

This is an amendment to 20.3.1 NMAC, Section 7, effective 8/10/2021.

20.3.1.7 DEFINITIONS: As used in these regulations, these terms have the definitions as set forth below.

- A. “Accelerator”** (See particle accelerator).
- B. “Accelerator produced material”** means any material made radioactive by exposure to radiation from a particle accelerator.
- C. “Act”** means the Radiation Protection Act (Sections 74-3-1 through 74-3-16, NMSA 1978).
- D. “Agreement state”** means any state with which the United States nuclear regulatory commission (NRC) or the United States atomic energy commission (AEC) has entered into an effective agreement under Section 274b of the Atomic Energy Act, as amended (73 Stat. 689).
- E. “Board”** means the environmental improvement board.
- F. “Byproduct material”** means:
 - (1) any radioactive material, (except special nuclear material), yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material;
 - (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content, including discrete surface wastes resulting from uranium or thorium solution extraction processes; underground ore bodies depleted by these solution extraction operations do not constitute byproduct material within this definition;
 - (3) any discrete source of radium-226 that is produced, extracted or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical or research activity;
 - (4) any material that:
 - (a) has been made radioactive by use of a particle accelerator; and
 - (b) is produced, extracted or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical or research activity; or
 - (5) any discrete source of naturally occurring radioactive material, other than source material, that
 - (a) NRC, in consultation with the administrator of the environmental protection agency (EPA), the secretary of energy, the secretary of homeland security, and the head of any other appropriate federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and
 - (b) before, on, or after August 8, 2005, is extracted or converted after extraction for use in a commercial, medical or research activity.
- G. “Calibration”** means the quantitative evaluation and adjustment, as deemed necessary by the department, of radiation measuring instruments by a department approved laboratory. Calibration includes the determination of:
 - (1) the response or reading of an instrument relative to a series of known radiation values over the range of the instrument, or
 - (2) the strength of a source of radiation relative to a standard using national institute of standards and technology (NIST) traceable sources and approved techniques.
- H. “CFR”** means code of federal regulations.
- I. “Chelating agent”** means amine polycarboxylic acids, hydroxycarboxylic acids, gluconic acid and polycarboxylic acids.
- J. “Commercial waste disposal”** means disposal of radioactive waste as a business enterprise.
- K. “Consortium”** means an association of medical use licensees and a PET radionuclide production facility in the same geographical area that jointly own or share in the operation and maintenance cost of the PET radionuclide production facility that produces PET radionuclides for use in producing radioactive drugs within the consortium for noncommercial distributions among its associated members for medical use. The PET radionuclide production facility within the consortium must be located at an educational institution or a federal facility or a medical facility.
- L. “Council”** means the radiation technical advisory council (RTAC).
- M. “Curie”** means that amount of radioactive material which disintegrates at the rate of 37 billion atoms per second.
- N. “Cyclotron”** means a particle accelerator in which the charged particles travel in an outward spiral or circular path. A cyclotron accelerates charged particles at energies usually in excess of 10 megaelectron volts and is commonly used for production of short half-life radionuclides for medical use.

O. “**Decommission**” means to remove a facility or site safely from service and reduce residual radioactivity to a level that permits:

- (1) release of the property for unrestricted use and termination of the license; or
- (2) release of the property under restricted conditions and termination of the license.

P. “**Department**” means the environment department, its successors, or its predecessors, the environmental improvement agency, or the environmental protection [~~improvement~~] division of the [~~health and environment~~] environment department.

Q. “**Depleted uranium**” means the source material uranium which the isotope uranium-235 is less than 0.711 weight percent of the total uranium present. Depleted uranium does not include special nuclear material.

R. “**Discrete source**” means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical or research activities.

S. “**DOE**” means the United States department of energy established by the Department of Energy Organization Act (Public Law 95-91, 91 Stat. 565, 42 U.S.C. 7101 et. seq.) to the extent that the DOE, or its duly authorized representatives, exercises functions formerly vested in the United States atomic energy commission (AEC), its chairman, members, officers and components and transferred to the United States energy research and development administration (ERDA) and to the administrator thereof pursuant to sections 104(b), (c) and (d) of the Energy Reorganization Act (Public Law 93-438, 88 Stat. 1233 at 1237, 42 U.S.C. 5814) and retransferred to the secretary of energy pursuant to section 301(a) of the Department of Energy Organization Act (Public Law 95-91, 91 Stat. 565 at 577-578, 42 U.S.C. 7151).

T. “**DOT**” means the United States department of transportation.

U. “**EPA**” means the United States environmental protection agency.

V. “**FDA**” means the United States food and drug administration.

W. “**Former U.S. atomic energy commission (AEC) or NRC licensed facilities**” means nuclear reactors, nuclear fuel reprocessing plants, uranium enrichment plants or critical mass experimental facilities where AEC or NRC licenses have been terminated.

X. “**Government agency**” means any state or federal executive department, commission, independent establishment, corporation, wholly or partly owned by any state or the United States of America which is an instrumentality of the state or United States, or any board, bureau, division, service, office, officer, authority, administration or other establishment in the executive branch of the government.

Y. “**Hazardous waste**” means those wastes designated as hazardous by EPA regulations in 40 CFR Part 261.

Z. “**Healing arts**” means those professional disciplines authorized by the laws of this state to use x-rays or radioactive material in the diagnosis or treatment of human or animal disease.

AA. “**Human use**” means the internal or external administration of radiation or radioactive material to human beings for the purpose of medical diagnosis or therapy.

BB. “**Individual**” means any human being.

CC. “**Inspection**” means an official examination or observation including, but not limited to, tests, surveys and monitoring to determine compliance with rules, regulations, orders, requirements and license or registration conditions of the department.

DD. “**License**” means a license issued by the department in accordance with 20.3 NMAC.

EE. “**Licensed material**” means radioactive material received, possessed, used, transferred or disposed of under a general or specific license issued by the department.

FF. “**Licensee**” means the holder of a license.

GG. “**Licensing state**” means any state with regulations equivalent to the suggested state regulations for control of radiation (SSRCR) relating to, and an effective program for, the regulatory control of NARM (as defined in 20.3.1.7 NMAC) and which has been granted final designation by the conference of radiation control program directors, incorporated (CRCPD).

HH. “**Lost or missing licensed material**” means licensed material whose location is unknown. This definition includes, but is not limited to, material that has been shipped but has not reached its planned destination and whose location cannot be readily traced in the transportation system.

II. “**Major processor**” means a user processing, handling or manufacturing radioactive material exceeding type A quantities as unsealed sources or material, or exceeding 4 times type B quantities as sealed sources, but does not include nuclear medicine programs, universities, industrial radiographers or small industrial programs. Type A and B quantities are defined in 10 CFR Part 71.4.

JJ. “**Mixed waste**” contains both hazardous waste (as defined by Resource Conservation and Recovery Act (RCRA) and its amendments) and radioactive waste (as defined by Atomic Energy Act (AEA) and its

a amendments). It is jointly regulated by NRC or NRC's agreement states and EPA or EPA's RCRA authorized states. The fundamental and most comprehensive statutory definition is found in the Federal Facilities Compliance Act (FFCA) where Section 1004(41) was added to RCRA: "The term 'mixed waste' means waste that contains both hazardous waste and source, special nuclear, or byproduct material subject to the Atomic Energy Act."

KK. "NARM" means any naturally occurring or accelerator-produced radioactive material. It does not include source or special nuclear material.

LL. "Natural radioactivity" means radioactivity of naturally occurring nuclides.

MM. "NRC" means the United States nuclear regulatory commission or its duly authorized representatives.

NN. "Ore refineries" means all processors of a radioactive material ore including uranium mills or other source material extraction facilities.

OO. "Particle accelerator" (accelerator) means any machine capable of accelerating electrons, protons, deuterons or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, "accelerator" is an equivalent term. Particle accelerators which intentionally produce radioactive materials or produce radioactive materials incidental to the operation of an accelerator shall be subject to the licensing requirements in 20.3.3 NMAC. Particle accelerators which produce radiation for research, diagnostic or therapeutic purposes shall be subject to the registration requirements in 20.3.2 and 20.3.9 NMAC.

PP. "Person" means:

(1) any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, government agency other than NRC or DOE, any state or any political subdivision of or any political entity within a state, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and

(2) any legal successor, representative, agent or agency of the foregoing.

QQ. "PET" means positron emission tomography.

RR. "Qualified expert" means an individual having the knowledge and training to measure ionizing radiation, to evaluate safety techniques, and to advise regarding radiation protection needs; for example, individuals certified in the appropriate field by the American board of radiology (ABR), or the American board of health physics (ABHP), or the American board of medical physics (ABMP) or those having equivalent qualifications. With reference to the calibration of radiation therapy equipment, an individual having, in addition to the above qualifications, training and experience in the clinical applications of radiation physics to radiation therapy; for example, individuals certified in therapeutic radiological physics or x-ray and radium physics by the ABR, or those having equivalent qualifications. With reference to providing medical physics services to certified mammographic facilities, such individuals must meet the requirements as defined by the FDA.

SS. "Radiation" (ionizing radiation), as used in this chapter, means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons and other particles capable of producing ions. Radiation, as used in this chapter, does not include non-ionizing radiation, such as radiowaves or microwaves, visible, infrared or ultra violet light.

TT. "Radiation machine" means any device capable of producing radiation except those devices with radioactive material as the only source of radiation.

UU. "Radiation safety officer" means one who has the knowledge and responsibility to apply appropriate radiation protection regulations.

VV. "Radioactive material" means any material in any physical or chemical form which emits radiation spontaneously.

WW. "Radioactivity" means the transformation of unstable atomic nuclei by the emission of radiation.

XX. "Radioisotope" (see radioactive material).

YY. "Radionuclide" (see radioactive material).

ZZ. "Registrant" means a holder of a registration and any person who is registered or legally obligated to register with the department pursuant to 20.3.2 NMAC or 20.3.9 NMAC.

AAA. "Registration" (certificate of registration) means a registration issued by the department pursuant to 20.3.2 NMAC or 20.3.9 NMAC.

BBB. "Regulation" means any rule adopted pursuant to the act.

CCC. "Regulations of the U.S. department of transportation" (DOT) means the regulations in 49 CFR Parts 100-185.

DDD. "Research and development" means:

(1) theoretical analysis, exploration or experimentation; or

(2) the extension of investigative findings and theories of a scientific or technical nature into practical application for experimental and demonstration purposes, including the experimental production and testing of models, devices, equipment, materials and processes. Research and development does not include the internal or external administration of radiation or radioactive material to human beings.

EEE. “Sealed source” means any radioactive material that is encased in a capsule designed to prevent leakage or escape of the radioactive material.

FFF. “Sealed source and device registry” means the national registry that contains all the registration certificates, generated by both NRC and the agreement states that summarize the radiation safety information for the sealed sources and devices and describe the licensing and use conditions approved for the product.

GGG. “Secretary” means the secretary of the New Mexico environment department.

HHH. “SI” means the international system of units.

III. “Site boundary” means that line beyond which the land or property is not owned, leased or otherwise controlled by the licensee or registrant.

JJJ. “Source material” means:

- (1) uranium or thorium, or any combination thereof, in any physical or chemical form; or
- (2) ores that contain by weight one-twentieth of one percent (0.05 percent) or more of uranium, thorium or any combination thereof; source material does not include special nuclear material.

KKK. “Source material milling” means any activity which results in the production of byproduct as defined in Paragraph (2) of Subsection F of this section.

LLL. “Source of radiation” means any radioactive material, device or equipment emitting or capable of producing radiation.

MMM. “Special form radioactive material” means radioactive material that satisfies the conditions in 10 CFR 71.75

NNN. “Special nuclear material” means:

- (1) plutonium, uranium-233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the NRC, pursuant to the provisions of Section 51 of the Atomic Energy Act determines to be special nuclear material, but does not include source material; or

- (2) any material artificially enriched by any of the foregoing but does not include source material.

OOO. “Special nuclear material in quantities not sufficient to form a critical mass” means uranium enriched in the isotope U-235 in quantities not exceeding 350 grams of contained U-235; uranium-233 in quantities not exceeding 200 grams; plutonium in quantities not exceeding 200 grams or any combination of them in accordance with the following formula: for each kind of special nuclear material, determine the ratio between the quantity of that special nuclear material and the quantity specified above for the same kind of special nuclear material. The sum of such ratios for all of the kinds of special nuclear material in combination shall not exceed 1 (i.e. unity). For example, the following quantities in combination would not exceed the limitation and are within the formula: $175 \text{ (grams contained U-235)} / 350 + 50 \text{ (grams U-233)} / 200 + 50 \text{ (grams Pu)} / 200 = 1$.

PPP. “Test” means a method for determining the characteristics of conditions of sources of radiation or components thereof.

QQQ. “These regulations” means all parts of 20.3 NMAC.

RRR. “Unrefined and unprocessed ore” means ore in its natural form prior to any processing such as grinding, roasting, beneficiating or refining.

SSS. “Waste” (radioactive waste) means those low-level radioactive wastes containing radioactive material which is acceptable for disposal in a land disposal facility. For the purposes of this chapter, excluded from the definition of “waste” are:

- (1) high-level radioactive waste or spent nuclear fuel as defined in section 2 of the Nuclear Waste Policy Act;

- (2) transuranic waste as defined in section 11.(ee) of the Atomic Energy Act; or

- (3) byproduct material as defined in Paragraphs (2), (3), (4) and (5) of the definition of *byproduct material* set forth in this section.

[20.3.1.7 NMAC - Rp, 20.3.1.7 NMAC, 4/30/2009; A, 6/13/2017; A, 8/10/2021]