Detection Systems, Inc.
130 Perinton Parkway
Fairport, NY 14450

Request for Amendment to License 31-23818-01E

Radioactive Material -- No change from original license.

Purposes For Which Licensed Material Will be Used -- No change from original license, except that the design of the DS260 Ionization Smoke Detector has been modified as described in Summary Data Sections 3.2 and 3.3. Drawings are enclosed for your review.

Individuals Responsible for the Radiation Safety Program -- No change from original license except that David Pennington is no longer with the Company. Mr. Bruce Kaminsky is currently serving as the Assistant or Site Radiation Safety Officer. Our New York State License was amended November 17, 1995, to reflect this change (copy enclosed).

Training for Individuals Working in or Frequenting Restricted Areas -- No change from original license.

Facilities and Equipment -- No change from original license.

Radiation Safety Program -- Our Operating and Emergency Manual as well as operating procedures regarding the Company's Radiation Safety Program have been updated periodically to reflect changes in State and Federal requirements as well as to document changes that have resulted from experience in the program. These changes have not reduced the frequency of checks, tests, surveys, or calibrations; reduced any standards or action limits or otherwise made the Radiation Safety Program at Detection Systems any less protective. Revision level "October 27, 1995" of our Manual was approved by the NYS Department of Labor on December 5, 1995. Copies of amendments and/or correspondence related to our State license are enclosed for your reference.

Quality Assurance Program -- No significant change from original license.

18

Summary Description:

The sealed source will be used as the means of detecting combustion in a local area using the principle of ionization. The construction and design of the product completely encloses the Americium 241 source within a metal case. There are 0.030" holes in a metal screen to allow smoke to enter the sensing chamber. This metal screen is surrounded by a plastic enclosure with a maximum opening of approximately 0.18 inches. This opening or slot allows smoke entry to the metal screen.

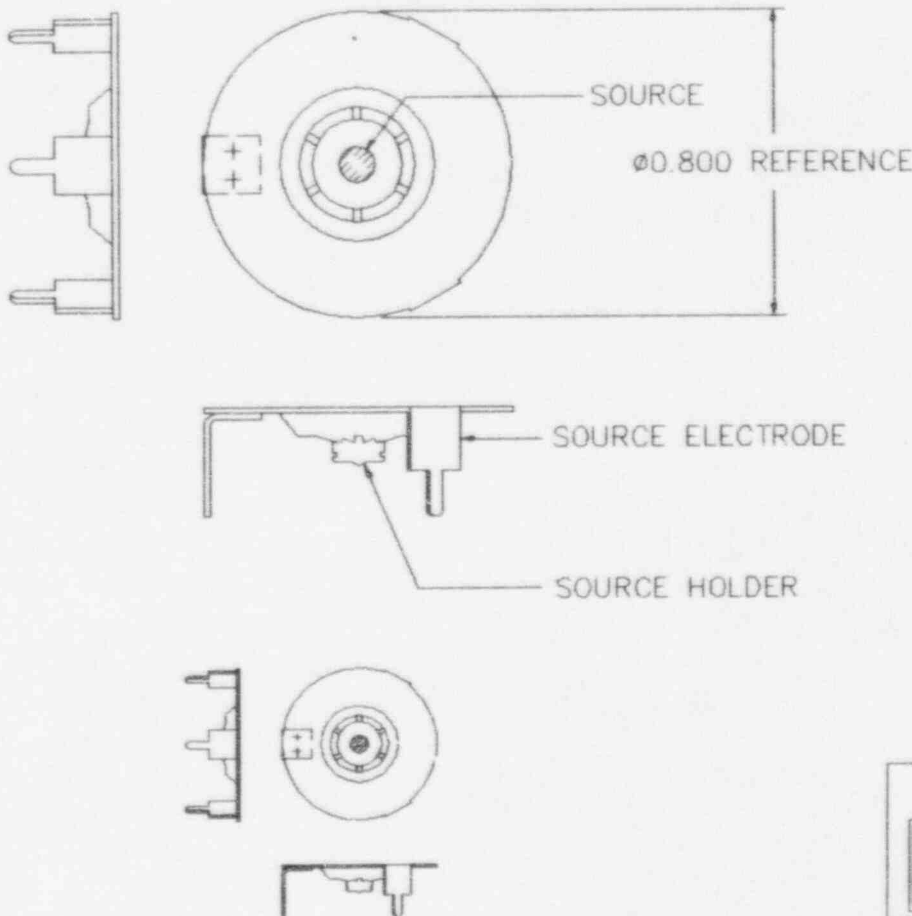
The metal screen is held into the plastic enclosure and can be removed for cleaning. A narrow bladed screwdriver must be used to assist removal by inserting the blade between the cover and the appropriate slots in the enclosure. This technique is designed to decrease the likelihood of a child accidentally opening the cover.

When the cover is removed for cleaning, a "CAUTION RADIOACTIVE MATERIAL" notice is etched in plain view on the top of a stationary metal shield located inside the screen. The metal shield and screen form the outer electrode of the chamber. The outer electrode is crimped and soldered to the printed circuit board and has openings approximately 0.35" high by 0.55" wide at the bottom and 0.4" wide at the top. The radiation source is located at the bottom of a small cylindrical "well like" reference chamber that further restricts access to the foil.

Written Description:

No change from original application.

REV	DATE	ZONE (S) DESCRIPTION	ECR	CHK	DFT
A2	28JAN93	ADDED INDICATORS FOR SRC HLDR AND ELCTRD			MCT
A2	13NOV95	REVISED SOURCE HOLDER			MCT



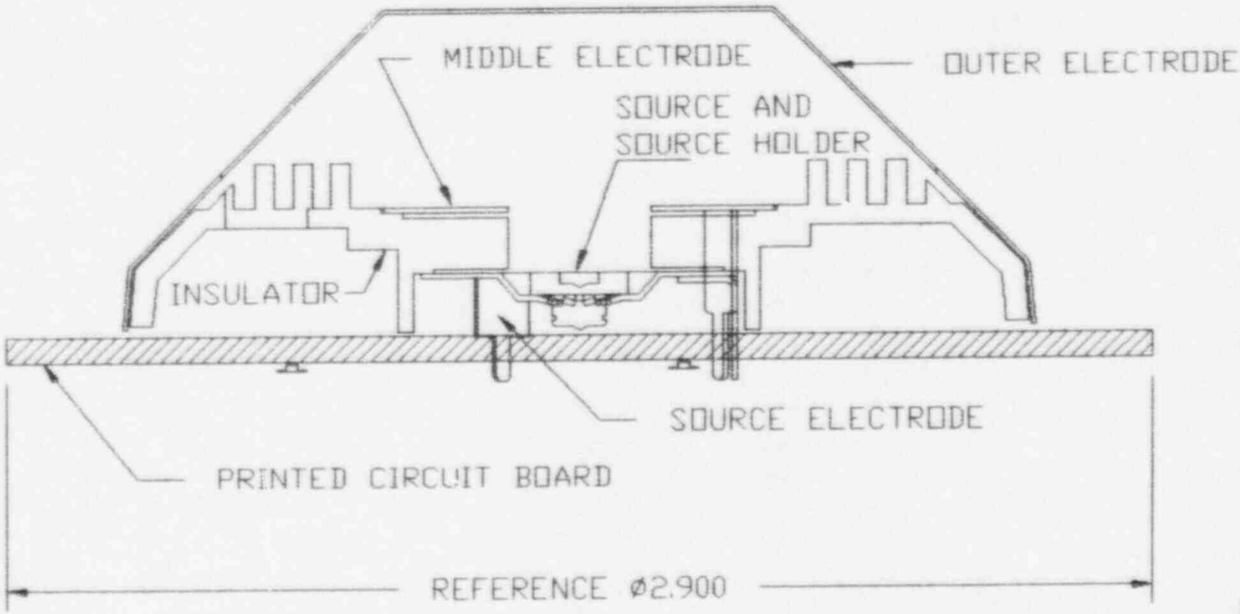
SCALE 1=1

DETECTION SYSTEMS, INC.

130 PERINTON PARKWAY
FAIRPORT, NEW YORK 14450-9199, U.S.A.
(716) 223 4060, FAX (716) 223 9180

DRAWING TITLE	SOURCE ASSEMBLY AS PURCHASED
DATE DRAWN 14AUG92	DRAWN BY MC TECHNICAL SERVICES INC.
TOOL DRAWING NUMBER 16-1	REVISION LEVEL A3
SCALE 2=1	SHEET 1 OF 1

REV	DATE	ZONE (S)	DESCRIPTION	ECR	CHK	DFT
A2	13NOV95		REVISED SOURCE HOLDER	-	-	STC



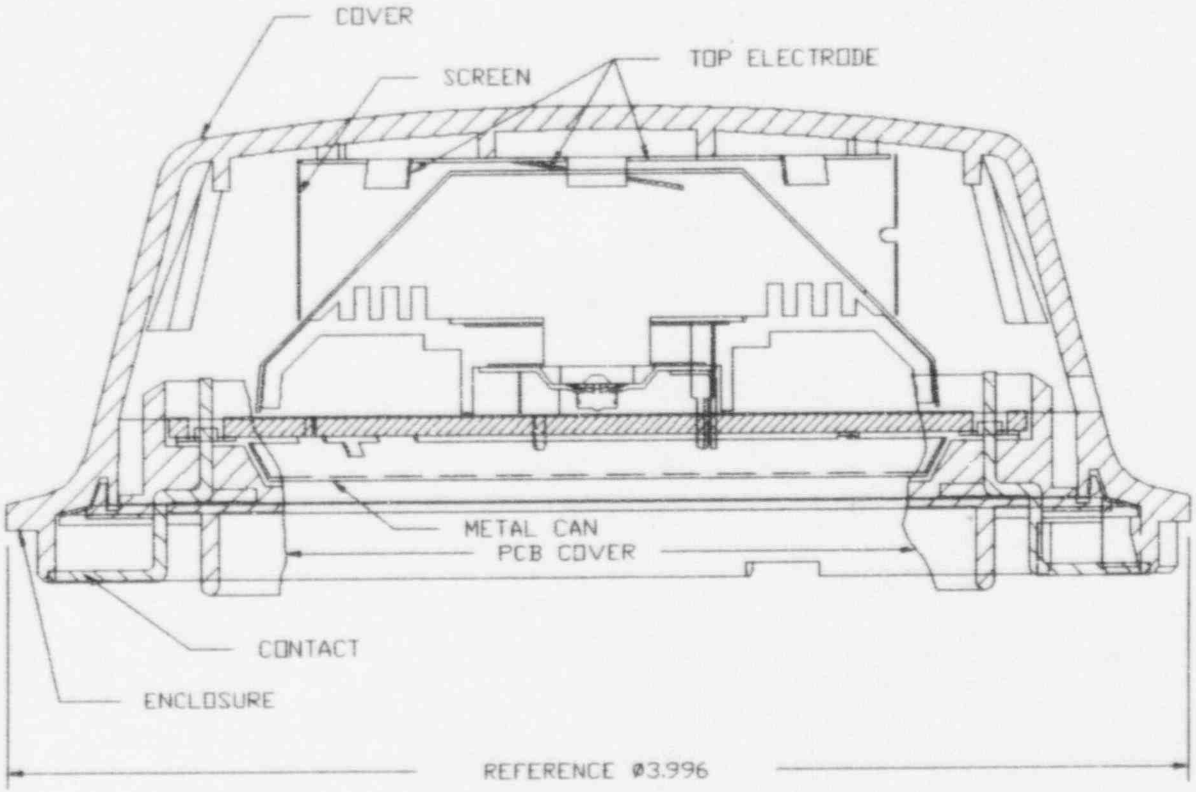
DETECTION SYSTEMS, INC.
130 PERINTON PARKWAY
FAIRPORT, NEW YORK 14450-9199, U.S.A.
(716) 223 4060, FAX (716) 223 9180

INTRINSICALLY SAFE SMOKE DETECTOR SUB ASSEMBLY

DATE DRAWN	DRAWN BY
14AUG92	MC TECHNICAL SERVICES INC.

DRAWING NUMBER	REVISION LEVEL	
16-2	A2	NOT TO SCALE
		SHEET 1 OF 1

REV	DATE	ZONE (S)	DESCRIPTION	ECR	CHK	DFT
A2	[illegible]		DELINEATION OF REVISED COVER, OUTER ELECTRODE & PCB COVER TO AGREE WITH REDESIGN	-	-	-



DETECTION SYSTEMS, INC.
130 PERINTON PARKWAY
FAIRPORT, NEW YORK 14450-9199, U.S.A.
(716) 223 4060, FAX (716) 223 9180

COMPLETED DS260 SMOKE DETECTOR ASSEMBLY

14AUG92	MC TECHNICAL SERVICES INC.		
16-3	A2	SCALE NONE	SHEET 1 OF 1

Part 32.26 (b) (1) -- *Product Description and Intended Use*

No change from original application.

Part 32.26 (b) (2) -- *Type and Quantity of Byproduct Material*

No change from original application.

Part 32.26 (b) (3) -- *Chemical and Physical Form of Materials*

No change from original application.

Part 32.26 (b) (4) -- *Solubility in water and body fluids*

No change from original application.

Part 32.26 (b) (5) -- *Design and Safety*

The construction and design of the product completely enclose the Americium 241 source within a metal case. There are 0.030" holes in a metal screen to allow smoke to enter the sensing chamber. This metal case is surrounded by a plastic enclosure with a maximum opening of approximately 0.18 inches. This opening or slot allows smoke entry into the metal screen. (See Figure 1)

The metal screen is held into the plastic enclosure and can be removed for cleaning. A narrow bladed screwdriver must be used to assist removal by inserting the blade between the cover and the appropriate slots in the enclosure. This technique is designed to decrease the likelihood of a child accidentally opening the cover.

When the cover is removed for cleaning, a "CAUTION RADIOACTIVE MATERIAL" notice is etched in plain view on the top of a stationary metal shield located inside the screen. The metal shield and screen form the outer electrode of the chamber. The outer electrode is crimped and soldered to the printed circuit board and has openings of approximately 0.35" high by 0.55" wide at the bottom and 0.4" wide at the top. The radiation source is located at the bottom of a small cylindrical "well like" reference chamber that further restricts access to the foil. The slanted openings in the outer electrode in conjunction with the "well like" reterence chamber make touching the sealed source even more difficult. (See Figure 2)

A standard pencil cannot touch the Americium 241 source. The top of the opening in the outer electrode and the middle electrode contact points prevent the pencil point from reaching the source. (See Figure 3)

Figure 1:

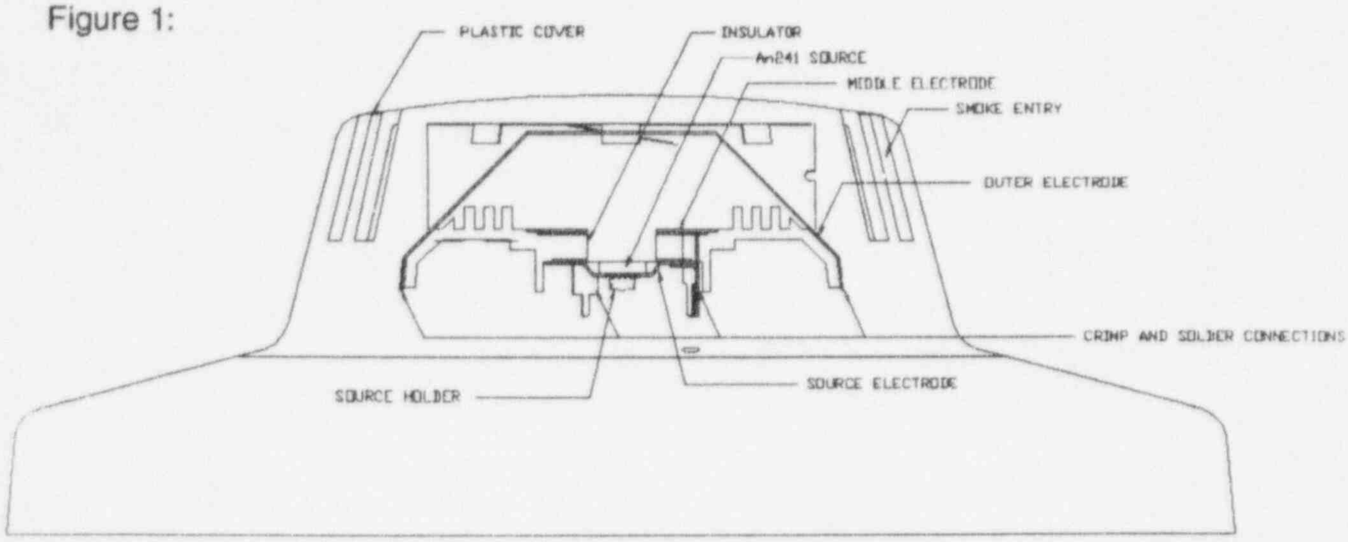
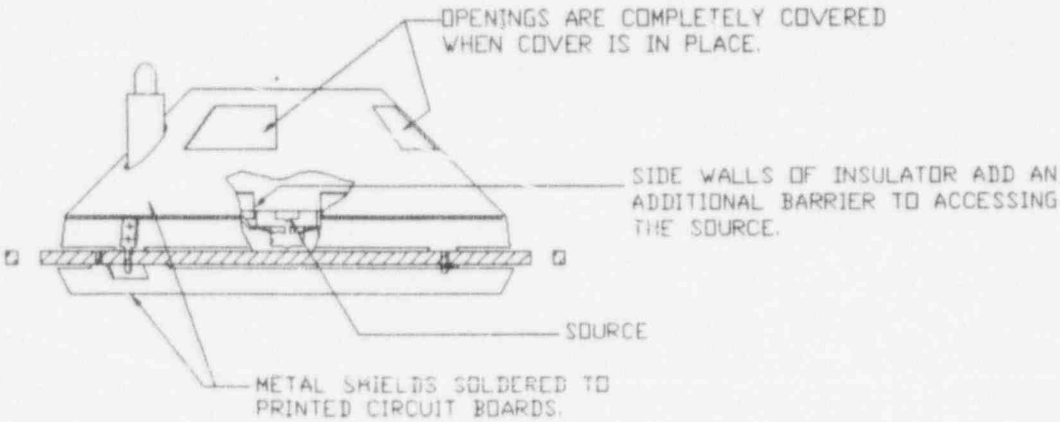


FIG.1 NOT TO SCALE

Figure 2:



DS260 WITH ALL THE PLASTIC ENCLOSURE PARTS REMOVED
CUT-AWAY TO SHOW LOCATION OF SOURCE.
FIG. 2. SCALE IS 1 TO 1 (ACTUAL SIZE)

Figure 3:

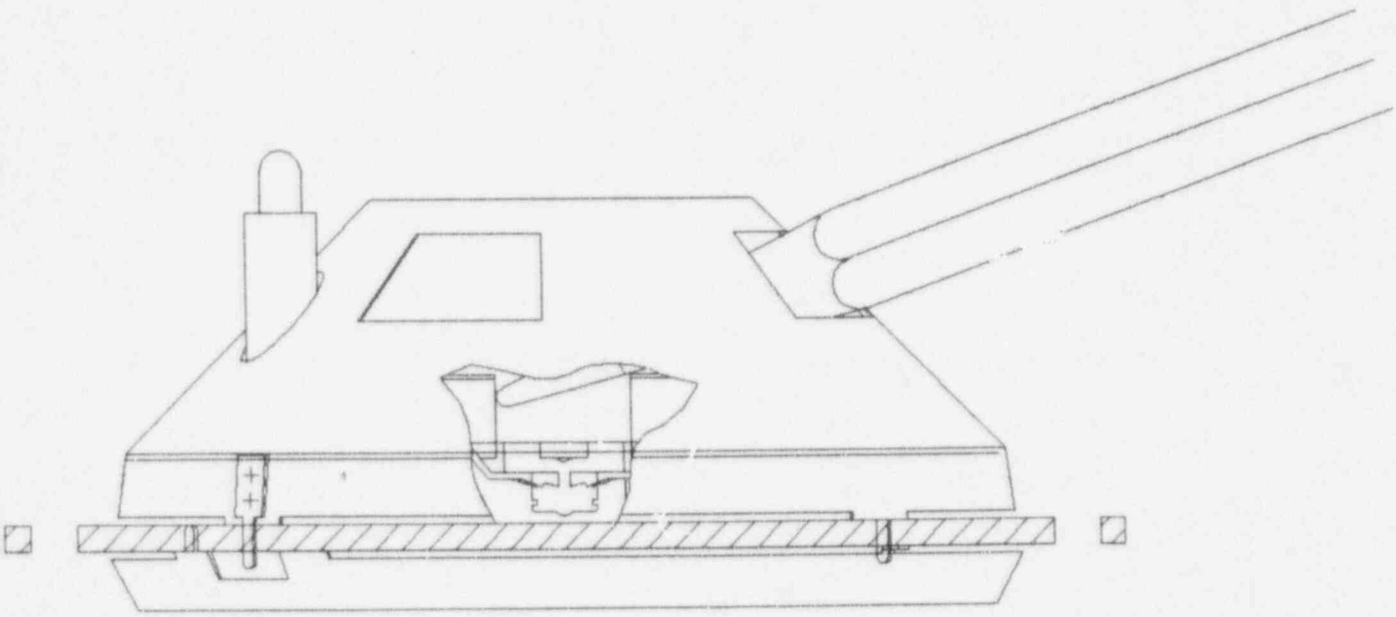


FIG. 3 NOT TO SCALE

Part 32.26 (b) (6)-- *Maximum External Radiation Levels*

No change from original application.

Part 32.26 (b) (7) --*The Degree of Access to Human Beings*

The source is secured in a source holder and supplied by an approved vendor. The source holder (with source) is secured in a source electrode having tabs which are crimped and soldered to the printed circuit board. Access to the source is prevented by the outer electrode which is also crimped and soldered to the printed circuit board. There is an insulator and middle electrode between the source electrode and the outer electrode. See Figure 1 in Part 32.26 (b) (5).

A groove on the source holder is located near the base of a shaft. The source electrode has stainless steel fingers that snap over this groove and are seated against the shaft. The source holder is captive after being inserted into the source electrode. If for some reason the source holder should slip in the direction that would cause it to come out of the source electrode, the stainless steel fingers will snap into the groove on the source holder shaft and prevent additional slippage. Removal can only be accomplished by first unsoldering and decrimping (straightening) the outer electrode tabs. The middle electrode must then be unsoldered and removed. The source electrode with the source holder and source may then be unsoldered, decrimped and removed. The source holder can then be removed from the source electrode only by driving it out with a hammer and punch. (See Figure 4)

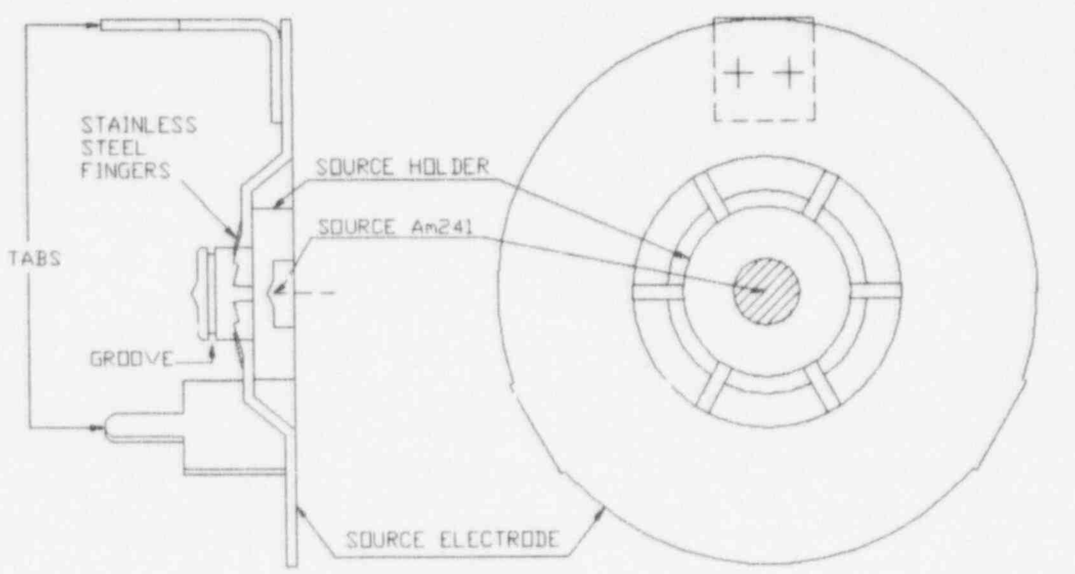


FIG. 4 NOT TO SCALE

Drop testing of the product has demonstrated that neither the flange nor the retaining ring is necessary to secure the source holder in the source electrode. After repeated drops from 10 meters, the stainless steel fingers of the source electrode held the source holder in place with no apparent relative change in position.

Part 32.26 (b) (8) -- *The total quantity to be distributed annually*

No change from original application.

Part 32.26 (b) (9) -- *The expected useful life of the product*

No change from original application.

Part 32.26 (b) (10) -- *Labeling of the detector*

The metal electrode that surrounds the Americium 241 source will have the Radiation Symbol and "CAUTION RADIOACTIVE MATERIAL" stamped into the metal. The outside back surface of the smoke detector will be labeled as shown in **Appendix A**, **Label, DS260 General Product.**

The smoke detector Box, otherwise known as the point of sale container, will be labeled as shown in **Appendix A, DS260 Shipping Label.**

Part 32.26 (b) (11-12) -- *Procedures for Prototype Testing*

There are several references to which we will refer, as testing of the Americium 241 foil sources has been detailed in many federal and private industry reports.

1) Americium 241 Foil Integrity Tests: No change from original application.

2) High Temperature Testing of Smoke Detector Sources (ORNL/NUREG/TM-246): No change from original application.

3) Emersion tests (ORNL/2468): No change from original application.

4) Product Design and Drop Tests:
In addition to the above mentioned tests, DSI performed it's own testing of the product to insure proper design and construction of the detector. These tests included a detailed dose rate and contamination survey of the device while under initial development and construction as well as a drop test of the product from 10

meters. This height was chosen because of the fact that the device will be used primarily as an industrial facility smoke detector.

The results of the drop test are as follows:

The device was dropped 4 times from a height of 10 meters. On the first drop, the plastic casing surrounding the internal components broke away. This exposed the outer electrode, but not the source. The device was dropped 3 additional times, with no further separation of parts. At no time did the source separate from it's retaining device or give such indications.

In addition to determining the dose rate, smears were taken of the detector exterior and interior as well as the general area where the detector landed. There were no positive indications of contamination as a result of the drop tests. These results are as follows.

Drop Test Smear Results

Instrument Used: Ludlum 2929 Smear Counter, Calibrated 10/95.

The instrument's response was checked prior to counting any smears by placing a N.I.S.T. traceable Americium 241 source in the source holder and counting it for one minute. The alpha counter responded with 257,328 counts, or approximately 18% 4π efficiency. This is within the bands of expected performance for the source. Next, a background check was performed. There were no background counts in one minute. Previous background determinations have indicated that the background count rate is approximately 0.1 cpm. The analysis of the smears following the drop test are as follows:

Analysis Number	Smear Location/Other	Results (α cpm)
1	Outside of Detector, G.A.	0
2	1st drop, floor near area	0
3	Detector interior, outer electrode	0
4	Bent case, outer electrode	0
5	Drop 2 detector interior	0
6	Floor, G.A. near impact	0
7	Drop 3, outer electrode	0

8	Drop 4, Floor G.A. after impact	0
9	Drop 4, outer electrode, base	0
10	Drop 5, G.A., outer electrode	0

Note: The outer electrode never separated from the base. At no time did the source separate from its source electrode. It was soon apparent that further drops would only cause the source to be more secure. Therefore, after 5 drops, the test was terminated.

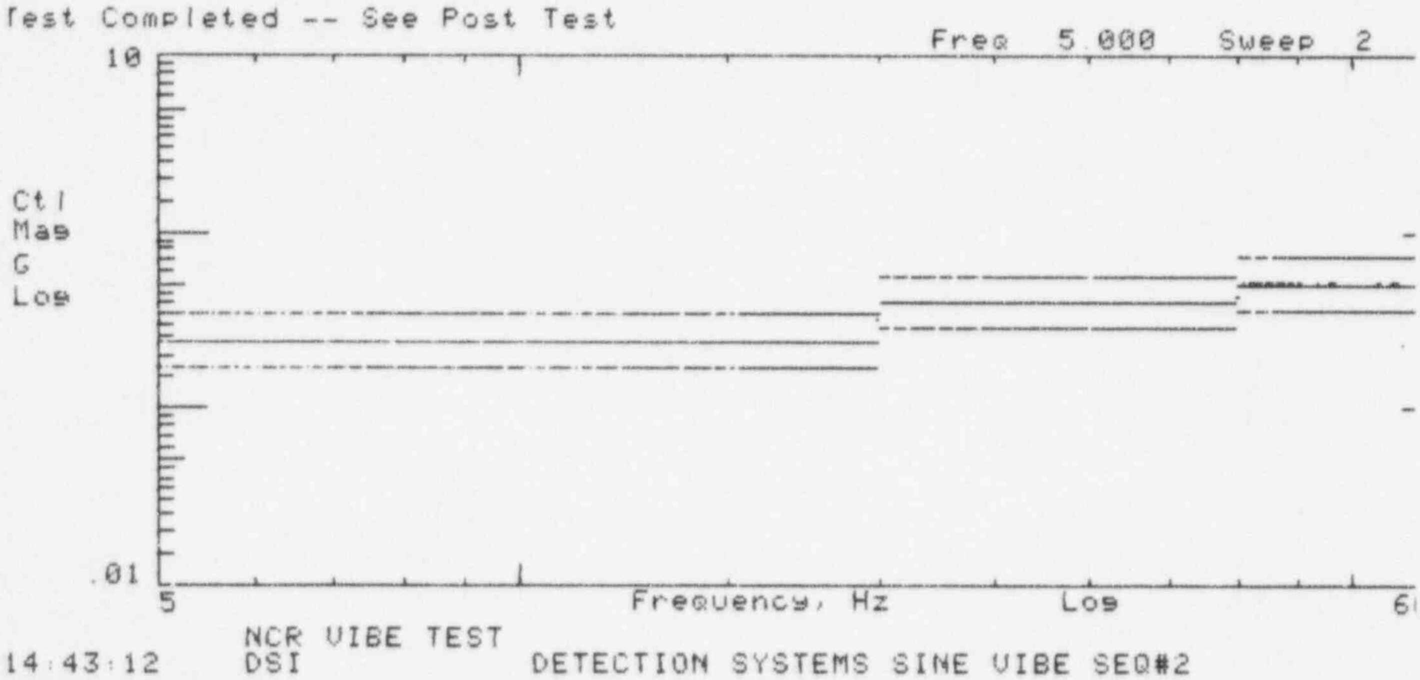
5) **Product Design Vibration Test:**

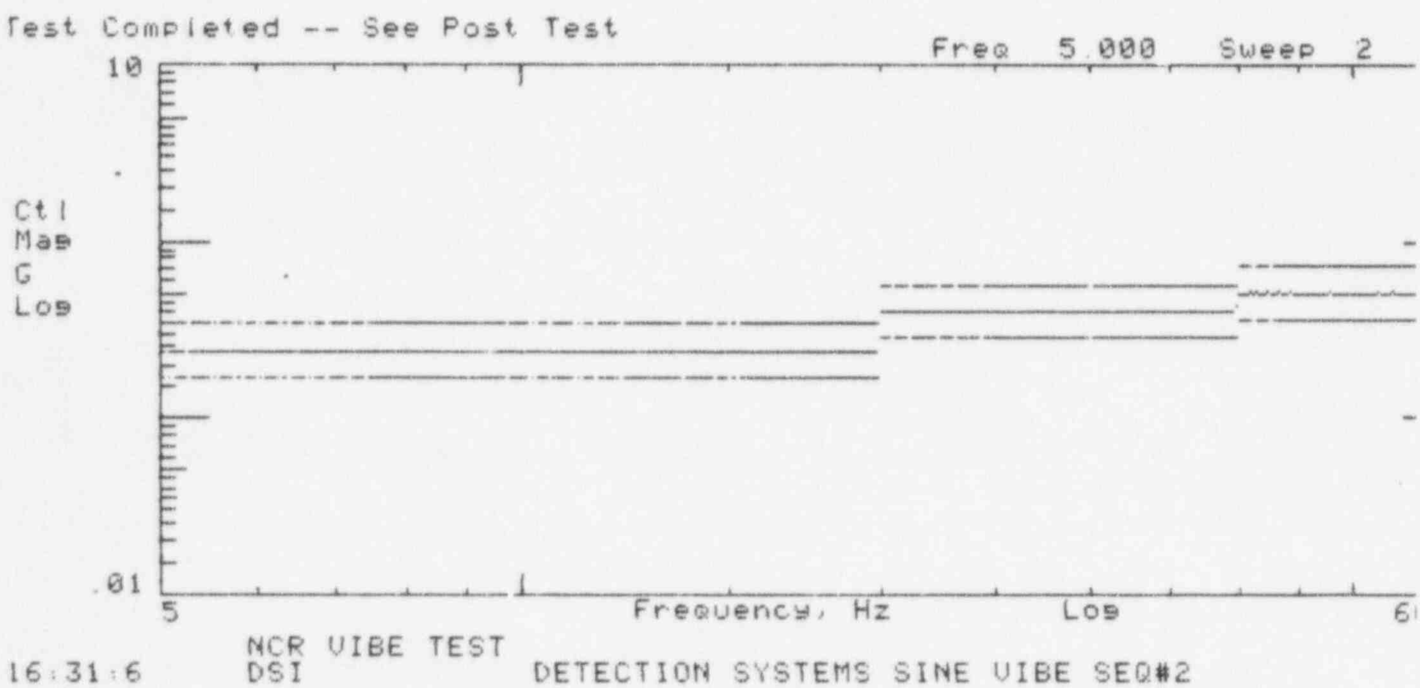
A vibration test was performed on the DS260 Ionization Smoke Detector on 11/29/95 using a Ling Electronics Model APS-106-1, D390 vibration table. The unit was run through two sweeps ranging in frequency from 5 Hz to 60 Hz. As can be seen on the graphs that follow, no resonant frequencies were found.

Following the vibration test, frisks and smears were performed on the unit. The frisks were done using a Ludlum 1000 Scaler and Model 43-5 Scintillator. No alpha contamination was found on the external surfaces of the unit. Two smears were then taken. One smear was taken of the external surfaces of the DS260 head. The second smear was of the smoke detector base and vibration fixture. The smears were then analyzed using a Ludlum 2929 Scaler and 43-10-1 alpha/beta sample counter. In both cases, no contamination was found.

A final visual inspection was then performed. The DS260 Ionization Smoke Detector was disassembled to a level where the source holder and electrodes could be inspected. The source was found to be intact and seated firmly and correctly in its appropriate operation location. It was concluded that the vibration test had no detrimental effect on the smoke detector.

DS260 Vibration Test Results





6) **Impact Test Results**

An impact test was performed on the DS260 Ionization Smoke Detector on 10/26/95 following the criteria described in Annex Prototype, pages 19-22, which was provided to Detection Systems by John Lubinski at the USNRC.

The ionization smoke detector was placed on a concrete floor and a 0.5 kgm. weight was dropped onto it from a height of 0.5 meters per ISO2919 so that the ionization chamber would suffer the maximum damage. Following this, the unit was frisked and smeared. The smears were counted using a Ludlum 43-10-1 alpha-beta counter and a Ludlum 2929 Scaler. The frisking was performed using a Ludlum 43-5 Scintillator and a Ludlum 2929 Scaler. The frisking was performed using a Ludlum 43-5 Scintillator and a Ludlum 1000 Scaler. No contamination was found on the ionization smoke detector nor on the adjacent floor.

Part 32.26 (b) (13), (14) -- *Estimated External Radiation Doses*

No change from original application.

Part 32.26 (b) (15) -- *Quality Control Procedures During Production*

No change from original application.

Part 32.26 (b) (16) -- *Any Additional Information*

No change from original application.

APPENDIX A
DS260 PRODUCT DRAWINGS

Drawing Description — Pages

DS260 General Product Label, Drawing #A26603, Rev. F 1

DS260 Shipping (Box) Label, Drawing #A26606, Rev. B 1

Engineering Product Related Drawings:
- Source Electrode -- Drawing #D24354, Rev. F 1
- Ionization Source & Electrode Holder -- Drawing #A25095, Rev. G 1
- Source Electrode/Source Holder Assembly -- Drawing #A26444, Rev. E........ 1
- Outer Electrode -- Drawing #C24347, Rev. G 1
- Individual Fabrication (Printed Circuit Board) -- Drawing #C25081, Rev. E........ 1, 6-8
- PCB Cover -- Drawing #D25870 Rev. B........ 1
- DS260 Cover -- Drawing #D27933, Rev. C........ 1-2

CONVERSATION RECORD

TIME 2:30p

DATE 05/30/96

TYPE

☐ VISIT ☐ CONFERENCE ☒ TELEPHONE ☐ INCOMING ☐ OUTGOING

Location of Visit/Conference:

ROUTING	
NAME/SYMBOL	INT

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU	ORGANIZATION (Office, dept., bureau, etc.)	TELEPHONE NO:
Betty Green	Detection Systems	716-223-4060

SUBJECT

application to amend NR-0206-D-101-E

SUMMARY

Ms. Green stated that the original design was never produced and distributed.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
Michele Burgess	Michele L Burgess	05/30/96

ACTION TAKEN

SIGNATURE	TITLE	DATE

5/6/96 1:45pm
tel call Betty Green
Bruce Kaminsky

~~[illegible]~~

~~[illegible]~~

Betty Greene - [illegible] - Detection Systems
1800 284 0086

---

(1) How is the detector mounted?
AC wired only? Yes

(2) When you remove the cover does it come apart?
stay attached to cover.

(3) explain how 5 drops demonstrate that the detector will withstand likely use conditions?

(4) Figure A
& Dwg. 16-3-A2 don't match

(Before, QA already looked at, so leave it)

NRC FORM 567
(8-93)

U. S. NUCLEAR REGULATORY COMMISSION

REQUEST FOR A SEALED SOURCE OR DEVICE EVALUATION

INSTRUCTIONS: Send this request AND a copy of all related letters/applications and drawings to: The Sealed Source Safety Section, ATTN: Chief, OWFN Mail Stop 6 H3. Change the License Tracking System milestone to 19 and assign to reviewer code I-5.
NOTE: Retain a copy of this request with the application and background files.

REQUESTER: S. Kimberley

REGION/LOCATION: ☐ I ☐ II ☐ III ☐ IV ☐ V ☒ HQ ☐ LFDCB

TELEPHONE NUMBER: 415-6096

DATE: 12/21/95

APPLICANT'S NAME: Detection Systems, Inc.

MAIL CONTROL NUMBER(S): 021802

LETTER/APPLICATION DATE: 12/14/95

LICENSE NUMBER(S): 31-23818-01E

TYPE OF ACTION REQUESTED (Check as appropriate)

☐ SOURCE REVIEW
☐ DEVICE REVIEW
☐ CUSTOM REVIEW
☐ AMENDMENT OF REGISTRATION SHEET NUMBER(S) ______

COMMENTS:

FOR SSSS USE ONLY

REVIEWER	MODEL NUMBERS	NUMBER ASSIGNED
DATE RECEIVED	DATE ASSIGNED	DATE TO FEES

TYPE OF ACTION (Indicate the number of each type)

☐ COMMERCIAL DISTRIBUTION (FORMAL) ☐ USE BY A SINGLE APPLICANT (CUSTOM)

SOURCE (9C)	DEVICE (9A)	SOURCE (9D)	DEVICE (9B)
☐ NEW ☐ AMENDMENT	☐ NEW ☒ AMENDMENT	☐ NEW ☐ AMENDMENT	☐ NEW ☐ AMENDMENT

☐ NO SAFETY EVALUATION REQUIRED
NO FEES REQUIRED

☐ LICENSING ACTION REQUIRED IF KNOWN ☐ YES ☐ NO

☐ OTHER *(Specify)*

TOTAL NUMBER OF REVIEW HOURS	NOTES
NUMBER OF DEFICIENCY LETTERS	
NUMBER OF DEFICIENCY CALLS	

FOR BILLING PURPOSES ONLY

☐ NAME CHANGE ☐ ADDRESS CHANGE ☐ NEW REGISTRATION – ADD TO BILLING ☐ PRODUCT INACTIVE – REMOVE FROM BILLING

FOR FEE USE ONLY

TYPE OF FEE: AMD

FEE CATEGORY: ☐ 9A ☐ 9B ☐ 9C ☐ 9D

AMOUNT RECEIVED: $1200 $2190 See also Dec. 1 1495

CHECK NUMBER: 42522

☐ MATANN UPDATED AS REQUIRED

DATE OF CHECK: 12/14/95

LOG: Dec. 95 1550

☐ MATSYS UPDATED AS REQUIRED

APPROVED BY: SK

DATE RETURN: 12/21/95

DATE

COMMENTS: SK

NRC FORM 567 (8-93)

ORIGINAL TO SSSS

Ms. Betty Green
Detection Systems, Inc.
130 Perinton Parkway
Fairport, NY 14450

June 6, 1996

Dear Ms. Green:

Based on the information and test data submitted in your application dated December 14, 1995, and subsequent letters, with enclosures thereto, we continue to conclude that the Model DS260 smoke detector is acceptable for licensing purposes in accordance with the conditions of the enclosed registration certificate (NR-0206-D-101-E). A copy of the certificate has been forwarded to the appropriate reviewer for licensing action.

Please be advised that you must manufacture and distribute the product in accordance with the statements and representations contained in your application, with enclosures thereto, and the information set out in your registration certificate. As a general rule, you must request and obtain an amendment to the certificate before you make changes or modifications to the information submitted to obtain the certificate.

Please read over the registration certificate in its entirety and notify us immediately of any errors or omissions.

You are obligated to notify us promptly in writing should you decide to no longer manufacture or off[illegible] service support for the product.

Please be aware that, as a holder of an NRC registration, you may be subject to the NRC's licensing and inspection fees in accordance with 10 CFR Part 170, and annual fees in accordance with 10 CFR Part 171. If you have any questions concerning the fee requirements, please contact the License Fee and Debt Collection Branch at (301) 415-7544.

If you have any questions, please contact me at (301) 415-5868 or Mr. Douglas Broaddus at (301) 415-5847.

Sincerely,

/S/

Michele L. Burgess, Mechanical Engineer
Sealed Source Safety Section
Medical, Academic, and Commercial
Use Safety Branch
Division of Industrial and
Medical Nuclear Safety
Office of Nuclear Material Safety
and Safeguards

Enclosure: As stated

cc w/encl: SKimberley, LFDCB

Distribution:
SSSS r/f SSD-95-123 NE01 NR-0206-D-101-E

DOCUMENT NAME: C:\SSSS\WORKSSD\DETECT\NR206D10.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	IMAB E	IMAB C		
NAME	MBurgess/mb mlB	DBroaddus		
DATE	05/30/96	05/30/96		

OFFICIAL RECORD COPY

9606250186 1P

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

April 16, 1996

Ms. Betty Green
Detection Systems, Inc.
130 Perinton Parkway
Fairport, NY 14450

Dear Ms. Green:

This letter is in response to Detections System's request dated December 14, 1995, requesting an amendment to the registration of the Model DS260 smoke detectors. We are in the process of evaluating your request. However, in order to continue our evaluation, the following information and clarifications are necessary:

1. Figure 2 on page 2 of Summary Data 3.3 states that the openings to the metal cover are completely covered when the plastic cover is in place. Based on Figure 1 on the same page it does not appear that this is the case. Please provide an explanation of this apparent discrepancy.

2. The first sentence on page 5 of Summary Data 3.3 refers to a flange and retaining ring. These are not included in the drawings for the new design. Please provide additional information concerning the flange and retaining ring in the new design.

3. Please explain how the metal screen is attached to the outer electrode.

4. Page 7 of Summary Data 3.3 states that during the drop testing, the detector was dropped four times. On page 6, it states that the detector was dropped 5 times. Please clarify this discrepancy. In addition, page 7 of Summary Data 3.3 states that the drop testing of the detector was terminated at 5 drops due to the fact that "further drops would only cause the source to be more secure". Please provide additional discussion concerning this point, describing how and why this would occur.

5. Page 9 of Summary Data 3.3 lists the meters used to perform the surveys. In the second paragraph, it is listed that the frisking was performed using two different sets of meters. Please clarify what meters were used.

6. The application includes drawings that are marked as proprietary. Please be aware that you may request that certain portions of your submittal to NRC be withheld from public disclosure as proprietary information. To do this, you must execute an affidavit as specified in 10 CFR 2.790. You must list all portions that you wish to be held proprietary, along with your reasoning as to why that is appropriate. While it is allowable, please refrain from submitting proprietary information in support of a registration unless necessary. Keep in mind that all registration certificates in the Sealed Source and Device Registry, and all NRC licenses are considered to be in the public domain, and are therefore may be viewed by any member of the public who requests to see them.

~~9604170248~~ 2pp.

Please provide the requested information within thirty (30) days of the date of this letter. If you have any questions, please contact me at (301) 415-5868 or Mr. Steven Baggett at (301) 415-7273.

Sincerely,

Original Signed by

Michele L. Burgess, 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

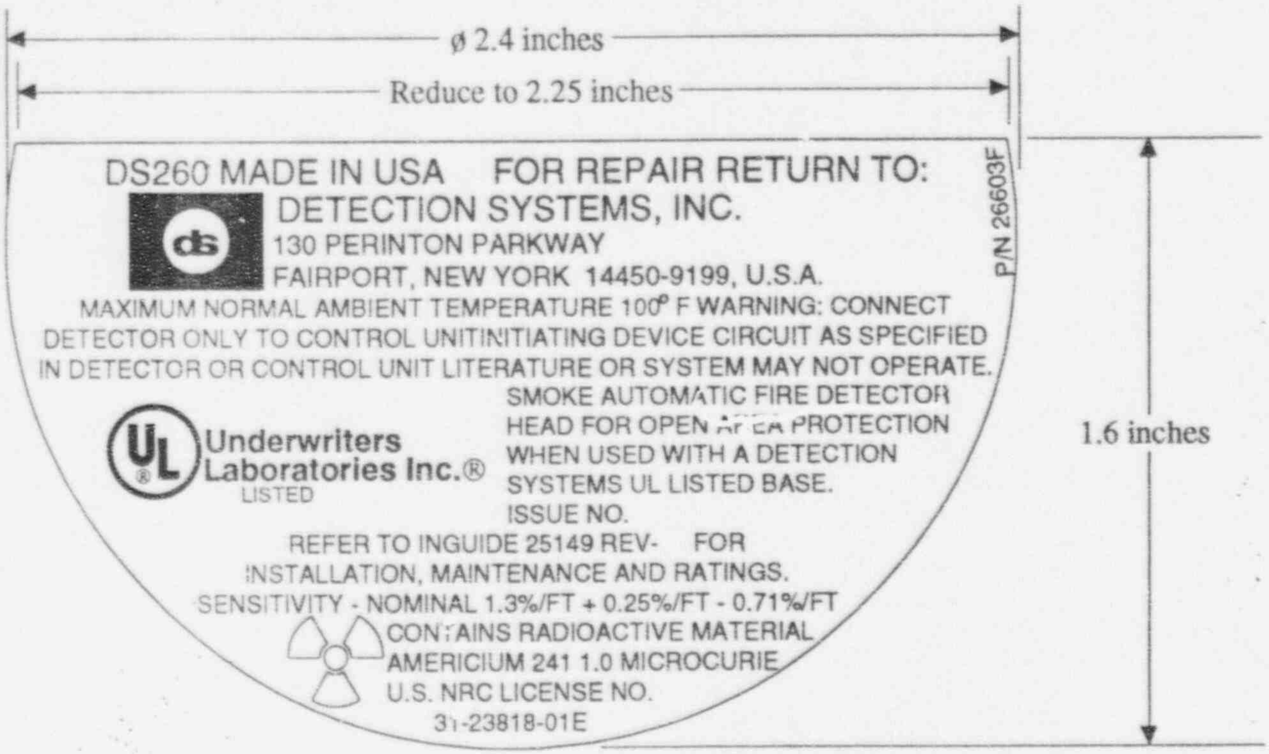
Distribution:
SSSS r/f SSD-95-123 NE01

DOCUMENT NAME: C:\WINDOWS\WP{WP}.BK1
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	IMAB	C	IMAB	N						
NAME	MBurgess/mb mLB		SBaggett SB							
DATE	4/12 /96		4/ 15 /96							

OFFICIAL RECORD COPY

DATE	SYM	REVISION RECORD	ECR#	DR	AUTH
12/27/94	B	ACCEPTED DRAWING		PMB	RLMc
3/20/95	C	Added Sensitivity Tolerance	4030	PMB	RLMc
3/23/95	D	Ambient Temperature was 120°F, added new UL Logo.	4030	PMB	RLMc
3/23/95	E	Added P/N to Label , added Listed Base Note.	4030	PMB	RLMc
3/29/95	F	Corrected spelling of "AMERICIUM", Moved "SMOKE AUTOMATIC..." right to bring in line with rest of paragraph.	4063	PMB	GJR



NOTES:

1. Material: U.L. recognized tamper proof paper stock.
2. Print Color: Black on white background.
3. Corners may have radius.
4. To be supplied on rolls.
5. Dimensions are in inches.
6. Dimensional tolerance +/- .020 inch.
7. For adhesive specifications refer to DSI Drawing #A22941.
8. Lines are to define outer edge of label, only, not to show on finished label.
9. Issue number to be supplied by Underwriters Laboratories.

ORIGINAL
IF IN RED

PART NO. 26603F

DETECTION SYSTEMS, INC.

130 PERINTON PARKWAY
FAIRPORT, NEW YORK, 14450-9099, USA
(716) 223 4060, FAX (716) 223 9180

DRAWING TITLE
DS260 General Product Label

DATE DRAWN 1/29/93 | DRAWN BY: PRJ | APPR BY: [illegible]

DRAWING NUMBER **A26603** **REV-F** | SCALE | SHEET 1 OF 1

DATE	SYM	REVISION RECORD	ECR#	DR	AUTH
11/13/95	B	ACCEPTED DRAWING		PRJ	RLM

Reduce to 2 Inches

U.S. NRC License No. 31-23818-01E

THIS DETECTOR CONTAINS RADIOACTIVE MATERIAL
AMERICIUM 241, 1.0 MICROCURIE, AND HAS BEEN
MANUFACTURED IN COMPLIANCE WITH U.S.NRC
SAFETY CRITERIA IN 10 CFR 32.27. THE PURCHASER
IS EXEMPT FROM ANY REGULATORY REQUIREMENT.

26606B

.75

NOTES:

1. Material: White 60# bond with permanent, pressure sensitive adhesive backing.
2. Print color: Black.
3. Corners may have a radius.
4. To be supplied on rolls.
5. Dimensions are in inches.
6. For adhesive specifications refer to DSI drawing #A22941.
7. Tolerances are ± .020

ORIGINAL
IF IN RED

PART NO. 26606B

DETECTION SYSTEMS, INC.

130 PERINTON PARKWAY
FAIRPORT, NEW YORK, 14450-9099, USA
(716) 223 4060, FAX (716) 223 9180

DRAWING TITLE
Label, DS260 shipping label

DATE DRAWN 11/13/95 | DRAWN BY: PRJ APPR BY: RJM

DRAWING NUMBER
A26606 **REV-B**

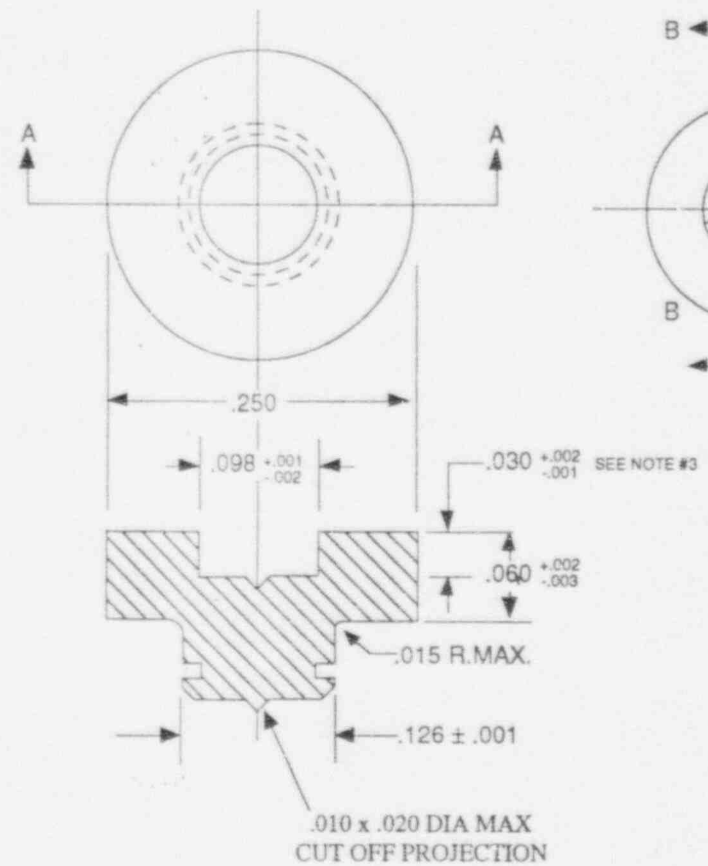
SCALE 2:1
SHEET 1 OF 1

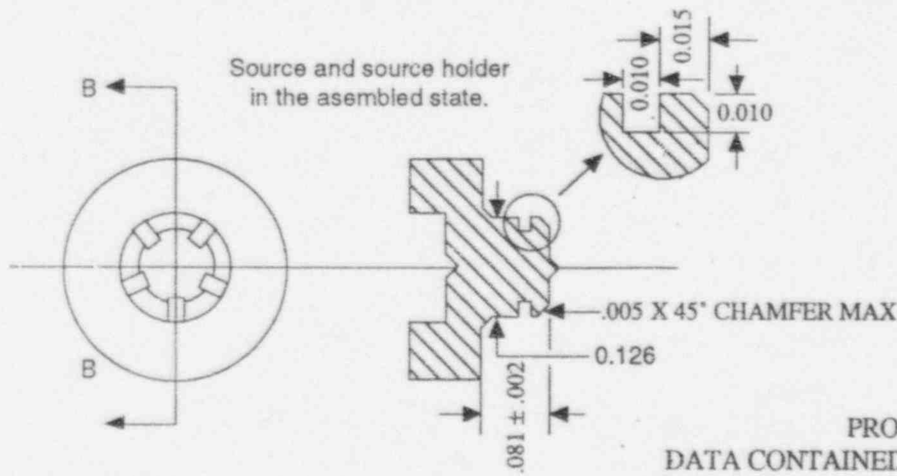
DATE	SYM	REVISION RECORD	ECR#	DR	AUTH
4/1/92	B	ACCEPTED DRAWING		PRJ	RLMc
4/26/93		REMOVED PROJECTION FROM HOLDER, ADDED FLANGE		PRJ	RLMc
7/13/93	D	FLANGE WAS TRIANGULAR SHAPE, WIDTH .135 WAS .136	2579	PRJ	RLMc
2/24/95	E	ADDED NOTE 5	3970	PRJ	RLMc
7/6/95	F	ADDED 10% TOLERANCE TO SOURCE	4306	PMB	RLMc
9/12/95	G	Remove lip at bottom of stem. Lengthen stem, add groove.	4494	PRJ	RLMc

NOTES:

1. Source holder and source holder assembly must comply with NRD specification 2016 dated 2/8/85
2. All dimensions are in inches.
3. Each shipment, .030 dimension must be held to ± .001 within the + .002 -.001 tolerance.
4. Tolerances: ± .005 Decimal, 1° Angular.
5. Source holder material: Type 303 stainless steel.

MANUFACTURER	MANUFACTURER'S P/N
NRD	A-001 Nuclear Foil Sealed Source Am241 0.9µCi +/- 10% Source Holder: A-1056





ORIGINAL
IF IN RED

PART NO. 25095E

DETECTION SYSTEMS, INC.

ds ®

130 PERINTON PARKWAY
FAIRPORT, NEW YORK, 14450-9099, USA
(716) 223 4060, FAX (716) 223 9180

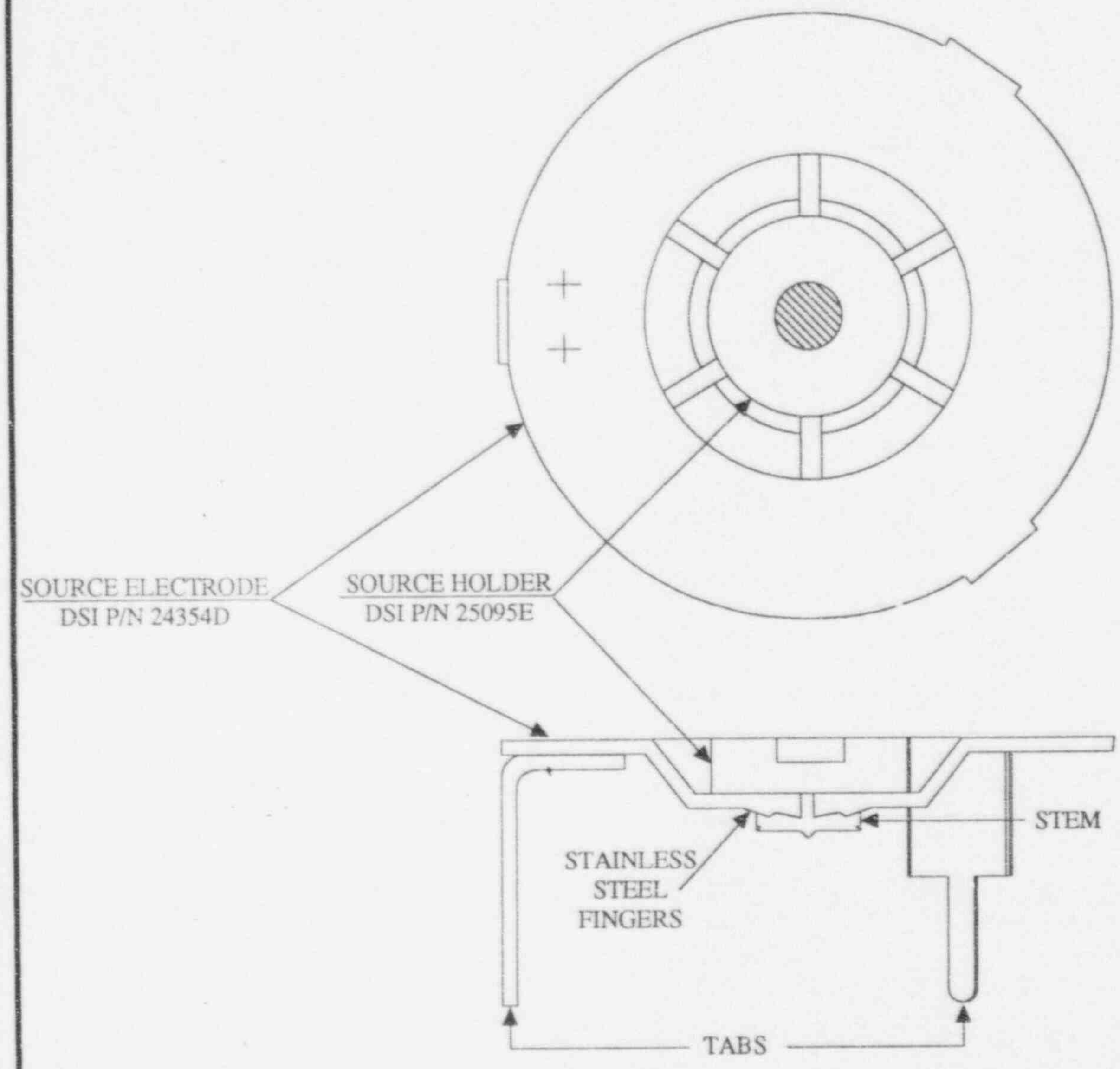
DRAWING TITLE
IONIZATION SOURCE & HOLDER

DATE DRAWN 4/1/92	DRAWN BY: PRJ APPR BY: RJMc
DRAWING NUMBER A25095 REV-G	SCALE SHEET 1 OF 1

DATE	SYM	REVISION RECORD	ECR#	DR	AUTH
5/3/93	B	ACCEPTED DRAWING		PRJ	RLMc
2/24/95	C	CHANGED COMPONENT PARTS TO 6 DIGIT NUMBERS, REVISED 24354 FROM "B"TO "C"	3757	PRJ	RLMc
8/8/95	D	REVISE TO "D" FOR RETOOLING	3757	PRJ	RLMc
9/12/95	E	Removed flange at bottom stem, lengthen stem.	4494	PRJ	RLMc

NOTES:

1. The top surface of the source holder and the source electrode are to be flush with each other.
2. The stainless steel fingers of the source electrode are to be tightly crimped to the 0.126 diameter stem of the source holder.



ORIGINAL
IF IN RED

SUPPLIER: NRD

PART NO. 26444E

DETECTION SYSTEMS, INC.

130 PERINTON PARKWAY
FAIRPORT, NEW YORK, 14450-9099, USA
(716) 223 4060, FAX (716) 223 9180

DRAWING TITLE
DWG-SE/SH Purchased assembly

DATE DRAWN 5/3/93 | DRAWN BY: PRJ APPR BY: RJMc

DRAWING NUMBER
A26444 REV-E

SCALE

SHEET 1 OF 1

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
Radiological Health Unit
Building #12, Room 457
State Office Building Campus
Albany, NY 12240

December 5, 1995

Mr. Bruce Kaminsky
Radiation Safety Officer
Detection Systems, Inc.
130 Perinton Parkway
Fairport, New York 14450

License No. 2577-3799
Reference No. 1
Amendment No. 4
DL No. 95-008

Dear Mr. Kaminsky:

Enclosed is a renewal of the above referenced license, which also incorporates your revised operating and emergency manual into the license.

If you have any questions please do not hestitate to contact this office.

Sincerely,

Robert F. Kelly

Robert F. Kelly
Associate Radiophysicist

RFK:jmp
enclosure

STATE OF NEW YORK - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

RADIOACTIVE MATERIALS LICENSE

DL 95-008

PURSUANT TO THE LABOR LAW AND INDUSTRIAL CODE RULE 38, AND IN RELIANCE ON STATEMENTS AND REPRESENTATIONS HERETOFORE MADE BY THE LICENSEE DESIGNATED BELOW. A LICENSE IS HEREBY ISSUED AUTHORIZING SUCH LICENSEE TO RECEIVE, POSSESS, USE AND TRANSFER RADIOACTIVE MATERIAL(S) DESIGNATED BELOW; AND TO USE SUCH RADIOACTIVE MATERIAL(S) FOR THE PURPOSE(S) AND AT THE PLACE(S) DESIGNATED BELOW. THIS LICENSE IS SUBJECT TO ALL APPLICABLE RULES, REGULATIONS, AND ORDERS NOW OR HEREAFTER IN EFFECT OF ALL APPROPRIATE REGULATORY AGENCIES AND TO ANY CONDITIONS SPECIFIED BELOW.

1. NAME OF LICENSEE	3. LICENSE NUMBER
DETECTION SYSTEMS, INC. FEIN:16-0958589 PHONE:(716)223-4060	2577-3799
	4. EXPIRATION DATE: FEBRUARY 28, 1998
2. ADDRESS OF LICENSEE	**5a. REFERENCE No. / b. AMENDMENT No.**
130 PERINTON PARKWAY FAIRPORT, NEW YORK 14450	1 / 4

6. RADIOACTIVE MATERIALS (element in mass number)	7. CHEMICAL AND/OR PHYSICAL FORM	8. MAXIMUM QUANTITY LICENSEE MAY POSSESS AT ANY ONE TIME
A. Americium 241	A. Foil Source (NRD, Inc. Model A-001)	A. 50 millicuries (not to exceed 1 microcurie per source)

9. Authorized use.

In research, development and manufacture of smoke detection devices Model DS 260 and also for receipt, repair, maintenance and service of smoke detectors.

10. Licensed material shall be stored and used at the licensee's installation located at the address indicated in Condition 2, above.

11. The site Radiation Safety Officer for this license is Bruce Kaminsky. Mr. Kaminsky shall be provided with technical support by Frederic J. Mis, consultant Radiation Safety Officer.

12. The licensee shall instruct persons who engage in work under the license, in accordance with section 38.27(c) of Code Rule 38. Such instruction shall include the licensee's operating and emergency procedures, and other information contained in documents incorporated in Condition 23.

13. The licensee shall have available an appropriate survey meter which shall be maintained operational and shall be calibrated before initial use and at subsequent intervals not exceeding twelve months by a person specifically authorized by the U.S. Nuclear Regulatory Commission or an Agreement State to perform such services. Records of all calibrations shall be kept a minimum of five years.

14. Licensee shall maintain records, for each individual isotope, of total activities received and shipped out during each complete calendar year.

15. The licensee shall not release any licensed radioactive materials into the environment except as permitted by the regulations of the New York State Department of Environmental Conservation.

16. The licensee shall not possess or store mixed waste, defined as the combination of hazardous wastes (identified in the State of New York, Department of Environmental Conservation Part 371 of Title 6, Identification and Listing of Hazardous Wastes) and radioactive materials, without a current valid permit from the Department of Environmental Conservation to possess and store such mixed waste.

17. A. The licensee shall submit to the Department a detailed description of any proposed changes to the facilities and equipment, described in the license application and supporting documents, before making any such changes. This shall include, but not be limited to, changes in use, floor plans, ventilation systems and usage of areas contiguous to areas where radioactive materials are used and stored.

    B. Plans of facilities which the licensee intends to dedicate to operations involving the use of radioactive material shall be submitted to the Department for review and approval prior to any such use.

18. The licensee shall submit complete decontamination procedures to the Department for approval ninety (90) days prior to the termination of authorized operations involving radioactive material in controlled areas and/or vacating installations pursuant to 12 NYCRR 38, section 38.23.

19. The licensee shall maintain records of information important to safe and effective decommissioning at 130 Perinton Parkway, Fairport, New York, and at other locations as the licensee chooses. The records shall be maintained until this license is terminated by the Department and shall include:

    (a) Records of spills or other unusual occurrences involving the spread of contamination in and around the facility, equipment, or site;

    (b) As-built drawings and modifications of structures and equipment in restricted areas where radioactive materials are used and/or stored, and locations of possible inaccessible contamination such as buried pipes which may be subject to contamination;

20. The licensee shall submit full information on any proposed changes of ownership or control of licensed premises, at least 90 days prior to the proposed action.

21. In addition to the possession limits in Condition 8, the licensee shall further restrict the possession of licensed material to quantities below the minimum limit specified in Section 38.7 of 12 NYCRR 38 for establishing decommissioning financial assurance.

3. License Number 2577-3799 5a. Ref. No. 1 b. Amend. No. -4-

23. Except as specifically provided otherwise in this License, the licensee shall conduct its program in accordance with the statements, representation and procedures contained in the documents, including any enclosures, listed below. The Department's Regulations shall govern, unless the statements, representation and procedures in the licensee's application and correspondence are more restrictive than the Regulations.

    A. Application dated October 7, 1992, signed by David B. Lederer.

    B. Letters dated June 26, 1992; Ocotber 7, 1992; October 19, 1993; December 3, 1993; January 7, 1994; January 21, 1994; and July 6, 1994, signed by David B. Lederer.

    C. Operating and Emergency Manual dated October 27, 1995.

    D. Letter dated October 7, 1992, signed by David B. Lederer.

    E. Letter dated December 10, 1993, signed by Betty Green.

    F. License Renewal Request dated January 17, 1995, signed by David B. Lederer, Executive Vice President.

Deputy Commissioner Denis Peterson
for: THE COMMISSIONER OF LABOR

Rita Aldrich

DATE: December 5, 1995
RFK:jmp

by: Rita Aldrich
Principal Radiophysicist

RECEIVED

By__________________

STATE OF NEW YORK
DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH
Radiological Health Unit
Building #12, Room 457
State Office Building Campus
Albany, NY 12240

November 17, 1995

Mr. David B. Lederer
Detection Systems, Inc.
130 Perinton Parkway
Fairport, New York 14450

License No. 2577-3799
Reference No. 1
Amendment No. 3
DL No. 95-267

Dear Mr. Lederer::

Enclosed please find an amendment to your company's license which names Bruce Kaminsky as site Radiation Safety Officer, and designates Frederic Mis as consultant Radiation Safety Officer.

We no longer name consultants as the site RSO, since the RSO must provide day-to-day oversight of the radiation protection program. However, Mr. Mis remains essential to your program as a trained health physicist, and remains on the license as consultant RSO.

Your renewal is in the process of being reviewed. Therefore, this amendment is being issued separately, so as not to inconvenience you.

If you have any questions concerning this letter, please feel free to contact me.

Sincerely,

Rita Aldrich

Rita Aldrich
Principal Radiophysicist

RA:jmp
enclosure

STATE OF NEW YORK - DEPARTMENT OF LABOR
DIVISION OF SAFETY AND HEALTH

RADIOACTIVE MATERIALS LICENSE AMENDMENT

DL Nos. 95-267

PURSUANT TO THE LABOR LAW AND INDUSTRIAL CODE RULE 38, AND IN RELIANCE ON STATEMENTS AND REPRESENTATIONS HERETOFORE MADE BY THE LICENSEE DESIGNATED BELOW. A LICENSE IS HEREBY ISSUED AUTHORIZING SUCH LICENSEE TO RECEIVE, POSSESS, USE AND TRANSFER RADIOACTIVE MATERIAL(S) DESIGNATED BELOW; AND TO USE SUCH RADIOACTIVE MATERIAL(S) FOR THE PURPOSE(S) AND AT THE PLACE(S) DESIGNATED BELOW. THIS LICENSE IS SUBJECT TO ALL APPLICABLE RULES, REGULATIONS, AND ORDERS NOW OR HEREAFTER IN EFFECT OF ALL APPROPRIATE REGULATORY AGENCIES AND TO ANY CONDITIONS SPECIFIED BELOW.

1. NAME OF LICENSEE DETECTION SYSTEMS, INC.	3. LICENSE NUMBER 2577-3799
	4. EXPIRATION DATE FEBRUARY 28, 1995
2. ADDRESS OF LICENSEE 130 PERINTON PARKWAY FAIRPORT, NEW YORK 14450	5a. REFERENCE No. 1 / b. AMENDMENT No. 3

Change Condition 12 to Read:

12. The site Radiation Safety Officer for this license is Bruce Kaminsky. Mr. Kaminsky shall be provided with technical support by Frederic J. Mis, consultant Radiation Safety Officer.

Deputy Commissioner Denis Peterson
for: THE COMMISSIONER OF LABOR

Rita Aldrich

DATE: November 17, 1995
RA:jmp

by: Rita Aldrich
Principal Radiophysicist

DOSH-242 B (4-91)