U.S. NUCLEAR REGULATORY COMMISSION
REGION I

INSPECTION REPORT

Inspection No.	03012771/2011001
Docket No.	03012771
License No.	08-17447-01
Licensee:	Department of Homeland Security
Locations Inspected:	Licensee's facilities at the Ports of Entry located in the States of New Jersey, Vermont, Alabama, California, Texas, Virginia, Commonwealth of Puerto Rico, and the US Virgin Islands
Inspection Dates:	July 9, 2011 through September 11, 2012

Lead Inspector: ***/RA/*** 10/4/12

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EXECUTIVE SUMMARY

Department of Homeland Security
NRC Inspection Report No. 03012771/2011001

Department of Homeland Security (DHS) maintains NRC License No. 08-17447-01 that authorizes use of licensed material at various ports of entry and seaports. The licensed material is used by its Bureau of U.S. Customs and Border Protection to scan incoming and outgoing cargo at the ports of entry and seaports. The scanning is performed by using various types of Vehicle and Cargo Inspection Systems (VACIS), and Rapiscan GaRDS devices. The license also authorizes use of licensed material for training of the licensee's personnel in the techniques of detecting contraband that may be present within the cargo or vehicles.

Inspectors from NRC Region I conducted routine inspections at the licensee's facilities in the States of New Jersey, Vermont, Texas, Virginia, Alabama, California, the US Virgin Islands, and the Commonwealth of Puerto Rico. In addition to the facilities in these States, Region I also conducted inspections at the licensee's facilities located at the ports of entry in the State of Michigan. Findings of these inspections are documented in NRC Inspection Report Nos. 030-12771/201102 (ML120190820, ML120190821) and 030-12771/2011003 (ML120060031, ML120060040), and are not included in this report.

The inspections mainly consisted of reviews of: (1) the use of licensed material by the licensee's personnel; (2) training of personnel in the use of radioactive material; (3) observation during actual use of licensed material by the personnel; (4) the licensee's procedures to maintain the radiation dose to its personnel and members of the public as low as reasonably achievable (ALARA), and (5) the required records of use of licensed material, including postings of appropriate caution signs. In addition, the inspectors also performed independent measurements of radiation dose rates in restricted and unrestricted areas during scans, and conducted interviews of personnel to verify adequacy of their training.

These reviews indicated that the licensee provided appropriate training to its personnel in the safe use of licensed material. The personnel were familiar with, and implemented appropriate radiation safety procedures to ensure safety of personnel and members of the public. The licensee had developed appropriate procedures to ensure security and accountability of all licensed material, and maintained the records required by the regulations and conditions of the license.

Within the scope of this inspection, the inspectors did not identify any violation of NRC requirements.

REPORT DETAILS

I. Organization and Scope of the Program

a. Inspection Scope

The inspectors reviewed the licensee's organizational structure and conduct of its activities authorized under its NRC license No. 08-17447-01.

b. Observations and Findings

Department of Homeland Security (DHS) maintains NRC License No. 08-17447-01 that authorizes use of licensed material in fixed and mobile devices for the detection of contraband. These devices include Science Applications International Corporation, Inc.'s (SAIC) Models Portal, Mobile and/or prototype Pallet VACIS, Railroad VACIS, and VACIS II; or Rapiscan GaRDS devices. The license also authorizes use of licensed material for training of the licensee's personnel. The licensee's Bureau of Customs and Border Protection (CBP) uses these devices at various ports of entry to perform non-intrusive inspections of cargo coming into or going out of the ports of entry. The licensee is also authorized to temporarily hold unauthorized radioactive material that it may intercept during the cargo scans.

The licensee possessed several scanning devices and the RSO maintained a comprehensive list of these devices, including the location to which each device was assigned. Each device was identified by its serial number and the inspectors verified that the devices at each location were in agreement with the list that the RSO had maintained. In addition to the above mentioned devices, the licensee also uses devices that use x-rays to scan cargo. Use of such devices is not regulated by the NRC.

c. Conclusions

The licensee used licensed material as authorized on the license. Inspectors did not identify any violation or safety concerns.

II. Management Oversight of the Program

a. Inspection Scope

Inspectors reviewed the management's oversight of the licensed activities.

b. Observations and Findings

The licensee has appointed a Radiation Safety Officer (RSO) to implement its radiation safety program. The RSO reports to the Director of Border & Transportation Security Directorate. In addition to the RSO, the licensee's radiation safety staff includes an assistant RSO and five health physicists who assist the RSO in the implementation of the radiation safety program. CBP facilities are divided into five geographic regions and a health physicist is assigned to each region. The health physicist routinely visits his

regional facilities at least once every quarter and is available to the regional staff any time if there is any incident or event of radiological significance.

The licensee has established a Radiation Safety Committee (RSC) that meets each quarter to review the conduct of the radiation safety program, including the results of the annual audit of the radiation safety program. Results and findings of NRC inspections are also discussed during the RSC meetings. The RSO maintains reports of annual audits, and minutes of the RSC meetings.

c. Conclusions

The licensee's management was involved in the conduct of licensed activities and provided appropriate oversight and support to the radiation safety program. The inspectors did not identify any violation or safety concern.

III. Facilities and Equipment

a. Inspection Scope

The inspectors reviewed the adequacy of the facilities with regard to safety of personnel and members of the public.

b. Observations and Findings

The licensee uses the scanning devices at CBP facilities at various ports of entry. The licensee maintains that these facilities are under exclusive federal jurisdiction. Access to these facilities was controlled by the licensee. There was a designated area at each of these facilities for performing the scans of cargo. These areas were cordoned off and a safe boundary was established around these areas. Adequate signs were posted at the boundary to alert personnel of radiation areas. The licensee had adequate staff to maintain constant surveillance of the boundaries to prevent inadvertent entry by unauthorized persons during scanning process. The number of scanning devices at various ports of entry varied, depending on the traffic entering the port.

The licensee has contracted with the vendor to perform routine and non-routine maintenance of the devices.

c. Conclusions

The licensee's facilities were adequate to ensure safe use of licensed material. The licensee implemented appropriate radiation safety procedures to ensure safety of personnel and members of the public. The inspectors did not identify any violation or safety concern.

IV. Training of Workers

a. Inspection Scope

The inspection included a review of the licensee's training program and the training provided to its staff in the safe use of licensed material.

b. Observations and Findings

The licensee had developed adequate training program for its staff. Initial training was provided to the staff at its training facilities in Charleston, South Carolina. The training included description of hazards associated with use of radioactive material, description of various devices containing radioactive material, and the procedures for using the devices safely. Initial hands-on training was provided by the vendor, and refresher training was conducted whenever the vendor visited the facilities to perform routine and non-routine maintenance of the device(s). The licensee did not authorize any individual to use licensed material until the individual had received the required training, including the hands-on training. Training records were maintained by the RSO. A previous inspection had identified a violation of inadequate training of personnel. The inspectors discussed training program with the licensee's personnel whose responsibilities included use of the scanning devices. Each of these individuals stated that he/she had received the required training and the inspector noted that these individuals were familiar with appropriate radiation safety and emergency procedures. The individuals who had performed the required radiation surveys satisfactorily demonstrated to the inspectors their procedure for making these surveys.

c. Conclusions

The inspectors determined that the licensee had implemented its approved radiation safety training program and the personnel were instructed in the safe use of licensed material. Therefore the training violation identified in a previous inspection is closed. The inspectors did not identify any violation or safety concern.

V. Radiation Surveys

a. Inspection Scope

The inspectors reviewed the implementation of the licensee's procedures for performing radiation surveys and adequacy of survey instruments.

b. Observations and Findings

The licensee's radiation safety procedures required making radiological surveys around the scanning devices before the start and the end of each shift, and once mid way during the shift. Records maintained at the control areas indicated that personnel performed these surveys as required by the survey procedures. The inspectors noted that the licensee possessed adequate number of appropriate instruments to perform these

surveys. The survey instruments were calibrated annually.

The inspectors confirmed that each facility possessed at least one survey instrument and each instrument had been calibrated and was in working condition. The inspectors verified the accuracy of the licensee's survey instruments by comparing the dose rate readings indicated by the licensee's instruments to those indicated by the inspectors' NRC survey instruments (Thermo Electron Corporation Model Micro Rem Doserate Meter). These comparisons did not indicate any significant difference between the dose rates measured by the two instruments.

c. Conclusions

The licensee performed the required surveys and maintained records of these surveys. The inspectors did not identify any violation or safety concern.

VI. Exit Meeting

On September 11, 2012, the lead inspector held a telephone conference with the licensee's management to discuss the inspection findings and to explain the NRC's inspection program, and the NRC's Policy Statement on Safety Culture. The inspector informed the licensee that the inspections performed at the above mentioned locations did not identify any violations of NRC requirements; and the training violation identified during a prior inspection is closed.

The licensee personnel included the Director of Border & Transportation Security Directorate, and the RSO. The management representatives assured the inspector of their continued commitment to comply with all regulatory requirements and to conduct their licensed activities in a manner that ensured safety of its personnel and members of public.

LOCATION OF PORTS INSPECTED

Elizabeth, NJ
Newark, NJ
Highgate Springs, VT
Derby Lane, VT
Swanton, VT
Norton, VT
Chesapeake, VA
Pharr, TX
Ysleta, TX
El Paso, TX
Brownsville, TX
Rio Grande City, TX
Roma, TX
Mobile, AL
Oakland, CA

San Juan, PR
St. Thomas, USVI

PARTIAL LIST OF PERSONS CONTACTED

Licensee

Gary T. McMahen, Director, Border & Transportation Security Directorate
Steven Tilden, Radiation Safety Officer
Port Directors or Deputy Directors at the ports of entry
Personnel using licensed material at the ports of entry

INSPECTION PROCEDURES USED

IP 87124 – NRC Inspection Procedure for Fixed and Portable Gauge Programs