

# TABLES & GRAPHICS

Graphic images included in rules are published separately in this tables and graphics section. Graphic images are arranged in this section in the following order: Title Number, Part Number, Chapter Number and Section Number.

Graphic images are indicated in the text of the emergency, proposed, and adopted rules by the following tag: the word "Figure" followed by the TAC citation, rule number, and the appropriate subsection, paragraph, subparagraph, and so on.

Figure: 25 TAC §289.252(l)(1)(C)(iii)(II)

The receipt, possession, use, and transfer of this device, Model \_\_\_\_\_, Serial No. \_\_\_\_\_, are subject to a general license or an equivalent license of the agency, the NRC, or any agreement state. This label shall be maintained on the device in a legible condition. Removal of this label is prohibited.

CAUTION-RADIOACTIVE MATERIAL

\_\_\_\_\_  
(Name of Manufacturer or Distributor);

Figure: 25 TAC §289.252(p)(3)(B)

This radioactive material may be received, acquired, possessed, and used only by physicians, veterinarians, clinical laboratories, or hospitals and only for *in vitro* clinical or laboratory tests not involving internal or external administration of the material, or the radiation therefrom, to human beings or animals. Its receipt, acquisition, possession, use, and transfer are subject to the regulations of the agency, the NRC, or any agreement state.

\_\_\_\_\_; and  
Name of Manufacturer

Figure: 25 TAC §289.252(j)(2)

RADIONUCLIDES	Limit	Unsealed Sources			Sealed Sources
		10 <sup>3</sup>	10 <sup>4</sup>	10 <sup>5</sup>	
Pr-141 Gd-152 Bi-209m U-232 Pu-240 Cm-245 Cf-252 Ce-142 Dy-154 Po-208 U-233 Pu-241 Cm-246 Es-254 Nd-144 Dy-156 Po-209 U-234 Pu-242 Cm-247 Nd-145 Tb-159 Po-210 U-235 Pu-244 Cm-248 Sm-146 Ho-165 Ra-226 U-236 Am-241 Bk-247 Sm-147 Hf-174 Ac-227 Np-235 Am-242m Bk-249 Sm-148 W-180 Th-228 Np-237 Am-243 Cf-248 Gd-148 Pt-190 Th-229 Pu-236 Cm-242 Cf-249 Gd-150 Pb-210 Th-230 Pu-238 Cm-243 Cf-250 Gd-151 Bi-209 Pa-231 Pu-239 Cm-244 Cf-251 and any alpha-emitting radionuclide not listed above or mixtures of unknown alpha emitters of unknown composition.	0.01 µCi	0.01 mCi	0.1 mCi	1.0 mCi	100 Ci
Be-10 Fe-60 Rh-102 Te-123 Sm-145 Lu-175 Ir-199m Al-26 Zn-70 Pd-107 Te-130 Nd-150 Lu-176 Pt-192 Si-32 Ge-68 Ag-108m I-129 Eu-150 Lu-177m Pt-198 Ar-39 Ge-76 Cd-113m La-137 Tb-157 Hf-172 Hg-194 K-40 Kr-81 Cd-116 La-138 Tb-158 Hf-182 Pb-202 Ar-42 Sr-90 Sn-121m Ce-139 Dy-159 Ta-179 Pb-205 Ca-48 Zr-96 Sn-123 Pm-143 Ho-166m Re-184m Bi-208 Ti-44 Mo-100 Sn-124 Pm-144 Lu-173 Re-187 Ra-228 V-49 Tc-98 Sn-126 Pm-145 Lu-174 Re-189 Np-236 V-50 Rh-101 Te-121m Pm-146 Lu-174m Os-194 Bk-248 and any other alpha-emitting radionuclides not listed above or mixtures of beta emitters of unknown composition.	0.1 µCi	0.1 mCi	1.0 mCi	10 mCi	1.0 kCi
Na-22 Ru-106 Cs-134 Eu-152 Bi-210 U (natural) Co-60 Ag-110m Ce-144 Eu-154 Th (natural)	1.0 µCi	1.0 mCi	10 mCi	100 mCi	10 kCi
Cl-36 Ni-63 Rb-87 Cd-109 Ba-133 Gd-153 Tm-171 Ca-45 Zn-65 Zr-93 In-115 Ba-135 Eu-155 W-181 Mn-54 Se-75 Nb-93m Sb-125 Cs-137 Tm-170 Tl-204	10 µCi	10 mCi	100 mCi	1.0 Ci	100 kCi
C-14, Co-57 Kr-85 Tc-99 Ir-194 U-238 Fe-55 Ni-59 Tc-97 Pt-193 Th-232	100 µCi	100 mCi	1.0 Ci	10 Ci	1.0 MCI
H-3	1.0 mCi	1 Ci	10 Ci	100 Ci	10 MCI

Radioactive Material*	Release Fraction	Quantity (curies)	Radioactive Material*	Release Fraction	Quantity (curies)	Radioactive Material*	Release Fraction	Quantity (curies)
Ac-228 (89)	0.001	4,000	In-114m (49)	0.01	1,000	V-48 (23)	0.01	7,000
Am-241 (95)	0.001	2	Ir-192 (77)	0.001	40,000	Xe-133 (54)	1.0	900,000
Am-242 (95)	0.001	2	Fe-55 (26)	0.01	40,000	Y-91 (39)	0.01	2,000
Am-243 (95)	0.001	2	Fe-59 (26)	0.01	7,000	Zn-65 (30)	0.01	5,000
Sb-124 (51)	0.01	4,000	Kr-85 (36)	1.0	6,000,000	Zr-93 (40)	0.01	400
Sb-126 (51)	0.01	6,000	Pb-210 (82)	0.01	8	Zr-95 (40)	0.01	5,000
Ba-133 (56)	0.01	10,000	Mn-56 (25)	0.01	60,000	Any other β-γ emitter	0.01	10,000
Ba-140 (56)	0.01	30,000	Hg-203 (80)	0.01	10,000	Mixed fission products	0.01	1,000
Bi-207 (83)	0.01	5,000	Mo-99 (42)	0.01	30,000	Mixed corrosion products	0.01	10,000
Bi-210 (83)	0.01	600	Np-237 (93)	0.001	2	Contaminated equipment, β-γ	0.001	10,000
Cd-109 (48)	0.01	1,000	Ni-63 (28)	0.01	20,000	Irradiated material, any form other than solid non- combustible	0.01	1,000
Cd-113 (48)	0.01	80	Nb-94 (41)	0.01	300	Irradiated material, solid non- combustible	0.001	10,000
Ca-45 (20)	0.01	20,000	P-32 (15)	0.5	100	Mixed radioactive waste, β-γ ***	0.01	1,000
Cf-252 (98)	0.001	9(20mg)	P-33 (15)	0.5	1,000	Packaged waste, β-γ	0.001	10,000
C-14 (6)**	0.01	50,000	Po-210 (84)	0.01	10	Any other α emitter	0.001	2
Ce-141 (58)	0.01	10,000	K-42 (19)	0.01	9,000	Contaminated equipment α	0.0001	20
Ce-144 (58)	0.01	300	Pm-145 (61)	0.01	4,000	Packaged waste α ***	0.0001	20
Cs-134 (55)	0.01	2,000	Pm-147 (61)	0.01	4,000			
Cs-137 (55)	0.01	2,000	Ra-226 (88)	0.001	100			
Cl-36 (17)	0.5	100	Ru-106 (44)	0.01	200			
Cr-51 (24)	0.01	300,000	Sm-151 (62)	0.01	4,000			
Co-60 (27)	0.001	5,000	Sc-46 (21)	0.01	3,000			
Cu-64 (29)	0.01	200,000	Se-75 (34)	0.01	10,000			
Cm-242 (96)	0.001	60	Ag110m (47)	0.01	1,000			
Cm-243 (96)	0.001	3	Na-22 (11)	0.01	9,000			
Cm-244 (96)	0.001	4	Na-24 (11)	0.01	10,000			
Cm-245 (96)	0.001	2	Sr-89 (38)	0.01	3,000			
Eu-152 (63)	0.01	500	Sr-90 (38)	0.01	90			
Eu-154 (63)	0.01	400	Sr-35 (16)	0.5	900			
Eu-155 (63)	0.01	3,000	Tc-99 (43)	0.01	10,000			
Ge-68 (32)	0.01	2,000	Tc-99m (43)	0.01	400,000			
Gd-153 (64)	0.01	5,000	Te-127m(52)	0.01	5,000			
Au-198 (79)	0.01	30,000	Te-129m(52)	0.01	5,000			
Hf-172 (72)	0.01	400	Tb-160 (65)	0.01	4,000			
Hf-181 (72)	0.01	7,000	Tm-170 (69)	0.01	4,000			
Ho-166 (67)	0.01	100	Sn-113 (50)	0.01	10,000			
H-3 (1)	0.5	20,000	Sn-123 (50)	0.01	3,000			
I-125 (53)	0.5	10	Sn-126 (50)	0.01	1,000			
I-131 (53)	0.5	10	Ti-144 (22)	0.01	100			

- \* For combinations of radionuclides, consideration of the need for an emergency plan is required if the sum of the ratios of the quantity of each radionuclide authorized to the quantity listed for that radionuclide in this paragraph exceeds one. ( ) indicates atomic number.
- \*\* Non CO forms only.
- \*\*\* Waste packaged in Type B containers does not require an emergency plan.

## Category 1 and Category 2 Radioactive Material Thresholds

The terabecquerel (TBq) values are the regulatory standard. The curie (Ci) values specified are obtained by converting from the TBq value. The curie values are provided for practical usefulness only.

Radioactive material	Category 1 (TBq)	Category 1 (Ci)	Category 2 (TBq)	Category 2 (Ci)
Americium-241	60	1,620	0.6	16.2
Americium-241/Be	60	1,620	0.6	16.2
Californium-252	20	540	0.2	5.40
Cobalt-60	30	810	0.3	8.10
Curium-244	50	1,350	0.5	13.5
Cesium-137	100	2,700	1	27.0
Gadolinium-153	1,000	27,000	10	270
Iridium-192	80	2,160	0.8	21.6
Plutonium-238	60	1,620	0.6	16.2
Plutonium-239/Be	60	1,620	0.6	16.2
Promethium-147	40,000	1,080,000	400	10,800
Radium-226	40	1,080	0.4	10.8
Selenium-75	200	5,400	2	54.0
Strontium-90	1,000	27,000	10	270
Thulium-170	20,000	540,000	200	5,400
Ytterbium-169	300	8,100	3	81.0

Note: Calculations Concerning Multiple Sources or Multiple Radionuclides

The "sum of fractions" methodology for evaluating combinations of multiple sources or multiple radionuclides is to be used in determining whether a location meets or exceeds the threshold and is thus subject to the requirements of §289.252(ii) of this title.

I. If multiple sources of the same radionuclide and/or multiple radionuclides are aggregated at a location, the sum of the ratios of the total activity of each of the radionuclides must be determined to verify whether the activity at the location is less than the category 1 or category 2 thresholds in Figure: 25 TAC §289.252(jj)(9), as appropriate. If the calculated sum of the ratios, using the equation below, is greater than or equal to 1.0, then the applicable requirements of §289.252(ii) of this title apply.

II. First determine the total activity for each radionuclide from Figure: 25 TAC §289.252(jj)(9). This is done by adding the activity of each individual source, material in any device, and any loose or bulk material that contains the radionuclide. Then use the equation below to calculate the sum of the ratios by inserting the total activity of the applicable radionuclides in the numerator of the equation and, in the denominator of the equation, the corresponding activity threshold from Figure: 25 TAC §289.252(jj)(9) which is applicable.

Calculations must be performed in metric values (i.e., TBq) and the numerator and denominator values must be in the same units.

$R_1$  = total activity for radionuclide 1

$R_2$  = total activity for radionuclide 2

$R_N$  = total activity for radionuclide n

$AR_1$  = activity threshold for radionuclide 1

$AR_2$  = activity threshold for radionuclide 2

$AR_N$  = activity threshold for radionuclide n

$$\sum_1^n \left[ \frac{R_1}{AR_1} + \frac{R_2}{AR_2} + \frac{R_n}{AR_n} \right] \geq 1.0$$

Rule Cross Reference	Name of Records/Documents	Time Interval for Keeping Record/Document
(l)(7)(D)	Documentation of all receipts and transfers for the manufacture and commercial distribution of devices	3 years after the date of the event (i.e. receipt or transfer)
(r)(2)(C)	Records of tests and checks of measurements of the radioactivity of radioactive drugs	A minimum of 3 years after when the record was made
(r)(3)(G)	A complete description of any deviation from the manufacturer's instructions when eluting generators or processing radioactive materials with a reagent kit	3 years after the record was made
(s)(4)(G)	Records including the name, address, and point of contact for each general licensee to whom depleted uranium in products or devices is distributed	2 years after the record was made
(x)(10)	Test results and records for generator eluates of molybdenum-99 breakthrough or strontium-82 and strontium-85 contamination	3 years after the record was made
(cc)(6)(B)(v)	All information supporting the report of a transfer of small quantities of source material	1 year after the transfer event is included in a report to the agency, the NRC, or any agreement state
(gg)(7)	Records of information important to the safe and effective decommissioning of the facility	Until the license is terminated by the agency
(ii)(3)(G)(i)	Confirmation of receipt of a notification to the individual of the right to complete, correct and explain any reasons for denial of personnel access authorization	1 year after the date of the notification
(ii)(3)(H)(i)	Documentation regarding the trustworthiness and reliability of individual employees	3 years after the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material
(ii)(3)(H)(ii)	Copy of the current access authorization program procedures	3 years after the procedure is no longer needed
(ii)(3)(H)(ii)	Superseded material for any portion(s) of the access authorization program procedures that is superseded	3 years after the procedure or any portion(s) of the procedure is superseded

Rule Cross Reference	Name of Records/Documents	Time Interval for Keeping Record/Document
(ii)(3)(H)(iii)	List of persons approved for unescorted access authorization	3 years after the list is superseded or replaced
(ii)(4)(A)(ii)	Certification in writing that each individual employee's identification was properly reviewed and any documents used for the review	3 years after the date an individual granted unescorted access to category 1 or category 2 quantities of radioactive material no longer requires such access, or, for an individual denied access, 3 years from the date the record was made
(ii)(6)(A)(xii)	Written confirmation of an active federal security clearance from the federal agency or employer that granted the clearance or reviewed the criminal history records check of the individual	3 years after the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material
(ii)(6)(A)(xiii)	Written verification from a service provider licensee for an individual employed by that service provider that it has conducted a background investigation for the individual and approved that individual for unescorted access to category 1 or category 2 quantities of radioactive material	3 years after the date the individual employee no longer requires unescorted access to category 1 or category 2 quantities of radioactive material
(ii)(6)(B)	Written confirmation from a federal agency or employer that reviewed the criminal history records check for an individual who has had a favorably adjudicated U.S. Government criminal history records check within the last 5 years, under a comparable U.S. Government program involving fingerprinting and an FBI identification and criminal history records check provided that he or she makes available the appropriate documentation	3 years after the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material
(ii)(7)(E)	All fingerprint and criminal history records on an individual (including data indicating no record) received from the FBI, or a copy of these records if the individual's file has been transferred	3 years after the date the individual no longer requires unescorted access to category 1 or category 2 quantities of radioactive material

§289.252 Rule Cross Reference	Name of Records/Documents	Time Interval for Keeping Record/Document
(ii)(8)(C)	Access authorization program review records	3 years after the record was made
(ii)(10)(A)(iv)	Copy of the current security plan	3 years after the record is no longer needed
(ii)(10)(A)(iv)	Copy of superseded material from any portion of the security plan that is superseded	3 years after the record is superseded
(ii)(10)(B)(iii)	Copy of the current implementing procedures	3 years after the procedure is no longer needed
(ii)(10)(B)(iii)	Any superseded portion(s) of the implementing procedures	3 years after the record is superseded
(ii)(10)(C)(iv)	Copies of initial and refresher training	3 years after the date of the training
(ii)(10)(D)(viii)(I)	Copy of the information protection procedures	3 years after the document is no longer needed
(ii)(10)(D)(viii)(II)	List of individuals approved for access to the security plan or implementing procedures	3 years after the document is no longer needed
(ii)(11)(C)	Documentation of the licensee's efforts to coordinate with the LLEA	3 years after the record was made
(ii)(14)(B)	Records on maintenance and testing activities	3 years after the record was made
(ii)(16)(C)	Security program review documentation	3 years after the record was made
(ii)(18)(D)	Verification documentation for any transfer of category 1 or category 2 quantity of radioactive material	3 years after the record was made
(ii)(20)(E)	Documentation, and any revisions thereof, for the preplanning and coordination of shipments of category 1 or category 2 quantities of radioactive material	3 years after the record was made
(ii)(21)(E)	Copy of the advance notification and any revision and cancellation notices for the shipment of category 1 quantities of radioactive material through or across boundaries of a State	3 years after the record was made
(II)(2)	Documentation of any installation, repair, or maintenance of devices containing sealed sources of radioactive material	5 years after date of service

Figure: 43 TAC §215.139(c)

If a new license applicant is:	Maximum number of metal dealer's license plates issued during the first license term is:
1. a franchised motor vehicle dealer	5
2. a franchised motorcycle dealer	5
3. an independent motor vehicle dealer	2
4. an independent motorcycle dealer	2
5. a franchised or independent travel trailer dealer	2
6. a trailer or semi-trailer dealer	2
7. an independent mobility motor vehicle dealer	2
8. a wholesale motor vehicle dealer	1

Figure: 43 TAC §215.139(e)

If a vehicle dealer is:	Maximum number of metal dealer's license plates issued per license term is:
1. a franchised motor vehicle dealer	30
2. a franchised motorcycle dealer	10
3. an independent motor vehicle dealer	3
4. an independent motorcycle dealer	3
5. a franchised or independent travel trailer dealer	3
6. a trailer or semi-trailer dealer	3
7. an independent mobility motor vehicle dealer	3
8. a wholesale motor vehicle dealer	1

Figure: 43 TAC §215.139(f)(1)

If a vehicle dealer is:	Number of additional metal dealer's license plates issued to a dealer that demonstrates a need through proof of sales is:
1. a wholesale motor vehicle dealer	1
2. a dealer selling fewer than 50 vehicles during the previous 12-month period	1
3. a dealer selling 50 to 99 vehicles during the previous 12-month period	5
4. a dealer selling more than 200 vehicles during the previous 12-month period	any number of metal dealer's license plates the dealer requests.

Figure: 43 TAC §215.153(c)(2)(A) [~~§215.153(e)(1)~~]

APPENDIX A-1

**TEXAS DEALER**

**VEHICLE OWNED BY JOHN DOE AUTO SALES**

THIS VEHICLE TEMPORARILY REGISTERED WITH STATE UNDER TAG #

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**EXPIRES**

		-		-			
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**VIN** \_\_\_\_\_

**FOR INTRANSIT, ROAD TESTING, DEMONSTRATION AND USE  
BY CHARITABLE ORGANIZATIONS**

DEALER'S TEMPORARY [DEALER] TAG – ASSIGNED TO SPECIFIC VEHICLE

Figure: 43 TAC §215.153(c)(2)(B) [§215.153(e)(2)]

APPENDIX A-2

<p>● <b>TEXAS DEALER</b> ●</p> <p><b>VEHICLE OWNED BY JOHN DOE AUTO SALES</b></p> <p>THIS VEHICLE TEMPORARILY REGISTERED WITH STATE UNDER TAG #</p>						
<b>EXPIRES</b>		-		-		
<p>● <b>Authorized Agent Tag</b> ●</p> <p><b>FOR INTRANSIT, ROAD TESTING, DEMONSTRATION AND USE</b></p> <p><b>BY CHARITABLE ORGANIZATIONS</b></p>						

DEALER'S TEMPORARY [DEALER] TAG – ASSIGNED TO AGENT

Figure: 43 TAC §215.153(c)(2)(C) [§215.153(e)(3)]

APPENDIX B-1

<b>TEXAS BUYER</b>											
THIS VEHICLE TEMPORARILY REGISTERED WITH STATE UNDER TAG #											
<b>EXPIRES</b>						-			-		
VIN	_____			SELLER: ABC FANTASTIC FABULOUS AUTO SALES							

BUYER'S TEMPORARY TAG

Figure: 43 TAC §215.153(c)(2)(D) [§215.153(e)(4)]

APPENDIX B-2

<b>TEXAS BUYER – INTERNET</b>										
THIS VEHICLE TEMPORARILY REGISTERED WITH STATE UNDER TAG #										
<b>4587650</b>										
<b>EXPIRES</b>					-			-		
VIN _____										
<b>SELLER: ABC FANTASTIC FABULOUS AUTO SALES</b>										

PREPRINTED INTERNET-DOWN TEMPORARY [INTERNET-DOWN-BUYER'S] TAG

Figure: 43 TAC §215.153(c)(2)(E) [§215.153(e)(5)]

APPENDIX C-1

**TEXAS CONVERTER**  
**VEHICLE OWNED BY JOHN DOE CONVERSIONS**  
THIS VEHICLE TEMPORARILY REGISTERED WITH STATE UNDER PERMIT #

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**EXPIRES**

		-		-			
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VIN \_\_\_\_\_

FOR INTRANSIT, ROAD TESTING, DEMONSTRATION

CONVERTER'S TEMPORARY [CONVERTER] TAG

Figure: 43 TAC §215.250(h)(1) [§215.250(e)(1)]

Dealer Discount with Sales Price:

SRP [MSRP]	\$20,000
Less Dealer Discount	<u>1,000</u>
Sales Price	\$19,000

Dealer Discount without Sales Price:

"\$1,000 Discount Off SRP"

Figure: 43 TAC §215.250(h)(2) [~~§215.250(e)(2)~~]

Customer Rebate with Sales Price:

<u>SRP</u> [ <del>Advertised Price</del> ]	\$18,000
Less Rebate	<u>500</u>
Sales Price	\$17,500

Customer Rebate without Sales Price:

"\$500 Rebate Off SRP"

Figure: 43 TAC §215.250(h)(3) [~~§215.250(e)(3)~~]

Customer Rebate and Dealer Discount with Sales Price:

<u>SRP</u> [ <del>MSRP</del> ]	\$20,000
Less Rebate	500
Less Dealer Discount	<u>500</u>
<u>Sales</u> [ <del>Sale</del> ] Price	\$19,000

Customer Rebate and Dealer Discount without Sales Price:

"\$1,000 Savings Off SRP (\$500 Rebate and \$500 Dealer Discount)"

Figure: 43 TAC §215.250(i) [~~§215.250(d)~~]

Option Package Discount with Sales Price:

Total [ <del>Motor</del> ] Vehicle Plus Options	\$10,995
Option Package Discount	1,000
<u>SRP</u> [ <del>MSRP</del> ]	9,995
Less Rebate	500
Less Dealer Discount	<u>500</u>
<u>Sales</u> [ <del>Sale</del> ] Price	\$8,995

Option Package Discount without Sales Price:

"Total Savings \$2,000 (\$1,000 Option Package Discount; \$500 rebate, and \$500 dealer discount off SRP)"

Figure: 43 TAC §215.250(j) [~~§215.250(e)~~]

Limited Rebate with Featured Sales Price:

<u>SRP [MSRP]</u>	<u>\$10,995</u> [ <del>\$9,995</del> ]
Less Rebate	<u>1000</u> [ <del>500</del> ]
Less Dealer Discount	<u>1000</u> [ <del>500</del> ]
<u>FEATURED SALES PRICE</u>	<u>\$8,995</u>
<u>[Sale Price]</u>	

Texas Residents receive an additional \$500 off      \$8,495

Limited Rebate with Featured Savings:

Featured savings available to any and all members of the buying public:

\$2,000 DISCOUNT OFF SRP

Savings includes \$1,000 rebate and \$1,000 dealer discount

Texas resident save an additional \$500

[FIRST-TIME BUYERS RECEIVE  
—ADDITIONAL \$500 OFF]