Description of document:	Nuclear Regulatory Commission (NRC) memo regarding radioactive metal sent to the United States from Mexico, SECY-92-042, 1992
Requested date:	2025
Release date:	2025
Posted date:	19-January-2026
Source of document:	FOIA Request NRC Freedom of Information Act Officer U.S. Nuclear Regulatory Commission Mail Stop TWFN-6 A60M Washington, DC 20555-0001 Email: FOIA.resource@nrc.gov Nuclear Regulatory Commission Public Access Link (PAL) FOIA.gov

POLICY ISSUE
(Information)

February 5, 1992

SECY-92-042

For: The Commissioners

From: James M. Taylor
Executive Director
for Operations

Subject: TERMINATION OF THE MEXICAN BORDER MONITORING PROGRAM

Purpose: To inform the Commission of the staff's intent to discontinue Nuclear Regulatory Commission (NRC) maintenance of radiation monitoring equipment at Mexican border crossings.

Background: On January 16, 1984, unlicensed cobalt-60 contaminated reinforcing bars from Mexico were discovered in New Mexico. Later that month, cobalt-60 contaminated cast-iron table legs from Mexico were discovered in Missouri. With assistance from State radiation control programs, about 1500 tons of contaminated iron and steel were recovered in the United States and returned to Mexico.

To help protect against additional inadvertent entry into the United States of products contaminated as a result of this incident, NRC provided radiation survey meters to the U.S. Customs Service in El Paso, Texas, in January 1984. In March 1984, the Department of Energy (DOE) installed portal monitors at two border crossing points in El Paso on a loan basis. Subsequently, NRC purchased micro-R survey meters for use by the Customs Service at 23 land border crossings with Mexico and obtained portal monitors for the five commercial-truck border crossings. A contract was arranged with Oak

NOTE: TO BE MADE PUBLICLY AVAILABLE IN 10 WORKING DAYS FROM THE DATE OF THIS PAPER

Contact:
Kevin M. Ramsey, NMSS
504-2534

200161

9202130104 XA

2/21

D/08

Ridge Associated Universities (ORAU) to maintain and calibrate the instruments.

Survey meters were to be exchanged with ORAU semi-annually by mail to maintain calibration. ORAU was to visit the portal monitors annually for calibration and repairs as needed. Region IV was tasked with providing training to Customs Service personnel.

In August 1986, Region IV visited all 23 border crossings and subsequently decided to remove the survey meters at 13 of the crossings because the traffic flow did not warrant monitoring for radiation. In October 1990, the survey meter at another border crossing was removed at the request of the Customs personnel at the crossing. Only 9 of the original 23 crossings still have micro-R survey meters.

Discussion:

The radiation monitoring program along the Mexican border was established in response to the 1984 Mexican Steel Incident. The intent was to prevent the entry of materials contaminated as result of that incident. The program was confined to commercial-truck crossings and did not include private-vehicle or railroad crossings. The program was never intended to be permanent and provisions for long-term use of the monitoring equipment were not incorporated into the program. Interaction between the staff and the U.S. Customs Service personnel at the border crossings has diminished over the years and several problems have developed. These problems are discussed below:

* Maintenance of Portal Monitors

  The portal monitors have been plagued by faulty internal circuitry and damage caused by the humid and dusty conditions along the Mexican border. The portal monitors are not adequately weatherized and ORAU has identified the constant need for replacement parts as a significant problem.

* High False Alarm Rate

  During periodic visits to the commercial truck border crossings the portal monitors are frequently found disconnected from the power supply. Border guards have admitted that they often shut off the monitors because they produce so many false alarms. False alarms could be reduced by reconfiguring the portal monitors, installing shielding, and raising the alarm set point.

* Modifications to Border Crossings

The establishment of Maquiladora plants in Mexico has created significant increases in commercial vehicle traffic along the border. Maquiladora plants are assembly plants where materials manufactured in the United States are assembled in Mexico and returned to the United States for sale. Some of the existing commercial crossings are being modified to accommodate the increased traffic. Customs officials have indicated that there ae plans to add traffic lanes to the crossings at Otay Mesa, California; El Paso, Texas; and Brownsville, Texas. Additional portal monitors would be required to monitor the new commercial crossings.

* Training

It is difficult to keep the available personnel at the border crossings trained because of the high turnover rate. ORAU staff also believe that the border guards are not sufficiently trained or motivated to use the equipment, because the micro-R survey meters that are returned every six months for calibration show few signs of normal "wear and tear." A program of regular refresher training for the border guards is needed. The Customs Service has a training center in El Paso, Texas, that could be used.

The staff estimates that it would cost several thousand dollars per portal monitor to weatherize the outdoor components and reconfigure the systems to reduce false alarms. However, this may not completely eliminate the maintenance problems. Purchasing new sodium iodide detectors with advanced electronics that start at about $5000 each would be a better long-term solution. This would cost approximately $40,000 if each of the five existing portal monitors were replaced, and three additional systems were purchased to monitor new commercial traffic lanes. With respect to training, the staff estimates that it would cost about $50,000 to have a contractor develop a training program and offer the course once. The cost of conducting refresher training would be minimal if the border States of California, Arizona, New Mexico, and Texas (all NRC Agreement States), agreed to support periodic training of Customs personnel after the first class was taught. The total cost of correcting the existing problems with the monitoring program is estimated to be $90,000. This is in addition to instrument calibration and routine maintenance costs which

would be minimized if the portal monitors are upgraded. Current calibration and maintenance costs are approximately $30,000 per year.

In response to the 1984 Mexican Steel incident, the Aerospace Corporation contracted to study the feasibility of monitoring all United States borders for radioactive material. The final report was published in September 1985, as NUREG/BR-4357. The report identified 453 "choke points" where 99 percent of high-risk iron and steel products could be monitored as they entered the country. The cost of a 30-year monitoring program was estimated to be almost $12 million. The number of incidents necessary over the 30-year period for the program to break even solely on the basis of cost ranged from four cases of national distribution of a contaminated consumer product to 51 cases of a five-state distribution of contaminated structural steel. The cost/benefit analysis of the Aerospace study did not clearly indicate that a national monitoring program would be cost-effective. The Commission was advised, in SECY-87-125, dated May 19, 1987, that the staff did not intend to proceed with a national monitoring program. Instead the staff believed that international activities involving information exchange and guidance addressing control of radioactive material in the workplace were more cost-effective.

In light of the 1985 Aerospace study and the history of the Mexican border monitoring program, the staff does not believe that continuing the current program is cost-effective. Since the monitoring program was started in 1984, no radiation has been detected from Mexican shipments that were not already identified as containing radioactive material. However, there have been several cases where contaminated shipments have entered the United States through other ports.

- In 1984, contaminated pipe fittings were imported from Taiwan to two United States distributers in Valencia, California, and Sharon, Massachusetts.

- In 1985, contaminated 10-inch pipe was imported from Brazil to a distributer with facilities in Tampa, Florida, and Atlanta, Georgia.

- In 1988, contaminated steel flanges were imported from Italy to several companies in Houston, Texas.

- In 1991, contaminated steel fencing products were imported from India to distributors in Riverside, California, and Houston, Texas.

There have also been numerous cases of radioactive material in recycled scrap metal within the United States. As a result of these incidents, many of the scrap metal recycling industries in the United States have established their own radiation monitoring programs. For these industries the cost of collecting and disposing of radioactive materials easily justifies the cost of establishing monitoring programs.

The staff believes that efforts to improve the control of radioactive materials by licensees and provide technical support to non-licensee industries using recycled materials are more cost-effective methods of protecting the public from contaminated consumer products than the Mexican border monitoring program.

During the All Agreement State meeting in October 1991, the staff met with representatives of Mexico, Canada, and the border States of California, Arizona, New Mexico, and Texas. Everyone concurred with the plan to remove the portal monitors and transfer control of the portable survey meters to the Customs Service. In addition, the border States agreed to support periodic training of Customs personnel.

Conclusions: The staff intends to terminate the maintenance and calibration contract with ORAU, remove the portal monitors, and transfer the micro-R survey meters to the U.S. Customs Service. The Customs Service would arrange for calibration and maintenance services, and the border States of California, Arizona, New Mexico, and Texas, would support periodic training of Customs personnel. The staff has discussed these plans with the border states, and they concur. The staff has also informed the U.S. Customs Service, and they concur. The staff will continue to provide technical support to the U.S. Customs Service, if requested.

James M. Taylor
Executive Director
for Operations

DISTRIBUTION:
Commissioners
OGC
OCAA
OIG
LSS
REGIONAL OFFICES
EDO
SECY