Guidance Document – AGC Chemicals Europe Ltd

1. Quantification of PFAS releases to water

We require you to provide annual mass releases to water for the PFAS compounds listed in Annex I. We suggest the use of the EPA method for wastewater - PFAS Analytical Methods Development and Sampling Research | US EPA - or a similar methodology. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

We require you to provide annual mass releases to water for PFAS compounds listed in Annex II. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

We require you to conduct Total Organofluorine (TOF) analysis to determine annual mass release of all fluoroorganic compounds from site. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

All monitoring is to take place at the following effluent discharge points:

- Site to provide grid reference/details

Please provide the flow rate from your effluent discharge points.

All monitoring is to take place over a 3/6-month period, minimum 12 samples from each effluent discharge point. Monitoring period length must consider seasonal changes to discharges if relevant – site to advise.

Please provide upstream/background chemical quality data for each substance listed in Annex I and Annex II, along with upstream/background flow data. This will allow a more accurate assessment of the effect of these substances in the discharge on the receiving water. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

A minimum of 12 samples over a 3/6-month period should be provided along with a grid reference of the sample point.

If upstream/background chemical quality data is not provided; we will use Q95 flow data provided by our hydrology team along with upstream quality for each substance assumed to be 50 percent of the EQS/PNEC's.

2. Quantification of PFAS releases to air

We require you to provide annual mass releases to air for the PFAS compounds listed in Annex I. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

We require you to provide annual mass releases to air for PFAS compounds listed in Annex II. Please provide a detailed breakdown of your chosen procedure for us to review before proceeding.

Monitoring to take place at the following emission points:

- Site to provide grid reference/details

Monitoring to take place over a 3/6-month period, minimum 12 samples from each emission point. Monitoring period length must consider seasonal changes to emissions if relevant – site to advise.

3. Other PFAS releases

Are the company aware of any PFAS other than the substances listed in Annexes I and II being released from the site to all media? If so, please provide details of annual mass releases for each substance.

4. Information regarding PFAS contamination, risks and impacts on site and in surrounding areas

We require you to provide copies of any site surveys, reports, risk assessments, impact assessments or similar documents produced between January 1st 2000 and DATE OF ISSUE which contain information regarding PFAS contamination, risks and impacts on site and in surrounding areas.

5. Proposals to reduce PFOA releases to water

We require you to provide proposals to reduce PFOA releases to water.

6. Proposals to reduce Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt [EEA-NH4 (SAA-1000) releases to water

We require you to provide proposals to reduce Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt [EEA-NH4 (SAA-1000) releases to water.

7. Historic information related to releases of PFOA from the site

We require you to provide annual mass releases of PFOA to air, land, water and in products from first production on site to DATE OF ISSUE. If possible, please break this down into tonnage by year for each medium.

8. Modelling of emissions from product dryer

We wish to model air dispersion of PFOA released from the product dryer. We are assuming emissions were from a single stack, if this is not correct, please let us know.

Please provide the following information:

- Stack height
- Stack diameter

- Stack temperature
- Stack velocity
- PFOA release rate

If exact information is not available, please provide a best estimate.

ANNEXES

ANNEX I

Analyte	**CAS RN**
Perfluoro-1-butanesulfonic acid (PFBS)	375-73-5
Perfluoro-1-pentanesulfonic acid (PFPeS)	2706-91-4
Perfluoro-1-hexanesulfonic acid (PFHxS)	355-46-4
Perfluoro-1-heptanesulfonic acid (PFHpS)	375-92-8
Perfluoro-1-octanesulfonic acid (PFOS)	1763-23-1
Perfluoro-1-nonanesulfonic acid (PFNS)	68259-12-1
Perfluoro-1-decanesulfonic acid (PFDS)	335-77-3
1H, 1H, 2H, 2H-perfluorohexane sulfonic acid (4:2 FTS)	757124-72-4
1H, 1H, 2H, 2H-perfluorooctane sulfonic acid (6:2 FTS)	27619-97-2
1H, 1H, 2H, 2H-perfluorodecane sulfonic acid (8:2 FTS)	39108-34-4
Perfluorobutanoic acid (PFBA)	375-22-4
Perfluoropentanoic acid (PFPeA)	2706-90-3
Perfluorohexanoic acid (PFHxA)	307-24-4
Perfluoroheptanoic acid (PFHpA)	375-85-9
Perfluorooctanoic acid (PFOA)	335-67-1
Perfluorononanoic acid (PFNA)	375-95-1
Perfluorodecanoic acid (PFDA)	335-76-2
Perfluoroundecanoic acid (PFUnDA)	2058-94-8
Perfluorododecanoic acid (PFDoDA)	307-55-1
Perfluorotridecanoic acid (PFTrDA)	72629-94-8
Perfluorotetradecanoic acid (PFTeDA)	376-06-7
N-ethylperfluoro-1-octanesulfonamidoacetic acid (N-EtFOSAA)	2991-50-6
N-methylperfluoro-1-octanesulfonamidoacetic acid (N-MeFOSAA)	2355-31-9
Perfluoro-1-octanesulfonamide (PFOSA)	754-91-6

ANNEX II

Analyte	CAS RN
Perfluoro(2-ethoxy-2-fluoroethoxy)acetic acid ammonium salt [EEA-NH4] (SAA-1000)	908020-52-0
1,1,1,2,2,3,3-Heptafluoro-3-[(trifluorovinyl)oxy]propane (PPVE)	1623-05-8
3,3,4,4,5,5,6,6,6-Nonafluorohexene - also known as perfluorobutylethylene (PFBE)	19430-93-4
Trideca-1,1,1,2,2,3,3,4,4,5,5,6,6-fluorohexane - also known as 1H-perfluorohexane (1H-PFHx)	355-37-3