

APR 23 1992

MEMORANDUM FOR: Susan Greene, License Reviewer
Commercial Section
Medical, Academic, and Commercial
Use Safety Branch

FROM: John W. Lubinski, Mechanical Engineer
Sealed Source Safety Section
Source Containment and
Devices Branch

SUBJECT: SSD TECHNICAL ASSISTANCE REQUEST:
AMERICAN SCITEC, INC.
CONTROL NO. - 021341
LICENSE NO. - 04-21357-01E

In response to your request dated January 22, 1992, for a SSD review associated with American Scitec's license amendment application, we have completed the SSD review. Please find enclosed a copy of registration certificate NR-134-D-101-E.

Please note that American Scitec committed to sending NRC a letter when a new listee is incorporated. The letter would include the listee's name and address and the model number under which each corresponding American Scitec model number device is sold. Since this commitment was made in a letter dated March 15, 1984, we feel an up-to-date, complete listing of listees and model numbers is needed. We feel this issue should be addressed when processing the renewal of American Scitec's license.

If you have any questions, please contact me at 504-2689 or Mr. Steven Baggett at 504-2542.

/s/
John W. Lubinski, Mechanical Engineer
Sealed Source Safety Section
Source Containment and
Devices Branch

Enclosures:
Registration Certificate NR-134-D-101-E
License File Package

cc: GJackson, LFDCB

Distribution:

SSSS Staff	NMSS r/f	SCDB r/f	IMNS Central Files
FBrown	JGlenn		

OFC: SCDB

NAME: J. Lubinski

DATE: 04/24/92

OFFICIAL RECORD COPY
NR134101.TAR

9305110248 921109
PDR FOIA
MIS92-414 PDR

9305110248

A/11

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(AMENDED IN ITS ENTIRETY)

NO.: NR-134-D-101-E

DATE: APR 23 1992

PAGE 1 OF 4

DEVICE TYPE: Smoke Detector

MODELS: 168101 Series, 168102 Series, 168103 Series,
168104 Series, 168106 Series, 168108 Series,
168111 Series, 168112 Series

(All models are sold under various brand names, some
with different housings. See description section for
more detail)

DISTRIBUTOR: American Scitec, Inc.
3505 Cadillac Avenue, BLDG J-5
Costa Mesa, CA 92626

MANUFACTURER: Shanghai Fenghua Radio Factory
238 Guang Xi Bei Road
Shanghai, P.R. China

SEALED SOURCE MODEL DESIGNATION: Amersham Model AMM-1001H

ISOTOPE:

Americium-241

MAXIMUM ACTIVITY:

1 microcurie

LEAK TEST FREQUENCY: Not Required

PRINCIPAL USE: (P) Ion Generators, Smoke Detectors

CUSTOM DEVICE: _____ YES _____ X _____ NO

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(AMENDED IN ITS ENTIRETY)

NO.: NR-134-D-101-E

DATE: APR 23 1992

PAGE 2 OF 4

DEVICE TYPE: Smoke Detector

DESCRIPTION:

All models of the smoke detector contain a single foil source of americium-241 having an activity of $0.9 \mu\text{Ci} \pm 10\%$. The americium-241 is purchased from Amersham as a foil source mounted on a stainless steel holder and is designated as Model AMM-1001H. The source holder is mounted in a plastic ionization chamber. This chamber is attached to a printed circuit board. The metal leads (electrodes) coming from the chamber are secured to the circuit board by soldering. The entire ionization chamber is covered with a perforated metal cap which is screwed to the plastic insulator which captures a wire which is soldered to the circuit board. The completed circuit board is mounted within a decorative plastic housing. The ionization chamber is the same for all models. The American Scittec model numbering system is as follows:

- 168101-(*) Basic battery operated unit. The covers for the units range from 5" to 7" in diameter. The printed circuit board, which contains the ionization chamber, is universally interchangeable for all housings.
- 168102-(*) Battery operated ion smoke detector designed for use on christmas trees. This model employs the same chamber, electronics, and materials as the Model 168101 Series except the housing is designed to be hung from objects such as christmas trees, mantels, etc. In most cases the plastic housing for this model is spherical in design.
- 168103-(*) Portable battery operated ion smoke detector with clock/alarm. Travel design for use in hotels. Can be self-standing or hung on a door.
- 168104-(*) Basic smoke detector with heat detector option added.
- 168106-(*) Basic smoke detector with escape light option added.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(AMENDED IN ITS ENTIRETY)

NO.: NR-134-D-101-E

DATE: APR 23 1992

PAGE 3 OF 4

DEVICE TYPE: Smoke Detector

DESCRIPTION (Cont.):

168108-(*) Portable battery operated ion smoke detector with clock/alarm. Travel design for use in hotels. Can be self-standing or hung on a door. This model is identical to the Model 168103 Series with the exception of the housing and the inclusion of a burglar intrusion alarm on the Model 168108 Series.

168111-(*) Basic 120 VAC operated smoke detector.

168112-(*) VAC detector with multiple station option added. Allows interconnection of up to 10 units. When any one unit detects smoke all interconnected units sound alarm.

* A suffix letter follows the dash mark in the model number to indicate the type of plastic outer housing used with the basic detector mechanism as denoted by the seven digit numbers before the dash. With regard to their multiple listees, American Scitec's distribution number appears on both the smoke detectors and retail box, regardless of the name and model. In addition, American Scitec will provide NRC a letter with the name and address of each listee and the model number under which each device will be sold. This letter will not constitute an amendment.

REFERENCES:

The following supporting documents for the smoke detectors are hereby incorporated by reference and are made a part of this registry document.

- American Scitec's letters dated June 24, 1983, July 1, 1983, July 6, 1983, July 29, 1983, September 19, 1983, October 6, 1983, March 15, 1984, March 28, 1984, June 21, 1984, July 1, 1984, March 11, 1986, March 23, 1987, June 22, 1990, July 5, 1990, November 25, 1991, and April 21, 1992, with enclosures thereto.

REGISTRY OF RADIOACTIVE SEALED SOURCES AND DEVICES
SAFETY EVALUATION OF DEVICE
(AMENDED IN ITS ENTIRETY)

NO.: NR-134-D-101-E

DATE: APR 23 1992

PAGE 4 OF 4

DEVICE TYPE: Smoke Detector

ISSUING AGENCY:

U.S. Nuclear Regulatory Commission

Date: APR 23 1992

Reviewer: 

Date: APR 23 1992

Concurrence: 