

Memorandum

TO : THE COMMISSION

DATE: 2 DEC 1982

Through: Sadye E. Dunn, Secretary *S. Dunn*Through: Martin Howard Katz, General Counsel *M. Katz*FROM : Through: Stephen Lemberg, Assistant General Counsel *S. Lemberg*
Harleigh Ewell, Attorney, OGC *HE*SUBJECT: Labeling and Instructions for Coal and Wood Burning
Appliances -- VOTE SHEET

Attached is a briefing package containing a draft final rule under section 27(e) of the CPSA that would provide notification of certain information about the installation, operation, and maintenance of coal and wood burning appliances. A restricted memorandum from the Office of the General Counsel concerning this package is also attached.

Please indicate your vote on the alternatives given below:

- I. DIRECT STAFF TO PREPARE A DRAFT FEDERAL REGISTER NOTICE TO ISSUE THE PROPOSED RULE (staff to forward, for Commission approval, a final Federal Register notice to issue §§ 1406.1-1406.4):

(Signature)

(Date)

- II. DIRECT STAFF TO PREPARE A DRAFT FEDERAL REGISTER NOTICE TO ISSUE SELECTED PROVISIONS OF THE PROPOSED RULE (staff to forward, for Commission approval, recommendations and a draft Federal Register notice to issue certain provisions of the proposed rule).

(Signature)

(Date)

- III. DEFER FURTHER ACTION ON A FINAL RULE PENDING FURTHER VOLUNTARY EFFORTS (staff to forward a draft Federal Register notice announcing this action for approval by ballot vote).

(Signature)

(Date)

IV. WITHDRAW PROPOSED RULE (staff to forward Federal Register notice for approval by ballot vote).

.....

(Signature)

(Date)

V. OTHER.

.....

(Signature)

(Date)

Comments/Instructions:

Attachments

Memorandum

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

TO : THE COMMISSION

DATE: 2 DEC 1982

Through: Sadye E. Dunn, Secretary *S. Dunn*

Through: Martin Howard Katz, General Counsel *M. Katz*

FROM :

Through: Stephen Lemberg, Assistant General Counsel *SL*

Harleigh Ewell, Attorney, OGC *HE*

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Nancy Harvey
(Signature) *12/2*
(Date)

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(Signature) (Date)

- III. DEFER FURTHER ACTION ON A FINAL RULE PENDING FURTHER VOLUNTARY EFFORTS (staff to forward a draft Federal Register notice announcing this action for approval by ballot vote).

(Signature) (Date)

NOTE: This document has not been reviewed or accepted by the Commission.
Initial _____ Date _____

Memorandum

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

522

TO : THE COMMISSION

DATE: 2 DEC 1982

Through: Sadye E. Dunn, Secretary *SD*Through: Martin Howard Katz, General Counsel *MHK*

FROM :

Through: Stephen Lemberg, Assistant General Counsel *SL*
Harleigh Ewell, Attorney, OGC *HE*SUBJECT: Labeling and Instructions for Coal and Wood Burning
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Sam Zaparin

(Signature)

1/19/83

(Date)

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(Signature)

(Date)

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(Signature)

(Date)

SMS 2

UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

Memorandum

TO : THE COMMISSION

DATE: 2 DEC 1982

Through: Sadye E. Dunn, Secretary *SDunn*

Through: Martin Howard Katz, General Counsel *MKatz*

FROM : Through: Stephen Lemberg, Assistant General Counsel *SL*
Harleigh Ewell, Attorney, OGC *HE*

SUBJECT: Labeling and Instructions for Coal and Wood Burning
Appliances -- VOTE SHEET

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[Signature]
(Signature)

Jan 26, 83
(Date)

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(Signature)

(Date)

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(Signature)

(Date)

12/13/82
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12/13/82

102 p.

UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

Memorandum

NOV 26 1982

TO: The Commission
THROUGH: Sadye E. Dunn, Secretary
THROUGH: Martin Howard Katz, General Counsel
THROUGH: Edgar Morgan, Executive Director
THROUGH: Harry I. Cohen, Acting Director
Office of Program Management *DLN (for)*

FROM: James F. Hoebel, Program Manager, Fire and Thermal Burn Hazards,
Office of Program Management *John S. Hoebel*

SUBJECT: Labeling Rule for Wood and Coal Burning Appliances

This memo transmits a briefing package containing a final rule which would require certain solid fuel burning appliances to bear a written notice containing important fire prevention information. The Commission options include a) publish the final rule, b) proceed with parts of the rule, c) further defer the rule while seeking voluntary industry activity, and d) withdraw the rule because of current voluntary activity. Staff recommends that the Commission publish the final rule.

Attachment

RECEIVED
OFFICE OF THE
SECRETARY
DEC 1 4 19 PM '82
CONSUMER PRODUCT
SAFETY COMMISSION

Briefing Paper

Final Labeling Rule for Wood and Coal Burning Appliances

November 24, 1982

Prepared by the Fire and Thermal Burn Hazards Program Staff:

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Executive Summary

A mandatory labeling rule was proposed by CPSC on November 17, 1980 which would require certain wood and coal burning appliances to bear a written notice which was intended to give consumers important information relating to the prevention of fires. The proposal also would require manufacturers to provide installation, operation, and maintenance directions.

While evaluating issues involving in developing a final rule, CPSC staff observed that voluntary labeling efforts to address the same hazards had apparently increased significantly since the proposal was published. On July 9, 1981, the Commission accepted a staff recommendation to delay consideration of a final rule until the staff evaluated the scope of the voluntary labeling efforts.

A survey of wood burning stoves was conducted in February 1982 which found that about 77 percent of the stoves on the market were certified by a laboratory and that about 75 percent of the stoves had labels which contained information relating to the recommended distances to combustible materials. These proportions appeared to be increasing.

However, subsequent analysis indicated that the content of the certifying laboratories' labeling requirements varied, and many stoves did not contain certain label information that the CPSC rule would require. Furthermore, significant items were lacking in the content of the installation and use instructions provided with the stoves.

On the basis of available information, the staff believes that the installation instructions and the label content need to be improved. Even though the industry has indicated a willingness to voluntarily upgrade these items, staff is recommending that the Commission proceed with the mandatory labeling rule. Staff is uncertain that voluntary activity can be effective enough fast enough because of the complexity of the existing laboratory certification and labeling system.

I. Background

On June 7, 1979, the Commission granted the petition of Adam Paul Banner to issue a rule requiring that labeling as to the minimum clearance to combustibles and the type of chimney required for any wood-burning stove, appliance, or free-standing fireplace be a) permanently attached on an embossed metal plate to each unit, b) printed in all sales literature, and c) printed on all display or shipping cartons. The Commission believed that a number of fires connected with wood and coal burning appliances occurred because the appliances were improperly installed, particularly where they were installed too close to combustible walls or other materials. In order to reduce the fires occurring from these causes, on November 17, 1980, the Commission proposed a rule under Section 27(e) of the Consumer Product Safety Act (see Tab A) that would require certain coal and wood burning appliances to bear a written notice containing the following information:

1. Appropriate minimum clearances from combustibles to avoid fires. This would include both distances from the back and sides of the appliance to combustible walls and distances to be maintained between the chimney connector and combustible walls and ceilings. It also would include distances to be maintained between the appliance and furnishings in the room.

2. Type and dimensions of floor protection, if necessary to protect combustible floors.

3. Type of chimney and chimney connector to be used with the appliance.

4. Identification of parts or precautions required for passing a chimney or chimney connector through combustible walls or ceilings.

5. A statement that the appliance should not be overfired and a description of the conditions which signal overfiring.

6. A statement of how often the chimney and chimney connector should be inspected and cleaned.

Items 5 and 6 and the appropriate distance to be maintained from furnishings in the room would be placed so that they are readily visible during normal use of the appliance.

The proposal also required manufacturers to provide complete installation, operation, and maintenance directions.

In order that consumers may select an appliance suitable for their intended use, the proposal would require all sales catalogs and other point of sale literature to include the appliance clearance information and the statement that local building or fire officials should be consulted concerning restrictions and installation inspection requirements.

The proposed rule would also require manufacturers to provide to the Commission copies of the written notice and installation, operation,

and maintenance directions required by the rule. Manufacturers would also provide to the Commission a statement of how the clearance distances from the appliance to combustibles were determined.

A detailed discussion of the hazards addressed by this proposal and of the rationale for its requirements is contained in the Federal Register notice that issued the proposal (Tab A).

In response to the proposal, the Commission received 76 written comments. The Commission also received oral comments at a proceeding held on December 2, 1980. After considering the comments and other available data, the Commission's staff recommended certain modifications to the proposal, in the event that the Commission decides to issue a final rule.

The following modifications are included in the draft rule at Tab B:

- ° the distances to walls should be in diagrammatic form, but need not be in written form (see page 33);
- ° the types of fuels suitable for use in the appliance must be identified on the label and in a manual (pages 34 and 37);
- ° the installation directions referring users to the instructions accompanying the chimney and chimney connector shall also refer to local building codes (page 37);
- ° the requirement that a reminder to read enclosed instructions be included in packaging is deleted;
- ° the use of a 2 label format is recommended (page 36); and
- ° changes are made to the format of the recommended label to improve readability (pages 40 and 41).

In evaluating the issues involved in promulgating a final rule raised by the comments, the staff considered data showing that, since the proposal had originally been considered, voluntary efforts to address the same hazards had increased significantly.

The voluntary activities relevant to the hazards addressed by the proposal consisted of a complex situation involving two Underwriters Laboratories (UL) voluntary standards (UL 1492 and UL 737), several independent test laboratories testing and certifying products to these standards (in addition to UL itself), and state and local code officials enforcing labeling and installation requirements of codes. The certification of a stove or other appliance by an independent laboratory other than UL, or by a code organization, usually indicated that the appliance had been tested to the applicable UL standard's performance requirements, but the safety labeling requirements varied with the laboratory or code group issuing the certification label.

The industry trade association, as well as state and local codes, influenced manufacturers to have their products tested to the existing UL standards. The number of appliances which were being sold which were certified as conforming to the UL standards' performance requirements and have some degree of installation and maintenance information accompanying them appeared to be quite substantial and increasing. Information from Underwriters Laboratories indicated that, in 1978, 78,000 UL labels were issued for stoves, representing 7 percent of total unit sales as estimated by the industry. In 1980, the labels issued rose to 723,000, or 72 percent of estimated total unit sales. Three other certifying laboratories reported issuing a total of 82,000 labels for 1980. Based on this information and assuming that nearly all issued labels were used by the manufacturers on their stoves, staff estimated that between 70 and 85 percent of the stoves built in 1980 were models that had been tested by independent laboratories.

Further, UL issued changes to their standards that were intended to reflect the substance of the Commission's proposed labeling rule. These changes became effective for all products bearing the label and manufactured after August 31, 1982.

These developments concerning voluntary efforts to address the risks associated with wood and coal burning appliances were encouraging, and the staff concluded that if the instructions and labels provided by the proposed rule were implemented by voluntary action, the Commission could consider withdrawing its proposal. However, the predictions of the future effectiveness of these voluntary efforts were based on estimates of the number of labels sold by certifying organizations and on the anticipated success of programs to change existing standards. Therefore, Commission staff believed that, before deciding to withdraw its proposal, the Commission should determine the extent to which currently marketed appliances were being provided with adequate labels and instructions.

The analysis of public comments on the proposed 27(e) rule and the staff's recommendation for further action were submitted to the Commission in a briefing package dated June 9, 1981, and the Commission was briefed on July 1, 1981. On July 9, 1981, the Commission voted to accept the staff's recommendation to delay formal consideration of whether to issue a final rule requiring labeling and installation, operation, and maintenance instructions for coal and wood burning appliances until the staff evaluated the on-going voluntary efforts.

II. Discussion

a. Survey Results

A retail survey was designed which would provide the data needed to determine the extent to which buyers of wood and coal burning stoves were being provided with adequate labels and installation, operation, and maintenance instructions. The survey was intended to estimate the proportion of stoves which were a) certified by a testing laboratory or other certifying organization and b) labeled with information on safe clearances from combustibles (examination of the complete content of labels was beyond the scope of this survey). This information, combined

with information obtained from test organizations concerning their label content requirements was intended to provide an assessment of the adequacy of the labels. Six metropolitan areas were selected for the survey. The survey was conducted during the heating season, in February, 1982, and the results are believed to be reasonably representative of stores selling wood and coal burning stoves in the United States at that time. Tab C contains the survey report.

Analysis of the data reveals that 59 percent of the stove models examined and 77 percent of the total estimated number of units sold were certified by a testing laboratory or other certifying organization. Later model stoves appeared more likely to be certified; an estimated 95 percent of 1982 models were certified (although only a limited number of 1982 models were surveyed).

Fifty-two percent of the stove models examined during the survey and 75 percent of the total estimated number of units sold were labeled with information concerning appropriate clearances to combustibles. Later model stoves appeared more likely to have clearance information; an estimated 95 percent of 1982 model units sold had such information. The label containing the clearance information was usually on the back of the stoves; about 82 percent of the labeled stove models examined and 87 percent of the labeled units sold had the label on the back. This would have been permitted by the proposed mandatory rule, except for information relating to the distances to be maintained for furnishings, which would have had to be visible during normal use.

As noted earlier, the complexity of the voluntary standards system was demonstrated by the existence of several independent test laboratories which were involved with performing tests and certifying products. This was certainly confirmed by the survey, when 18 different certifying organizations were identified as certifying 160 different stove models. The most frequently observed certifier of the stove models examined was Underwriters Laboratories (28 percent). However, when taking into consideration the total number of certified stoves reported to have been sold, the most frequent certifier was Arnold Greene Laboratory (31 percent).*

b. Label Requirements

A comparison of the content of the Underwriters Laboratories' labeling requirement with the CPSC proposed label requirement was made by the Directorate for Engineering Sciences, and is included in their memorandum found at Tab D. Most of the UL labeling provisions were judged to provide a level of safety either equal to or greater than those in the CPSC proposal. However, CPSC would require that the

* Information previously discussed on page 4 indicated that over 70 percent of the estimated number of stoves produced in 1980 were listed by UL. Up to another 15 percent appeared to be certified by other organizations. More recent information on stove shipments indicates that the earlier industry estimates may have understated actual shipments by as much as 60 percent. This understatement of shipments led to an overestimation of the proportion of UL-listed stoves. Further, subsequent changes in the market occurred in 1981, including a significant decrease in the number of firms believed to produce UL-listed stoves. The actual proportion of UL-labeled stoves shipped in 1981 is uncertain, but is likely to be substantially lower than 70 percent. See Tab H for a more detailed discussion.

recommended clearance between the heater and furnishings be readily visible during heater use. UL requires that the clearance to "combustible materials" be visible after installation, but does not differentiate between furnishings and combustible materials of construction. Figure 1 of Tab D (page 80) presents a point-by-point comparison of the requirements. Statements on overfiring, inspecting for creosote, and fuel are to be visible while feeding fuel. UL considers as "visible" the back of the stove and locations inside compartments that have doors or panels which have to be opened to operate the appliance. (The CPSC proposal would not allow information required to be visible to be placed on the back of the stove.) The UL labeling requirements discussed in Tab D became effective on August 31, 1982, except for the requirements for coal heaters which are scheduled to become effective on March 1, 1983.

However, as noted earlier, staff found that many heaters were listed by laboratories other than UL. This created a need to determine the label requirements of other laboratories to see if there were any significant quantities of heaters with labels which differed from either the UL or the proposed CPSC requirements. The Directorate for Engineering Sciences, in cooperation with the Wood Heating Alliance, contacted six other certifying laboratories which, together with UL, represent at least 67 percent of the models surveyed and 85 percent of the total estimated number of units sold. Engineering found that these laboratories had quite differing labeling procedures, most of which appeared to be governed by the labels requested by manufacturers. These manufacturers were acting usually in response to the local or state code requirements where the manufacturer was marketing the product. Some local/state codes require specified labels, while others allow the laboratories to use their own labels. These local/state codes usually incorporate the model codes specified by the International Conference of Building Officials (ICBO), the Southern Building Code Congress International (SBCCI), or the Building Officials and Code Administrators (BOCA). Massachusetts has its own requirements. Three of the laboratories use the UL labeling requirements for their own label, with only minor variations having to do with the mode of describing clearance information. However, these laboratories also use other labels if required by local jurisdictions. Two of the laboratories do not have their own label, but follow the code requirements of the local jurisdictions where the stoves are sold. The sixth laboratory, Arnold Greene, reported only that their requirements vary according to the local jurisdiction's requirements. In order to obtain better information on Arnold Greene, staff examined the label of the largest Arnold Greene seller identified in the survey, and found this label to be lacking much of the information required by UL or the CPSC proposal.

The ICBO specified label differs from UL in four aspects. These provisions are not found on the ICBO label: a) the specification of the type of chimney connector, b) the reminder that special precautions are needed to join the chimney and connector through a combustible wall, c) the reminder that installation and use should be according to the manufacturer's directions, and d) the reminder that the local building official should be contacted.

SBCCI does not have its own label requirements, but authorizes laboratories to use their own label content. Presumably, if the laboratory does not have its own label, it uses UL. BOCA requires the UL label.

Because of this very complicated system of certifying and labeling, it is not possible, in a reasonable period of time, to determine the proportion of the market represented by each label or label variation. Even knowing the percent of stoves listed by each laboratory as shown in Table 5 of Tab C (page 63), the proportion cannot be estimated without knowing the distribution of labels within each lab. Staff, however, can report with some certainty that there appear to be three widely used labels: UL, ICBO, and Arnold Greene, with UL probably the most frequently used. Table I of Tab E (page 85) contains a comparison of the content of the three labels with the CPSC proposal. While the UL label has similar requirements, both the ICBO and the Arnold Greene required less information. Examples of the UL, ICBO, and Arnold Greene labels are shown in Tab I.

c. Installation and Operating Instructions

Wood stove manufacturers usually included an owner's manual with each appliance, which provides installation and operating instructions to the buyer. The CPSC proposed requirements were compared with UL requirements, and then actual practices were evaluated by collecting available manuals during the February survey. The other certifying laboratories which were contacted by Engineering (Tab E) all use UL instruction manual content specifications.

The CPSC proposed rule would require that all appliances should be accompanied by directions that include:

- ° a specified safety notice on the first page of the booklet.
- ° Step by step installation directions, including an explanation of consequences which could result from failure to install the appliance properly, and a statement that the installer should refer to the instructions provided by the chimney and chimney connector manufacturer.
- ° Use directions, including how to fire the appliance; information about the use of flammable liquids; maintenance directions including how and when to clean the chimney and chimney connector; and a description of the consequences that could result from failure to use or maintain the appliance properly.

The Directorate for Engineering Sciences, in Tab D, notes that the UL requirements are similar except that:

- a) There is no general safety notice,
- b) there is no specific reference to a requirement for directions for joining the chimney and chimney connector through a combustible wall,
- c) the distance to be kept between the heaters and furnishings is not a specified requirement, but is included in the requirement for "clearance to combustible materials".

The Human Factors Division of the Directorate for Epidemiology expresses specific concern (Tab F) over two aspects of the UL instructions requirements. The first is related to the CPSC requirement that information be provided on the installation of chimney connectors through combustible walls or ceilings. The Commission proposed in the recommended outline for the installation, use, and maintenance directions that the directions include methods to join safely the chimney connector to the chimney through a combustible wall or ceiling. The UL requirement on the other hand simply states that the directions must include the parts and materials required and the step-by-step process for installing a room heater, accessories, and its chimney connector. This is not specific enough, in that a manufacturer may interpret this as a connection only to the appliance. Secondly, the section of the UL requirement relating to inspection for creosote build-up does not adequately explain how to inspect the system, and the frequency of inspection recommended (every two months) may be too long in some cases.

Instruction booklets prepared by 19 manufacturers or importers were obtained during the retail survey (Tab C). The majority (12) of the booklets covered 1981 stove models and most of the booklets provided some installation, use, and maintenance information. However, none of the booklets provided all of the information that would be required by the CPSC proposal. Two of the 19 booklets contained a safety notice at the beginning of the booklet. Seventeen of the booklets contained some installation information; however, only nine of the booklets contained step by step installation directions as specified in the proposed rule and only four of the booklets mentioned the potential fire hazard resulting from improper installation. Many of the booklets stated that a UL listed chimney should be used, but only two firms directed the reader to the installation instructions provided by the chimney and chimney connector manufacturer. One firm that manufactures the chimney and chimney connector that must be used with its appliance provided complete chimney installation directions. Eight other booklets discussed the use of a thimble or connector through a combustible wall or ceiling. However, these eight provided insufficient information for the installer to make the connection properly because no details were included for the installer to follow (Tab G). This is consistent with the identified shortcoming of the UL 1482 voluntary standard.

Sixteen of the 19 booklets reviewed provided directions for firing the appliance, and 10 booklets cautioned against the use of flammable liquids to start or freshen-up the fire. Seventeen of the booklets provided some maintenance information, although only 9 of the booklets provided directions for cleaning the chimney and chimney connector, and only 7 of the booklets mentioned the consequences of improper use and installation information.

Based on this information, staff concludes that not only do the UL instructions requirements lack information in several areas required by the CPSC proposed rule, but that many stove manufacturers do not conform to even these instruction requirements.

d. Recent Industry Contacts

The Executive Director of the Wood Heating Alliance has informed the staff that this trade association would like to work with the Commission in an effort to voluntarily upgrade the labeling and instruction requirements of the certifying laboratories. He believes that such an effort could be effective and timely. Further discussions are planned.

III. Conclusions

The extent of labeling of wood and coal burning stoves is about the extent estimated by the staff in the June 9, 1981 briefing package: more than 70 percent, and compliance appears to be increasing. The content of certifying laboratories' labeling requirements vary, and many stoves do not contain certain necessary label information. Significant items that would be required by the proposed rule were lacking in the content of installation and use instructions provided with the stoves.

IV. Options

A. Proceed with the regulation. Direct staff to prepare a Federal Register notice containing a final rule. Possible rationale:

1. Fires caused by solid fuel equipment are a growing major problem which should be addressed as completely and quickly as possible.

2. Only limited revisions, as a result of the comments, would be necessary to prepare the rule for issuance.

3. The extent of compliance would be greater with the mandatory rule.

4. A mandatory rule could be in effect for the 1983-84 heating season.

5. More stringent installation and use instructions would be required.

6. The cost of industry complying with a mandatory standard would be relatively small because most stoves now contain a label.

7. Label information would be upgraded, uniform, and in certain cases more visible during use.

B. Proceed with selected provisions. Direct staff to prepare a Federal Register notice containing a final rule covering installation instructions. Withdraw remaining proposed provisions. Possible rationale:

1. There is widespread voluntary labeling now, although the label content does not always meet the CPSC proposed requirements.

2. Installation instructions being provided are more deficient than the label information.

C. Continue to defer the regulation. The regulation could be deferred with the condition that the staff work with the industry to 1) upgrade the installation and use instructions and 2) upgrade the required label content on an expedited basis. Possible rationale:

1. There is widespread voluntary labeling now.

2. The results of the survey indicated that the industry responded to the challenge of providing widespread labeling. They were not asked directly to upgrade the content of the labels. The industry should be given the opportunity to upgrade label information and instructions voluntarily. The industry association has emphasized, to staff, their willingness to do this.

3. Voluntary action would be in the spirit of the 1981 amendments to the Consumer Product Safety Act.

4. The proposal would still be active, and a final rule could be reconsidered at any time.

D. Withdraw the regulation. Direct staff to prepare a Federal Register notice withdrawing the proposed rule. This could also be done with the condition that the staff work with the industry to voluntarily upgrade the label and the instructions. Possible rationale:

1. There is widespread voluntary labeling now.

2. Use of considerable compliance resources to reach the many small firms would be avoided.

V. Staff Recommendations

The staff recommends that the Commission proceed with the mandatory rule. The significant fire problem continues to increase, and expeditious action is indicated. Installation and use instructions plus the label content need to be improved. The existing voluntary system is very complex, and staff is uncertain that voluntary activity can be sufficiently effective in a short period of time because of this complexity.

The Directorate for Health Sciences believes that the rule should continue to be deferred and that voluntary industry action should be encouraged. This recommendation is presented in Tab Q.

CHRONOLOGY

January 24, 1977	CPSC received petition from A. P. Banner
June 7, 1979	Commission granted petition
November 17, 1980	Proposed Rule published in Federal Register
December 2, 1980	Public Meeting
July 9, 1981	Final Rule deferred pending evaluation of voluntary efforts.
February, 1982	CPSC survey of stove labeling.

Monday
November 17, 1980.

Part VI

Consumer Product Safety Commission

Provision of Performance and Technical
Data for Coal and Wood Burning
Appliances; Proposed Rule

13

CONSUMER PRODUCT SAFETY COMMISSION

16 CFR Part 1406

Provision of Performance and Technical Data for Coal and Wood Burning Appliances

AGENCY: Consumer Product Safety Commission.

ACTION: Proposed rule.

SUMMARY: The Commission proposes a rule that would require that certain performance and technical data be supplied with coal and wood burning stoves, freestanding fireplaces, and similar appliances in order that consumers will be aware of important safety information concerning the installation, operation, and maintenance of these appliances. Part of the required data would be in the form of a permanent, conspicuous written notice on the device that would provide the following information: a. Appropriate minimum clearances between the stove and chimney connector and combustibles to avoid the occurrence of fire.

b. Type of chimney and connector appropriate for use with the appliance and identification of parts or precautions required for passing the chimney or connector through combustible walls or ceilings.

c. Type and dimensions of floor protection, if necessary to protect combustible floors.

d. Information to prevent overfiring of the appliance.

e. A statement of how often the chimney and chimney connector should be inspected and cleaned.

f. A statement that local building or fire officials should be contacted about restrictions and installation inspection in the owner's area.

g. The name and address of the manufacturer or private labeler, and the model designation of the appliance.

Items (d) and (e) and the appropriate distance to be maintained from furnishings in the room would be placed so that they are readily visible during normal use of the appliance.

The proposed rule would also require that complete installation, operation, and maintenance directions be provided with the appliance. The appliance's packaging would bear a statement referring to the installation directions. Sales catalogs and other point of sale literature would contain the information required by items (a) and (f) above. To facilitate the Commission's confirmation that manufacturers are adequately

complying with the rule, manufacturers must provide copies of the notice on the appliance, and of the directions, to the Commission.

DATES: Under the proposal, the required safety and performance data would have to be furnished with all such appliances first introduced into commerce in the United States after May 31, 1981. Copies of the required data would be provided to the Commission by July 1, 1981, or within 30 days after any change in the data or introduction of a new model. The requirement applicable to sales catalogs and point of sale literature would be effective May 31, 1982.

Written data, views, and arguments on this proposed rule must be submitted to the Commission on or before January 2, 1981.

An opportunity for the oral presentation of comments is scheduled for December 2, 1980, at 9:30 a.m. in the third floor conference room, 1111 18th Street, NW, Washington, D.C. 20207.

Persons wishing to present oral comments should notify Richard Danca in the Office of the Secretary, at the address given below, by November 25, 1980.

ADDRESSES: Written comments, preferably in five copies, should be submitted to the Secretary, Consumer Product Safety Commission, Washington, D.C. 20207, and should be titled *Coal and Wood Stoves, Proposed Labeling Rule*.

All materials the Commission has that are relevant to this proceeding, including the documents listed in Appendix III of this notice and any comments that may be received on this proposal, may be seen in, or copies obtained from, the Office of the Secretary, Third Floor, 1111 18th Street, NW, Washington, D.C. 20207.

FOR FURTHER INFORMATION CONTACT: Stan Morrow, Project Manager, Fire and Thermal Burn Hazards Program, Office of Program Management, Consumer Product Safety Commission, Washington, D.C. 20207, phone (301) 492-6453.

SUPPLEMENTARY INFORMATION:

A. Background

The energy shortage and attendant high heating costs have motivated consumers to search for cheaper kinds of fuel. Wood, both as a primary and a supplemental fuel, has enjoyed a particular revival. Sales of wood-burning stoves have tripled since 1974. Accompanying this revival, however, has been a concern about the safety of these devices.

On January 24, 1977, the Commission received a petition from Adam Paul Banner of Midland, Michigan, (Petition No. AP 77-2) stating that many fires and resultant injuries occur due to improper installation of certain coal and wood burning appliances, stoves, and free-standing fireplaces. He requested that the Commission issue a rule requiring that labeling as to the minimum safe clearance to combustibles (such as walls and furnishings) and the type of chimney required for any woodburning stove, similar appliance, or free-standing fireplace be (a) permanently attached on an embossed metal plate to each unit, (b) be printed in all sales literature, and (c) be printed on all display or shipping cartons. At that time, the readily available data were inconclusive as to whether the statements requested by Mr. Banner addressed an unreasonable risk of injury associated with these appliances. On February 2, 1978, the Commission deferred action on the petition and directed the staff to provide additional information. The petition was again considered by the Commission on March 14, 1979, and May 30, 1979, and on June 7, 1979, the Commission granted the petition. The staff was directed to develop a rule under section 27(e) of the Consumer Product Safety Act, 15 U.S.C. 2076(e), that would require installation and maintenance labeling for coal and woodburning stoves, similar appliances, and free-standing fireplaces, requiring each manufacturer to specify minimum clearances to combustibles and type of chimney required. Also, the staff was directed to develop options for other types of installation and maintenance information materials (such as cartons or instruction manuals).

B. Development of the Proposed Rule

In order to determine the type of performance and technical data that would enable consumers to insure that their appliances are properly selected, installed, operated, and maintained, the Commission's staff examined the available data on fires associated with coal and woodburning appliances. The available data are summarized in a Commission staff report, "Hazards Associated with the Use of Wood or Coal-Burning Stoves or Free-Standing Fireplaces," B. Harwood and P. Kluge, February 1980.

In recent years, the number of hospital emergency room-treated burn injuries arising from the use of wood-burning stoves and free-standing fireplaces has risen sharply, from about 600 in 1974 to an estimated 4,600 in 1979. From 1978 to 1979 alone, the number doubled. Although most of these injuries appear to be the result of falling against or

accidentally contacting the hot surface of the stove, estimates of injuries resulting from an actual fire have also increased, from about 40 in 1974 to 400 in 1979.

According to 1978 data from fire departments in 15 states that report to the U.S. Fire Administration (USFA), fires in heating equipment account for roughly 20 percent of all residential fires. The largest proportion of these fires, but the smallest proportion of deaths and injuries, was from fires in chimneys, flues, and chimney connectors. Most of these were reported to have been connected to devices burning solid fuel, but whether these were masonry fireplaces or stoves is not generally known. The second largest source of heating equipment fires was fixed, local heaters or stoves. Within this category, gas-fired heaters and wood or coal stoves accounted for the largest number of fires.

National estimates derived from extrapolating these USFA data to the nationwide number of residential fires estimated by the National Fire Protection Association (NFPA) indicate that there are about 8,000-9,000 fires nationally from wood or coal stoves, resulting in about 100-130 deaths. These estimates show an additional 23,000-28,000 fires and 60-80 deaths from chimneys or flues and 6,000-7,500 fires and 15-20 deaths from chimney connectors. The latter are assumed to connect to stoves or free-standing fireplaces, since ordinary masonry fireplaces do not have chimney connectors. Thus, at least 14,000 fires and 115 deaths are estimated to have occurred in 1978 from the use of wood or coal-burning stoves, plus an unknown proportion of the minimum estimate of 23,000 fires and 60 deaths associated with chimneys or flues.

The major cause of fires in wood or coal stoves and in chimney connectors to solid-fueled equipment was improper installation, primarily installing the devices too close to combustibles, which are then ignited by the heat from the stove or connector. Combustibles can include permanent items such as walls and ceilings and semi-permanent items such as carpets and draperies. In addition, during the stove's operation, movable items such as furnishings may be placed too close to the appliance, resulting in ignition of the furnishings.

Other major causes of fires in coal and wood burning appliances include the use of an unsuitable chimney or chimney connector for the appliance being used or the improper installation of the chimney or connector. Proper installation requires the use of a "thimble" or special methods where the

chimney or connector passes through a combustible wall or ceiling, in order to provide needed insulation and separation from the adjacent combustible. Specific floor protection upon which the appliance is installed may be required in order to protect combustible flooring against heat from the appliance or embers falling out of the appliance onto combustibles.

Other hazard patterns involve the lack of proper maintenance of the appliance. Wood tars (creosote) can condense in chimneys and chimney connectors when wood is burned. If the accumulation of creosote is not removed periodically, or if the appliance is overfired, the creosote can ignite and cause a very hot fire in the chimney or connector. Regular inspection is required to ensure that excessive creosote has not accumulated. Also, the installation should be periodically inspected to ensure that holes or cracks have not developed in the chimney or connector and that these pieces are properly fastened together.

Other hazards are related to improper operation of the appliance. If too much fuel is added, the appliance can be overfired, resulting in ignition of creosote in the chimney or connector or excessive temperatures in the appliance, chimney, or connector. Also, the use of flammable liquids to start the fire in these appliances causes a number of injuries.

The USFA data from 15 states show that approximately 30% of fires associated with wood and coal stoves were caused by improper installation. Ninety percent of these improper installations involved an installation that was too close to combustibles. Fifteen percent of coal and wood stove house fires were caused by misuse of the material ignited, including placing a combustible too close to the appliance and improper fueling technique. Another 13% were caused by operational deficiencies, including overfiring, and 11% resulted from lack of maintenance and/or mechanical failure, which includes a sub-category called "lack of maintenance, worn out" which can be related to creosote buildup. (The remaining reports include other and unknown or unspecified causes.) Also, the Commission has conducted a number of in-depth investigations of wood stove fires where the fire was the result of a failure to remove creosote buildup.

Thus, fires that originate in wood or coal appliances or venting components used with these appliances contribute significantly to the fire problem in this country. If chimney connectors are included, they are the leading cause of fires reported in stationary heating

units, producing an estimated 14,000-17,000 fires and 115-150 deaths each year. The major cause of these fires is reported to be improper installation, primarily the practice of installing them too close to combustibles. This is particularly the cause of fires involving chimney connectors.

C. Description of the Proposal

For the purposes of this rule, the term "coal and wood burning appliances" includes coal and wood burning fireplace stoves, room heater/fireplace stove combinations, cookstoves and ranges, and radiant and circulating heaters. It does not include central heating units, masonry fireplaces and chimneys, fireplace inserts, or factory built fireplaces (zero clearance fireplaces), since these do not present the same hazards of installation and operation as do the generally free-standing or smaller appliances covered by the rule. The definitions for these terms are found at § 1406.3 of the proposed rule.

In order to reduce the risk of injury currently associated with coal and woodburning appliances, and to enable consumers to better judge the comparative safety of different appliances for their intended installation, the Commission proposes to require that such appliances bear a written notice that contains the following performance and technical data:

1. Appropriate minimum clearances from combustibles to avoid the occurrence of fire. The clearances shall be stated in both written and diagrammatic form and shall include: (a) Distance(s) from the back and sides of the appliance to combustible walls. (b) Distance(s) to be maintained between the chimney connector and combustible walls and ceilings.
2. Type and dimensions of floor protection, if necessary to protect combustible floors.
3. Type of chimney and chimney connector to be used with the appliance.
4. Identification of parts or precautions required for passing a chimney or chimney connector through combustible walls or ceilings.
5. A statement that the appliance should not be overfired and a description of the condition(s) which signal(s) overfiring.
6. A statement of how often the chimney and chimney connector should be inspected and cleaned.
7. Information explaining that the appliance should be installed and used only in accordance with the manufacturer's directions.

8. A statement that the owner should contact local building or fire officials about restrictions and installation inspection requirements in the owner's area.

9. Distances to be maintained between the appliance and furnishings in the room.

10. The name and address of the manufacturer, importer, or private labeler to which the owner can write for a copy of the manufacturer's directions or for additional information, and a sufficient identification of the appliance model so that the appropriate information can be supplied.

The part of the written notice involving installation shall be located so that it is conspicuous before the appliance is installed. The remainder of the written notice contains operation and maintenance information and must be readily visible during normal use of the appliance. In a meeting with the Commission's staff, some manufacturers expressed opposition to the idea of requiring a label or other written notice on the stove to be in a position so that it can be readily seen during use. This is especially true for some manufacturers of decorative stoves who believe such a notice would detract from the appearance and customer appeal of the stove. In an attempt to address these concerns, the "two label" format explained below provides that a label may be considered to be readily visible during normal use if it is within compartments or behind doors that are used during the normal operation of the appliance. Thus, if a compartment door must be opened in order to fuel the appliance or remove ashes from the appliance, a notice that is readily visible when the door is opened is considered "readily visible during normal use." Therefore, the portion of the notice required to be readily visible during normal use could be on the inner surface of the door, on a readily visible inner surface of the compartment, or on an outer surface of the appliance that is covered by an overlapping door when the door is closed. Comment is invited on the potential impact on decorative stoves and other appliances of requiring operation and use directions to be readily visible during normal use of the appliance.

Also as explained above, the remainder of the written notice required to be on the appliance need only be conspicuous before installation. Thus, this portion of the notice could be on the back of an appliance that can be installed so close to a wall that the back would not be regularly seen during normal use of the appliance.

These general principles concerning the conspicuousness and visibility of the data being provided could be satisfied by either (1) a single label that is both conspicuous before installation and readily visible during normal use or (2) two labels, one label that concerns installation and that is conspicuous before installation and another label that concerns operation and maintenance and that is readily visible during normal use. The "one label" format has the advantages of being cheaper and of providing all information in one place. The "two label" format has the advantage of potentially providing more consumer awareness of the operation and maintenance information after the appliance is installed, since this information would all be on one simpler label that would not have installation information competing for the consumers' attention. Also, if a manufacturer wished, the two label format could be used to reduce the degree to which a readily visible label might interfere with the esthetic design of the stove.

The decision of whether the information should be presented in one or two labels involves questions of consumer preference, label effectiveness, and manufacturing cost. The proposed rule would permit manufacturers to use either a one label or two label format for the written notice required by the rule, and examples of both formats are given in Figs. 1 and 2. After considering the comments on the rule, however, the Commission may conclude that one format or the other is preferable for most appliances covered by the rule. In that event, the Commission may recommend the use of one format or the other when issuing the final rule, and may delete the example of the other format. However, the recommended format would not be mandatory.¹

The written notice will be permanent so that it will remain legible for the maximum expected useful life of the appliance in normal operation. The following are examples of labeling methods that may meet these requirements: 1. Molding the notice into the casting of the appliance body.

2. Etching a metal plate riveted or screwed to the appliance.

¹ The final version of the proposed rule was approved by a 3-2 vote of the Commission, Chairman Susan B. King and Commissioners R. David Pittle and Stuart Statler approving the document. Commissioners Sam Zargoria and Edith B. Sloan voted to propose an alternative rule which would require the written notice to be presented in the two label format, in plain English, in order to highlight the information concerning operation and maintenance.

3. Stamping or engraving the notice into the metal body of the appliance.

The proposal also requires manufacturers to provide complete installation, operation, and maintenance directions which include descriptions of the consequences that can occur from failure to install, use, and maintain the appliance properly. In order to stress the importance of the following the instructions, the appliance packaging or carton or the parts container supplied by the manufacturer is required to bear a reminder to read the enclosed installation directions.

In order that consumer may select an appliance suitable for their intended use and compare the safety of different appliances, all sales catalogs and other point of sale literature are required to include the appliance clearance information and the statement that local building or fire officials should be consulted concerning restrictions and installation inspection requirements. Since some sales literature may be printed far in advance of its expected use, this requirement is proposed to go into effect one year after the remainder of the rule.

The proposed rule would also require manufacturers to provide to the Commission copies of the written notice and directions required by the rule. Manufacturers would also provide to the Commission a statement of how the clearance distances from the appliance to combustibles were determined. Submission of the data is required so the staff can determine (1) that the specific statements required by the rule are present, (2) that other types of information required by the rule, but not required to be in specific language, are present, and (3) whether the clearance distances stated appear appropriate or whether further investigation is necessary.

D. Economic Impact of the Proposed Rule

The economic ramifications of the proposal are explored in a Commission staff report entitled, "Coal and Woodburning Stoves Section 27(e) Labeling Rule: Preliminary Economic Analysis", T. R. Karels, February 1980. The average finished cost for purchase and installation of appliances covered by the rule is between \$600-800. The direct cost of providing the written notice on the appliance and the required directions would be approximately \$1.85 per stove. Another element of cost for some manufacturers would be testing of the stove to determine or confirm the appropriate clearances. Not all manufacturers will have to perform such testing, however, since many

manufacturers already know the appropriate clearances from previous tests or from past experience with the product. In one example examined by the staff (involving a fee of \$3,000 for a test of one model and a production of 2,000 model units per year), the fixed cost attributable to this testing could be considered to be \$0.22 per unit. Therefore, the staff believes that the cost to producers of these coal and wood burning appliances should not exceed about \$2.05 per stove as an effect of the proposed rule. Depending on the markup on the additional costs, the increased cost to consumers could be as much as \$2.80 per stove. The cost of providing copies of the written notice and directions to the Commission is expected to be negligible. Because of the small size and small cost of the required label, the rule is also not expected to cause a significant reduction in the number of these appliances purchased each year.

The cost stated above could be somewhat higher if manufacturers give the written notice by two labels instead of one. On the other hand, many manufacturers already provide a label and/or will not need to test their product, and the costs to these manufacturers should be substantially less than those stated above.

However, the rule is expected to also result in a substantial potential savings as a result of a reduction of property damage, deaths, and injuries associated with the product.

It has been estimated that fires directly attributed to these stoves and their chimney connectors caused some \$49 million in property damages in 1978. Although the Commission is unable to estimate the degree to which the proposed rule may reduce fire incidents, a reduction of as little as 7 percent in these property damages alone would offset the total yearly cost of the rule.

An additional \$84 million in fire losses to property in 1978 were attributed to chimneys, flues, "fireplaces" and other causes; a significant portion of these fires is believed to be related to the appliances addressed by the rule. Therefore, additional savings would accrue to consumers through any reduction in these fires as a result of the rule.

In 1978, between 115 and 150 deaths were attributed to fires caused by coal and woodburning stoves; an additional 60-80 deaths were attributed to chimney or flue fires, some of which were stove-related. Thus, at least 115 (and possibly more than 200) deaths were associated with these appliances in a single year. Based on emergency room data, an

estimated 400 fire-related injuries were associated with these articles in 1979.

One estimate of the cost of nonfatal, medically attended injuries associated with these products is \$5 million, excluding any subjective dollar estimate for pain and suffering experienced by the victim. There are also significant economic and social costs of deaths associated with these products; however, the dollar valuation of these costs is subject to considerable controversy. Although the Commission has not determined a monetary value to be placed on the loss of life, even a foregone earnings approach (one of the more conservative methods of valuation currently used) would result in a total value of over \$25 million for the deaths associated with these products. Any reduction in these injuries and deaths would result in significant benefits to consumers.

Thus, it appears that the increased costs attributable to the rule (about \$3.6 million yearly, based on 1979 projections) would be offset by potential savings resulting from a reduction in property damage from fires directly attributed to these stoves (\$49 million total in 1978), plus some reduction in property damage from fires attributed to sources which would include appliances addressed by the rule (a portion of the \$84 million total in 1978). Further, substantial savings may accrue to consumers through any reduction in the number of deaths (115-200 in 1978) and the number or severity of fire-related injuries (400 in 1979) attributed to these appliances.

The Commission does not view the proposed rule as a major action that would have any significant effect on the environment.

E. Effective Date

The notification rule for coal and wood burning appliances, described above, is proposed to go into effect on May 31, 1981, as to all covered products first introduced in United States (U.S.) commerce after that date. For the purpose of this rule, a product manufactured outside the United States if first introduced in U.S. commerce when it is first brought within a U.S. port of entry. A product manufactured in the U.S. is first introduced in U.S. commerce when it is shipped by the manufacturer or delivered to the consumer, whichever comes first. (The requirement applicable to catalogs and point of sale literature is proposed to be come effective May 31, 1982.)

The comment period on the proposal expires January 2, 1981. If the comments received do not require substantial staff resources to resolve, the Commission

expects to decide on whether to issue a final rule by about January 20, 1981. Under the proposed effective date of May 31, 1981, this would be at least 4 months before the regulation would become effective. Although this effective date will require prompt action on the part of a number of manufacturers, the Commission believes that it is important to have the rule go into effect as soon as is reasonably possible in view of the fact that the production season for the 1981-1982 winter season begins in about May of 1981. Comment is specifically solicited on the effect of the proposed effective date.

The Commission estimates that a period of 3 months is necessary in order for manufacturers to do any testing needed to determine or confirm the appropriateness of clearance distances, develop the required labels and directions, print the appropriate directions booklets, and incorporate the means to provide the labels into their normal production procedures. From the information available to the commission, manufacturers do not keep appliances on hand for any substantial period of time after they are manufactured, but, rather quickly introduce them into commerce. Therefore, a 3 month period after publication of the final rule should be sufficient for manufacturers to comply with the rule. Importers of appliances made outside of the United States, however, must also allow for the time required for the appliances to be shipped from the foreign country to the United States. The Commission estimates that this shipping time should not exceed another 30 days. Therefore, the 4 month period for an effective date that is proposed should allow both domestic and foreign manufacturers to initiate compliance with the rule in time that previously produced appliances can be introduced in commerce in the United States before the effective date of the rule, thus avoiding potentially costly retrofitting of the label to previously manufactured appliances.

F. Possible Alternatives to a Mandatory Rule

a. *Voluntary standards.* There are a number of voluntary standards that apply to the products covered by this rule. The relationship between some of the better known voluntary standards and the Commission's proposed standard is discussed in a Commission Engineering staff memorandum dated June 24, 1980. Although the Commission applauds the voluntary efforts in this area, it does not believe that the extent of compliance with these standards is sufficient to eliminate the need for a

mandatory standard. In addition, the Commission is not aware of any voluntary standard that addresses the identified risk by consumer notification in a comprehensive manner as the standard that is now being proposed by the Commission. Therefore, based on presently available information, the Commission concludes that in this case voluntary action will not address the risk associated with coal and wood burning appliances as effectively as will the proposed mandatory standard.

b. *State and local requirements.* Many jurisdictions have requirements for installation of these appliances, inspections for the completed installation, testing and certification programs, and labeling requirements. However, the information available to the Commission does not indicate that these local requirements are sufficiently widespread or enforced to a degree that would remove the need for a mandatory regulation.

The existence of state and local regulations in this area, however, raises the question of the degree to which the Commission's action may affect the application of state and local requirements. Section 26(a) of the act, 15 U.S.C. 2075(a), provides that where a federal consumer product safety standard is in effect, state and local governments do not have the authority to establish or to continue in effect a different safety standard or regulation designed to deal with the same risk of injury as the federal standard. This statutory effect on state and local government regulations, known as preemption, applies only to a "consumer product safety standard", which is defined in section 7(a) of the act, 15 U.S.C. 2056(a). The statutory preemption provision is not applicable to a disclosure requirement issued under section 27(e), since the disclosure requirement is not a consumer product safety standard (which is issued under sections 7 and 9 of the act, 15 U.S.C. 2056, 2058). Interested persons should be aware, however, that even though the statutory preemption provision would not apply, there may be instances where certain state or local government actions could be preempted under other legal principles. However, the Commission does not intend that the proposed rule would preempt any state or local requirements that are not inconsistent with the rule, even though the state or local requirements concern the same risk of injury addressed by the rule. Comment is invited on the possible effect of the proposed rule on state or local requirements.

G. Penalties

If the Commission issues a final regulation requiring the written notification proposed here, manufacturers of coal and wood burning appliances must comply with the requirements of the regulation on the effective date. Failure to comply with the regulation is a prohibited act, as specified in section 19(a)(9) of the CPSA, and could lead to civil and criminal penalties under sections 20 and 21 of the CPSA. Section 21 provides criminal penalties for violations after notice, consisting of fines of not more than \$50,000 and imprisonment for not more than one year. Section 20 provides a maximum civil penalty of \$500,000 for any related series of violations. In addition, section 22 of the act authorizes the Commission to obtain an injunction from a United States district court to restrain a violation of the notification requirement.

H. Statutory Findings

The Commission would issue the proposed regulation under section 27(e) of the Consumer Product Safety Act (CPSA), 15 U.S.C. 2076(e). This section of the act authorizes the Commission to require manufacturers of consumer products to provide the Commission with such performance and technical data related to performance and safety as may be required to carry out the purposes of the act. Section 27(e) also authorizes the Commission to require manufacturers of consumer products to give notification of such performance and technical data to prospective purchasers at the time of original purchase and to the first purchaser for purposes other than resale, as it determines necessary to carry out the purposes of the act. As provided in section 2(b) of the CPSA, 15 U.S.C. 2051(b), two purposes of the act are to protect the public against unreasonable risks of injury associated with consumer products and to assist consumers in evaluating the comparative safety of consumer products.

(a) *Protecting the public from unreasonable risks of injury.* The estimates of fire incidents that are associated with coal and wood burning appliances show that there is a substantial risk associated with their use. This risk can be addressed by the requirements of the rule proposed below at a minimal cost to the consumer. Providing this information to consumers should reduce the number of improperly installed appliances and increase the number of consumers who know how to properly operate and maintain these devices. The Commission therefore

preliminarily concludes that there is an unreasonable risk of injury associated with those coal and wood burning appliances that do not provide the notices and directions provided for in proposed Part 1406 below.

(b) *Comparative safety.* The requirements of this rule will aid the public in determining which appliances can be safely installed in the space available. This knowledge facilitates the consumer's choice of an appliance to suit his or her installation situation. In addition, the manufacturer's specification of a safe distance that should be maintained to furnishings should assist consumers in determining which appliances are suitable for the consumer's intended use in this regard. This may be especially significant where movable furnishings are kept in the vicinity of the appliance.

Therefore, in order to carry out the purposes of the CPSA to protect the public against unreasonable risks of injury and to assist the public in evaluating the comparative safety of consumer products, the Commission preliminarily concludes that it is necessary to require manufacturers of these products to provide the notifications described in proposed Part 1406 as set forth below.

Accordingly, under provisions of the Consumer Product Safety Act (Secs. 2, 27(e), Pub. L. 92-573, 86 Stat. 1207, 1228; 15 U.S.C. 2051, 2076(e)), the Commission proposes to amend Title 16, Chapter II, of the Code of Federal Regulations by adding to Subchapter B a new Part 1406, reading as follows:

PART 1406—COAL AND WOOD BURNING APPLIANCES—NOTIFICATION OF PERFORMANCE AND TECHNICAL DATA

Sec.

1406.1 Scope, application, and effective date.

1406.2 Background.

1406.3 Definitions.

1406.4 Requirements to provide performance and technical data by written notice to purchasers and prospective purchasers.

1406.5 Performance and technical data to be furnished to the Commission.

Appendix I—Recommended Format and Wording for Written Notice

Appendix II—Recommended Outline for Directions

Authority: Secs. 2, 27, Pub. L. 92-573, 86 Stat. 1207, 1228 (15 U.S.C. 2051, 2076).

§ 1406.1 Scope, application, and effective date.

(a) *Scope and application.* This Part 1406 requires manufacturers, including importers, of coal and wood burning appliances, as defined in § 1406.3, to

provide consumers with a specified notification concerning the installation, operation, and maintenance of the appliances. The notification is intended to provide consumers with specified technical and performance information related to the safety of the appliances. This Part 1406 also requires these manufacturers to provide to the Commission a copy of the notification to consumers and a statement of the reasons supporting their conclusion that certain clearance distances contained in the notification are appropriate for preventing the occurrence of fire.

(b) *Effective date.* (1) Except as provided in paragraph (b)(2) of this section, manufacturers, including importers, of coal and wood burning appliances as defined in § 1406.3 must comply with this regulation with respect to stoves that are first introduced into United States commerce after May 31, 1981. For the purposes of this rule, a product manufactured in the United States (U.S.) is first introduced into U.S. commerce when it is shipped by the manufacturer or delivered to the consumer, whichever comes first. A product manufactured outside the U.S. is first introduced into U.S. commerce when it is first brought within a U.S. port of entry.

(2) The requirements of § 1406.4(d) apply to sales catalogs and point of sale literature provided after May 31, 1982.

§ 1406.2 Background

(a) Fire data analyzed by the Consumer Product Safety Commission disclose a number of incidents involving coal and wood burning appliances. Many of these cases involve improper installation of the appliances, especially where they are installed with insufficient clearances to adjacent combustibles such as walls, ceilings, floors, draperies, carpets, or furnishings. Another common installation problem involves the use of improper types of chimneys or chimney connectors and insufficient clearances between these devices and combustibles. Other incidents involve improper operation of the appliance, such as by overfiring it or using flammable liquids to start the fire. Still other incidents occur when appliances are improperly maintained and develop mechanical defects or excessive deposits of flammable creosote.

(b) After considering the available data on the causes of fires in these appliances, the Commission concludes that there is an unreasonable risk of injury associated with appliances that are sold without notifying consumers of the information they need to prevent many of these occurrences. Accordingly,

the Commission has determined that disclosure of the information required by § 1406.4 is necessary to help the Commission in carrying out the purposes of the Consumer Product Safety Act of (1) helping to protect the public against unreasonable risks of injury associated with consumer products and (2) assisting consumers in evaluating the comparative safety of consumer products.

(c) The Commission has also determined that in carrying out these purposes of the act, it is also necessary for manufacturers to provide to the Commission a copy of the information provided to consumers and a statement of the reasons why some of the information was selected, in accordance with § 1406.5.

§ 1406.3 Definitions.

For the purposes of this rule: (a) "Coal and wood burning appliances" means fireplace stoves, room heater/fireplace stove combinations, cookstoves and ranges, and radiant and circulating heaters. It does not include central heating units, masonry fireplaces and chimneys, fireplace inserts, or factory built fireplaces (zero clearance fireplaces).

(b) "Central heating units" include boilers, furnaces, and furnace add-ons. These appliances are designed to be connected to hot water distribution or ductwork systems for heating several rooms. The furnace add-on converts an existing gas, oil, or electric heating system to one capable of using solid fuels as well as its original fuel.

(c) A "chimney" is a vertical or nearly vertical enclosure containing one or more passageways called flue passages for conveying combustion wastes to the outside atmosphere.

(d) A "chimney connector" is the stovepipe which connects the appliance flue with the chimney flue.

(e) "Cookstoves and ranges" are chimney connected solid fuel burning appliances that are used primarily for cooking. In addition to the firechamber, there may be one or more ovens or warmer compartments and several removable cooking space pothole lids. The intensity of the fire is controlled by damper and draft regulators.

(f) A "factory built fireplace" is a firechamber and chimney assembly consisting entirely of factory made parts. It is designed for component assembly without requiring field construction. These "zero clearance" units are fabricated for safe installation against combustible surfaces and for burning fireplace fuel.

(g) "Fireplace inserts" are heating units that fit into a fireplace and connect

to the fireplace flue. These units function like radiant and circulating heaters.

(h) A "fireplace stove" is a freestanding, chimney-connected firechamber which is constantly open to view. It is designed to burn regular fireplace fuel and function as a decorative fireplace.

(i) A "masonry chimney" is field constructed of solid masonry units, brick, stones, or reinforced concrete.

(j) A "masonry fireplace" is an open firechamber built into a structure along with a chimney and hearth. It is constructed of solid masonry units such as bricks, stones, or reinforced concrete.

(k) "Radiant and circulating heaters" have firechambers which may be airtight¹ or non-airtight and are available in a number of sizes, shapes, and designs. The firechamber is closed in use, but there may be a window of specially formulated glass for viewing the fire. Drafts and dampers are used to control the burning process. There may be a secondary combustion chamber, baffles, a thermostat, a blower, or other components which function to improve combustion efficiency or to control heat output. The primary function of these appliances is as space heaters.

However, some have lift-off cooking pothole lids, and the top surface of most can be used for cooking. The fuel may be wood, coal, or both wood and coal. Radiant heaters transmit heat primarily by direct radiation. Circulating heaters have an outer jacket surrounding the fire chamber. Air enters from the bottom, is warmed by passing over the fire chamber, and exists at the top. Movement is by natural convection or forced air circulation.

(l) A "room heater/fireplace stove combination" is a freestanding, chimney-connected fire chamber with doors. It is designed to be used to burn fireplace fuels with the firechamber either open or closed to view. This appliance functions as a decorative fireplace when the doors are open and as a non-airtight heater when the doors are closed.

§ 1406.4 Requirements to provide performance and technical data by written notice to purchasers and prospective purchasers.

Manufacturers, including importers, of coal and wood burning appliances as defined in § 1406.3 shall give notification of performance and technical data related to performance and safety to

¹ An airtight stove is defined by J. W. Shelton in *Wood Heat Safety*, 1979, as "A stove in which a large fire can be suffocated by shutting the air inlets, resulting ultimately in a large mass of unburned fuel remaining in the stove."

prospective purchasers at the time of original purchase and to the first purchaser of such products for purposes other than resale, in the manner set forth below: (a) Written notice on appliance.

The appliance shall bear a written notice that contains the following performance and technical data.

(i) Appropriate minimum clearances from combustibles to avoid the occurrence of fire. The clearances shall be stated in both written and diagrammatic form and shall include:

(A) Distance from back and sides of appliance to combustible walls.

(B) Distance to be maintained between the chimney and chimney connector and combustible walls and ceilings.

(ii) Type and dimensions of floor protection, if necessary to protect combustible floors.

(iii) Proper type(s) of chimney and chimney connector to be used with the appliance.

(iv) Identification of parts or precautions required for passing a chimney or chimney connector through combustible walls or ceilings.

(v) A statement that the appliance should not be overfired, and a description of the condition(s) which signal(s) overfiring.

(vi) A statement of how often the chimney and chimney connector should be inspected and cleaned.

(vii) Information explaining that the appliance should be installed and used in accordance with the manufacturer's directions.

(viii) A statement that the owner should contact local building or fire officials about restrictions and installation inspection requirements in the owner's area.

(ix) Distance to be maintained between appliance and furnishings in the room.

(x) The name and address of the manufacturer, importer, or private labeler to which the owner can write for a copy of the manufacturer's directions or for additional information, and sufficient identification of the appliance model so that the appropriate information can be supplied.

(2) No specific wording is required on the written notice, but the information shall be printed in legible English in clear and readily understandable language. (An) example(s) of (an) acceptable label(s) are (is) given in Fig(s). 1 (and 2), Appendix I.

(3) Except for the information required by paragraphs (a)(1)(v), (a)(1)(vi), and (a)(1)(ix) of the section, the written notice shall be placed in a location that is conspicuous before the appliance is installed. In addition, the written

information required by paragraphs (a)(1)(v), (a)(1)(vi), and (a)(1)(ix) of the section shall be readily visible during normal use of the appliance. Locations within compartments or behind doors or panels may be readily visible during normal use if the location is readily visible when the door or panel is opened or removed and the door or panel must be opened or removed, or the compartments used as part of the normal operating procedures for the appliance. An example of a notice format where the information required, to be readily visible during normal use is separated from the remainder of the notice is given in Fig. 2, Appendix I.

Note.—The final rule may recommend that the required information be on a single label that is both conspicuous before the appliance is installed and readily visible during normal use of the appliance, or it may recommend the use of two labels as provided in Fig. 2. If one of these formats is recommended, the example of the other format may be deleted.

(4) The written notice shall be provided so that it will remain legible for the maximum expected useful life of the appliance in normal operation.

(b) Directions. All appliances covered by this rule shall be accompanied by directions that include the following technical and performance information:

① The following notice shall be placed on the first page of the document(s) containing the directions and at the beginning of the directions:
SAFETY NOTICE.—IF THIS—IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA

This statement shall be conspicuous and in type that is at least as large as the largest type used on the remainder of the page, with the exception of the logo and any identification of the manufacturer, brand, model, and similar designations.

② Step by step installation directions shall be provided, including all necessary information regarding parts and materials. This information shall include an explanation of the consequences which could result from failure to install the appliance properly. These directions shall include a direction to refer to the chimney and chimney connector manufacturers' instructions for installation through combustible walls or ceilings.

(3) These directions shall also include a clearly identified section containing complete use directions, including how to fire the unit to avoid fire hazards, and a clearly identified section containing

complete maintenance directions, including how and when to clean the chimney and chimney connector. Information about the use of flammable liquids should also be included. These sections shall contain a description of the consequences that could result from failure to use or maintain the appliance properly.

(4) The directions required by paragraphs (b)(2) and (b)(3) of this section shall include all the information required by paragraph (a)(1) of this section and shall be in legible English in readily understandable language. A recommended outline for the directions is given in Appendix II.

(c) Packaging. The following written notice shall appear legibly and conspicuously on the appliance packaging or carton or on the enclosed container for parts supplied by the manufacturer:

REMINDER.—READ THE ENCLOSED INSTALLATION DIRECTIONS

(d) Sales literature, catalogs, and point of sale advertisements. All sales literature, catalogs, and point of sale advertisements for the appliance that are provided by the manufacturer shall legibly and conspicuously include the information required by paragraph (a)(1)(viii) of this section and shall state the appropriate minimum clearances, to avoid the occurrence of fire, from the back and sides of the appliance to combustible walls.

§ 1406.5 Performance and technical data to be furnished to the Commission.

Manufacturers, including importers, of coal and wood burning appliances as defined in § 1406.3 shall provide to the Commission the following performance and technical data related to performance and safety: (a) Written notice. Manufacturers shall provide to the Commission copies of the written notice required by § 1406.4(a). If the written notice is provided to purchasers in a way, such as by casting or stamping the notice into the stove, that makes it impractical to furnish a sample of the actual notice to the Commission, the manufacturer will provide an actual size copy of the notice and a description of the forming process.

(b) Directions. Manufacturers shall provide to the Commission a copy of the directions required by § 1406.4(b).

(c) Rationale. Manufacturers shall provide to the Commission a statement of how the distances to combustibles required to be stated by § 1406.4(a)(1) were determined. In addition, the manufacturer will state the type of appliance, its fuel, size, and weight, and the material of which it is constructed,

unless this information is included in the directions submitted under paragraph (b) of this section.

(d) *General.* (1) the information required to be provided under paragraphs (a) through (c) of this section shall be submitted for each distinct design or model of appliance manufactured. An appliance will be considered to be a distinct design or model if it differs from other appliances of the same manufacturer by functional differences such as performance, weight, size, or capacity. Differences in cosmetic or other non-functional features do not require the submission of additional information.

(2) The written notice, directions, and rationale shall be provided to the Associate Executive Director for Compliance and Administrative Litigation Consumer Product Safety Commission, 5401 Westbard Avenue, Bethesda, Maryland 20207, by July 1, 1981, or, in the event of a subsequent change in the component materials or design features that could cause the model to require different clearances from combustibles or a different type of chimney, or if a new product is introduced into the United States commerce, within 30 days after the change or introduction.

Dated: November 12, 1980.

Sadye E. Dunn,
Secretary, Consumer Product Safety
Commission.

Appendix I—Recommended Format and Wording for Written Notice

The following are recommended formats and suggested wording for the written notice required by § 1406.4(a). Information to be supplied by the manufacturer is indicated by underlined blank spaces or by asterisks.

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Fig. 1 - Written notice requirement satisfied by a single label that is readily visible during normal use of the appliance and conspicuous before installation. Insert appropriate information or numbers at " * ". Change words or diagrams to suit particular appliance.

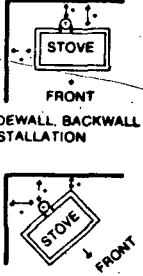
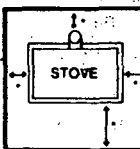
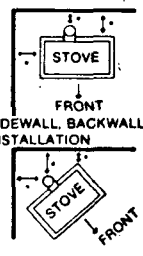
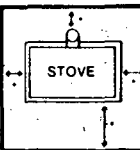
CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA		
MINIMUM CLEARANCES TO COMBUSTIBLE WALLS (IN INCHES)  <p>FRONT SIDEWALL, BACKWALL INSTALLATION CORNER INSTALLATION</p>	PREVENT HOUSE FIRES INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INSTALL STOVE MINIMUM OF * INCHES FROM BACK WALL AND * FROM SIDE WALL CHIMNEY CONNECTOR MINIMUM OF * INCHES FROM WALL AND * INCHES FROM CEILING CHIMNEY TYPE REQUIRED * CHIMNEY CONNECTOR TO BE USED * (SPECIAL METHODS ARE REQUIRED WHEN PASSING THROUGH A WALL OR CEILING. SEE INSTRUCTIONS AND BUILDING CODES) PREVENT CREOSOTE FIRE: INSPECT CHIMNEY CONNECTOR AND CHIMNEY TWICE MONTHLY AND CLEAN IF NECESSARY. DO NOT OVERFIRE: IF UNIT OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING. KEEP FURNISHINGS MINIMUM OF * INCHES FROM APPLIANCE. MODEL NO. _____ MANUFACTURER'S NAME MAILING ADDRESS CITY STATE, ZIP	FLOOR PROTECTOR: MINIMUM SIZE (IN INCHES)  <p>FLOOR PROTECTOR MATERIAL _____ (OR EQUIVALENT)</p>

Fig. 2 - Written notice requirements satisfied by label (A) that is conspicuous before installation and additional label (B) that is readily visible during normal use. Insert appropriate information or numbers at " * ". Change words or diagrams to suit particular appliance.

CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA		
MINIMUM CLEARANCES TO COMBUSTIBLE WALLS (IN INCHES)  <p>FRONT SIDEWALL, BACKWALL INSTALLATION CORNER INSTALLATION</p>	PREVENT HOUSE FIRES INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS INSTALL STOVE MINIMUM OF * INCHES FROM BACK WALL AND * FROM SIDE WALL CHIMNEY CONNECTOR MINIMUM OF * INCHES FROM WALL AND * INCHES FROM CEILING CHIMNEY TYPE REQUIRED * CHIMNEY CONNECTOR TO BE USED * (SPECIAL METHODS ARE REQUIRED WHEN PASSING THROUGH A WALL OR CEILING. SEE INSTRUCTIONS AND BUILDING CODES) MANUFACTURER'S NAME, MAILING ADDRESS, CITY, STATE, ZIP MODEL NO. _____	FLOOR PROTECTOR: MINIMUM SIZE (IN INCHES)  <p>FLOOR PROTECTOR MATERIAL _____ (OR EQUIVALENT)</p>

(B)

PREVENT CREOSOTE FIRE: INSPECT CHIMNEY CONNECTOR AND CHIMNEY TWICE MONTHLY AND CLEAN IF NECESSARY.

DO NOT OVERFIRE: IF UNIT OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING.

KEEP FURNISHINGS MINIMUM OF * INCHES FROM APPLIANCE.

Appendix II—Recommended Outline for Directions

The following is a recommended outline for the directions required by § 1406.4(b). This outline is a guide and should not be considered as including all of the information that may be necessary for the proper installation, use, and maintenance of the appliance since the necessary information may vary from product to product.

"HOW TO INSTALL, USE, AND MAINTAIN YOUR—"

I. Safety Precautions

A. The Safety Notice required by this rule.

- "SAFETY NOTICE.— IF THIS — IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA."

B. Statements of other important safety messages, including:

- "Creosote may build up in the chimney connector and chimney and cause a house fire. Inspect the chimney connector and chimney at least twice monthly and clean if necessary."
- "Overfiring the appliance may cause a house fire. If a unit or chimney connector glows, you are overfiring."
- "Never use gasoline or other flammable liquids to start or 'freshen up' a fire."
- "Dispose of ashes in a metal container."

II. Installation Instructions

A. The parts and materials required, including:

- The size and type of chimney to which the appliance is to be connected
- The size and thickness or gage of metal of the chimney connector
- The thimble or type of connection through a combustible wall or ceiling

B. The step-by-step directions for installing the appliance and its accessories, chimney connector, and chimney. The directions would include:

- Clearances from the appliance and chimney connector to combustibles
- Methods to safely join the chimney connector to the chimney through a combustible wall or ceiling
- The joining of two or more parts to constitute a safe assembly such as attaching and securing the chimney connector to the appliance and to each adjoining section.
- Where required, the parts or materials to be used for the floor protector

(hearth). The minimum areas to be covered and their relation to the appliance.

III. Use Instructions

A. Recommendations about building and maintaining a fire, warnings against overfiring, and condition(s) that signal(s) overfiring.

B. Caution against the use and storage of flammable liquids, as follows: "Do not use gasoline, gasoline-type lantern fuel, kerosene, charcoal lighter fluid, or similar liquids to start or 'freshen up' a fire in this appliance. Keep these flammable liquids well away from this appliance while it is in use."

C. Explanation about the use or nonuse of grates, andirons or other methods of supporting the fuel.

D. How to use manual or thermostatic controls.

E. Explanation about the use of any electrical assemblies including care and routing of power supply cord.

F. Caution about disposing of ashes, as follows: "Disposal of Ashes. Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, away from all combustible materials, pending final disposal. The ashes should be retained in the closed container until all cinders have thoroughly cooled."

IV. Maintenance Instructions

A. How to inspect and maintain the appliance, chimney, and chimney connector.

B. Explanation about the formation and removal of creosote buildup in the chimney connector and chimney as follows:

"Creosote—Formation and Need for Removal". When wood is burned slowly, it produces tar and other vapors, which combine with moisture to form creosote. Creosote vapors condense in the relatively cool chimney flue, and creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if creosote buildup has occurred.

If creosote has accumulated, it should be removed to reduce the chance of a chimney fire.

C. Explain how to remove creosote.

V. References

A. The name and address of the manufacturer or private labeler from which the owner can obtain additional information if needed. Include other sources of information as appropriate.

B. The manufacturer's or private labeler's catalog designations, model numbers or the equivalent for the appliance and related parts.

Note.—The following reference list will not appear in the Code of Federal Regulations.

Bibliographical Reference List; Coal and Wood Stove Label Rule

1. National Fire Protection Association (NFPA)—97M—Glossary of Terms Relating to Heat Producing Appliances, 1979, pp. 7, 8, 14, 26, 27: 470 Atlantic Avenue, Boston, Mass. 02210.
2. Wood Heat Safety, Jay W. Shelton, 1979, p. 160; Garden Way Publishing, Charlotte, Vermont 05445.
3. The Wood Burner's Encyclopedia, Jay W. Shelton and A. B. Shapiro, 1976, p. 70; Vermont Crossroads Press, Waitsfield, Vermont 05673.
4. UL103—Factory Built Chimneys, Residential Type and Building Heating Appliances; Underwriters Laboratories, Inc., 333 Pfingsten Road, Northbrook, Illinois 60062.
5. UL737—Fireplace Stoves; Underwriters Laboratories, Inc.
6. UL1482—Solid Fuel Type Room Heaters; Underwriters Laboratories, Inc.
7. BOCA Basic Building Code/1978, Sections 1000–1005.5; Building Officials and Code Administrators International Inc., 1313 East 60th Street, Chicago, Illinois 60637.
8. Manual on Clearances for Heat Producing Appliances, NFPA No. 89m—1976.
9. Standard for Chimneys, Fireplaces, and Vents, NFPA 211—1977.
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11. Woodstove Installation Guide—Commonwealth of Massachusetts; Massachusetts State Building Code Commission, Massachusetts Energy Office; 1979; 1 Ashburton Place No. 1305, Boston, Mass. 02108.
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17. "Towards Effective Precautionary Labeling"; CPSC document prepared by Irene Y. Bick; December 18, 1975—Office of the Secretary, CPSC, Washington, D.C. 20207.
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21. Washington Post Article on Wood-Burning, Lee Lescase, December 15, 1979, p. A-3.

22. The 1978 United States Fire Experience, Michael J. Karter, Jr., Fire Journal, September 1979; NFPA.

23. United States Fire Fighter Deaths in the Line of Duty During 1978, Arthur E. Washburn and David W. Harlow, NFPA Fire Analysis Department, May 1979; NFPA.

24. "Carbon Monoxide Deaths in the Line of Duty During 1978," Arthur E. Washburn and David W. Harlow, NFPA Fire Analysis Department, May 1979; NFPA.

25. "Carbon Monoxide Deaths From Unvented Gas Space Heaters," Bea Harwood, Oct. 12, 1979—CPSC Document.

26. A Review of Fire Incidents, Model Building codes, and Standards Related to Wood-burning Appliances, Richard D. Peacock, Center for Fire Research, National Engineering Laboratory, National Bureau of Standards, May 1979—NBSIR 79-149, Center for Fire Research, NBS, Washington, D.C. 20234.

27. Analysis of Fire Reports on File in the Massachusetts State Fire Marshal's Office Relating to Wood and Coal Heating Equipment, Jay W. Shelton, PH.D., November 1978; NBS-GCR-78-149, Center for Fire Research, NBS, Washington, D.C. 20234.

28. Oregon Wood Burning Fire Incidents, January & February 1979.

29. Fuelwood and Wood Burning Stoves, Special Circular 249, The Pennsylvania State University, Cooperative Extension Service, University Park, PA 16802.

30. How to Choose A Wood Burning Appliance, Pennsylvania State University, Cooperative Extension Service.

31. Safety Information to Prevent Chimney Fires, Pennsylvania State University, Cooperative Extension Service.

32. United States International Trade Commission Report on Cast-Iron Stoves, July 1977, Pub. No. 826, ITC, Washington, D.C.

33. Assessment of Proposed Federal Tax Credits for Residential Wood Burning Equipment, Department of Energy, Division of Buildings and Community Systems, Technology and Consumer Products Branch, March 21, 1979. Report EC-77-C-03-1693.

Additional documents of interest

1. Briefing Paper on Proposed CPSA 27(e) Labeling Rule for Coal and Wood Burning Appliances, Consumer Product Safety Commission, Washington, D.C. 20207.

Tab A—Draft Proposed Rule: Provision of Performance and Technical Data for Coal and Wood Burning Appliances

Tab B—Staff Hazard Assessment Memoranda

B-1—Hazard Identification, February 1980.

B-2—Human Factors, Feb. 29, 1980.

B-3—Health Sciences, Jul. 14, 1980.

Tab C—Communications Evaluation, Aug. 20, 1980.

Tab D—Engineering Evaluation

D-1—Product Definitions & Information Evaluation, February 25, 1980.

D-2—Comparison of Proposed Rule to Existing Standards, June 24, 1980.

Tab E—Economic Analysis Report, Feb. 1980.

Tab F—Enforcement Considerations

F-1—Enforcement Strategy, June 5, 1980.

F-2—Engineering Enforcement Resource Estimates, May 7, 1980.

F-3—Estimates of Industry Size, April 21, 1980.

Tab G—Survey of State and Local Regulations, June 19, 1980.

Tab H—Correspondence

H-1—Letter from Terry Ellsworth, Fireplace Inst., regarding Industry Conformance to Voluntary Standards, Apr. 14, 1980.

H-2—Letter from Frank Stanonik, Gas Appliance Manufacturers Association, regarding Industry Conformance Labeling Requirements, May 23, 1980.

Tab I—Suggested Formats For Written Notices

2. CPSC staff memorandum, T. Karels, October 14, 1980. (typical production and sales cycle)

3. CPSC staff memorandum, E. Perry, October 14, 1980. (concerning clearances between chimney connector and ceiling)

4. Correspondence to CPSC from Martin Industries concerning production and sales, October 10, 1980.

5. Correspondence to CPSC from Suburban Manufacturing Company concerning production and shipments, October 15, 1980.

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PART 1406 - COAL AND WOOD BURNING APPLIANCES - NOTIFICATION
OF PERFORMANCE AND TECHNICAL DATA

Sec.

1406.1 Scope, purpose, and effective date.

1406.2 Background.

1406.3 Definitions.

1406.4 Requirements to provide performance and technical data by written notice to purchasers and prospective purchasers.

1406.5 Performance and technical data to be furnished to the Commission.

AUTHORITY: Secs. 2, 27, Pub. L. 92-573, 86 Stat. 1207, 1228 (15 U.S.C. 2051, 2076).

§ 1406.1 Scope, purpose, and effective date.

(a) Scope. This Part 1406 requires manufacturers, including importers, of coal and wood burning appliances, as defined in § 1406.3(a), to provide consumers with a specified notification concerning the installation, operation, and maintenance of the appliances. The notification is intended to provide consumers with technical and performance information related to the safety of the appliances. This Part 1406 also requires these manufacturers to provide to the Commission a copy of the notification to consumers and a statement of the reasons supporting their conclusion that certain clearance distances contained in the notification are appropriate for preventing fires.

(b) Purpose. This regulation is intended to reduce the unreasonable risk of injury from fire associated with inadequate information provided with coal and wood burning appliances. This rule does not replace any voluntary standards applicable to these appliances or any state or local requirements applicable to the installation, use, or maintenance of such appliances that are not inconsistent with this rule. Thus; for example, a local code could require the actual installation of appliances at different distances from combustibles than those specified on the label required by this rule, and voluntary standards or local codes could require labeling or instructions in addition to those required by this rule. The fact that a product complies with this regulation is not intended to be a substitute for the performance tests and other criteria established by listing organizations whose approval is required to meet some state or local requirements applicable to these appliances.

(c) Effective date. (1) Except as provided in paragraph (c)(2) of this section, manufacturers, including importers of coal and wood burning appliances as defined in § 1406.3(a) must comply with this regulation with respect to stoves that are manufactured after March 31, 1982, or that are first introduced into United States commerce after July 31, 1982, regardless of the date of manufacture. For

the purposes of this rule, an appliance is manufactured when no further assembly of the appliance is required (1) before shipment by the manufacturer or (2), if the product is not so shipped, before delivery to the first purchaser. A product manufactured in the United States (U.S.) is first introduced into U.S. commerce when it is shipped by the manufacturer or delivered to the consumer, whichever comes first. A product manufactured outside the U.S. is first introduced into U.S. commerce when it is first brought within a U.S. port of entry.

(2) The requirements of § 1406.4(d) apply to sales catalogs and point of sale literature provided by manufacturers after July 31, 1982.

§ 1406.2 Background.

(a) Fire data analyzed by the Consumer Product Safety Commission disclose a number of incidents involving coal and wood burning appliances. Many of these cases involve improper installation of the appliances, especially where they are installed with insufficient clearances to adjacent combustibles such as walls, ceilings, floors, draperies, carpets, or furnishings. Another common installation problem involves the use of improper types of chimneys or chimney connectors and insufficient clearances between these devices and combustibles. Other incidents involve improper operation of the appliance, such as by overfiring it or using flammable

liquids to start the fire. Still other incidents occur when appliances are improperly maintained and develop mechanical defects or excessive deposits of flammable creosote.

(b) After considering the available data on the causes of fires in these appliances, the Commission concludes that there is an unreasonable risk of injury associated with appliances that are sold without notifying consumers of the information they need to prevent many of these occurrences. Accordingly, the Commission has determined that disclosure of the information required by § 1406.4 is necessary to help the Commission in carrying out the purposes of the Consumer Product Safety Act of (1) helping to protect the public against unreasonable risks of injury associated with consumer products and (2) assisting consumers in evaluating the comparative safety of consumer products.

(c) The Commission has also determined that in carrying out these purposes of the act, it is also necessary for manufacturers to provide to the Commission a copy of the information provided to consumers and a statement of the reasons why some of the information was selected, in accordance with § 1406.5.

§ 1406.3 Definitions.

For the purposes of this rule:

(a) "Coal and wood burning appliances" means fireplace stoves, room heater/fireplace stove combinations, cookstoves and ranges, and radiant and circulating heaters. It does

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not include central heating units, masonry fireplaces and chimneys, fireplace inserts, or factory built fireplaces (zero clearance fireplaces).

(b) "Central heating units" include boilers, furnaces, and furnace add-ons. These appliances are designed to be connected to hot water distribution or ductwork systems for heating several rooms. The furnace add-on converts an existing gas, oil, or electric heating system to one capable of using solid fuel as well as its original fuel.

(c) A "chimney" is a vertical or nearly vertical enclosure containing one or more passageways called flue passages for conveying combustion wastes to the outside atmosphere.

(d) A "chimney connector" is the stovepipe which connects the appliance flue with the chimney flue.

(e) "Cookstoves and ranges" are chimney connected solid fuel burning appliances that are used primarily for cooking. In addition to the firechamber, there may be one or more ovens or warmer compartments and several removable cooking space pothole lids. The intensity of the fire is controlled by damper and draft regulators.

(f) A "factory built fireplace" is a firechamber and chimney assembly consisting entirely of factory made parts. It is designed for component assembly without requiring field construction. These "zero clearance" units are fabricated for safe installation against combustible surfaces and for burning fireplace fuel.

(g) "Fireplace inserts" are heating units that fit into a fireplace and connect to the fireplace flue. These units function like radiant and circulating heaters.

(h) A "fireplace stove" is a freestanding, chimney-connected firechamber which is constantly open to view. It is designed to burn regular fireplace fuel and function as a decorative fireplace.

(i) A "masonry chimney" is field constructed of solid masonry units, brick, stones, or reinforced concrete.

(j) A "masonry fireplace" is an open firechamber built into a structure along with a chimney and hearth. It is constructed of solid masonry units such as bricks, stones, or reinforced concrete.

(k) "Radiant and circulating heaters" have firechambers which may be airtight^{1/} or non-airtight and are available in a number of sizes, shapes, and designs. The firechamber is closed in use, but there may be a window of specially formulated glass for viewing the fire. Drafts and dampers are used to control the burning process. There may be a secondary combustion chamber, baffles, a thermostat, a blower, or other components which function to improve combustion efficiency or to control heat output. The primary function of these appliances is as space heaters. However, some have lift-off cooking pothole lids, and the top surface of most can be used for cooking. The fuel may be wood, coal,

^{1/} An airtight stove is defined by J. W. Shelton in Wood Heat Safety, 1979, as "A stove in which a large fire can be suffocated by shutting the air inlets, resulting ultimately in a large mass of unburned fuel remaining in the stove."

or both wood and coal. Radiant heaters transmit heat primarily by direct radiation. Circulating heaters have an outer jacket surrounding the fire chamber. Air enters from the bottom, is warmed by passing over the fire chamber, and exits at the top. Movement is by natural convection or forced air circulation.

(1) A "room heater/fireplace stove combination" is a freestanding, chimney-connected fire chamber with doors. It is designed to be used to burn fireplace fuels with the firechamber either open or closed to view. This appliance functions as a decorative fireplace when the doors are open and as a non-airtight heater when the doors are closed.

§ 1406.4 Requirements to provide performance and technical data by written notice to prospective purchasers and purchasers.

Manufacturers, including importers, of coal and wood burning appliances as defined in § 1406.3 shall give notification of performance and technical data related to performance and safety to prospective purchasers at the time of original purchase and to the first purchaser of such products for purposes other than resale, in the manner set forth below:

-7-

(a) Written notice on appliance. (1) The appliance shall bear a legible notice containing the following performance and technical data.

(i) Appropriate minimum clearances from unprotected combustibles to avoid the occurrence of fire.^{1/} The clearances shall include:

(A) Distance from the back and sides of the appliance, and the chimney connector, to walls, stated in diagrammatic form.

(B) Distance to be maintained between the chimney connector and ceilings, in either diagrammatic or written form.

(ii) Type and dimensions of floor protection, if necessary to protect combustible floors.

(iii) Proper type(s) of chimney and chimney connector to be used with the appliance. This information should include the proper designations so that the chimney and chimney connector are of suitable design and construction

^{2/} Appropriate distances are to be determined by the manufacturer. The Commission expects that test procedures utilized by a nationally recognized testing organization would be suitable for determining appropriate distances.

to withstand the temperature of the flue gases and other probable environmental stresses and so that the inside dimensions are suitable to adequately vent the products of combustion. See Figs. 1 and 2 for an example of acceptable designations for a chimney and chimney connector.

(iv) Identification of parts or precautions required for passing a chimney or chimney connector through combustible walls or ceilings. The following statement complies with this requirement:

Special methods are required when passing through a wall or ceiling. See instructions or building codes.

(v) A statement that the appliance should not be overfired, and a description of at least 1 condition which signals overfiring.

(vi) A statement of how often the chimney and chimney connector should be inspected and that it should be cleaned when necessary.

(vii) Information explaining that the appliance should be installed and used only in accordance with the manufacturer's directions and local building codes.

(viii) A direction to contact local building or fire officials about restrictions and installation inspection requirements.

(ix) Distance to be maintained between appliance and furnishings in the room to avoid the occurrence of fire.

(x) The types of fuel suitable for use in the appliance.

(xi) The name and address of the manufacturer, importer or private labeler to which the owner can write for a copy of the manufacturer's directions or for additional information, and sufficient identification of the appliance model so that the appropriate information can be supplied.

(2) No specific wording is required on the written notice, but the information shall be printed in legible English in clear and readily understandable language. Examples of acceptable labels are given in Figs. 1 and 2, Appendix I.

(3) Except for the information required by paragraphs (a)(1)(v), (a)(1)(vi), (a)(1)(ix), and (a)(1)(x), the written notice shall be placed in a location that is conspicuous before the appliance is installed. In addition, the written information required by paragraphs (a)(1)(v), (a)(1)(vi), (a)(1)(ix), and (a)(1)(x) shall be readily visible during normal use of the appliance. Locations within compartments or behind doors or panels may be readily visible during normal use if the location is readily visible when the door or panel is opened or removed and the door or panel must be opened or removed, or the compartments used, as part of the normal operating procedures for the appliance. An example of a notice format where the information required to be readily visible during normal use is separated from

the remainder of the notice is given in Fig. 1, Appendix I. The Commission recommends the use of this 2 label format in order to provide more consumer awareness of the operation and maintenance information after the appliance is installed, since this information would all be on a simpler label that would not have installation information competing for the consumers' attention.

(4) The written notice shall be provided so that it will remain legible for the maximum expected useful life of the appliance in normal operation.

(b) Directions. (1) All appliances covered by this rule shall be accompanied by directions that include the following technical and performance information:

(i) The following notice shall be placed on the first page of the document(s) containing the directions and at the beginning of the directions:

SAFETY NOTICE: IF THIS _____ IS NOT PROPERLY
INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY,
FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL
BUILDING FOR FIRE OFFICIALS ABOUT RESTRICTIONS AND
INSTALLATION INSPECTION IN YOUR AREA.

This statement shall be conspicuous and in type that is at least as large as the largest type used on the remainder of the page, with the exception of the logo and any identification of the manufacturer, brand, model,

and similar designations. At the manufacturer's option, other information may be added to this notice.

(ii) Step by step installation directions shall be provided, including all necessary information regarding parts and materials. This information shall include an explanation of the consequences which could result from failure to install the appliance properly. These directions shall include a direction to refer to the chimney and chimney connector manufacturers' instructions and local building codes for installation through combustible walls or ceilings.

(iii) These directions shall also include a clearly identified section containing complete use directions, including what types of fuel(s) can be used and how to fire the unit to avoid fire hazards, and a clearly identified section containing complete maintenance directions, including how and when to clean the chimney and chimney connector. Information about the use of flammable liquids should also be included. These sections shall contain a description of the consequences that could result from failure to use or maintain the appliance properly.

(iv) The directions required by sections (b)(1)(ii) and (b)(1)(iii) above shall include all the information required by paragraph (a)(1) above and shall be in legible English in readily understandable language. A recommended outline for the directions is given in Appendix II.

(c) Catalogs and point of sale literature. Catalogs and point of sale literature for the appliance that are provided by the manufacturer shall legibly and conspicuously include the information required by paragraph (a)(1)(viii) and shall state the appropriate minimum clearances, to avoid the occurrence of fire, from the back and sides of the appliance to combustible walls.

& 1406.5 [Reserved.]

Dated: _____, 1981

SADYE E. DUNN, Secretary
Consumer Product Safety Commission

APPENDIX I

RECOMMENDED FORMAT AND WORDING FOR WRITTEN NOTICE

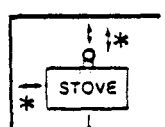

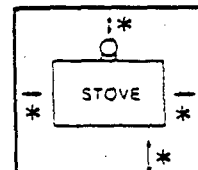
The following are recommended formats and suggested wording for the written notice required by § 1406.4(a). Information to be supplied by the manufacturer is indicated by underlined blank spaces or by asterisks.

(insert Fig. 1)

(insert Fig. 2)

Fig.1 - Example of how written notice requirements are satisfied with two labels. Label (A) is located so that it is conspicuous before installation. Label (B) is located so that it is readily visible during normal use. Insert appropriate information or numbers at " * ". Words or diagrams should be changed to suit particular appliance.

(A)

CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA		
<p>INSTALL WITH MINIMUM CLEARANCES TO WALLS AS SHOWN (IN INCHES)</p>  <p>FRONT SIDEWALL-BACKWALL INSTALLATION</p>  <p>CORNER INSTALLATION</p>	<p>PREVENT HOUSE FIRES</p> <p>INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND LOCAL BUILDING CODES.</p> <p>CHIMNEY TYPE: MINIMUM * INCH DIAMETER APPROVED RESIDENTIAL TYPE *</p> <p>CHIMNEY CONNECTOR: * INCH DIAMETER, MINIMUM * GAUGE BLUED STEEL * INSTALL AT LEAST * INCHES FROM WALL AND * INCHES FROM CEILING.</p> <p>SPECIAL METHODS ARE REQUIRED WHEN PASSING THROUGH A WALL OR CEILING: SEE INSTRUCTIONS AND BUILDING CODES.</p>	<p>FLOOR PROTECTOR MINIMUM SIZE (IN INCHES)</p> 
	<p>MANUFACTURER'S NAME, MAILING ADDRESS. CITY, STATE, ZIP.</p> <p>MODEL NO. *</p>	<p>FLOOR PROTECTOR MATERIAL</p> <p>_____*_____ _____*_____ (OR EQUIVALENT)</p>

(B)

PREVENT CREOSOTE FIRE: INSPECT CHIMNEY CONNECTOR AND CHIMNEY TWICE MONTHLY AND CLEAN IF NECESSARY.

DO NOT OVERFIRE: IF UNIT OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING.

KEEP FURNISHINGS AND COMBUSTIBLES AT LEAST * INCHES FROM APPLIANCE.

TYPE OF FUEL: WOOD ONLY *

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CONTACT YOUR LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA	
<p>INSTALL WITH MINIMUM CLEARANCES TO WALLS AS SHOWN (IN INCHES)</p> <p style="text-align: center;">FRONT SIDEWALL-BACKWALL INSTALLATION</p>	<p style="text-align: center;">PREVENT HOUSE FIRES</p> <p>INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS AND LOCAL BUILDING CODES.</p> <hr/> <p>CHIMNEY TYPE: MINIMUM ____ * INCH DIAMETER APPROVED RESIDENTIAL TYPE *</p> <p>CHIMNEY CONNECTOR: ____ * INCH DIAMETER. MINIMUM ____ * GAUGE BLUED STEEL ____ * INSTALL AT LEAST ____ * INCHES FROM WALL AND ____ * INCHES FROM CEILING.</p> <p>SPECIAL METHODS ARE REQUIRED WHEN PASSING THROUGH A WALL OR CEILING. SEE INSTRUCTIONS AND BUILDING CODES.</p>
<p style="text-align: center;">FRONT CORNER INSTALLATION</p>	<p style="text-align: center;">FLOOR PROTECTOR MINIMUM SIZE (IN INCHES)</p> <p style="text-align: center;">FLOOR PROTECTOR MATERIAL</p> <p style="text-align: center;">____ *</p> <p style="text-align: center;">____ *</p> <p style="text-align: center;">(OR EQUIVALENT)</p>
<p style="text-align: center;">PREVENT CREOSOTE FIRE: INSPECT CHIMNEY CONNECTOR AND CHIMNEY TWICE MONTHLY AND CLEAN IF NECESSARY. DO NOT OVERFIRE: IF UNIT OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIREFING. KEEP FURNISHINGS AND COMBUSTIBLES AT LEAST ____ * INCHES FROM APPLIANCE. TYPE OF FUEL: WOOD ONLY *</p>	
<p>MODEL NO. ____ *</p>	
<p>MANUFACTURER'S NAME, MAILING ADDRESS, CITY, STATE, ZIP</p>	

APPENDIX II

RECOMMENDED OUTLINE FOR DIRECTIONS

The following is a recommended outline for the directions required by § 1406.4(b). This outline is a guide and should not be considered as including all of the information that may be necessary for the proper installation, use, and maintenance of the appliance since the necessary information may vary from product to product.

"HOW TO INSTALL, USE, AND MAINTAIN YOUR _____"

I. SAFETY PRECAUTIONS

A. The Safety Notice required by this rule.

- ° "SAFETY NOTICE: IF THIS _____ IS NOT PROPERLY INSTALLED, A HOUSE FIRE MAY RESULT. FOR YOUR SAFETY, FOLLOW THE INSTALLATION DIRECTIONS. CONTACT LOCAL BUILDING OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA."

B. Statements of other important safety messages, including:

- ° "Creosote may build up in the chimney connector and chimney and cause a house fire. Inspect the chimney connector and chimney at least twice monthly and clean if necessary."
- ° "Overfiring the appliance may cause a house fire. If a unit or chimney connector glows, you are overfiring."
- ° "Never use gasoline or other flammable liquids to start or 'freshen up' a fire."
- ° "Dispose of ashes in a metal container."

II. INSTALLATION INSTRUCTIONS

A. The parts and materials required, including:

- ° The size and type of chimney to which the appliance is to be connected

The size and thickness or gage of metal of the chimney connector

- ° The thimble or type of connection through a combustible wall or ceiling.
- B. The step-by-step directions for installing the appliance and its accessories, chimney connector, and chimney. The directions would include:
 - ° clearances from the appliance and chimney connector to combustibles
 - ° methods to safely join the chimney connector to the chimney through a combustible wall or ceiling
 - ° the joining of two or more parts to constitute a safe assembly such as attaching and securing the chimney connector to the appliance and to each adjoining section.
 - ° where required, the parts or materials to be used for the floor protector (hearth). The minimum areas to be covered and their relation to the appliance.

III. USE INSTRUCTIONS

- A. Recommendations about building and maintaining a fire, warnings against overfiring, and condition(s) that signal(s) overfiring.
- B. Caution against the use and storage of flammable liquids, as follows:

"Do not use gasoline, gasoline-type lantern fuel, kerosene, charocoal lighter fluid, or similar liquids to start or 'freshen up' a fire in this

appliance. Keep these flammable liquids well away from this appliance while it is in use."

- C. Explanation about the use or nonuse of grates, irons and or other methods of supporting the fuel.
- D. How to use manual or thermostatic controls.
- E. Explanation about the use of any electrical assemblies including care and routing of power supply cord.
- F. Caution about disposing of ashes, as follows:

"Disposal of Ashes

Ashes should be placed in a metal container with a tight fitting lid. The closed container of ashes should be placed on a noncombustible floor or on the ground, away from all combustible materials, pending final disposal. The ashes should be retained in the closed container until all cinders have thoroughly cooled."

IV. MAINTENANCE INSTRUCTIONS

- A. How to inspect and maintain the appliance, chimney, and chimney connector.
- B. Explanation about the formation and removal of creosote buildup in the chimney connector and chimney as follows:

"Creosote - Formation and Need for Removal"

When wood is burned slowly, it produces tar and other vapors, which combine with moisture to form creosote. Creosote vapors condense in the relatively cool chimney flue, and creosote residue accumulates on the flue lining. When ignited, this creosote makes an extremely hot fire.

The chimney connector and chimney should be inspected at least twice monthly during the heating season to determine if creosote buildup has occurred.

If creosote has accumulated, it should be removed to reduce the chance of a chimney fire."

- C. Explain how to remove creosote.

V. REFERENCES

- A. The name and address of the manufacturer or private labeler from which the owner can obtain additional information if needed. Include other sources of information as appropriate.
- B. The manufacturer's or private labeler's catalog designations, model numbers or the equivalent for the appliance and related parts.

Reporting requirement subject to the Paperwork Reduction Act of 1980. If approved, it will be separately issued.

§ 1406.5 Performance and technical data to be furnished to the Commission.

Manufacturers, including importers, of coal and wood burning appliances as defined in § 1406.3(a) shall provide to the Commission the following performance and technical data related to performance and safety:

(a) Written notice. Manufacturers shall provide to the Commission copies of the written notice required by § 1406.4(a). If the written notice is provided to purchasers in a way, such as by casting or stamping the notice into the stove, that makes it impractical to furnish a sample of the actual notice to the Commission, the manufacturer will provide an actual size copy of the notice and a description of the forming process.

(b) Directions. Manufacturers shall provide to the Commission a copy of the directions required by § 1406.4(b).

(c) Rationale. Manufacturers shall provide to the Commission a statement of how the distances to combustibles required to be stated by § 1406.4(a)(1) were determined. In addition, the manufacturer will state the type of appliance, its fuel, size, and weight, and the material of which it is constructed, unless this information is included in the directions submitted under paragraph (b) of this section.

(d) General. (1) The information required to be provided under paragraphs (a) through (c) of this section shall be submitted for each distinct design or model of appliance manufactured. An appliance will be considered to be a distinct design or model if it differs from other appliances of the same manufacturer by functional differences such as performance, weight, size, or capacity. Differences in cosmetic or other non-functional features do not require the submission of additional information.

(2) The written notice, directions, and rationale shall be provided to the Associate Executive Director for Compliance and Administrative Litigation, Consumer Product Safety Commission, 5401 Westbard Avenue, Bethesda, Maryland 20207, by April 30, 1982, or, in the event of a subsequent change in the component materials or design features that could cause the model to require different clearances from combustibles or a different type of chimney, or if a new product is introduced into United States commerce, within 30 days after the change or introduction.

TAB C

UNITED STATES GOVERNMENT

RECEIVED

U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

JUL 15 9 18 AM '82

TO : James F. Hoebel, Program Manager, Fire and Thermal Burn Hazards, OPM
Through: Kenneth W. Haase, Director, EPSM *LWH*
FROM : Through: Robert G. Poth, CARM *RGP*
Elizabeth J. Gomilla, CARM *EJG*
Eileen P. Kessler, EPSM *EPK*
SUBJECT: Report on the Coal and Woodburning Stove Survey
DATE: 14 JUL 1982

Attached is the report on the coal and woodburning stove survey that was conducted in February 1982 to determine the percentage of stoves available for sale which were certified by independent testing laboratories or other certifying organizations and which were labeled with information concerning the appropriate clearance (distance) to combustibles for safe installation.

Attachment

REPORT ON THE
COAL AND WOODBURNING STOVE SURVEY
CONDUCTED IN FEBRUARY 1982

Prepared by
Elizabeth J. Gomilla, Carm
Eileen P. Kessler, EPSM

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EXECUTIVE SUMMARY

A survey of stores selling coal and woodburning stoves was conducted by the Commission staff in February 1982, in order to determine the percentage of stoves available for sale which were certified by independent testing laboratories or other certifying organizations and which were labeled with information concerning the appropriate clearance (distance) to combustibles for safe installation.

As a result of on-site visits to 43 stores randomly selected in six metropolitan areas in the United States, it is estimated that more than 70 percent of the coal and woodburning stoves sold in these six metropolitan areas were certified by a testing laboratory or other certifying organization and were labeled with clearance (distance) to combustibles. These data are presented as being reasonably representative of the nation as a whole and support the information obtained by the Commission staff in the spring of 1981 from certain independent testing laboratories.

An examination of the limited number of instruction booklets collected during the study reveals that few provide all of the information that would be required by the proposed Commission rule for coal and woodburning stoves.

REPORT ON THE
COAL AND WOODBURNING STOVE SURVEY
CONDUCTED IN FEBRUARY 1982

I. BACKGROUND

On November 17, 1980, the Commission proposed a rule under Section 27(e) of the CPSA to require that certain performance and technical data be supplied with coal and woodburning stoves, freestanding fireplaces and similar appliances. The performance and technical data that would be supplied under the proposed rule consists of safety information concerning the installation, operation and maintenance of these appliances. Part of the required data would be in the form of a permanent, conspicuous written notice on the appliance. The information provided in the written notice would include appropriate minimum clearances (distances) between the stove (and chimney connector) and combustibles to avoid the occurrence of fire. The proposed rule would also require that complete installation, operation and maintenance directions be provided with the stove. This proposed rule was issued in response to a petition received by the Commission in 1977. The petitioner reported that many fires and resultant injuries occur due to improper installation of certain coal and woodburning appliances, stoves and freestanding fireplaces. This report was substantiated by the Commission staff. As reported in the 1980 Federal Register notice issuing the proposed rule, at least 14,000 fires and 115 deaths are estimated to have occurred in 1978 from the use of coal or woodburning stoves, plus an unknown proportion of the minimum estimate of 23,000 fires and 60 deaths associated with chimneys or flues.

In July 1981, the Commission decided not to vote on the issuance of a final rule until mid-1982, in order to provide time to confirm preliminary data showing that a mandatory rule may not be needed due to an increase in the

number of stove models that are certified by independent testing organizations and due to certain anticipated changes in the labeling and instructions requirements that such organizations apply to these appliances. As reported by the staff at that time, information from Underwriters laboratory indicated that in 1978, 78,000 labels were issued for stoves, representing 7 percent of the total sales. In 1980, the labels issued rose to 723,000 or 72 percent of the market. Three other certifying laboratories reported issuing a total of 82,000 labels in 1980. Based upon this information, the staff estimated that between 70 percent and 85 percent of the stoves built in 1980 were labeled.

II. SURVEY METHODOLOGY

To verify the information provided by the independent testing laboratories, the staff conducted a field survey in six metropolitan areas: Atlanta, Boston, Cleveland, Dallas, Denver and Seattle. Eight retail stores in each of the six metropolitan areas or a total of 48 stores were randomly selected from the yellow-page telephone directories of the six metropolitan areas. The stores included in the survey were stratified by type of yellow-page listing: (1) fireplace and stove stores; (2) hardware stores; (3) lumber stores and (4) department stores. These categories were selected based on the survey pre-test conducted in the Washington, D.C. metropolitan area.

Care was taken to eliminate duplicate yellow-page listings so that each establishment would have only one chance for selection. Those establishments which were listed in more than one stratum (e.g. hardware and lumber) were kept with that stratum listed first, in accordance with the order described above.

Telephone calls were then made to a random selection of 10 to 15 percent of the stores listed in the 6 study sites for each stratum (type of yellow-page listing). The purpose of these calls was to determine whether the store sold

coal or woodburning stoves and had models on display. Based on these preliminary calls, the staff was able to estimate the number of stores which sold stoves for each city and for each stratum. These estimates served as the basis for apportioning the sample of eight per city among the four strata so that the sampling fraction (number of stores selected divided by the number of stores selling stoves) was approximately equal for each stratum.

Each retailer listed within a particular city and stratum had an equal chance for selection. When a retailer was selected which had more than one store listed (e.g. 6 Sears stores), all those listed had an equal chance to be the one store which would be selected.

When the results of the study are weighted to represent all stoves sold by similar stores in the 6 study sites in the past 12 months, the weights are the inverses of these probabilities of selection, adjusted for the stores which were sampled but did not participate.

The survey questionnaire and instructions for conducting the survey were prepared by the headquarters staff and issued to the field staff under field program 82-0012 (TAB A). ^{of TAB C} The survey was conducted during the month of February 1982.

As directed by the field program (82-0012), the field staff conducted an on-site interview at each of the selected stores to examine all stove models available for sale. 1/ The field staff informed the store management that

1/ The field program was written to cover models displayed at the store as well as models displayed in a catalog. However, due to the inability to obtain, first hand, the necessary information regarding the presence and location of label information, models displayed only in a catalog were subsequently excluded from the survey.

participation in the survey was voluntary and proceeded with the survey only if the management agreed to participate. The pertinent information collected during the survey included:

1. Type of each appliance on display
2. Name of manufacturer
3. Model Number
4. Model Year
5. Name of any certifying organization
6. Location of any statement of laboratory certification
7. Location of any label with clearances (distances) to combustibles
8. Number of units sold during the past 12 months.

III. QUALIFICATIONS OF THE DATA

Although the survey did not sample the entire United States, the six metropolitan areas selected -- Atlanta, Boston, Cleveland, Dallas, Denver and Seattle -- provide a reasonable geographic spread.

The yellow-page listings for metropolitan areas include rural as well as suburban and urban businesses. Therefore, the samples from the six selected sites included a mix of urban, suburban and rural stores. However, the majority of the selected stores were located either in suburban or urban areas. Therefore, the rural areas are probably somewhat underrepresented. To the extent that rural stores sell a different product than the product sold in urban and suburban areas, the study will be less representative of any products sold only in rural areas.

The survey results are presented as a reasonable representation of the stores selling coal or woodburning stoves in the United States at the time of the survey.

~~A~~

IV. RESULTS OF THE FIELD SURVEY

A. Stores Included in the Survey. Table 1 presents the number and percent distributions by stratum for all selected stores, for all stores which participated in the survey and for all stores which participated in the survey and shared their sales data (number of units sold for each available model) for the 12 months preceding the survey. The sample was comprised of 48 stores. Data was collected from a total of 43 stores. ^{2/} The 43 stores consisted of 23 stove stores (53.5 percent); 10 hardware stores (23.2 percent); 5 lumber stores (11.6 percent) and 5 department stores (11.6 percent). This is essentially the same proportion as was originally selected. While 43 stores cooperated by participating in the study, only 37 stores provided sales data for the stove models available for sale.

Table 1. Number and Percent Distribution by Selection Stratum for All Selected Stores, for All Stores Which Participated in the Study and for All Stores Which Participated and Shared Their Sales Data.

Stratum	Stores Selected		Participating Stores		Participating Stores Which Provided Sales Data	
	Number	Percent	Number	Percent	Number	Percent
Stove	24	50.0	23	53.5	19	51.4
Hardware	11	22.9	10	23.2	10	27.0
Lumber	7	14.6	5	11.6	4	10.8
Department	6	12.5	5	11.6	4	10.8
TOTAL	48	100.0	43	100.0	37	100.0

^{2/} Due to a lack of time to select and visit replacements, five stores were ultimately dropped from the survey because the store did not sell stoves (2); had no units available for examination (1); would not participate (1); or was contacted by telephone rather than an on-site visit (1). In addition, ten of the originally selected stores were replaced by a second selection because the originally selected store was out of business (4); did not want to participate in the survey (2); had no stock left (1); carried only antique stoves (1); was a duplicate selection (1); or did not sell stoves (1).

In order to estimate the proportion of units sold with certification and combustible labels, as well as other important study variables, only data from the 37 stores providing sales information could be used. As shown in Table 2, these 37 stores sold a total of 1,986 stove units in the 12 months preceding the study. ^{3/}

Table 2. Number of Stores by Selection Stratum Which Provided Sales Data and Number of Stoves Sold by These Participating Stores During the 12 Months Preceding the Survey.

Participating Stores Which Provided Sales Data		
Type of Store	Number of Stores	Number of Stoves Sold in 12 Months Preceding Survey
Stove	19	1719
Hardware	10	98
Lumber	4	6
Department	4	163
TOTAL	37	1,986

B. Types of Appliances. The survey collected data on the following six types of appliances:

1. Fireplace Stove - a freestanding, chimney-connected firechamber which is constantly open to view. It is designed to burn regular fireplace fuel and function as a decorative fireplace.

^{3/} In the June 9, 1981 Commission Briefing Package, the Economic Analysis staff reported that the estimated total U.S. consumption of stoves in 1980 was 1 million.

2. Room Heater Stove - a freestanding, chimney-connected firechamber which is closed in use, although there may be a window for viewing the fire. Drafts and dampers are used to control the burning process. The fuel may be wood, coal or both wood and coal. The stove is primarily designed for heating.

3. Room Heater/Fireplace Combination - a freestanding, chimney-connected firechamber with doors. It is designed to be used to burn fireplace fuels with the firechamber either open or closed to view. This appliance functions as a decorative fireplace when the doors are open and as a heater when the doors are closed.

4. Cook Stove - a freestanding, chimney-connected solid fuel burning appliance that is used primarily for cooking. In addition to the firechamber, there may be one or more ovens or warmer compartments and several removable cooking space pothole lids. The intensity of the fire is controlled by damper and draft regulators.

5. Fireplace Insert 4/ - a heater unit that fits into a build-in fireplace and connects to the fireplace flue.

6. Room Heater Stove/Fireplace Insert 4/- a heating unit that may be used either as a freestanding, chimney-connected firechamber or may be fitted into a built-in fireplace and connected to the fireplace flue. The stove is primarily designed for heating.

4/ Fireplace inserts are excluded from this report. Fireplace inserts were not covered by the proposed labeling rule for coal and wood stoves since they are designed to be installed against combustible walls. They were included in this survey due to the staff's interest in all coal and wood burning appliances. Staff work involving this type of appliance is now being conducted under the fireplace/chimney project (MIS 10494).

A total of 273 stove models (excluding all fireplace inserts) were examined during the survey. Table 3 presents the percent distribution of the type of stoves examined, both for the unweighted data and for the total estimated units sold in the 6 study sites for the 12 months preceding the study.

Table 3. Percent Distribution of Stoves Sold in the Preceding 12 Months by Type of Stove for the Stores Participating in the Study and for All Similar Stores in the Six Study Sites.

Type of Stove	Percent Distribution of Stoves Sold in Preceding 12 Months by Stores Participat- ing in the Survey and Providing Sales Data	Estimated Percent Dis- tribution of Stoves Sold in Preceding 12 Months by All Similar Stores in the 6 Study Sites
	Percent	Percent
Fireplace Stove	6.5	3.9
Room Heater	61.0	63.6
Room Heater/Fire- place Combination	30.0	28.0
Cook Stove	2.5	4.5
TOTAL	100.0	100.0

C. Manufacturers (Importers). Stove models manufactured or imported by 99 different firms were examined during the survey. Stoves manufactured by nine firms previously identified by the Economic Analysis staff as the 9 largest firms were among those inspected in the survey. ^{5/}

^{5/} In the June 9, 1981 Commission Briefing Package, the Economic Analysis staff reported the Underwriters Laboratory projection that some 100 firms account for about 75 percent of production and the residual of some 300 firms account for the remaining 25 percent.

D. Certifying Organizations. As shown in Table 4, 59 percent of the stove models examined during the survey and 77 percent of the total estimated number of units sold by all similar stores during the past 12 months in the 6 study sites were certified.

Table 4. Percent of Stoves Certified by Model Year for the Models Examined During the Survey and for the Estimated Number of Stoves Sold by All Similar Stores in the 6 Study Sites During the 12 Months Preceding the Survey.

Model Year	Percent Certified of Models Examined During the Survey	Percent Certified of Estimated Number of Stoves Sold by All Similar Stores in the 6 Study Sites During the 12 Months Preceding the Survey
1982	71.4	95.2
1981	70.4	80.5
1980	73.1	79.9
1979	58.7	87.7
1978	50.0	64.1
Unknown	32.9	18.0
All	58.6	76.7

At least eighteen different certifying organizations certified one or more of the stove models inspected during the survey. In most instances, the name of the certifying organization was provided on the stove (86 percent of the certified stove models examined and 95 percent of the estimated number of certified stoves sold by all similar stores in the past 12 months in the 6 study sites). The remainder were certified according to the accompanying literature, but no label appeared on the stove model examined by the investigator. Of the certification labels appearing on the stoves, the vast majority were located on the back of the stove (58 percent of the stove models examined and 74 percent of the estimated number of stoves sold by all similar stores during the past 12 months in the 6 study sites).

As shown in Table 5, the most frequently observed certifying organization for the stove models examined during the survey was Underwriters Laboratory (28.0 percent). Whereas, the most frequently observed certifying organization on the total estimated certified stoves sold in all similar stores in the 6 study sites during the preceding 12 months was Arnold Greene Laboratory (31.3 percent).

Table 5. Distribution of Certification Laboratories for All Certified Stove Models Examined During the Survey and for the Total Estimated Number of Stoves Sold by all Similar Stores in the 6 Study Sites During the Preceding 12 Months.

Certification Laboratories	Percent Distribution of Certified Stove Models Examined During the Survey	Percent Distribution of the Total Estimated Certified Stoves Sold in the 6 Study Sites During the Preceding 12 Months
(n = 160)		
Arnold Greene	13.1	31.3
E.T.L. Testing Lab	2.4	19.6
UL	28.0	10.5
Gas & Mechanical Lab	7.7	8.6
Energy Systems Inc.	4.3	7.0
Energy Testing of Maine	6.5	6.1
R. F. Geisser Inc. Assoc.	3.6	3.6
Stove Testing Labs	2.4	2.5
Product Fabrication	5.4	1.9
Northwest Labs	2.4	0.6
CML	0.6	0.5
Gas Appliance Lab	1.8	0.5
All Other Specified Labs	4.2	1.0
No Lab Specified	19.9	6.3
TOTAL	100.0	100.0

E. Clearance (Distance) to Combustibles. As shown in Table 6, 52 percent of the stove models examined during the survey and 75 percent of the total estimated number of units sold by similar stores during the past 12 months in the 6 study sites were labeled with information concerning the appropriate clearance (distance) to combustibles for safe installation.

Table 6. Percent Distribution by Model Year of Stoves Having a Clearance (Distance) to Combustibles Label for the Stove Models Examined During the Survey and for the Estimated Total Stoves Sold by All Similar Stores in the 6 Study Sites During the Preceding 12 Months.

Model Year	Percent With Clearance Label of the Stove Models Examined (n = 273)	Percent With Clearance Label of the Estimated Number of Stoves Sold in the 6 Study Sites Dur- ing the Preceding 12 Months
1982	71.4	95.2
1981	63.6	78.1
1980	75.6	90.0
1979	65.2	79.9
1978	60.0	80.8
Unknown	8.7	6.0
TOTAL	51.6	75.1

In most instances, the label for clearance (distance) to combustibles was located on the back of the stove (81.6 percent of the stove models examined and 86.7 percent of the estimated number of stoves sold by all similar stores during the 12 months in the 6 study sites).

F. Instruction Booklets. The CPSC proposed rule specifies that all appliances shall be accompanied by directions that include the following information:

1. A specified safety notice on the first page of the booklet.
2. Step by step installation directions, including an explanation of consequences which could result from failure to install the appliance properly, and statement that the installer should refer to the instructions provided by the chimney and chimney connector manufacturer.
3. Use directions, including how to fire the appliance; information about the use of flammable liquids; maintenance directions including how and when to clean the chimney and chimney connector; and a description of the consequences that could result from failure to use or maintain the appliance properly.

Copies of the instruction booklet prepared by 19 manufacturers or importers were obtained during the survey. 6/ One of the booklets contained virtually no installation, use and/or maintenance information and one of the booklets was written in German. The remaining 17 booklets contained varying degrees of information; however, none of the booklets provided all of the information that would be required by the proposed rule.

Two of the 19 booklets contained a safety notice at the beginning of the booklet. Seventeen of the booklets contained some installation information; however, only 9 of the booklets contained step by step installation directions as specified in the proposed rule and only 4 of the booklets mentioned the consequences of improper installation. Many of the booklets stated that a UL listed chimney should be used, but only two firms directed the reader to refer to the installation instructions provided by the chimney and chimney connector

6/ In most instances, the retailer did not have an extra copy of the instruction booklet provided by the manufacturer or importer for distribution to the consumer.

manufacturer. One firm that manufactures the chimney and chimney connector that must be used with its appliance provided complete chimney installation directions.

Sixteen of the 19 booklets reviewed provided directions for firing the appliance and 10 booklets cautioned against the use of flammable liquids to start or freshen-up the fire. Seventeen of the booklets provided some maintenance information, although only 9 of the booklets provided directions for cleaning the chimney and chimney connector, and only 7 of the booklets mentioned the consequences of improper use and installation information.

V. SUMMARY AND CONCLUSION

The survey data supports the information obtained by the Commission staff from several certifying laboratories in the Spring of 1981. Over 70 percent of the total estimated units sold by all stores in the study sites similar to those included in the survey were found to be certified by a testing laboratory and labeled with clearances (distances) to combustibles.

The survey data reveals that in most instances labels with clearances (distances) to combustibles are provided on the back of the unit; whereas, the proposed Commission rule would require at least a portion of the label information to be visible during normal operation of the stove.

Review of the instruction booklets obtained during the survey reveals that most firms provide some installation, use and maintenance information; however, few, if any, firms provide all of the information that would be required by the proposed Commission rule.

UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

ALL FIELD OFFICES

TO : Through: Acting Associate Executive Director
for Field

DATE: OCT 28 1981

RF

FROM : Carlos Perez, Acting AEDCA

SUBJECT: FY 1982 Coal and Wood Burning Stove Program, FPR 82-0012

Attached is the FY 1982 Coal and Wood Burning Stove Program, FPR 82-0012. All work conducted under the program should be recorded under Project Code 95496.

The program will be implemented in the following cities on November 9, 1981 and completed by November 30, 1981.

<u>Cities</u>	<u>Number Of Inspections</u>
Atlanta	8
Boston	8
Cleveland	8
Dallas	8
Denver	8
Seattle	8
	<u>48</u>

As noted in the program, the list of stores selected for the survey in each metropolitan area will be provided to the responsible regional office prior to the survey implementation date. A copy of the questionnaire and instruction sheet are also being provided for your convenience on legal size paper after we obtain OMB clearance.

ATTACHMENT

COAL AND WOOD BURNING STOVE RETAIL SURVEY

CHAPTER I

PURPOSE

The purpose of this program is to initiate a survey of coal and wood burning stove retail stores. The survey is being conducted to estimate the proportion of stoves sold to consumers during the past 12 months which were labeled as having been certified by a testing laboratory. The survey will also provide estimates of the proportion of stoves certified by each testing laboratory. The program resources are provided in Project Code 95496.

SCOPE

The program is intended for use by field office personnel.

TIMETABLE

The survey will be initiated on November 9, 1981 and completed by November 30, 1981. Data sheets will be mailed to CARM (Liz Gomilla) no later than December 1, 1981.

REFERENCE

Provision of Performance and Technical Data for Coal and Wood Burning Appliances; Proposed Rule, Federal Register, Vol. 45, No. 223, Monday, November 17, 1980. (Appendix A)

CHAPTER II

BACKGROUND

On November 17, 1980 the Commission published a proposed labeling rule for coal and wood burning stoves, including freestanding fireplaces. The rule would require that manufacturers provide consumers with certain installation, use and maintenance information on permanent labels, in instruction manuals and by point-of-sale literature. One of the primary types of information that would be provided is the minimum installation distance from combustibles (walls, ceiling, floor and furnishings). Comments were received and analyzed by the staff during late 1980 and early 1981.

In a June 9, 1981 briefing package, the staff subsequently recommended that the Commission withhold a decision on publishing a final rule until mid-1982 and direct the staff (1) to conduct a survey of retail stores to evaluate the reported success of the voluntary industry programs and (2) to monitor the pending changes to the voluntary standards. On July 9, 1981 the Commission voted its agreement with this recommendation.

APPROACH

Eight retail stores will be visited in six metropolitan areas, for a total of 48 stores. The stores will include fireplace and stove stores, department stores, hardware stores and lumber stores. The stores will be randomly selected from among those listed in the telephone directories of the six metropolitan areas. The selection will be made by the Division of Special Studies, HIA. A list of the stores selected in each metropolitan area will be provided to the responsible regional office prior to the survey implementation date.

An on-site interview of the store management and examination of all stove models available for sale will be conducted at each retail store selected by HIA, using the questionnaire provided in Appendix B. Provided with the questionnaire is a detailed instruction sheet for using the questionnaire.

ON-SITE VISIT

Present your CPSC credentials to the owner or store manager. Briefly describe the Commission's activity in the area of coal and wood stoves, using the information provided in the section entitled BACKGROUND and in the proposed labeling rule ~~(Appendix A)~~ ^(TAB A). Inform the store management that participation in the survey is voluntary, but at the same time emphasize the fact that the survey data is expected to support the industry contention that the high level of industry conformance with the voluntary standard eliminates the need for a mandatory standard.

If the store management does not agree to participate in the survey, terminate the interview and contact the CARM program manager to obtain the name of another retail store. Keep in mind, however, that a substitution of this nature should be avoided if at all possible because it will bias the sample.

If the store management agrees to participate in the survey, proceed to examine all models^{1/} of the following types of stoves that are available for sale:

Fireplace Stove (FS): A freestanding, chimney-connected firechamber which is constantly open to view. It is designed to burn regular fireplace fuel and function as a decorative fireplace.

1/ Due to the time burden for both the investigator and the retail management, the survey at each retail store will be limited to 50 models. If more than 50 different models are being offered for sale by a particular retail store, record only the model name and number for each appliance during the initial visit. Telecopy this information to the CARM program manager. The Division of Special Studies, HIA, will randomly select the 50 models to be examined. Upon receipt of the 50 models selected for examination, return to the retail store and complete the survey.

Room Heater Stove (RHS): A freestanding, chimney-connected fire-chamber which is closed in use, although there may be a window for viewing the fire. Drafts and dampers are used to control the burning process. The fuel may be wood, coal or both wood and coal. The stove is primarily designed for heating.

Room Heater/Fireplace Combination (RHS/FS): A freestanding, chimney-connected firechamber with doors. It is designed to be used to burn fireplace fuels with the firechamber either open or closed to view. This appliance functions as a decorative fireplace when the doors are open and as a heater when the doors are closed.

Cook Stove (CS): A freestanding, chimney-connected solid fuel burning appliance that is used primarily for cooking. In addition to the firechamber, there may be one or more ovens or warmer compartments and several removable cooking space pothole lids. The intensity of the fire is controlled by damper and draft regulators.

Fireplace Insert (FI): A heating unit that fits into a built-in fireplace and connects to the fireplace flue.

As provided by the above definitions, an individual stove may be both a room heater and a fireplace. In such cases, use the established designation RHS/FS. As provided by the definitions, a cook stove could also be classified as a room heater stove or fireplace stove. This type of dual-purpose use is inherent to the cook stove and need not be designated on the questionnaire. Use only the designation CS for a cook stove. A third type of dual-purpose stove which was observed during the survey pre-test is somewhat unusual. This dual-purpose stove may be installed as a fireplace insert or used as a freestanding stove on a fireplace hearth. If this type of stove is observed and there are differences in the physical appearance of the stove when it is ready for each type of installation, (i.e., no back and side outer panels when purchased for use as an insert), consider the stove to be two distinct models. Record information separately on the questionnaire under fireplace insert and, as appropriate, room heater, fireplace stove or room heater/fireplace stove combination. If there is no difference in the physical appearance of the stove when it is ready for each installation, designate the stove as a fireplace insert on the questionnaire and note in the remarks section that the stove may also be installed as a freestanding unit.

To provide both an accurate and up-to-date assessment of the current level of industry conformance to the voluntary standard, knowledge of the model year for each stove examined is very critical. As noted on the instruction sheet, this information may be stated on the unit in the form of a date code or as the year of certification. If a date is not available on the stove model being examined, determine the date the model was first sold by the retailer. Be sure to accurately record the model year and the basis for the determination, (See questions #7e and 7f.).

As noted in the questionnaire instruction sheet, it is also very important that we examine stove models received by the retailer after June 1980. Our estimate of conformance with the voluntary standard is based upon 1980 production data and we would anticipate that most stoves being shipped after June 1980 were manufactured during 1980.

Be sure to thoroughly examine each stove for the presence of labels, in that all information may not be provided on one label. In some instances, labels have been found inside compartments or on the underside of a stove with legs. If a label indicating laboratory certification has been observed, the unit should also bear a label with distances to combustibles. As such, please reexamine any stove model that falls into a category of having a certification label but no label with distance to combustibles.

Collect any available brochures, catalogs or other literature concerning each stove examined.

In addition to the questionnaire, please prepare an Investigation-Inspection Cover Sheet for each on-site visit.

CHAPTER III

REPORTING

Provide the original questionnaire, any brochures or catalogs collected during the survey and a copy of each coversheet to CARM (Liz Gomilla) no later than December 1, 1981.

51

71

OMB # _____

INSTRUCTION SHEET

1. Present your CPSC credentials to the owner or store manager. Briefly describe the Commission's activity in the area of coal and wood burning appliances and the reason for CPSC interest in determining the level of conformance with the voluntary standard. Inform the stove owner or manager that participation in the program is voluntary.
2. If the owner or store manager agrees to participate in the survey, complete all questions for each appliance covered by the survey that is currently available for sale by the store.

7a. Item No:

Number each model examined at each store consecutively, i.e., 1, 2, 3...

7b. Type:

If a unit appears to fall into more than one category, designate each category that applies.

Fireplace Stove (FS) is a freestanding, chimney-connected firechamber which is constantly open to view. It is designed to burn regular fireplace fuel and function as a decorative fireplace.

Room Heater Stove (RHS) is a freestanding, chimney-connected firechamber which is closed in use, although there may be a window for viewing the fire. Drafts and dampers are used to control the burning process. The fuel may be wood, coal or both wood and coal. The stove is primarily designed for heating.

Room Heater/Fireplace Combination (RHS/FS) is a freestanding, chimney-connected firechamber with doors. It is designed to be used to burn fireplace fuels with the firechamber either open or closed to view. This appliance functions as a decorative fireplace when the doors are open and as a heater when the doors are closed.

Cook Stove (CS) is a freestanding, chimney-connected solid fuel burning appliance that is used primarily for cooking. In addition to the firechamber, there may be one or more ovens or warmer compartments and several removable cooking space pothole lids. The intensity of the fire is controlled by damper and draft regulators.

Fireplace Insert (FI) is a heating unit that fits into a built-in fireplace and connects to the fireplace flue.

7c. Name & Address Manufacturer:

Record name and address of manufacturer or importer. If information is not on the stove, check with the store management.

7d. Model No:

List the model name also, if given.

7e. Model Year:

Year unit was manufactured. Report the most recent, available date... year of manufacture as stated on unit (look for date code); year of certification as stated on unit; or year model was first sold by retailer.

7f. How was model year determined?

Self explanatory.

7g. To provide the most accurate assessment of the current marketplace, we need to examine the most recently received unit of a particular model whenever possible. However, note that if no unit is available which was received after 6/80, complete the form for whatever unit is available.

7h. Location of unit examined:

Self explanatory.

7i. Name of certifying lab on label.

If the literature (manual, etc) indicates that the model has been certified, but the information is not available on the unit itself, enter "none" in this section, but report the certifying lab and location of the certification under remarks. Be sure any reported certification covers the coal and wood burning appliance and not other components, such as a blower or chimney.

7j. Does label include distance to combustibles?

This information may be either on the certification label or a separate label. Be sure to look each model over very thoroughly in that labels may not be readily visible. As noted on the questionnaire, if the unit bears no certification label, record your response as NA. Combustibles include walls, ceilings, etc.

7k. Location of label with distances to combustibles:

If distances to several designated items (walls, ceilings, furnishings) are not located on the same label, report the location of each label. See the following example:

☒ Back *distance to walls*
☐ Front
☒ Side *distance to furniture*
☐ Other _____
☐ NA

7l. No. months this model has been sold:

Record estimated number of months model has been sold, as remembered by the owner or store manager.

7m. No. sold in past 12 months.

Record estimated number of units sold during the past 12 months as reported by the owner or store manager. Ask that the number be as accurate as possible, but do not request a review of store documents.

7n. Lab certification statement on label:

Copy verbatim the statement as to how the model was certified. Examples: "Testing and Inspection Service Provided by . . ."; "Tested to UL 1482"; and "Test Standards ANSI-UL 737 and UL 1482". If this information is not available on the label, but is located in other materials provided by the manufacturer, enter "none" in this section, but record the statement and its location under remarks.

7o. Location of statement:

Self explanatory.

7p. Remarks:

Record any additional information you believe is pertinent.

1. Name of Store

2. Address

3. Phone No.

4. Type of Store: (Check) ☐ Stove/Fireplace ☐ Department ☐ Hardware ☐ Lumber ☐ Other (Specify)5. Type of Ownership: (Check) ☐ Chain ☐ Franchise ☐ Single Store ☐ Other (Specify)

6. If more than one store: How many nation-wide? How many in metropolitan area? How many stores included in sales data?

7. List each model stove currently available for sale by the store and provide the information requested.

a. Item No.	c. Name & Address Manufacturer	f. How was model year determined?	g. If model year is prior to 1980, ask to see a unit received after 6/80. If no unit received after 6/80 is available check this <input type="checkbox"/>	h. Location of unit examined	i. Name of Certifying Lab on label (If none, enter none)	k. Location of label with distance to combustibles (If no label, enter NA)	l. No. Months this model has been sold
b. Type *	d. Model No.	e. Model Year **	<input type="checkbox"/> On unit <input type="checkbox"/> In manual <input type="checkbox"/> Retailer <input type="checkbox"/> Other	<input type="checkbox"/> On display <input type="checkbox"/> Storage Area <input type="checkbox"/> Catalog	j. Does unit have label with distance to combustibles? (No label, enter NA) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA	<input type="checkbox"/> Back <input type="checkbox"/> Front <input type="checkbox"/> Side <input type="checkbox"/> Other	m. No. sold in past 12 months

n. Lab Certification Statement on label:
(If none, enter none)

p. Remarks

o. Location of Statement: ☐ Back ☐ Side ☐ Front ☐ NA ☐ Other
(If no certification statement, enter NA)n. Lab Certification Statement on label:
(If none, enter none)

p. Remarks

o. Location of Statement: ☐ Back ☐ Side ☐ Front ☐ NA ☐ Other
(If no certification statement, enter NA)

*Type of stove use the following abbreviation: FS=Fireplace Stove; RHS=Room Heater Stove; RHS/FS=Room Heater Stove/Fireplace Stove Combination; CS=Cook Stove; FI=Fireplace Insert

**Year unit was manufactured. Report the most recent, available date....year of manufacture as stated on unit (look for date code); year of certification as stated on unit; or year model was first sold by retailer.

a. Item No.	c. Name & Address Manufacturer	f. How was model year determined?	g. If model year is prior to 1980, ask to see a unit received after 6/80. If no unit received after 6/80 is available check this <input type="checkbox"/> and proceed using pre-6/80 unit. If unit received after 6/80 is available check this <input type="checkbox"/> and proceed using post 6/80 unit.	h. Location of unit examined	i. Name of Certifying Lab on label (If none, enter none)	j. Does unit have label with distance to combustibles? (No label, enter NA) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA	k. Location of label with distance to combustibles (If no label, enter NA) <input type="checkbox"/> Back <input type="checkbox"/> Front <input type="checkbox"/> Side <input type="checkbox"/> Other <input type="checkbox"/> NA	l. No. Months this model has been sold
b. Type *	d. Model No.	<input type="checkbox"/> On unit <input type="checkbox"/> In manual <input type="checkbox"/> Retailer <input type="checkbox"/> Other _____		<input type="checkbox"/> On display <input type="checkbox"/> Storage Area <input type="checkbox"/> Catalog				m. No. sold in past 12 months
	e. Model Year **							

n. Lab Certification Statement on label: _____

(If none, enter none)

p. Remarks _____

o. Location of Statement: ☐ Back ☐ Side ☐ Front ☐ NA ☐ Other _____

(If no certification statement, enter NA)

a. Item No.	c. Name & Address Manufacturer	f. How was model year determined?	g. If model year is prior to 1980, ask to see a unit received after 6/80. If no unit received after 6/80 is available check this <input type="checkbox"/> and proceed using pre-6/80 unit. If unit received after 6/80 is available check this <input type="checkbox"/> and proceed using post 6/80 unit.	h. Location of unit examined	i. Name of Certifying Lab on label (If none, enter none)	j. Does unit have label with distance to combustibles? (No label, enter NA) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA	k. Location of label with distance to combustibles (If no label, enter NA) <input type="checkbox"/> Back <input type="checkbox"/> Front <input type="checkbox"/> Side <input type="checkbox"/> Other <input type="checkbox"/> NA	l. No. Months this model has been sold
b. Type *	d. Model No.	<input type="checkbox"/> On unit <input type="checkbox"/> In manual <input type="checkbox"/> Retailer <input type="checkbox"/> Other _____		<input type="checkbox"/> On display <input type="checkbox"/> Storage Area <input type="checkbox"/> Catalog				m. No. sold in past 12 months
	e. Model Year **							

n. Lab Certification Statement on label: _____

(If none, enter none)

p. Remarks _____

o. Location of Statement: ☐ Back ☐ Side ☐ Front ☐ NA ☐ Other _____

(If no certification statement, enter NA)

a. Item No.	c. Name & Address Manufacturer	f. How was model year determined?	g. If model year is prior to 1980, ask to see a unit received after 6/80. If no unit received after 6/80 is available check this <input type="checkbox"/> and proceed using pre-6/80 unit. If unit received after 6/80 is available check this <input type="checkbox"/> and proceed using post 6/80 unit.	h. Location of unit examined	i. Name of Certifying Lab on label (If none, enter none)	j. Does unit have label with distance to combustibles? (No label, enter NA) <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> NA	k. Location of label with distance to combustibles (If no label, enter NA) <input type="checkbox"/> Back <input type="checkbox"/> Front <input type="checkbox"/> Side <input type="checkbox"/> Other <input type="checkbox"/> NA	l. No. Months this model has been sold
b. Type *	d. Model No.	<input type="checkbox"/> On unit <input type="checkbox"/> In manual <input type="checkbox"/> Retailer <input type="checkbox"/> Other _____		<input type="checkbox"/> On display <input type="checkbox"/> Storage Area <input type="checkbox"/> Catalog				m. No. sold in past 12 months
	e. Model Year **							

n. Lab Certification Statement on label: _____

(If none, enter none)

p. Remarks _____

o. Location of Statement: ☐ Back ☐ Side ☐ Front ☐ NA ☐ Other _____

(If no certification statement, enter NA)

*Type of stove use the following abbreviation: FS=Fireplace Stove; RNS=Room Heater Stove; RNS/FS=Room Heater Stove/Fireplace Stove Combination;

CS=Cook Stove; FI=Fireplace Insert

**Year unit was manufactured. Report the most recent, available date....Year of manufacture as stated on unit (look for date code); year of certification as stated on unit; or year model was first sold by retailer.

Memorandum

TO : Margaret Neily, Program Representative *MM* DATE: **MAY 25 1982**
For: James Hoebel, Fire and Thermal Burn Program Manager, EX-P
Through: William W. Walton, Acting DAED, ES *W3*
FROM : Through: William H. King, Jr., Acting Director, ESES *WHP*
Eleanor Perry, ESES *EP*
SUBJECT: Provisions for Labeling and Instruction Manuals in the
Underwriters Laboratories Standards for Fireplace Stoves (UL737)
and Solid Fuel Room Heaters (UL1482)

Underwriters Laboratories (UL) has adopted a number of changes to the standards for Fireplace Stoves (UL737) and Solid Fuel Type Room Heaters (UL1482). This memorandum compares the labeling and instruction manual requirements of the proposed CPSC rule with the requirements of these UL standards covering wood and coal burning heating equipment.

Labeling Requirements

All of the new labeling requirements with the exception of those specifically applicable to coal heaters become effective by August 31, 1982. The requirements for coal heaters become effective March 9, 1983. With the inclusion of these adopted UL labeling requirements, most of the UL provisions either equal or exceed those in the CPSC proposal. Provisions which CPSC designates to be visible during normal operation of the wood and coal burning heating equipment are, with one exception, required by UL to be visible while feeding fuel. This exception is in the requirement for inclusion of a distance to be maintained between the heating equipment and furnishings. UL uses the term "combustible materials" to refer to any material that will ignite and burn including walls and furnishings. The UL standards do not make a distinction between the two or require that this clearance information be visible while feeding fuel. Consequently, this information may be, for example, on the back of the heater.

A comparison of UL's adopted requirements with those proposed by CPSC is in figure 1. Additional labeling requirements in UL 1482, the Standard for Room Heaters, which exceed those in the CPSC proposal are as follows:

- o The statement, "Do not connect this unit to a chimney flue serving another appliance."
- o Date of manufacture.
- o Maximum flue collar draft for coal stove operation and information on measuring and controlling draft.
- o The statement on or near the feed door of coal heaters, "CAUTION-RISK OF EXCESSIVE TEMPERATURES AND DAMAGE TO UNIT - PROPER OPERATION REQUIRES THE USE OF ONLY (size of coal) SIZE (Type of coal) COAL."
- o Additional information to cover needed requirements for specific uses as indicated from testing. These requirements may cover, for example, grates, chimneys, blower assemblies, the avoidance of injury from moving parts, and use in mobile homes.

UL labeling requirements for fireplace stoves (UL737) which exceed the proposed CPSC labeling requirements, are:

- o The statement, "Do not connect this unit to a chimney flue serving another appliance."
- o Date of manufacture.
- o A warning about operation with the doors partially open when shown to be necessary from tests.
- o Electrical rating and statements covering the use of dampers, grates and the routing of power supply cords when applicable.

Installation and Operation Instructions

Requirements for the proposed CPSC instructions include explanations of the consequences which may result from improperly installing, using and maintaining the wood and coal burning heating equipment. The proposed CPSC rule also specifies that these instructions be separated into clearly labeled installation, maintenance and use sections. Differences between the proposed CPSC instruction requirements and the UL requirements for instructions are in the areas of the general consequential explanation, the format and the emphases on specific hazards.

The requirements for instructions in the two UL standards (UL1482 and UL737) are the same as those in the proposed CPSC rule with the following exceptions:

- o The general safety notice giving the consequences of failure to install and use the appliance correctly.
- o Direction to refer to the chimney and chimney connector manufacturer's instructions and local codes for installation through combustible walls and ceilings. (The UL standards specify, "details concerning the parts and materials required and the step-by-step process for installing a room heater/fireplace stove, accessories and its chimney connector." There is no specific reference to the passage of the connector through a combustible wall.)
- o The distance to be kept between the heater and furnishings is not a specified requirement. The clearance to combustible materials is required and the distance to the back and side of the heater and the chimney connector to the wall are singled out.

Conclusions:

Recent changes in the UL standards for solid fuel room heaters (UL1482) and Fireplace Stoves (UL737) have made the requirements for labels and instructions in these standards very close to those proposed by CPSC. One difference in both the label and the instructions is in the requirement for the treatment of reminders of clearances needed between heaters and furnishings. The CPSC requirement is that this information be clearly visible during heater use and makes reference to a clearance to furnishings. The UL standards require that the clearance to "combustible materials" be visible after installation but they do not require that this clearance data have the prominence of other use information ("visible while feeding fuel"). Other differences between the CPSC proposal and the UL requirements for the instructions are in the format of the instructions; the explanations of the consequences of not following the instructions; and specific references to the procedure for joining a chimney connector and chimney through a combustible wall.

Figure I
Comparison of Proposed CPSC and Adopted UL Labeling Requirements

Proposed CPSC Labeling Requirements	UL1482 & UL737 Written & diagram form (1)
Distance from back and sides of appliance and chimney connector to combustible walls in diagram form.	Written & diagram form (1)
Distance between chimney connector and ceiling in either diagram or written form.	Written & diagram form (1)
Type and dimensions of floor protection.	May be in diagram form
Type of chimney and chimney connector needed.	Included
Reference to instructions and building codes for methods to use for passing a chimney or connector through a combustible wall.	Included
Statement not to overfire and a description of at least 1 condition that signals overfiring. (3)	Included (4)
Statement on frequency of chimney and connector inspection and to clean when necessary. (3)	Included (4)
Install and use according to manufacturer's directions and local building codes.	Manufacturer's directions included (2)
Contact local building and fire officials about restrictions and installation inspection requirements.	Included
Distance to be maintained between the appliance and furnishings. (3)	Written and diagram form (1)
Type of fuel. (3)	Included (4)
Model identification.	Included
Name and address of manufacturer, importer or private labeler.	Manufacturer or private labeler

Notes (1) Stated as clearance to combustible materials, not as walls, ceilings or furnishings.

(2) Building codes not included but the model codes allow installation according to manufacturer's instructions for listed appliances.

(3) CPSC specified as visible during normal use of appliance.

(4) UL specified as visible while feeding fuel to the heater.



UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

TO : Margaret Neily, Program Representative DATE: NOV 8 1982
For: James Hoebel, Fire and Thermal Burn Program Manager, EX-P
Through: William W. Walton, Acting DAED, ES *W3*
FROM : Through: William H. King, Jr., Acting Director, ESES *2AKQ*
Eleanor Perry, ESES *EP*

SUBJECT: Labeling and Instruction Manual Requirements for Wood and Coal
Burning Fireplace Stoves and Room Heaters

This memorandum updates information on the labeling and instruction manual requirements of organizations certifying wood and coal burning fireplace stoves and room heaters.

Underwriters Laboratories' (UL) recent changes (ES memo of May 25, 1982) to the labeling requirements of UL 737 and UL 1482 have made the UL and proposed CPSC requirements very similar. Our 1981 investigations revealed, however, that even though all of the other certifying organizations used these UL standards for tests, the labeling requirements varied widely. In order to assess the current situation, Mike Sciacca (Wood Heating Alliance), at CPSC's request, queried six of the laboratories identified in CARM's survey report. The laboratories were chosen either because of the percent of certified stove models or sales attributed to them. The laboratories contacted were:

- . Arnold Greene Testing Labs, Inc. (AGTL)
Natick, Massachusetts
- . ETL Testing Labs, Inc. (ETL)
Cortland, New York
- . Gas and Mechanical Labs (GML)
Los Angeles, California
- . Energy Systems, Inc. (ESI)
Auburn, Alabama
- . Energy Testing Lab of Maine (ETLM)
South Portland, Maine
- . Product Fabrication Service (PFS)
Madison, Wisconsin

Additionally, since our 1981 information indicated labeling differences from the UL requirements, ES obtained further information from the International Conference of Building Officials (ICBO).

82

Present Requirements

The present requirements for the test standard and instruction manual content are uniform. All of the organizations specify the use of UL 737 for fireplace stoves and UL 1482 for room heaters. Other findings are as follows:

- . ESI and GML only test for other certifying organizations. These labs do not have their own labels.
- . ETL, ETLM and PFS have their own certification programs. They all use the prescribed UL label content. There are some differences in the use of words, diagrams, or both, as specified by UL for clearance information.
- . AGTL does not use the UL-required label content. Information on their label is subject to variance. The information here was taken from the label of the stove identified in the CARM survey as having the most sales. The following information was on the AGTL label:
 - 1. Name of manufacturer
 - 2. Model number
 - 3. Date tested
 - 4. Fuel
 - 5. Label serial number
 - 6. Use with (Name of Manufacturer) coal basket
 - 7. Name of testing lab
 - 8. Clearance from stove to combustibles, side and rear
 - 9. UL's hot surfaces label
- . The ICBO-specified label differs from the UL requirements in four aspects. The following information is not on the ICBO label:
 - 1. The specification of the type of chimney connector.
 - 2. The reminder that special precautions are needed to join the chimney and connector through a combustible wall.
 - 3. The reminder that installation and use should be according to the manufacturer's directions.
 - 4. The reminder that the local building official should be contacted.

Figure 1 summerizes the present label situation and compares it to the proposed CPSC label.

Conclusions

The following conclusions can be made about the present certification, labeling and instruction manual situation for wood and coal fireplace stoves and room heaters.

- . All of the certifying organizations contacted use UL 737 and UL 1482 for test procedures and instruction manual content.
- . Two of the six laboratories contacted do not have a private label.
- . Three of the remaining four laboratories contacted use the UL-specified label with some variance in the presentation of clearance information.
- . The one remaining laboratory uses a label on the most popular unit it certifies that contains very little of the information required on the UL label.
- . The UL label contains (ES memo of May 25, 1982) all of the provisions proposed for the CPSC label. The clearance to furnishings is not highlighted but included in the clearance to combustible materials.
- . There appear to be three prominent labels -- the UL, the ICBO, and the Arnold Greene.

Figure 1
Comparison of Label Content

Proposed CPSC Label Content	UL	ICBO	AGTL (2)
Clearance of back and sides of appliance from walls	X	X	X
Clearance of appliance to furnishings	X (1)	X (1)	
Clearance of chimney-connector to walls	X	X	
Floor protector materials and dimensions	X	X	
Type of chimney and chimney connector needed	X	chimney	
Precautions needed to join chimney and connector	X		
Type of fuel	X	X	X
Statement on overfiring	X	X	
Frequency of inspection and cleaning chimney and connector	X	X	
Install and use according to manufacturer's directions	X		
Contact building official	X		
Name of manufacturer, importer, or private labeler	X	X	X
Address of manufacturer, importer, or private labeler	X	X	
Model Number	X	X	X

(1) Stated as clearance to combustible materials, not as walls, ceilings or furnishings.

(2) Information from the label on the largest AGTL seller in the survey. The label content is that required by the state of Massachusetts.

X - Denotes inclusion on the label

1
UNITED STATES GOVERNMENT

RECEIVED

U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

MAY 25 9 20 AM '82

TO : Jim Hoebel, OPM

DATE: May 24, 1982

FROM : Warren A. Mathers, EPHF *WAM*

SUBJECT: Wood Heating Appliances: Comparison of UL 1482 Installation and Labeling Requirements to CPSC's Proposed Requirements

An analysis was conducted of the UL 1482 installation and labeling requirements to determine if the requirements generally followed those proposed by the agency for wood burning appliances. UL 1482 has been revised and in general includes the provisions proposed by the agency. However, there are several points I would like to discuss about the UL requirements for the installation and operation instructions as found in section 2 of the UL standard for chimney connectors and creosote.

Chimney Connectors

The proposed rule published by the agency included an Appendix II - "Recommended Outline for Directions" in which there is a section on "Installation Instructions." It was proposed that parts and materials required for installation would note "the thimble or type of connection through a combustible wall or ceiling" in the manufacturers manual accompanying the appliance. Also, that "methods to safely join the chimney connector to the chimney through a combustible wall or ceiling" would be specified.

Since the agency was fully aware at that time of the fire hazard from an improperly installed chimney connector through a combustible wall, the intent was to clearly tell the consumer about the proper installation. Thus, it was proposed that the necessary parts would be specified and the method specified for installation through a combustible wall.

The UL 1482 requirement in section 2.3(A) states "The parts and materials required and the step-by-step process for installing a room heater, accessories and its chimney connector." This statement is not specific enough. The manufacturer may interpret this as connection to the appliance. It should be specific about installation through a combustible wall so the manufacturer will understand what should be included in the installation instructions. It is the only way to assure that sufficient and adequate information is provided for the consumer to safely and properly install the chimney connector through a combustible wall.

UNITED STATES GOVERNMENT

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U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

MAY 25 9 20 AM '82

OFFICE OF THE
ADMINISTRATIVE

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Page 2 - Wood Heating Appliances: Comparison of UL 1482 Installation and Labeling Requirements to CPSC's Proposed Requirements

Creosote

The problem with fires from creosote is well known. An aspect of the problem that is not well defined though is how often to inspect for creosote buildup to determine whether or not the chimney, etc., needs cleaning. The agency proposal included two points about creosote that the manufacturer should include in the owners manual. The instructions were to include how to inspect the system and that it should be inspected "twice monthly" during the season.

Since the system is a closed system, it was felt that instructions were necessary to tell the consumer what to do to inspect the system for creosote buildup. Determination of how often to inspect was difficult but the recommendation of twice monthly was based on accidents in which creosote buildup occurred over a matter of days. It was recognized that creosote buildup also took longer but it was considered better to cover the situations in which the buildup was over a shorter period of time. In this way consumers would possibly become accustomed to frequently checking for creosote and establish a routine fitting their situation.

The UL 1482 requirement in section 2.3(G) notes that the instructions shall include particular details concerning inspection, maintenance and cleaning of the chimney and chimney connector and in (k) should be inspected for creosote"... at least once every two months. . .". From this it isn't clear that the manufacturer will explain how to inspect for creosote buildup. As noted, since it is essentially a closed system, it is not easy to inspect. Of particular concern is the consumer who did not install the system. It may be asking too much for these consumers to determine where to disassemble the system, should this be necessary, to inspect for creosote. Some information has to be provided if the consumer is to heed the inspection instructions.

As for the frequency of inspection for creosote, every two months is too long in some situations, based on investigative data. The UL requirement has an option which allows manufacturers to shorten the time period for inspection. Some manufacturers who are aware certain types of stoves (e.g., airtight stoves) may promote rapid creosote buildup may specify a shorter inspection period. This will be helpful if it happens but is too limited since it may not adequately account for all situations of rapid creosote buildup.

Conclusion

The effort by UL to revise the voluntary standards regarding wood heating appliances, particularly UL 1482 is very encouraging and may prove very beneficial in reducing the number of household fires associated with these products. However, I believe the above points made about chimney connectors and creosote are weaknesses in the standard and efforts should be made to correct them. This may either be done by working with UL or perhaps by working with the Wood Heating Alliance (WHA). It is possible that the WHA may be willing to encourage manufacturers to include additional information in their owners manual that goes beyond what UL may require.

Memorandum

RECEIVED

AUG 12 9 31 AM '82

OFFICIAL PROGRAM
MANAGEMENT

DATE: August 11, 1982

TO : Jim Hoebel, EXP

FROM : Warren A. Mathers, EPHF

SUBJECT: Wood Stove Chimney Connector Pipe/Owner's Installation Manual

Wood stove manufacturers include owner's manuals with each appliance when sold. The manual provides operation and installation information to the buyer. The installation instructions should provide the necessary information for safe and proper installation of the stove.

A review of owner's manuals provided by 16 stove manufacturers indicated that most are deficient in their installation instructions. Particularly lacking were details on the installation of the chimney connector pipe through a combustible wall. Only the manuals of manufacturers of freestanding stoves were reviewed. These manuals were collected during the February 1982 stove label survey.

Since it is well known that the greater fire hazard from wood stoves is improper chimney connector pipe installation, it is critical that this issue is properly addressed in installation instructions. Only one of the 16 manuals reviewed had adequate information on connector pipe installation. In addition to this one, there were eight that noted something about a thimble or connector through a combustible wall or ceiling. However, these eight provided insufficient information for the installer to properly make the connection because no detail was included for the installer to follow. Some mentioned UL and various codes to follow but this is expecting entirely too much of the owner/installer to write or otherwise seek information that may require additional money as well as weeks to receive.

Based on this review of owner's manuals, it is clear that the manuals have to be upgraded to assure safe and proper installation. It appears the quickest way to upgrade the owner's manual is through working with the Wood Heating Alliance (W.H.A.). By doing so, improvement to all aspects of the installation instructions can also be suggested.

Memorandum

U.S. CONSUMER PRODUCT
SAFETY COMMISSION
WASHINGTON, D.C. 20207

TO : James Hoebel, EX-P
THROUGH: Walter R. Hobby, AED, Economics *WRH*
FROM : Dale Ray, ECCP *May*

DATE: November 24, 1982

SUBJECT: Wood Stove Labeling Rule Briefing Package

The briefing package on the proposed 27(e) labeling rule for wood and coal stoves discusses the complexity of the voluntary standards system involving the testing, certification, and labeling of these products. The staff's retail survey in 1982 identified 18 different certifying organizations, predominant among which were Arnold Greene, E.T.L. and UL, with an estimated 31.3, 19.6, and 10.5 percent of the stove market respectively. We estimated UL's market share in 1980 to be about 70 percent, based on individual label shipment data obtained directly from UL, and on industry estimates of total stove shipments.

In our original analysis of the solid fuel stove market, we relied on the best available estimates of sales i.e., those developed by the Wood Heating Alliance (WHA). This information was partially substantiated by information received from other industry and government sources.

It should be noted that these earlier WHA estimates were based primarily on data submitted by member firms; these member firms were believed to account for the majority of U.S. production. A 1982 study, commissioned by the WHA and conducted by Housing Industry Dynamics, Inc., indicates that the level of 1981 sales may have been understated by as much as 60 percent; thus only 34 percent of the total number of stoves sold in 1980 may have been U.L. listed. However, the results of this study have been contested by the WHA; further clarifications of the findings of the study are expected within six months.

Further, 1981 sales are believed to be down as much as 30 percent from 1980. Due to this substantial industry downturn, a large number of domestic manufacturers either left the market or sharply curtailed the number of models available during 1981. It is likely that firms which market stoves nationally (and which are most likely to be U.L. listed), were most heavily affected by this downturn; these firms bear substantial freight costs in shipping, and compete with smaller, regional suppliers. Thus, it is entirely possible that market conditions could have influenced a significant change in the "label mix", as found in the CPSC survey. UL has reported that about 238,000 labels were sold for stoves ("room heaters" and "fireplace stoves") produced in 1981. This represents about 11 percent of the 2.1 million stoves reported to be shipped by the HID survey (or about 26 percent of the 900,000 units most recently reported to be shipped by WHA). Since a significant number of 1981 stove shipments may have been produced in 1980 (unlike the situation during the 1979-80 season when all production was shipped),

the proportion of retail unit sales bearing UL labels cannot be precisely determined. Although it is unlikely that a majority of stoves sold to consumers was UL-labeled, it is likely that a significantly greater proportion than 11 percent were so labeled. UL has also reported that label sales are running at about the same rate in 1982.

Thus, we believe that our previous information may have led to an overstatement of UL's market share in 1980. Further, recent changes in the market structure, including the development of the complex voluntary certification system and the reduction in the number of firms believed to produce UL-listed stoves, lead us to believe that the proportion of stove shipments that are listed specifically by UL may have decreased in 1981 and 1982.

We are currently contacting other testing and certification organizations to request information on the numbers of stoves listed by them since 1980. One organization, Energy Testing Laboratories of Maine, has provided data on their listing mark sales for 1980 and 1981. Data from others are expected before the staff briefs the Commission in December. Individual organizations' (except UL's) sales data are considered proprietary. A restricted summary of available figures will be provided separately as necessary.

CAUTION:

KEEP ASH DOOR CLOSED DURING FIRING OF THE HEATER TO AVOID DEVELOPING EXCESSIVE TEMPERATURES.

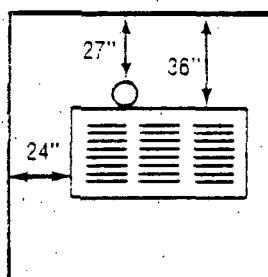
DO NOT OVERFIRE. IF HEATER OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING.

FOR USE WITH SOLID WOOD FUEL ONLY.

INSPECT AND CLEAN CHIMNEY FREQUENTLY — UNDER CERTAIN CONDITIONS OF USE, CREOSOTE BUILD-UP MAY OCCUR RAPIDLY.

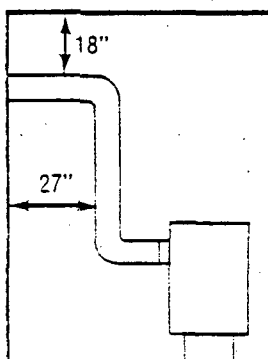
CONTACT LOCAL BUILDING OR FIRE OFFICIALS ABOUT RESTRICTIONS AND INSTALLATION INSPECTION IN YOUR AREA.

**MINIMUM CLEARANCES
TO COMBUSTIBLE
MATERIALS (INCHES)**



**SIDEWALL/BACKWALL
INSTALLATION**

**MINIMUM CLEARANCES
TO CEILING (INCHES)**



INSTALL AND USE ONLY IN ACCORDANCE WITH THE MANUFACTURER'S INSTALLATION AND OPERATING INSTRUCTIONS.

USE 6 INCH DIAMETER BLACK OR BLUED STEEL (24 GAUGE MIN.) CHIMNEY CONNECTOR WITH LISTED RESIDENTIAL TYPE AND BUILDING HEATING APPLIANCE OR MASONRY RESIDENTIAL TYPE CHIMNEY. (SPECIAL METHODS ARE REQUIRED WHEN PASSING THROUGH A WALL OR CEILING. SEE INSTRUCTIONS AND LOCAL BUILDING CODES).

INSTALL STOVE A MINIMUM OF **36** INCHES FROM BACK WALL AND **24** INCHES FROM SIDE WALL. CHIMNEY CONNECTOR: MINIMUM **27** INCHES FROM BACKWALL-**33** INCHES TO SIDEWALL AND **18** INCHES FROM CEILING.

DO NOT CONNECT THIS UNIT TO A CHIMNEY FLUE SERVING ANOTHER APPLIANCE.

DO NOT BUILD FIRE IN HEATER WITHOUT GRATE INSTALLED. HOT WHILE IN OPERATION. DO NOT TOUCH - KEEP CHILDREN, CLOTHING AND FURNITURE AWAY.

BLOWER: XXXXXXXXXX BLOWER NO. F36 MAY BE USED WITH THE MODEL 2721 STOVE.

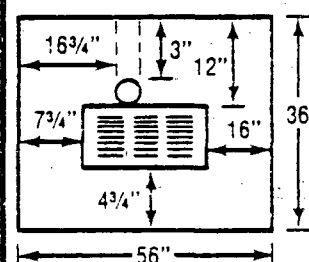


UNDERWRITERS
LABORATORIES
LISTED INC. ®

U.L. 1482, NBK. RPT.
MAY 10, 1982

SOLID FUEL ROOM HEATER
NO. _____

**FLOOR PROTECTOR
MINIMUM SIZE
(INCHES)**



**FLOOR PROTECTOR
MATERIAL**

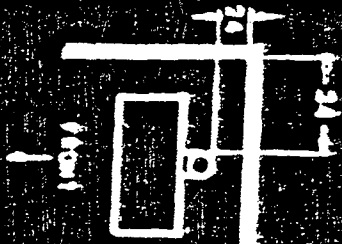
3/8" MILLBOARD HAVING A THERMAL CONDUCTIVITY OF $K=0.84$ Btu in/ft hr deg F. WITH 28 GAUGE SHEET METAL OR LISTED FLOOR PROTECTOR—EXTENDING **16"** IN FRONT OF THE LOADING DOOR—**7-3/4"** ON REMAINING SIDE—DIRECTLY UNDERNEATH AND **6"** TO EITHER SIDE OF THE CHIMNEY CONNECTOR.

CAUTION

FOR USE WITH SOLID WOOD FUEL ONLY. DO NOT OVERFIRE—IF HEATER OR CHIMNEY CONNECTOR GLOWS, YOU ARE OVERFIRING. INSPECT AND CLEAN CHIMNEY FREQUENTLY. UNDER CERTAIN CONDITIONS CREOSOTE OR SOOT BUILDUP MAY OCCUR RAPIDLY.

WARNING: DO NOT OVERFIRE

**MINIMUM CLEARANCES
TO COMBUSTIBLES
IN INCHES**



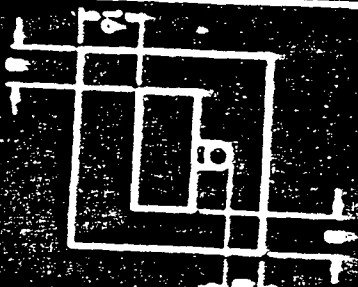
**MINIMUM CLEARANCE
TO COMBUSTIBLES
IN INCHES**

MODEL: **2000**
TESTED SPRINKLER, 1000 PER UL 1483
ICBO NO. 3336
SERIAL NO. **2000**

FOR USE WITH SOLID FUEL ONLY.
INSTALL AND USE ONLY IN ACCORDANCE WITH THE
MANUFACTURER'S INSTALLATION AND OPERATING
INSTRUCTIONS.
UNIT MUST BE INSTALLED IN CONJUNCTION WITH
A UL LISTED 8 INCH LOW-NEAR RESIDENTIAL
APPLIANCE TYPE CHIMNEY (ALL-FUEL).
CHIMNEY CONNECTOR MUST BE A MINIMUM OF 24 CAL
BLACK OR BLUED STEEL 8 INCH DIAMETER
UNLESS AND ONLY WHEN CHIMNEY PREVIOUSLY UNDER
CERTAIN CONDITIONS OF USE, CERTIFIED BUILDING
SAFETY OFFICIAL.

MADE IN U.S.A.

**FLUE GAS PROTECTION
MINIMUM SIZE
IN INCHES**



**1/8 INCH THICK
ASBESTOS WILL DO ALSO
OR EQUIVALENT**

**IF UNIT OR CHIMNEY
CONNECTOR CLOWS
YOU ARE OVERFIRING**

Inspection or Testing Laboratory Label

MODEL

DATE TESTED

5/30/1980

FUEL APPROVED

WOOD AND COAL

LABEL

SER. NO.



Arnold Greene Testing Laboratories, Inc.
Natick, Massachusetts 01760

501-692

CLEARANCE TO COMBUSTIBLES

SIDE

36"

REAR

36"

TEST STANDARD(s)

UL1482

Memorandum

TO : James F. Hoebel, Program Manager, Fire and
Thermal Burn Hazards, OPM

DATE: 12/2/82

FROM : Peter W. Preuss, Ph.D., AED/HS *PW Preuss*

SUBJECT: Proposed Rule Coal/Wood Stove Label

I believe that the history of the CPSC/industry efforts on this matter warrant an additional period of joint activity to implement a voluntary standard. In essence, I think that the industry has shown itself to be responsive to our concerns, has implemented what we have proposed be done, and has indicated a willingness to work with us at present, and in the future, to deal with additional concerns that we may have.

Historically, our interests in this issue go back to the petition that we granted on June 7, 1979, to issue a rule requiring that coal/wood stoves be labeled to indicate the necessary clearance to combustibles and the type of chimney required. The industry was responsive to that action, and by 1980, 72% of estimated total unit sales included a UL certifying label.

When the Commission actually published a proposed rule in November of 1980, it included other requirements in addition to the above label. Again, UL was forthcoming, so that their existing standard was revised to conform to the CPSC proposal. The new standard (which is equal to, if not better than what we have proposed) became effective on August 31, 1982.

It appears that a problem remains, however, with regard to the instructions that are given out with the stoves. In fact, in a recent survey that was carried out, the staff found these instructions to be less than adequate. This concern is of recent origin and has not yet been shared with the industry. Additionally, it should be noted that these manuals were prepared only a short time after the publication of our proposed rule. I see no reason why we could not expect a response similar to that we received in the past, i.e., an upgrading of what currently exists to meet our concerns.

Finally, it is important to note that the industry association has offered to work with us to correct differences in labeling that may exist, and to improve the instruction booklets. I suggest, therefore, that an opportunity should be provided to the industry to work on a voluntary program, and that a mandatory standard should be deferred for now. I further suggest that six months would be sufficient to set this program in place, so that by the end of May if sufficient progress has not been made, a mandatory standard, effective for the coming heating season, could still be implemented.