

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES  
SAFETY EVALUATION OF DEVICE

NO.: NR420D124B

DATE: September 09, 1965

PAGE 1 OF 2

DEVICE TYPE: "C", "O" or MO" Frame Beta Gauge

MODEL: SCL-1A and SCL-1B

MANUFACTURER/DISTRIBUTOR: LFE Corporation  
1601 Trapelo Road  
Waltham, MA 02154

MANUFACTURER/DISTRIBUTOR:

SEALED SOURCE MODEL DESIGNATION: LFE Model S2A-2 or NER-592

ISOTOPE: Strontium-90

MAXIMUM ACTIVITY: 50 millicuries

LEAK TEST FREQUENCY: 6 months

PRINCIPAL USE: (E) Beta Gauges

CUSTOM DEVICE: ☐ YES ☒ NO

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SAFETY EVALUATION OF DEVICE

NO.: NR420D124B

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DEVICE TYPE: "C", "O" or "MO" Frame Beta Gauge

DESCRIPTION:

The gauge consists of a source mount (cast iron box) and a detector mounted opposite each other on a "C" frame structure. The source is fixed inside the box behind a collimated opening covered by a 0.001" stainless steel window. A flat, stainless steel shutter, 0.094" thick, is mounted directly to the rotary disc of a D.C. rotary solenoid. In the absence of power, a clock-type spring returns the shutter to the closed position between the source and the collimated opening.

The shutter position is indicated by red and green lights located on the "C" frame structure and by a plexiglass window in the side of the box which allows a visible check of the solenoid position.

The Model SCL-1A and SCL-1B devices are identical except for a difference in the shape of the collimated opening.

LABELING:

The devices may be distributed to specific or general licensees. A label on the cast iron source mount contains the information specified in Sections 20.203(f)(1) and (4), 10 CFR 20. When distributed to general licensees the device is labeled in accordance with the terms and conditions of the specific license issued to the manufacturer (GL 114).

EXTERNAL RADIATION LEVELS:

Each device uses a Tracerlab (LFE) Model S2A-2 sealed source containing up to 50 millicuries of Strontium 90. Maximum radiation levels at one foot do not exceed 5 mr/hr when the shutter is open.

ISSUING AGENCY:

U.S. Atomic Energy Commission

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SAFETY EVALUATION OF DEVICE

NO.: NR-420-D-818-B

DATE:

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

MODEL: SCL-1A and SCL-1B

MANUFACTURER/DISTRIBUTOR:

LFE Industrial Systems Corporation  
55 Green Street  
Clinton, MA 01510

SEALED SOURCE MODEL DESIGNATION: LFE Model S2-A2

ISOTOPE:

Strontium-90

MAXIMUM ACTIVITY:

50 millicuries (1.85 GBq)

LEAK TEST FREQUENCY: 6 Months

PRINCIPAL USE: (E) Beta Gauges

CUSTOM DEVICE: \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO

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SAFETY EVALUATION OF DEVICE

NO.: NR-420-D-818-B

DATE:

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

DESCRIPTION:

The gauge consists of a source mount (cast iron box) and a detector mounted opposite each other on a "C", "O" or "MO" frame structure. The source is fixed inside the source mount behind a collimated opening covered by a 0.001" (0.025 mm) stainless steel window. A flange, stainless steel shutter, 0.094" (2.4 mm) thick is mounted directly to the rotary disc of a D.C. rotary solenoid. The gauge has a maximum air gap of 4" (10.2 cm).

The shutter position is indicated by red (open) and green (closed) lights located on the source mount structure and by a plexiglass window in the side of the source mount which allows a visible check of the solenoid position.

The model SCJ 1A and SCL-1B gauges are identical except for a difference in the shape of the collimated opening.

LABELING:

When distributed to general licensees the device is labeled as follows: The following markings are shown on aluminum and stainless steel marking plates:

"Removal of This Label is Prohibited. This Label Shall be Maintained on the Device in Legible Condition, Caution, Radioactive Material," Radiation Symbol, Name and Address of Manufacturer, Isotope, Quantity, Date, Model Number, Serial Number, "Turn Source Off When Necessary to Stay Within 3 ft. of Green Light. Green Light Indicates Source Off. Do Not Place Hands in Measuring Gap."

The following statement is also included:

REMOVAL OF THIS LABEL IS PROHIBITED  
THIS LABEL SHALL BE MAINTAINED ON THE  
DEVICE IN LEGIBLE CONDITION

THE RECEIPT, POSSESSION, USE AND TRANSFER OF THIS  
DEVICE ARE SUBJECT TO A GENERAL LICENSE OR THE  
EQUIVALENT AND THE REGULATIONS OF THE U.S. NRC OR A

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

STATE WITH WHICH THE NRC HAS ENTERED INTO AN AGREEMENT FOR THE EXERCISE OF REGULATORY AUTHORITY. ABANDONMENT OR DISPOSAL PROHIBITED UNLESS TRANSFERRED TO PERSONS SPECIFICALLY LICENSED BY NRC OR AN AGREEMENT STATE. OPERATION PROHIBITED IF THERE IS INDICATION OF FAILURE OR DAMAGE TO SHIELDING, SOURCE CONTAINMENT OR ON-OFF MECHANISM. ONLY PERSONS SPECIFICALLY LICENSED BY NRC OR AGREEMENT STATE MAY INSTALL, DISMANTLE, RELOCATE, REPAIR OR TEST THIS DEVICE. DEVICE SHALL BE TESTED FOR RADIOACTIVE LEAKAGE AND PROPER FUNCTIONING OF ON-OFF MECHANISM AND INDICATOR, IF ANY, AT INSTALLATION, AT SOURCE REPLACEMENT AND THEREAFTER AT NO LONGER THAN 6 MONTH INTERVALS. LOSS, THEFT OR TRANSFER OF THIS DEVICE TO ANOTHER LICENSEE AND FAILURE OR DAMAGE TO SHIELDING, SOURCE CONTAINMENT OR ON-OFF MECHANISM MUST BE REPORTED TO NRC OR AGREEMENT STATE.

CONDITIONS OF NORMAL USE:

The SCL-1A and SCL-1B source holders are designed for use in a beta thickness gauge to measure thickness of materials in industrial environments. Expected operating conditions are:

- Temperature - Up to 300°F (149°C)
- Humidity - Up to 100%
- Vibration - Industrial conditions of slight to moderate vibration.

PROTOTYPE TESTING:

The LFE Model S2-A2 sealed source has achieved an ANSI classification of 77C64343.

EXTERNAL RADIATION LEVELS:

The radiation levels from the device are controlled with shielding such that the levels do not exceed 3 mR/hr (30  $\mu$ Sv/hr) and 0.8 mR/hr (8  $\mu$ Sv/hr) at 30 cm (11.8") and 100 cm (39.4") from the surface, respectively.

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

- The Models SCL-1A and SCL-1B may be used by either generally or specifically licensed persons in accordance with NRC or Agreement State regulations.
- Handling, storage, use, transfer, and disposal: To be determined by the licensing authority.
- The device shall be leak tested at intervals not to exceed 6 months using techniques capable of detecting 0.005 microcurie (185 Bq) of removable contamination.
- This registration sheet and the information contained within the references shall not be changed without the written consent of the NRC.

SAFETY ANALYSIS SUMMARY:

REFERENCES:

The following supporting documents for the Models SCL-1A and SCL-1B are hereby incorporated by reference and are made a part of this registry document.

- LFE's letters dated September 16, 1991, and August 6, 1991.

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

MODEL: SCL-1A and SCL-1B

MANUFACTURER/DISTRIBUTOR:

LFE Industrial Systems Corporation  
55 Green Street  
Clinton, MA 01510

SEALED SOURCE MODEL DESIGNATION: LFE Model S2-A2

ISOTOPE:

Strontium-90

MAXIMUM ACTIVITY:

50 millicuries (1.85 GBq)

LEAK TEST FREQUENCY: 6 Months

PRINCIPAL USE: (E) Beta Gauges

CUSTOM DEVICE: \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO



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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

DESCRIPTION:

The gauge consists of a source mount (cast iron box) and a detector mounted opposite each other on a "C", "O" or "MO" frame structure. The source is fixed inside the source mount behind a collimated opening covered by a 0.001" (0.025 mm) stainless steel window. A flat, stainless steel shutter, 0.094" (2.4 mm) thick is mounted directly to the rotary disc of a D.C. rotary solenoid. The gauge has a maximum air gap of 4" (10.2 cm).

The shutter position is indicated by red (open) and green (closed) lights located on the source mount structure and by a plexiglass window in the side of the source mount which allows a visible check of the solenoid position.

The model SCL-1A and SCL-1B gauges are identical except for a difference in the shape of the collimated opening.

LABELING:

When distributed to general licensees the device is labeled as follows: The following markings are shown on aluminum and stainless steel marking plates:

"Removal of This Label is Prohibited. This Label Shall be Maintained on the Device in Legible Condition, Caution, Radioactive Material," Radiation Symbol, Name and Address of Manufacturer, Isotope, Quantity, Date, Model Number, Serial Number, "Turn Source Off When Necessary to Stay Within 3 ft. of Green Light. Green Light Indicates Source Off. Do Not Place Hands in Measuring Gap."

The following statement is also included:

REMOVAL OF THIS LABEL IS PROHIBITED  
THIS LABEL SHALL BE MAINTAINED ON THE  
DEVICE IN LEGIBLE CONDITION

THE RECEIPT, POSSESSION, USE AND TRANSFER OF THIS  
DEVICE ARE SUBJECT TO A GENERAL LICENSE OR THE  
EQUIVALENT AND THE REGULATIONS OF THE U.S. NRC OR A



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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

STATE WITH WHICH THE NRC HAS ENTERED INTO AN AGREEMENT FOR THE EXERCISE OF REGULATORY AUTHORITY. ABANDONMENT OR DISPOSAL PROHIBITED UNLESS TRANSFERRED TO PERSONS SPECIFICALLY LICENSED BY NRC OR AN AGREEMENT STATE. OPERATION PROHIBITED IF THERE IS INDICATION OF FAILURE OR DAMAGE TO SHIELDING, SOURCE CONTAINMENT OR ON-OFF MECHANISM. ONLY PERSONS SPECIFICALLY LICENSED BY NRC OR AGREEMENT STATE MAY INSTALL, DISMANTLE, RELOCATE, REPAIR OR TEST THIS DEVICE. DEVICE SHALL BE TESTED FOR RADIOACTIVE LEAKAGE AND PROPER FUNCTIONING OF ON-OFF MECHANISM AND INDICATOR, IF ANY, AT INSTALLATION, AT SOURCE REPLACEMENT AND THEREAFTER AT NO LONGER THAN 6 MONTH INTERVALS. LOSS, THEFT OR TRANSFER OF THIS DEVICE TO ANOTHER LICENSEE AND FAILURE OR DAMAGE TO SHIELDING, SOURCE CONTAINMENT OR ON-OFF MECHANISM MUST BE REPORTED TO NRC OR AGREEMENT STATE.

CONDITIONS OF NORMAL USE:

The SCL-1A and SCL-1B source holders are designed for use in a beta thickness gauge to measure thickness of materials in industrial environments. Expected operating conditions are:

- Temperature - Up to 300°F (149°C)
- Humidity - Up to 100%
- Vibration - Industrial conditions of slight to moderate vibration.

PROTOTYPE TESTING:

The LFE Model S2-A2 sealed source has achieved an ANSI classification of 77C64343.

EXTERNAL RADIATION LEVELS:

The radiation levels from the device are controlled with shielding such that the levels do not exceed 3 mR/hr (30  $\mu$ Sv/hr) and 0.8 mR/hr (8  $\mu$ Sv/hr) at 30 cm (11.8") and 100 cm (39.4") from the surface, respectively.

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

- The Models SCL-1A and SCL-1B may be used by either generally or specifically licensed persons in accordance with NRC or Agreement State regulations.
- Handling, storage, use, transfer, and disposal: To be determined by the licensing authority.
- The device shall be leak tested at intervals not to exceed 6 months using techniques capable of detecting 0.005 microcurie (185 Bq) of removable contamination.
- This registration sheet and the information contained within the references shall not be changed without the written consent of the NRC.

SAFETY ANALYSIS SUMMARY:

REFERENCES:

The following supporting documents for the Models SCL-1A and SCL-1B are hereby incorporated by reference and are made a part of this registry document.

- LFE's letters dated September 16, 1991, and August 6, 1991.

William R. Prendergast  
LFE Industrial Systems Corporation  
55 Green Street  
Clinton, MA 01510

Dear Mr. Prendergast:

This letter is in reference to your letter dated August 6, 1991, which requested that we transfer the registration certificates listed in column 1 of Enclosure 1 to inactive status. The certificates have been transferred to inactive status as you have requested. Please note that transfer of the registration certificates to inactive status means the sources or devices included on the certificates may no longer be commercially distributed.

The registration numbers for the certificates have been changed. Enclosure 1 specifies the old registration number, the new registration number, and the model numbers. Please note that some old certificates have been combined into one new inactive certificate. In addition, two registration certificates have been deleted from the system since they were duplicates of other certificates.

Please review the registration certificates (copies enclosed) in their entirety and notify us immediately if there are any errors or omissions.

If you have any questions, please call me at (301) 415-7868 or Mr. Steven Baggett at (301) 415-7273.

Sincerely,

/s/

John W. Lubinski, Mechanical Engineer  
Sealed Source Safety Section  
Source Containment and  
Devices Branch  
Division of Industrial and  
Medical Nuclear Safety  
Office of Nuclear Material Safety  
And Safeguards

Enclosures: As stated

cc: S. Kimberley, LFDCB

Distribution:

SCDB r/f                      SSD-91-86                      NE01  
SSD Files listed in column 1 of enclosure 1 of this letter

DOCUMENT NAME: C:\FILES\SSDS\LFE\LFE.CMP

To receive a copy of this document, indicate in the box: "C" = Copy without attachment/enclosure "E" = Copy with attachment/enclosure "N" = No copy

OFFICE	SCDB	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
NAME	JLubinski/jl	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
DATE	09/29/95	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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## ENCLOSURE 1

Old Reg. Number	New Reg. Number	Model Number(s)
NR-420-D-101-U	NR-420-D-801-S	Keleket-Barnes Rotary
NR-420-D-102-U	NR-420-D-802-S	Keleket-Barnes Shperay
NR-420-D-103-U	NR-420-D-803-S	Keleket-Barnes Ceiling Mounted Unit
NR-420-S-104-S	NR-420-S-804-S	S-10
NR-420-D-106-U	NR-420-D-805-S	Keleket-Barnes Flexaray
NR-420-S-107-U	NR-420-S-806-S	RXA, RXB, RXC, RXL, RXM, RXN
NR-420-D-108-U	NR-420-D-807-B	SCL-1D
NR-420-D-109-B	NR-420-D-808-B certificates were combined	BGL-7C
NR-420-D-110-G		BGL-7
NR-420-D-111-B		BGL-1C
NR-420-D-112-B	NR-420-D-809-B	BGL-1
NR-420-D-113-B	NR-420-D-810-B certificates were combined	SO-7D, SO-7E
NR-420-D-114-B		SO-7A, SO-7B, SO-7C
NR-420-D-115-B	NR-420-D-811-B	SO-1A, SO-1B, SO-1C
NR-420-D-116-B	NR-420-D-812-B certificates were combined	SN-7D, SN-7E
NR-420-D-117-B		SN-7A, SN-7B, SN-7C
NR-420-D-118-B	NR-420-D-813-B	SN-1A, SN-1B, SN-1C, SN-1D, SN-1E, SN-1F
NR-420-D-119-B	NR-420-D-814-B	SC-7D, SC-7E
NR-420-D-120-B	NR-420-D-815-B	SC-7A, SC-7B, SC-7C
NR-420-D-121-B	NR-420-D-816-B	SC-1A, SC-1B, SC-1C, SC-1D, SC-1E, SC-1F
NR-420-D-122-B	NR-420-D-817-B	SN-P7B
NR-420-D-124-B	NR-420-D-818-B	SCL-1A and SCL-1B
NR-420-D-125-G	NR-420-D-819-B	SN-P7A4
NR-420-D-126-U	NR-420-D-820-B	HSB-76 and HSB-77
NR-420-D-127-G	NR-420-D-821-G	HSB-76A and HSB-77A

## ENCLOSURE 1

Old Reg. Number	New Reg. Number	Model Number(s)
NR-420-D-128-G	NR-420-D-822-G	BGL-7A
NR-420-D-132-G	NR-420-D-823-G	SNF-18
NR-420-D-133-G	NR-420-D-824-G	SSL-3
NR-420-S-137-U	NR-420-S-826-S	R-30, R-31
NR-420-S-138-U	NR-420-S-827-S	CD-1
NR-420-D-139-U	NR-420-D-828-S	SC-11
NR-420-D-140-U	NR-420-D-829-B	DH-75
NR-420-S-141-U	NR-420-S-830-S	S-75
NR-420-D-142-U	NR-420-D-831-S	AX-4
NR-420-D-143-U	NR-420-D-832-S	BG-107
NR-420-D-144-U	NR-420-D-833-S	BG-105
NR-420-D-145-U	NR-420-D-834-S	BG-7
NR-420-D-146-U	NR-420-D-835-S	BG-5
NR-420-D-147-U	NR-420-D-836-S	BG-2/5
NR-420-D-151-B	deleted from system - same as old registration NR-420-D-117-B	
NR-420-D-152-U	NR-420-D-840-B	SC-9C
NR-420-S-154-U	NR-420-S-842-S	S-9
NR-420-S-155-U	NR-420-S-843-S	R-58, R-59
NR-420-S-156-U	NR-420-S-844-S	CS-15
NR-420-S-157-U	NR-420-S-845-S	CD-15
NR-420-S-158-U	deleted from system - same as old registration NR-420-S-156-U	
NR-420-D-159-U	NR-420-D-846-S	SC-11A
NR-420-D-160-U	NR-420-D-847-S	Clathrate Gas Detector
NR-420-S-163-U	NR-420-S-849-S	CD-11
NR-420-D-164-B	NR-420-D-850-B	SN-P1B

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

MODEL: SCL-1A and SCL-1B

MANUFACTURER/DISTRIBUTOR:

LFE Industrial Systems Corporation  
55 Green Street  
Clinton, MA 01510

SEALED SOURCE MODEL DESIGNATION: LFE Model S2-A2

ISOTOPE:

Strontium-90

MAXIMUM ACTIVITY:

50 millicuries (1.85 GBq)

LEAK TEST FREQUENCY: 6 Months

PRINCIPAL USE: (E) Beta Gauges

CUSTOM DEVICE: \_\_\_\_\_ YES \_\_\_\_\_ X \_\_\_\_\_ NO



REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES  
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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

DESCRIPTION:

The gauge consists of a source mount (cast iron box) and a detector mounted opposite each other on a "C", "O" or "MO" frame structure. The source is fixed inside the source mount behind a collimated opening covered by a 0.001" (0.025 mm) stainless steel window. A flat, stainless steel shutter, 0.094" (2.4 mm) thick is mounted directly to the rotary disc of a D.C. rotary solenoid. The gauge has a maximum air gap of 4" (10.2 cm).

The shutter position is indicated by red (open) and green (closed) lights located on the source mount structure and by a plexiglass window in the side of the source mount which allows a visible check of the solenoid position.

The Models SCL-1A and SCL-1B gauges are identical except for a difference in the shape of the collimated opening. In addition, the devices are identical in construction to the Model SCL-1C except the activity limit is restricted to 50 millicuries.

LABELING:

All devices distributed were labeled with the following:  
"Caution Radioactive Material," radiation symbol, isotope, activity, and model number.

Devices distributed to general licensees included the following additional information: (The following markings were shown on aluminum and stainless steel marking plates)

"Removal of This Label is Prohibited. This Label Shall be Maintained on the Device in Legible Condition, Caution, Radioactive Material," Radiation Symbol, Name and Address of Manufacturer, Isotope, Quantity, Date, Model Number, Serial Number, "Turn Source Off When Necessary to Stay Within 3 ft. of Green Light. Green Light Indicates Source Off. Do Not Place Hands in Measuring Gap."



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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

LABELING (Cont.):

The following statement is also included:

REMOVAL OF THIS LABEL IS PROHIBITED  
THIS LABEL SHALL BE MAINTAINED ON THE  
DEVICE IN LEGIBLE CONDITION

THE RECEIPT, POSSESSION, USE AND TRANSFER OF THIS  
DEVICE ARE SUBJECT TO A GENERAL LICENSE OR THE  
EQUIVALENT AND THE REGULATIONS OF THE U.S. NRC OR A  
STATE WITH WHICH THE NRC HAS ENTERED INTO AN AGREEMENT  
FOR THE EXERCISE OF REGULATORY AUTHORITY. ABANDONMENT  
OR DISPOSAL PROHIBITED UNLESS TRANSFERRED TO PERSONS  
SPECIFICALLY LICENSED BY NRC OR AN AGREEMENT STATE.  
OPERATION PROHIBITED IF THERE IS INDICATION OF FAILURE  
OR DAMAGE TO SHIELDING, SOURCE CONTAINMENT OR ON-OFF  
MECHANISM. ONLY PERSONS SPECIFICALLY LICENSED BY NRC  
OR AGREEMENT STATE MAY INSTALL, DISMANTLE, RELOCATE,  
REPAIR OR TEST THIS DEVICE. DEVICE SHALL BE TESTED FOR  
RADIOACTIVE LEAKAGE AND PROPER FUNCTIONING OF ON-OFF  
MECHANISM AND INDICATOR, IF ANY, AT INSTALLATION, AT  
SOURCE REPLACEMENT AND THEREAFTER AT NO LONGER THAN 6  
MONTH INTERVALS. LOSS, THEFT OR TRANSFER OF THIS  
DEVICE TO ANOTHER LICENSEE AND FAILURE OR DAMAGE TO  
SHIELDING, SOURCE CONTAINMENT OR ON-OFF MECHANISM MUST  
BE REPORTED TO NRC OR AGREEMENT STATE.

CONDITIONS OF NORMAL USE:

The SCL-1A and SCL-1B source holders are designed for use in a  
beta thickness gauge to measure thickness of materials in  
industrial environments. Expected operating conditions are:

- Temperature - Up to 300°F (149°C)
- Humidity - Up to 100%
- Vibration - Industrial conditions of slight to moderate vibration.

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

PROTOTYPE TESTING:

The LFE Model S2-A2 sealed source has achieved an ANSI classification of 77C64343.

LFE has indicated that they have no information concerning prototype testing of the devices. However, they have indicated that there have been no reported failures of the device resulting in a radiation hazard.

EXTERNAL RADIATION LEVELS:

The radiation levels from the device are controlled with shielding such that the levels do not exceed 3 mR/hr (30  $\mu$ Sv/hr) and 0.8 mR/hr (8  $\mu$ Sv/hr) at 30 cm (11.8") and 100 cm (39.4") from the surface, respectively.

LIMITATIONS AND/OR OTHER CONSIDERATIONS OF USE:

- The Models SCL-1A and SCL-1B may be used by either generally or specifically licensed persons in accordance with NRC or Agreement State regulations.
- Handling, storage, use, transfer, and disposal: To be determined by the licensing authority.
- The device shall be leak tested at intervals not to exceed 6 months using techniques capable of detecting 0.005 microcurie (185 Bq) of removable contamination.
- This registration sheet and the information contained within the references shall not be changed without the written consent of the NRC.

SAFETY ANALYSIS SUMMARY:

These devices are no longer distributed by the LFE. However, LFE may provide servicing for devices in use and may accept return of the sources. LFE has indicated that it has distributed approximately 221 of these model devices.

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DEVICE TYPE: "C", "O", or "MO" Frame Beta Gauge

REFERENCES:

The following supporting documents for the Models SCL-1A and SCL-1B are hereby incorporated by reference and are made a part of this registry document.

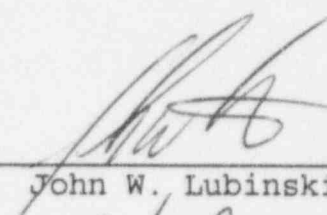
- LFE's letters dated August 25, 1995, September 16, 1991, and August 6, 1991, with enclosures thereto.

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

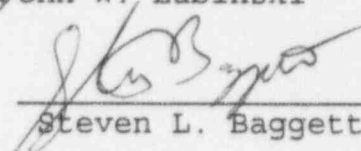
Date: September 28, 1995

Reviewer:

  
John W. Lubinski

Date: September 28, 1995

Concurrence:

  
Steven L. Baggett

August 25, 1995

Mr. John W. Lubinski, Mechanical Engineer  
Sealed Source Safety Section/Source Containment and Devices Branch  
Division of Industrial and Medical Nuclear Safety  
Office of Nuclear Material Safety and Safeguards/USNRC  
Washington, DC 20555-0001

Dear Mr. Lubinski:

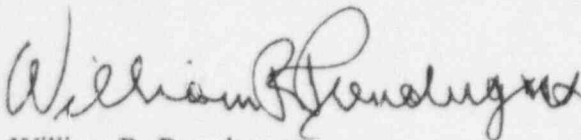
I am enclosing Group 4 registrations NR-420-D-807-B and NR-420-D-818-B. Device SCL-1D is actually an SCL-1C (registration NR-420-D-131-B) with a slight modification. In the SCL-1C, the source is located near the window and just behind the shutter. In the SCL-1D, the source is located at a greater distance (about 1 inch) from the window. I am enclosing a drawing of the SCL-1D. Devices SCL-1A and SCL-1B are actually SCL-1C devices with an activity limit of 50 millicuries.

LFE may provide service, including repair and leak testing, for devices currently in use. LFE may accept the return of sources used with these devices. There have been no reports of failure of these devices resulting in a radiation hazard.

Labels containing instructions for General Licensees should not be included on devices transferred to Specific Licensees.

Perhaps I have spent too much time researching the registrations that I have sent to you. However, my success in locating most of the drawings appears to justify the expenditure of time. This time, plus my absence on August 28 - 31, will result in my failure to complete the Group 4 registrations by Labor Day. I will resume this activity upon my return, and I will complete the task as soon as I can.

Very truly yours,



William R. Prendergast  
Radiation Safety Officer  
LFE Industrial Systems Corporation

WRP/ddl  
Enclosures

April 13, 1995

William R. Prendergast  
LFE Industrial Systems Corporation  
55 Green Street  
Clinton, MA 01510

Dear Mr. Prendergast:

This letter is in reference to your letter dated August 6, 1991, which requested that we transfer the registration certificates listed in column 1 of Enclosure 1 to inactive status. Columns 2 and 3 of Enclosure 1 include the new registration numbers that will be assigned to the certificates and the model numbers of the sources or devices that will be included on each new certificate. Please note that in several cases existing registration certificates have been combined into one inactive certificate.

In order to continue our evaluation your request, we need the additional information that is indicated in Enclosure 2. The table in Enclosure 2 provides a matrix which includes the new registration certificate numbers and a listing of the information necessary to complete our evaluation.

In addition to the information in Enclosure 2, please verify that the information included in the copies of draft registration certificates (Enclosure 3) is correct. Please mark any changes directly on the certificates and return them with your response. Please note that we did not include certain registration certificates (see column 9 of the table in Enclosure 2) due to not having enough information to generate a certificate.

Please note that transfer of the registration certificates to inactive status means the sources or devices included on the certificates may no longer be commercially distributed.

Once we have completed our evaluation of these certificates, we will re-evaluate the sources and devices which you are actively distributing and will re-issue the registration certificates for the products.

If you have any questions, please call me at (301) 415-7868 or Mr. Steven Baggett at (301) 415-7273.

Sincerely,

**Original Signed by**

John W. Lubinski, Mechanical Engineer  
Sealed Source Safety Section  
Source Containment and  
Devices Branch  
Division of Industrial and  
Medical Nuclear Safety  
Office of Nuclear Material Safety  
And Safeguards

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NAME	JLubinski/jl							
DATE	04/13/95							

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## ENCLOSURE 1

Old Reg. Number	New Reg. Number	Model Number(s)
NR-420-D-101-U	NR-420-D-801-S	Keleket-Barnes Rotary
NR-420-D-102-U	NR-420-D-802-S	Keleket-Barnes Shperay
NR-420-D-103-U	NR-420-D-803-S	Keleket-Barnes Ceiling Mounted Unit
NR-420-S-104-S	NR-420-S-804-S	Sealed Source
NR-420-D-106-U	NR-420-D-805-S	Keleket-Barnes Flexaray
NR-420-S-107-U	NR-420-S-806-S	RXA, RXB, RXC, RXL, RXM, RXN
NR-420-D-108-U	NR-420-D-807-B	SCL-1D
NR-420-D-109-B	NR-420-D-808-B certificates were combined	BGL-7C
NR-420-D-110-G		BGL-7
NR-420-D-111-B		BGL-1C
NR-420-D-112-B	NR-420-D-809-B	BGL-1
NR-420-D-113-B	NR-420-D-810-B certificates were combined	SO-7D, SO-7E
NR-420-D-114-B		SO-7A, SO-7B, SO-7C
NR-420-D-115-B	NR-420-D-811-B	SO-1A, SO-1B, SO-1C
NR-420-D-116-B	NR-420-D-812-B certificates were combined	SN-7D, SN-7E
NR-420-D-117-B		SN-7A, SN-7B, SN-7C
NR-420-D-118-B	NR-420-D-813-B	SN-1A, SN-1B, SN-1C, SN-1D, SN-1E, SN-1F
NR-420-D-119-B	NR-420-D-814-B	SC-7D, SC-7E
NR-420-D-120-B	NR-420-D-815-B	SC-7A, SC-7B, SC-7C
NR-420-D-121-B	NR-420-D-816-B	SC-1A, SC-1B, SC-1C, SC-1D, SC-1E, SC-1F
NR-420-D-122-B	NR-420-D-817-B	SNP-UB
NR-420-D-124-B	NR-420-D-818-B	SCL-1A and SCL-1B
NR-420-D-125-G	NR-420-D-819-G	SN-P7A4
NR-420-D-126-U	NR-420-D-820-S	HSB-76 and HSB-77
NR-420-D-127-G	NR-420-D-821-G	HSB-76A and HSB-77A



## ENCLOSURE 1

Old Reg. Number	New Reg. Number	Model Number(s)
NR-420-D-128-G	NR-420-D-822-G	BGL-7A
NR-420-D-132-G	NR-420-D-823-G	SNF-18
NR-420-D-133-G	NR-420-D-824-G	SSL-3
NR-420-D-136-G	NR-420-D-825-G	SV-87
NR-420-S-137-U	NR-420-S-826-S	R-30, R-31
NR-420-S-138-U	NR-420-S-827-S	CD-1
NR-420-D-139-U	NR-420-D-828-S	SC-11
NR-420-D-140-U	NR-420-D-829-S	DH-75
NR-420-S-141-U	NR-420-S-830-S	S-75
NR-420-D-142-U	NR-420-D-831-S	AX-4
NR-420-D-143-U	NR-420-D-832-S	BG-107
NR-420-D-144-U	NR-420-D-833-S	BG-105
NR-420-D-145-U	NR-420-D-834-S	BG-7
NR-420-D-146-U	NR-420-D-835-S	BG-5
NR-420-D-147-U	NR-420-D-836-S	BG-2/5
NR-420-S-148-U	NR-420-S-837-S	S-3
NR-420-S-149-U	NR-420-S-838-S	S-4
NR-420-S-150-U	NR-420-S-839-S	S-6
NR-420-D-151-B	same as old 117	
NR-420-D-152-U	NR-420-D-840-S	SC-9C
NR-420-S-153-U	NR-420-S-841-S	S-70
NR-420-S-154-U	NR-420-S-842-S	S-9
NR-420-S-155-U	NR-420-S-843-S	R-58, R-59
NR-420-S-156-U	NR-420-S-844-S	CS-15
NR-420-S-157-U	NR-420-S-845-S	CD-15
NR-420-S-158-U	same as old 156	
NR-420-D-159-U	NR-420-D-846-S	SC-11A
NR-420-D-160-U	NR-420-D-847-S	Clathrate Gas Detector



## ENCLOSURE 1

Old Reg. Number	New Reg. Number	Model Number(s)
NR-420-S-162-U	NR-420-S-848-S	S-6A
NR-420-S-163-U	NR-420-S-849-S	CD-11
NR-420-D-164-B	NR-420-D-850-B	SNP-1B

## ENCLOSURE 2

Group	New Reg. Number	1	2	3	4	5	6	7	8	9
1	NR-420-D-801-S	X								
1	NR-420-D-802-S	X								
1	NR-420-D-803-S	X								
4	NR-420-S-804-S								X	
1	NR-420-D-805-S	X								
3	NR-420-S-806-S		X			X				
4	NR-420-D-807-B		X		X		X	X		
4	NR-420-D-808-B		X		X			X		
2	NR-420-D-809-B								X	
4	NR-420-D-810-B		X	X	X		X	X		
2	NR-420-D-811-B								X	
4	NR-420-D-812-B		X	X	X		X	X		
4	NR-420-D-813-B		X		X		X	X		
2	NR-420-D-814-B								X	
4	NR-420-D-815-B		X	X	X		X	X		
4	NR-420-D-816-B		X		X		X	X		
4	NR-420-D-817-B		X	X	X		X	X		
4	NR-420-D-818-B		X		X		X	X		
4	NR-420-D-819-G		X	X	X		X	X		
4	NR-420-D-820-S		X		X			X		
2	NR-420-D-821-G								X	
2	NR-420-D-822-G								X	
2	NR-420-D-823-G								X	
4	NR-420-D-824-G		X	X	X	X				
4	NR-420-D-825-G		X	X	X	X	X			X
3	NR-420-S-826-S						X			
3	NR-420-S-827-S					X	X			
2	NR-420-D-828-S								X	

## ENCLOSURE 2

Group	New Ren Number	1	2	3	4	5	6	7	8	9
4	NR-420-D-829-S		X	X	X			X		
4	NR-420-S-830-S		X		X					
3	NR-420-D-831-S						X			
2	NR-420-D-832-S								X	
2	NR-420-D-833-S								X	
2	NR-420-D-834-S								X	
2	NR-420-D-835-S								X	
2	NR-420-D-836-S								X	
4	NR-420-S-837-S		X	X	X	X	X			X
4	NR-420-S-838-S		X	X	X	X	X			X
4	NR-420-S-839-S		X	X	X	X	X			X
4	NR-420-D-840-S		X		X		X	X		
4	NR-420-S-841-S		X	X	X	X	X			X
2	NR-420-S-842-S								X	
3	NR-420-S-843-S		X			X	X			
3	NR-420-S-844-S			X		X	X			
3	NR-420-S-845-S			X		X	X			
2	NR-420-D-846-S								X	
3	NR-420-D-847-S				X		X			
4	NR-420-S-848-S		X	X	X	X	X			X
3	NR-420-S-849-S			X		X				
4	NR-420-D-850-B		X		X		X	X		

## ENCLOSURE 2

### LEGEND:

#### Groups:

- 1 Keleket-Barnes Units.
- 2 Products which were never distributed.
- 3 Product lines which were sold in 1969.
- 4 Products for which you provided number of units distributed.

Information which is necessary to complete our evaluation:

#### Column

- 1 Source model designation and the name and address of the manufacturer of the device.
- 2 Drawings showing the complete construction of the product.
- 3 Conditions under which the product is designed to be used.
- 4 Information which is included on the labeling of the product and the construction of the labeling (e.g., steel labels with engraved information, engraved directly on the source)
- 5 The maximum radiation levels, during use, in the beam of the product, on its surface, and at 30 and 100 cm from the product.
- 6 Tests performed on prototypes of the products and the results of such tests.
- 7 The maximum radiation levels, during use, in the beam of the product and on its surface.
- 8 Verification that the registration certificate is complete and accurate. No additional information is necessary.
- 9 A draft of the registration is not included.

#### Additional Information:

- For all products in groups 1, 3, and 4, please provide a listing of the types of services you will provide for the products. Please include whether LFE will receive the product for disposal, provide source exchanges, or will service or repair devices.
- A letter dated June 20, 1986, has been referenced in documents pertaining to many of the registration certificates. However, our files do not include a copy of the letter. If LFE has a copy of the letter, please include it with your response to this letter.

ENCLOSURE 3

COPIES OF DRAFT REGISTRATION CERTIFICATES



LFE  
INDUSTRIAL  
SYSTEMS  
CORPORATION  
A Mark IV Company

August 6, 1991

Mr. Steven Baggett  
Mail Stop 6K3  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Baggett:

Please change to inactive status the following source and  
device registrations:

NR0420D101U  
NR0420D102U  
NR0420D103U  
NR0420S104S  
NR0420D106U  
NR0420S107U  
NR0420D108B ←  
NR0420D109B  
NR0420D110G  
NR0420D111B  
NR0420D112B  
NR0420D113B  
NR0420D114B  
NR0420D115B  
NR0420D116B  
NR0420D117B  
NR0420D118B  
NR0420D119B  
NR0420D120B  
NR0420D121B  
NR0420D122B  
NR0420D124B  
NR0420D125G  
NR0420D126U  
NR0420D127G  
NR0420D128G  
NR0420D132G  
NR0420D133G  
NR0420D136G  
NR0420S137U  
NR0420S138U  
NR0420D139U  
NR0420D140U  
NR0420S141U  
NR0420D142U

LFE  
A Mark IV Company

NR0420D143U  
NR0420D144U  
NR0420D145U  
NR0420D146U  
NR0420D147U  
NR0420S148U  
NR0420S149U  
NR0420S150U  
NR0420D151B  
NR0420D152U  
NR0420S153U  
NR0420S154U  
NR0420S155U  
NR0420S156U  
NR0420S157U  
NR0420S158U  
NR0420D159U  
NR0420D160U  
NR0420S162U  
NR0420S163U  
NR0420D164B

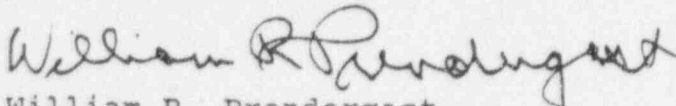
The following source and device registrations will remain active:

NR0420S105S  
NR0420D123B  
NR0420D129G  
NR0420D130G  
NR0420D131B  
NR0420D134G  
NR0420D135B  
NR0420S161U

Licenses 20-01382-02 and 20-01382-16G will remain active. I will, within a few days, send you a report showing the approximate quantity of each inactive item shipped. None have been shipped since 1983. Please correct registration NR0420D134G. The correct Model is SU-S3 (not SU-E3).

Thank you for sending me copies of our registration and for your assistance in changing the status of registrations.

Very truly yours,  
LFE Industrial Systems Corporation



William R. Prendergast  
Radiation Safety Officer





See 9/-26

LFE September 16, 1991

INDUSTRIAL  
SYSTEMS  
CORPORATION

A Mark IV Company

Mr. Steven Baggett  
Mail Stop 6H3  
U.S. Nuclear Regulatory Commission  
Washington, DC 20555

Dear Mr. Baggett:

In my letter of August 6, 1991, I requested that a number of source and device registrations be changed to inactive status. I promised to send you an approximate population of inactive items.

I have found that many of the registrations applied to products not manufactured at LFE, product lines sold many years ago, to sources and devices not associated with radiation gauging, and sources and devices which were registered but never manufactured. For example, the Keleket-Barnes Teletherapy Units were not distributed from LFE, therefore, I have no population information. Also, Tracerlab manufactured many sources that were used as reference or calibration sources. This product line was sold in 1969 and, again, I have no population information. I will list each inactive registration with the information that I have available.

NR0420D101U	Keleket-Barnes. No information.
D102U	Keleket-Barnes. No information.
D103U	Keleket-Barnes. No information.
S104S	Approximately 14 distributed.
D106U	Keleket-Barnes. No information.
S107U	Tracerlab reference sources. Sold in 1969.
D108U	Approximately 33 distributed.
D109B	Approximately 58 distributed.
D110G	Approximately 4 distributed.
D111B	Approximately 47 distributed.
D112B	None distributed.
D113B	Approximately 4 distributed.
D114B	Approximately 8 distributed.
D115B	None distributed.
D116B	Approximately 6 distributed.
D117B	Approximately 130 distributed.
D118B	Approximately 19 distributed.
D119B	None distributed.

D120B	Approximately 20 distributed.	
D121B	Approximately 4 distributed.	
D122B	Approximately 2 distributed.	
D124B	Approximately 221 distributed.	
D125G	Approximately 4 distributed.	
D126U	Approximately 26 distributed.	
D127G	None distributed.	
D128G	None distributed.	
D132G	None distributed.	
D133G	Approximately 17 distributed.	
D136G	Approximately 19 distributed.	
S137U	Tracerlab calibration source.	Sold in 1969.
S138U	Tracerlab radiography source.	Sold in 1969.
D139U	None distributed.	
D140U	Approximately 6 distributed.	
S141U	Approximately 6 distributed.	
D142U	Tracerlab calibrator.	Sold in 1969.
D143U	None distributed.	
D144U	None distributed.	
D145U	None distributed.	
D146U	None distributed.	
D147U	None distributed.	
S148U	Approximately 13 distributed.	
S149U	Approximately 29 distributed.	
S150U	Approximately 92 distributed.	
D151B	Same as NR0420D117B.	
D152U	Approximately 3 distributed.	
S153U	Approximately 96 distributed.	
S154U	None distributed.	
S155U	Tracerlab calibration source.	Sold in 1969.
S156U	Tracerlab source.	Sold in 1969.
S157U	Tracerlab source.	Sold in 1969.
S158U	Tracerlab source.	Sold in 1969.
D159U	None distributed.	
D160U	Tracerlab device.	Sold in 1969.
S162U	Approximately 108 distributed.	
S163U	Tracerlab source.	Sold in 1969.
D164B	Approximately 1 distributed.	

I trust that the information provided in this letter satisfies your requirements. If you have any questions or if I can provide any additional information, please contact me.

Very truly yours,  
LFE Industrial Systems Corporation

*William R. Prendergast*

William R. Prendergast  
Radiation Safety Officer