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UNITED STATES GOVERNMENT

U.S. CONSUMER PRODUCT
SAFETY COMMISSION

Memorandum

DATE: NOV 24 1981

TO: The Commission
THROUGH: Sadye Dunn, Secretary
THROUGH: Margaret A. Freeston, Acting General Counsel
THROUGH: Kirke Harper, Acting Executive Director
THROUGH: Peter W. Preuss, AED, Health Sciences *PKP*



FROM: Hugh L. Spitzer, Chemical Hazards Program, Health Sciences *HLS*
SUBJECT: Asbestos in the Home Booklet

The purpose of this paper is:

- ° to present to the Commission a draft copy of a booklet prepared by the staff, titled: Asbestos in the Home; and
- ° to seek Commission guidance on external review and publication of the booklet.

The Commission staff has been concerned, because of the numerous requests for information received by the Hot Line, about the need to provide information to consumers on the potential health hazard associated with in-place asbestos. An example of this broad-based consumer concern about in-place asbestos in homes is a recent telegram (Tab A) to the Chairman from Mr. Paul O'Connell, President of the American Society of Home Inspectors. Mr. O'Connell's concern focuses on what to tell consumers about the health hazard associated with deteriorating asbestos. The problems of in-place asbestos also were discussed recently by the National Academy of Sciences in a report on Indoor Pollutants.*

"The health hazard posed by indoor exposure to asbestos has been perceived as a problem by virtue of the presence of asbestos fibers in insulating and decorative materials. Abrasion, mechanical vibration, or deliberate disruption of asbestos-containing surfaces can result in increased fiber concentrations in the indoor environment.... Home exposure to asbestos due to aging, cracking, or physical disruption of insulated pipes or asbestos-containing ceiling tiles and spackling compounds may be greater than public exposure in schools, which have received the most attention."

* A copy of this report and a staff summary will soon be forwarded to the Commission.

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viewed or accepted by the Commission. JM - 83
Initial _____ Date _____

In FY 1981 the Commission authorized the staff to begin to develop a booklet which would inform consumers about asbestos uses in the home and, if appropriate, recommend to consumers procedures for reducing exposure to asbestos. The project was undertaken as a coordinated effort with the Environmental Protection Agency (EPA), under the aegis of the Interagency Regulatory Liaison Group (IRLG). The rationale for the coordinated effort was:

- ° to help consumers;
- ° to address concerns under the jurisdiction of both agencies;
- ° to eliminate duplicative efforts; and
- ° to share the cost of development, printing, and distribution.

Preparation of the Booklet

The goals of the booklet are:

- ° to identify known uses of asbestos in the home;
- ° to identify known uses of asbestos in the home which present a health hazard under certain conditions;
- ° to alert the consumer to the health hazard associated with exposure to asbestos; and
- ° to give the consumer information on how to limit release of asbestos fiber into the home.

In preparing the consumer information booklet on Asbestos in the Home, the staff reviewed relevant booklets and materials from the Occupational Safety and Health Administration, the Asbestos Information Association, and the Resilient Floor Covering Institute, to obtain suitable language and to provide consistency with existing warnings. For example, the Resilient Floor Covering Institute's recommendation that asbestos-containing floor tile not be sanded was incorporated into the booklet. Information in the booklet on the use of asbestos was obtained from published reports.

The strategy outlined for the containment of asbestos was adapted from the EPA Asbestos in the School strategy. The basic assumptions of the approach are that, (1) if the asbestos-containing material is in good condition, do not disturb it, and (2) that removal is the least desirable and last alternative in reducing the potential hazard from deteriorating asbestos.

The booklet was written jointly by the staffs of the CPSC and the EPA. The attached draft has completed extensive staff review at both agencies. The project, as originally planned, called for publication by the EPA.

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Publication

The staff believes that the booklet Asbestos in the Home is ready for external review. Prior to publication, the staff would like to solicit comments, from organizations concerned with consumer education, on the usefulness of the booklet in informing the consumer about the safer handling of asbestos-containing materials. Concurrently, the staff would like to seek comments from industry representatives on the technical accuracy of the booklet.

The Commission staff is aware that the Administrator of the EPA has suspended agency publication and distribution of all informational materials. The Chairman has contacted the Assistant Administrator of the EPA regarding the EPA's commitment to publication of the booklet. The Assistant Administrator of the EPA has indicated an interest in continuing the discussions started by staff on the publication of the booklet. Therefore, the staff seeks Commission approval to continue with the joint CPSC/EPA effort in publication of the Asbestos in the Home booklet.

The Commission might want to consider alternative funding for publication of the booklet if the EPA declines to go forth with publication of the booklet. Therefore, the staff has outlined, for Commission consideration, suggestions regarding other possible sources of funding for publication of the booklet.

The Commission may wish to:

- ° make the booklet available for publication by interested consumer and industry organizations;
- ° pending review and approval of the booklet, provide funding for publication at the mid-year review of the FY82 budget; or
- ° provide funding for publication in the FY83 budget.

Recommendations/Requests

- ° The staff requests Commission approval to solicit comments to the Asbestos in the Home booklet from interested consumer education organizations and industry representatives. The staff will consider all comments and will incorporate information which enhances the quality of the booklet. The staff will forward a copy of the final draft booklet to the Commission for approval. Concurrent with the external review process, the staff recommends that the Office of Outreach Coordination develop a plan for distribution of the booklet.
- ° The staff requests Commission approval to continue staff discussions on whether the EPA will publish the jointly developed booklet as originally planned.

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If the EPA declines to continue with the joint effort, the staff requests Commission guidance on development of alternative approaches to funding. Should the Commission elect to proceed with the publication of the booklet by CPSC, the Office of Outreach Coordination will obtain OMB approval, as required by OMB Bulletin 81-16 on "Controlling Production of Periodicals and Pamphlets," and will coordinate publication and distribution.

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INTRODUCTION

This booklet was prepared by the Environmental Protection Agency (EPA) and the Consumer Product Safety Commission (CPSC). It is intended to help the homeowner understand and handle the potential hazards of exposure to asbestos in the home. The booklet answers many often asked questions on asbestos and asbestos-containing products. It defines asbestos, the hazards that asbestos poses, and where it may be found in the home. The Table of Contents lists the questions this booklet answers. If additional information is needed, you may call one of the several toll-free numbers listed at the back of the booklet.

The Federal Government is concerned about asbestos-containing products in the home because in some cases fibers can be released from these products and be inhaled. Certain types of cancer could result from inhaling asbestos fibers. The federal agencies believe that asbestos in homes poses several unique problems. First, household members have little or no protection from exposure to asbestos fibers. Second, once released the fibers may stay suspended in the air for many hours. After they settle, fibers can be stirred up again by a household activity, such as sweeping. This continued presence could cause an ongoing risk in the home.

The EPA and CPSC have already taken several steps to reduce human exposure to asbestos. In 1973, the EPA prohibited the spraying of asbestos-containing materials for insulation, fire protection, and soundproofing. In 1975, the EPA prohibited the use of asbestos for pipe covering if the material, after drying, is easily crumbled. The CPSC banned two asbestos-containing products in 1977: patching compounds and artificial fireplace emberizing materials (ash and embers) containing respirable asbestos.

The EPA and CPSC are jointly investigating the risk from asbestos in other products. These activities are being coordinated to avoid duplication of effort, and to produce the most effective program possible for reducing unnecessary human exposure to asbestos.

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TABLE OF CONTENTS

QUESTIONS ANSWERED IN THIS BOOKLET

ANSWER ON PAGE

- What is asbestos?
- Why does asbestos cause concern?
- Do all asbestos-containing products create health hazards for consumers?
- Do all people exposed to asbestos develop asbestos-related disease?
- Do cigarette smokers exposed to asbestos, have a greater chance of developing lung cancer than smokers not exposed to asbestos?
- How is asbestos typically used in the home?
 1. Asbestos reinforced materials
 2. Insulation materials in appliances and contained behind barriers
 3. Exposed insulation or decorative materials
- What should I do if I have material in my home that contains asbestos fibers?

APPLIANCES

CEILINGS

FURNACES AND STOVES: Insulation and Door Gaskets

WALLS AND PIPES: Insulation

VINYL FLOOR TILES AND VINYL SHEET

ROOFING, SHINGLES AND SIDING

- What if I have to disturb some of the harder asbestos material for repairs or renovation?
- Where can I get more information?

Toll-free numbers for EPA and CPSC

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Q: What is asbestos?

A: Asbestos is a term used to describe a certain group of naturally-occurring mineral fibers. There are several varieties of asbestos, all of which are fire resistant and not easily destroyed or degraded.

Q: Why does asbestos cause concern?

A: Asbestos has been shown to cause cancer in humans. Cancers of the lung, abdomen, and other parts of the body, have been related to asbestos exposure through studies of workers and others exposed to asbestos. As yet, no one has been able to determine a level of exposure to asbestos fibers below which harm will definitely not occur.

Asbestos has a tendency to break into small fibers, which can float in the air. Most often, airborne fibers cannot be seen by the naked eye, and may be inhaled or swallowed. The crucial point is that in order to be a health hazard, asbestos fibers must be released from the material and be present in the air for people to breathe or swallow.

Q: Do all asbestos-containing products create health hazards for consumers?

A: NO. A health hazard exists only when asbestos fibers are released from the material or product. Soft, easily crumbled asbestos-containing material has the greatest potential for asbestos release and therefore has the greatest potential to create health risks.

Q: Do all people exposed to asbestos develop asbestos-related disease?

A: NO. Some people exposed to asbestos do not develop any related health problems. Health studies of asbestos workers and others, however, show that the chances of developing some serious illnesses, including lung cancer, are greater after exposure to asbestos. Once inhaled, asbestos fibers can become lodged in tissue for a long time.

Q: Do cigarette smokers exposed to asbestos, have a greater chance of developing lung cancer than smokers not exposed to asbestos?

A: YES. Asbestos exposure and cigarette smoking together have been shown to cause a greater risk of lung cancer than either factor acting alone.

Q: How is asbestos typically used in the home?

A: Asbestos has been used in a wide variety of products, including household and building materials. Basically, asbestos was used in products for three reasons: (1) to strengthen the product material; (2) for thermal insulation within a product; and (3) for thermal or acoustical insulation or decoration on exposed surfaces.

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1. Asbestos reinforced materials

Asbestos is frequently added to a wide variety of materials to improve their durability. This is because of three special characteristics of asbestos: resistance to breaking when bent, resistance to wear, and the ability to withstand high heat. Some examples of products where asbestos has been used to increase durability are: vinyl floor tiles, shingles, roofing materials, and "fire resistant" board. However, by no means do these products always contain asbestos.

2. Insulation materials in appliances and contained behind barriers

Many common appliances use or have used asbestos as insulation. The asbestos serves both to improve the efficiency of the appliance and to make it safer by protecting the user from burns.

3. Exposed insulation or decorative materials

In some cases asbestos was applied to open, exposed surfaces for decoration or as acoustical or thermal insulation. The asbestos was either mixed like cement and troweled onto the ceiling or wall or sprayed on with special equipment to create a very soft to the touch, irregular surface. The troweled-on application technique is occasionally found in homes built or renovated between 1945 and 1973. The spray-applied material, was developed for large commercial and public buildings and had limited use in individual homes.

Q: What should I do if I have a material that contains asbestos fibers?

When it is necessary to use or work with asbestos-containing products, reduce exposure to fibers as much as possible. To help you do this, we have provided some general guidelines on page ___ for working with asbestos-containing materials. Unless the material is in an area where it might be damaged, the material should not cause a problem. In most cases, asbestos-containing materials are best left alone.

APPLIANCES

Some appliances are or have been manufactured with asbestos-containing components. The CPSC is making an effort to identify household appliances which could release asbestos fibers during use. The CPSC has reviewed information on the use of asbestos-containing components in toasters, popcorn poppers, boilers, slow cookers, dishwashers, refrigerators, ovens, ranges, clothes dryers and electric blankets. Current production models of these appliances either do not contain asbestos components or the use of asbestos is unlikely to expose consumers to asbestos fibers during normal use. An exception was hair dryers with asbestos-containing heat shields. Laboratory tests of these hair dryers showed that asbestos fibers were released during use. This was the reason manufacturers voluntarily recalled such hair dryers in 1979.

If you are concerned about asbestos in an out-of-order appliance, it is best to take the appliance to a qualified repairman, rather than attempting to fix it yourself.

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CEILINGS

Some large buildings and a few homes built or renovated between 1945 and 1978 may contain a crumbly, asbestos-containing material which has been either sprayed or troweled onto the ceiling or walls. If the material is in good condition, we think it is best at this time to leave it alone. If the material appears damaged you may want to consider having it repaired or removed.

We recommend that you contact the builder of your home, or the contractor that applied the ceiling coating to determine whether asbestos-containing material was used. If you decide that it is necessary to remove this type of asbestos material, call one of the toll-free numbers listed on page ____ for information on contractors experienced in repair or removal of asbestos ceiling coatings and for guidelines for repair or removal of asbestos.

FURNACES AND STOVES: INSULATION AND DOOR GASKETS

Furnace Insulation

Oil, coal, or wood furnaces with asbestos-containing insulation and cement are generally found in older homes. System modernization such as oil to gas conversions can result in removal and damage to the old insulation.

If the insulation on or around your furnace is in good condition -- not damaged or flaking off -- we think it is best to leave it in place. If, however, pieces of insulating material accumulate around the furnace area, you may want to consider repair or removal. CHILDREN SHOULD NOT PLAY IN THE DUSTY AREA. (See additional CAUTION on page ____.)

If you suspect that asbestos-containing materials were used to insulate your furnace, and are concerned that the materials are in poor condition, contact either the manufacturer of the furnace, the builder of your home, or the contractor that installed the furnace and/or insulation. If this is not possible, call one of the toll-free numbers listed on page ____ for further guidance.

Stove Insulation

Asbestos-containing cement sheets, millboard and paper have been used frequently in homes where wood burning stoves have been installed. These asbestos-containing materials are used as thermal insulation to protect the floor and walls around the stoves. The label on the sheet may indicate whether they contain asbestos.

The cement sheet material is unlikely to release asbestos fibers under non-destructive use. This sheet material may also be coated with a high temperature paint, which will further seal any asbestos into the material. Asbestos paper or millboard is also used for this type of thermal insulation. Placing these materials where they are subjected to wear or abrasion may increase the possibility that asbestos fibers are released. Damage or misuse of the material by sanding, drilling, or sawing will release asbestos fibers. Therefore, suitable precautions should be taken (see page ____).

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Door Gaskets

Some door gaskets in furnaces, ovens, and stoves may also contain asbestos. The asbestos-containing door gaskets on wood and coal burning stoves are subject to wear and can release asbestos fibers under normal use conditions. When removing and replacing a worn out asbestos-containing gaskets, it should be handled as little as possible. Follow the guidelines given in response to the question, "What if I have to disturb some asbestos-containing material for repairs or renovations?" on page ____.

WALLS AND PIPES: INSULATION

Wall Insulation

Homes constructed between 1930 and 1950 may contain insulation made with asbestos. Wall insulation that contains asbestos is generally found inside the wall, e.g. "sandwiched" behind plaster walls. It is unlikely that the asbestos insulation will release asbestos fibers into the home unless the insulation is subjected to air currents. Renovation and home improvements, however, may expose and disturb the material. (See CAUTION on page ____.)

Pipe Insulation

Hot water and steam pipes in some homes may be covered with an asbestos-containing material primarily to reduce heat loss, and to protect nearby surfaces from the hot pipes. Pipes may also be wrapped in an asbestos "blanket" or asbestos paper tape. It has also been used on furnace ducts. Most asbestos pipe insulation in homes is preformed to fit around various diameter pipes. This type of asbestos-containing insulation was manufactured from 1949 to 1972.

If you have damaged insulation around pipes or boilers, the best current recommendation is to leave the insulation in place and repair the protective covering. In many circumstances, this is the best way to avoid potential exposure to asbestos. You can use a protective tape such as a good wide duct tape, or other commercial product developed to cover pipes. Specific information on these alternatives can be obtained from heating contractors, hardware stores or hardware departments of many major department stores.

VINYL FLOOR TILES, AND VINYL SHEET FLOORING

Asbestos has been added to some vinyl floor tiles to strengthen them. Asbestos is also present in the backing on some vinyl sheet flooring. The asbestos is bound in the tiles and backing with vinyl or some type of plastic binder, which should prevent most fibers from being released during normal use. Asbestos fibers can, however, be released if the tiles are sanded or seriously damaged, or the backing on the sheet flooring is scraped or sanded.

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When replacement or repair becomes necessary, follow the guidelines given in response to the question, "What if I have to disturb some asbestos-containing materials for repairs or renovation?" on page _____. The tiles should be handled as little as possible; avoid sanding or otherwise damaging them. A safe and simple alternative is to place a new flooring material directly over the tiles or sheet.

For additional information, you may wish to read, "Recommended Work Procedures for Resilient Floor Coverings," available on request from the Resilient Floor Covering Institute, 1030 15th Street, NW, Suite 350, Washington, D.C. 20005.

ROOFING, SHINGLES, AND SIDING

Some shingles, roofing, and siding products have been manufactured with asbestos. The asbestos based asphalt shingles were used for residential roofing in the 1940's. None, however, are used in residential applications today. The asbestos siding products made of asbestos-cement sheet are still being installed. These products are subject to weathering, which can result in changes in the asphalt or cement binder with some release of asbestos fibers. Since these products are already in place and outdoors, there is likely to be little risk to human health.

We recommend that you avoid disturbing these products if they are already part of your home. Unless the roofing must be replaced as a result of normal wear, it is wiser to simply leave it in place. Follow the guidelines for replacement and repair procedures given in response to the question, "What if I have to disturb some asbestos-containing materials for repair or renovation?" on page _____.

GENERAL GUIDELINES

If disturbing the material cannot be avoided, you should first try to determine whether the material does contain asbestos. If you cannot determine whether the material contains asbestos from the label, installer, or manufacturer, we think it is best to assume that the product does contain asbestos.

Note, people who have frequently worked with asbestos material, such as plumbers, building contractors or heating contractors, will often be able to make a reasonable judgment on whether a product contains asbestos, based on a visual inspection.

In some cases you may want to have the material analyzed; for example, you may have a large area of damaged material or are preparing a major renovation which will expose material contained behind a wall or other barrier. Before you attempt to sample the material, call one of the toll-free numbers on page _____ for information on sampling and in locating laboratories capable of analyzing material samples for asbestos. Laboratory analysis can be expensive, ranging from about \$20 to \$40 or more per sample.

If you are sure the material contains asbestos and are satisfied that it must be repaired to prevent future fiber release, call one of the toll-free numbers for guidance on how to proceed. Removal is usually a LAST alternative. Both repair and removal of asbestos-containing materials should be performed following specific safety precautions, and experienced contractors are more qualified

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to reduce health hazards from asbestos while correcting possible exposure problems. Call one of the toll-free numbers for information on locating contractors qualified to remove or repair asbestos-containing materials or products. Always keep the following cautions in mind.

CAUTION: DO NOT DUST, SWEEP, OR VACUUM PARTICLES SUSPECTED OF CONTAINING ASBESTOS. THE DUST SHOULD BE REMOVED BY A WET MOPPING PROCEDURE DESCRIBED ON PAGE ____.

RENOVATION OR REPAIR OF WITH ASBESTOS-CONTAINING MATERIAL IS BEST DONE BY PROPERLY TRAINED AND EQUIPPED PERSONS. SPECIAL PRECAUTIONS SHOULD BE TAKEN DURING REMOVAL OF EXPOSED OR DAMAGED ASBESTOS-CONTAINING INSULATION. CALL ONE OF THE TOLL-FREE NUMBERS LISTED ON PAGE ____ FOR INFORMATION ON LOCATING EXPERIENCED CONTRACTORS TO DO THIS WORK AND GUIDELINES FOR REMOVAL OF ASBESTOS.

Q: What if I have to disturb some asbestos-containing material for repairs or renovations?

A: If you suspect that a material does contain asbestos and you do have to disturb it, some precautions should be followed to reduce fiber release. Disturbing this type of material requires special procedures. Therefore, we recommend that you consider using a trained contractor. The basic precautions for working with asbestos-containing material are as follows:

1. If you must drill or cut an asbestos-containing material, it is best to do it outside.
2. When working with an asbestos-containing materials, you should wear an approved respirator (Call _____ for latest information on respirators).
3. If you must remove asbestos-containing material, you should seal the area off to avoid contamination of your home with asbestos fibers (Call or write _____ for latest information on how to seal the area during removal of asbestos).
4. If you must remove the material, take it off in as complete pieces as possible. That is, if you are removing shingles, tiles, insulating board or sheets of paper, avoid breaking the material into small pieces. Pipe insulation was usually installed in preformed blocks; remove these in complete pieces.
5. If the material may break apart, wet it with a hand sprayer. The sprayer should provide a fine mist, and the material should be thoroughly dampened, but not dripping wet. Wet fibers do not float in the air as readily as dry fibers and will be easier to clean up. The addition of a small amount (about a teaspoon to a quart of water) of a low sudsing dish- or laundry- detergent will improve the penetration of the water into the material and reduce the amount of water needed.

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6. Place any material you remove and any debris from the work in plastic trash bags and dispose of it in a proper land fill. Take care not to break the bags.
7. After you finish removing the material, clean the area with wet mops, rags, or sponges. Again, if you have to disturb the fibers, wetting will help to reduce the chance that the fibers get spread around. If possible, dispose of the mop heads, rags, and sponges in the trash bags with the removed materials. Otherwise, vigorously flush the mop, rag, or sponge in running water in a sink or basin with a drain; make sure to completely rinse both the utensil and the basin.
8. If you are going to have work done by a contractor who may not have special experience in dealing with asbestos material, we, (a) encourage you to discuss steps to minimize asbestos exposure, and (b) obtain CPSC information sheets for guidance.

Q: Where can I get more information?

A: If you need more help, the Consumer Product Safety Commission (CPSC) and the Environmental Protection Agency (EPA) have several toll-free numbers. These are listed below.

For information on specific appliances or products, call CPSC at:

800-638-8326
800-492-8363 (Maryland)
800-638-8333 (Alaska, Hawaii, Puerto Rico,
Virgin Islands)

For assistance in determining if a construction material in your home may be releasing asbestos fibers, call EPA at:

800-424-9065
(In Washington, D.C. call 554-1404)

For assistance in how to sample a suspect material and how to choose a qualified laboratory to analyze the material, call EPA at:

800-334-8571

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SHC, INC -P OCONNELL
2315 HUNTINGDON RD
HUNTINGDON VALLEY PA 19006

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NANCY HARVEY STEORTS CHAIRMAN
US CONSUMER PRODUCT SAFETY COMMISSION
WASHINGTON DC 20207

IN OUR OPINION THE HEALTH HAZARD FROM ASBESTOS INSULATION ON HEATING
SYSTEMS BY FAR OUT WEIGHS HAZARDS OF FORMALDEHYDE INSULATION FOUND IN
HOMES OUR MEMBERS ARE INSPECTING. WE ARE IN NEED OF ANSWERS TO ADVISE
CONSUMERS HOW TO PROTECT THEMSELVES FROM ASBESTOS HAZARDS. INCIDENT
RATIO OF ASBESTOS APPEARS HIGHER THAN ORIGINAL ESTIMATES SUBMITTED TO
YOUR AGENCY

PAUL OCONNELL PRESIDENT
AMERICAN SOCIETY OF HOME INSPECTORS INC

08:43 EST

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