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Dr. Cynthia Jones
U.S. Nuclear Regulatory Commission
Office of Nuclear Security & Incident Response
Mail Stop T4-D22A
Washington, D.C. 20555

RE: Comments on proposed rulemaking on the elimination of Cesium Chloride

Dear Dr. Jones:

K&S is a small privately owned calibration laboratory accredited by the Health Physics Society (HPS), the American Association of Physicist in Medicine (AAPM) and the American Association for Laboratory Accreditation (A2LA). K&S is one of hundreds of small businesses, academic institutions and industrial calibration facilities providing health physics instrument calibration services to medical, industrial and government facilities using $^{137}\text{Cesium}$ sealed sources as the primary means of traceability. Sealed $^{137}\text{Cesium}$ sources are also widely used in well logging and tank level gages. Virtually all of these sources are Cesium chloride. $^{137}\text{Cesium}$ was selected many years ago as the preferred standard for health physics instruments because it has a single high energy peak (662kev), it has a long life (30 years) and a well understood decay. There is no other isotope source or x-ray generator that could easily replace ^{137}Cs as a standard.

This letter is to recommend that the NRC should not promulgate rules to eliminate Cesium chloride sources for the following reasons:

1. The elimination of ^{137}Cs would devastate hundreds of small laboratories providing health physics instrument calibration services in the US.
2. The NAS report only considered the use of ^{137}Cs sources in medical applications. It did not consider the impact of the elimination on the other users of ^{137}Cs in the US such as the calibration of instruments.
3. Although Cesium chloride has been proposed as the source of choice for the construction of a dirty bomb because it is soluble and dispersible as a powder , there are compelling reasons why it would not be chosen:
 - a. It is high energy, difficult to shield and easily detectable which limits transportation.
 - b. Virtually all of the calibration sources are double encapsulated in stainless steel and secured in lead and steel housing that would make them difficult to transport.

- c. Only large sources would have sufficient Cesium chloride to cause widespread injury from the radioactive material. The larger sources have significant security measures that would limit access.
- d. No one has ever been killed or injured from a dirty bomb using ¹³⁷Cesium chloride. The use of this material in a dirty bomb is pure speculation.
- e. A dirty bomb would more likely be made with low level radioactive material (alpha or beta emitters that are readily available and difficult to detect – smoke detectors) and its purpose would be to set off alarms and cause panic.

Please reconsider the proposal for rulemaking. The ¹³⁷Cs sources are already regulated by the NRC or agreement states and we already have tighter controls on the larger sources. There is no need for the elimination of these sources based on the speculation that they might be used for a dirty bomb (see the PBS NOVA presentation on dirty bombs).

Respectfully submitted,

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Radiation Physicist
Director, AAPM, HPS, A2LA Accredited Laboratory