# U.S. NUCLEAR REGULATORY COMMISSION
# REGION I

## INSPECTION REPORT

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| Report No. | 99990001/98-010 |
| Docket No. | 99990001 |
| License No. | General Licensee |
| Licensee: | Sonoco |
| Location: | 400 Blair Road, Cateret, New Jersey |
| Inspection Dates: | May 4, 1998 |

Inspector: Steven P. Courtemanche 5/27/98

Steven Courtemanche
Health Physicist
date

Approved By: Judith A. Joustra 5/27/98

Judith A. Joustra, Acting Chief
Nuclear Materials Safety Branch 3
Division of Nuclear Materials Safety
date

## EXECUTIVE SUMMARY

Sonoco
NRC Inspection Report No. 99990001/98-010

This special safety inspection was conducted in order to determine the circumstances surrounding the loss of an NRD, Inc. Model P-2051 nuclear ion air gun (device) containing a nominal source of 10 millicuries of polonium-210 sometime between 1:00 a.m. March 14, 1998 and 7:00 a.m. March 16, 1998. Also inspected was the licensee's program related to the transfer of ownership to Greif Brothers Corporation and the receipt, use and transfer of generally-licensed devices. Two apparent violations were identified: (1) 10 CFR 31.5(c)(8) the unauthorized disposal of a device containing byproduct material and (2) 10 CFR 31.5(c)(9)(i) the failure to notify the Commission within 30 days of the transfer of generally-licensed devices to another general licensee while the devices were in use at the same location.

## REPORT DETAILS

### I. Organization and Scope of the Program

a. Inspection Scope

The inspector reviewed the regulatory authority to possess licensed material, the organization of the licensed program, and the scope of the program.

b. Observations and Findings

The licensee possesses NRD, Inc. Model P-2051 nuclear ion air guns (device) with a nominal 10 millicurie polonium-210 sealed source under the authority of a general license pursuant to 10 CFR 31.5(a). Sonoco, Sonoco Industrial Container Division has possessed nuclear ion air guns since July of 1993. On March 30, 1998, Sonoco sold the Industrial Container Division to Greif Brothers Corporation and did not notify the Commission of the transfer as of May 4, 1998. The licensee operates one device to reduce the electrical static charge of plastic liners placed within fibre board drums. There are two devices onsite when the licensee receives a replacement device from the manufacturer. The devices are used approximately 20 to 30 hours a week.

c. Conclusions

The failure of the licensee to notify the Director of Nuclear Materials and Safeguards within 30 days of the transfer of generally-licensed devices to another general licensee at the same location is an apparent violation of 10 CFR 31.5(c)(9)(i).

### II. Event of March 14, 1998

a. Inspection Scope

The inspector reviewed the circumstances surrounding the loss of an NRD, Inc. Model P-2501 device and the licensee's corrective and preventive actions.

b. Observations and Findings

The licensee notified NRC Region I staff in a March 30, 1998 letter that sometime between 1:00 a.m. on March 14, 1998 and 7:00 a.m. on March 16, 1998, the licensee lost an NRD, Inc. Model 2051 nuclear ion air gun, a generally-licensed device. The device was distributed by the manufacturer to the licensee in July of 1997 and contained, at that time, a 10 millicurie polonium-210 sealed source in the tip of the device. The licensee determined that the device was missing about 10:00 a.m. on March 16, 1998 and reported the suspected loss to management. The manufacturer was contacted by the licensee on March 16, 1998 to obtain a replacement device. Personnel were interviewed by the licensee to determine when the device was last used and if anyone had seen the device. The licensee also posted a picture along with a description of the device and the statement that if found the device should be returned. Trash is compacted by the licensee and the compactor was emptied on February 26,

1998 and March 23, 1998. Licensee personnel went through the trash in the compactor and searched the plant on March 16, 1998, but did not recover the device. On March 23, 1998, the licensee contacted the manufacturer to inform them that the device had been lost. The manufacturer sent a letter to the licensee describing the reporting requirements for the loss of licensed material.

The inspector reviewed the licensee's actions to recover the device and performed a radiological survey using a Ludlum 12S Micro R meter of the general work area where the device was used. The missing device was not found. Radiological measurements of the replacement device indicated that, at the surface of the device, radiation exposure levels were 15 microRoentgen per hour compared to a background radiation level of about 5 microRoentgen per hour.

The inspector interviewed personnel and determined that the following were contributory causes to the loss of the device:

1. Personnel are not continuously present at the work station where the device is used,

2. The device was returned to secure storage only at the end of a shift, and

3. The device was hooked onto the waste barrel when not in use.

The licensee informed the inspector that it would take the following corrective and preventive actions:

1. The device will be returned to storage whenever no one is working at the station,

2. A sign informing employees to put the device in storage if the employee leaves the area will be placed at the work station, and

3. The air hose shall be put on an overhead pull-down assembly so that the device will not have to be hooked on the waste barrel.

c. Conclusions

The unauthorized disposal of a device containing byproduct material and possessed by the licensee under the authority of 10 CFR 31.5(a) is an apparent violation of 10 CFR 31.5(c)(8).

## III. Management Oversight of the Program

a. Inspection Scope

The inspector reviewed the licensee's supervision of the use of the nuclear ion air guns.

b. Observations and Findings

The plant manager and plant maintenance supervisor control the use of the devices. They have provided instruction to the workers who use the devices that the devices have a radioactive source and to place the device in secure storage after the end of each shift.

c. Conclusions

No safety concerns were identified.

## IV. Facilities and Equipment

a. Inspection Scope

The inspector reviewed how the generally-licensed device is stored when not in use.

b. Observations and Findings

The inspector observed that the licensee had a locked storage cabinet near the area where the device was used. The licensee has only one device in use at any one time.

c. Conclusions

No safety concerns were identified.

## V. Material Receipt, Use, Transfer, and Control

a. Inspection Scope

The inspector reviewed the licensee's receipt, use, transfer and control of devices possessed under the authority of 10 CFR 31.5(a).

b. Observations and Findings

The inspector reviewed the records of receipt of devices and the shipping papers of their return to the manufacturer. The licensee has been receiving devices since July of 1993 for a lease period of one year and returns the devices within the time period of the lease. The device has a leak test interval of one year and has been returned to the manufacturer prior to the end of the leak test interval. When in use, the device was attached to an air hose lying on the floor. The device was hung onto a waste barrel so that the worker would not have to continually bend down to pick up the hose. The

device was used about 20 to 30 hours each week over a span of two shifts (i.e., 80 hours). The workers were often called away from the work station to perform other work and left the device attached to the air hose at the work station. The licensee's procedures were to place the device in a locked cabinet at the end of each shift

c. Conclusions

The practice of leaving the device unattended and hooking it onto the waste barrel were contributing causes to the event of March 14, 1998. (See Item II). No safety concerns were identified.

## VI. Training of Workers

a. Inspection Scope

The inspector reviewed the information that was provided to the licensee by the manufacturer and the information given to the workers by management.

b. Observations and Findings

The inspector reviewed the documents that the manufacturer provided the licensee in accordance with 10 CFR 32.51a(a). It was noted by the inspector that the licensee has received three different versions of the NRD, Inc. instruction manual since 1993. The most recent version, which was with the the device received in March of 1998, was marked in the lower left hand corner of the instruction manual with the identifier 5K0988. The references to 10 CFR Part 31, in the document, were outdated in that it referred to 10 CFR 20.402 and 403 which were superseded in January of 1994. Also, the contact numbers for the NRC Regions and the Agreement States, in the document, were in need of revision. The licensee provided its workers with appropriate training as to the handling and storage of the device.

c. Conclusions

No safety concerns were identified, however, the State of New York will be notified by the NRC to inform them that NRD, Inc. continues to distribute outdated copies of 10 CFR Parts 20 and 31 to their customers.

## VI. Exit Meeting

Licensee personnel were informed of the inspection findings at the conclusion of the inspection.

## PARTIAL LIST OF PERSONS CONTACTED

Licensee

Herman L. Graff, Plant Manager
Michael Bevilaqua, Plant Maintenance Supervisor
Mel Bradshaw, Operator
Carlos Tissoni, Operator
William Velez, Plant Supervisor
William Crandall, Shipping Supervisor