



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION I
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JAN 21 1992

Dr. Norman R. Sunderland
Radiation Safety Officer
Utah State University
Safety Office
Logan, Utah 84322-8315

Dear Dr. Sunderland:

Subject: Coyote Predation Field Study

This is to confirm a telephone conversation between you and Mr. John McGrath of the Region I staff concerning the coyote predation field study carried out at the Jornada Experimental Range in Las Cruces, New Mexico by Dr. Frederick F. Knowlton of Utah State University. The following is a summary of information provided to us by representatives of the U.S. Department of Agriculture (USDA) and the States of Utah and New Mexico and of our own actions in this matter:

Utah State University is authorized to use radioactive material by the State of Utah under License No. UT 0300159. Dr. Knowlton, a faculty member at the University, is authorized to use radioactive material by the University's Authorization No. FFK 304100192. Dr. Knowlton is also an employee of the USDA, Animal, Plant, and Health Inspection Service (APHIS). This field study was not performed under the USDA NRC license to possess and use radioactive material and there was no contact made with the USDA Radiation Safety Staff (RSS) prior to the study. The coyote predation study was approved by the University on January 10, 1991. Dr. Knowlton received permission from the State of New Mexico to perform the study at the Jornada Experimental Range under reciprocity in a letter dated January 14, 1991. He also requested and received permission from the USDA Jornada Experimental Range Director to perform the study at the site.

The study involved the release of goats with neck collars containing solutions of radioactive material and the use of 200 tallow baits containing two microcuries each of iodine-125. Coyotes ingest the radioactive material by preying on the goats and breaking the collars or eating the tallow baits. When coyotes are captured and sacrificed, the radioactive tracer in the coyote provides predation information. Thirty-eight adult goats were released in the Range, with 30 microcuries of cesium-134 in the neck collar of each; thirty-four kid goats were released, with 67 microcuries of zinc-65 in the neck collar of each.

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In April 1991 the NRC received complaints that radioactive goats had been set loose on public lands. The NRC contacted the USDA RSS who indicated that they had not approved any field study involving radioactive material at the Jornada Range. Following our contact, the USDA RSS inquired and determined that the study was under way. Due to the public concern, all remaining goats were re-captured and destroyed, and the neck bands recovered. The goat carcasses and some contaminated coyote carcasses were buried in April and May on the Jornada Experimental Range as had been intended in the study protocol, without notification to the USDA RSS.

Since this study and the burial were conducted under the auspices of the Utah State University license, there are a number of points we would like the University to address. It appears that the University, in good faith, tried to obtain the appropriate approvals for the study. However, we need to point out that: 1) Reciprocity is not an appropriate regulatory vehicle for approving field studies with radioactive material. The State of New Mexico should not have granted the reciprocity authorization and we have discussed this issue with the appropriate officials in New Mexico. Even if reciprocity had been the appropriate mechanism for approving such a study in New Mexico, the Jornada Experimental Range is federal property and the State of New Mexico has limited jurisdiction over the use of radioactive material on that property. The appropriate regulatory authority for use of radioactive material at this location is the NRC and not the State. Therefore, the conduct of the study is an apparent violation of 10 CFR 30.3; and (2) The burial of licensed material on federal property without specific approval by the NRC is an apparent violation of 10 CFR 20.302.

Please review the information provided above and inform us of any discrepancies in the facts as we have stated them. Also, in response to this letter, please describe your understanding of the regulatory requirements concerning reciprocity and burial of radioactive material and your plans to inform researchers at the University license of these requirements and to assure that similar circumstances and/or apparent violations of NRC requirements do not recur.

Normally, we would also request that you plan and execute corrective action for the burial of the goat and coyote carcasses containing radioactive material at the Jornada Range. However, USDA has indicated that since this burial is on USDA property, they will be responsible for necessary corrective action and they have requested an amendment to their license to authorize the burial. We are now reviewing that request.

Dr. Norman R. Sunderland

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We would appreciate receiving your answer to this letter within thirty (30) days.

Sincerely,



John D. Kinneman, Chief
Research Development &
Decommissioning Section
Division of Radiation Safety
and Safeguards

cc:
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