

IN REPLY REFER TO  
IRB:JEB (865)

Oak Ridge, Tennessee  
June 5, 1956

Mr. R. M. Priest, Buyer  
Purchasing Department  
Indiana University  
Bloomington, Indiana

Subject: APPLICATION FOR BROAD SPECIFIC LICENSE

Dear Mr. Priest:

We wish to acknowledge receipt of an application from the Department of Physics, Indiana University, for a broad license.

In order to continue the review of this request, we shall need the following information:

1. A list of the local Isotope Committee of the Physics Department. The Isotope Committee should be composed of such persons as a radiological safety officer, a representative of the business office, and one or more persons trained or experienced in the use of radioactive materials, who will review and approve in advance the purchase of radioisotopes and proposals for use. The Committee Chairman and radiological safety officer should be indicated.
2. A copy of your administrative procedures establishing local Isotope Committee control over byproduct material use and procurement. These procedures should include radiological safety rules and regulations that will be followed by persons that will use the byproduct materials.
3. Clarification of whether or not the 1000 millicurie possession limit was meant to be a total possession limit or a possession limit for each isotope Atomic Nos. 3 to 83 inclusive. A possession limit should be established in keeping with facilities available to safely handle the materials. Broad licenses are issued for a possession limit of from a few millicuries to a curie, or more, for any byproduct material

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June 5, 1956

between Atomic Nos. 3 to 83, depending on the specific needs of the institution and ability to safely handle the material. Any stored wastes or other reactor-produced radioisotopes should be included in the possession limit requested.

4. A complete description of the laboratory facilities available in the Physics Department, as we have not had any information on the physical facilities since 1953. Your application should include a complete listing of instruments available in the Physics Department, along with handling equipment, shielding, and storage facilities.
5. Complete details of your method of disposing of radioactive waste. We note that waste will be buried. Please give conditions of disposal, location, packaging, and restricting and posting of the area. In addition, we would appreciate clarification of the conditions by which sewer disposal will be used.

A separate application for the possession of Plutonium 207 is not necessary as this radioisotope is included on a broad license.

Upon receipt of the above information we shall continue the review of your request for a broad specific license.

Very truly yours,

for      Lester R. Rogers  
Chief, Byproduct Licensing Branch  
Isotopes Extension  
Division of Civilian Application

*VRR*  
Enclosure:  
Sample of Research Broad License

CC: A.C.G. Mitchell  
*OK* Bloomington, Indiana

*Rogers/jd*

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13-108-5

INDIANA UNIVERSITY  
DEPARTMENT OF PHYSICS  
BLOOMINGTON, INDIANA

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June 19, 1956

Mr. Lester R. Rogers, Chief  
Byproduct Licensing Branch  
Isotopes Extension  
Division of Civilian Application  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

Dear Mr. Rogers:

I am sending a second copy of our application form for a byproduct material license. Our original has been changed to read "not more than 500 mc any 1, 5 curies total".

Very truly yours,

*Allan C. G. Mitchell*

Allan C. G. Mitchell  
Chairman  
Department of Physics

ACGM:rj

Enclosure *OKM/L*

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13-108-5

INDIANA UNIVERSITY  
DEPARTMENT OF PHYSICS  
BLOOMINGTON, INDIANA

June 11, 1956

Mr. Paul C. Aebersold, Chief  
Isotopes Division  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

Dear Paul:

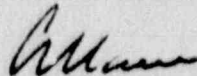
J.E.B. → we put in an application for a byproduct material license for the use of the Physics Department along the lines you suggested when we talked. This is being held up by someone in the byproduct licensing branch (whose name I cannot read) acting for Mr. Lester R. Rogers. I am enclosing a copy of the letter which he wrote to Mr. Priest, our purchasing agent, and a copy of my reply.

I would think that with the experienced people we have here, there should be no trouble in obtaining a byproduct license. Our Chemistry Department, which made an application along the same lines and whose people are certainly not as experienced as ours, had no difficulty.

Will you personally look into this and see what can be done to get the byproduct license at the earliest possible time since our work is being held up on account of this.

You realize, of course, that we are not really interested in a byproduct license. We would much prefer the old system, on which we have been operating since 1946 and from which the Atomic Energy Commission has benefited (through the use of our disintegration schemes), in which we order a few hundred millicuries of any isotope in which we have an interest. These new regulations have been set up by the Commission and as far as I can see tend to penalize those people who have been working in the field for a long time and have experience, because they wish to protect themselves from those industrial users who are just starting in the business.

Very truly yours,



Allan C. G. Mitchell  
Chairman  
Department of Physics

ACGM:rj

Enclosures

Copy of our ltr of June 5, 1956  
& his ltr of June 8

6-19-56 (LHR)

Call to Dr. A. C. G. Mitchell, Indiana University, Bloomington, regarding his application for a broad license. Dr. Mitchell indicated that he submitted his application upon advice from PCA for this type of license. We did not feel that we have sufficient information on radiological safety procedures to issue the license and LHR will visit Indiana on June 28 to review and discuss licensing with Dr. Langer, Radiological Safety Officer. Requested that Dr. Mitchell send additional copy of 313b since we had temporarily misplaced copy which we had received. He indicated he felt we could place a maximum possession limit of 5 curies total of byproduct materials between 3 and 83, inclusive.



INDIANA UNIVERSITY  
DEPARTMENT OF PHYSICS  
BLOOMINGTON, INDIANA

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June 29, 1956

Mr. Lester R. Rogers, Chief  
Byproduct Licensing Branch  
Isotopes Extension  
Division of Civilian Application  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

Dear Mr. Rogers:

I am enclosing two copies of Procedures for Handling Radioactive Materials in the Department of Physics at Indiana University. I hope that it meets with your approval.

Very truly yours,

*L M Langer*

Lawrence M. Langer  
Professor of Physics

LML:rj

Enclosures

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Procedures for Handling  
Radioactive Materials

Department of Physics  
Indiana University

1. All orders for radioisotopes must be approved by the Chairman of the Isotope Committee (A. C. G. Mitchell).
2. Shipments are received and opened only by responsible supervisory personnel (Profs. Langer, Mitchell, Wilkinson, and Sampson). Aliquots for research are meted out by the above for use by themselves or by instructed personnel working under their supervision.
3. Areas in which radioisotopes are stored or used are so indicated by radiation warning signs. Isotopes are stored in lead enclosures in controlled areas.
4. Personnel working with radioactive materials wear film badges and pocket dosimeters to monitor the accumulated dose. Survey meters are used to determine the instantaneous rate of irradiation. No personnel are permitted to accept an integrated dosage in excess of 200mR in any one week. All personnel receive monthly blood counts.
5. Areas in which radioactive material is handled are surveyed periodically. All spills or surface contaminations are cleaned up at once. In the case of non-removable contamination, the contaminated surface is either removed or appropriately covered over.
6. Expanded material is usually disposed of after having decayed to an insignificant level. Disposal is by means of controlled burning (to reduce the bulk) and then buried in an unfrequented area. During chemical processing small amounts (less than 1.mc) of water soluble material are flushed into the sewer usually highly diluted with inactive carrier isotopes of the same element.



13-108-5

INDIANA UNIVERSITY  
DEPARTMENT OF PHYSICS  
BLOOMINGTON, INDIANA

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*[Signature]*

June 8, 1956

Mr. Lester R. Rogers, Chief  
Byproduct Licensing Branch  
Isotopes Extension  
Division of Civilian Application  
Oak Ridge National Laboratory  
Oak Ridge, Tennessee

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FOR DIV. OF INSP.

Dear Sir:

Subject: Application for Broad Specific License  
Physics Department - Indiana University

I am in receipt of a letter dated June 5, 1956 to Mr. R. M. Priest from Mr. Lester Rogers concerning our application for a broad specific license for the Department of Physics at Indiana University.

I would call your attention to the fact that most of the information you asked for in your letter was supplied on the application form and attachments. In regard to your specific questions, the information is as follows:

1. A list of the local Isotope Committee of the Physics Department. This is not requested on your application form. The local Isotope Committee will consist of A. C. G. Mitchell, Chairman, L. M. Langer, Radiological Safety Officer. All requests for radioactive isotopes cross my desk and none can be procured without my signature.

2. A copy of administrative procedures establishing local Isotope Committee control over byproduct material use and procurement. We do not have such an administrative procedure and do not propose to set one up. All radioactive isotopes and their handling are directly under the supervision of the four people listed in the supplement to the application, namely A. C. G. Mitchell, L. M. Langer, R. G. Wilkinson, and M. B. Sampson. We do not have inexperienced people handling radioactive isotopes without the supervision of these four experienced investigators.

*so what?!*

*students?*



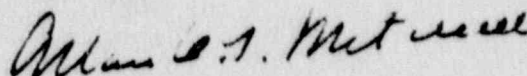
3. Clarification of the 1000 millicurie possession limit. we shall go along with your suggested limit of 500 millicuries for each byproduct between Atomic Nos. 3 to 83.

4. Complete description of laboratory facilities available in the Physics Department. The instruments available for monitoring are set forth in the attachment; supplement to application. The facilities are the same as those in 1953, namely, one chemical laboratory equipped with hood, lead shielding as necessary, and lead storage boxes distributed in places throughout the building such that the radiation hazard is kept to a minimum.

5. Details of disposing of radioactive waste. In most cases sources are so short-lived that they die down to a negligible level (stored in lead boxes) before they have to be disposed of. Filter papers are burned and the residues buried in an area behind the Physics Laboratory which is not frequented by people. The area has been monitored by us and has always been found to be way below tolerance. We should be happy to have you monitor this area at any time you wish.

I note that you are holding up our application for the procurement of 10 microcuries of Bismuth 207 until the red tape of the blanket specific license is settled. This is holding up our work and we would appreciate it if you would make arrangements to procure the Bismuth 207 and also issue the blanket license at your earliest convenience.

Yours truly,



Allan C. G. Mitchell  
Chairman  
Department of Physics

ACGM:rj

cc: Mr. Paul C. Aebersold  
Mr. R. M. Priest