LEAR SIEGLER, INC.
INSTRUMENT DIVISION

1397

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May 4, 1979

U.S. Nuclear Regulatory Commission
License Management Branch
Washington, D.C. 20555

Attention: Mr. Nathan Bassin

Dear Mr. Bassin:

Control No. 98453 (License Renewal No. 21-07265-01 -
Your letter of March 9, 1979

Your letter is hereby answered with a part by part discussion of each section:

1) Paint applied by outside source

The radioactive paint is applied by U.S. Radium, 4150 Old Berwick Road, Bloomsburg, PA 17815.

The Quality Control Program to assure proper paint application has not as of this date been supplied to us by U.S. Radium. Attached is a copy of the letter sent March 20 to U.S. Radium which they have not answered. We have delayed our reply to you, hoping we would have received a response from U.S. Radium by now.

2) Storing and Handling of Components

The handling and storage of painted components is carried out according to our Specification SB1443, a copy of which is enclosed.

3) Physical Surveys

I have discussed the need for physical surveys with our Manufacturing people and made inquiries on several occasions with the University of Michigan, Radiation Control Service, to provide us with a monitoring service. However, our production build has been essentially zero (0) units for more than a year according to our Manufacturing people, and so surveys have not been made during this time.

With such little activity, we have even questioned the wisdom of reapplying for a by-product license. We do have a commitment, however, to supply spare units when requested by our Lear Siegler marketing subsidiary, American Avitron (Rye, New York).

4) Transfer of Painted Components

The painted components are assembled into our attitude indicators, which are hermetically sealed containers totally enclosing the painted components. These components have been painted and sealed with a clear lacquer overcoat and mounted behind glass dial covers.

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JUN 11 1979

4141 EASTERN AVENUE, S.E., GRAND RAPIDS, MI 49508 • TWX 810-273-6929 • TELEX 22-6430 • (616) 241-7000

External radiation levels will be essentially zero. Sealed units are shipped to American Avitron. Painted components could also be shipped to American Avitron.

These shipments would be made under Part 31 of the NRC Rules and Regulations. Specifically under Part 31.7 (Luminous safety devices for use in aircraft) a general license has been granted by the NRC for these devices provided each device contains not more than 10 curies of tritium.

Shipments in the past have also been made to Sirkorsky Aircraft, Stratford, Connecticut, under license number 06-02269-03.

Very truly yours,

LEAR SIEGLER, INC.

Joe Konecsni

Joe Konecsni
Section Head
Materials Technology

JK/fk

Enc. (2)

ENGINEERING SPECIFICATION

1397

HANDLING OF RADIOACTIVE MARKED PARTS

CAUTION
RADIOACTIVE
MATERIAL

APVD W.F.Lee 11-21-69

1. SCOPE

1.1 Scope - This procedure ~~establishes acceptable~~ methods of handling parts painted with radioactive self-luminous paint.

1.2 Purpose - This procedure applies only to material on which activated self-luminous paint is specified on the engineering drawing.

2. APPLICABLE DOCUMENTS

2.1 The following specifications and documents, of the issue in effect on date of invitation for bids or request for proposal, form a part of this specification to the extent specified herein.

LSI Specification

SM 2055 Paint, Self Luminescent, Radioactive

(Applications for copies should be addressed to the Purchasing Department of Lear Siegler, Inc., 4141 Eastern Avenue, SE, Grand Rapids, Michigan 49508.)

Publication

U. S. Atomic Energy Commission Regulations, Title 10, Chapter I

(Applications for copies should be addressed to the Director of Publications, U. S. Atomic Energy Commission, Oak Ridge, Tennessee.)

					NAME	DATE
				STDS.		
C	E1108	L.C.	5-4-70	SYS PROJ	F Bosworth	11-24-69
B	E1102	L.C.	6/18/72	DSGN PROJ		
A	Rev.	V.R.	11/24/69	CHK BY	M Lewis	11/21/69
	ENG ORDER	CHK	DATE	APPD BY	W F Lee	11-21-69

LEAR SIEGLER, INC. / LSI INSTRUMENT DIVISION
GRAND RAPIDS, MICHIGAN, US

TITLE
HANDLING OF RADIOACTIVE MARKED PARTS

SPEC. NO. SB 1443

3. RESPONSIBILITY

3.1 Materials Engineering - The responsibility for proper handling of radioactive materials in any situation is delegated by the Atomic Energy Commission license to the Section Head of Materials Engineering. This person or his designated alternate is also known as the Radiological Safety Officer.

3.2 Supervision - Supervisors are responsible for supplying the Section Head of Materials Engineering with the names and clock numbers of the personnel who will be handling radioactive material. Supervisors are also responsible for reporting to the Section Head of Materials Engineering all or any abnormal conditions such as: chipped paint, scratched paint, etc.

3.3 Production Control - Production Control is responsible for notifying Receiving and the storage area which parts will have radioactive paint.

3.4 Manufacturing Engineer - The cognizant manufacturing engineer is responsible for updating and maintaining processes in compliance with this procedure.

3.5 Quality Engineer - The cognizant quality control engineer is responsible for updating and maintaining checklists in compliance with this procedure.

3.5.1 The P.D.C. for purchased materials must show "Radioactive Parts".

4. PROCEDURE

4.1 Receiving - Receiving personnel may open and remove contents of containers labeled "CAUTION RADIOACTIVE MATERIAL" per normal unpacking procedures, except where:

(a) Individual parts are not labeled "Caution Radioactive Material".

(b) Individual parts are not packaged in a polyethylene bag.

When either or both the above conditions exist, the material is to be held until the manufacturing engineer responsible for the part is notified and corrective action is taken to properly package and label the material. The Section Head, Materials Engineering, must be notified when containers or parts labeled "Caution Radioactive Parts" are received.

4.2 Incoming Inspection - Material labeled "Caution Radioactive Material" may be handled or removed from the container and/or polyethylene bag for inspection purposes by authorized personnel only. In such cases:

(a) The inspector must wear disposable latex or surgical gloves when handling unpackaged material.

(b) At completion of inspection the material must be repackaged as received with radioactive caution label attached.

(c) Any person making direct skin contact with radioactive painted surfaces during inspection handling must cleanse the affected skin area thoroughly with soap and water and prior to inserting anything into his mouth, such as cigarettes, pencils, food, etc., if contact with any part of the hand is made.

(d) After use, disposable gloves must be placed in an identified closed container for pickup and disposal by Materials Engineering. The container shall be furnished by Manufacturing Engineering.

4.2.1 Radioactive parts, awaiting inspection in the receiving area, shall be segregated and isolated from Receiving Inspection personnel.

4.3 Storage Area - Radioactive parts must be stored in an isolated area of the present stockroom or an enclosed cabinet within the present stockroom. The storage area must:

(a) Be identified "CAUTION RADIOACTIVE MATERIAL".

(b) Have access to the area restricted to authorized personnel only whose name and clock number is registered with Materials Engineering per Para. 3.2.

(c) Not accept radioactive parts improperly labeled or packaged, in which case the cognizant manufacturing engineer must be notified.

(d) Withhold radioactive painted parts from assembly kits until the parts are required for assembly at which time they will be requisitioned on a daily basis.

4.4 Assembly Area - The assembly area and personnel performing sub-assembly and final assembly of units using radioactive painted parts must adhere to the following:

(a) The area in which assembly and sub-assembly occurs must have caution placards or signs proclaiming "DANGER CAUTION RADIOACTIVE MATERIAL".

(b) Access to the assembly area must be restricted t , the personnel whose names are registered with the Section Head of Materials Engineering per Para. 3.2.

(c) Disposable latex or surgical gloves need only be worn by any person active in assembling or handling radioactive parts. Normal assembly (without gloves) can resume when the radioactive parts are assembled in place, provided there is no direct skin contact with the paint portion of the radioactive parts.

(d) Any person making direct skin contact with radioactive painted surfaces during assembly handling shall cleanse the affected skin area as in 4.2(c).

(e) After use, disposable gloves must be disposed of in the manner of 4.2(d).

(f) Packaging material, such as polyethylene bags, must be disposed of in the container with the gloves. Rigid plastic containers may be disposed of in the normal manner provided the radioactive material was contained in a polyethylene bag inside the plastic container.

(g) Rejected material must be repackaged and labeled as received before transferring from the assembly area to the salvage department. The rejected material must be isolated in the salvage area.

(h) A label indicating "CAUTION RADIOACTIVE MATERIAL" must be affixed to each complated indicator leaving the assembly area.

(i) The line supervisor will requisition radioactive painted parts for assembly on a daily basis.

4.5 Inspection - Inspectors who inspect radioactive self-luminous painted parts may perform inspection operations per standard procedures, except:

(a) They must wear disposable latex or surgical gloves whenever direct skin contact with the radioactive material is inherent or possible during the inspection process.

(b) They must have eye protection, such as glasses or magnifying lamp, when inspecting the radioactive material, subassemblies or final assemblies within ten inches of the eye.

(c) If direct skin contact is made with the parts, inspectors must cleanse the affected skin area as in 4.2(c).

4.6 Shipping Area - The shipping departments must assure the following is completed for radioactive parts in addition to standard packaging:

(a) Identify all shippers and accompanying papers a note stating "Radioactive Devices - No Label Required".

(b) Place into each container having a completed assembly containing radioactive parts an information sheet indicating the extent of radioactive material, the precautions in handling and directions to be followed in case of damaged hermetic seals. See Attachment I.

(c) Notify the Section Head of Materials Engineering when shipment is to be made.

4.7 Salvage - Material labeled "Caution Radioactive Material" received into the salvage area for scrap shall not be disposed of without direction from the Section Head of Materials Engineering.

ATTACHMENT I

1397

CAUTION

RADIOACTIVE MATERIAL

This product contains * _____ of RADIOACTIVE

* _____.

* To be filled in for each part number.

LEAR SIEGLER, INC. / ISi INSTRUMENT DIVISION GRAND RAPIDS, MICH.	UNLESS OTHERWISE SPECIFIED DIMS ARE IN INCHES. TOL. ARE: 2 PLACE DEC ± .02 ANGLE ± 5° 3 PLACE DEC ± .005	SIZE A	CODE IDENT NO. 35351	DRAWING NO. SB1443
		SCALE		SHEET 6

LEAR SIEGLER, INC.
INSTRUMENT DIVISION

March 20, 1979

U.S. Radium
4150 Old Berwick Road
Bloomburg, PA 17815

Attention: Mr. Terry Brown

Dear Mr. Brown:

In order to renew our By Product License, we have been asked by the Nuclear Regulatory Commission to supply supporting information from our radioactive paint application vendor (see attachment).

They wish to know the manufacturer and manufacturer's designation of the paint. They al o wish to know the quality control program followed by the painter to assure that the paint has been properly applied to the components.

Thank you for your cooperation.

Very truly yours,

LEAR SIEGLER, INC.

Joe Konecsni
Section Head
Materials Engineering

JK/fk

Attachment

cc: F. Boshoven
B. Bloemendaal