SCOTTISH SALMON WATCH

CHEMICALS

Terry A'Hearn
Chief Executive
Scottish Environment Protection Agency
Strathallan House
Castle Business Park
Stirling
FK9 4TZ

17 March 2020

Dear Sir,

Neonicotinoid insecticide Imidacloprid use in Scottish salmon farming via Benchmark's BMK08 (Ectosan) & CleanTreat

Further to Scottish Salmon Watch's renewed FOI request earlier today on discharges and disposal of Imidacloprid, BMK08, Ectosan and CleanTreat and our appeal filed last month with the Scottish Information Commissioner, could you please re-consider SEPA's refusal to disclose basic information on the use of this highly toxic Neonicotinoid insecticide by the salmon farming industry in Scotland?

The news that Ectosan - first publicised by Benchmark in 2017 and re-branded as BMK08 in 2019 although it first surfaced as D10 Aquatic Blast in 2014 - is the toxic chemical Imidacloprid (banned in the UK in 2018 or use in terrestrial agriculture) is shocking.

Read more via: Revealed: Toxic Neonicotinoid Insecticide Used to 'CleanTreat' Lousy Scottish Salmon

Why has SEPA met privately with Benchmark at least five times in the last 18 months and discussed secret trials with industry yet has failed to notify the public or issue a public consultation?

In November 2019, SEPA refused another FOI request on CleanTreat but conceded:

> We confirm that SEPA has attended meetings with Benchmark on 9 October 2018, 11 April 2019, 30 May 2019, 20 September 2019 and 30 September 2019

Documents disclosed to Scottish Salmon Watch by the Scottish Government via FOI-19-02443 in December 2019 included:

#1: Letter from the SSPO to SEPA copied to Scottish Ministers

Scottish Salmon
PRODUCERS ORGANISATION

30 May 2019

Mr T A'Hearn
SEPA
Strathallan House
Castle Business Park
Stirling
FK9 4TZ

By Email

Dear Terry,

[Redacted]

Scottish Salmon
PRODUCERS ORGANISATION

In this context, you undertook to look again at the potential for trials of novel lice treatment methods and the barriers in the way of Scottish trials for the CleanTreat innovation which the developers believe has no environmental impact at sea. The novel approach has been trialled in Norway successfully and now requires field trials in Scotland. It has the potential to reduce other medicinal treatment methods for lice significantly and reduce environmental impact from farms. We understand that there have been discussions with the company involved though no progress has been made to take forward trials in Scotland. If you required further information on the detail of the issue, we can provide it, though your team have worked with [Redacted] at Marine Scotland and the company involved directly already.

[Redacted]

I am copying this letter to Roseanna Cunningham, Cabinet Secretary for Cabinet Secretary for Environment, Climate Change and Land Reform and Fergus Ewing, Cabinet Secretary for the Rural Economy.

I look forward to your early response.

Yours sincerely,

[Redacted]

Julie Hesketh-Laird
Chief Executive

c.c. Roseanna.Cunningham.msp@parliament.scot
Fergus.Ewing.msp@parliament.scot

Last month, Scottish Salmon Watch filed an appeal with the Scottish Information Commissioner following SEPA's refusal to disclose information on CleanTreat (including BMK08/Ectosan).

Appeal by Scottish Salmon Watch re. SEPA's F0191198

Scottish Salmon Watch's appeal dated 21 February 2020 included:

> Scottish Salmon Watch argues that SEPA's review refusal dated 13 December 2019 wrongly concluded that commercial confidentiality took precedence over public disclosure:
>
> > B. - *Commercial interests – Regulation 10(5)(e) of the EIRs – Question 6*
> >
> > Regulation 10(5)(e) states that a Scottish public authority may refuse to make environmental information available to the extent that its disclosure would, or would be likely to, prejudice substantially the confidentiality of commercial or industrial information where such confidentiality is provided for by law to protect a legitimate economic interest.
>
> Scottish Salmon Watch believes that there is a clear public interest in disclosure as well as a growing public interest in this issue. For example, The Sunday Times reported on 29 December 2019: "Official fears revealed over toxic threat of salmon trade".
>
> Scottish Salmon Watch considers such a refusal by SEPA is unreasonable and does not see an overriding public interest in protecting commercial or industrial information. The public interest is surely served best by disclosing specific details on CleanTreat (including the active ingredients in BMK08 & Ectosan - the subject of another FOI to SEPA and the Scottish Government which have been refused). Secret trials took place two decades ago in Scotland in relation to Calicide (Teflubenzuron) and that did not end well.
>
> The public case for disclosure is much stronger than the case for protecting commercial confidentiality. It is obvious that Benchmark (as the manufacturer of the CleanTreat system) is a company which wants to maximise investment, profit and economic returns by delaying disclosure.
>
> However, SEPA's duty is not to the shareholders of Benchmark but to the Scottish environment and the Scottish public whose livelihoods may be impacted by the Norwegian and other foreign investors controlling Benchmark.

Scottish Salmon Watch asked for an internal review of another FOI refusal by SEPA in a letter dated 21 February 2020:

21 February 2020

Review re. F0191311 re. BMK08 & Ectosan

Please consider this a formal request for a review of SEPA's refusal dated 7 January 2020 (via F0191311) to Scottish Salmon Watch's FOI request dated 5 December 2019 (received by SEPA on 10 December 2019). For easy reference please find enclosed below the Appendix the FOI request and refusal.

Scottish Salmon Watch strongly objects to SEPA's refusal which cited commercial confidentiality; namely:

Response
SEPA holds a small amount of correspondence which falls into the scope of the request.

This information is excepted under Regulation 10(5)(e) of the EIRs. The text of which is reproduced below;

(5) A Scottish public authority may refuse to make environmental information available to the extent that its disclosure would, or would be likely to, prejudice substantially:-

(e) the confidentiality of commercial or industrial information where such confidentiality is provided for by law to protect a legitimate economic interest;

Feedback had been sought from the third party who confirmed that disclosure of information would cause substantial prejudice to their commercial interests. We recognise that Regulation 10(2)(b) requires SEPA to apply a presumption favour of disclosure. In the specific circumstances of this request, SEPA considers that the release of the correspondence and documentation would cause a substantial prejudice to the commercial undertaking and economic interest. SEPA therefore contends that the public interest in the release of the information is outweighed by the public interest in maintaining the exception under the terms of Regulation 10(5)(e) of the EIRs

Scottish Salmon Watch's review letter to SEPA concluded:

The public interest is surely better served by disclosure rather than the dubious excuse of protecting commercial interests.

Surely SEPA should be placing environmental protection ahead of the protection of economic interests?

It seems that SEPA, by aiding and abetting privacy, are effectively promoting rogue/insider trading. Benchmark, by failing to publicly disclose basic information on BMK08 & Ectosan, are guilty of potentially misleading investors and the public alike.

Surely the public has a right to know what BMK08 actually is; how it is going to be used and how it is going to be discharged in Scotland? Only then, with full disclosure, can investors and the public make a wholly informed decision as to the acceptability of BMK08 & Ectosan. SEPA has no jurisdiction blocking public scrutiny.

SEPA should also be aware that later today Scottish Salmon Watch will be filing an appeal in relation to F0191198 on CleanTreat with the Scottish Information Commissioner. Scottish Salmon Watch looks forward to taking a similar case in relation to F0191311.

Fish Farming Expert [reported (28 February 2020)] that BMK08 was "in the hands of regulators" but the public (including investors) are still in the dark.

fishfarmingexpert

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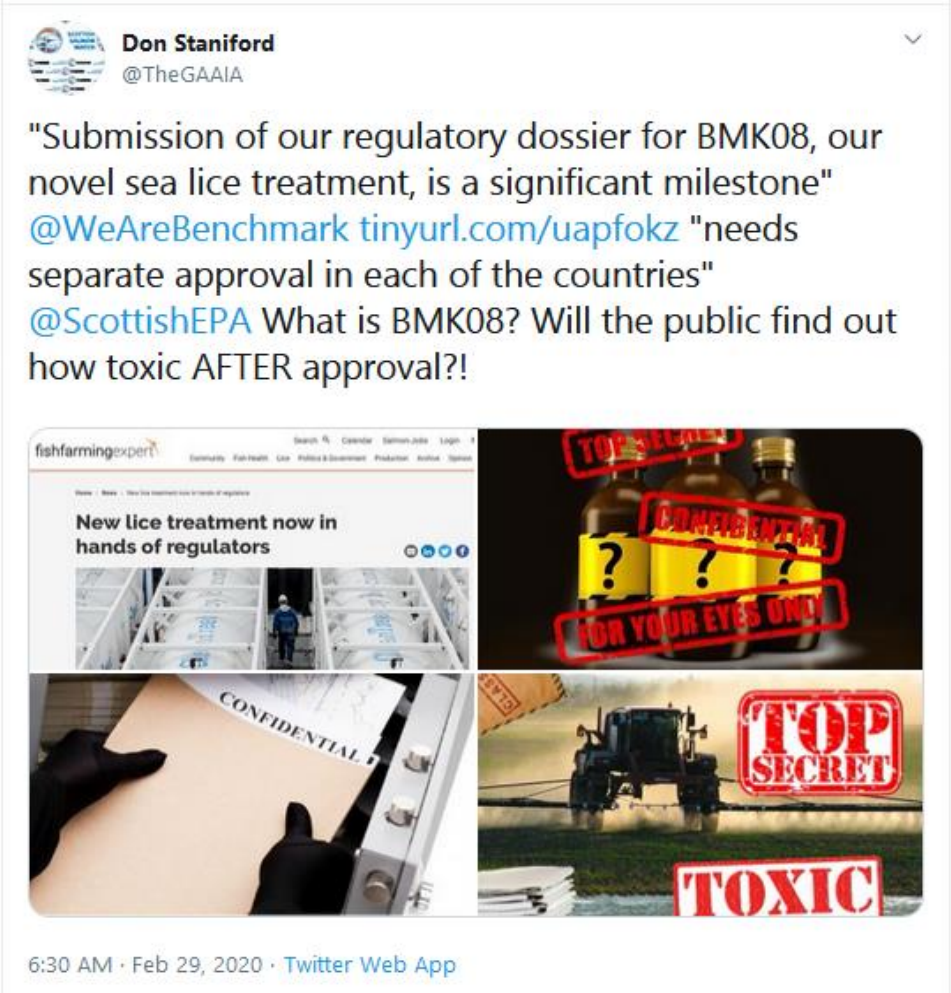
Home › News › New lice treatment now in hands of regulators

New lice treatment now in hands of regulators

BMK08 is designed to be used in conjunction with CleanTreat, which removes chemical and lice residues from treatment water. Photo: Benchmark.



Don Staniford
@TheGAAIA

"Submission of our regulatory dossier for BMK08, our novel sea lice treatment, is a significant milestone" @WeAreBenchmark tinyurl.com/uapfokz "needs separate approval in each of the countries" @ScottishEPA What is BMK08? Will the public find out how toxic AFTER approval?!

6:30 AM · Feb 29, 2020 · Twitter Web App

What scientific research has SEPA conducted on the toxicity and environmental impact of Imidacloprid?

Imidacloprid is classified as an 'Environmental Hazard' with the warning that it is "very toxic to aquatic life with long lasting effects" and "hazardous to the aquatic environment, long-term hazard".

PubChem Imidacloprid (Compound)

12 Safety and Hazards

12.1 Hazards Identification

12.1.1 GHS Classification

Showing 1 of 4 View More

Pictogram(s)	 Irritant Environmental Hazard
Signal	Warning
GHS Hazard Statements	H302: Harmful if swallowed [Warning Acute toxicity, oral] H400: Very toxic to aquatic life [Warning Hazardous to the aquatic environment, acute hazard] H410: Very toxic to aquatic life with long lasting effects [Warning Hazardous to the aquatic environment, long-term hazard]

The Scottish Wildlife Trusts called for a ban on pesticides containing Imidacloprid back in 2012.

In April 2018, the European Commission (following an assessment by the European Food Safety Authority) banned Imidacloprid for use on outdoor crops due to risks to bees. "Unless the scientific evidence changes, the government will maintain these increased restrictions post-Brexit," stated DEFRA in a press release in April 2018.

The weight of scientific evidence on the toxicity of Imidacloprid especially in the aquatic environment is increasingly clear and alarming.

In December 2017, the Rivers Trust reported that "Aquatic insects are just as vulnerable to neonicotinoid insecticides as bees and flying insects..... 88% of sites in Britain were contaminated with neonicotinoids, eight rivers in England exceeded recommended chronic pollution limits, and two were acutely polluted."

Imidacloprid, according to the Material Safety Data Sheet of one of the insecticide formulations on the market, is "highly toxic to aquatic invertebrates" and the chemical company warns users "do not apply directly to water" and "do not contaminate water when disposing of equipment washwaters".

MATERIAL SAFETY DATA SHEET
Quali-Pro® Imidacloprid 2F Turf & Ornamental

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL HAZARDS: This product is highly toxic to aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are visiting the treatment area.

This chemical demonstrates the properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

Another Imidacloprid formulation warns:

Kohinor 350 SC

Synonyms	Imidacloprid 350 SC

Signal word	Warning
Hazard Statements	H410 - Very toxic to aquatic life with long lasting effects
Precautionary Statements	P102 - Keep out of reach of children P501 - Dispose of contents/ container to an approved waste disposal plant

A scientific paper - "Acute Toxicity of Imidacloprid on the Developmental Stages of Common Carp *Cyprinus carpio*" - published in October 2019 concluded: "The results suggest that the minimum concentration of 10 µg/L imidacloprid in the aquatic environment may have adverse effects on the embryonic and larval stages of common carp".

A scientific paper - "Effects of insecticides, fipronil and imidacloprid, on the growth, survival, and behavior of brown shrimp *Farfantepenaeus aztecus*" - published in PLOS One in October 2019 reported: "Under imidacloprid, survivorship decreased from 100% in the control to 33.33% in the 320.0 µg/L treatment..... We conclude that, at the corresponding EPA benchmark concentrations, fipronil had more lethal effects than imidacloprid, and imidacloprid had more sub-lethal effects than fipronil. Both effects are of serious concern, and we suggest monitoring is necessary in estuaries."

Marine Environment Research reported in October 2019:

Marine Environmental Research
Volume 151, October 2019, 104765

Imidacloprid and formulated product impacts the fatty acids and enzymatic activities in tissues of Sydney rock oysters, *Saccostrea glomerata*

Endurance E. Ewere [a, b], Amanda Reichelt-Brushett [a], Kirsten Benkendorff [a]

Highlights

- Imidacloprid (IMI) accumulates in the tissues of Sydney rock oysters (SRO) exposed to formulated or pure IMI.

Abstract

The use of imidacloprid (IMI) and its formulated products in agriculture is a risk to aquatic organisms due to deposition into waterways from runoff and aerial spraying. However, there is limited information on the potential effects of this pesticide on commercially important shellfish, such as oysters. We investigated the impacts of IMI and Spectrum 200SC (IMI formulation) on the activity of the enzymes Glutathione-S-transferase (GST), Catalase (CAT) and Acetylcholinesterase (AChE), in different oyster tissues including the gill, adductor muscle and digestive gland. We also investigated the condition index and fatty acid composition of the flesh of oysters after 2 weeks exposure. The concentrations of IMI in the different tissues was assessed using Liquid Chromatography-Mass Spectrometry (LC-MS) after QuEChERS extraction. Higher concentrations of IMI residues were detected in the adductor muscle of the oysters, followed by the gills and with the lowest amounts recovered from the digestive gland across all the concentrations tested. IMI and Spectrum 200SC significantly affected the gill AChE activity at 2 mg/L, but digestive gland CAT, and gill and digestive gland GST were impacted at environmentally relevant concentrations (0.01 and 0.05 mg/L). In the whole oyster, 2 weeks exposure to IMI (≥0.01 mg/L) resulted in a proportional increase in saturated fatty acids (SFA), altered the polyunsaturated fatty acid (PUFA) to SFA ratio and altered the omega 3 fatty acids (*n*-3) to omega 6 fatty acids (*n*-6) ratio, but there were no effects on the condition index of the oyster. Although the oysters responded differently to the formulated product, there was no consistent difference in the sublethal effects of analytical IMI and Spectrum 200SC. This study showed that exposure to IMI and Spectrum 200SC can significantly affect the biochemical processes and metabolites in oysters, with implications for food quality and safety.

The use of Imidacloprid in aquatic environments and in aquaculture is environmentally hazardous. North America Aquaculture reported in April 2018:

Aquaculture North America

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Pesticide banned in oyster farming

The Washington Department of Ecology has banned a pesticide that was approved two years ago for oyster growers to kill burrowing shrimp.

The department said it made the decision after a lengthy evaluation of the environmental impacts of the pesticide, imidacloprid. The pesticide belongs to a class of chemicals called the neonicotinoids, which act on the central nervous system of insects.

The state announced Monday that it is too harmful to the ecosystem and decided to deny a request for its approval.

"The science around imidacloprid is rapidly evolving and we can't ignore it. New findings make it clear that this pesticide is simply too risky and harmful to be used in Washington's waters and estuaries," state Ecology Director Maia Bellon said in a press release.

The Associated Press reported in December 2019:

Oyster growers abandon push to use imidacloprid, a controversial insecticide

| Associated Press
Updated 2:46 AM EST Dec 13, 2019

LONG BEACH, Wash. (AP) — A southwest Washington oyster growers association has abandoned a drive to use a controversial insecticide that combats burrowing shrimp, a creature that can make tidelands unfit for shellfish farming.

The Seattle Times reports that in a settlement reached last week, the Willapa Grays Harbor Growers Association agreed to accept a 2018 state Ecology Department denial of the proposed use of imidacloprid and drop an appeal to the state Pollution Control Hearings Board.

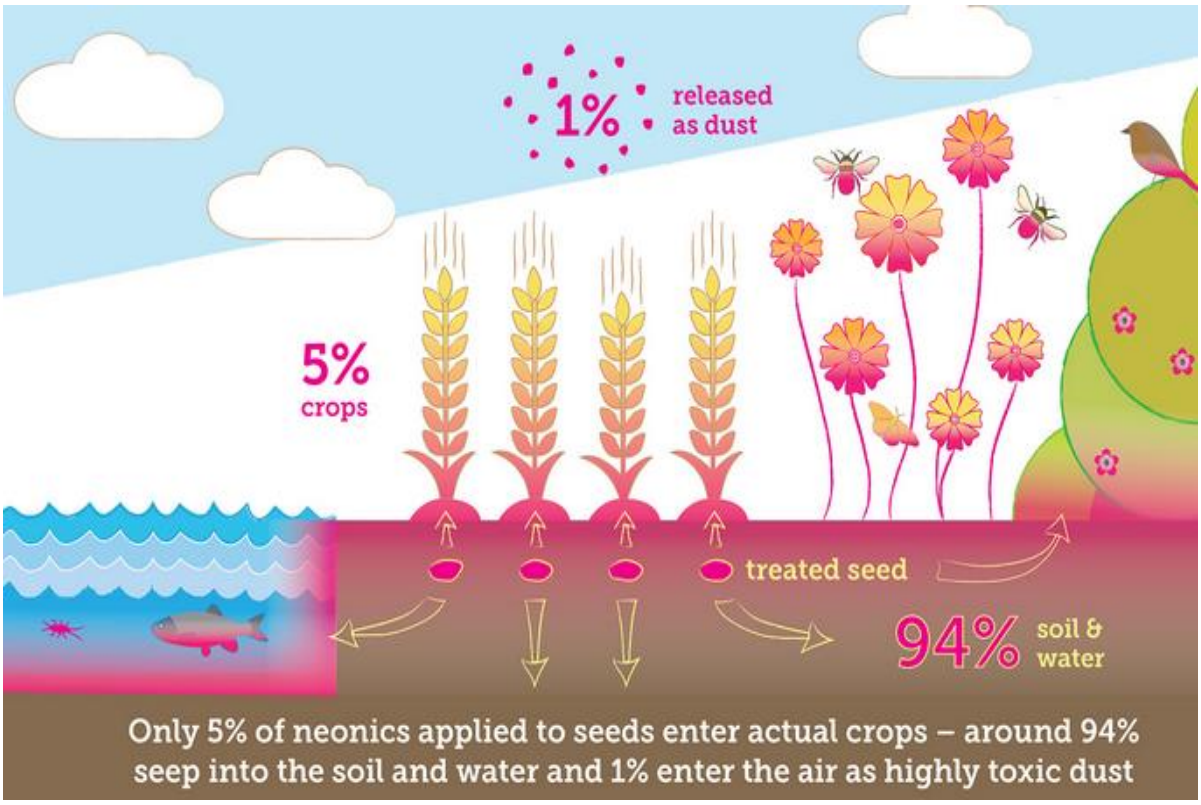
The growers wanted to use the insecticide to spray up to 500 annually of the more than 12,000 acres of tidelands used for shellfish cultivation in Willapa Bay and Grays Harbor. Without the spray, the growers say they lose productive tidelands to the shrimp, which churn up sediment and can cause oysters, as well as clams, to suffocate in the muck.

Read more on the toxicity of Imidacloprid via:

"Contamination of the Aquatic Environment with Neonicotinoids and its Implication for Ecosystems" (Frontiers in Environmental Science, November 2016)

"Effects of neonicotinoids and fipronil on non-target invertebrates" (Environ. Sci. Pollu. Res. Int., September 2015)

The Soil Association (which certify salmon farms in Scotland as 'organic') are vehemently opposed to the use of Imidacloprid and other neonicotinoids.



So why is SEPA protecting commercial confidentiality and industrial secrets rather than protecting the environment?

SEPA's case history with Emamectin benzoate (Slice) hardly inspires confidence that it has everything under control regarding Imidacloprid.

For example, why is no data publicly available for the use of Imidacloprid (and other chemicals such as Azamethiphos and Deltamethrin) at Benchmark's FAI Aquaculture laboratory at Ardtoe where CleanTreat has been developed over the last decade?

Scottish Salmon Watch cannot find any data posted via SEPA's Scottish Pollutant Release Inventory or the Scotland's Aquaculture web-site.

Could you please publish details of the use of Imidacloprid by the salmon farming industry in Scotland (I don't see Imidacloprid listed via SPRI at all)?

SEPA seem to have forgotten the sobering lesson of Teflubenzuron. As 'Silent Spring of the Sea' (a chapter in the 2004 book 'A Stain Upon the Sea') detailed:

Teflubenzuron (Calicide)—A hazardous, wasteful and persistent marine pollutant

Teflubenzuron is a highly hazardous marine pollutant, lethal to shellfish in tiny doses, extremely persistent in the sediment under salmon cages and in the flesh of farmed salmon, and a suspected carcinogen. Hardly a suitable candidate for use on sea cage salmon farms, yet that is what salmon farmers reached for when they needed to replace dichlorvos and azamethiphos.

Teflubenzuron is a benzoylphenyl urea insecticide, initially introduced in 1984 to protect fruit, vegetables and cotton. By the 1990s, though, chemical resistance was already being reported in land-based pests,[173] so Nutreco (owners of Marine Harvest), in conjunction with the US chemical giant American Cynamid, developed teflubenzuron (trade name Calicide) for aquaculture. Sea cage fish farming is in danger of becoming a dumping ground for chemicals which are past their sell by date on land.

Speaking to the *West Highland Free Press* in August 2000, scallop farmer David Oakes said: "Why was no work done on the effects of the chemical on scallops? The chemical affects the shells of the sea lice and it is likely it will affect shellfish as well, especially in the larval stages. There is evidence to show that the chemical is still to be found in the seabed six months after it was used."[190] Oakes gained this inside knowledge in 1999 when he was approached by a scientist working at a university in Scotland. The scientist had damning evidence concerning teflubenzuron, but wanted to remain anonymous. "Deep Trout" accused the Scottish government of failing to protect the marine environment and the shellfish farming industry.

Deep Trout's "Calicide Critique," widely circulated on the internet and submitted officially to the Scottish government and Nutreco, stated: "The prima facie evidence is that teflubenzuron will be highly toxic to shellfish. SEPA are therefore grossly ignorant of the range of species that will be directly affected by teflubenzuron. The lethal effects are: by prevention of growth in the Arthropoda; prevention of movement in the Annelida and death by starvation and internal damage in the Mollusca. There have been no studies of long term ecological effects of the use of teflubenzuron. They could be immense but have not been considered in its proposed use as Calicide."[191]

Deep Trout made a big splash in the Sunday papers. The *Sunday Herald* reported: "David Oakes, who requested the 'Deep Trout' report, has been denied access to the scientific evidence which led SEPA to accept that Calicide

was safe. He was told that Trouw's (a subsidiary of Nutreco) commercial interests overrode the need for openness."[192] SEPA's pollution control specialist Andy Rosie told the *Sunday Herald* that "the claims made by Deep Trout are taken seriously." He admitted that SEPA's case was weakened by the fact that studies commissioned by Nutreco were still not available for peer-review. "At the very least the papers we have cited should be available. We will be negotiating with Nutreco to say that these papers should be in the public domain."

SEPA finally persuaded Nutreco to make some of the documents available for public inspection in February 2001, but they came in a straitjacket. In a letter to David Oakes, SEPA explained: "Nutreco retains copyright and intellectual property rights to most of these documents so SEPA is not able to provide you with copies. If you do wish to obtain a copy of any particular document, once you have viewed these, I would recommend you contact Nutreco directly."[193]

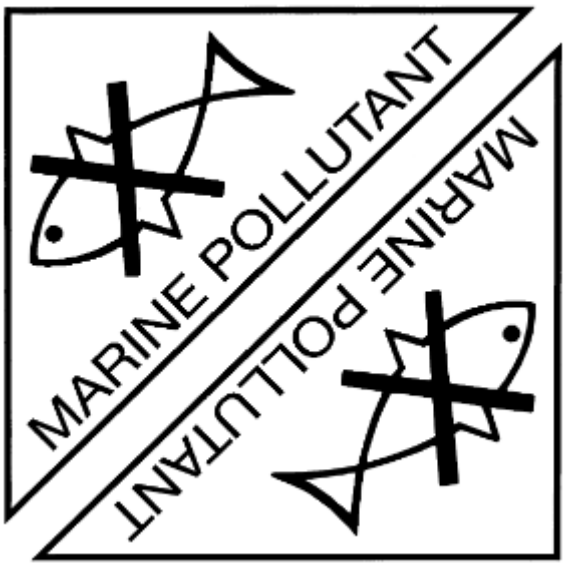
Subsequently, I visited SEPA offices to view a mountain of documents marked "Private and Confidential." I was given only a short time to peruse the material and was not allowed to make photocopies, but it soon became obvious why Nutreco might want to keep a lid firmly shut on these ecotoxicological studies. Different reports showed that teflubenzuron can persist in sediment for nearly two years at distances up to one kilometre away from the salmon cages; it can have "significant lethal effect on lobster juveniles fed salmon pellets containing as little as 0.5g feed additive per kg pellets"; 90 to 95 percent of the compound was excreted into the environment via feces"; "the highest concentrations were found 408 days after treatment"; teflubenzuron was still present 654 days after treatment; and it could bioaccumulate up through the food chain via filter-feeders such as scallops and mussels.[194]

The day after I viewed these documents, Nutreco's PR adviser Colin Ley rang me up. "How was your visit to SEPA yesterday?" he asked. "If there are any specific queries, please let us know—it would be much better to talk things through with us first before you make any public comments." Needless to say Nutreco read about the reports in the weekend's Sunday papers. "A controversial pesticide approved for use on 61 salmon farms in Scotland is classed as a highly toxic marine pollutant and can still be found in sediment on the sea bed nearly two years after use, according to documents revealed this week," reported the *Sunday Herald*.[195]

SEPA's role in authorizing teflubenzuron is typical of the manner in which governments in Norway, Canada, Chile and Ireland have allowed private profit to outweigh the public interest. SEPA's current policy on tefluben-

zuron was published in July 1999 and is based almost exclusively on Nutreco's unpublished private and confidential reports. The impact of teflubenzuron on crustacea such as lobsters is of primary concern, and SEPA's policy admits that teflubenzuron "is potentially highly toxic to any species which undergo moulting in their life cycle." As SEPA points out in the "environmental risk assessment": "This will therefore include some commercially important marine animals such as lobster, crab, shrimp and some zooplankton species."[196] In spite of this, SEPA began handing out licences to use teflubenzuron in 2000 and by March 2004 had issued 212.[197]

Meanwhile, the case against teflubenzuron is building all the time.[198] Little wonder then that salmon farmers want to bury the evidence. When a secret trial on its environmental impact was conducted in 1996 in the waters around the Isle of Skye, the first the locals knew about it was when their shellfish started dying. "We were unaware of the use of teflubenzuron until massive crab, prawn, squat lobster, and sea urchin deaths were observed in Lochbay," claims Aileen Robertson, who runs a diving centre in the area. "Scallop divers had to move to another sea loch, and the creel fisherman had to stop fishing. Even staff at the fish farm were alarmed to hear what was going on and gave us labels for the medicated food they had been given to use. We got the safety data, worked it out, and called the Scottish Environment Protection Agency. They had given consent for its sea trial with no public notification or advertisement. How do they get away with it?!"(Aileen Robertson, pers. comm.)



The Guardian [reported in 2013]():

Fish company investigated after salmon farm pollutes Scottish loch

Marine Harvest, one of the largest fish-farming companies, is under investigation after polluting loch with pesticide

Severin Carrell, *Scotland correspondent*

@severincarrell

Fri 10 May 2013 12.08 BST

34

▲ Caged Scottish Salmon. Photograph: Alamy

Marine Harvest, one of the world's largest fish-farming companies, is under investigation after its salmon farms polluted a Scottish loch with toxic pesticide residues hundreds of times above environmental limits.

Sampling tests around salmon cages on Loch Shell in the Outer Hebrides by the Scottish Environment Protection Agency (Sepa) found that levels of Teflubenzuron, used to kill sea lice parasites which affect hundreds of thousands of caged fish each year, were up to 450 times higher than recommended levels.

The agency could now cut back Marine Harvest's operations on Loch Shell where the firm has three fish farms, including one which was already under Sepa investigation, after it launched a review of its operations there.

The Sunday Herald [reported in 2015]():

Salmon farm drug that kills wildlife to be withdrawn from market

from **Sunday Herald, 10 May 2015**

A toxic drug fed to caged salmon in Scotland is due to be withdrawn from the market after scientists found that that it can leak into lochs and kill crabs, shrimps and lobsters.

Food pellets laced with a chemical called teflubenzuron have long been given to farmed salmon around the coast in order to control sea lice infestations. The lice eat salmon, killing them or stunting their growth, and can cause multi-million-pound losses for fish farmers.

But salmon excrete the chemical, which then pollutes the seabed around fish farms at levels than can be lethal to marine wildlife. Shellfish are poisoned and prevented from making new shells to protect them as they grow.

Now the **Scottish Environment Protection Agency (Sepa)** says it has persuaded the company that markets the drug to withdraw it. Campaigners, however, warn that replacement drugs could do just as much harm, and are demanding a much broader legal ban.

The Sunday Herald [reported in 2017]():

THE 45 CONTAMINATED LOCHS

Inner Sound, Highland	Kilbrannan Sound, Argyll and Bute	Lax Firth, Shetland
Loch a Chairn Bhain, Highland	Loch Craignish, Argyll and Bute	Off Lunnaness, Shetland
Loch Alsh, Highland	Loch Creran, Argyll and Bute	Olnafirth, Shetland
Loch Bracadale, Highland	Loch Fyne, Argyll and Bute	Ronas Voe, Shetland
Loch Broom, Highland	Loch Spelve, Argyll and Bute	Swarbacks Minn, Shetland
Loch Duich, Highland	Loch Tuath, Argyll and Bute	The Deeps, Shetland
Loch Ewe, Highland	Shuna Sound, Argyll and Bute	East Loch Tarbert, Eilean Siar
Loch Kishorn, Highland	Sound of Gigha, Argyll and Bute	Loch Boisdale, Eilean Siar
Loch Laxford, Highland	Sound of Jura, Argyll and Bute	Loch Erisort, Eilean Siar
Loch Linnhe, Highland	Sound of Mull, Argyll and Bute	Loch Roag, Eilean Siar
Loch Nevis, Highland	Cat Firth, Shetland	Loch Seaforth, Eilean Siar
Loch Sunart, Highland	Clift Sound, Shetland	Loch Shell, Eilean Siar
Loch Torridon, Highland	Clousta Voe, Shetland	Loch Skipport, Eilean Siar
Sound of Raasay. Highland	Colla Firth, Shetland	Lamlash Bay, North Ayrshire
Firth of Lorn, Argyll and Bute	Dury Voe, Shetland	*Source: Scottish Environment Protection Agency*

So will SEPA be presiding over a similar case study in secrecy and toxicity with Imidacloprid?

Will SEPA be publishing a scientific dossier on environmental impacts of Imidacloprid (as SEPA has done so via Emamectin benzoate)?

Will SEPA be conducting scientific studies and monitoring of impacts of Imidacloprid (as it has done so via Emamectin benzoate)?

Will Bayer/Monsanto be making available to the public their 'Confidential' work on Imidacloprid (or will the chemical company behind Imidacloprid be taking the Merck behind the scenes route)?

Indeed, does SEPA currently even have the power or jurisdiction to regulate the use of Imidacloprid via well boats?

A redacted email dated May 2019 obtained from the Scottish Government in July 2019 via FOI-19-01398 referred to Benchmark's "need to satisfy SEPA's concerns as part of any marine licence application prior to the handover of the licensing role to SEPA":

From: [Redacted] MARLAB)
Sent: 29 May 2019 11:42
To: [Redacted]
Subject: RE: Benchmark CleanTreat

Hi [redacted],

Back in the office now!

We met with Benchmark a few weeks ago. SEPA and the VMD were also in attendance.

The position was that they would need to satisfy sepa's concerns as part of any marine licence application prior to the handover of the licensing role to SEPA. After which it seems likely to be SEPA's process entirely. They do seem to be in discussion with SEPA still. [Redacted]

[Redacted] As part of the meeting, Benchmark advised they would draft a 'white paper' to help explain what their plans were [Redacted] This has not yet been received and we will be writing to benchmark, finalising the meeting minutes and reminding them of their offer of the white paper, probably today.

Hope this helps,

[redacted]
[Redacted]

The move of licensing wellboat discharges from Marine Scotland to SEPA "may well be seized on" concedes a redacted email dated December 2018:

From: [Redacted]
Sent: 07 December 2018 11:28
To: [Redacted]
Cc: [Redacted]

Subject: RE: For information only - Outcome of meetings on 28 November - mortality disposal + Benchmark cleantreat
Attachments: Cab Sec brief - benchmark - Dec 2018.docx

[redacted] – thanks. Happy in large part, but I've suggested downplaying the references to wellboat discharge licensing moving to SEPA as it shouldn't affect consideration of this proposal under the current system (and any suggestion that it might may well be seized on).

Regards, [redacted]

The move of licensing wellboat discharges to SEPA (recommended back in 2016 by the Aquaculture Industry Leadership Group but still not completed as far as Scottish Salmon Watch understands) has "raised some challenges but it still under active consideration and we are hopeful to a conclusion" [states another redacted email dated December 2018](#).

From: [Redacted]
Sent: 06 December 2018 09:00
To: [Redacted]
Cc: [Redacted]
Subject: RE: For information only - Outcome of meetings on 28 November - mortality disposal + Benchmark cleantreat

[redacted]

Many thanks for sharing.

I agree it would be worth referencing both the report and the focus on medicine use (see below) but also that the REC report said 'The Committee recognises the need to ensure that the licensing regime for medicines is fit for purpose and sufficiently robust to prevent environmental damage or impact on other species. It notes and welcomes the Fish Health Framework workstream which is dedicated to the licensing of fish treatment.'

RECOMMENDATION 32 The publication of this research leaves the Committee in no doubt that effective regulation of medicine used by the farmed salmon industry is a requirement. In this regard, it welcomes the action by SEPA to the UK Technical Advisory Group (UK TAG) to make recommendations to the Scottish Government on new environmental standards for Emamectin Benzoate. It also calls on SEPA and the Scottish Government to similarly consider the environmental impact of other medicines by the industry. (see paragraph 293)

For now the key issue is around the text at your para 8 and I have offered a few suggested changes below.

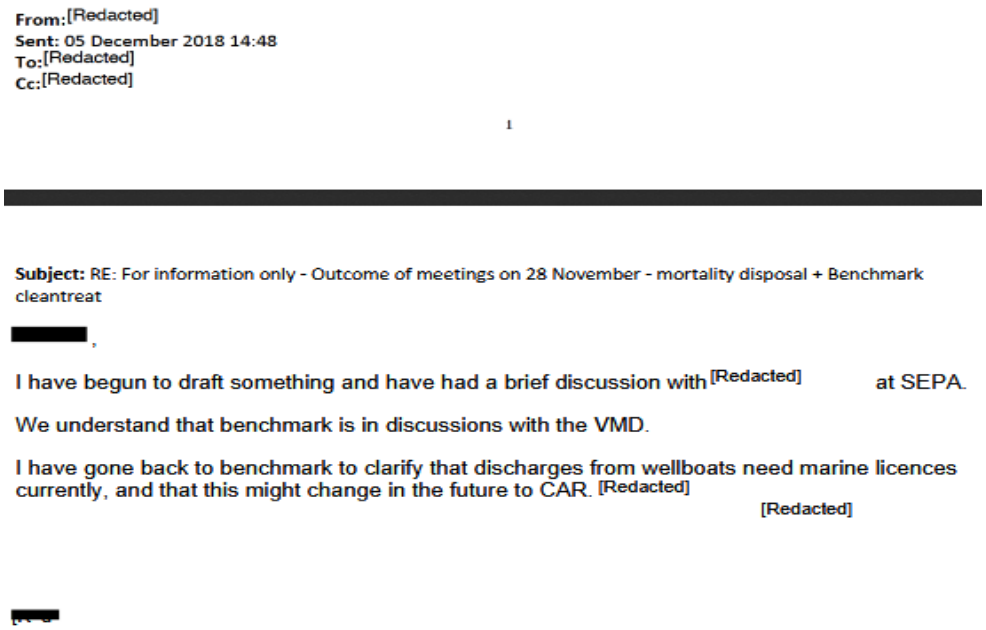
'Legislative Framework – BAHL raised with the Cabinet Secretary that they were unclear of applicable legislation following the call. However the position for now is very clear. MS has been the licensing authority for wellboat discharges for the last 8 years. However, and as the Cabinet Secretary will be aware from the discussions at the Aquaculture Industry Leadership Group, Marine Scotland have been actively looking at moving forward on the recommendation from the 2016 'Independent review of Aquaculture Consents', which looked at the licensing role for wellboat discharge moving to SEPA. That recommendation has raised some challenges but is still under active consideration and we are hopeful close to a conclusion. The legislative framework has subsequently been clarified to BAHL by MS and an offer has been made to further discuss if they are not clear.'

I am not sure of the wider benefits of a presentation to the sub group and what expectations that might bring with it, but that is just an observation.

I suggest you address to both Cab Secs.

Regards

A redacted email dated December 2018 reports that Benchmark is aware that "discharges from wellboats need marine licences" (currently issued by Marine Scotland but well overdue to be transferred to SEPA).



From: [Redacted]
Sent: 05 December 2018 14:48
To: [Redacted]
Cc: [Redacted]

1

Subject: RE: For information only - Outcome of meetings on 28 November - mortality disposal + Benchmark cleantreat

[redacted],

I have begun to draft something and have had a brief discussion with [Redacted] at SEPA.

We understand that benchmark is in discussions with the VMD.

I have gone back to benchmark to clarify that discharges from wellboats need marine licences currently, and that this might change in the future to CAR. [Redacted]

[Redacted]

[redacted]

Documents published by Scottish Salmon Watch in December 2019 via "CleanTreat: FOI Disclosures by the Scottish Government to Scottish Salmon Watch".

Scottish Salmon Watch reported in October 2018:

Legislative & Licence Background:

A letter dated 17 April 2018 from the Director of Marine Scotland to the Scottish Parliament's Environment, Climate Change & Land Reform Committee included:

'Wellboat licences'

Wellboat licences are issued by MS-LOT to fish farm operators to permit the discharge of chemotherapeutants following treatment for sealice in a vessel (a wellboat). Such licences are only issued where a valid Controlled Activity Regulations (CAR) licence has been issued to the relevant fish farm site for discharge of chemotherapeutants following in-cage treatments by SEPA following its consideration of the environmental effects. The volumes permitted for discharge are the same as the CAR volumes and Marine and CAR licences are conditioned to prohibit the release of chemotherapeutant under one regime at the same time as the other, thereby avoiding cumulative effects.

Wellboat licences are issued for three (3) years.

MCA and NLB have confirmed they will not provide routine comment on the applications for 'wellboat licences' as there is not a navigational element.

SEPA has provided standing advice that it has no objection to 'wellboat applications' provided the type and amount of chemical used and discharged will not exceed that specified in the respective CAR licence. An agreed condition is added to licences which prevents the simultaneous discharge from bath treatments.

SNH is consulted where such activity takes place in a European site, and advise of the likely significant effects. SNH directs MS-LOT to advice given by SNH during the CAR licensing process. MS-LOT would look to adopt the 'appropriate assessment' carried out by the SEPA as the competent authority under The Conservation (Natural Habitats, &c.) Regulations 1994. Again, a similar process occurs where SNH advise that an activity may affect the feature of a Marine Protected Area (MPA).

In May 2018 the Scottish Aquaculture Industry Leadership Group reported:

Scottish Aquaculture Industry Leadership Group

Meeting 22nd May 2018 Agenda and Actions Note

CW summarised findings of research commissioned by HIE on behalf of the AILG on future skills requirements for the industry including supply chain. Next steps will include drafting of a skills action plan. AILG members repeated previous requests for Marine Scotland to provide site specific advice on sea lice. MP reported on progress across the 8 'quick wins' arising from the consenting review (http://www.gov.scot/Resource/0052/00525256.pdf). Aside from the transfer of wellboat discharge licensing from Marine Scotland to SEPA, these had all been completed or were well on track for completion (a workshop would be held in June to finalise the work on the EIA template and the Working Arrangements Document, with a view to sign off by July 2018.) On the transfer of wellboat licensing from Marine Scotland to SEPA, there continued to be legal questions requiring clarification but it was hoped a positive resolution of the legal issues could be reached within a few weeks.	

The Scottish Aquaculture Industry Leadership Group noted in February 2018:

> MP updated on progress with the ICR recommendations. Detailed at http://www.gov.scot/Resource/0052/00525256.pdf All projects were progressing well or had been completed. It was noted that on the integration of wellboat marine licences into the CAR regime the process was necessarily complex and would take time to work through. . would shortly be updated on the current state of play.

In January 2018, the Farmed Fish Health Framework Working Group noted:

Farmed Fish Health Framework Working Group (FFHFWG)
Meeting 2
30 January 2018
Note and Actions

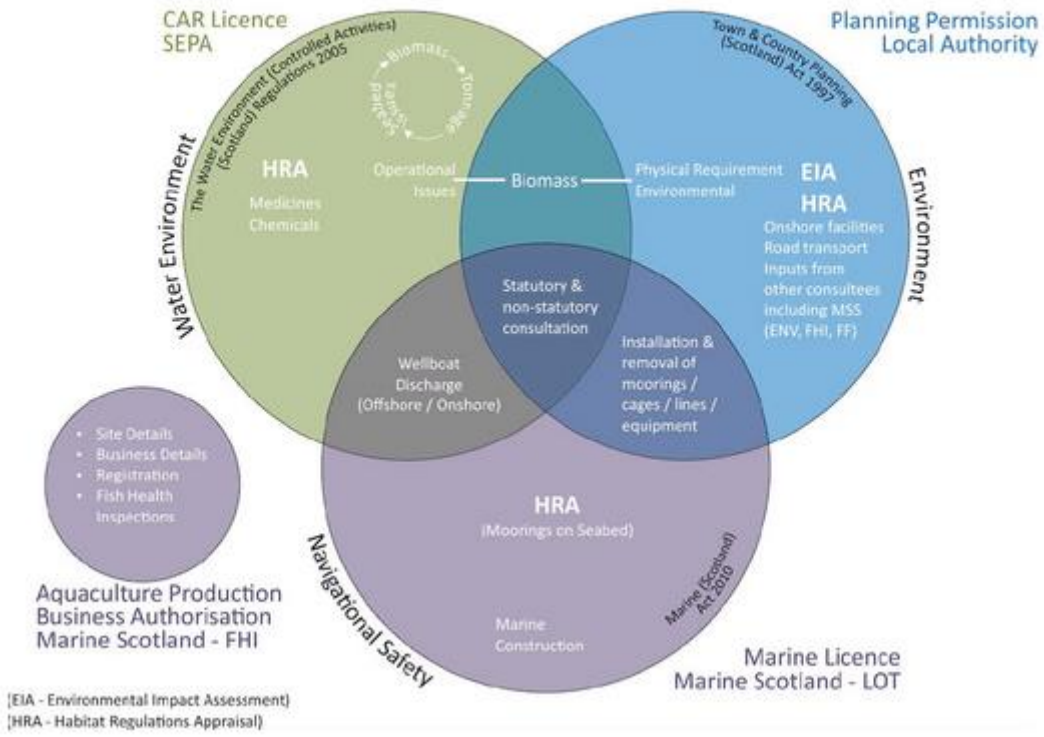
- It was noted the independent consenting review (ICR) recommendation on wellboat discharge licenses was outstanding.
- SG confirmed that an update would be provided at the next aquaculture industry leadership group and would be relayed to the farmed fish health working group at the next meeting.

Action: SG to keep FFHWG updated with ICR wellboat discharge licence recommendation.

Marine Scotland
Secretariat
February 2018

An 'Independent Review of Scottish Aquaculture Consenting' published by the Scottish Government in July 2016 identified "wellboat discharge" as overlapping in the consenting area for SEPA and Marine Scotland:

Figure 4.11: Venn diagram illustrating overlap in consenting areas for key regulators



The report included (p13):

A Ministerial Group on Aquaculture (MGA) was established in 2009 to oversee implementation of A Fresh Start, through six working groups. The MGA has since been replaced by the Ministerial Group for Sustainable Aquaculture (MGSA), which was established in 2013 to continue the work of the MGA and to support Scotland's aquaculture industry to achieve the 2020 growth targets. This includes the following working groups:

- Wellboats Working Group: considers standards for wellboats - tracking position, valve status & sea lice filtration.

And (p30):

4.2.4 Marine Licence

With respect to finfish and shellfish aquaculture, three types of activities require a marine licence(s):

- Equipment – including mussel lines, fish farm cages, walkways/pontoon;
- Moorings (i.e. deposits on the seabed); and
- Discharge of sea lice treatments from wellboats.

In relation to equipment and moorings, the marine licence focuses only on potential hazards to navigation and conditions may require appropriate markers and lighting. A separate marine licence for 'discharge of treatment agents' is also required for discharging from a wellboat. This is not focused on navigational safety and is not specifically needed to gain consent for a fish farm, but will be applied for during the operational phase, if required.

And (p53):

Table 6.1: Recommended quick wins

No.	Action	Responsibility
QW4	**Integrate wellboat Marine Licence into the CAR Licence** • It is understood that this would require one additional sentence to be added to the CAR Licence. • It is assumed that this would cover all wellboat discharges. • It is noted that SEPA and the finfish industry support this consolidation of licences.	SEPA MS-LOT

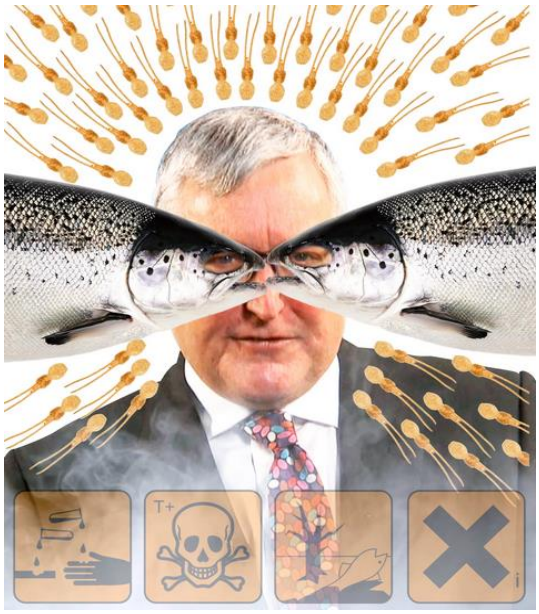
And (p74):

Table 7.1: Summary of recommendations

No.	Actions
Quick WIns	
QW	1. Strengthen the pre-application process 2. Introduce consistent format for co-ordinates, site name and summary information 3. Update of Working Arrangements document 4. Integrate wellboat Marine Licence into the CAR Licence 5. Update Scottish Aquaculture portal

Read more via "All is Not Well With Sick Scottish Salmon: Unreported Use of Toxic Chemicals Via Wellboats Slips Net"

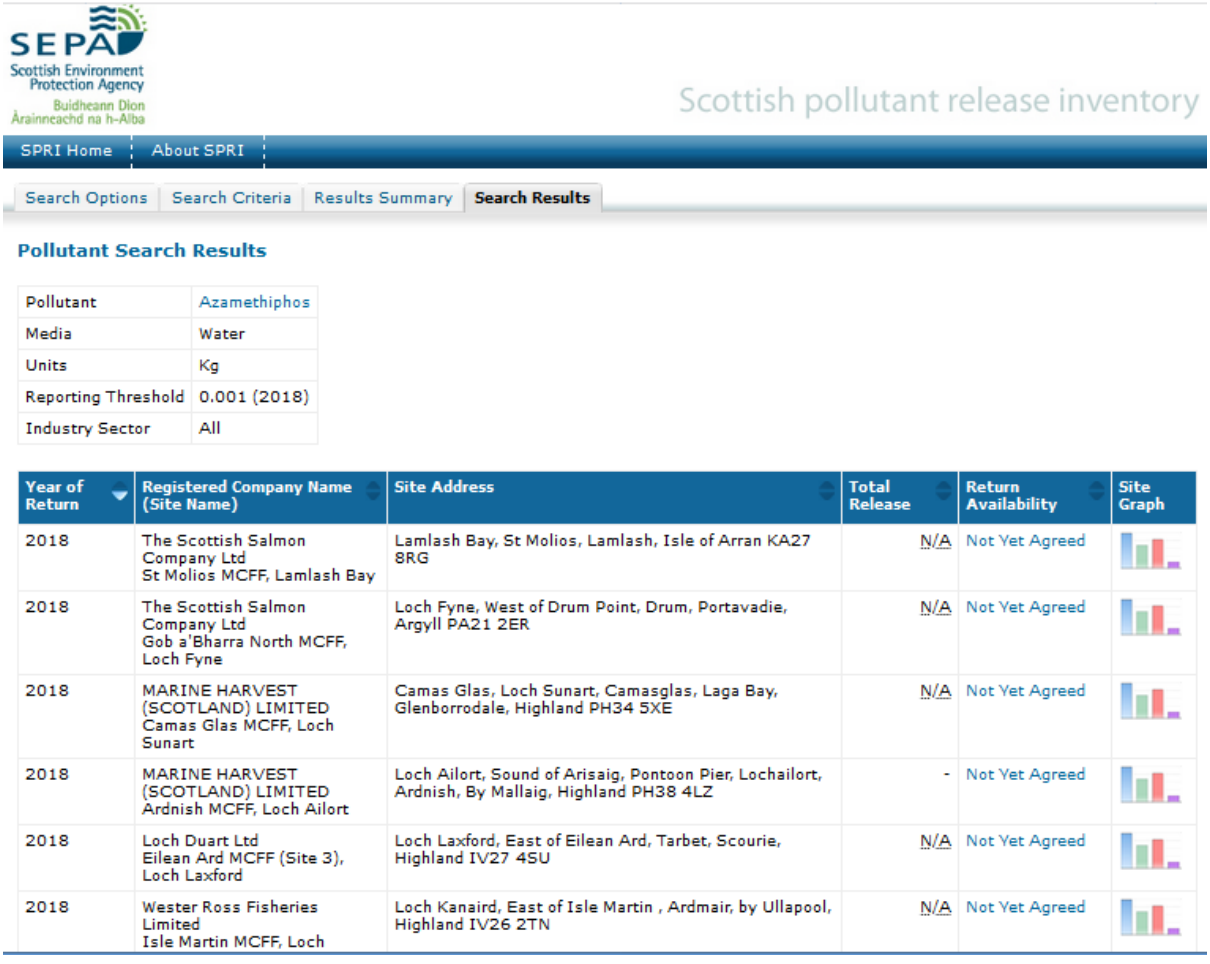
Is Fergus Ewing's secret plan to rush through approvals for well boat use of Imidacloprid via licensing by Marine Scotland before the transfer of powers to SEPA? Certainly, it is well known that Fergus Ewing is a huge supporter of CleanTreat and toxic chemicals such as Acetamprid - an insecticide similar to Imidacloprid - even bullying colleagues over attempts to ban them.



Finally, when will SEPA publish data on well boat use of toxic chemicals used by the salmon farming industry (including any use of Imidacloprid) via the Scottish Pollutant Release Inventory?

Scotland's Aquaculture web-site states that: "This dataset does not include treatments carried out on wellboats. The full annual SPRI data returns inclusive of wellboat information can be found here".

It is shameful that data for 2018 is still not publicly available.



Year of Return	Registered Company Name (Site Name)	Site Address	Total Release	Return Availability	Site Graph
2018	The Scottish Salmon Company Ltd St Molios MCFF, Lamlash Bay	Lamlash Bay, St Molios, Lamlash, Isle of Arran KA27 8RG	N/A	Not Yet Agreed	
2018	The Scottish Salmon Company Ltd Gob a'Bharra North MCFF, Loch Fyne	Loch Fyne, West of Drum Point, Drum, Portavadie, Argyll PA21 2ER	N/A	Not Yet Agreed	
2018	MARINE HARVEST (SCOTLAND) LIMITED Camas Glas MCFF, Loch Sunart	Camas Glas, Loch Sunart, Camasglas, Laga Bay, Glenborrodale, Highland PH34 5XE	N/A	Not Yet Agreed	
2018	MARINE HARVEST (SCOTLAND) LIMITED Ardnish MCFF, Loch Ailort	Loch Ailort, Sound of Arisaig, Pontoon Pier, Lochailort, Ardnish, By Mallaig, Highland PH38 4LZ	-	Not Yet Agreed	
2018	Loch Duart Ltd Eilean Ard MCFF (Site 3), Loch Laxford	Loch Laxford, East of Eilean Ard, Tarbet, Scourie, Highland IV27 4SU	N/A	Not Yet Agreed	
2018	Wester Ross Fisheries Limited Isle Martin MCFF, Loch	Loch Kanaird, East of Isle Martin , Ardmair, by Ullapool, Highland IV26 2TN	N/A	Not Yet Agreed	

2017 SPRI data for Deltamethrin use (which is understood to include use via well boats) is at least available with the worst users identified here:

Year	Registered Company Name (Site Name)	Total Release
2017	MARINE HARVEST (SCOTLAND) LIMITED. Soay Sound MCFF West Loch Tarbert	0.263
2017	The Scottish Salmon Company Ltd. Greanamul MCFF Isle of Benbecula	0.24
2017	Kames Fish Farming Limited. Castle Bay MCFF Shuna	0.174
2017	MARINE HARVEST (SCOTLAND) LIMITED. Carradale (North) MCFF Carradale	0.15
2017	MARINE HARVEST (SCOTLAND) LIMITED. Maol Ban East MCFF Caol Mor Isle of Skye	0.148
2017	Grieg Seafood Shetland Limited. Easter Score Holm MCFF Haddock Sands	0.14
2017	MARINE HARVEST (SCOTLAND) LIMITED. Sron MCFF Loch Alsh	0.135
2017	MARINE HARVEST (SCOTLAND) LIMITED. Cairidh MCFF Moll Isle Of Skye	0.125
2017	MARINE HARVEST (SCOTLAND) LIMITED. Carradale (South) MCFF Carradale	0.12
2017	MARINE HARVEST (SCOTLAND) LIMITED. Ardgour MCFF Loch Linnhe	0.12
2017	MARINE HARVEST (SCOTLAND) LIMITED. Colonsay MCFF Isle of Colonsay	0.12
2017	The Scottish Salmon Company Ltd. Sgeir Dughall Outer Loch Torridon	0.1
2017	MARINE HARVEST (SCOTLAND) LIMITED. Camas Glas MCFF Loch Sunart	0.1
2017	MARINE HARVEST (SCOTLAND) LIMITED. Noster MCFF Loch Seaforth Isle of Harris	0.094
2017	The Scottish Salmon Company Ltd. Maragay Mor MCFF Benbecula	0.09
2017	Dawnfresh Farming Ltd. Aird's Point MCFF Loch Etive	0.081
2017	Grieg Seafood Shetland Limited. Cole Deep MCFF Cole Deep	0.078
2017	The Scottish Salmon Company Ltd. Druimyeon Bay MCFF Isle of Gigha	0.076
2017	MARINE HARVEST (SCOTLAND) LIMITED. Marulaig Bay MCFF Loch Boisdale South Uis	0.075
2017	Skelda Salmon Farms Limited. Spoose Holm MCFF The Deeps	0.075
2017	Grieg Seafood Shetland Limited. East of Papa Little MCFF Shetland	0.069
2017	MARINE HARVEST (SCOTLAND) LIMITED. Bagh Dail nan Ceann MCFF	0.065
2017	Kames Fish Farming Limited. Kames Bay MCFF Loch Melfort	0.054
2017	Grieg Seafood Shetland Limited. Burwick West MCFF Bur Wick	0.052

Perhaps the general public will be able to access data on the use of Imidacloprid in 2023 and a public consultation will be rolled out by SEPA just before it is banned in 2028?

Yours sincerely,

Don Staniford

Director, Scottish Salmon Watch