USACHPPM
Readiness thru Health

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Just the Facts...

Irradiated Mail

Why is mail being irradiated?

The anthrax attacks of October 2001 targeted Federal offices but also affected mail processed in the Brentwood Postal Facility in Washington, D.C. Other Federal agencies in the Washington area may become targets for this kind of attack, or they may receive mail affected by attacks on other agencies. Irradiation protects workers against possible future releases of bacteria and viruses through the mail. It is a proven and reliable sterilization method that can handle large flows of mail that come to Federal agencies. It protects workers even before an attack is suspected.

What is irradiation and how does it work?

The irradiation process sterilizes mail by passing it through a high-energy beam, such as an electron beam or x-ray. This beam penetrates deep into the mail to knock out germs and viruses inside letter trays and packages. It has been used commercially for decades to defend against anthrax spores in imported wool and animal hides and to sterilize products such as medical equipment.

Which mail is being irradiated?

All letters, flat envelopes, and other small pieces of mail that might have been exposed to anthrax at the Brentwood Postal Facility were sent to a commercial irradiation facility before being released for delivery. All larger pieces of bulk mail that might have been exposed will be irradiated later. The U.S. Postal Service (USPS) routinely irradiates mail addressed to Federal agencies in the Washington, D.C. zip codes 202 to 205. Addressees in other zip codes in the Baltimore-Washington area may also receive a few items of irradiated mail. Other U.S. mail is not being irradiated at present, to include prescription or non-prescription pharmaceuticals.

What does irradiation do to the mail?

The irradiation beam does not make the mail radioactive. However, the materials in the mail are heated and may become chemically altered. Paper dries out and may become dusty, discolored, and brittle. Biological specimens, pharmaceutical products, photo film, computer disks, and videotapes may be damaged. In addition, irradiation of some plastic materials generates carbon monoxide, ozone, and volatile organic compounds. These gases dissipate quickly when the mail is opened in well-ventilated areas and allowed to air.

What symptoms have been reported by people who handle and open irradiated mail?

Most people who handle and open this mail have not reported any health problems. Some postal workers and Federal agency staff have reported symptoms such as eye, nose, throat, and skin irritation, headache, nausea, and occasional nosebleeds. Some workers who already had breathing difficulties have reported worsening of their symptoms as a result of opening mail.

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Has anyone looked at the health effects of irradiated mail?

The Occupational Safety and Health Administration (OSHA), the National Institute for Occupational Safety and Health (NIOSH), and other Federal agencies have all tested the irradiated mail after it has been aired out. The USPS investigates all complaints from mail recipients, and tests for problem gases and dust. All test results indicate that irradiated mail is safe and that the levels of gases and dust are below established health standards. NIOSH investigated conditions at one Federal agency where people opening irradiated mail reported symptoms. They found no elevated levels of problem gases or dust in the air. The air was very dry because of the winter season, and the irradiated mail was itself dry and dusty. These dry conditions can cause symptoms similar to the ones that were reported.

What's being done to resolve the complaints?

The USPS has gained experience with the irradiation process and has reduced the amount of energy used to irradiate the mail, which in turn reduces the amount of gases that are generated. They are implementing the following measures to reduce any problems from the irradiated mail.

- Letting irradiated mail air out for 24 to 48 hours to eliminate gases.
- Using hypoallergenic deodorizers to eliminate any smells.
- Testing each batch of aired-out mail to ensure no detectable amounts of gas exist before delivery.

What can you do to minimize any side effects?

Spread your mail out in a room that has good airflow. Don't enclose the mail in a box or drawer. If you are prone to skin irritation, wear non-latex powder-free gloves when opening mail. Use moisturizer after washing your hands. Ask someone else to open your mail if you feel that you are particularly sensitive, but have the other individual take precautions.

Are there other ways of sterilizing mail?

Although other methods have been proposed and tested successfully, there is currently no large scale, commercially available method for sterilizing mail other than irradiation.

Where can you receive more information?

Contact or access any one of the following organizations:

- For military personnel, Military Postal Service Agency at (703) 325-9221/8305.
- Other Federal personnel, –
  - USACHPPM Industrial Hygiene Field Services Program at the address above.
  - General Services Administration at http://www.gsa.gov/mailpolicy
  - USPS at http://www.usps.gov