

[REDACTED]

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**From:** [REDACTED]  
**Sent:** 01 September 2022 09:02  
**To:** [REDACTED]  
**Subject:** RE: PFOA Releases  
**Attachments:** ER21-467 Definitive. Predicting and determining the potential effects of AGCCE's Hillhouse site effluent on the Wyre estuary v3.pdf; ER20-451 Wyre 2020 final.pdf

Some people who received this message don't often get email from [REDACTED] [Learn why this is important](#)

Apologies for the slight delays, see our response below.

Please let us know if you need further information. We could of course arrange a site meeting and tour if this would aid in the understanding / context.

*1 Historical release to river/sea of PFOA, of the order of the low hundreds of tonnes over a period from the 1950s until 2010 (or was it 2011?). I'm basing that on the 400 – 600 tonnes of PFOA usage and the wet polymerisation process resulting in the bulk of the PFOA used being released to water.*

With further review we believe the levels will be near 200 to 300 tonnes for PFOA there is roughly an equal split between air and water emissions, for SAA-1000 there is a higher usage requirements and the majority of the material ends up in water streams, which in majority are already treated. It is estimated that between 1950 and 2012 about 250t of PFOA was used on site emission of 75 t to river, 70 to atmosphere and 80to customers with 15 t destroyed by incineration and under 5 in landfill.

The data is estimated using available information pre 2003 and then based upon mass balance calculations from 2003 to 2012.

*2 Current releases of PFOA to water, 26kg per year. That is based on a concentration of 80 µg/l and an annual effluent discharge of 330,000 m3 per year.*

Average detection levels in effluent for 2021 is 0.007 ug/ml = and now at 0.009ug/l for 2022 (I think we missed a decimal place on the value we initially provided)

Flow to River Wyre in 2021 was 283,737m3 This was a bit lower than previous years, 330,000 is more typical historically.

using 330,000m3 per year = 2.64kg  
For 2021 = 1.99kg

3 SAA-1000, can you supply a number for an annual mass release please. My notes are that at 1mg/l and the same effluent flow the annual release would be 330kg.

In 2021 our average discharge of SAA-1000 is 1.62 ug/ml, flow to River Wyre in 2021 was 283,737m3 = 460kg / year.

4 Do you have any survey work on PFAS, and in particular PFOA ,in offshore sediment and/or in biota, particularly shellfish?

We have undertaken a bi-annual benthic survey of the River Wyre – please see an example attached the most recent survey was completed in June 2022. I have also attached a report covering a prediction of SAA-1000 potential impacts on the Wyre Estuary (previously supplied to EA)

With regards the permit improvement conditions we understand the reasoning and have no objection in principle but would like to suggest the following amendments to provide increased clarity on the scope and avoid confusion.

**1 Please quantify annual releases of all PFAS from the site to all media.**

Quantify the annual release of all raw materials utilised by AGCCE that are defined as PFAS by the [OECD Comprehensive Global Database of PFASs](#) from the AGCCE site to air and water.

Quantity the annual releases of PFOA from the AGCCE site to air and water.

We do not have any direct emission to land, we do have waste disposal and some PFAS are retained within the product. We recognise there will some deposition of air emissions to land, but extremely difficult to determine on an annual basis.

We recognise there are more PFAS but to analyse for all PFAS will be technically extremely difficult and incredibly expensive. In any case PFAS may be detected that are not associated with AGCCE activity.

**2 Please put forward proposals to reduce releases of PFOA to water.**

OK. We are currently developing plans as part of our internal Responsible Manufacturing initiative . What timescale would the proposal need to be submitted within?

**3 Please put forward proposals to reduce releases of Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt [EEA-NH4 (SAA-1000) to water.**

OK. We are currently developing plans as part of our internal Responsible Manufacturing initiative . What timescale would the proposal need to be submitted within?

Regards

[Redacted]



[Redacted]

AGC Chemicals Europe, Ltd.

[Redacted]

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**From:** [Redacted]

**Sent:** 15 August 2022 10:23

**To:** [Redacted]

[REDACTED]

**Subject: RE: PFOA Releases**

Hi

That would be great, appreciate that people are on leave.

Best wishes

[REDACTED]

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**From:** [REDACTED]  
**Sent:** 15 August 2022 10:17  
**To:** [REDACTED]

**Subject: RE: PFOA Releases**

[REDACTED]

Thanks for your email.

I have a few days holiday this week and [REDACTED] return from holiday this week.

Ill get together with the team here at AGCCE and come back to you with an initial reponse by end of next week (26<sup>th</sup> August) if that is OK?

[REDACTED]



[REDACTED]

**AGC Chemicals Europe, Ltd.**

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**From:** [REDACTED]  
**Sent:** 15 August 2022 10:06

To: [REDACTED]

Subject: PFOA Releases

Good Morning [REDACTED]

Would it possible to confirm some mass releases of PFAS to the water. The numbers are based on information supplied during our telecom.

1 Historical release to river/sea of PFOA, of the order of the low hundreds of tonnes over a period from the 1950s until 2010 (or was it 2011?). I'm basing that on the 400 – 600 tonnes of PFOA usage and the wet polymerisation process resulting in the bulk of the PFOA used being released to water.

2 Current releases of PFOA to water, 26kg per year. That is based on a concentration of 80 µg/l and an annual effluent discharge of 330,000 m3 per year.

3 SAA-1000, can you supply a number for an annual mass release please. My notes are that at 1mg/l and the same effluent flow the annual release would be 330kg.

Do you have any survey work on PFAS, and in particular PFOA ,in offshore sediment and/or in biota, particularly shellfish?

After discussing with [REDACTED], we are considering a permit improvement condition along the lines of.

1 Please quantify annual releases of all PFAS from the site to all media.

2 Please put forward proposals to reduce releases of PFOA to water.

3 Please put forward proposals to reduce releases of Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt [EEA-NH4 (SAA-1000) to water.

Do you have any comments on this proposal?

Best wishes

[REDACTED]

[REDACTED]

[REDACTED]

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