

From: Jonathan Rivera
To: internet: terrill.garland@kidde-fenwal.com
Date: 3/18/05 11:50AM
Subject: SSD review for new Model No. 7054, Certificate No. NR-668-D-101-E

Good morning Terry,

We are in the final stages in the completion of this device evaluation. In order to complete our review, please address the issues discussed in the attached Word file. A response via email will be sufficient.

We would like to set up a conference call with you on Monday 3/21/05 to discuss these issues and any questions that you may have. If you would, please provide me a convenient time for us to call you.

Sincerely,

Jonathan Rivera
Materials Safety & Inspection Branch
U.S. Nuclear Regulatory Commission
Phone: (301) 415-5810
Email: jxr4@nrc.gov

CC: John Jankovich

b36

Mail Envelope Properties (423B06E9.777 : 18 : 20473)

Subject: SSD review for new Model No. 7054, Certificate No. NR-668-D-101-E
Creation Date: 3/18/05 11:50AM
From: Jonathan Rivera

Created By: JXR4@nrc.gov

| Recipients | Action | Date & Time |
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| terrill | Transferred | 03/18/05 11:51AM |
| garland (internet: terrill.garland@kidde- | | |

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| MESSAGE | 1346 | 03/18/05 11:50AM |
| Kidde, Deficiencies&Clarifications.doc | 38912 | 03/18/05 11:49AM |

Options

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| Return Notification: | None |

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Deficiency Issues To Address / Clarifications Needed
Kidde Fenwal, 04-58, NR-688-D-101-E

1. Prototype Testing

In accordance with NUREG-1556, Vol. 3, Rev. 1, Section 10.5 and Appendix F, NRC staff uses OECD/NEA 1977, "Recommendations for Ionization Chamber Smoke Detectors in Implementation of Radiation Protection Standards", for the evaluation of prototype testing procedures and results for smoke detectors. The table below compares the prototype testing for the new Model No. 7054, addressed in your application dated September 17, 2004, to the required tests in OECD/NEA 1977. Please review the table below, and either:

- (a) Provide procedures and results for the tests not addressed in your application, as indicated under Comments in the table below;
- (b) Provide justification for excluding the tests not addressed in your application; or,
- (c) Provide a description of how the procedures and results of the currently approved Model No. CPD-7051 would apply to the new Model No. 7054.

| Required Tests in OECD/NEA 1977 | | Addressed In 9/17/04 Application? (Yes, No) | Comments |
|---|--|--|---|
| Preliminary Tests | General Inspection noting obvious defects | No | Provide Information |
| | Measurement of external dose rates (averaged over 10 cm ²) | Yes (see comments) | Provide the equipment used and how the average over 10 cm ² is addressed |
| | Measurement of radioactive contamination | No | Provide information on wipe tests |
| Additional Tests (using a separate detector for each) | Temperature (-25°C, 100°C) | Yes (see comments) | Test performed from room temperature to 600°C. Address -25°C to room temperature (20°C) |
| | Impact (0.5kg steel hammer, 0.5m) | No | Provide Information |
| | Drop (10m) | Yes | ----- |
| | Vibration (5 to 60 Hz) | No | Provide Information |
| Additional Tests On Sources | Maintenance (on 2 sources, 2x number of cleaning operations expected during lifetime) | No | Not applicable for exempt products (smoke detectors) |
| Other Tests | Effects of Fire (600°C) | No | Confirm that temperature test above satisfies this requirement |
| | High Temperature Industrial Fire and Incineration (1200°C) | No | Provide Information |
| | Corrosion | No | Provide Information |

2. Background Information

In order to maintain a complete historical file, please provide:

- (a) A copy of the new drawings for the alternate assembly referenced in the letter dated July 24, 2003, listed under the References section of SSD Certificate No. NR-0668-D-101-E.
- (b) A copy of the letter dated May 13, 2002, listed under the References section of SSD Certificate No. NR-0668-D-101-E.

3. Degree of Human Access

In your application, under the Detector Assembly drawing, Appendix B, you indicate screws under Item Nos. 15 and 16. Please indicate whether or not these screws are tamper resistant, and/or describe how access to the source is prevented.

4. Radiation Profiles

Please describe the environmental conditions present during the dose rate measurements addressed under Appendix D of your application, as well as the type, window thickness, and sensitivity of the instrument used.

5. Quality Assurance and Quality Control

Please confirm that the Quality Assurance / Quality Control procedures that are on file with the NRC will not change for the manufacture and distribution of the new Model No. 7054.