

Title 194 - Department of Environmental Quality

Chapter 1 - DEFINITIONS

001 "Act" or "the Act" means the Low-level Radioactive Waste Disposal Act, Neb. Rev. Stat. §81-1578 et seq.

002 "Active maintenance" means any significant activity needed during the period of institutional control to maintain or to ensure that performance objectives in Chapter 4 are met. Such active maintenance includes ongoing activities such as pumping and treatment of water from a disposal unit or one-time measures such as replacement of a disposal unit cover. Active maintenance does not include custodial care activities such as repair of fencing, repair or replacement of monitoring equipment, revegetation, minor repair of disposal unit covers, and general disposal site upkeep such as mowing grass.

003 "Applicant" means a person who has filed an application for a license from the department under this Title.

004 "Buffer zone" means a portion of the disposal site that is controlled by the licensee and that lies under the disposal units and between the disposal units and the boundary of the site.

005 "Byproduct material" means:

005.01 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; and

005.02 The tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

006 "Chelating agent" means those agents relating to, or capable of combining with (a metal) so as to form a ring structure held by coordination bonds, e.g., a chelate ring. Chelating agents include amine polycarboxylic acids (e.g., EDTA, DTPA), hydroxy-carboxylic acids, and polycarboxylic acids (e.g., citric acid, carboic acid, and qlucinic acid).

007 "Closure" or "Site closure and stabilization" means those actions that are taken upon completion of operations which prepare the disposal site for custodial care and that assure that the disposal site will remain stable and will not need ongoing active maintenance.

008 "Commencement of construction" means any clearing of land, excavation, or other substantial action that may affect the environment of a facility. The term does not include disposal site exploration, necessary roads for disposal site exploration, borings to determine foundation conditions, or other preconstruction monitoring or testing to establish background information related to the suitability of the disposal site or the protection of environmental values.

009 "Compact" means the Central Interstate Low-Level Radioactive Waste Compact.

010 "Council" means the Environmental Quality Council.

011 "Custodial care" means the continued observation, monitoring, and care of a facility for a minimum of one hundred years following transfer of the ownership of the facility from the operator to the

institutional control agency.

012 "Decommissioning" means removing a nuclear reactor safely from service and reducing residual radioactivity to a level that permits release of the property for unrestricted use following termination of the federal license for the reactor.

013 "Department" means the Nebraska Department of Environmental Quality.

014 "Developer" means any person or commercial entity seeking to site, license, or operate a facility within the State of Nebraska.

015 "Director" means the director of the Nebraska Department of Environmental Quality.

016 "Disposal" means the isolation and final disposition of low-level radioactive wastes from the biosphere by emplacement in a facility that employs technology dictated by a zero-release objective.

017 "Disposal site" means that portion of a facility used for disposal of waste. It consists of disposal units and a buffer zone.

018 "Disposal unit" means a discrete portion of the disposal site into which waste is placed for disposal.

019 "Engineered barrier" means a man-made structure or device that is intended to improve the facility's ability to meet the performance objectives in Chapter 4.

020 "Explosive material" means any chemical compound, mixture, or device which produces a substantial instantaneous release of gas and heat spontaneously or by contact with sparks or flame.

021 "Facility" means the land, buildings and equipment selected pursuant to the Compact and used or to be used for the disposal of low-level radioactive waste.

022 "Hazardous waste" means those wastes designated as hazardous in Title 128, Nebraska Administrative Code.

023 "High-level radioactive waste" means:

023.01 Irradiated reactor fuel;

023.02 Liquid wastes resulting from the operation of the first cycle solvent extraction system or equivalent and the concentrated wastes from subsequent extraction cycles or equivalent in a facility for reprocessing irradiated reactor fuel;

023.03 Solids into which such liquid wastes have been converted; and

023.04 Other highly radioactive waste material as defined by the U.S. Nuclear Regulatory Commission.

024 "Hydrogeologic unit" means any soil or rock unit or zone which by virtue of its porosity or permeability, or lack thereof, has a distinct influence on the storage or movement of groundwater.

025 "Inadvertent intruder" means a person who might occupy the disposal site after closure and engage in normal activities, such as agriculture, dwelling construction, or other pursuits in which an individual might be unknowingly exposed to radiation from the waste.

026 "Institutional control" means the institutional control program to physically control access to the

disposal site. The institutional control program shall also mean, but not be limited to, custodial care and other requirements as determined by the "Institutional control agency".

027 "Institutional control agency or custodial agency" means the Nebraska Department of Health.

028 "Intruder barrier" means a sufficient depth of cover over the waste that inhibits contact with waste and helps to ensure that radiation exposures to an inadvertent intruder will meet the performance objectives in Chapter 4 or engineered structures that provide equivalent protection to the inadvertent intruder.

029 "License" means an authorization or license issued by the department to implement the requirements of these regulations.

030 "Low-level radioactive waste" or "waste" means radioactive waste not classified as high-level radioactive waste, spent nuclear fuel, or byproduct material as defined in 005.02 of this Chapter and classified by the federal government as low-level radioactive waste but shall not include waste which remains a federal responsibility as designated in section 3(b) of the Low-Level Radioactive Waste Policy Act as amended, 42 U.S.C. 2021C(b).

031 "Mixed waste" means low-level radioactive waste that also contains hazardous waste that is identified in Title 128.

032 "Monitoring" means observing and making measurements to provide data to evaluate the performance and characteristics of the disposal site.

033 "Near-surface disposal facility" means a facility in which waste is disposed of on the earth's surface or within approximately the upper 30 meters of the earth's surface. Near surface disposal includes disposal in engineered facilities which may be built totally or partially above-grade provided there is a protective earthen cover at or before the time of facility closure.

034 "Operational life of the facility" means the period of time commencing when low-level radioactive waste is initially received at the facility and ending when the facility permanently ceases to receive such waste for disposal.

035 "Person" means any individual, corporation, partnership, firm, association, joint venture, trust, estate, public or private institution, group, public agency, political subdivision of this state, any other state or political subdivision or agency thereof, any legal successor, representative, agent, or agency of the foregoing, but shall not include federal governmental agencies.

036 "Pyrophoric liquid" means any liquid that ignites spontaneously in dry or moist air at or below 130° F (54.4°C). A pyrophoric solid is any solid material, other than one classed as an explosive, which under normal conditions, is liable to cause fires through friction, retained heat from manufacturing or processing, or which can be ignited readily and, when ignited, burns so vigorously and persistently as to create a serious transportation, handling, or disposal hazard. Included are spontaneously combustible and water-reactive materials.

037 "Quality Assurance Program" means a multi-disciplinary system of management controls backed by quality verification and overview activities that demonstrate completeness and appropriateness of achieved quality. Quality assurance comprises all the planned and systematic actions necessary to provide adequate confidence that a structure, system, or component will perform satisfactorily in service. Quality assurance includes quality control, which comprises the quality assurance actions

related to the physical characteristics of a material, structure, component, or system which provide a means to control the quality of the material, structure, component, or system to predetermined requirements.

038 "Radioactive material" means any material, solid, liquid, or gas, which emits ionizing radiation spontaneously, including accelerator-produced, byproduct, naturally occurring, source, and special nuclear materials.

039 "Recovery" means the acts, actions, and processes necessary to cleanup contaminants; defined as radioactive material or hazardous substances from low-level radioactive waste that, when released to the environment outside the disposal unit and combined with air, soil, biota, or water, may cause the concentrations of that material or substance to exceed the levels specified in Title 180, or which is reportable as a hazardous substance release in Title 126, Chapter 18 that are no longer isolated by the disposal unit and whose migration beyond site boundaries could result in failure to meet the performance objectives of Chapter 4.

040 "Retrievability" means the capability to, in a deliberate, planned manner, remove or retrieve waste from containment in the disposal unit.

041 "Source material" means:

041.01 Uranium or thorium or any combination thereof in any chemical or physical form; or
041.02 Ores which contain by weight one-twentieth of one per cent or more of uranium or thorium or any combination thereof. Source material does not include special nuclear material.

042 "Special nuclear material" means:

042.01 Plutonium, uranium 233, and uranium enriched in the isotope 233 or in the isotope 235 but not including source material; or
042.02 Any material artificially enriched by any of the foregoing, but not including source material.

043 "Spent nuclear fuel" means irradiated nuclear fuel that has undergone at least one year of decay since being used as a source of energy in a power reactor, including the special nuclear material, byproduct material, source material, and other radioactive material associated with fuel assemblies.

044 "Stability" means structural stability.

045 "Surveillance" means monitoring and observation of the disposal site for purposes of detection of need for maintenance, custodial care, evidence of intrusion, and compliance with other license and regulatory requirements of this Title.

046 "Transuranic waste" means radioactive waste containing alpha emitting transuranic elements at levels determined by the U.S. Nuclear Regulatory Commission to be transuranic waste.

047 "Zero-release objective" means a goal of preventing the release into the environment of any detectable radioactive material resulting from the disposal of low-level radioactive waste at the facility.

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