Annex

Additional Information on Potential PFOS Precursors

1. Information on environmental fate

One potential PFOS precursor was notified to the Japanese Government under the Chemical Substance Control Law as a new chemical which includes PFOS structure in its molecular structure. For this notification, biodegradation test and bioaccumulation test were included.

Based on the provided test result, the Chemical Substance Council concluded that the chemical is not readily biodegradable and not bioaccumulative. It means that the Council has judged that the chemical is not likely to transfer to other chemical including PFOS.

Following is the summary of these test result.

(a) Chemical identity

CAS REGISTRY NUMBER: 109669-84-3

INVENTORY NAME(S):

1-Propanaminium,N-(carboxymethyl)-N-[3-[[(heptadecafluorooctyl)sulfonyl]amino] propyl]-2-hydroxy-N-(2-hydroxy-3-sulfopropyl)-3-sulfo-, chloride, trisodium salt

FORMULA: C19H24F17N2O12S3.Cl.3Na

STRUCTURE: (to be provided)

(b) Biodegradation

4 week biodegradation test was conducted by CERI using MITI method which is compatible with OECD TG 301-C in 1996 under GLP.

According to the test result, it was recorded that average biodegradability was BOD 17%, TOC 48%, and IC 0%. Although biodegradability by BOD was 17 %, the result was judged that this chemical is not readily biodegradable because the test sample contained corresponding amount of organic impurities to the biodegradation of BOD.

(c) Bioaccumulation

Bio-concentration test was conducted in 1998-1999 by CERI using OECD TG305 in accordance with GLP. BCF is 3.9 -16 (higher test concentration), below 36 (lower test concentration). These results show that this chemical is not bioaccumulative.

2. Information of shipping

A former PFOS manufacturer has provided shipping amount of PFOS related chemicals

for last 5 years. Since the manufacturer stopped production in the end of 2004, the shipping is expected to finish within few years. The data is shown in table 1.

Table 1. Shipping amount of PFOS and its derivative chemicals of a former producer

(a)Surface Active Agent unit: ton as PFOS

		Main purpose	00	01	02	03	04
1	PFOS	Photographic films, developing fluid, plating,	2.3	1.8	2.4	3.1	2.9
2	Anions other than PFOS	Photographic films, carbon fiber for aircraft, floor polish, aqueous paint	4.9	4.7	4.0	3.9	2.6
3	Cationic low molecular	Plating, photo films, inkjet paper	0.13	0.13	0.10	0.11	0.07
4	Perfluoro alkyl ethoxylate	Inkjet paper/film, floor polish, primer coat for PET films, auto chemicals	0.8	1.0	0.25	0.26	0.17
5	Aclyl polymer	Semi conductor, photo resist for LCD, developing fluid for photo resist, dry films, paint for auto/ electrical appliance, grease, tire	2.4	1.5	1.7	1.4	0.86

(b)Fire-fighting foams unit: ton as PFOS

8	Ionic low molecular	Fire-fighting foam	6.3	5.7	5.9	6.7	4.3

(c)Water repellent/ Oil repellent agents unit: ton as PFOS

9	Acryl polymer	Impregnation of textiles, carpets	1.4	1.5	0.35	0.42	0.05

3. Information of Production

One PFOS producer also produces some chemical substances listed as potential PFOS precursor. The production amount in 2004 is in table2. Furthermore, according to the existing chemical list of the Chemical Substance Control Law, none of the listed chemicals are registered as existing chemicals except PFOS and its salts. The production of such chemical as registered new chemical or under small amount exemption by CSCL requires further investigation. However the fact that this producer is a single remaining PFOS producer in Japan suggests that the production of listed potential precursor may be limited.

Table 2. Production amount of PFOS and related chemicals of a PFOS producer

Ref No.	CAS No.	PFOS related substance	Production (2004,ton)	Use	Note
1	307-35-7	1-Octanesulphonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8 -heptadecafluoro-	7.7	Precursor for PFOS	(a)

7	1652-63-7	1-Propanaminium, 3-[[(heptadecafluorooctyl)sulphonyl] amino] -N,N,N-trimethyl-, iodide	0.2	Etching agent Plating	
9	1763-23-1	1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-	3.2	Antireflective coating for photoresist, acid generator	
13	2795-39-3	1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8 -heptadecafluoro-, potassium salt	3.3	Mist suppressant for plastic, acid generator	
19	13417-01-1	1-Octanesulphonamide, N-[3-(dimethylamino)propyl] -1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8 -heptadecafluoro-	0.2	Intermediate of Ref 7	(a)
24	29081-56-9	1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8 -heptadecafluoro-, ammonium salt	0.1	Etching auxiliary	
26	29457-72-5	1-Octanesulphonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8 -heptadecafluoro-, lithium salt	2.0	Electrification control agent for films, acid generator	
32	52550-45-5	Poly(oxy-1,2-ethanediyl), α -[2-[[(heptadecafluorooctyl) sulphonyl] propylamino]ethyl]- ω -hydroxy-	0.5	Cleaning auxiliary, Electrification inhibitor, water and oil repellent agent	
37	61660-12-6	1-Octanesulphonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6, 7,7,8,8,8 -heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-	0	Toner additive	(b)

Note: (a) all produced amount is for captive consumption

(b) No production in FY2005.