

NUCLEAR REGULATORY COMMISSION

10 CFR Part 32

Specific Domestic Licenses to Manufacture or Transfer  
Certain Items Containing Byproduct Material

AGENCY: U.S. Nuclear Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is amending its regulations to provide new requirements for labeling of gas and aerosol detectors, including smoke detectors, and also for labeling the point-of-sale packaging for these detectors. The new requirements are intended to:

- (1) inform prospective purchasers and other persons that the detectors contain radioactive material, and
- (2) identify the radioactive material and quantity of activity in each detector.

EFFECTIVE DATE: January 1, 1981.

FOR FURTHER INFORMATION CONTACT: Donovan A. Smith, Office of Standards Development, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, telephone 301-443-5946.

SUPPLEMENTARY INFORMATION: On November 30, 1979, the NRC published in the Federal Register (44 FR 68853) a notice of proposed amendments to 10 CFR Part 32 to revise NRC requirements for labeling of gas and aerosol detectors designed to protect life or property from fires and airborne hazards. These detectors include smoke detectors. Smoke detectors containing small quantities of radioactive material, usually americium-241, are

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distributed extensively to homeowners and commercial and industrial users. The homeowner or other user is exempt from regulatory requirements; the manufacturer (or distributor of imported detectors) must have a specific license from the NRC to distribute the detector. The manufacturer of the detector has been required to label the detector in such a way that the manufacturer and the radioactive material can be identified. This final rule, in addition, requires the manufacturer to label the package used in the retail sale of the detector. This new requirement for labeling of the package in which the detector is displayed for sale is intended to inform prospective buyers that the detector contains radioactive material.

The notice of proposed rulemaking provided a period of 45 days for public comment. Copies of a value/impact assessment of the proposed amendments, prepared by the NRC staff, were sent to individuals who requested further information.

Interested persons submitted 24 letters regarding the proposed amendments. The letters generally included numerous specific comments but the most frequent and key comments could be divided into three categories:

1. The use of radioactive material in smoke detectors should be banned because there are nonradioactive detectors available; however, if radioactive smoke detectors are permitted to be used, they should be disposed of in a controlled manner as radioactive waste and should not be discarded with normal household waste.

2. The proposed amendments should not be made effective because the new labels would not be understood, would cause unnecessary concern on the part of the consumer, and would discourage the sale of a lifesaving device.

3. The proposed statement to be included on the label for the package containing the detector, "This detector contains radioactive material which presents no significant hazard to health if used in accordance with the instructions," is misleading and should be revised.

Copies of the comments may be examined in the Commission's Public Document Room at 1717 H Street, NW., Washington, D.C. A summary of the NRC's response to these comments is presented below.

1. The principal question in this rulemaking is neither prohibition of the use of smoke detectors nor their disposal. The question is how to label the detector package so that prospective purchasers are informed that the detectors contain radioactive material and are informed about what and how much radioactive material is contained in the detectors.

2. Whether or not some persons may or may not understand the significance of the information required in the new labels, and whether or not sales may or may not be discouraged, it appears appropriate to provide the prospective purchaser/user an opportunity to be informed about the radioactive content of the detector. If that person then decides to reject the benefit because of the small radiation risk, if any, associated with the detector, that decision can be based upon specific information.

3. The NRC agrees that revision of the proposed statement is needed to avoid unintended meanings. For example, the statement could reasonably cause one to believe that there would be a significant hazard to health if the detector is used other than in accordance with the instructions.

Upon further consideration of the objective of conveying safety information to the prospective purchaser, the NRC has revised the statement to show that the detector contains radioactive material, that the detector has been manufactured in compliance with safety criteria of the U.S.

Nuclear Regulatory Commission, and that the user of the detector is exempt from U.S. NRC regulations.

This method of communicating safety information to consumers by citing an applicable Federal regulation is used for other radiation-emitting consumer products. For example, the U.S. Department of Health and Human Services requires that certification tags which give indication of product conformance to applicable Federal standards be attached to television receivers and microwave ovens. The fact that a product's manufacture is subject to Federal standards and regulation by a Federal agency may be significant to the prospective purchaser.

After careful consideration of the comments on the notice of proposed rulemaking and the other factors involved, the Commission has adopted the rule in effective form with the significant changes discussed below.

1. The proposed amendments would have required package labeling only if the detector were individually packaged. The final rule does not limit package labeling to individually packaged detectors. Although individual packaging is most frequently used in marketing of detectors intended for residential use, many detectors intended for commercial and industrial establishments are not individually packaged. An opportunity for informing this latter group of users will be provided by the requirement that all point-of-sale packages be labeled.

2. The proposed amendments would have been effective after July 14, 1980. The final rule becomes effective January 1, 1981. This change is based on industry's representations that additional time is needed to avoid dumping of present supplies of labels and to design and produce new

labels. Also, no safety question in need of immediate action is involved in this change in the effective date.

3. The proposed amendments would have required the detector label to identify the manufacturer or initial transferor of the product. The final rule requires both the detector label and the package label to identify the person with an NRC license authorizing distribution of the detectors. Usually that person is the manufacturer if the detector is made in the U.S, or the importer if the detector is manufactured abroad. In either case, identification of the NRC licensee will assure identification of the person with responsibility for distributing a product that meets NRC safety criteria.

4. The proposed amendments would have required that the detector label be located on the external surface of the detector. The final rule retains that requirement and also specifies that the label must be visible when the detector is removed from its mounting, i.e., from its installed position. This additional detail on location of the detector label was prompted by several comments about the need for the label to be visible when the detector is installed. Because of the safety criteria that each detector must meet, particularly those relating to external radiation levels, and because of the other provisions for location of labels, a highly visible label on the external surface of an installed detector is not needed.

5. The proposed amendments would have required that the label on the point-of-sale package contain the statement "This detector contains radioactive material which presents no significant hazard to health if used in accordance with the instructions." The final rule does not



require that statement. As discussed before, the point-of-sale package label will state that the detector contains radioactive material, that it has been produced in compliance with NRC safety criteria, and that the purchaser is exempt from any regulatory requirements.

6. The proposed amendments would not have changed a general provision whereby the Commission, on a case-by-case basis, may require the manufacturer to provide additional labeling or marking information, including disposal instructions when appropriate. The final rule changes this provision. The final rule omits specific reference to disposal instructions in order to avoid any suggestion that the labeling or marking imposes regulatory requirements on the consumer. The labeling or marking is intended only to inform the consumer.

Pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and sections 552 and 553 of title 5 of the United States Code, the following amendments to Title 10, Chapter I, Code of Federal Regulations, Part 32 are published as a document subject to codification to be effective January 1, 1981.

1. Paragraph 32.26(b)(10) is revised to read as follows:

§32.26 Gas and aerosol detectors containing byproduct material: requirements for license to manufacture, process, produce, or initially transfer.

\* \* \* \* \*

(b) \* \* \* The information should include:

\* \* \* \* \*

(10) The proposed methods of labeling or marking the detector and its point-of-sale package to satisfy the requirements of §32.29(b);

2. Paragraph 32.29(b) is revised to read as follows:

§32.29 Conditions of licenses issued under §32.26: quality control, labeling, and reports of transfer.

Each person licensed under §32.26 shall:

\* \* \* \* \*

(b) Label or mark each detector and its point-of-sale package so that:

(1) Each detector has a durable, legible, readily visible label or marking on the external surface of the detector containing:

- (i) The following statement: "CONTAINS RADIOACTIVE MATERIAL";
- (ii) The name of the radionuclide and quantity of activity; and
- (iii) An identification of the person licensed under §32.26 to transfer the detector for use pursuant to §30.20 of this chapter or equivalent regulations of an Agreement State.

(2) The labeling or marking specified in paragraph (b)(1) of this section is located where it will be readily visible when the detector is removed from its mounting.

(3) The external surface of the point-of-sale package has a legible, readily visible label or marking containing:

- (i) The name of the radionuclide and quantity of activity;
- (ii) An identification of the person licensed under §32.26 to transfer the detector for use pursuant to §30.20 of this chapter or equivalent regulations of an Agreement State; and
- (iii) The following or a substantially similar statement: "THIS DETECTOR CONTAINS RADIOACTIVE MATERIAL AND HAS BEEN MANUFACTURED IN COMPLIANCE WITH U.S. NRC SAFETY CRITERIA IN 10 CFR 32.27. THE PURCHASER IS EXEMPT FROM ANY REGULATORY REQUIREMENTS."

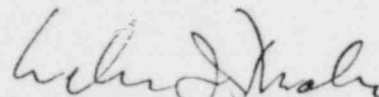
(4) Each detector and point-of-sale package is provided with such other information as may be required by the Commission; and

\* \* \* \* \*

(Secs. 81, 161b, Pub. Law 83-703, 68 Stat. 935, 948b (42 U.S.C. 2111, 2201); sec. 201, Pub. Law 93-438, 88 Stat. 1242 (42 U.S.C. 5841))

Dated at Bethesda, Md. this 27<sup>th</sup> day of May, 1980.

For the Nuclear Regulatory Commission.



William J. Dircks,  
Acting Executive Director for Operations



## DISCUSSION OF COMMENTS RECEIVED ON THE PROPOSED RULE

A notice to the public of the proposed issuance of amendments to 10 CFR Part 32 to change the labeling requirements for gas and aerosol detectors was published in the Federal Register November 30, 1979, (44 FR 68853) in order to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rule. A news release (No. 79-209) on the proposed regulation change invited interested persons to submit written comments and suggestions to the NRC. In addition to normal distribution of the news release, copies of the Federal Register notice were sent to Agreement State officials, manufacturers of gas and aerosol detectors, normal recipients of consumer product reports, special interest groups and organizations, and the usual recipients of proposed NRC rules.

In response to the above, 24 letters of comments were received. These were: 6 from individuals; 5 from special interest groups (environmental); 1 from an industry association; 8 from manufacturers of ionization type smoke detectors; 3 from State agencies; and 1 from a Federal agency. Generally: (1) manufacturers expressed disapproval of the proposed amendments, contending that present labeling requirements are adequate, (2) environmental protection oriented special interest groups encouraged the amendments but thought NRC should go further and prohibit all use or at least prohibit uncontrolled disposal of detectors, and (3) the State agencies and some individuals encouraged the effort to better inform consumers. The Federal agency suggested that NRC require that smoke detectors be labeled much like DHEW requires that TV sets and microwave ovens be labeled, i.e., by certification that the product satisfies a particular federal regulation. In summary, there was some support

for changing the present labeling requirements and many constructive comments were received.

The following is a brief summary statement, and the staff position, on each of the comments. The numbers following the comment relate to the letter and its originator that is identified at the end of this enclosure.

COMMENT: Point-of-sale packaging for other exempt products containing radioactive material, e.g. timepieces and compasses, also should be labeled.

(24)

Staff Position: The U.S. NRC is reevaluating the adequacy of its existing policy dealing with the distribution of consumer products containing radioactive material. The need for point-of-sale package labeling of all consumer products will be considered during this evaluation. If a revised policy is developed that requires all point-of-sale packaging for consumer products to be labeled, then some changes in current labeling practices may be required. The details of these changes, however, may be specific to the product and practices for its marketing.

COMMENT: The requirement that the point-of-sale package should be labeled should be made flexible enough to cover multiple units in one point-of-sale package.

(5)

Staff Position: The proposed amendments would have required point-of-sale package labeling only if the unit was packaged individually. The adopted amendments remove this limitation and require labels on all point-of-sale packages.

Removal of this limitation, however, may be of questionable value since marketing of multiple units in a single package is most likely to occur with respect to commercial and industrial detectors that are part of an elaborate fire detection system. Such systems are specified by architects or fire professionals and an installation agreement is reached before the user sees the detectors or their packaging, if ever.

Even though differences exist between marketing residential detectors and marketing commercial detectors and the potential buyer for the former is more likely to encounter a point-of-sale package label, some potential buyers of commercial detectors may see their packaging. At a minimum, a label on the package for the commercial detector may encourage the salesperson to mention to potential customers that the detectors contain radioactive material.

COMMENT: The Nuclear Energy Agency, OECD, established no specific requirement for labeling smoke detector packaging. If NRC wants to go along with the NEA, then it should not establish any packaging requirements.

(5)

Staff Position: The NEA document "Recommendations for Ionization Chamber Smoke Detectors in Implementation of Radiation Protection Standards" does not specifically address packaging requirements for the detectors. The NEA document does provide, however, in Section 8.1:

It is recommended that the competent National Authorities should ensure that all relevant information on the presence and utilization of radioactive sources is brought to the attention of users of ICSDs.

The above general administrative control procedure would cover the requirement for packaging labelings. A requirement for labeling the package is not inconsistent with the NEA recommendations.

COMMENT: The commenters support the proposed rules because they better inform the consumer that the devices contain radioactive material.

(8, 12, 13, 14, 15, 24)

Staff Position: The staff acknowledges the support and notes that providing information upon which a consumer can make his own choice when purchasing a product is consistent with a trend in federal regulations. Requirements for labeling of food products is an example of this trend.

COMMENT: Other alternative approaches to informing the consumer might be the use of a package insert or use of a more general regulatory requirement whereby the manufacturer is given the option of how to inform the consumer.

(4, 6, 22)

Staff Position: The staff agrees that the alternative approach of allowing the manufacturer an option of how to inform the consumer might achieve the desired objective. However, the administrative effort required for the manufacturer and the NRC to work out mutually acceptable procedures discourages this approach.

Use of a package insert would appear to be a less effective means of informing the potential purchaser than would the use of a label on the external surface of the package. Package inserts are likely to be discovered only after the purchase is made and the new owner arrives home and prepares to install the detector.

COMMENT: The label should contain the radiation symbol.

(8, 14, 15)

Staff Position: The staff does not agree. The very small radiation risk associated with gas and aerosol detectors which satisfy the safety criteria in 10 CFR 32.27 does not warrant the use of a radiation symbol that traditionally is associated by informed persons with much greater radiation risks.



COMMENT: Implementation of the proposed amendments would cost manufacturers an estimated \$100,000 to revise presently used labels. The manufacturer commenting indicates that the benefit for this expenditure would be small.

(5, 16, 21)

Staff Position: Although the staff does not disagree with the estimate that \$100,000 would be spent by the industry to implement the proposed amendments, a lower implementation cost might also satisfy the new labeling requirements. If a manufacturer elects a complete redesign of his package inscriptions to satisfy the new requirements, that is his choice. At a lower cost, he could simply glue on a small label to existing packaging. The implementation cost is considerably within the manufacturer's control. In designing inscriptions for packages for new models, the new requirements can be implemented at the initial design stage.

The benefit of the new requirements is difficult to quantify. NRC staff and contractor studies indicate the radiation risk of the detectors to be very small. Some persons, however, strongly desire to have information upon which to base their own decision about purchasing a product which presents even a very small radiation risk. The new requirements would help ensure that such information is readily available.

COMMENT: Change the proposed 6 months period for requiring compliance when the new labeling requirements are published.

(5, 19, 20, 23)

Staff Position: The adopted rules will become effective January 1, 1981. Since the proposed amendments were published November 30, 1979, this in effect provides 13 months notice to the manufacturers that label changes will be required. This would appear to provide reasonable opportunity for a manufacturer to prepare for the new requirements.

Implementation of new requirements in less than 6 months does not appear necessary since no urgent safety question is involved in this rule making action.

COMMENT: A minimum label size and type set should be specified in the regulation.

(8)

Staff Position: This degree of detail is not considered necessary at this time. As adopted, some flexibility is provided to the manufacturer in selecting a label size and type set. If experience under the new rules shows that excessive administrative effort is required to avoid use of proposed labels that are neither legible nor readily visible (requirements in §32.29(b)), further revision of §32.29 can be undertaken.

COMMENT: The regulations should clearly state the location for the detector and package labels.

(4, 6, 14, 16, 20, 22, 23)

Staff Position: Both the proposed amendments and the adopted amendments require that a legible, readily visible label or marking be located on the external surface of the detector and on the external surface of the package. This degree of location specification is adequate with respect to the package label or marking.

The adopted amendments provide additional guidance with respect to location of the detector label. The adopted amendments specify that the label must be visible when the detector is removed from its mounting, i.e. from its installed position. This additional detail on location of the detector label was prompted by several comments about the need for the label to be visible when the detector is installed. Because of the safety criteria that each detector must meet, particularly those relating to external radiation levels, and because of the other provisions relating to location of labels, a highly visible label on the external surface of an installed detector is not needed.

COMMENT: The proposed package statement "THIS DETECTOR CONTAINS RADIOACTIVE MATERIAL WHICH PRESENTS NO SIGNIFICANT HAZARD TO HEALTH IF USED IN ACCORDANCE WITH THE INSTRUCTIONS" is misleading and should be revised.

(1, 2, 3, 4, 6, 8, 9, 13, 16, 17, 19, 22, 23, 24)

Staff Position: The staff agrees that revision of the proposed statement is needed to avoid unintended meanings. For example, the statement could reasonably cause one to believe that there would be a significant hazard to health if the detector is used other than in accordance with the instructions.

Upon further consideration of the objective of conveying safety information to the prospective purchaser, the statement has been revised to show that the detector contains radioactive material, that the detector has been manufactured in compliance with safety criteria of the U.S. Nuclear Regulatory Commission, and that the user of the detector is exempt from U.S. NRC regulations.

This method of communicating safety information to consumers by citing an applicable federal regulation is used for other radiation emitting consumer products. For example, the U.S. Department of Health and Human Services requires that certification tags which give indication of product conformance to applicable Federal standards be affixed to television receivers and microwave ovens. The fact that a product's manufacture is subject to Federal standards and regulation by a Federal agency may be significant to the prospective purchaser.

COMMENT: To require the name of the radionuclide and the quantity of activity on the labels is of little value because few people will understand the terms used.

(4, 16)

Staff Position: The staff agrees that many people will lack the specialized knowledge needed to understand the significance of a particular radionuclide or quantity of activity. In an effort to compensate for this lack the labels also use the term "radioactive material" and refer to a particular NRC regulation. These bits of information, when considered collectively, may be understood by many people and help them make informed decisions about the detectors.

COMMENT: The proposed rules should not be made effective because they would cause unnecessary concern on the part of the consumer and discourage the sale of a lifesaving device.

(2, 4, 5, 6, 7, 20, 21, 23)

Staff Position: The staff agrees that some persons will not understand the significance of the information required in the new labels and some sales may be discouraged. However, it appears appropriate to provide the prospective purchaser/user an opportunity to be informed about the radioactive content of the detector. If for some reason that person then decides to reject the benefit and the small radiation risk, if any, associated with the detector, that can be a decision based upon specific information.



COMMENT: Replace NRC by the Consumer Product Safety Commission as the regulator of smoke detectors.

(19)

Staff Position: The comment is concerned with the regulatory control exercised over the use of radioactive material in smoke detectors. Presently, CPSC's jurisdiction does not extend to a risk of injury that could be regulated by another Government agency. Accordingly, implementation of the action proposed by the commenter would require Congressional amendment of CPSC's authority and perhaps amendment of NRC's responsibilities for radioactive materials.

Although the comment is of interest to the staff, it is outside the scope of the present rulemaking proceeding on the labeling of gas and aerosol detectors.

COMMENT: Ban the use of radioactive material in smoke detectors.

(3, 11, 13, 14, 17)

Staff Position: The question of prohibiting the use of radioactive material in smoke detectors is outside the scope of this rulemaking proceeding on the labeling of gas and aerosol detectors. Although NRC staff and contractor studies do not support the banning of the use of radioactive material in smoke detectors, the NRC's policy on the use of radioactive material in consumer products is under review. If that policy is substantially changed, the use of radioactive material in smoke detectors may require reconsideration.

COMMENT: Require sellers to record the Social Security numbers of all purchasers and send these numbers to NRC.

(2)

Staff Response: The commenter did not state a reason for this comment although his other comments suggest that it is based on an interest in recovery of all the detectors for controlled disposal. Although the question of controlled disposal is outside the scope of this rulemaking on labeling of detectors, the staff does not agree that such recovery is necessary. NRC and contractor studies indicate that disposal of detectors with other waste is an acceptable practice.

COMMENT: The proposed detector labeling should be expanded to warn the user about the radiation hazards and need to return the detector to the manufacturer for controlled disposal.

(2, 3, 4, 9, 10, 14, 19)

Staff Position: NRC staff and contractor studies do not show a need for controlled disposal of the detectors. With respect to warning the user about the radiation hazards, the adopted amendments require a package label that identifies the U.S. NRC safety criteria that must be satisfied by the detector manufacturer. Users may refer to these criteria and form conclusions about the radiation hazards. In view of the dose limits in these criteria and the small quantities of radioactive material normally used, in most cases the staff does not believe it will be necessary to require further label warnings about the radiation hazards. The staff does have the authority, however, to require additional information with each detector.

The proposed amendments would not have changed a general provision whereby the Commission, on a case-by-case basis, may require the manufacturer to provide additional labeling or marking information, including disposal instructions when appropriate. The final rule changes this provision. The final rule omits specific reference to disposal instructions in order to avoid any suggestion that the labeling or marking imposes regulatory requirements on the consumer. The labeling or marking is intended only to inform the consumer.

COMMENT: The proposed labeling requirements should apply only to smoke detectors intended for residential use; not for those intended for industrial applications.

(10, 18, 23)

Staff Response: The staff does not agree. Although marketing practices for detectors intended for industrial applications may differ from marketing practices for detectors intended for residential use, the objective of informing the consumer applies in both cases. If, as indicated by one commenter, the industrial user buys his smoke detector system sight-unseen, that user will not see the package label prior to purchase. However, if the package and the detector are labeled, a salesman of industrial system, may inform his potential customer about the detectors' radioactive contents if the salesman desires to avoid adverse reactions when the system is delivered and installed.

LIST OF COMMENTERS

- |   |   |                   |
|---|---|-------------------|
| 1. Robert G. Clark, P.E.<br>Senior Research Scientist<br>1618 W. Clearwater St.<br>Kennewick, WA 99336  | - | Dec. 12, 1979     |
| 2. Eddleman<br>Rt.1, Box 183<br>Durham, N.C. 27705  | - | Docketed 12/21/79 |
| 3. Pat Granahan<br>36 Croydon Rd.<br>Hingham, Ma. 02043   | - | Dec. 13, 1979     |
| 4. R.L. Clark<br>(address unspecified<br>in letter)   | - | Dec. 18, 1979     |
| 5. King Harris<br>Executive Vice President<br>BRK Electronics<br>780 McClure Avenue<br>Aurora, Illinois 60507   | - | Jan. 2, 1980      |
| 6. Harold L. Spiker, Chief<br>Surveillance and Emergency Planning<br>Section, Bureau of Radiation Control<br>Kansas Dept. of Health & Environment<br>Forbes Field, Topeka, Kansas 66620 |   | Dec. 26, 1979     |
| 7. King Harris<br>Executive Vice President<br>BRK Electronics<br>780 McClure Avenue<br>Aurora, Illinois 60507   | - | Dec. 19, 1979     |
| 8. John Van Vranken<br>Assistant Attorney General<br>Chief, Northern Region<br>Environmental Control Division<br>188 West Randolph Street, Suite 2315<br>Chicago, Ill. 60601            | - | Docketed 1/7/80   |
| 9. Shirli Axelrod, Health Researcher<br>Vermont Public Interest Research<br>Group, Inc.<br>26 State Street, Montpelier, Vermont<br>05602  | - | Dec. 27, 1979     |

LIST OF COMMENTERS Cont.

- |     |   |   |                 |
|-----|---|---|-----------------|
| 10. | James C. Wantz<br>Managing Engineer<br>A Hochiki America Corp.<br>5415 Industrial Drive<br>Huntington Beach, Calif. 92649   | - | Dec. 17, 1979   |
| 11. | Anna Gyorgy<br>Box 30<br>Montagne, Mass.  | - | Docketed 1/7/80 |
| 12. | David K. Lacker, Director<br>Division of Occupational Health<br>and Radiation Control<br>Texas Department of Health<br>1100 West 49th Street<br>Austin, Texas 78756 | - | Jan. 4, 1980    |
| 13. | Mary M. Tone, Vice-Chairperson for<br>the Lepoco action meeting of 1/9/80<br>Lehigh-Pocono Committee of Concern<br>Bethlehem, PA. 18018                             |   | Jan. 10, 1980   |
| 14. | Ellis Walters<br>Radiation Health Information Project<br>Environmental Policy Institute<br>317 Pennsylvania Ave., S.E.<br>Washington, D.C. 20003                    | - | Jan. 13, 1980   |
| 15. | Wm. A. Lochstedt<br>119 E. Aaron Dr<br>State College, Pa., 16801  | - | Jan. 11, 1980   |
| 16. | Prentice Moore<br>Sr. Project Engineer<br>Electronics Division<br>Square D Company<br>P.O. Box 6440<br>Clearwater, Florida 33518                                    | - | Jan. 11, 1980   |
| 17. | Catherine Quigg, Research Director<br>Pollution & Environmental Problems, Inc.<br>Box 309, Palatine, Illinois 60067   |   | Jan. 10, 1980   |



LIST OF COMMENTERS Cont.

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|-----|---|---|---------------|
| 18. | Samuel Stockhamer<br>Product Manager<br>Protection Systems Division<br>Fenwal Incorporated<br>P.O. Box 309<br>Ashland, Mass 01721   | - | Jan. 14, 1980 |
| 19. | Betty Johnson, Chmn. of the<br>Natural Resources and Energy Comm.<br>of the League of Women Voters of<br>Rockford, Illinois 61107   | - | Jan. 12, 1980 |
| 20. | King Harris, Chairman<br>Ionization Smoke Detector Information<br>Bureau<br>BRK Electronics, 780 McClure Ave.<br>Aurora, Ill. 60507 | - | Jan. 18, 1980 |
| 21. | Quentin L. Schneider<br>Radiation Safety Officer<br>Firex Corporation<br>2464 Wisconsin Ave.<br>Downers Grove, Ill. 60515           | - | Jan. 11, 1980 |
| 22. | Irv Ellner, Manager<br>Consumer Product Development<br>Pyrotronics<br>8 Ridgedale Ave.<br>Cedar Knolls, New Jersey 07927            | - | Jan. 28, 1980 |
| 23. | Joseph E. Johnson<br>Vice President External Affairs<br>Baker Industries, Inc.<br>1633 Littleton Road<br>Parsippany, N.J. 07054     | - | Jan. 25, 1980 |
| 24. | Allan C. Tapert<br>Standards Consultant<br>Bureau of Radiological Health<br>FDA, PHS, DHEW<br>Rockville, Maryland 20857             | - | Feb. 19, 1980 |