



UNITED STATES
NUCLEAR REGULATORY COMMISSION

REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8084

REQUEST FOR TECHNICAL ASSISTANCE

DATE: May 28, 1993

FROM: L. J. Callan, Director
Division of Radiation Safety
and Safeguards, Region IV *6/2/93*

TO: John E. Glenn, Chief
Medical, Academic, and Commercial
Use Safety Branch, NMSS

LICENSEE: University of Wyoming

LICENSE NO: 49-09955-10

- Control NO. 464722 (enclosed)
- Letter Dated (enclosed)
- Suggest change in licensing procedure (enclosed)
- Other (see remark)

NRC Facsimile Dated: May 20, 1993 (enclosed)

PROBLEM/ISSUE:

The University of Wyoming is requesting immediate authorization to use up to 2 mCi of tritiated water in the study of lactational strategies and constraints of pronghorn antelope. During the pilot study, antelope will be administered tritium and maintained in a 1/2 acre fenced plot consisting of primary grasslands with a few sage shrubs. This 1/2-acre pen is located inside a five acre fence area that is surrounded by a 7 1/2-foot woven wire fence topped with barbed wire.

ACTION REQUIRED:

Determine the feasibility of approving the pronghorn antelope lactational strategies and constraints study based on the experimental protocol outlined in the April 7, April 27, and May 24, 1993, letters. Region IV is requesting that this study be approved as a categorical exclusion under the provisions of 10 CFR 51.22(c).

ALTERNATIVES CONSIDERED:

- o Approve the experimental protocol as written.
- o Approve the experimental protocol with restrictions.

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- o Request the licensee to provide an Environmental Report prior to approval of its experimental protocol.
- o Deny the experimental protocol.

RECOMMENDED ALTERNATIVE:

- o Approve the experimental protocol.
- o Request the licensee to provide an Environmental Report prior to approval of experimental protocol should it be extended to the 5 acre plot.

REMARKS:

- o The licensee is at a critical stage for the above requested research project, and has requested that we expedite, if possible, its request. The pronghorn antelope fawns will be born during the last of May or very early June. Experimental protocol requires that the isotope be administered at this time to the mothers.
- o The pilot study requires that antelope be maintained in a $\frac{1}{2}$ acre fenced plot consisting of primary grasslands with a few sage shrubs. This $\frac{1}{2}$ -acre pen is located inside a five acre fence area that is surrounded by a $7\frac{1}{2}$ -foot woven wire fence topped with barbed wire. Because of the above restrictions, Region IV suggests that the procedure be approved. However, if the study is expanded to cover the 5 acre plot as planned, an Environmental Report should be provided.
- o NMLS is requesting that this pilot study be approved under the provisions of 10 CFR 51.22(c) as a categorical exclusion. If categorically excluded, an Environmental Report would not be required by the licensee and the pilot study could be immediately approved. However, on the other hand, if not approved for such an exclusion, the experiment would have to be postponed until a later date.

Region IV Reviewer: Jack E. Whitten
Senior Health Physicist

Reviewer Code: T1
Reviewer Phone No.: 817-860-8197



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611 RYAN PLAZA DRIVE, SUITE 400
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FACSIMILE TRANSMITTAL

DATE/TIME: May 20, 1993

**MESSAGE TO: John E. Doerges, RSO
University of Wyoming**

**MESSAGE FROM: Jack E. Whitten
817-860-8197**

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**FACSIMILE NUMBER: 307-766-2255
VERIFICATION NUMBER: 307-766-3277**

CONTACT: Jim Herrold, Assistant RSO

SPECIAL INSTRUCTIONS/ATTACHMENT(S)

INFORMATION REQUIRED FOR FIELD USE OF BYPRODUCT MATERIAL

Should the University of Wyoming wish to perform field studies in which licensed material is deliberately released to the environment, the following information must be provided:

1. A complete application describing the type and amount of material to be used, the location of use, and training and experience of the individual using the material.
2. A complete experimental protocol.
3. A description of the amount of radioactive material to be released in the field, decontamination procedures at the conclusion of the experiment, if appropriate, and procedures for minimizing releases.
4. A description of the expected radiation dose to humans.
5. The written permission from the property owner to use radioactive materials at the proposed site.
6. A letter from the appropriate state health authorities indicating that they have reviewed your application and concur with your request.

10 CFR 51.22(c)(14)(v) identifies certain categorical exclusions for environmental assessments which includes an exclusion for radioactive material for research and development, and for educational purposes. However, this

