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(98815)

MAY 25 1979

Union Carbide Corporation
Chemicals and Plastics Operations Division
ATTN: Mr. R. D. Stief
Director of Engineering
P.O. Box 8361
South Charleston, WV 25303

Gentlemen:

This refers to your application dated February 15, 1979, for renewal of License No. 47-00260-06.

Our review of your application reveals that additional information is needed in support of your application. Since you have a Type A license of broad scope, as defined in 10 CFR Part 33, we are enclosing a copy of Guide 10.5, GUIDE FOR THE PREPARATION OF APPLICATIONS FOR TYPE A LICENSES OF BROAD SCOPE FOR BYPRODUCT MATERIALS. Please note that Guide 10.5 describes the minimum guidelines which we use as guidance in reviewing applications for Type A licenses of broad scope. Although, you may, of course, exceed our established guidelines, we require, as a minimum, that you meet the guidelines described in Guide 10.5. Examples of the kinds of additional information needed in support of your application are as follows:

1. Kinds and quantities of licensed material. Attachment 1 to your application specifies 10 specific radionuclides and the total quantities to be possessed at any one time. Since your activities appear to fall under the Type A broad license category, we believe it would be more appropriate for you to specify the licensed material to be possessed under your license in the manner described in Items 6(a) and 6(b) of the enclosed Guide. Items 6, 7, and 8 of your license could be written as shown below to include all the radionuclides in Attachment 1 of your application:

Any byproduct material with Atomic Numbers 1-83, inclusive	any form	not to exceed 1 curie per radionuclide and and 2 curies total except:	
		~~Hydrogen-3 25 curies~~ total	
		Krypton-85 ~~total~~ 100 curies	

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If you are agreeable to the above, please state this. Please note that if you want to exclude certain radionuclides, (e.g., all alpha emitters) in the 1-83 range, you should specify this.

2. Use of licensed material at temporary jobsites (field sites). In your letter of March 14, 1979, you requested authorization to use licensed material at temporary job-sites. Your application did not specify the type and extent of use of licensed material at these sites. We need a description of the types of activities you will perform including the kinds and quantities of licensed material you will use, the specific locations, the purpose of the studies, and a description of your procedures for controlling releases of radioactive material to the environment. Also, you should describe your procedures for storing licensed material to prevent unauthorized use and/or removal from storage. See Item 7 of the enclosed Guide 10.5.

3. Research and Development. Item 7.E. of your application specifies that you will perform research and development as defined in Section 30.4(g) of 10 CFR Part 30. Apparently, you are referring to Section 30.4(q). We need a general description of the activities you will perform under your license including a description of the activities at temporary job-sites. If any of your activities involve field applications where activity is released, we need a detailed description of each specific program of this type. You should note that although you have a Type A license of broad scope, you are not authorized to conduct field application studies except as authorized by a specific condition of your license. Refer to Item 7. in the enclosed guide.

4. Licensed Material. Your letter of March 14, 1979, specifies that you possess a small amount of krypton-85 that will be disposed of shortly. If you have not disposed of this licensed material, you should specify the maximum amount you will have on hand at any one time.

5. Designation of Individual Users. Item 6 of your application specifies that users will be chosen at the discretion of the Radioactive Materials Committee. It is not clear from your application what your minimum training and experience requirements are for employees to be designated as individual users. Attachment 2 of your application references a handout on "Principles and Handling Procedures of Radioactive Materials". Chapter XII of your Radiological Control Handbook gives an outline for radiation safety training for individuals working in a restricted area. We need a clear description of your experience and training requirements for each individual user to be designated by your Committee. All employees who work in or frequent a restricted area should receive the instructions described in Section 19.12 of 10 CFR Part 19, including janitors, office personnel, maintenance workers, etc. Chapter XII appears to satisfy these

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requirements. For employees engaged in the use of radioactive material, we need a description of your requirements concerning experience and training and a description of your methods for determining competency of individual users (written tests, observations during on-the-job use, etc.). You should provide this infomation for employees who perform research and development, perform field studies, use devices containing sealed sources, perform tracers studies, etc. Refer to Items 8 and 9 in the enclosed Guide.

6. Bioassays. You should describe the criteria to be used in determining the need for bioassays, the type and frequency of bioassays that will be performed, and the bioassay procedures. If you conduct an air sampling program, limit the amount of radionuclides for any individual study and/or require the use of certain quantities of radionuclides in "closed" systems, etc., you should provide your procedures for establishing these limitations. For your guidance in providing this information, we are enclosing Regulatory Guide 8.20, APPLICATIONS FOR BIOASSAYS FOR I-125 AND I-131, and GUIDELINES FOR BIOASSAY REQUIREMENT FOR TRITIUM". You should provide information concerning your bioassay program for both iodine and tritium. If you determine that a bioassay program is not necessary, you should provide information to justify your position. Also, refer to Item 12 in enclosed Guide 10.5.

7. Radiation Protection Program. Your application does not provide sufficient detailed information on your day-to-day radiation safety program. We need specific information concerning your radiation safety program including the following:

   a. Your established action limits for external radiation and removable contamination levels which require decontamination, evacuation, etc. in laboratories, storage areas (restricted areas), and offices, hallways, restrooms, etc. (unrestricted areas).

   b. Procedures for conducting instrument surveys and/or wipe tests in laboratories, offices, hallways, restrooms, etc. If, for example, workers in laboratory areas conduct instrument surveys and/or wipe tests daily, and/or after use of licensed material, these should be supplemented by surveys by the radiation safety officer.

   c. The radiation surveys to be made prior to work on hoods, duct work, sinks, etc. in laboratory areas to prevent excessive exposures and/or contamination to workers.

   d. Air sampling equipment and procedures, including descriptions of the sample filters used, volumes of air collected, typical sample locations, and the frequencies or requirements for conducting air sampling.

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e. Your procedures for monitoring hoods, exhaust ducts, and room airflow rates to assure that you will meet acceptable standards.

See Item 14. of enclosed Guide 10.5. Also, refer to the enclosed Regulatory Guide 8.21. Although this guide is not entirely applicable to your program, it provides good information concerning the kind of radiation survey programs that Type A licensed programs should have in effect.

Our review of your application will continue upon receipt of the above information. Please reply in duplicate and reference Mail Control No. 98815.

Sincerely,

Paul R. Guinn
License Management Branch
Division of Fuel Cycle and
Material Safety

Enclosures: As stated

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