

(STP-03-061, August 2003, Other, Unrecovered Radioactive Sources)

August 13, 2003

ALL AGREEMENT STATES, MINNESOTA, PENNSYLVANIA

**CONGRESSIONAL UPDATE ON THE STATUS OF LOST OR STOLEN AND
UNRECOVERED RADIOACTIVE SOURCES (7/1998 -- 7/2003) (STP-03- 061)**

Enclosed for your information is a copy of a table sent to Congressman Edward Markey, Subcommittee on Energy and Air Quality by Email on August 8, 2003, that provides an update on the status of lost or stolen (and not recovered) radioactive sources over the last five years (Enclosure 1). We have also included NRC's updated list of specific Questions and Answers on lost and stolen sources (Enclosure 2). Losses over a five-year period from FY 1997 to FY 2001 were summarized in a previous response from the NRC Chairman to Congressman Markey dated April 15, 2002.

If you have questions regarding the information provided in this correspondence, please contact the individual named below.

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Enclosure:
As stated

Table 1. Estimates of recovery rate for lost/stolen sources (updated 7/21/2003)

| 5 Year Period | Lost or Stolen | Recovered | Not Recovered | % Not Recovered |
|--------------------------------|-----------------------|------------------|----------------------|------------------------|
| 07/21/1998 - 07/21/2003 | 1700 | 771 | 929 | 55 |
| 10/01/1996 - 09/30/2001 | 1495 | 660 | 835 | 56 |

Review of the events involved shows that most of the missing material is tritium (1953 curies), contained primarily in exit signs and other self-luminous devices. Tritium is a very low-hazard material. The other missing material, corrected for decay, totals less than 20 curies. These sources are below any thresholds for concern regarding suitability for an RDD. The recovery rate remained essentially unchanged.

In late 2001 to early 2002, a review of the NMED data was performed to verify that all events had been adequately captured in the database. This resulted in the addition of a number of additional records. The additional records do not reflect an actual increase trend in the number of losses and thefts, but rather reflects capture of these events in the database.

Official Use Only (08/07/03 update)

Q. Do the radioactive sources that have been reported as lost or stolen (and not recovered) over the last five years represent a significant hazard?

A. The NRC does not believe that the sources reported as lost or stolen represent a significant hazard.

Many of the sources are too small to cause real injury to even a single person. Even the largest missing sources do not represent a hazard to a large number of people.

The NRC regularly assesses the reports of loss or theft to determine if any patterns or trends exist. Based upon our reviews, we do not have any reason to believe that the missing material is being targeted by an individual or small group of individuals. The historic rate of reported events and the geographical distribution of reported events have led us to conclude that the most likely cause of losses and thefts are random in nature.

Q. NRC receives about 300 reports per year of lost or stolen radioactive sources. Could terrorists have collected some of this material for an RDD attack?

A. It is possible, but only a few of the missing sources are large enough for an effective RDD. About half of the missing sources have been recovered. (Some additional sources may have been recovered but not reported to NRC.) Most of the losses involve small or short-lived sources. NRC notifies the FBI if there is any indication of theft or criminal activity associated with a loss.

The 1500 reports of losses over a five-year period of FY1997-FY2001 were summarized in the Chairman's letter to Congressman Markey dated April 15, 2002. An update was provided on August 8, 2003, to cover the most recent five year period (July 21, 1998-July 21, 2003). In both cases, most of the missing material is tritium (2700 curies for the earlier timeframe and 1953 curies for the update), which is a very low-hazard material. The other missing material, corrected for decay, is less than 20 curies. A major portion of that material was contained in over 100 missing portable gauges. The sources in a single portable gauge are small, and unlikely to be suitable for an effective RDD. These sources are below any thresholds for concern regarding suitability for an RDD.

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