



Lehigh Testing Laboratories, Inc.

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August 27, 1984

U.S. NUCLEAR REGULATORY COMMISSION
Region I -- 631 Park Avenue
King of Prussia, PA 19406

ATTN: Jenny M. Johansen, M.S.
Nuclear Materials Section B
Division of Engineering and Technical Programs

SUBJ: Docket No. 030-14700; License No. 07-01173-03
Control No. 16383

This is our response to your letter dated June 12, 1984 requesting additional information on our application dated November 30, 1983 to renew License No. 07-01173-03.

We have made extensive revisions to the November 30 issue of our Radiation Safety Manual. In each of the responses that follow, we refer you to the enclosed revisions to the manual.

ITEM 1A (pages 1 and 2): Per our recent telephone discussion, this item apparently deals with a new exposure room we will be constructing when we relocate in several months. Our plans for the relocation are incomplete at this time, however, and we would like to defer your questions regarding this future construction until our plans are completed.

ITEM 1B (pages 3 and 4): Regarding our current, permanent radiographic facility at 4027 New Castle Avenue, Sections 1.7.0 and 1.8.0 of our manual have been revised extensively to resolve the questions you pose. These revisions incorporate many of the same restrictions we imposed upon our operations as a result of Inspection 84-01; however the new, proposed list of restrictions, upon NRC approval, would supercede the previous list.

ITEM 2 (page 4): Regarding personnel monitoring, Section 1.5.1 has been amended as requested. Several editorial changes were made also.

ITEM 3A (page 4): You suggested that we provide specific instructions in sections 2.2.3 and 2.2.4 concerning when the Radiation and High Radiation Areas need to be established, when surveys are to be performed of the Restricted Area boundary to assure that radiation levels do not exceed 2 mR/hr, and when the individual should start maintaining surveillance over the Restricted Area to keep all persons from entering. We inserted section 2.2.3(G), renumbered subsequent paragraphs in section 2.2.3. We also expanded paragraph 2.2.4(F).

ITEM 3B (page 5): You requested that we clarify 1.6.2(A) concerning the maximum allowable radiation levels along the guide tube. See the enclosed revision of 1.6.2(A).

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ITEM 3C (page 5): This deals with the nature of the required survey of the storage location at the end of radiography operations. In the vast majority of operations, the radioactive materials are returned to the lab storage vault at the end of the day. However, it is possible that a temporary storage location would be required occasionally in the field. In this case, the revision to section 1.6.2(C) and the revised Source Utilization Report (Form 201) require surveys of the boundary of the unrestricted area surrounding such field storage locations.

ITEM 3D (page 5): To comply with the recent changes in 10 CFR 71 and DOT regulations, sections 1.2.0 (Transport Index), 1.6.2(E), 2.3.2(C), 2.3.2(D), 2.4.2(A), 2.4.2(P), and 2.6.2(F)3 have been revised to replace the phrase "3 feet" with "1 meter". The examinations have been revised in their entirety.

ITEM 3E (page 5): Sections 1.6.3 and 2.5.1 have been revised to define situations in which survey readings are higher than the maximum allowable as emergency situations.

ITEM 3F (page 5): In section 1.9.2(B), Item 4 has been deleted as requested. Also, the phrase "occupancy factors" has been deleted from 1.9.7.

ITEM 3G (pages 5 and 6): This deals with administrative restrictions on the use of radioactive sources within the permanent radiation cell, and the resulting "worst-case" radiation levels which can occur. See revised sections 1.8.1, 1.8.2, and 1.8.3. As mentioned above, these revisions incorporate many of the same restrictions we imposed upon our operations as a result of Inspection 84-01; however the proposed list of new restrictions would supercede the previous list we issued at that time.

ITEM 3H (page 6): Regarding when a device is locked in a room for storage at a field site, see revised section 1.9.1(B) and revised Form 201 requiring that the key be kept by the Radiographer and that a survey will be made and recorded of the unrestricted area surrounding the storage room. (This is similar to ITEM 3C on page 5.)

ITEM 3I (page 6): Section 2.5.4 has been amended as requested to notify the "Regional Administrator" at NRC Region I when required; Appendix A has been amended as requested to include NRC Region I telephone number.

ITEM 3J (page 6): Section 2.6.1(F) has been amended as requested to provide for checks of various equipment prior to (not Juring) the first exposure of the shift. Section 2.6.1(D) has been revised to include inspection of the control cable for cuts and breaks. The Source Utilization Report (Form 201) has also been revised to include this check as part of the Daily Equipment Inspections.

ITEM 3K (page 6): Section 2.6.1 has been amended to include instructions to 1) Report all defects to the RSO immediately, and 2) Do not attempt to use defective equipment. Also, section 1.1.1 has been revised to include Section 3.3 and Appendices A and D as additional parts of the Radiation Safety Manual which are issued to radiography workers, and they are now responsible for the additional requirements of those parts. The evaluation and reporting of defects and noncompliances has been added to the list of training subjects in section 3.1.2(B).

ITEM 3L (page 7): Quarterly Maintenance procedures have been revised to exclude removal of the source from the exposure device; see revisions of section 2.6.2(F) and Form 203. This form has also been revised to include documentation of any equipment removed from service.

ITEM 4A (page 7): Section 3.1.1(A) has been revised to increase the minimum training for the subjects covered in 3.1.1(A) from 4 hours to 6 hours. Instruction in the use of radiographic equipment is allotted a minimum of 2 hours. The requirement of completing the two General Dynamics programmed instruction textbooks has been deleted from 3.1.1(A). These texts may continue to be used as part of the training of prospective Radiographers.

ITEM 4B (page 7): The sample examinations for prospective Radiographers and for prospective Assistant Radiographers have been revised entirely, and are enclosed.

ITEM 4C (page 8): The checkpoints used for evaluating the field competency of Radiographers are contained in the "Practical Examination", also enclosed.

ITEM 5A (page 8): Sections 1.3.1(C), 3.2.2(A)3, and 3.2.4 have been revised to include audits by the General Manager of the RSO performing radiography, if the RSO actually does perform radiography. Note that the frequency of the audits performed by the General Manager has been changed. Previously, the General Manager was required to perform an audit "at least once every six months". This has been changed to require that "each (radiography) worker shall be audited by the General Manager at intervals not to exceed twelve months...".

ITEM 5B (page 8): The revision of section 3.2.4 specifies when a radiography worker would be audited if he had not participated in radiography operations for a period exceeding three months.

ITEM 5C (pages 8 and 9): Form 208, "Management Audit of Radiographic Operations", has been revised and expanded. Among the revisions is the added requirement that a copy of the applicable Source Utilization Report (Form 201) be attached to the audit sheet. Form 201 now includes all of the information you requested.

ITEM 6A (page 9): There was a typographical error in section 2.6.4(F). See the enclosed revision.

OTHER REVISIONS - SUBSTANTIVE:

In sections 1.3.2(F), 3.2.2(B)6, and 3.2.4, the words "monthly" and "each quarter" have been deleted from the discussions on the frequency of inspections of radiography workers by the RSO. The frequencies are now set at intervals not to exceed 3 months for each individual worker.

Section 2.1.8 (formerly 2.1.7): corrected attenuation factor for Model 799 collimator to 1/20; added description of Model 527 "Rayguide" collimator.

Sections 3.1.1(D) and 3.1.3(D) now require review and approval of the qualifications and documentation thereof by the General Manager before individuals may receive their certifications as either Assistant Radiographers or as Radiographers.

OTHER REVISIONS - SUBSTANTIVE (cont'd):

Sections 3.1.6, 3.5.0(D), and Forms 209 thru 212 are all new.

Appendix A, "Emergency Telephone Numbers" has been revised and expanded.

OTHER REVISIONS - EDITORIAL, OR OF LESSER IMPORTANCE

"Contents" page has been expanded to include the list of Appendices.

Lehigh's QA Program for Transporting Radioactive Materials has been incorporated into the Radiation Safety Manual as Appendix F.

The "Qualifications of Responsible Personnel for Radiation Safety Management" has been simplified and incorporated in the manual as Appendix E.

Section 1.3.2(F): Deleted the redundant word "by".

Section 1.3.5(C): Corrected "1.3.6" to read "1.3.7" at bottom of page.

Section 1.3.8: Chart revised to show RSO as the direct supervisor of all radiography workers; Ass't RSO has no direct supervisory authority.

Section 1.3.7: Corrected "3.2.2(A)" to "3.1.2(A)".

Section 1.9, Table 1.1: Expanded to include distances for 100 mR/hr

Section 2.2.1(C): Capitalized entire paragraph; added reference to 1.8.0.

Section 3.1.2(E): List of topics to be covered in on-the-job training of prospective Radiographers was expanded and rearranged.

Section 3.1.2(C)2: Corrected "3.1.3(A)" to 3.1.2(A)".

Section 3.1.3(D): Corrected "3.1.2(B)" to 3.1.1(B)".

Section 3.1.3(E): Corrected "3.1.3(C)" to 3.1.2(C)".

Changed the phrase "Daily Utilization Report" to "Source Utilization Report" throughout the manual.

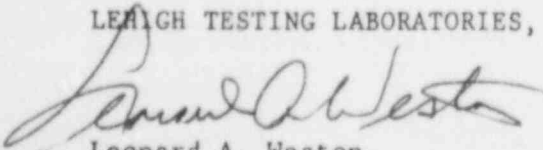
Section 3.4.1(A) has been expanded to include more information.

Section 3.4.2: Half-life of Cesium changed from 33 years to 30 years.

Section 2.1.6: Inserted description of Tech/Ops Model 693 Pistol-Grip crank; renumbered subsequent sections.

Sincerely,

LEHIGH TESTING LABORATORIES, INC.



Leonard A. Weston
Vice-President