

## **Rule Concept Summary for Planned Amendments to Air Quality Rules – Air Toxics Emissions Reporting**

### **Purpose**

The main purpose of this rulemaking is to establish new rules for air toxics emissions reporting requirements for permitted facilities located in the seven metropolitan counties, except for those issued an option B registration permit, as directed by [Minn. Stat. § 116.062](#).

Additionally, the MPCA is proposing to repeal certain sections of chapter 7007 that allow a Title V air permittee to assert emergency affirmative defense. The Environmental Protection Agency (EPA) has repealed these provisions from the Clean Air Act Title V operating permit program regulations and has set a deadline for states to remove this language, or to seek an extension to remove the language as soon as practicable, by August 21, 2024. The MPCA has applied for an extension and intends to repeal the language with this rulemaking since the air quality rule chapters would already be open for air toxics emissions reporting.

Where rule chapters are open for this rulemaking, minor housekeeping edits to modernize rule language and format that do not change the intent of existing rule language are also proposed.

### **Current Rules**

Current Minnesota Rules require that emissions reporting facilities submit an annual air emissions inventory for criteria pollutants including particulate matter, ammonia, volatile organic compounds (VOCs), lead, nitrogen dioxide, carbon monoxide, and sulfur dioxide. The MPCA also collects voluntary air emissions data from facilities for air toxics emissions triennially for hazardous air pollutants (HAPs), per- and polyfluoroalkyl substances (PFAS), and additional air toxics of concern in Minnesota. The criteria pollutant and air toxics emissions data collected by the MPCA are used in many ways including the agency's air toxics risk-screening tool called "MNRISKS" to model emissions sources, concentrations, and risks.

### **Statute**

The 2023 Minnesota Statute that has promulgated the MPCA's rulemaking authority over air toxics emissions reporting reads as follows:

#### ***116.062 AIR TOXICS EMISSIONS REPORTING.***

*(a) This section applies to facilities that are subject to paragraph (b) and are located in the counties of Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, or Washington.*

*(b) The commissioner must require owners and operators of a facility issued an air quality permit by the agency, except a facility issued an Option B registration permit under Minnesota Rules, part 7007.1120, to annually report the facility's air toxics emissions to the agency, including a facility not required as a condition of its air quality permit to keep records of air toxics emissions. The commissioner must determine the method to be used by a facility to directly measure or estimate air toxics emissions.*

*The commissioner must amend permits and complete rulemaking, and may enter into enforceable agreements with facility owners and operators, in order to make the reporting requirements under this section enforceable.*

*(c) For the purposes of this section, "air toxics" means chemical compounds or compound classes that are emitted into the air by a permitted facility and that are:*

*(1) hazardous air pollutants listed under the federal Clean Air Act, United States Code, title 42, section 7412, as amended;*

*(2) chemicals reported as released into the atmosphere by a facility located in the state for the Toxic Release Inventory under the federal Emergency Planning and Community Right-to-Know Act, United States Code, title 42, section 11023, as amended;*

*(3) chemicals for which the Department of Health has developed health-based values or risk assessment advice;*

*(4) chemicals for which the risk to human health has been assessed by either the federal Environmental Protection Agency's Integrated Risk Information System; or*

*(5) chemicals reported by facilities in the agency's most recent triennial emissions inventory.*

## **Concepts**

The MPCA is proposing amendments to the existing emission inventory requirements found in Minn. R. chapter 7019 to incorporate requirements for the air toxics emissions inventory in the seven metropolitan counties. The air toxics emissions inventory will be structured similarly to the existing emissions inventory for criteria pollutants, however, there will be some requirements specific to air toxics emissions. For specific requirements that apply only to the air toxics emissions inventory, a new section 7019.3110 is proposed.

### Facilities required to report.

To address Minn. Stat. § 116.062(a), a definition of "Air toxics reporting facility" is proposed. This definition refers only to permitted facilities in Anoka, Carver, Dakota, Hennepin, Ramsey, Scott, or Washington Counties for which the owner or operator of the facility must obtain an air emission permit under chapter 7007, but does not include a facility permitted under part 7007.1120, registration permit option B.

Amendments to Minn. R. 7019.3000, subp. 3, Mercury emission sources, are proposed to clarify that mercury emission sources that are also air toxics reporting facilities must report mercury emissions annually as provided under part 7019.3110 (*new section*).

### Reporting frequency.

To address Minn. Stat. § 116.062(b), for reporting frequency, amendments to Minn. R. 7019.3000 are proposed to add requirements for owners or operators of air toxics reporting facilities to submit an annual emission inventory due on April 1 of each year. This is the current due date for the emissions inventory. Other requirements proposed address the format of submittal and who must certify and sign the report.

### Methods to measure or estimate air toxics emissions.

To address Minn. Stat. § 116.062(b), for methods to measure or estimate air toxics emissions, several amendments to existing rule language are proposed.

Amendments to Minn. R. 7019.3020 proposed including:

- Clarifying that air toxics reporting facilities are not required to report emissions from insignificant and conditionally insignificant activities,
- Referencing which method facilities that have obtained an option C permit must use to calculate emissions for air toxics, and that the owner or operator must report the weight factor (WF) air toxics in the materials and the density of the materials,
- Addressing what records facilities must maintain when using material balance to calculate air toxics emissions, and
- A new Subp. 10. “Control efficiency factors,” is proposed to describe how an owner or operator submitting the emission inventory may apply control efficiency factors to air toxics emissions calculations.

Amendments to Minn. R. 7019.3030 proposed including:

- Incorporating the method for calculating air toxics emissions into the existing method hierarchy, and
- A new Subp. 4. “Reporting individual pollutants,” is proposed that states an owner or operator of a facility must report individual pollutants for pollutants within a group (e.g. Lead compounds or Glycol Ether compounds) to the maximum extent feasible.

Amendments to Minn. R. 7019.3060 proposing that facilities may calculate air toxics emissions using the material balance method described in this part.

Amendments to Minn. R. 7019.3080 proposed to include that control equipment efficiency must be based on efficiency factors or on the efficiency verified by a performance test.

A new section 7019.3110 Air Toxics Emission Inventory and Emissions Reporting is proposed that includes:

- The owner or operator of an air toxics reporting facility must report their air toxics emissions according to part 7019.3000 (*with proposed amendments*).
- A list of the air toxics required to be reported. For pollutant names that contain the word “compounds”, any chemical substance that contains the named chemical as part of the chemical’s infrastructure is included. The full list of air toxics required to be reported as a result of this rulemaking are provided in the attached excel spreadsheet titled, Proposed Air Toxics Reporting List.
- For reporting pollutants using a material balance method, the owner or operator of the facility need only report the emissions of the air toxics if they constitute 1% or more of the material according to the safety data sheet (SDS), or 0.1% for a toxic chemical which is a carcinogen or potential carcinogen. This is known as the de minimis for reporting. There are several pollutants for which there is no de minimis for reporting emissions and all emissions must be reported. These pollutants are noted at the bottom of the Proposed Air Toxics Reporting List.
- How facilities must calculate actual air toxics emissions (see above for proposed amendments to 7019.2020 and 7019.3030, 7019.3060 and 7019.3080.)
- Recordkeeping requirements for air toxics emissions and calculations that include retaining records for 5 years and the MPCA may require them to be submitted upon request.

[Pollutants required to be reported.](#)

To address Minn. Stat. § 116.062 (c), a definition of “Air toxics” is proposed. This definition includes pollutants, except for criteria pollutants, that are known or suspected to cause cancer or other serious health effects or adverse environmental and ecological effects. This definition includes the pollutants listed under the new section 7019.3110.

Hazardous air pollutants (HAPs) and per-and polyfluoroalkyl substances (PFAS) included on the Toxic Release Inventory (TRI) list would be incorporated by reference. HAPs are defined in MN Rule part 7007.0100, subpart 12a. PFAS are defined in Minn. Stat. § 325F.075 subdivision 1, paragraph (c). A definition of “Toxic release inventory list” or “TRI list” is proposed. Incorporating by reference will allow pollutants added to or removed from these lists by the Environmental Protection Agency (EPA) to be incorporated into the air toxics emissions reporting requirements without having to amend the rule.

Additionally, the MPCA has reviewed the pollutants identified by the Minnesota Department of Health (MDH) to have health-based values or risk assessment advice, pollutants listed on the Integrated Risk Information System (IRIS) for having an inhalation risk, and the pollutants reported in Minnesota during the most recent voluntary triennial emissions inventory. Of these pollutants, the MPCA has selected those that have inhalation risks, are persistent, bioaccumulative, and toxic chemicals (PBTs), or have known health, environmental, or ecological effects that facilities will be required to report in the air toxics emissions inventory. The EPA has also recently finalized two stack test methods; OTM-45 and OTM-50, so facilities will be required to report any of the PFAS pollutants that could be detected using those testing methods.

# Proposed Air Toxics Reporting List

As of 7/3/2024

**Disclaimers:** This is a list of the air toxics pollutants proposed to be reported in the annual air toxics emissions inventory. Some pollutants may be listed twice. For example, "Zinc chromate" is both a chromium compound and a zinc compound. This does not mean that emissions of zinc chromate or other dually listed pollutants must be reported twice.

Please note that this list is not final and is subject to change.

| Chemical Abstracts Service (CAS) number | Pollutant                     |
|---|-------------------------------|
|   | <b>Individual Pollutants:</b> |
| 75-56-9                                 | (+/-)-1,2-Propylene oxide     |
| 156-60-5                                | (E)-1,2-Dichloroethylene      |
| 123-73-9                                | (E)-Crotonaldehyde            |
| 156-59-2                                | (Z)-1,2-Dichloroethylene      |
| 10061-01-5                              | (Z)-Dichloropropene           |
| 71-55-6                                 | 1,1,1-Trichloroethane         |
| 79-34-5                                 | 1,1,2,2-Tetrachloroethane     |
| 79-00-5                                 | 1,1,2-Trichloroethane         |
| 75-34-3                                 | 1,1-Dichloroethane            |
| 75-35-4                                 | 1,1-Dichloroethylene          |
| 57-14-7                                 | 1,1-Dimethylhydrazine         |
| 96-18-4                                 | 1,2,3-Trichloropropane        |
| 526-73-8                                | 1,2,3-Trimethylbenzene        |
| 120-82-1                                | 1,2,4-Trichlorobenzene        |
| 95-63-6                                 | 1,2,4-Trimethylbenzene        |
| 120-80-9                                | 1,2-Benzenediol               |
| 96-12-8                                 | 1,2-Dibromo-3-chloropropane   |
| 106-93-4                                | 1,2-Dibromoethane             |
| 95-50-1                                 | 1,2-Dichlorobenzene           |
| 107-06-2                                | 1,2-Dichloroethane            |
| 540-59-0                                | 1,2-Dichloroethylene          |
| 122-66-7                                | 1,2-Diphenylhydrazine         |
| 106-88-7                                | 1,2-Epoxybutane               |
| 108-67-8                                | 1,3,5-Trimethylbenzene        |
| 106-99-0                                | 1,3-Butadiene                 |
| 541-73-1                                | 1,3-Dichlorobenzene           |
| 542-75-6                                | 1,3-Dichloropropene           |
| 1120-71-4                               | 1,3-Propane sultone           |
| 106-50-3                                | 1,4-Benzenediamine            |
| 106-51-4                                | 1,4-Benzoquinone              |
| 106-46-7                                | 1,4-Dichlorobenzene           |
| 123-91-1                                | 1,4-Dioxane                   |
| 822-06-0                                | 1,6-Diisocyanatohexane        |
| 78-87-5                                 | 1,2-Dichloropropane           |
| 106-94-5                                | 1-Bromopropane                |
| 71-36-3                                 | 1-Butanol                     |
| 5131-66-8                               | 1-Butoxy-2-propanol           |
| 75-68-3                                 | 1-Chloro-1,1-difluoroethane   |
| 107-98-2                                | 1-Methoxy-2-propanol          |
| 115-07-1                                | 1-Propene                     |
| 540-84-1                                | 2,2,4-Trimethylpentane        |
| 95-95-4                                 | 2,4,5-Trichlorophenol         |
| 88-06-2                                 | 2,4,6-Trichlorophenol         |
| 95-80-7                                 | 2,4-Diaminotoluene            |
| 51-28-5                                 | 2,4-Dinitrophenol             |

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| 121-14-2   | 2,4-Dinitrotoluene                     |
| 108-31-6   | 2,5-Furandione                         |
| 53-96-3    | 2-Acetylaminofluorene                  |
| 90-04-0    | 2-Anisidine                            |
| 111-76-2   | 2-Butoxyethanol                        |
| 532-27-4   | 2-Chloroacetophenone                   |
| 591-78-6   | 2-Hexanone                             |
| 95-53-4    | 2-Methylaniline                        |
| 79-46-9    | 2-Nitropropane                         |
| 91-94-1    | 3,3'-Dichlorobenzidine                 |
| 119-93-7   | 3,3'-Dimethylbenzidine                 |
| 563-47-3   | 3-Chloro-2-methylpropene               |
| 92-87-5    | 4,4'-Diamino-1,1'-biphenyl             |
| 101-77-9   | 4,4'-Diaminobiphenyl methane           |
| 101-68-8   | 4,4'-Diphenylmethane diisocyanate      |
| 101-14-4   | 4,4'-Methylenebis(2-chloroaniline)     |
| 96-45-7    | 4,5-Dihydro-2-mercaptoimidazole        |
| 534-52-1   | 4,6-Dinitro-o-cresol (including salts) |
| 92-67-1    | 4-Biphenylamine                        |
| 108-10-1   | 4-Methyl-2-pentanone                   |
| 92-93-3    | 4-Nitrobiphenyl                        |
| 100-02-7   | 4-Nitrophenol                          |
| 75-07-0    | Acetaldehyde                           |
| 60-35-5    | Acetamide                              |
| 67-64-1    | Acetone                                |
| 75-05-8    | Acetonitrile                           |
| 98-86-2    | Acetophenone                           |
| 107-02-8   | Acrolein                               |
| 79-06-1    | Acrylamide                             |
| 79-10-7    | Acrylic acid                           |
| 107-13-1   | Acrylonitrile                          |
|            | Aldehyde                               |
| 309-00-2   | Aldrin                                 |
| 107-05-1   | Allyl chloride                         |
| 1318-09-8  | Amphibole-group minerals               |
| 62-53-3    | Aniline                                |
| 140-57-8   | Aramite                                |
| 12674-11-2 | Aroclor 1016                           |
| 12672-29-6 | Aroclor 1248                           |
| 11097-69-1 | Aroclor 1254                           |
| 1332-21-4  | Asbestos                               |
| 1912-24-9  | Atrazine                               |
| 103-33-3   | Azobenzene                             |
| 100-52-7   | Benzaldehyde                           |
| 71-43-2    | Benzene                                |
| 3547-04-4  | Benzene, 1,1'-ethylidenebis(4-chloro-  |
| 98-07-7    | Benzotrichloride                       |
| 85-68-7    | Benzyl butyl phthalate                 |
| 100-44-7   | Benzyl chloride                        |
| 57-57-8    | beta-Propiolactone                     |
| 92-52-4    | Biphenyl                               |
| 111-44-4   | Bis(chloroethyl) ether                 |
| 542-88-1   | bis(Chloromethyl) ether                |
| 108-86-1   | Bromobenzene                           |
| 75-25-2    | Bromoform                              |
| 123-72-8   | Butyraldehyde                          |

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| 119-90-4   | C.I. Disperse Black 6                            |
| 60-11-7    | C.I. Solvent Yellow 2                            |
| 156-62-7   | Calcium cyanamide                                |
| 105-60-2   | Caprolactam                                      |
| 133-06-2   | Captan   |
| 63-25-2    | Carbaryl   |
| 75-15-0    | Carbon disulfide                                 |
| 56-23-5    | Carbon tetrachloride                             |
| 463-58-1   | Carbonyl sulfide                                 |
| 1306-38-3  | Ceric oxide                                      |
| 133-90-4   | Chloramben                                       |
| 57-74-9    | Chlordane  |
| 7782-50-5  | Chlorine   |
| 10049-04-4 | Chlorine dioxide                                 |
| 79-11-8    | Chloroacetic acid                                |
| 108-90-7   | Chlorobenzene                                    |
| 510-15-6   | Chlorobenzilate                                  |
| 75-45-6    | Chlorodifluoromethane                            |
| 75-00-3    | Chloroethane                                     |
| 67-66-3    | Chloroform                                       |
| 74-87-3    | Chloromethane                                    |
| 107-30-2   | Chloromethyl methyl ether                        |
| 126-99-8   | Chloroprene                                      |
| 98-82-8    | Cumene   |
| 110-82-7   | Cyclohexane                                      |
| 50-29-3    | DDT  |
| 117-81-7   | Di(2-ethylhexyl) phthalate                       |
| 334-88-3   | Diazomethane                                     |
| 132-64-9   | Dibenzofuran                                     |
| 84-74-2    | Dibutyl 1,2-benzenedicarboxylate                 |
| 25321-22-6 | Dichlorobenzene                                  |
| 75-71-8    | Dichlorodifluoromethane                          |
| 75-09-2    | Dichloromethane                                  |
| 62-73-7    | Dichlorvos                                       |
| 77-73-6    | Dicyclopentadiene                                |
| 111-42-2   | Diethanolamine                                   |
| 131-11-3   | Dimethyl phthalate                               |
| 77-78-1    | Dimethyl sulfate                                 |
| 79-44-7    | Dimethylcarbamoyl chloride                       |
| 117-84-0   | Di-n-octyl phthalate                             |
| 106-89-8   | Epichlorohydrin                                  |
| 140-88-5   | Ethyl acrylate                                   |
| 64-67-5    | Ethyl sulfate (Et <sub>2</sub> SO <sub>4</sub> ) |
| 637-92-3   | Ethyl t-butyl ether                              |
| 100-41-4   | Ethylbenzene                                     |
| 107-21-1   | Ethylene glycol                                  |
| 75-21-8    | Ethylene oxide                                   |
| 151-56-4   | Ethyleneimine                                    |
| 82-68-8    | Fartox   |
| 50-00-0    | Formaldehyde                                     |
| 64-18-6    | Formic acid                                      |
| 76-44-8    | Heptachlor                                       |
| 87-68-3    | Hexachloro-1,3-butadiene                         |
| 118-74-1   | Hexachlorobenzene                                |
| 77-47-4    | Hexachlorocyclopentadiene                        |
| 67-72-1    | Hexachloroethane                                 |

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| 680-31-9   | Hexamethylphosphoramide                 |
| 302-01-2   | Hydrazine                               |
| 7647-01-0  | Hydrochloric acid                       |
| 7664-39-3  | Hydrogen fluoride                       |
| 7783-06-4  | Hydrogen sulfide                        |
| 123-31-9   | Hydroquinone                            |
| 78-59-1    | Isophorone                              |
| 67-56-1    | Methanol                                |
| 72-43-5    | Methoxychlor                            |
| 74-83-9    | Methyl bromide                          |
| 78-93-3    | Methyl ethyl ketone                     |
| 74-88-4    | Methyl iodide                           |
| 624-83-9   | Methyl isocyanate                       |
| 80-62-6    | Methyl methacrylate                     |
| 1634-04-4  | Methyl tert butyl ether                 |
| 60-34-4    | Methylhydrazine                         |
| 2385-85-5  | Mirex                                   |
| 121-69-7   | N,N-Dimethylaniline                     |
| 68-12-2    | N,N-Dimethylformamide                   |
| 91-20-3    | Naphthalene                             |
| 110-54-3   | n-Hexane                                |
| 7697-37-2  | Nitric acid                             |
| 98-95-3    | Nitrobenzene                            |
| 924-16-3   | N-Nitrosodibutylamine                   |
| 55-18-5    | N-Nitrosodiethylamine                   |
| 62-75-9    | N-Nitrosodimethylamine                  |
| 59-89-2    | N-Nitrosomorpholine                     |
| 684-93-5   | N-Nitroso-N-methylurea                  |
| 930-55-2   | N-Nitrosopyrrolidine                    |
| 72-55-9    | p,p'-DDE                                |
| 56-38-2    | Parathion                               |
| 40487-42-1 | Pendimethalin                           |
| 87-86-5    | Pentachlorophenol                       |
| 108-95-2   | Phenol                                  |
| 75-44-5    | Phosgene                                |
| 7803-51-2  | Phosphine                               |
| 7723-14-0  | Phosphorus (yellow or white)            |
| 85-44-9    | Phthalic anhydride                      |
| 9016-87-9  | Polymethylene polyphenyl polyisocyanate |
| 123-38-6   | Propanal                                |
| 114-26-1   | Propoxur                                |
| 75-55-8    | Propyleneimine                          |
| 91-22-5    | Quinoline                               |
| 7631-86-9  | Silica                                  |
| 100-42-5   | Styrene                                 |
| 96-09-3    | Styrene oxide                           |
| 7664-93-9  | Sulfuric acid                           |
| 12789-03-6 | Technical chlordane                     |
| 540-88-5   | tert-Butyl acetate                      |
| 75-65-0    | tert-Butyl alcohol                      |
| 127-18-4   | Tetrachloroethylene                     |
| 109-99-9   | Tetrahydrofuran                         |
| 62-56-6    | Thiourea                                |
| 7550-45-0  | Titanium tetrachloride                  |
| 108-88-3   | Toluene                                 |
| 584-84-9   | Toluene 2,4-diisocyanate                |



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| 26471-62-5 | Toluene diisocyanate  |
| 8001-35-2  | Toxaphene   |
| 10061-02-6 | trans-1,3-Dichloropropene                                     |
| 79-01-6    | Trichloroethylene   |
| 121-44-8   | Triethylamine   |
| 1582-09-8  | Trifluralin   |
| 51-79-6    | Urethane  |
| 108-05-4   | Vinyl acetate   |
| 593-60-2   | Vinyl bromide   |
| 75-01-4    | Vinyl chloride  |
|            | <b>2,4-D, salts and esters, including but not limited to:</b> |
| 5742-19-8  | (2,4-Dichlorophenoxy)acetic acid diethanolamine               |
| 2008-39-1  | (2,4-Dichlorophenoxy)acetic acid dimethylamine                |
| 1320-18-9  | 2,4-D 2-butoxymethylethyl ester                               |
| 53404-37-8 | 2,4-D 2-Ethyl-4-methylpentyl ester                            |
| 1929-73-3  | 2,4-D Butotyl   |
| 94-80-4    | 2,4-D Butyl ester   |
| 2971-38-2  | 2,4-D Chlorocrotyl ester                                      |
| 94-11-1    | 2,4-D isopropyl ester   |
| 5742-17-6  | 2,4-D isopropylamine salt                                     |
| 2702-72-9  | 2,4-D sodium salt   |
| 32341-80-3 | 2,4-D Triisopropanolammonium salt                             |
| 94-75-7    | 2,4-Dichlorophenoxyacetic acid                                |
| 1928-43-4  | 2-Ethylhexyl (2,4-dichlorophenoxy)acetate                     |
|            | <b>Aluminum compounds, including but not limited to:</b>      |
| 1344-28-1  | Alumina   |
| 7429-90-5  | Aluminum  |
| 7784-18-1  | Aluminum fluoride   |
|            | <b>Antimony compounds, including but not limited to:</b>      |
| 16925-25-0 | Antimonate(1-), hexfluoro-, sodium (1:1), (OC-6-11)-          |
| 7440-36-0  | Antimony  |
| 1327-33-9  | Antimony oxide  |
| 7783-70-2  | Antimony pentafluoride  |
| 10025-91-9 | Antimony trichloride  |
| 1309-64-4  | Antimony trioxide   |
| 1345-04-6  | Antimony trisulfide colloid                                   |
|            | <b>Arsenic compounds, including but not limited to:</b>       |
| 7440-38-2  | Arsenic   |
| 7778-39-4  | Arsenic acid  |
| 1327-53-3  | Arsenic oxide (As <sub>2</sub> O <sub>3</sub> )               |
| 1303-28-2  | Arsenic(V) pentoxide  |
| 3141-12-6  | Arsenous acid, triethyl ester                                 |
| 7784-42-1  | Arsine  |
| 7784-40-9  | Lead arsenate   |
| 10031-13-7 | Lead arsenite   |
|            | <b>Beryllium compounds, including but not limited to:</b>     |
| 7440-41-7  | Beryllium   |
| 7787-47-5  | Beryllium chloride  |
| 7787-49-7  | Beryllium fluoride  |
| 13597-99-4 | Beryllium nitrate (Be(NO <sub>3</sub> ) <sub>2</sub> )        |
| 1304-56-9  | Beryllium oxide (BeO)   |
| 13510-49-1 | Beryllium sulfate   |
|            | <b>Cadmium compounds, including but not limited to:</b>       |
| 7440-43-9  | Cadmium   |
| 543-90-8   | Cadmium acetate   |
| 7789-42-6  | Cadmium bromide   |

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| 10108-64-2 | Cadmium chloride  |
| 10325-94-7 | Cadmium dinitrate   |
| 7790-80-9  | Cadmium iodide  |
| 1306-19-0  | Cadmium oxide   |
| 2223-93-0  | Cadmium stearate  |
| 10124-36-4 | Cadmium sulfate (1:1)   |
| 1306-23-6  | Cadmium sulfide   |
|            | <b>Chromium compounds, including but not limited to:</b>                  |
| 7788-96-7  | (T-4)-Difluorodioxochromium   |
| 7788-98-9  | Ammonium chromate ((NH <sub>4</sub> ) <sub>2</sub> CrO <sub>4</sub> )     |
| 7789-09-5  | Ammonium dichromate   |
| 10294-40-3 | Barium chromate   |
| 13765-19-0 | Calcium monochromate  |
| 10060-12-5 | Chromic chloride hexahydrate  |
| 7738-94-5  | Chromic(VI) acid  |
| 7440-47-3  | Chromium  |
| 16065-83-1 | Chromium (III)  |
| 18540-29-9 | Chromium (VI)   |
| 21679-31-2 | Chromium acetylacetonate  |
| 10025-73-7 | Chromium chloride (CrCl <sub>3</sub> )                                    |
| 10049-05-5 | Chromium dichloride   |
| 12018-01-8 | Chromium oxide (CrO <sub>2</sub> )  |
| 10101-53-8 | Chromium sulfate (Cr <sub>2</sub> (SO <sub>4</sub> ) <sub>3</sub> )       |
| 1308-14-1  | Chromium trihydroxide   |
| 1333-82-0  | Chromium trioxide   |
| 50922-29-7 | Chromium zinc oxide   |
| 12018-19-8 | Chromium zinc oxide (Cr <sub>2</sub> ZnO <sub>4</sub> )                   |
| 1308-38-9  | Chromium(III) oxide   |
| 14977-61-8 | Chromyl chloride  |
| 13530-68-2 | Dichromic acid  |
| 18454-12-1 | Lead chromate oxide   |
| 7758-97-6  | Lead(II) chromate   |
| 14307-35-8 | Lithium chromate  |
| 7789-00-6  | Potassium chromate(VI)  |
| 7778-50-9  | Potassium dichromate  |
| 7775-11-3  | Sodium chromate   |
| 10034-82-9 | Sodium chromate tetrahydrate  |
| 10588-01-9 | Sodium dichromate   |
| 7789-06-2  | Strontium chromate  |
| 13530-65-9 | Zinc chromate   |
| 11103-86-9 | Zinc potassium chromate   |
|            | <b>Cobalt compounds, including but not limited to:</b>                    |
| 13586-82-8 | 2-Ethylhexanoic acid--cobalt (1/1)  |
| 71701-14-9 | Bis(3-((1-(3-chlorophenyl)-4,5-dihydro-3-methyl-5-(oxo-kappaO)-1H-pyra... |
| 1345-16-0  | C.I. Pigment Blue 28  |
| 7440-48-4  | Cobalt  |
| 7542-09-8  | Cobalt carbonate  |
| 16842-03-8 | Cobalt hydrocarbonyl [CoH(CO) <sub>4</sub> ]                              |
| 1317-42-6  | Cobalt monosulfide  |
| 61789-51-3 | Cobalt naphthenates   |
| 27253-31-2 | Cobalt neodecanoate   |
| 1308-06-1  | Cobalt oxide (Co <sub>3</sub> O <sub>4</sub> )                            |
| 10124-43-3 | Cobalt sulfate  |
| 10141-05-6 | Cobalt(II) nitrate  |
| 1307-96-6  | Cobalt(II) oxide  |
| 68955-83-9 | Fatty acids, C9-13-neo-, cobalt salts                                     |

|            |  |
|------------|--|
| 136-52-7   | Hexanoic acid, 2-ethyl-, cobalt(2+) salt                     |
|            | <b>Copper compounds, including but not limited to:</b>       |
| 7440-50-8  | Copper   |
| 544-92-3   | Copper cyanide   |
| 7758-99-8  | Copper(II) sulfate, pentahydrate                             |
|            | <b>Cresols including:</b>                                    |
| 1319-77-3  | Cresol   |
| 108-39-4   | m-Cresol   |
| 95-48-7    | o-Cresol   |
| 106-44-5   | p-Cresol   |
|            | <b>Cyanide compounds, including but not limited to:</b>      |
| 78-82-0    | 2-Methylpropanenitrile                                       |
| 140-29-4   | Benzyl cyanide   |
| 544-92-3   | Copper cyanide   |
| 57-12-5    | Cyanide  |
| 13943-58-3 | Ferrate(4-), hexakis(cyano-kC)-, potassium (1:4), (OC-6-11)- |
| 37187-64-7 | Gold(3+) tricyanide  |
| 74-90-8    | Hydrogen cyanide   |
| 151-50-8   | Potassium cyanide  |
| 13967-50-5 | Potassium dicyanoaurate                                      |
| 14220-17-8 | Potassium tetracyanonickelate                                |
| 506-64-9   | Silver cyanide   |
| 143-33-9   | Sodium cyanide (Na(CN))                                      |
| 557-21-1   | Zinc cyanide   |
|            | <b>Dioxins/Furans, including:</b>                            |
| 35822-46-9 | 1,2,3,4,6,7,8- Heptachlorodibenzodioxin                      |
| 67562-39-4 | 1,2,3,4,6,7,8-Heptachlorodibenzo[b,d]furan                   |
| 55673-89-7 | 1,2,3,4,7,8,9-Heptachlorodibenzofuran                        |
| 39227-28-6 | 1,2,3,4,7,8-Hexachlorodibenzodioxin                          |
| 70648-26-9 | 1,2,3,4,7,8-Hexachlorodibenzofuran                           |
| 57117-44-9 | 1,2,3,6,7,8-Hexachlorodibenzofuran                           |
| 57653-85-7 | 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin                       |
| 57117-41-6 | 1,2,3,7,8- Pentachlorodibenzofuran                           |
| 40321-76-4 | 1,2,3,7,8- Pentachlorodibenzo-p-dioxin                       |
| 72918-21-9 | 1,2,3,7,8,9-Hexachlorodibenzofuran                           |
| 19408-74-3 | 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin                       |
| 60851-34-5 | 2,3,4,6,7,8-Hexachlorodibenzofuran                           |
| 57117-31-4 | 2,3,4,7,8- Pentachlorodibenzofuran                           |
| 1746-01-6  | 2,3,7,8-Tetrachlorodibenzo-1,4-dioxin                        |
| 51207-31-9 | 2,3,7,8-Tetrachlorodibenzofuran                              |
| 39001-02-0 | Octachlorodibenzofuran                                       |
| 3268-87-9  | Octachlorodibenzo-p-dioxin                                   |
|            | <b>Fine mineral fibers including:</b>                        |
|            | Ceramic fibers   |
|            | Fine mineral fibers  |
|            | Glasswool  |
|            | Rockwool   |
|            | Slagwool   |
|            | <b>Glycol ethers, including but not limited to:</b>          |
| 18912-80-6 | 2-(2-(2-Methylpropoxy)ethoxy)ethanol                         |
| 112-34-5   | 2-(2-Butoxyethoxy)ethanol                                    |
| 111-90-0   | 2-(2-Ethoxyethoxy)ethanol                                    |
| 112-15-2   | 2-(2-Ethoxyethoxy)ethyl acetate                              |
| 10137-96-9 | 2-[(2-Methylpentyl)oxy]ethan-1-ol                            |
| 7795-91-7  | 2-[(Butan-2-yl)oxy]ethan-1-ol                                |
| 143-22-6   | 2-[2-(2-Butoxyethoxy)ethoxy]ethanol                          |

|            |   |
|------------|---|
| 112-50-5   | 2-[2-(2-Ethoxyethoxy)ethoxy]ethanol                         |
| 112-35-6   | 2-[2-(2-Methoxyethoxy)ethoxy]ethanol                        |
| 112-59-4   | 2-[2-(Hexyloxy)ethoxy]ethanol                               |
| 10143-56-3 | 2-{2-[(2-Methylpentyl)oxy]ethoxy}ethan-1-ol                 |
| 112-07-2   | 2-Butoxyethyl acetate                                       |
| 110-80-5   | 2-Ethoxyethanol   |
| 112-25-4   | 2-Hexyloxyethanol   |
| 109-86-4   | 2-Methoxyethanol  |
| 110-49-6   | 2-Methoxyethyl acetate                                      |
| 3121-61-7  | 2-Methoxyethyl acrylate                                     |
| 122-99-6   | 2-Phenoxyethanol  |
| 23495-12-7 | 2-Phenoxyethyl propanoate                                   |
| 2807-30-9  | 2-Propoxyethanol  |
| 112-36-7   | Diethylene glycol diethyl ether                             |
| 111-96-6   | Diethylene glycol dimethyl ether                            |
| 124-17-4   | Diethylene glycol monobutyl ether acetate                   |
| 111-77-3   | Diethylene glycol monomethyl ether                          |
| 1002-67-1  | Ethane, 1-ethoxy-2-(2-methoxyethoxy)-                       |
| 110-71-4   | Ethylene glycol demethyl ether                              |
| 629-14-1   | Ethylene glycol diethyl ether                               |
| 111-15-9   | Ethylene glycol monoethyl ether acetate                     |
| 4439-24-1  | Ethylene glycol monoisobutyl ether                          |
| 20706-25-6 | Ethylene glycol monopropyl ether acetate                    |
| 112-49-2   | Triethylene glycol dimethyl ether                           |
|            | <b>Lead compounds, including but not limited to:</b>        |
|            | Alkylated lead  |
| 598-63-0   | Carbonic acid, lead(2+) salt (1:1)                          |
| 7439-92-1  | Lead  |
| 7784-40-9  | Lead arsenate   |
| 10031-13-7 | Lead arsenite   |
| 18454-12-1 | Lead chromate oxide   |
| 1309-60-0  | Lead dioxide  |
| 13814-96-5 | Lead fluoroborate   |
| 1317-36-8  | Lead monoxide   |
| 61790-14-5 | Lead naphthenate  |
| 10099-74-8 | Lead nitrate  |
| 1335-25-7  | Lead oxide  |
| 7446-27-7  | Lead phosphate (3:2)  |
| 7446-14-2  | Lead sulphate   |
| 1314-41-6  | Lead tetroxide  |
| 12060-00-3 | Lead titanium oxide (PbTiO <sub>3</sub> )                   |
| 12626-81-2 | Lead zirconate titanate                                     |
| 301-04-2   | Lead(II) acetate  |
| 7758-97-6  | Lead(II) chromate   |
| 1335-32-6  | Monobasic lead acetate                                      |
| 27253-28-7 | Neodecanoic acid, lead salt                                 |
| 7428-48-0  | Octadecanoic acid, lead salt                                |
| 78-00-2    | Tetraethyl lead   |
|            | <b>Lindane (all isomers), including but not limited to:</b> |
| 608-73-1   | 1,2,3,4,5,6-Hexachlorocyclohexane                           |
| 319-84-6   | alpha-1,2,3,4,5,6-Hexachlorocyclohexane                     |
| 319-85-7   | beta-Hexachlorocyclohexane                                  |
| 319-86-8   | delta-Hexachlorocyclohexane                                 |
| 6108-10-7  | epsilon-Hexachlorocyclohexane                               |
| 6108-12-9  | eta-Hexachlorocyclohexane                                   |
| 58-89-9    | gamma-Hexachlorocyclohexane                                 |

|              |  |
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| 58-89-9      | Lindane (all isomers)  |
| 6108-13-0    | theta-Hexachlorocyclohexane  |
| 6108-11-8    | zeta-Hexachlorocyclohexane   |
|              | <b>Manganese compounds, including but not limited to:</b>  |
| 8030-70-4    | Fatty acids, tall-oil, manganese salts   |
| 7439-96-5    | Manganese  |
| 12079-65-1   | Manganese cyclopentadienyl tricarbonyl   |
| 1313-13-9    | Manganese dioxide  |
| 1317-35-7    | Manganese oxide (Mn <sub>3</sub> O <sub>4</sub> )  |
| 1317-34-6    | Manganese sesquioxide  |
| 7785-87-7    | Manganese sulfate (1:1)  |
| 7783-16-6    | Manganese(II) hypophosphite monohydrate  |
| 1336-93-2    | Naphthenic acids, manganese salts  |
| 10377-66-9   | Nitric acid, manganese(2+) salt (2:1)  |
| 7722-64-7    | Potassium permanganate   |
| 10101-50-5   | Sodium permanganate  |
|              | <b>Mercury compounds, including but not limited to:</b>  |
| 7487-94-7    | Mercuric chloride  |
| 7439-97-6    | Mercury  |
| 22967-92-6   | Methyl mercury(II) cation  |
| 62-38-4      | Phenylmercuric acetate   |
|              | <b>Nickel compounds, including but not limited to:</b>   |
| 7440-02-0    | Nickel   |
| 13138-45-9   | Nickel bis(nitrate)  |
| 12710-36-0   | Nickel carbide   |
| 3333-67-3    | Nickel carbonate   |
| 7718-54-9    | Nickel chloride  |
| 6018-89-9    | Nickel diacetate tetrahydrate  |
| 12054-48-7   | Nickel hydroxide (Ni(OH) <sub>2</sub> )  |
| 1314-06-3    | Nickel oxide (Ni <sub>2</sub> O <sub>3</sub> )   |
|              | Nickel refinery dust   |
| 12035-72-2   | Nickel subsulfide  |
| 7786-81-4    | Nickel sulfate   |
| 13463-39-3   | Nickel tetracarbonyl   |
| 13462-88-9   | Nickel(2+) bromide   |
| 373-02-4     | Nickel(II) acetate   |
| 1313-99-1    | Nickel(II) oxide   |
| 10101-97-0   | Nickel(II) sulfate hexahydrate   |
| 1271-28-9    | Nickelocene  |
| 14220-17-8   | Potassium tetracyanonickelate  |
| 13770-89-3   | Sulfamic acid, nickel(2+) salt (2:1)   |
|              | <b>PFAS</b>  |
| 375-61-1     | 1,1,1,2,2,3,3,4,4,5,5-Undecafluoropentane  |
| 811-97-2     | 1,1,1,2-Tetrafluoroethane  |
| 420-46-2     | 1,1,1-Trifluoroethane  |
| 82113-65-3   | 1,1,1-Trifluoro-N-[(trifluoromethyl)sulfonyl] methanesulfonamide   |
| 27905-45-9   | 1,1,2,2-Tetrahydroperfluorodecyl acrylate  |
| 17741-60-5   | 1,1,2,2-Tetrahydroperfluorododecyl acrylate  |
| 34362-49-7   | 1,1,2,2-Tetrahydroperfluorohexadecyl acrylate  |
| 34395-24-9   | 1,1,2,2-Tetrahydroperfluorotetradecyl acrylate   |
| 148240-89-5  | 1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C10-20-alkyl)thio]methyl] derivs., phosphates, ammonium salts   |
| 148240-85-1  | 1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C4-10-alkyl)thio]methyl] derivs., phosphates, ammonium salts  |
| 148240-87-3  | 1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C6-12-alkyl)thio]methyl] derivs., phosphates, ammonium salts  |
| 1078142-10-5 | 1,3-Propanediol, 2,2-bis[[(γ-ω-perfluoro-C6-12-alkyl)thio]methyl] derivs., polymers with 2,2-bis[[(γ-ω-perfluoro-C10-20-alkyl)thio]methyl]-1,3-propanediol, 1,6-diisocyanato-2,2,4(or 2,4,4)-trimethylhexane, 2-heptyl-3,4-bis(9-isocyanatononyl)-1-pentylcyclohexane and 2,2'-(methylimino)bis[ethanol] |

|              |   |
|--------------|---|
| 68515-62-8   | 1,4-Benzenedicarboxylic acid, dimethyl ester, reaction products with bis(2-hydroxyethyl)terephthalate, ethylene glycol, $\alpha$ -fluoro- $\omega$ -(2-hydroxyethyl)poly(difluoromethylene), hexakis(methoxymethyl)melamine and |
| 120226-60-0  | 10:2 Fluorotelomer sulfonic acid  |
| 763051-92-9  | 11-Chloroperfluoro-3-oxaundecanesulfonic acid   |
| 67906-42-7   | 1-Decanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heneicosafuoro-, ammonium salt  |
| 27619-90-5   | 1-Decanesulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-  |
| 678-39-7     | 1-Decanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-  |
| 27619-91-6   | 1-Dodecane sulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuoro-  |
| 865-86-1     | 1-Dodecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuoro-   |
| 65104-65-6   | 1-Eicosanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,19,19,20,20,20-  |
| 68555-76-0   | 1-Heptanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-N-(2-hydroxyethyl)-N-methyl-  |
| 68957-62-0   | 1-Heptanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-  |
| 68259-07-4   | 1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, ammonium salt   |
| 70225-15-9   | 1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, compd. with 2,2'-iminobis[ethanol]  |
| 60270-55-5   | 1-Heptanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-, potassium salt  |
| 335-71-7     | 1-Heptanesulfonyl fluoride, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,7-pentadecafluoro-  |
| 60699-51-6   | 1-Hexadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-nonacosafuoro-  |
| 68555-75-9   | 1-Hexanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-N-(2-hydroxyethyl)-N-methyl-   |
| 68259-08-5   | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, ammonium salt  |
| 70225-16-0   | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)   |
| 3871-99-6    | 1-Hexanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,6-tridecafluoro-, potassium salt   |
| 2252-84-8    | 1H-Heptafluoropropane   |
| 375-17-7     | 1H-Nonafluorobutane   |
| 355-37-3     | 1H-Perfluorohexane  |
| 375-83-7     | 1-Hydroperfluoroheptane   |
| 17202-41-4   | 1-Nonanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,9-nonadecafluoro-, ammonium salt   |
| 65104-67-8   | 1-Octadecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,17,17,18,18,18-  |
| 24448-09-7   | 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-N-methyl-   |
| 31506-32-8   | 1-Octanesulfonamide, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-methyl-  |
| 178094-69-4  | 1-Octanesulfonamide, N-[3-(dimethyloxidoamino)propyl]-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-,   |
| 2263-09-4    | 1-Octanesulfonamide, N-butyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-(2-hydroxyethyl)-  |
| 67969-69-1   | 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[2-(phosphonoxy)ethyl]-,   |
| 61660-12-6   | 1-Octanesulfonamide, N-ethyl-1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-N-[3-(trimethoxysilyl)propyl]-   |
| 29081-56-9   | 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, ammonium salt  |
| 70225-14-8   | 1-Octanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptadecafluoro-, compd. with 2,2'-iminobis[ethanol]   |
| 68555-74-8   | 1-Pentanesulfonamide, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-N-(2-hydroxyethyl)-N-methyl-   |
| 68259-09-6   | 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, ammonium salt  |
| 70225-17-1   | 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, compd. with 2,2'-iminobis[ethanol] (1:1)   |
| 3872-25-1    | 1-Pentanesulfonic acid, 1,1,2,2,3,3,4,4,5,5,5-undecafluoro-, potassium salt   |
| 70983-60-7   | 1-Propanaminium, 2-hydroxy-N,N,N-trimethyl-, 3-[( $\gamma$ - $\omega$ -perfluoro-C6-20-alkyl)thio] derivs., chlorides   |
| 38006-74-5   | 1-Propanaminium, 3-[[heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-, chloride  |
| 1078715-61-3 | 1-Propanaminium, 3-amino-N-(carboxymethyl)-N,N-dimethyl-, N-[2-[( $\gamma$ - $\omega$ -perfluoro-C4-20-alkyl)thio]acetyl]   |
| 68555-81-7   | 1-Propanaminium, N,N,N-trimethyl-3-[[pentadecafluoroheptyl)sulfonyl]amino]-, chloride   |
| 67584-58-1   | 1-Propanaminium, N,N,N-trimethyl-3-[[pentadecafluoroheptyl)sulfonyl]amino]-, iodide   |
| 52166-82-2   | 1-Propanaminium, N,N,N-trimethyl-3-[[tridecafluorohexyl)sulfonyl]amino]-, chloride  |
| 68957-58-4   | 1-Propanaminium, N,N,N-trimethyl-3-[[tridecafluorohexyl)sulfonyl]amino]-, iodide  |
| 68957-55-1   | 1-Propanaminium, N,N,N-trimethyl-3-[[undecafluoropentyl)sulfonyl]amino]-, chloride  |
| 68957-57-3   | 1-Propanaminium, N,N,N-trimethyl-3-[[undecafluoropentyl)sulfonyl]amino]-, iodide  |
| 68187-47-3   | 1-Propanesulfonic acid, 2-methyl-, 2-[[1-oxo-3-[( $\gamma$ - $\omega$ -perfluoro-C4-16-alkyl)thio]propyl]amino] derivs., sodium   |
| 68758-57-6   | 1-Tetradecane sulfonyl chloride, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafuoro-   |
| 39239-77-5   | 1-Tetradecanol, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafuoro-  |
| 2991-50-6    | 2-(N-Ethylperfluorooctanesulfonamido)acetic acid  |
| 2355-31-9    | 2-(N-Methylperfluorooctanesulfonamido)acetic acid   |
| 53826-13-4   | 2-(Perfluorodecyl)ethanoic acid   |
| 53826-12-3   | 2-(Perfluorohexyl)ethanoic acid   |
| 27854-31-5   | 2-(Perfluorooctyl)ethanoic acid   |

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| 359-49-9    | 2,3,3,3-Tetrafluoropropanoic Acid  |
| 25268-77-3  | 2-[[Heptadecafluorooctyl)sulfonyl]methylamino]ethyl acrylate   |
| 383-07-3    | 2-[Butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl acrylate   |
| 423-82-5    | 2-[Ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl acrylate   |
| 376-14-7    | 2-[Ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl methacrylate   |
| 914637-49-3 | 2H,2H,3H,3H-Perfluorooctanoic acid   |
| 70887-84-2  | 2H-Perfluoro-2-decenoic acid   |
| 3330-14-1   | 2H-Perfluoro-5-methyl-3,6-dioxanonane  |
| 68867-60-7  | 2-Propenoic acid, 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl ester, polymer with 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-   |
| 68298-62-4  | 2-Propenoic acid, 2-[butyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, telomer with 2-[butyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, methyloxirane polymer with oxirane di-2-propenoate, methyloxirane polymer with oxirane mono-2-propenoate and 1-octanethiol  |
| 59071-10-2  | 2-Propenoic acid, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl ester   |
| 68084-62-8  | 2-Propenoic acid, 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl ester  |
| 67584-57-0  | 2-Propenoic acid, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl ester   |
| 67584-56-9  | 2-Propenoic acid, 2-[methyl[(undecafluoropentyl)sulfonyl]amino]ethyl ester   |
| 150135-57-2 | 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymers with Bu acrylate, $\gamma$ - $\omega$ -perfluoro-C8-14-alkyl acrylate and polyethylene glycol monomethacrylate, 2,2'-azobis[2,4-dimethylpentanenitrile]-initiated  |
| 196316-34-4 | 2-Propenoic acid, 2-methyl-, 2-(dimethylamino)ethyl ester, polymers with $\gamma$ - $\omega$ -perfluoro-C10-16-alkyl acrylate  |
| 68555-91-9  | 2-Propenoic acid, 2-methyl-, 2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl ester, polymer with 2-[ethyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-methyl-2-propenoate, 2-   |
| 68239-43-0  | 2-Propenoic acid, 2-methyl-, 2-ethylhexyl ester, polymer with $\alpha$ -fluoro- $\omega$ -[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene), 2-hydroxyethyl 2-methyl-2-propenoate and N-(hydroxymethyl)-2-   |
| 1996-88-9   | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl ester   |
| 2144-54-9   | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuorododecyl ester  |
| 65104-45-2  | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuorododecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-methyl-2-propenoate, methyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafuorotetradecyl 2-methyl-2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl 2-methyl-2-propenoate  |
| 6014-75-1   | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-   |
| 4980-53-4   | 2-Propenoic acid, 2-methyl-, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,15,15,16,16,16-   |
| 65605-59-6  | 2-Propenoic acid, 2-methyl-, dodecyl ester, polymer with $\alpha$ -fluoro- $\omega$ -[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene) and N-(hydroxymethyl)-2-propenamide   |
| 203743-03-7 | 2-Propenoic acid, 2-methyl-, hexadecyl ester, polymers with 2-hydroxyethyl methacrylate, $\gamma$ - $\omega$ -perfluoro-C10-16-alkyl acrylate and stearyl methacrylate   |
| 142636-88-2 | 2-Propenoic acid, 2-methyl-, octadecyl ester, polymer with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,12-heneicosafuorododecyl 2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14,14-pentacosafuorotetradecyl 2-  |
| 200513-42-4 | 2-Propenoic acid, 2-methyl-, polymer with butyl 2-methyl-2-propenoate, 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl 2-propenoate, 2-hydroxyethyl 2-methyl-2-propenoate and methyl 2-methyl-2-   |
| 68227-96-3  | 2-Propenoic acid, butyl ester, telomer with 2-[[heptadecafluorooctyl)sulfonyl]methylamino]ethyl 2-propenoate, 2-[methyl[(nonafluorobutyl)sulfonyl]amino]ethyl 2-propenoate, $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -hydroxypoly(oxy-1,4-butanediyl), $\alpha$ -(2-methyl-1-oxo-2-propenyl)- $\omega$ -[(2-methyl-1-oxo-2-propenyl)oxy]poly(oxy-1,4-butanediyl), 2-[methyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl 2-propenoate, 2-[methyl[(tridecafluorohexyl)sulfonyl]amino]ethyl 2-propenoate, 2- |
| 65605-58-5  | 2-Propenoic acid, esters, 2-methyl-, dodecyl ester, polymer with $\alpha$ -fluoro- $\omega$ -[2-[(2-methyl-1-oxo-2-propen-1-yl)oxy]ethyl]poly(difluoromethylene)   |
| 812-70-4    | 3-(Perfluoroheptyl)propanoic acid  |
| 70887-88-6  | 3-(Perfluoropentyl)-3-fluoro-2-propenoic acid  |
| 356-02-5    | 3:3 Fluorotelomer carboxylic acid  |
| 1652-63-7   | 3-[[Heptadecafluorooctyl)sulfonyl]amino]-N,N,N-trimethyl-1-propanaminium iodide  |
| 919005-14-4 | 4,8-Dioxa-3H-perfluorononanoic acid  |

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| 27619-93-8   | 4:2 Fluorotelomer sulfonate sodium   |
| 757124-72-4  | 4:2 Fluorotelomer sulfonic acid  |
| 27619-94-9   | 6:2 Fluorotelomer sulfonate sodium salt  |
| 27619-97-2   | 6:2 Fluorotelomer sulfonic acid  |
| 27619-96-1   | 8:2 Fluorotelomer sulfonate sodium salt  |
| 39108-34-4   | 8:2 Fluorotelomer sulfonic acid  |
| 335-65-9     | 8H-Perfluorooctane   |
| 2742694-36-4 | Acetamide, N-(2-aminoethyl)-, 2-[( $\gamma$ - $\omega$ -perfluoro-C4-20-alkyl)thio] derivs., polymers with N1,N1-dimethyl-1,3-propanediamine, epichlorohydrin and ethylenediamine, oxidized  |
| 2738952-61-7 | Acetamide, N-[3-(dimethylamino)propyl]-, 2-[( $\gamma$ - $\omega$ -perfluoro-C4-20-alkyl)thio] derivs.   |
| 2744262-09-5 | Acetic acid, 2-[( $\gamma$ - $\omega$ -perfluoro-C4-20-alkyl)thio] derivs., 2-hydroxypropyl esters   |
| 68391-08-2   | Alcohols, C8-14, $\gamma$ - $\omega$ -perfluoro  |
| 2728655-42-1 | Alcohols, C8-16, $\gamma$ - $\omega$ -perfluoro, reaction products with 1,6-diisocyanatohexane, glycidol and stearyl alc.  |
| 97659-47-7   | Alkenes, C8-14 $\alpha$ -, $\delta$ - $\omega$ -perfluoro  |
| 68188-12-5   | Alkyl iodides, C4-20, $\gamma$ - $\omega$ -perfluoro   |
| 10495-86-0   | Ammonium perfluorobutanoate  |
| 21615-47-4   | Ammonium perfluorohexanoate  |
| 3825-26-1    | Ammonium perfluorooctanoate  |
| 2816091-53-7 | Betaines, dimethyl(.gamma.-.omega.-perfluoro-.gamma.-hydro-C8-18-alkyl)  |
| 1478-61-1    | Bisphenol AF   |
| 68187-25-7   | Butanoic acid, 4-[[3-(dimethylamino)propyl]amino]-4-oxo-, 2(or 3)-[( $\gamma$ - $\omega$ -perfluoro-C6-20-alkyl)thio] derivs.  |
| 75-73-0      | Carbon tetrafluoride   |
| 75-45-6      | Chlorodifluoromethane  |
| 75-72-9      | Chlorotrifluoromethane   |
| 68141-02-6   | Chromium(III) perfluorooctanoate   |
| 67584-42-3   | Cyclohexanesulfonic acid, decafluoro(pentafluoroethyl)-, potassium salt  |
| 68156-07-0   | Cyclohexanesulfonic acid, decafluoro(trifluoromethyl)-, potassium salt   |
| 68156-01-4   | Cyclohexanesulfonic acid, nonafluorobis(trifluoromethyl)-, potassium salt  |
| 3107-18-4    | Cyclohexanesulfonic acid, undecafluoro-, potassium salt  |
| 2043-53-0    | Decane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8-heptafluoro-10-iodo-   |
| 75-10-5      | Difluoromethane  |
| 118400-71-8  | Disulfides, bis( $\gamma$ - $\omega$ -perfluoro-C6-20-alkyl)   |
| 2043-54-1    | Dodecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10-heneicosafuoro-12-iodo-  |
| 56773-42-3   | Ethanaminium, N,N,N-triethyl-, salt with 1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,8-heptafluoro-1-octanesulfonic  |
| 65636-35-3   | Ethanaminium, N,N-diethyl-N-methyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl sulfate, polymer with 2-ethylhexyl 2-methyl-2-propenoate, $\alpha$ -fluoro- $\omega$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]poly(difluoromethylene), 2-hydroxyethyl 2-methyl-2-propenoate and N-(hydroxymethyl)-2- |
| 182176-52-9  | Ethaneperoxoic acid, reaction products with 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptafluorodecyl thiocyanate and 3,3,4,4,5,5,6,6,7,7,8,8,8-tridecafluorooctyl thiocyanate   |
| 65530-64-5   | Ethanol, 2,2'-iminobis-, compd. with $\alpha$ , $\alpha'$ -[phosphinicobis(oxy-2,1-ethanediy)]bis[ $\omega$ -  |
| 65530-74-7   | Ethanol, 2,2'-iminobis-, compd. with $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]poly(difluoromethylene) (1:1)   |
| 65530-63-4   | Ethanol, 2,2'-iminobis-, compd. with $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]poly(difluoromethylene) (2:1)   |
| 72623-77-9   | Fatty acids, C6-18, perfluoro, ammonium salts  |
| 72968-38-8   | Fatty acids, C7-13, perfluoro, ammonium salts  |
| 178535-23-4  | Fatty acids, linseed-oil, $\gamma$ - $\omega$ -perfluoro-C8-14-alkyl esters  |
| 593-53-3     | Fluoromethane  |
| 55910-10-6   | Glycine, N-[(heptafluorooctyl)sulfonyl]-N-propyl-, potassium salt  |
| 2991-51-7    | Glycine, N-ethyl-N-[(heptafluorooctyl)sulfonyl]-, potassium salt   |
| 67584-62-7   | Glycine, N-ethyl-N-[(pentafluoroheptyl)sulfonyl]-, potassium salt  |
| 67584-53-6   | Glycine, N-ethyl-N-[(tridecafluorohexyl)sulfonyl]-, potassium salt   |
| 67584-52-5   | Glycine, N-ethyl-N-[(undecafluoropentyl)sulfonyl]-, potassium salt   |
| 65510-55-6   | Hexadecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12,13,13,14,14-nonacosafuoro-16-iodo-   |
| 116-15-4     | Hexafluoropropene  |
| 13252-13-6   | Hexafluoropropylene oxide dimer acid   |
| 62037-80-3   | Hexafluoropropylene oxide dimer acid ammonium salt   |
| 135228-60-3  | Hexane, 1,6-diisocyanato-, homopolymer, $\gamma$ - $\omega$ -perfluoro-C6-20-alc.-blocked  |



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| 29457-72-5  | Lithium (perfluorooctane)sulfonate   |
| 90076-65-6  | Lithium bis[(trifluoromethyl)sulfonyl] azanide   |
| 376-27-2    | Methyl perfluorooctanoate  |
| 1691-99-2   | N-Ethyl-N-(2-hydroxyethyl)perfluorooctanesulfonamide   |
| 16517-11-6  | Octadecanoic acid, pentatriacontafuoro-  |
| 115-25-3    | Octafluorocyclobutane  |
| 559-40-0    | Octafluorocyclopentene   |
| 335-66-0    | Octanoyl fluoride, pentadecafluoro-  |
| 354-33-6    | Pentafluoroethane  |
| 71608-60-1  | Pentanoic acid, 4,4-bis[( $\gamma$ - $\omega$ -perfluoro-C8-20-alkyl)thio] derivs.                     |
| 678-26-2    | Perflenapent   |
| 756426-58-1 | Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)   |
| 863090-89-5 | Perfluoro(4-methoxybutanoic acid)  |
| 428-59-1    | Perfluoro(methyloxirane)   |
| 113507-82-7 | Perfluoro-2-ethoxyethanesulfonic acid  |
| 3330-15-2   | Perfluoro-3-(1H-perfluoroethoxy)propane  |
| 151772-58-6 | Perfluoro-3,6-dioxaheptanoic acid  |
| 377-73-1    | Perfluoro-3-methoxypropanoic acid  |
| 355-25-9    | Perfluorobutane  |
| 375-73-5    | Perfluorobutane sulfonic acid  |
| 45187-15-3  | Perfluorobutanesulfonate   |
| 45048-62-2  | Perfluorobutanoate   |
| 375-22-4    | Perfluorobutanoic acid   |
| 335-77-3    | Perfluorodecanesulfonic acid   |
| 335-76-2    | Perfluorodecanoic acid   |
| 79780-39-5  | Perfluorododecanesulfonic acid   |
| 307-55-1    | Perfluorododecanoic acid   |
| 76-16-4     | Perfluoroethane  |
| 335-57-9    | Perfluoroheptane   |
| 375-92-8    | Perfluoroheptanesulfonic acid  |
| 375-85-9    | Perfluoroheptanoic acid  |
| 355-42-0    | Perfluorohexane  |
| 355-46-4    | Perfluorohexanesulfonic acid   |
| 307-24-4    | Perfluorohexanoic acid   |
| 68259-12-1  | Perfluorononanesulfonic acid   |
| 375-95-1    | Perfluorononanoic acid   |
| 307-34-6    | Perfluorooctane  |
| 1763-23-1   | Perfluorooctane sulfonic acid  |
| 754-91-6    | Perfluorooctanesulfonamide   |
| 335-67-1    | Perfluorooctanoic acid   |
| 21652-58-4  | Perfluorooctyl Ethylene  |
| 507-63-1    | Perfluorooctyl iodide  |
| 307-35-7    | Perfluorooctylsulfonyl fluoride  |
| 67905-19-5  | Perfluoropalmitic acid   |
| 2706-91-4   | Perfluoropentanesulfonic acid  |
| 2706-90-3   | Perfluoropentanoic acid  |
| 76-19-7     | Perfluoropropane   |
| 422-64-0    | Perfluoropropanoic acid  |
| 365971-87-5 | Perfluorotetradecanoate  |
| 376-06-7    | Perfluorotetradecanoic acid  |
| 72629-94-8  | Perfluorotridecanoic acid  |
| 2058-94-8   | Perfluoroundecanoic acid   |
| 68412-69-1  | Phosphinic acid, bis(perfluoro-C6-12-alkyl) derivs.  |
| 68412-68-0  | Phosphonic acid, perfluoro-C6-12-alkyl derivs.   |
| 74499-44-8  | Phosphoric acid, $\gamma$ - $\omega$ -perfluoro-C8-16-alkyl esters, compds. with diethanolamine        |
| 65530-62-3  | Poly(difluoromethylene), $\alpha, \alpha'$ -[phosphinicobis(oxy-2,1-ethanediyl)]bis[ $\omega$ -fluoro- |

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| 65530-70-3   | Poly(difluoromethylene), $\alpha, \alpha'$ -[phosphinicobis(oxy-2,1-ethanediyl)]bis[ $\omega$ -fluoro-, ammonium salt   |
| 123171-68-6  | Poly(difluoromethylene), $\alpha$ -[2-(acetyloxy)-3-[[carboxymethyl]dimethylammonio]propyl]- $\omega$ -fluoro-, inner salt                                      |
| 65530-83-8   | Poly(difluoromethylene), $\alpha$ -[2-[[2-carboxyethyl]thio]ethyl]- $\omega$ -fluoro-   |
| 65530-69-0   | Poly(difluoromethylene), $\alpha$ -[2-[[2-carboxyethyl]thio]ethyl]- $\omega$ -fluoro-, lithium salt   |
| 65530-59-8   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -(2-hydroxyethyl)-, 2-hydroxy-1,2,3-propanetricarboxylate (3:1)   |
| 65605-56-3   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -(2-hydroxyethyl)-, dihydrogen 2-hydroxy-1,2,3-propanetricarboxylate  |
| 65605-57-4   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -(2-hydroxyethyl)-, hydrogen 2-hydroxy-1,2,3-propanetricarboxylate  |
| 65530-61-2   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]-  |
| 95144-12-0   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]-, ammonium salt   |
| 65530-72-5   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]-, diammonium salt   |
| 65530-71-4   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-(phosphonoxy)ethyl]-, monoammonium salt   |
| 65605-73-4   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-[(1-oxo-2-propenyl)oxy]ethyl]-, homopolymer   |
| 65530-65-6   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-[(1-oxooctadecyl)oxy]ethyl]-  |
| 65530-66-7   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-   |
| 80010-37-3   | Poly(difluoromethylene), $\alpha$ -fluoro- $\omega$ -[2-sulphoethyl]-   |
| 29117-08-6   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 68958-61-2   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]- $\omega$ -methoxy-   |
| 68298-81-7   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-  |
| 68958-60-1   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]- $\omega$ -methoxy-  |
| 56372-23-7   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 68298-80-6   | Poly(oxy-1,2-ethanediyl), $\alpha$ -[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 65545-80-4   | Poly(oxy-1,2-ethanediyl), $\alpha$ -hydro- $\omega$ -hydroxy-, ether with $\alpha$ -fluoro- $\omega$ -(2-hydroxyethyl)poly(difluoromethylene)                   |
| 70983-59-4   | Poly(oxy-1,2-ethanediyl), $\alpha$ -methyl- $\omega$ -hydroxy-, 2-hydroxy-3-[[ $\gamma$ - $\omega$ -perfluoro-C6-20-alkyl]thio]propyl ethers                    |
| 37338-48-0   | Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -[2-[ethyl[(heptadecafluorooctyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 68259-39-2   | Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -[2-[ethyl[(pentadecafluoroheptyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-  |
| 68259-38-1   | Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -[2-[ethyl[(tridecafluorohexyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 68310-17-8   | Poly[oxy(methyl-1,2-ethanediyl)], $\alpha$ -[2-[ethyl[(undecafluoropentyl)sulfonyl]amino]ethyl]- $\omega$ -hydroxy-   |
| 83329-89-9   | Potassium 11-chloroeicosafuoro-3-oxaundecane-1-sulfonate  |
| 2966-54-3    | Potassium heptafluorobutanoate  |
| 335-24-0     | Potassium perfluoro-4-ethylcyclohexanesulfonate   |
| 29420-49-3   | Potassium perfluorobutane sulfonate   |
| 2795-39-3    | Potassium perfluorooctanesulfonate  |
| 2395-00-8    | Potassium perfluorooctanoate  |
| 2923-16-2    | Potassium trifluoroacetate  |
| 238420-80-9  | Propanedioic acid, mono( $\gamma$ - $\omega$ -perfluoro-C8-12-alkyl) derivs., bis[4-(ethenyloxy)butyl] esters   |
| 238420-68-3  | Propanedioic acid, mono( $\gamma$ - $\omega$ -perfluoro-C8-12-alkyl) derivs., di-me esters  |
| 61798-68-3   | Pyridinium, 1-(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-, salt with 4-methylbenzenesulfonic   |
| 83048-65-1   | Silane, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)trimethoxy-  |
| 78560-44-8   | Silane, trichloro(3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)-   |
| 125476-71-3  | Silicic acid ( $H_4SiO_4$ ), disodium salt, reaction products with chlorotrimethylsilane and 3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluoro-1-decanol     |
| 143372-54-7  | Siloxanes and Silicones, (3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,10-heptadecafluorodecyl)oxy Me, hydroxy Me, Me octyl, ethers with polyethylene glycol mono-Me ether |
| 335-93-3     | Silver(I) perfluorooctanoate  |
| 2250081-67-3 | Sodium 4,8-dioxa-3H-perfluorononanoate  |
| 2218-54-4    | Sodium perfluorobutanoate   |
| 2806-15-7    | Sodium perfluorodecanesulfonate   |
| 1260224-54-1 | Sodium perfluorododecanesulfonate   |
| 21934-50-9   | Sodium perfluoroheptane sulfonate   |
| 2923-26-4    | Sodium perfluorohexanoate   |
| 4021-47-0    | Sodium perfluorooctanesulfonate   |
| 335-95-5     | Sodium perfluorooctanoate   |
| 4151-50-2    | Sulfluramid   |
| 180582-79-0  | Sulfonic acids, C6-12-alkane, $\gamma$ - $\omega$ -perfluoro, ammonium salts  |
| 30046-31-2   | Tetradecane, 1,1,1,2,2,3,3,4,4,5,5,6,6,7,7,8,8,9,9,10,10,11,11,12,12-pentacosafuoro-14-iodo-  |
| 116-14-3     | Tetrafluoroethylene   |

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| 97553-95-2   | Thiocyanic acid, $\gamma$ - $\omega$ -perfluoro-C4-20-alkyl esters                                     |
| 68140-21-6   | Thiols, C10-20, $\gamma$ - $\omega$ -perfluoro   |
| 68140-18-1   | Thiols, C4-10, $\gamma$ - $\omega$ -perfluoro  |
| 1078712-88-5 | Thiols, C4-20, $\gamma$ - $\omega$ -perfluoro, telomers with acrylamide and acrylic acid, sodium salts |
| 68140-20-5   | Thiols, C6-12, $\gamma$ - $\omega$ -perfluoro  |
| 70969-47-0   | Thiols, C8-20, $\gamma$ - $\omega$ -perfluoro, telomers with acrylamide                                |
| 75-69-4      | Trichlorofluoromethane   |
| 75-46-7      | Trifluoromethane   |
| 1493-13-6    | Trifluoromethanesulfonic acid  |
|              | <b>Phosphorus compounds, including but not limited to:</b>   |
| 7664-38-2    | Phosphoric acid  |
| 10025-87-3   | Phosphoric trichloride   |
|              | <b>Polychlorinated biphenyls, including but not limited to:</b>  |
| 39635-31-9   | 2,3,3',4,4',5,5'-Heptachlorobiphenyl (PCB-189)   |
| 38380-08-4   | 2,3,3',4,4',5/2,3,3',4,4',5-Hexachlorobiphenyl (PCBs 156/157)  |
| 32598-14-4   | 2,3,3',4,4'-Pentachlorobiphenyl (PCB-105)  |
| 52663-72-6   | 2,3',4,4',5,5'-Hexachlorobiphenyl (PCB-167)  |
| 74472-37-0   | 2,3,4,4',5-Pentachlorobiphenyl (PCB-114)   |
| 31508-00-6   | 2,3',4,4',5-Pentachlorobiphenyl (PCB-118)  |
| 65510-44-3   | 2',3,4,4',5-Pentachlorobiphenyl (PCB-123)  |
| 7012-37-5    | 2,4,4'-Trichlorobiphenyl   |
| 2051-60-7    | 2-Chlorobiphenyl   |
| 32774-16-6   | 3,3',4,4',5,5'-Hexachlorobiphenyl (PCB-169)  |
| 57465-28-8   | 3,3',4,4',5-Pentachlorobiphenyl (PCB-126)  |
| 32598-13-3   | 3,3',4,4'-Tetrachlorobiphenyl (PCB-77)   |
| 70362-50-4   | 3,4,4',5-Tetrachlorobiphenyl (PCB-81)  |
| 2050-68-2    | 4,4'-Dichlorobiphenyl (PCB-15)   |
| 2051-24-3    | Decachlorobiphenyl (PCB-209)   |
| 28655-71-2   | Heptachlorobiphenyls   |
| 26601-64-9   | Hexachlorobiphenyls  |
| 53742-07-7   | Nonachlorobiphenyls  |
| 55722-26-4   | Octachlorobiphenyls  |
| 25429-29-2   | Pentachlorobiphenyls   |
| 1336-36-3    | Polychlorinated biphenyls  |
| 26914-33-0   | Tetrachlorobiphenyls   |
|              | <b>Polycyclic organic mater, including but not limited to:</b>   |
| 51338-27-3   | (+)-Diclofop-methyl  |
| 64969-34-2   | [1,1'-Biphenyl]-4,4'-diamine, 3,3'-dichloro-, sulfate (1:2)  |
| 42397-64-8   | 1,6-Dinitropyrene  |
| 42397-65-9   | 1,8-Dinitropyrene  |
| 2422-79-9    | 12-Methylbenz[a]anthracene   |
| 81-49-2      | 1-Amino-2,4-dibromoanthraquinone   |
| 82-28-0      | 1-Amino-2-methylanthraquinone  |
| 832-69-9     | 1-Methyl phenanthrene  |
| 90-12-0      | 1-Methylnaphthalene  |
| 2381-21-7    | 1-Methylpyrene   |
| 134-32-7     | 1-Naphthylamine  |
| 5522-43-0    | 1-Nitropyrene  |
| 1163-19-5    | 2,2',3,3',4,4',5,5',6,6'-Decabromodiphenyl ether   |
| 117-79-3     | 2-Aminoanthraquinone   |
| 91-58-7      | 2-Chloronaphthalene  |
| 26914-18-1   | 2-Methylanthracene   |
| 91-57-6      | 2-Methylnaphthalene  |
| 2531-84-2    | 2-Methylphenanthrene   |
| 91-59-8      | 2-Naphthylamine  |
| 607-57-8     | 2-Nitrofluorene  |

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| 90-43-7     | 2-Phenylphenol                         |
| 79-94-7     | 3,3',5,5'-Tetrabromobisphenol A        |
| 612-83-9    | 3,3'-Dichlorobenzidine dihydrochloride |
| 111984-09-9 | 3,3'-Dimethoxybenzidine hydrochloride  |
| 612-82-8    | 3,3'-Dimethylbenzidine dihydrochloride |
| 56-49-5     | 3-Methylcholanthrene                   |
| 101-61-1    | 4,4'-Methylenebis(N,N-dimethylaniline) |
| 101-80-4    | 4,4'-Oxydianiline                      |
| 139-65-1    | 4,4'-Thiodianiline                     |
| 57835-92-4  | 4-Nitropyrene                          |
| 156-10-5    | 4-Nitrosodiphenylamine                 |
| 57-41-0     | 5-5-Diphenylhydantoin                  |
| 3697-24-3   | 5-Methylchrysene                       |
| 602-87-9    | 5-Nitroacenaphthene                    |
| 41637-90-5  | 6-Methylchrysene                       |
| 7496-02-8   | 6-Nitrochrysene                        |
| 57-97-6     | 7,12-Dimethylbenz(a)anthracene         |
| 194-59-2    | 7H-Dibenzo[c,g]carbazole               |
| 779-02-2    | 9-Methylanthracene                     |
| 83-32-9     | Acenaphthene                           |
| 208-96-8    | Acenaphthylene                         |
| 3761-53-3   | Acid Red 26                            |
| 62476-59-9  | Acifluorfen sodium                     |
| 68085-85-8  | alpha-Cyhalothrin                      |
| 33089-61-1  | Amitraz                                |
| 120-12-7    | Anthracene                             |
| 492-80-8    | Auramine                               |
| 56-55-3     | Benz(a)anthracene                      |
| 205-99-2    | Benzo(b)fluoranthene                   |
| 205-82-3    | Benzo(j)fluoranthene                   |
| 203-33-8    | Benzo[a]fluoranthene                   |
| 50-32-8     | Benzo[a]pyrene                         |
| 195-19-7    | Benzo[c]phenanthrene                   |
| 192-97-2    | Benzo[e]pyrene                         |
| 203-12-3    | Benzo[g,h,i]fluoranthene               |
| 191-24-2    | Benzo[g,h,i]perylene                   |
| 207-08-9    | Benzo[k]fluoranthene                   |
| 56832-73-6  | Benzofluoranthene                      |
| 94-36-0     | Benzoyl peroxide                       |
| 82657-04-3  | Bifenthrin                             |
| 80-05-7     | Bisphenol A                            |
| 6459-94-5   | C.I. Acid Red 114                      |
| 1937-37-7   | C.I. Direct Black 38                   |
| 72-57-1     | C.I. Direct Blue 14                    |
| 28407-37-6  | C.I. Direct Blue 218                   |
| 2602-46-2   | C.I. Direct Blue 6                     |
| 16071-86-6  | C.I. Direct Brown 95                   |
| 20325-40-0  | C.I. Disperse Black 6 dihydrochloride  |
| 2832-40-8   | C.I. Disperse Yellow 3                 |
| 3118-97-6   | C.I. Solvent Orange 7                  |
| 60-09-3     | C.I. Solvent Yellow 1                  |
| 842-07-9    | C.I. Solvent Yellow 14                 |
| 128-66-5    | C.I. Vat Yellow 4                      |
| 86-74-8     | Carbazole                              |
| 218-01-9    | Chrysene                               |
|             | Coal tar                               |

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| 68359-37-5  | Cyfluthrin   |
| 13684-56-5  | Desmedipham  |
| 226-36-8    | Dibenz[a,h]acridine  |
| 53-70-3     | Dibenz[a,h]anthracene  |
| 224-42-0    | Dibenz[a,j]acridine  |
| 192-65-4    | Dibenzo(a,e)pyrene   |
| 5385-75-1   | Dibenzo[a,e]fluoranthene   |
| 189-64-0    | Dibenzo[a,h]pyrene   |
| 189-55-9    | Dibenzo[a,i]pyrene   |
| 191-30-0    | Dibenzo[a,l]pyrene   |
| 97-23-4     | Dichlorophen   |
| 115-32-2    | Dicofol  |
| 35367-38-5  | Diflubenzuron  |
| 957-51-7    | Diphenamid   |
| 122-39-4    | Diphenylamine  |
| 4680-78-8   | FD&C Green No. 1   |
| 60168-88-9  | Fenarimol  |
| 13356-08-6  | Fenbutatin oxide   |
| 66441-23-4  | Fenoxaprop-ethyl   |
| 72490-01-8  | Fenoxycarb   |
| 39515-41-8  | Fenpropathrin  |
| 51630-58-1  | Fenvalerate  |
| 206-44-0    | Fluoranthene   |
| 86-73-7     | Fluorene   |
| 69409-94-5  | Fluvalinate  |
| 72178-02-0  | Fomesafen  |
| 1335-87-1   | Hexachloronaphthalene  |
| 70-30-4     | Hexachlorophene  |
| 67485-29-4  | Hydramethylnon   |
| 193-39-5    | Indeno[1,2,3-cd]pyrene   |
| 77501-63-4  | Lactofen   |
| 569-64-2    | Malachite green  |
| 65357-69-9  | Methylbenzopyrene  |
| 90-94-8     | Michler's ketone   |
| 1836-75-5   | Nitrofen   |
| 86-30-6     | N-Nitrosodiphenylamine   |
| 97-56-3     | o-Aminoazotoluene  |
| 2234-13-1   | Octachloronaphthalene  |
| 41766-75-0  | o-Tolidine dihydrofluoride   |
| 42874-03-3  | Oxyfluorfen  |
| 52645-53-1  | Permethrin   |
| 198-55-0    | Perylene   |
| 85-01-8     | Phenanthrene   |
| 77-09-8     | Phenolphthalein  |
| 26002-80-2  | Phenothrin   |
|             | Polybrominated biphenyls   |
| 130498-29-2 | Polycyclic aromatic hydrocarbons   |
|             | Polycyclic aromatic hydrocarbons/Polycyclic organic matter - unspecified |
| 129-00-0    | Pyrene   |
| 76578-14-8  | Quizalofop-ethyl   |
| 989-38-8    | Rhodamine 6G   |
| 81-88-9     | Rhodamine B  |
| 132-27-4    | Sodium 2-phenylphenate   |
| 3383-96-8   | Temephos   |
| 639-58-7    | Triphenyltin chloride  |
| 76-87-9     | Triphenyltin hydroxide   |

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|            | Warfarin and salts                                       |
|            | <b>Selenium compounds, including but not limited to:</b> |
| 7783-07-5  | Hydrogen selenide  |
| 7783-00-8  | Selenious acid   |
| 7782-49-2  | Selenium   |
| 7446-08-4  | Selenium dioxide   |
| 7488-56-4  | Selenium disulfide                                       |
| 7783-79-1  | Selenium hexafluoride                                    |
| 12640-89-0 | Selenium oxide   |
| 7446-34-6  | Selenium sulfide (SeS)                                   |
|            | <b>Vanadium compounds, including but not limited to:</b> |
| 12604-58-9 | Ferrovandium   |
| 7440-62-2  | Vanadium   |
| 1314-62-1  | Vanadium oxide (V2O5)                                    |
|            | <b>Xylenes including:</b>                                |
| 108-38-3   | m-Xylene   |
| 95-47-6    | o-Xylene   |
| 106-42-3   | p-Xylene   |
| 1330-20-7  | Xylenes (mixed isomers)                                  |
|            | <b>Zinc compounds, including but not limited to:</b>     |
| 50922-29-7 | Chromium zinc oxide                                      |
| 12018-19-8 | Chromium zinc oxide (Cr2ZnO4)                            |
| 7440-66-6  | Zinc   |
| 13530-65-9 | Zinc chromate  |
| 557-21-1   | Zinc cyanide   |
| 1314-13-2  | Zinc oxide   |
| 11103-86-9 | Zinc potassium chromate                                  |

**Pollutants with no de minimis for which all emissions must be reported:**

|            |  |
|------------|--|
| 309-00-2   | Aldrin   |
| 57-74-9    | Chlordane  |
| 75-21-8    | Ethylene oxide                                   |
| 76-44-8    | Heptachlor                                       |
| 118-74-1   | Hexachlorobenzene                                |
| 72-43-5    | Methoxychlor                                     |
| 40487-42-1 | Pendimethalin                                    |
| 8001-35-2  | Toxaphene  |
| 1582-09-8  | Trifluralin                                      |
|            | Arsenic compounds (see full list for compounds)  |
|            | Cadmium compounds (see full list for compounds)  |
|            | Chromium compounds (see full list for compounds) |
|            | Cobalt compounds (see full list for compounds)   |
|            | Dioxins/furans (see full list)                   |
|            | Lead compounds (see full list for compounds)     |
|            | Mercury compounds (see full list for compounds)  |
|            | Nickel compounds (see full list for compounds)   |
|            | PFAS (see full list)                             |
|            | Polychlorinated biphenyls (PCBs) (see full list) |
|            | Polycyclic organic mater (see full list)         |