



UNIVERSITY OF ALASKA FAIRBANKS

School of Fisheries and Ocean Sciences

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September 13, 1996

Mr. Frank Wenolowski
Chief, Materials Branch
Nuclear Regulatory Commission
Walnut Creek Field Office
1450 Maria Lane
Walnut Creek, CA 94596-5368

Dear Mr. Wenolowski:

This letter is to request an extension of the deadlines specified under the Timeliness Rule for decommissioning notifications for disposals of radioactive waste by land burials under former 10CFR20.304, 20.302. The University of Alaska Fairbanks has received and read NRC Information Notice 96-47 and is willing to comply with all applicable Federal regulations on decommissioning. The University of Alaska Fairbanks, License #50-02430-07, carried out land burials of small amounts of radioactive materials under former 10CFR20.304, 20.302. A brief description of the particulars of these burials is given below. It has been approximately 15 years since the last burial was conducted, and UAF has no future intention of disposal by burial at any of these sites. We, however, do not know how to proceed to decommission these sites. It is the view of the UAF radiation safety program that these sites pose no significant threat to public health or safety, and thus probably do not require remediation or monitoring. However, we recognize that screening criteria to be developed by the NRC will be the proper way to determine what is required to decommission the sites. Pending this guidance from the NRC, we request an extension of deadlines relative to decommissioning and the submission of decommissioning plans.

Dates of Burials

Radioactive materials were buried at approximately 1-2 year intervals on 11 occasions from July, 1969 to January 19, 1981.

Locations of Burials

Radioactive materials were buried at three sites, all on property owned by the University of Alaska Fairbanks. These were: the Large Animal Research Station (LARS); a fill area located south of Tanana Loop and west of Fairbanks Street, near their intersection; and a

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fill area located west of Farmers Loop Road and north of Taku Drive, near their intersection. We have maps in our records showing the locations. However, there are some uncertainties. All of the burials were conducted by Dr. Dan Holleman, who is no longer employed by the University of Alaska. He was contacted by me shortly after he left the University (autumn, 1993) and asked for further information on the burial sites. He stated that the fill area burials (near Tanana Loop and Farmers Loop) could not be located precisely, because (a) there were a number of separate burials occurring over a period of time in different locations within the site, wherever the power plant was dumping ash at that time, (b) no records were required or kept of exactly where the materials were buried, and (c) the locations of various landmarks (roads, mainly), which might aid his recollection of the burial location, had changed in the intervening period of up to 25 years. Thus, the fill area burials are known to be within an area comprising several acres, but not more precisely than that. Dr. Holleman stated that the LARS site was the fill area used there for a variety of waste materials, and that Mr. Don Hartbauer (a UAF employee) could show us where the site was located. Mr. Hartbauer did subsequently show an NRC representative and Mr. A. Doyle (radiation safety technician) such a fill area (ice lens crater), although he had no personal knowledge that radioactive materials were buried there.

There was one further burial, in 1971, at the Reindeer Research Station in Cantwell, AK. This burial included 10 μCi ^{134}Cs , 50 μCi ^{14}C , and 50 μCi ^3H . Under the federal regulations in force at that time, this was not a burial of radioactive material, but rather included only concentrations or quantities of material which could be disposed without regard to radioactivity. I have no information on this burial beyond the above information, recorded in Dr. Holleman's disposal records.

Amount and Identity of Radioisotopes Buried

Much of the radioactive material that was buried was short-lived, so that the activity has decreased substantially or decayed entirely since the material was buried. Therefore, the activity is given in two columns, the amount buried and the calculated amount remaining in 1993.

Radioisotope	Quantity Buried (mCi)	Quantity in 1993 (mCi)
^{133}Ba	0.1	0.012
^{14}C	24.5	24.5
^{109}Cd	0.1	0.0001
^{141}Ce	0.075	0
^{144}Ce	0.10	0
^{51}Cr	0.38	0
^{134}Cs	0.08	0.0001
^{59}Fe	0.01	0

^3H	72.2	28
^{125}I	0.1	0
^{131}I	0.01	0
^{22}Na	0.035	0.0004
^{32}P	0.12	0
^{86}Rb	0.02	0
^{103}Ru	0.059	0
^{35}S	1.1	0
^{75}Se	0.76	0
^{85}Sr	0.59	0
^{65}Zn	1	0

If you require other information or action on our part, before the NRC issues applicable decommissioning guidelines, please inform us.

Sincerely,



Susan M. Henrichs
Radiation Safety Officer