

2022 Comparison of NRC Exempt Quantities to State Regulations

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Under the Atomic Energy Act of 1954, the United States Nuclear Regulatory Commission (NRC) has the authority to issue licenses for the use of byproduct material and to exempt byproduct materials from its regulatory control. "Agreement states" are those states that have agreed to regulate activities themselves that would otherwise be regulated directly by the NRC. In non-agreement states, the NRC directly regulates byproduct materials under their jurisdiction.

There are six categories of compatibility into which NRC program elements are placed, which describe the importance and impact of the need for state-to-state compatibility. One might expect that the choice of exempt quantity levels in Title 10 Code of Federal Regulations Part 30 (10 CFR 30) would fall under Category B, or "program elements that cross jurisdictional boundaries and that should be addressed to ensure uniformity of regulation on a nationwide basis."¹ In the case of exempt concentrations or exempt quantities of radioactive materials, if states were to regulate them differently, a radioactive item that might not even be labeled as such could cause legal issues when sent to another receiving state.

Merely referencing the exempt quantities in [10 CFR 30.71 Schedule B](#) is not adequate to determine exempt values for any state. Unfortunately, despite the last revision of the NRC regulation being promulgated in the *Federal Register* in October 2007, there are still 11 states with conflicting values as of the date of this article. It is the intent of this article to provide a reference for those discrepancies to help the reader ensure that they are not accidentally violating the receiving states' regulations.

Table 1 provides a list of the conflicting values.² Isotopes of radium and radon are listed in the NRC column as "N/A" because they are naturally occurring. It is unclear whether or not the states are intending to address artificially enhanced concentrations. It should also be noted that in some states, alpha emitters are given a default exempt value of 0.01 μCi , whereas in the NRC regulation and in other agreement state regulations, there is no exempt value defined for alpha emitters. Table 1 does not include these typographical errors in state regulations that are easy to identify:

- "Vanadium-43 (V-48)" in Arizona's table of exempt quantities
- "Lanthanum 40 (La-140)" and "Terbium 60 (Tb-160)" in Louisiana's table of exempt quantities
- "Dysprosium 166", "Erbium 17", and "Iridium 194" in New Mexico's table of exempt quantities
- "Flourine 18" in New York's table of exempt quantities
- Iodine 129: "0,1 μCi " in Virginia's table of exempt quantities (rather than 0.1 μCi)

It should be noted that these analyses are provided for convenience only and are not to be construed as authoritative. They do not imply any conclusion with respect to any other provision of any laws such as transportation or use of the materials. There are provisions of both federal and state laws that deal with naturally occurring radioactive materials, exempt concentrations, total quantities or numbers of items, and end-use of the materials. For instance, "exempt" generally refers solely to ownership and does not imply permission to purposefully incorporate radioactive materials into consumer products. The reader should consider referring to the full set of applicable regulations when working with radioactive materials.

¹ <https://www.federalregister.gov/d/2017-22514>

² All values in this article are in traditional units because the NRC's values, to which all others are compared, are still in traditional units.

Table 1

State	Nuclides	Exempt Values	
		State (μCi)	NRC (μCi)
Alabama	⁵⁸ Co	0.1*	10
	⁹⁷ Tc	0.1*	100
Arkansas	Other alpha emitters	0.01	-
California	⁴⁷ Ca	100	10
	¹²⁹ I	1	0.1
	¹³¹ I	0.1	1
	¹²⁶ I	0.1*	1
Illinois	¹²⁵ I	0.1*	1
Indiana	⁶⁸ Ge, ¹⁹⁵ Au	100	10
	¹²⁹ I	0	0.1
	²²⁶ Ra	1	-
Louisiana	⁶⁹ Ge	10	0.1
	⁷⁶ As	0.1*	10
New York	¹²⁹ Cs, ⁵⁷ Co, ⁶⁷ Ga, ¹¹¹ In, ¹²³ I	0.1*	100
	¹⁵⁹ Gd	1100	100
	⁶⁸ Ge, ¹⁹⁵ Au, ⁵² Fe, ⁴³ K, ⁸¹ Rb, ⁸⁷ Y, ⁸⁸ Y	0.1*	10
	⁷ Be	100	0.1*
	¹¹⁴ In	1	0.1*
	²²⁶ Ra	0.1	-
Ohio	²²⁴ Ra, ²²⁸ Ra	0.1	-
Pennsylvania	²³¹ Pa, ²²⁶ Ra, ²²⁸ Ra	0.1	-
	²²⁸ Ac, ¹⁹⁶ Au, ¹²⁴ I	1	0.1*
	²²³ Ra, ²²⁴ Ra, ²²⁰ Rn, ²²² Rn	1	-
	⁷ Be, ²⁰⁷ Bi, ²¹² Pb, ³³ P, ²³⁰ Pa	10	0.1*
	¹⁹⁰ Ir, ²⁰³ Pb, ¹⁸³ Re, ¹⁸⁷ Re, ^{96m} Tc	100	0.1*
	¹²⁷ Xe	1000	0.1*
South Carolina	¹¹ C, ¹³ N, ¹⁵ O	10	0.1*
	¹³³ I	10	1
	^{99m} Tc	10	100
	¹⁹⁵ Au	20	10
	²²⁶ Ra	0.1	-
	⁹⁹ Tc	0.1*	10
Washington	¹⁶⁹ Yb	10	0.1*
	²²⁶ Ra	0.1	-

* Values are default for non-alpha radionuclides not specifically listed in the table.

Table 2 provides a list of hyperlinks (as of the week of 9 May 2022) to each agreement state's regulations for exempt quantities. The second column provides the link to the regulatory citation that identifies the use of a particular exempt quantity table. The third column provides either the name of the table within the same document or a link to the table if it is in a separate location. The last column provides the actual rule number and any additional relevant comments.

Table 2

Agreement States	Citation	Exempt Quantity Table	Rule Number/ Comments
(NRC)	10 CFR 30.18 (http://www.nrc.gov/reading-rm/doc-collections/cfr/part030/part030-0018.html)	10 CFR 30.71, Schedule B	10 CFR 30.18
AL	https://www.alabamapublichealth.gov/radiation/assets/part_02.pdf	Schedule B	Rule 420-3-26-.02
AR	https://www.sos.arkansas.gov/uploads/rulesRegs/Arkansas%20Register/2006/nov_dec_2006/016.24.06-007.pdf	Schedule B to Section 2	RH-305
AZ	https://apps.azsos.gov/public_services/Title_09/9-07.pdf	Exhibit B	R9-7-303.(C)
CA	Located on the California Code of Regulations Website under: TITLE 17 (Public Health), Division 1, Chapter 5 [Sanitation (Environmental)], Subchapter 4 (Radiation), Group 2 (Licensing), Article 3, Exemptions	Section 30235, Schedule A	Cal. Admin. Code tit. 17, § 30180.3
CO	https://www.sos.state.co.us/CCR/DisplayRule.do?action=ruleinfo&ruleId=2932&deptID=16&agencyID=141&deptName=Department%20of%20Public%20Health%20and%20Environment&agencyName=Hazardous%20Materials%20and%20Waste%20Management%20Division&seriesNum=6%20CCR%201007-1%20Part%2003	Schedule 3B	6 CCR 1007-1 Part 3.3.2.1
FL	https://www.floridahealth.gov/environmental-health/radiation-control/documents/regs/64E-5PART2-7-1-2015-with-Bond-Table.pdf	Schedule B	64E-5.203(2)
GA	https://rules.sos.ga.gov/GAC/391-3-17	(21)(b), Schedule B	391-3-17-.02(3)(b)1.
IA	https://www.legis.iowa.gov/docs/AC/O/chapter/641.39.pdf	Appendix B	641—39.4(3)b.(1)

Agreement States	Citation	Exempt Quantity Table	Rule Number/ Comments
IL	https://www2.illinois.gov/iema/laws/Documents/Regs/32_330.pdf	Appendix B	32 ILLINOIS ADMINISTRATIVE CODE 330.40(b)(1)
KS	https://www.kdhe.ks.gov/DocumentCenter/View/9862/Kansas-Radiation-Control-Program---Regulations-and-Statutes-PDF?bidId=	K.A.R. 28-35-197a, Schedule B (10 CFR 30.71 adopted by reference)	K.A.R. 28-35-192g
KY	https://apps.legislature.ky.gov/law/kar/titles/902/100/045/	902 KAR 100:080. Exempt quantities. 10 C.F.R. 30.71 Schedule B incorporated by reference	902 KAR 100:045 Section 6
LA	https://deq.louisiana.gov/assets/docs/Legal_Affairs/ERC/33v15Rad.docx	Schedule B	Title 33 Part XV §304.B.
MA	https://www.mass.gov/doc/105-cmr-120-the-control-of-radiation-0/download	105 CMR 120.196: Appendix B Table I (alternately referred to as Table 1)	105 CMR 120.104(B)
MD	https://mde.maryland.gov/programs/Air/RadiologicalHealth/Documents/www.mde.state.md.us/assets/document/air/RH_comar/regs_final_new.pdf	Appendix B	Code of Maryland Regulations 26.12.01.01 C.4(b)(1)
ME	https://www1.maine.gov/sos/cec/rules/10/144/ch220/144c220c.docx	Schedule B	10-144A CMR 220 Part C.3.B(1)
MN	https://www.revisor.mn.gov/rules/4731.3040/	4731.3145	4731.3040 Subp. 1
MS	https://www.sos.ms.gov/adminsearch/ACCCode/00000213c.pdf	10 CFR 30 exempt quantities adopted by reference	Title 15 Part III Subpart 78 Rule 1.3.1
NC	http://reports.oah.state.nc.us/ncac/title%2010a%20-%20health%20and%20human%20services/chapter%2015%20-%20radiation%20protection/chapter%2015%20rules.pdf	10 CFR 30 exempt quantities adopted by reference	10A NCAC 15.0304(e)
ND	https://www.ndlegis.gov/information/acdata/pdf/33-10-03.1.pdf	10 CFR 30 adopted by reference	CHAPTER 33-10-03.1
NE	https://www.nebraska.gov/rules-and-regs/regsearch/Rules/Health_and_Human_Services_System/Title-180/Chapter-03.pdf	180 NAC 3, Appendix 3-B	Title 180 NAC 3-004.02(A)

Agreement States	Citation	Exempt Quantity Table	Rule Number/ Comments
NH	http://www.gencourt.state.nh.us/rules/state_agencies/he-p4023-4039.html	He-P 4096	He-P 4030.03 (g)
NJ	http://www.state.nj.us/dep/rpp/RPR_P_Rules/sub51.pdf	10 CFR 30 incorporated by reference	N.J.A.C. 7:28-51.1
NM	https://www.srca.nm.gov/parts/title20/20.003.0003.html	20.3.3.330 NMAC	20.3.3.302.B(1) NMAC
NV	https://www.leg.state.nv.us/nac/nac-459.html#NAC459Sec184	NAC 459.188	NAC 459.184.5
NY	https://regs.health.ny.gov/content/section-164-exemption-certain-radiation-sources-requirements-part	Appendix 16-A Table 3	NYC Title 10, Section 16.4
OH	http://codes.ohio.gov/oac/3701%3A1-40-11	Appendix	3701:1-40-11(A)
OK	https://www.deq.ok.gov/wp-content/uploads/deqmainresources/410.pdf	10 CFR 30 incorporated by reference	252:410-10-30.
OR	https://secure.sos.state.or.us/oard/viewSingleRule.action?ruleVrsnRsn=60161	10 CFR 30.71 Schedule B incorporated by reference	333-102-0035 (1)
PA	http://www.pacodeandbulletin.gov/Display/pacode?file=/secure/pacode/data/025/chapter217/s217.137.html	10 CFR 30 plus Table 2	217.137(1)
RI	https://rules.sos.ri.gov/regulations/part/216-40-20-7	10 CFR 30 incorporated by reference	216-RICR-40-20-7.4.4
SC	https://scdhec.gov/sites/default/files/Library/Regulations/R.61-63.pdf	RHA 2.24, Schedule B	RHA 2.20.2.5.1
TN	https://publications.tnsosfiles.com/rules/0400/0400-20/0400-20-10.20211130.pdf	Schedule RHS 8-3	Rule 0400-20-10-.04(3)(a)
TX	https://texreg.sos.state.tx.us/public/readtac\$ext.TacPage?sl=R&app=9&p_dir=&p_rloc=&p_tloc=&p_ploc=&pg=1&p_tac=&ti=25&pt=1&ch=289&rl=251	289.251(l)(2)	§289.251(e)(2)(A)
UT	https://adminrules.utah.gov/public/search/R313-19/Current%20Rules	R313-19-71	R313-19-13(2)(b)(i)
VA	https://law.lis.virginia.gov/admincode/title12/agency5/chapter481/section400/	12VAC5-481-3730	12VAC5-481-400.B.1.

Agreement States	Citation	Exempt Quantity Table	Rule Number/ Comments
VT	https://www.healthvermont.gov/sites/default/files/documents/pdf/Radiological%20Health%20and%20NRC%20Rule.Combined.Clean_.2.4.19.pdf	10 CFR 30 incorporated by reference	Section 5-304(B)
WA	http://apps.leg.wa.gov/wac/default.aspx?cite=246-232-010	WAC 246-232-120, Schedule B.	WAC 246-232-010(2)(a)(i)
WI	https://docs.legis.wisconsin.gov/code/admin_code/dhs/110/157/ii/09	DHS 157, Appendix B	DHS 157.09 (2)(b)