

TELEPHONE CONVERSATION RECORD

PERSON CALLED: Br. Jerome Rademacher, Ph.D., Radiation Safety Officer
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DATE OF CALL: March 18, 2005

REFERENCES: LISTED AT THE END OF THIS CONVERSATION RECORD

SUBJECT: REQUEST FOR ADDITIONAL INFORMATION REGARDING LICENSE
TERMINATION request DATED JANUARY 10, 2005 (MAIL CONTROL
NO. 314076)

On the above date, Dr. Rademacher was contacted by Decommissioning Branch staff to clarify and obtain additional information, as a result of the staffs' review of the University's January 10, 2005, license termination request, with attached final status survey report. The specifics of the conversation are outlined below:

1. The licensee will need to account for all past licensed activities at time of termination. Review of NRC files identified the following licenses 22-00027-03, 22-00027-04, and 22-00027-05, all terminated. The RSO was asked if they possessed these licenses? He indicated that they did not. I agreed to provide copies of the licenses to him, such that he can revisit his termination request.
2. Licensee must address past 10 CFR Part 20.304 (rescinded 1981) burials. Find records to identify types, quantities of radioactive materials buried, and location. One site identified in license. Was this the only location? Will need to demonstrate that these burials meet Part 20, Subpart E, unrestricted release criteria. Specifically, a letter dated February 15, 1979, indicates that "The burial site is located approximately 40 ft. due east of the Grotto behind St. Joseph's Hall." The document indicates that records of disposal were maintained.

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3. Licensee needs to address past licenses and other radioactive materials possessed and used prior to the 22-00027-06 license. NRC staff review of past licenses identified that other materials in unsealed form with relative long half-lives, including alpha emitters were possessed. Where were these materials used? Review of past documents indicate materials under the control of the biology department from 1958 until 1975. Determine if other laboratories were used. What happened to these long-lived materials? Were appropriate surveys done to insure adequate release, provide surveys or conduct additional surveys.

Specifically, 22--00027-04 authorized the below radioisotopes, in addition to those on the 220-0027-06 license, and were not addressed in the current termination request.:

Cl-36 1 mCi any form

Sr-90 1 micro curie

NOTE: The following individuals were indicated as the authorize users, and may be a possible source for additional information: Brothers, L. George Paul, L. Edward Chisholm and Robert E. Brown

Specifically, 22--00027-05 authorized the below radioisotopes, in addition to those on the 220-0027-06 license, and were not address in the current termination request:

Cs-137, Co-60, all the below were authorized to be possessed in any form, with a maximum of 10 mCi

Am241 unsealed = 0,2 mCi

1979 AM241 SS 1 micrC, AM241 SS 50 mCi, Cd109 SS 25 mCi, Cs 137 SS 40 mCi, Sr 90 (sealed in bottle) 2 mCi, Bi 207 US 2 mCi

Amendment No. 10 unsealed Am 241 removed from license., Telecon between Graden and you indicated the material was a sealed source, but I can't find source in sealed source directory. We can revisit this during our inspection or you can verify the use and provide information of the source, i.e., certificate of manufacture/disposal.

4. The licensee needs to determine if there are any collection points downstream from disposal points, that is hoods and sanitary disposal systems, which could be contaminated. Also, the licensee indicates that all sink traps were sampled, but tables only show two traps as being sampled, and one trap indicated a positive value? Also, one of the hood smears showed a positive value. Were these positive values followed up to ascertain if they were significant? There were positive values in the hood of Room 140 Brother Child's. Was this area evaluated further?

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5. Dr. Rademacher was asked about the survey data. Specifically, we would like to see the grid map and raw data which shows the raw survey results, that is the one meter by one meter surveys with an associated smear (100 cm²), and data, The licensee needs to provide more detail on the diagrams, e.g., location of sinks, hoods, storage and work areas,
6. Also, clarify survey approach, it is indicated that NUREG 5849, was used, but it is not clear how survey areas were designated, one room appears to have been designated as an effected area, as represented by the number of smears (24), whereas the other rooms had only one smear. The licensee needs to describe and justify this. If a procedure for conducting the surveys was created, please provide this.
7. Provide information regarding the calibration of efficiency Ludlum Model 3, probe 44-9. The indicated 40% efficiency is higher than typically encountered for the type probe. Since the unit was calibrated against cesium 137, was any determination made for efficiency for lower energies, e.g. C-14 (correction/multipliers)? Also, the instrument reading for the smears is in mR/hr. These values should be counts per minute. Also, if a procedure for collection and analysis of smears was created, please advise. Also, describe and justify statement that quenching effect of smears is conservative. Also, indicate if any efficiencies using similar radioactive materials or materials with comparable energies for the radiations of interest were used, e.g., c-14 beta energies.
8. What surveys were done in the area of the former neutron source?
9. Where was the animal rooms? Prior to the 22-00027-06 license, and after? Were all these room(s) surveyed?
10. Were any animals or other organic materials ever incinerated? Part 20.2005 limits the disposal of H3 and C14 to <.05 µCi per gram of animal and liquid scintillation materials only, no other organics. There are references in the backup materials which infer that materials may have been incinerated, other than animals or scintillation liquids. Identify the incinerator and indicate if it was surveyed.
11. The Region will schedule an inspection within the near future. The purpose of this inspection will be to review records and to conduct confirmatory surveys.

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12. Dr. Rademacher requested that a copy of this telephone conversation record be faxed to him. His fax number is
13. Nothing else was discussed.

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REFERENCES

1. St. Mary's University of Minnesota
LICENSE NO. 22-00027-06
DOCKET NO. 030-11241
2. St. Mary's University of Minnesota
LICENSE NO. 22-00027-05
3. St. Mary's University of Minnesota
LICENSE NO. 22-00027-04
4. St. Mary's University of Minnesota
LICENSE NO. 22-00027-03