

MEMORANDUM

State of Alaska

Department of Environmental Conservation
Division of Environmental Health

TO: All Solid Waste Program Staff

DATE: June 27, 2019

FROM: 
Christina Carpenter, Director
Division of Environmental Health

SUBJECT: Interim Policy for Radioactive
Material Disposal in Landfills

BACKGROUND

The purpose of this Memorandum is to set an interim policy to address the current issues with regulations in 18 AAC 85 (Radiation Protection), in which a 2015 amendment inadvertently set up a situation where even wastes with a *de minimis*, or background level of radioactivity are prohibited from any soil disposal in Alaska. This is contrary to AS 46.03.250 which directs the Department to adopt regulations establishing standards for discharge of low-level of radioactive materials on the land and subsurface, with appropriate safeguards to protect public health and safety, rather than to institute a complete ban.

The Department has initiated a regulations project to correct the inconsistency between the directives in AS 46.03.250 and the current regulatory ban on soil disposal in 18 AAC 85.300. Specifically, the Solid Waste Program is proposing to revise the definition of “radioactive material” in 18 AAC 85.770(10) such that it would exempt those materials with a *de minimis* amount of radioactivity. The Department is also contemplating specific exemptions that may be added to the section dealing with soil disposal.

The Department does not have a specialized radiological program, unlike many states. Therefore, dealing with exposure calculations to determine a *de minimis* radiation level appropriate for disposal is not feasible. In an effort to meet the AS 46.03.250 intent, the Solid Waste Program has researched various states standards to gauge what exemptions are being used around the country. Out of 37 states researched, a total of eight states allowed materials exhibiting radiation levels below a specified limit to be disposed of in a Municipal Solid Waste Landfill (MSWLF) or landfill meeting certain design specifications. These levels ranged from 3 picocuries/gram (pCi/g) to 100 pCi/g. Other types of exemptions included waste generated from laboratory settings and specific licensee/permittee type exemptions. The exemption levels for those ranged from 5 pCi/g to 200 pCi/g. In summary, the radiation concentration of 5 pCi/g was the most common exemption level found in the research and the majority of exemptions were for radium-226 and radium-228.

INTERIM POLICY

Until the regulation revisions are finalized, disposal requests should be handled on a case-by-case basis according to the process laid out in 18 AAC 85.280. The Solid Waste Program staff should consider any material with a combined radionuclide concentration of ≤ 5 pCi/g radium-226 and radium-228 to be non-radioactive material for the purpose of disposal, exempting it from the requirements of 18 AAC 85 and allow it to be disposed in a Class I MSWLF, or a permitted lined landfill, such as a drilling waste monofill. This exemption would not apply to low-level radioactive waste regulated by the Nuclear Regulatory Commission and subject to the Northwest Interstate Compact (AS 46.45). The generator of the material is responsible for ensuring that the waste is

sampled at a frequency required by the landfill accepting the waste, or at a frequency agreed upon in consultation with the Solid Waste Program. All samples collected must be tested for radium-226 and radium-228 and the results submitted to the Solid Waste Program. Once results are received and reviewed by a Solid Waste Program staff, a letter of decision will be issued to the material generator as to whether the material can be disposed of as non-radioactive waste; however, this decision does not obligate the landfill to accept the waste.

I continue to appreciate the diligence of the Solid Waste Program staff to protect public health and the environment in our state, and to work cooperatively with the various industries that you interact with and which depend on clarity and consistency in our programs and regulations. Further questions about implementing this policy should be directed to the Solid Waste Program Manager Bob Blankenburg.