

APR 17 1985

Docket No. 030-21231
Control No. 03574

Vector Corporation
Technical Services Division
ATTN: Edward Handrahan
Radiation Safety Officer
3700 Butler Street
Pittsburgh, Pennsylvania 15201

Gentlemen:

This is in reference to your application dated March 21, 1985, for a byproduct material license. In order to continue our review, we need the following additional information:

- A. In your application, you have not quantified the number of hours of on-the-job training required for a radiographer's assistant to be eligible to become a radiographer. Please confirm that in order for an assistant radiographer to become a radiographer, he or she must have received a minimum of 520 hours of on-the-job training.
- B. Your Assistant Radiographer's Examination contains too many questions that are not related to your operating and emergency procedures. It is recommended that questions addressing 10 CFR 34 Appendix A subject matter be deleted and replaced by additional questions pertinent to your operating and emergency procedures in order for your examination to more fully meet the intent of 10 CFR 34.31(b)(3). Please submit a 25 question Assistant Radiographer's examination with answers which more fully relates to your operating and emergency procedures.
- C. We recommend that a Radiographer's Examination contain at least 50 questions. Please upgrade your Radiographer's Exam and submit a revised copy including the answers to the additional questions.
- D. The following comments are provided concerning some of the questions contained in your Assistant Radiographer's Exam and your Radiographer's Exam:

Assistant Radiographer's Exam

- II.2 The correct response should require that first and foremost all radiography would be ceased immediately and then proceed with steps 1, 2, and 3 that you have indicated.
- II.6 The correct response should include a battery check.

OFFICIAL RECORD COPY

826 - 0001.0.0
04/09/85

8507260266 850624
REG1 LIC30
37-20827-01 PDR

ML10

II.18 The correct response would include the following:

Step 14 - maintain continuous surveillance of the restricted area, not the high radiation area.

Step 15 - make a survey of the device and guide tube to determine that the source is in a safe position.

Radiographer's Exam

- I.2 The definitions of Roentgen, dose, dose rate, and restricted area are not correct. Please revise.
- I.10 The correct response should include a statement that restricted area and high radiation area are posted and maintained under surveillance.
- I.13 Locking a radiography camera inside a vehicle is an adequate means of control. The NRC does not view chaining a radiography camera to a post as an adequate means of maintaining control of byproduct material.
- I.15(a) The Radioactive placard per 49 CFR 172.556(a) & (b) contains the word "RADIOACTIVE," not Caution-Radioactive Material.
- (b) Placards are required on all four sides of the vehicle.
- I.17 The correct response would include maintaining surveillance of the restricted area boundary.

Please address these comments and submit a revised answer key.

E. In Item III.D.3., page 8-11 of your application, you have indicated that the RSO may waive portions of the formal training requirements for a qualified radiographer from another company. Please confirm that a qualified radiographer from another company employed by Vector Corporation will as a minimum complete the following prior to being designated as a radiographer:

- (i) Four to six hours of formal classroom training in Vector Corporation's operating and emergency procedures.
- (ii) Two to four hours of instruction in the use of the radiography equipment.
- (iii) Successful completion of the written and practical (field) radiography examinations.

- F. In item III.C.1(a), page 8-10 of your application you have indicated that the RSO or his designee will be responsible for providing training. What is the minimal training and experience the RSO will find acceptable to authorize a designee to provide training?
- G. Please provide the following information concerning the permanent radiography cell at 493 Nixon Road, Cheswick, Pennsylvania:
- (i) A description of all areas (including the roof and roof access) adjacent to the exposure cell. An annotated diagram with all thicknesses of shielding, type of shielding material, and the direction of north indicated.
 - (ii) Detailed calculations (with references for values used in the calculation) of the radiation levels outside the cell (including the roof). These calculations should be for "worst case" set-up with the source 1 foot from each wall providing shielding.
 - (iii) A description of the visible-audible alarm system, its location, and how it meets the requirements in 34.29 of 10 CFR Part 34.
- In addition, please submit a calculation or the results of measurements of the radiation levels outside the storage vault.
- H. Explicit instructions should be provided to personnel about how and where dosimetry devices are to be stored when not in use. Please confirm.
- I. In your operating procedure for the Tech Ops exposure device, no mention is made of establishing a restricted area and a high radiation area and that the restricted area shall be maintained under constant surveillance. Please modify your procedures to incorporate these instructions.
- J. You have described several methods for securing radiographic exposure devices in Section 6 of your application. As mentioned previously, chaining a radiography camera to a post is not an adequate means of maintaining control of byproduct material. Also, please note that rooms or areas at field sites may be utilized for storage only if the radiographer or radiographer's assistant maintains control of the keys into the storage area. Please modify your procedures to address these comments.
- K. Your operating procedures should include instructions addressing the labeling of packages for shipment at contain radioactive materials. It is not acceptable to merely reference DOT regulations. Please submit instructions that will be incorporated into your operating procedures on how to determine which label (Radioactive White I, Radioactive Yellow II, or Radioactive Yellow III) is correct to use based on a package survey and the material contained in the package.

We will continue our review upon receipt of this information. Please reply in duplicate to my attention at the Region I office and refer to Mail Control No. 03574.

Sincerely,

Original Signed By:

John E. Glenn

John E. Glenn, Ph.D., Chief
Nuclear Materials Safety Section B
Division of Radiation Safety
and Safeguards

RI:DRSS
J.Miller/djh

4/17/85

RI:DRSS
J.Glenn

4/17/85

OFFICIAL RECORD COPY

826 - 0004.0.0
04/09/85

BETWEEN: William O. Miller, Chief
License Fee Management Branch
Office of Administration

John E. Glenn, Chief
Nuclear Materials Section B
Division of Engineering and
Technical Programs

LICENSE FEE TRANSMITTAL

A. REGION I

1. APPLICATION ATTACHED

Applicant/Licensee: Vector Corporation
Application Dated: 3/21/85
Control No.: 03574
License No.: NEW

2. FEE ATTACHED

Amount: \$ 700.00
Check No.: 1394

3. COMMENTS

Signed Brenda Platchek
Date 3/26/85

B. LICENSE FEE MANAGEMENT BRANCH

1. Fee Category and Amount: 30 \$700

2. Correct Fee Paid. Application may be processed for:

Amendment _____
Renewal _____
License ✓

Signed Frances Braum
Date 3/28/85
108
3/29/85

VECTOR CORPORATION

3700 BUTLER ST.
PITTSBURGH, PA 15201



Lawrenceville Office
Mellon Bank
Pittsburgh, PA

1394

3/21 1985

8-26
430

REGISTERED
R8P115384 700 DOLS 00 CTS

PAY

DOLLARS \$ 700.00

TO
THE
ORDER
OF

U.S. Nuclear Regulatory Commission

⑈001394⑈ ⑆043000261⑆ 163⑈5606⑈

VECTOR CORPORATION

DETACH AND RETAIN THIS STATEMENT
THE ATTACHED CHECK IS IN PAYMENT OF ITEMS DESCRIBED BELOW.
IF NOT CORRECT PLEASE NOTIFY US PROMPTLY. NO RECEIPT DESIRED.

DELUXE - FORM WVO-5 V-7

3/21/85

T/S

Byproduct Material License Application

700.00

"SECTION COPY"