

**CHAPTER 4717**  
**DEPARTMENT OF HEALTH**  
**ENVIRONMENTAL HEALTH**

4717 7000 VARIANCE REQUEST  
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**4717.7000 VARIANCE REQUEST.**

Subpart 1 **Request.** A party may ask the commissioner of health to grant a variance from the following rules

*[For text of items A to H, see M R ]*

I [Repealed, L 2007 c 140 art 13 s 3]

*[For text of items J to R, see M R ]*

*[For text of subs 2 and 3, see M R.]*

**Statutory Authority:** *MS s 14 05, 31 101, 31 11, 1031 101; 1031 221, 1031 301, 1031 621; 144.05, 144 08, 144 12, 144 123, 144 383, 144 9508, 145A 02, 157.01, 157.011, 157 04; 157.08, 157 09; 157.13, 326 70 to 326 81*

**History:** *L 2007 c 140 art 13 s 3*

**4717.7200 HEALTH RISK LIMITS FOR SYSTEMIC TOXICANTS.**

Subpart 1 **Scope.** This part establishes the method for determining the health risk limit for a systemic toxicant

Subp 2 **Equation for systemic toxicants other than nitrate (as nitrogen), perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), or possible human carcinogens.** The equation for determining the health risk limit for a systemic toxicant other than nitrate (as nitrogen), perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), or a possible human carcinogen is

$$\text{HRL} = \frac{(\text{RfD})(70)(\text{RSC})(1,000)}{(2)}$$

Where

- A HRL is expressed in microgram or micrograms per liter.
- B. (70) is the standard weight of an adult expressed in kilograms
- C The RSC for substances or chemicals not listed in item D shall be 0.2.
- D The RSC for the following substances or chemicals is

Name	CAS RN	RSC
(1) antimony	7440-36-0	0 4
(2) barium	7440-39-3	0.8
(3) cadmium	7440-43-9	0.25
(4) chromium III	16065-83-1	0 7
(5) chromium VI	18540-29-9	0 7
(6) manganese	7439-96-5	0 8

E (1,000) is a factor used to convert the units of concentration from milligrams per liter to micrograms per liter. There are 1,000 micrograms per milligram

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F. (2) is the standard amount of water ingested by an adult expressed in liters per day

*[For text of subp 3, see M R.]*

Subp 3a **Equation for perfluorooctane sulfonate (PFOS)**. The equation for determining the health risk limit for perfluorooctane sulfonate (PFOS) is

$$\text{HRL} = \frac{(\text{RfD})(\text{RSC})(1,000)}{(0.048)}$$

(0.048)

Where:

A. HRL, RSC, and (1,000) have the meanings given in subpart 2.

B. (0.048) is the time weighted average water intake (in units of liters per kilogram human body weight per day) of an upper-end consumer (95th percentile of water intake) over the first 27 years of life, a period of time corresponding to the longer half-life of the chemical in the human body

Subp. 3b. **Equation for perfluorooctanoic acid (PFOA)**. The equation for determining the health risk limit for perfluorooctanoic acid (PFOA) is:

$$\text{HRL} = \frac{(\text{RfD})(\text{RSC})(1,000)}{(0.053)}$$

(0.053)

Where:

A. HRL, RSC, and (1,000) have the meanings given in subpart 2.

B. (0.053) is the time weighted average water intake (in units of liters per kilogram human body weight per day) of an upper-end consumer (95th percentile of water intake) over the first 19 years of life; a period of time corresponding to the longer half-life of the chemical in the human body

*[For text of subp 4, see M R.]*

**Statutory Authority:** L 2007 c 37

**History:** 32 SR 373

### 4717.7500 TABLE OF HEALTH RISK LIMITS.

*[For text of subs 1 to 70, see M R.]*

Subp. 70a. **Perfluorooctane sulfonate (PFOS)**. Perfluorooctane sulfonate (PFOS):

1763-23-1	0.000075	—	0.3
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Subp 70b. **Perfluorooctanoic acid (PFOA)**. Perfluorooctanoic acid (PFOA)

335-67-1	0.00014	—	0.5
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*[For text of subs 71 to 90, see M.R.]*

**Statutory Authority:** L 2007 c 37

**History:** 32 SR 373

### 4717.7650 TOXIC ENDPOINTS.

*[For text of subs 1 to 57, see M.R.]*

Subp. 57a **Perfluorooctane sulfonate (PFOS)**. Perfluorooctane sulfonate (PFOS), 1763-23-1, hepatic (liver) system, thyroid

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Subp. 57b **Perfluorooctanoic acid (PFOA)**. Perfluorooctanoic acid (PFOA), 335-67-1, hepatic (liver) system, hematopoietic (blood) system, developmental, immune system

*[For text of subps 58 to 69, see M R ]*

**Statutory Authority:** *L 2007 c 37*

**History:** 32 SR 373