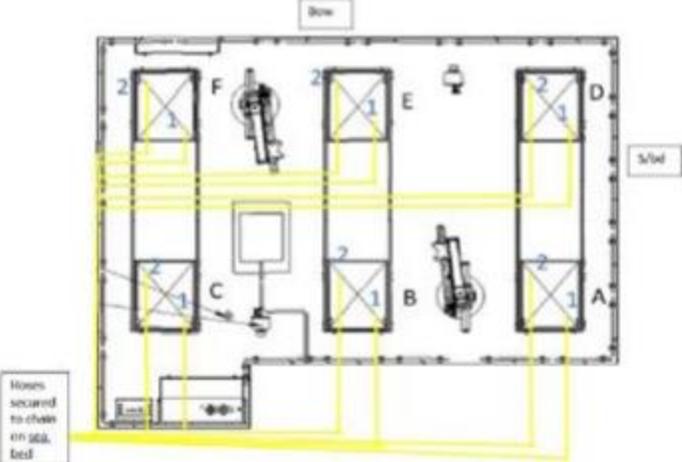
Method of Work		
Item	Task	Persons responsible
	<b>NO SMOKING ALLOWED!</b>	
	<p><b>Note: Project team and Vessel Master assess weather conditions and sea state are within parameters to carry out tasks.</b></p> <p>Maximum operational limits:</p> <p>Water current: 0.8 knots</p> <p>Surface visibility: <math>\leq 1</math>km</p> <p>Lightning Risk: Lightning forecast within 4hrs</p> <p>Wind speed: 20 knots</p> <p>Significant wave height: 1m</p>	
	<b>Notice to mariner's exclusion zone for operation</b>	





Area gas monitors to be positioned at below locations for continuous readings of H<sub>2</sub>s to the North, East, South and West from casualty location.

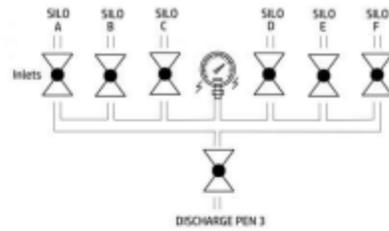
<p>1.</p> 	<p>Dive supervisor holds TBT with team.]</p> <p>Reviews risk assessments and emergency procedures</p> <p>Dive Supervisor obtain permit to work from vessel and harbour authority</p>	<p>Dive supervisor and Duty officer</p>
<p>1.</p>	<p>Dive supervisor holds toolbox talk – ensuring that all personnel are aware of the escape plan, safe use of the escape set and familiarisation with the risks at hand, including irritation of skin at wrists and neck if H2S concentrated in water</p>	<p>DS</p>
<p>2.</p>	<p>Personal gas monitors to be bump tested and recorded daily</p> <p>Static monitors to be checked for functionality during all plant checks</p> <p>BA sets to be checked over for readiness, charged if necessary and placed into locations for immediate access by the dive team.</p>	<p>All crew</p>
<p>3.</p> 	<p>Only personnel immediately needed to perform the task are to be present on deck e.g. Crane operator, slinger banksman</p> <p>Escape sets to be worn by all personnel on the vessels – ready for use!</p> <p style="text-align: center;"><b>NO SMOKING ALLOWED!</b></p>	<p>All Crew</p>
<p>4.</p>	<p>Gas monitor readings to be obtained in all areas</p> <p>CH<sub>4</sub> =</p> <p>O<sub>2</sub> =</p> <p>CO =</p> <p>H<sub>2</sub>S =</p>	<p>All crew</p>
<p>5.</p>	<p>Dive team to set up the dive spread and plant for the scheduled tasks ahead</p>	<p>Dive team</p>
<p>6.</p>	<p>Nitrogen spread to be set-up on the Forth Warrior with sufficient length of hoses and connections to reach and connect to the valves on the silos on the sunken barge.</p>	<p>DS Dive team</p>
<p>7.</p>	<p>DS and Vessel Master confirm vessel and working Forth Warrior are in suitable positions for diving</p> <ul style="list-style-type: none"> <li>• Forth Warrior to be within the 4-point mooring grid</li> <li>• MV Forth Drummer to be attached to the 4-point mooring grid, but on the outside, on 2-points of mooring just, up wind from the venting gases</li> </ul>	<p>DS Vessel Master</p>
<p>8.</p>	<p>Function test equipment, Standby and diver cross checks complete.</p>	<p>Dive team</p>
<p>9.</p>	<p>Dive team and deck crew ensure all hoses and tools are ready to be lowered to the diver down the job line using a messenger line</p>	<p>Dive team Deck Crew</p>

10.	Diver enters the water via the dive ladder	Diver Tender
11.	Diver places hat and hoses under the surface to check for leaks, Topside tenders to confirm to DS that there are / are not leaks.	Diver Tenders DS
12.	When satisfied there are no leaks DS instructs diver to leave surface. (In the event of leaks dive is aborted and diver recovered to deck to check leaks and repair)	DS Diver Tenders
13.	Diver makes way down the job line taking the first length of hose from Nitrogen spread Topside paying out the hose as diver descends	DS Diver Deck crew
14.	<p>Diver takes hose to first location as listed in the table below</p> 	Diver
15.	<p>Prior to connecting the crows' feet fittings, diver is to make sure umbilical is clear</p> 	Diver
16.	Diver connects fittings in order of the table, confirms with DS before securing with R-clip and whip checks	Diver DS

40.	Hoses are now installed sub surface ready for connections on the surface	All crew
41.	<p>Hoses recovered with the FRC and run to the 1<sup>st</sup> of the Northern pens on the inshore side to the manifold for venting, and discharge of oils into the boomed off area in the 3<sup>rd</sup> pen North inshore side.]</p>  <p><b>Figure 1 Proposed boomed off area (image for reference only)</b></p> <p>From the manifold at pen 11 the discharge pipe will continue onto pen 3 for discharge into the boomed off area.</p> <p>The discharge pipe is tethered to the pen using ropes, there will be 4 pellet buoys placed between pens 1 and 2, then 4 pellet buoys placed between 2 and 3.</p>	FRC Skipper Crew

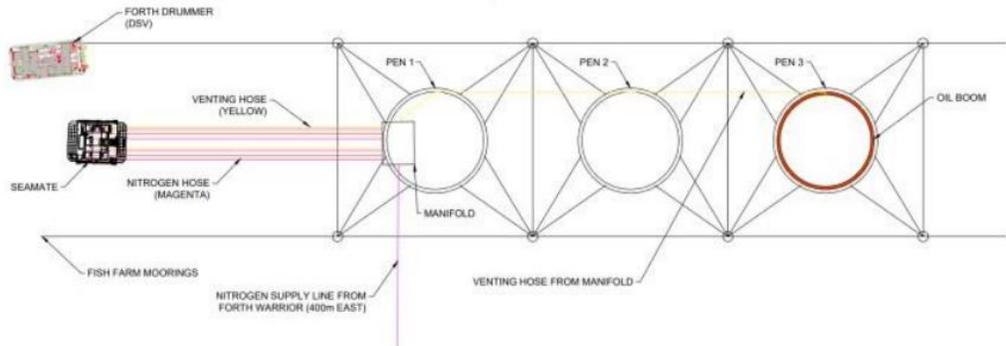


42.	<p>When all pipes have been connected and confirmed secure dive team will prepare to dive and open the valves on tanks as specified by the dive supervisor and operations supervisor.</p> <p>Gases will be dispersed slowly into the atmosphere – any oils that are recovered in the boomed off area will be recovered using the skimmer and dealt with according to instructions to follow!</p>	All crew
43.	Function test equipment, Standby and diver cross checks complete.	Dive team
44.	Diver enters the water via the splash zone ladders	Diver
45.	Diver places hat and hoses under the surface to check for leaks, Topside tenders to confirm to DS that there are / are not leaks.	DS Diver
46.	<p>When satisfied there are no leaks DS instructs diver to leave surface.</p> <p>(In the event of leaks dive is aborted and diver recovered to deck to check leaks and repair)</p>	DS Diver Tenders



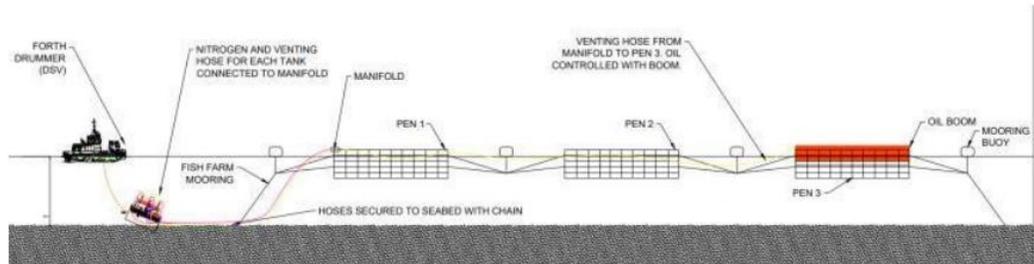
51.	Surface operator opens valve A1 on venting Manifold and records pressure reading before opening discharge valve to containment boom in pen 3.	
52.	<p>Pressure reading and sample gas to be taken.</p> <ul style="list-style-type: none"> <li>• Pressure reading =</li> <li>• Sample gas H<sub>2</sub>S =</li> </ul> <p>Marine Chemist to be on station to provide direction / confirmation</p>	<p>Diver DS Chemist</p>
53.	<p><b>Nitrogen to be very slowly, continually trickle fed, into the silos with constant monitoring of the pressure readings, to dilute the H<sub>2</sub>S until limit is achieved &lt;20 % lower explosive limit or 8600ppm H<sub>2</sub>S</b></p> <p>Marine Chemist to be on station to provide direction</p>	<p>DS Chemist</p>





## Overview of subsea setup

67.



Download the 15-page document in full [online here](#)

Document #5:

[Email 4\\_Bakkafrost Statement.pdf \(907K\)](#)

**From:** Access to Information Enquiries  
**Sent:** 15 September 2022 15:14  
**To:** Access to Information Enquiries  
**Subject:** FW: Portree Barge Gas Venting plan :update

OFFICIAL

OFFICIAL

**From:** CB Argyll Hebrides & South Highland <AHS@sepa.org.uk>  
**Sent:** 15 September 2022 14:46  
**To:** [REDACTED] <[REDACTED]@sepa.org.uk>  
**Subject:** FW: Portree Barge Gas Venting plan :update

OFFICIAL - CONFIDENTIAL

[REDACTED]

[REDACTED]

Scottish Environment Protection Agency  
Fort William Office  
Carrs Corner Industrial Estate  
Lochybridge  
Fort William  
PH33 6TL

Tele: 01397 704426  
Mob: [REDACTED]  
Fax: 01397 707504

Not in Scope

Not in Scope

OFFICIAL - CONFIDENTIAL

**From:** [REDACTED] <[REDACTED]@bakkafrost.com>  
**Sent:** 15 September 2022 14:40  
**To:** CB Argyll Hebrides & South Highland <AHS@sepa.org.uk>; [REDACTED] <[REDACTED]@crownstatescotland.com>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@bakkafrost.com>; Dundee fire serviceHQ <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@mcga.gov.uk>; HQ\_CounterPollution@mcga.gov.uk; HQ\_SOSRep@mcga.gov.uk; J [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@nlb.org.uk>; [REDACTED] <[REDACTED]@mcga.gov.uk>; navigation@nlb.org.uk; [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@bakkafrost.com>; [REDACTED] <[REDACTED]@nlb.org.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@gov.scot>; [REDACTED] <[REDACTED]@mcga.gov.uk>; To [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; zone36@hmcg.gov.uk; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@consultingmarinechemist.nl>; [REDACTED] <[REDACTED]@bakkafrost.com>; [REDACTED] <[REDACTED]@scotland.pnn.police.uk>; [REDACTED] <[REDACTED]@scotland.pnn.police.uk>; [REDACTED] <[REDACTED]@nhs.scot>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@scotland.police.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@firescotland.gov.uk>; [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@nhs.scot>; HIGHLAND, Hpt (NHS HIGHLAND) <hpt.highland@nhs.scot>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@nhs.scot>; [REDACTED] <[REDACTED]@scotland.police.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@sepa.org.uk>; [REDACTED] <[REDACTED]@highland.gov.uk>; MS.SpillResponse@gov.scot; [REDACTED] <[REDACTED]@gov.scot>; K [REDACTED] <[REDACTED]@nhs.scot>; [REDACTED] <[REDACTED]@highland.gov.uk>; [REDACTED] <[REDACTED]@nhs.scot>; [REDACTED] <[REDACTED]@mcga.gov.uk>; [REDACTED] <[REDACTED]@crownstatescotland.com>; [REDACTED] <[REDACTED]@crownstatescotland.com>; [REDACTED] <[REDACTED]@gov.scot>; [REDACTED] <[REDACTED]@mcga.gov.uk>

**Subject:** Portree Barge Gas Venting plan :update

All

Please see below statement from Bakkafrost Scotland.

A Bakkafrost Scotland spokesperson said:

"Bakkafrost Scotland can confirm the successful and safe completion of the initial recovery stage of venting gas from the submerged feeding barge at the Portree farm site, which was damaged during Storm 'Arwen' in November 2021.

"Throughout the recovery process we have been working closely with the relevant authorities including SEPA, Marine Coast Guards and Fire Brigade, alongside other experts, and we are now progressing to the next stage of the operation which will include lifting the barge.

"An exclusion zone was in place as a precaution throughout the venting operation and a 'Notice to Mariners' was issued on 5 August to ensure all affected were advised of the incident.

"The relevant authorities are being kept informed of progress and we will work with the recovery experts to ensure a safe conclusion to the operation.

"Bakkafrost Scotland is fully committed to ensuring public safety in relation to all of its operations, vessels and equipment."

[REDACTED]

[REDACTED]

[REDACTED]

Tel: +44 (0)131 718 8500

[REDACTED]

www.scottishsalmon.com  
shop.scottishsalmon.com

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Read more via:

[Toxic Salmon Barge Salvaged This Month Off Portree \(as revealed by FOI disclosure by the Maritime & Coastguard Agency\)](#)

[Potentially toxic gas leaks from sunken salmon feed barge near Scottish coast](#)

[500m exclusion zone near Portree Harbour in Skye as barge gives off rotten eggs smell](#)

[Experts tackle gas discovered in sunken feed barge](#)

[Toxic gases halt salvage of sunken Bakkafrost salmon feed barge off Scottish coast](#)

[P&J: "Exclusion zone set up around Skye barge giving off rotten eggs smell"](#)

["Experts tackle lethal gas leaking from sunken feed barge" \(Fish Farming Expert\)](#)

[BBC News: "'Rotten egg' gas leaking from fish feed barge wreck - 500m exclusion zone placed near Portree on Skye"](#)

[Toxic Gasses Spew From The Scottish Salmon Company \(Bakkafrost Scotland\) Off Portree](#)

## **APPENDIX: FOI review request from \$camon \$cotland (4 November 2022)**

From: **Don Staniford** [salmonfarmingkills@gmail.com](mailto:salmonfarmingkills@gmail.com)  
Date: Fri, Nov 4, 2022 at 6:20 PM  
Subject: Formal review request of F0194491 by \$camon \$cotland  
To: AccesstoInformation [foi@sepa.org.uk](mailto:foi@sepa.org.uk)

Please consider this a formal request for a review of F0194491 which was replied to by SEPA earlier this afternoon (4 November 2022).

Suffice to say that SEPA has not disclosed all the information requested. Please provide ALL information relating to the sinking and salvage of the feed barge off Portree.

For example, SEPA's FOI response refers to an email dated 27 November 2021 from The Scottish Salmon Company re. the sinking of the barge.

SEPA's FOI response then states:

**A multi-agency group was set up on 30 November 2021 in response to the incident, involving SEPA, the Maritime and Coastguard Agency, Marine Scotland, Highland Council, and other organisations.**

**Fuel and oil from the barge were safely removed by December 2021 and posed no further risk to the local water environment. SEPA continued to work with partners to ensure that the waste feed within the barge was recovered or disposed of in accordance with waste management legislation.**

However, the summary above does not detail ANY emails, letters or any specific information relating to the 'multi-agency group' set up on 30 November 2021.

Nor does SEPA provide any information whatsoever relating to how the "fuel and oil from the barge were safely removed by December 2021" or information relating to how it "posed no further risk to the local water environment". Where are those documents?

Finally, SEPA's FOI response states that "SEPA continued to work with partners to ensure that the waste feed within the barge was recovered or disposed of in accordance with waste management legislation". However, SEPA's FOI response fails to provide any documentation as requested in \$camon \$cotland's FOI request of 29 August 2022.

SEPA's failure to disclose all documents means that Email 1 (the first document disclosed by SEPA) has no context since it states that "as you are aware, from our ongoing correspondence" and "as previously advised".

**From:** [REDACTED]@scottishsalmon.com>  
**Sent:** 05 August 2022 14:17  
**To:** SEPA; [REDACTED]@crownstatescotland.com; [REDACTED]  
[REDACTED]; [REDACTED]@highland.gov.uk; [REDACTED]@mcga.gov.uk;  
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[REDACTED]@nlb.org.uk;  
[REDACTED]@gov.scot; [REDACTED]@highland.gov.uk; [REDACTED];  
[REDACTED]@highland.gov.uk; [REDACTED]@hmcg.gov.uk

**Subject:** Update From Barge Recovery works

All

As you are aware, from our ongoing correspondence with you, we have been carrying out lifting and fish feed removal works on the sunken feed barge at Portree

As previously advised and predicted we have readings and samples, from our contractor, that suggest that the feed

\$camon \$cotland would therefore like to be made fully aware of the full context prior to 5 August 2022 and requests that SEPA disclose ALL information relating to the sinking and salvage of the feed barge off Portree since it was notified on 27 November 2021.

Please provide a receipt for this FOI review request.

Please provide the information requested electronically.

Thanks,

Don Staniford

Director, \$camon \$cotland