

**Nuclear Regulatory Commission**

**§ 30.70**

(i) Sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the Atomic Energy Act of 1954, as amended;

(ii) Section 206 of the Energy Reorganization Act;

(iii) Any rule, regulation, or order issued pursuant to the sections specified in paragraph (b)(1)(i) of this section;

(iv) Any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1)(i) of this section.

(2) For any violation for which a license may be revoked under section 186 of the Atomic Energy Act of 1954, as amended.

[57 FR 55072, Nov. 24, 1992]

**§ 30.64 Criminal penalties.**

(a) Section 223 of the Atomic Energy Act of 1954, as amended, provides for criminal sanctions for willful violation of, attempted violation of, or conspiracy to violate, any regulation issued under sections 161b, 161i, or 161o of the Act. For purposes of section 223, all the regulations in part 30 are issued under one or more of sections 161b, 161i, or 161o, except for the sections listed in paragraph (b) of this section.

(b) The regulations in part 30 that are not issued under sections 161b, 161i, or 161o for the purposes of section 223 are as follows: §§30.1, 30.2, 30.4, 30.5, 30.6, 30.8, 30.11, 30.12, 30.13, 30.15, 30.31, 30.32, 30.33, 30.37, 30.38, 30.39, 30.61, 30.62, 30.63, 30.64, 30.70, 30.71, and 30.72.

[57 FR 55072, Nov. 24, 1992, as amended at 73 FR 42673, July 23, 2008]

**SCHEDULES**

**§ 30.70 Schedule A—Exempt concentrations.**

[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration $\mu\text{Ci/ml}^1$	Liquid and solid concentration $\mu\text{Ci/ml}^2$
Antimony (51)	Sb 122		$3 \times 10^{-4}$
	Sb 124		$2 \times 10^{-4}$
	Sb 125		$1 \times 10^{-3}$
Argon (18)	A 37	$1 \times 10^{-3}$	
	A 41	$4 \times 10^{-7}$	
Arsenic (33)	As 73		$5 \times 10^{-3}$
	As 74		$5 \times 10^{-4}$
	As 76		$2 \times 10^{-4}$
	As 77		$8 \times 10^{-4}$
Barium (56)	Ba 131		$2 \times 10^{-3}$
	Ba 140		$3 \times 10^{-4}$
Beryllium (4)	Be 7		$2 \times 10^{-2}$
Bismuth (83)	Bi 206		$4 \times 10^{-4}$
Bromine (35)	Br 82	$4 \times 10^{-7}$	$3 \times 10^{-3}$
	Cd 109		$2 \times 10^{-3}$
Cadmium (48)	Cd 115m		$3 \times 10^{-4}$
	Cd 115		$3 \times 10^{-4}$
	Ca 45		$9 \times 10^{-5}$
Calcium (20)	Ca 47		$5 \times 10^{-4}$
	C 14	$1 \times 10^{-6}$	$8 \times 10^{-3}$
Carbon (6)	Ce 141		$9 \times 10^{-4}$
	Ce 143		$4 \times 10^{-4}$
Cerium (58)	Ce 144		$1 \times 10^{-4}$
	Cs 131		$2 \times 10^{-2}$
	Cs 134m		$6 \times 10^{-2}$
Cesium (55)	Cs 134		$9 \times 10^{-5}$
	Cl 38	$9 \times 10^{-7}$	$4 \times 10^{-3}$
Chlorine (17)	Cr 51		$2 \times 10^{-2}$
Chromium (24)	Co 57		$5 \times 10^{-3}$
Cobalt (27)	Co 58		$1 \times 10^{-3}$
	Co 60		$5 \times 10^{-4}$
Copper (29)	Cu 64		$3 \times 10^{-3}$
	Dysprosium (66)	Dy 165	
Erbium (68)	Dy 166		$4 \times 10^{-4}$
	Er 169		$9 \times 10^{-4}$

§ 30.70

10 CFR Ch. I (1-1-14 Edition)

[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II
		Gas concentration μCi/ml <sup>1</sup>	Liquid and solid concentration μCi/ ml <sup>2</sup>
Europium (63)	Er 171		1×10 <sup>-3</sup>
	Eu 152		6×10 <sup>-4</sup>
	(T/2=9.2 Hrs).		
Fluorine (9)	Eu 155		2×10 <sup>-3</sup>
	F 18	2×10 <sup>-6</sup>	8×10 <sup>-3</sup>
Gadolinium (64)	Gd 153		2×10 <sup>-3</sup>
	Gd 159		8×10 <sup>-4</sup>
Gallium (31)	Ga 72		4×10 <sup>-4</sup>
Germanium (32)	Ge 71		2×10 <sup>-2</sup>
Gold (79)	Au 196		2×10 <sup>-3</sup>
	Au 198		5×10 <sup>-4</sup>
	Au 199		2×10 <sup>-3</sup>
Hafnium (72)	Hf 181		7×10 <sup>-4</sup>
Hydrogen (1)	H 3	5×10 <sup>-6</sup>	3×10 <sup>-2</sup>
Indium (49)	In 113m		1×10 <sup>-2</sup>
	In 114m		2×10 <sup>-4</sup>
Iodine (53)	I 126	3×10 <sup>-9</sup>	2×10 <sup>-5</sup>
	I 131	3×10 <sup>-9</sup>	2×10 <sup>-5</sup>
	I 132	8×10 <sup>-8</sup>	6×10 <sup>-4</sup>
	I 133	1×10 <sup>-8</sup>	7×10 <sup>-5</sup>
	I 134	2×10 <sup>-7</sup>	1×10 <sup>-3</sup>
Iridium (77)	Ir 190		2×10 <sup>-3</sup>
	Ir 192		4×10 <sup>-4</sup>
	Ir 194		3×10 <sup>-4</sup>
Iron (26)	Fe 55		8×10 <sup>-3</sup>
	Fe 59		6×10 <sup>-4</sup>
Krypton (36)	Kr 85m	1×10 <sup>-6</sup>	
	Kr 85	3×10 <sup>-6</sup>	
Lanthanum (57)	La 140		2×10 <sup>-4</sup>
Lead (82)	Pb 203		4×10 <sup>-3</sup>
Lutetium (71)	Lu 177		1×10 <sup>-3</sup>
Manganese (25)	Mn 52		3×10 <sup>-4</sup>
	Mn 54		1×10 <sup>-3</sup>
	Mn 56		1×10 <sup>-3</sup>
	Hg 197m		2×10 <sup>-3</sup>
Mercury (80)	Hg 197		3×10 <sup>-3</sup>
	Hg 203		2×10 <sup>-4</sup>
	Mo 99		2×10 <sup>-3</sup>
Molybdenum (42)	Nd 147		6×10 <sup>-4</sup>
	Nd 149		3×10 <sup>-3</sup>
Neodymium (60)	Ni 65		1×10 <sup>-3</sup>
Nickel (28)	Nb 95		1×10 <sup>-3</sup>
	Nb 97		9×10 <sup>-3</sup>
Niobium (Columbium) (41)	Os 185		7×10 <sup>-4</sup>
	Os 191m		3×10 <sup>-2</sup>
	Os 191		2×10 <sup>-3</sup>
	Os 193		6×10 <sup>-4</sup>
	Pd 103		3×10 <sup>-3</sup>
Palladium (46)	Pd 109		9×10 <sup>-4</sup>
	P 32		2×10 <sup>-4</sup>
Phosphorus (15)	Pt 191		1×10 <sup>-3</sup>
Platinum (78)	Pt 193m		1×10 <sup>-2</sup>
	Pt 197m		1×10 <sup>-2</sup>
	Pt 197		1×10 <sup>-3</sup>
	K 42		3×10 <sup>-3</sup>
Potassium (19)	Pr 142		3×10 <sup>-4</sup>
	Pr 143		5×10 <sup>-4</sup>
Praseodymium (59)	Pm 147		2×10 <sup>-3</sup>
	Pm 149		4×10 <sup>-4</sup>
Promethium (61)	Re 183		6×10 <sup>-3</sup>
Rhenium (75)	Re 186		9×10 <sup>-4</sup>
	Re 188		6×10 <sup>-4</sup>
	Rh 103m		1×10 <sup>-1</sup>
Rhodium (45)	Rh 105		1×10 <sup>-3</sup>
	Rb 86		7×10 <sup>-4</sup>
Rubidium (37)	Ru 97		4×10 <sup>-4</sup>
Ruthenium (44)	Ru 103		8×10 <sup>-4</sup>
	Ru 105		1×10 <sup>-3</sup>
	Ru 106		1×10 <sup>-4</sup>

Nuclear Regulatory Commission

§ 30.70

[See footnotes at end of this table]

Element (atomic number)	Isotope	Col. I	Col. II	
		Gas concentration μCi/ml <sup>1</sup>	Liquid and solid concentration μCi/ ml <sup>2</sup>	
Samarium (62)	Sm 153		8×10 <sup>-4</sup>	
Scandium (21)	Sc 46		4×10 <sup>-4</sup>	
	Sc 47		9×10 <sup>-4</sup>	
	Sc 48		3×10 <sup>-4</sup>	
	Se 75		3×10 <sup>-3</sup>	
Selenium (34)	Se 75		3×10 <sup>-3</sup>	
Silicon (14)	Si 31		9×10 <sup>-3</sup>	
	Ag 105		1×10 <sup>-3</sup>	
Silver (47)	Ag 110m		3×10 <sup>-4</sup>	
	Ag 111		4×10 <sup>-4</sup>	
	Na 24		2×10 <sup>-3</sup>	
	Sr 85		1×10 <sup>-4</sup>	
Sodium (11)	Na 24		2×10 <sup>-3</sup>	
Strontium (38)	Sr 89		1×10 <sup>-4</sup>	
	Sr 91		7×10 <sup>-4</sup>	
	Sr 92		7×10 <sup>-4</sup>	
	S 35	9×10 <sup>-8</sup>	6×10 <sup>-4</sup>	
	Ta 182		4×10 <sup>-4</sup>	
Sulfur (16)	S 35	9×10 <sup>-8</sup>	6×10 <sup>-4</sup>	
Tantalum (73)	Ta 182		4×10 <sup>-4</sup>	
Technetium (43)	Tc 96m		1×10 <sup>-1</sup>	
	Tc 96		1×10 <sup>-3</sup>	
	Te 125m		2×10 <sup>-3</sup>	
	Te 127m		6×10 <sup>-4</sup>	
Tellurium (52)	Te 127		3×10 <sup>-3</sup>	
	Te 129m		3×10 <sup>-4</sup>	
	Te 131m		6×10 <sup>-4</sup>	
	Te 132		3×10 <sup>-4</sup>	
	Tb 160		4×10 <sup>-4</sup>	
	Terbium (65)	Tl 200		4×10 <sup>-3</sup>
		Tl 201		3×10 <sup>-3</sup>
Tl 202			1×10 <sup>-3</sup>	
Tl 204			1×10 <sup>-3</sup>	
Thallium (81)	Tm 170		5×10 <sup>-4</sup>	
	Tm 171		5×10 <sup>-3</sup>	
Thulium (69)	Sn 113		9×10 <sup>-4</sup>	
	Sn 125		2×10 <sup>-4</sup>	
Tin (50)	W 181		4×10 <sup>-3</sup>	
	W 187		7×10 <sup>-4</sup>	
Tungsten (Wolfram) (74)	V 48		3×10 <sup>-4</sup>	
	Vanadium (23)	V 48		3×10 <sup>-4</sup>
Vanadium (23)	Xe 131m	4×10 <sup>-6</sup>		
	Xe 133	3×10 <sup>-6</sup>		
	Xe 135	1×10 <sup>-6</sup>		
	Xenon (54)	Xe 131m	4×10 <sup>-6</sup>	
Ytterbium (70)	Yb 175		1×10 <sup>-3</sup>	
	Y 90		2×10 <sup>-4</sup>	
Yttrium (39)	Y 91m		3×10 <sup>-2</sup>	
	Y 91		3×10 <sup>-4</sup>	
	Y 92		6×10 <sup>-4</sup>	
	Y 93		3×10 <sup>-4</sup>	
	Zn 65		1×10 <sup>-3</sup>	
	Zinc (30)	Zn 69m		7×10 <sup>-4</sup>
		Zn 69		2×10 <sup>-2</sup>
Zr 95			6×10 <sup>-4</sup>	
Zirconium (40)	Zr 97		2×10 <sup>-4</sup>	
	Beta and/or gamma emitting byproduct material not listed above with half-life less than 3 years.	1×10 <sup>-10</sup>	1×10 <sup>-6</sup>	

Footnotes to Schedule A:

<sup>1</sup> Values are given only for those materials normally used as gases.

<sup>2</sup> μCi/gm for solids.

NOTE 1: Many radioisotopes disintegrate into isotopes which are also radioactive. In expressing the concentrations in Schedule A, the activity stated is that of the parent isotope and takes into account the daughters.

NOTE 2: For purposes of §30.14 where there is involved a combination of isotopes, the limit for the combination should be derived as follows:

Determine for each isotope in the product the ratio between the concentration present in the product and the exempt concentration established in Schedule A for the specific isotope when not in combination. The sum of such ratios may not exceed "1" (i.e., unity).

Example:

$$\frac{\text{Concentration of Isotope A in Product}}{\text{Exempt concentration of Isotope A}} + \frac{\text{Concentration of Isotope B in Product}}{\text{Exempt concentration of Isotope B}} \leq 1$$

[30 FR 8185, June 26, 1965, as amended at 35 FR 3982, Mar. 3, 1970; 38 FR 29314, Oct. 24, 1973; 59 FR 5520, Feb. 7, 1994]