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December 6, 2010

John S. Pistole
Administrator
Transportation Security Administration
601 12th St S
Arlington, VA 22202

Dear Administrator Pistole:

I write to request information related to the manner in which TSA inspects, maintains and operates full body x-ray screening equipment used for airport security. I am concerned that TSA's past history in this area as well as its lack of expertise in radiation health and safety could lead to unintentional exposures to radiation of both TSA employees and members of the public.

As you know, several groups have raised concerns about the potential long term health impacts of these scans, particularly for vulnerable populations such as pregnant women, children and the elderly and for people who come into repeated contact with these scanners such as TSA employees, frequent fliers, pilots and flight attendants. While several studies have been performed by various expert groups and panels to support the approval and roll out of these machines for use as a screening tool by the TSA, these studies all assumed optimal operating conditions that would produce a level of radiation below the general use dose-per-screening limit of 25 μrem (i.e., the per scan radiation level that was published by a FDA and National Institute of Standards and Technology (NIST) working group in 2009).

In September 2008, the Centers for Disease Control and Prevention (CDC) and the National Institute of Occupational Safety and Health (NIOSH) released a report in which they evaluated the x-ray radiation exposure that TSA employees received from carry-on baggage and checked baggage screening machines.[1] This report found that some machines were not well maintained (i.e. had curtain flaps missing) or had other flaws that allowed for radiation to leak out of the machine and result in unnecessary radiation exposure to TSA employees. In a few cases (15 out of 854 individuals), the TSA employees received whole body doses above 100 mrem per year – the public radiation dose limits set by the Department of Energy and the Nuclear Regulatory Commission.

[1] http://www.cdc.gov/niosh/hhe/reports/pdfs/2003-0206-3067.pdf

Six of the machines monitored for the report were recommended by NIOSH to be removed from use because the machines were emitting significantly more radiation than intended.

This report raises questions about how TSA plans to ensure the proper functioning and compliance of all general-use full-body x-ray screening systems in order to protect both TSA employees and passengers from being irradiated with doses of radiation that are higher than the safety limits for these machines. Accordingly, I request that the TSA respond to the following questions and provide supporting documents and other relevant information by close of business Monday, December 20, 2010.

1. How frequently does TSA plan to inspect the new advanced imaging full-body x-ray screening systems to ensure that the radiation emitted is within acceptable standards? What does this inspection entail? Who is responsible for performing these inspections? Please provide details of the inspection protocol used to check radiation levels in and around the advanced imaging x-ray screening systems.

2. Please describe the maintenance and enforcement strategies that TSA has in place to ensure that all screening systems and protocols being used remain in compliance with the general-use dose-per screening limit of 25 μrem? Please provide any documentation in which scanning equipment has failed or malfunctioned resulting in an actual or potential radiation exposure in excess of this limit.

3. Does the responsibility of monitoring the safe use of this equipment lie solely with the TSA or is it shared with the FDA? Please describe the monitoring and coordination plan(s) that are in place for sharing information and activities with other federal agencies.

4. In the event that an inspection of the scanners reveals that the machine is not working optimally, what policies does TSA have to ensure that the machine is shut down from use and fixed promptly? Are any other agencies notified of machine defects or malfunctioning?

5. What policies does the TSA have to ensure that any inappropriate dosage that occurs as a result from either human error or malfunctioning of the equipment is promptly reported to the individual(s) who are likely to have received a higher dose, and that the machines are repaired?

6. Please provide any documentation of advanced imaging x-ray scanning machines that have failed, malfunctioned or otherwise experienced a problem that resulted in either an actual or potential radiation exposure that was higher than the per scan limit of 25 μrem, or an unanticipated increase in exposure to those operating or working in proximity to the machines. For each of these instances, please provide estimates for how high the exposure was (or was likely to have been), inspection records or other documentation related to how the problem was identified and

resolved, and records of notification for individuals who were (or may have been) exposed. Please also provide, for each of the past 3 years, a) the number of machines that were in operation at the time and b) the number of such machines that were shown, either through inspection or other reports, to have failed, malfunctioned or otherwise experienced a problem that resulted in an actual or potential radiation exposure that was higher than the per scan limit of 25 μrem, or an unanticipated increase in exposure to those operating or working in proximity to the machines.

7. Does the TSA have dosimeter monitoring plans in place for TSA employees? If so, please provide the details of the monitoring plans and what was found.

Thank you for your assistance and cooperation in responding to this request. Should you have any questions, please have your staff contact Dr. Avenel Joseph of my staff at 202-225-2836.

Sincerely,

Edward J. Markey

Edward J. Markey
Member of Congress