

red 3/14/92

Steven L. Baggett
Mail Stop 6H3
United States Nuclear Regulatory Commission
1 White Flint North
1155 Rockville Pike
Rockville MD 20852

FYRNETICS INC.

Regarding; Response to your letter of February 7 referencing
Amendment to NRC Licence No. 12-16856-01E control
121188

Dear Mr. Baggett;

We have reviewed your response letter of February 7, 1992 and
are responding to the specific points as they are called out in
your letter.

- 1, The type 200 ionization chamber will be used in six
detector models. Three of the models are 120 volt A.C.
powered, two of which have battery backup. The other three
models are battery powered.

All six models share common tooling for the plastic parts,
and differ only in the features they provide. The models and
features of the models are as follows:

120 VOLT AC POWERED UNITS.

MODEL #	DESCRIPTION OF FEATURES
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1235	120 VOLT A.C. POWERED IONIZATION TYPE WITH "HUSH".
1275	120 VOLT A.C. POWERED IONIZATION TYPE WITH 9 VOLT BATTERY BACK-UP AND "HUSH".
1285	120 VOLT A.C. POWERED IONIZATION TYPE WITH 9 VOLT BATTERY BACK-UP, "HUSH" AND BATTERY POWERED SAFETY LIGHT.

9 VOLT BATTERY POWERED UNITS

0915	9 VOLT BATTERY POWERED IONIZATION TYPE.
0916	9 VOLT BATTERY POWERED IONIZATION TYPE WITH "HUSH".
0918	9 VOLT BATTERY POWERED IONIZATION TYPE WITH "HUSH" AND SAFETY LIGHT.

- 2, Enclosed are copies of the drawings for the plastic parts
used in the six detectors.

ILL # 6	Detector cover drawing used on models 0918 and 1285.
ILL # 7	Detector base drawing used on models 0918 and 1285.
ILL # 25	Detector cover drawing used on models 0915, 916, 1235 and 1275.
ILL # 26	Detector base drawing used on models 0915, 0916, 1235, and 1275.
ILL # 19	Circuit board used in the models 0915, 0916, and 0918.
ILL # 19A	Circuit board used in the models 1235, 1275 and 1285.

9610180194 960819
PDR RC *
SSD PDR

9610180194

Complete
add name

- 3, Fyrnetics is a subsidiary of Management Investment & Technology Co. Limited (MIT). Fyrnetics is the marketing and distribution channel for smoke detectors produced by MIT. (see structure chart appendix "A") Fyrnetics takes care of all agency approval submittal and correspondence relating to the smoke detector product line. Fyrnetics does no manufacturing, only distribution.

MIT manufacturers the complete smoke detector including the ionization chamber.

All quality testing is performed by MIT at the manufacturing site, a complete copy of the Quality Assurance procedure is included in appendix "B".

Notwithstanding the extensive quality assurance program conducted by MIT, Fyrnetics will randomly select a sample of 10 % of the units to verify the correctness of the detector and the point of sale packaging labeling.

LT
detectable label
packaging

- 4, EAD has been removed as , a vendor from the source list (see appendix "C").
- 5, All detectors are sealed and the consumer has no access to the ionization chamber, consequently all consumer information is provided on the label on the back of the detector.
- All models of detectors will incorporate the following information on the product label.

From
ch. 1
from 12
manuf.

CONTAINS RADIOACTIVE MATERIAL. THIS DEVICE CONTAINS 0.9 MICROCURIE OF AMERICIUM 241. THIS DETECTOR IS DISTRIBUTED UNDER U.S. NRC LICENCE NO. 12-16856-01E

All models of detectors will contain the following information on the point of sale packaging.

Fyrnetics
manuf.

THIS PRODUCT IS DESIGNED TO DETECT PRODUCTS OF COMBUSTION USING THE IONIZATION TECHNIQUE. IT CONTAINS 0.9 MICROCURIE OF AMERICIUM 241, A RADIOACTIVE MATERIAL. DISTRIBUTED UNDER NRC LICENCE NO 12-16856-01E. MANUFACTURED IN COMPLIANCE WITH U.S. NRC SAFETY CRITERIA IN 10 CFR 32.27. THE PURCHASER IS EXEMPT FROM ANY REGULATORY REQUIREMENTS.

- 6, A detailed evaluation of the safety criteria outlined in 32.27 10 of the CFR was prepared and is included as appendix "D".
- 7, All tests were performed on the model 0918 since it is the unit which has all the features possible. The original evaluation report has several typing errors in the appendix 2 portion. In the appendix 2 the model number is called out as 0908 and 0608. The reference to 0908 and 0608 are both typing errors and should be 0918. There is also a reference to the model 0908 on the cover letter and report from J.R. Peterson & Assoc., Inc. All testing outlined in appendix 2 of the original report and the J.R. Peterson & Assoc., Inc. report was done on the model 0918.

The model 1285 is identical to the 0918 except the 1285 is 120 volt AC powered with battery back up.

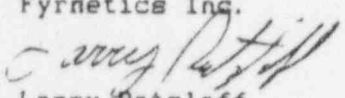
The rest of the models have various features deleted from the full featured 0918 and 1285.

1275	same as 1285 but with safety light deleted
1235	same as 1275 but with battery backup deleted.
0916	same as 0918 but with safety light deleted.
0915	same as 0916 but with "HUSH" deleted.

We feel that the enclosed information fulfills your requests for the additional information you need to finalize the licence amendment.

If there are any questions or items on which you need an explanation please contact me at 1-800-654-7665.

Sincerely;
Fyrnetics Inc.


Larry Ratzlaff
Product Eng.

c.c. Marlowe Bacon, Tom Ruso, Joanne Sha, Jerry Rork

Gerald D. Rork
Smoke Detector Consultant

P.O. BOX 142
DUNDEE, ILLINOIS 60118
(708) 428-4409

Ms. Joanne Sha
Radiation Protection Officer
Fyrnetics, Inc.
1021 Davis Road
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July 18, 1991

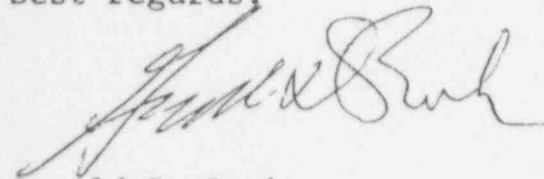
Dear Ms. Sha

At your request, I have evaluated the design of the type 200 ionization chamber that you propose to use in future Fyrnetics smoke detectors. This evaluation only considered the radiological safety aspects of the design. Enclosed is a report of my evaluation.

In my professional opinion, the Type 200 ionization chamber, when installed in a smoke detector, meets all criteria set forth in 32.26 and 32.27 Chapter 10 Code of Federal Regulations.

Please contact me if there are any questions or if additional information is necessary.

Best regards,



Gerald D. Rork
Smoke Detector Consultant