



S. C. Johnson & Son, Inc.  
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October 2, 1997

48-06453-01

Mr. James Lieberman, Director  
Office of Enforcement  
U.S. Nuclear Regulatory Commission  
One White Flint North  
11555 Rockville Pike  
Rockville, MD 20852-2738

**Re: Notice of Violation and Proposed Imposition of Civil Penalty  
(Docket No. 030-06740)**

Dear Mr. Lieberman:

S. C. Johnson & Son, Inc. (SCJ) encloses its Reply to NRC's Notice of Violation (NOV) and Proposed Imposition of Civil Penalty (dated September 4, 1997). This NOV is the result of an NRC inspection at SCJ's Waxdale facility on November 21-22 and December 5, 1996. SCJ regrets the occurrence of the circumstances giving rise to the cited violations. SCJ is confident that the corrective actions described in its Reply, dated October 2, 1997, will ensure that similar occurrences will not occur in the future. SCJ already has paid the civil penalty.

On a related matter, NRC conducted a follow-up inspection of the Waxdale facility on August 25, 1997 to focus on the effectiveness of the actions SCJ implemented as a result of the NRC inspection in November and December, 1996. In a September 4, 1997 letter relating to the August 25 inspection, NRC characterized SCJ's conduct of licensed activities as "safety-conscious nuclear gauge operations, sound health physics practices, and careful radioactive material inventory controls." SCJ was pleased with those observations. During the August 25 inspection, NRC also issued a Notice of Violation relating to a potential security level IV violation. SCJ is providing its Reply to that NOV under separate cover.

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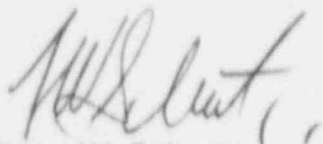
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Should you have any questions, please feel free to give me a call at (414) 260-4919.

Sincerely yours,



Larry W. Schuetze  
Vice President - Manufacturing Operations, NACP  
S. C. Johnson & Son, Inc.

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Enclosure

c: Regional Administrator  
U. S. Nuclear Regulatory Commission, Region III

## **REPLY TO A NOTICE OF VIOLATION**

### **S.C. JOHNSON & SON, INC. REPLY TO U.S. NUCLEAR REGULATORY COMMISSION, REGION III NOTICE OF VIOLATION AND PROPOSED IMPOSITION OF CIVIL PENALTY**

**Docket No. 030-06740**

**October 2, 1997**

#### **I. Introduction**

S.C. Johnson & Son, Inc. (SCJ) submits this Reply to the U.S. Nuclear Regulatory Commission's (NRC's) Notice of Violation and Proposed Imposition of Civil Penalty (NOV) issued on September 4, 1997. This violation relates to the removal and disposal of an Industrial Dynamics ID unit CI-2GV/3 (hereinafter referred to as the "ID Unit") from SCJ's Waxdale facility in Mt. Pleasant, Wisconsin. The requested information includes: (1) admission or denial of each alleged violation; (2) the reasons for the violation if admitted, and if denied, the reasons why; (3) the corrective steps that have been taken and the results achieved; (4) the corrective steps that will be taken to avoid further violations; and (5) the date when full compliance will be achieved.

#### **II. Reply to Alleged Violations**

In submitting this Reply, SCJ incorporates by reference its submission to NRC Region III on August 1, 1997. This written submission, titled "Submission of S.C. Johnson & Son, Inc. to U.S. Nuclear Regulatory Commission, Region III," was provided to NRC during a predecisional enforcement conference held at SCJ on August 1, 1997.

##### **A. First Alleged Violation**

NRC's first alleged violation concerns the unauthorized disposal of the Americium-241 sealed source. In support of this alleged violation, NRC cites to 10 C.F.R. § 20.2001 which requires that a licensee dispose of licensed material by certain enumerated methods.

NRC classifies this violation as a Severity Level III violation and proposes the imposition of a \$2,500 civil penalty. SCJ does not contest this alleged violation.

##### **1. The Reasons for the Violation**

NRC identifies three apparent causes of this alleged violation: (1) improper storage of the nuclear gauge; (2) poor judgment on the part of plant personnel participating in the scrapping

program; and (3) inadequate direction provided to staff regarding the scrapping program. SCJ does not contest NRC's determination of the causes of the violation.

**2.     The Corrective Steps that Have  
      Been Taken and the Results Achieved**

SCJ has undertaken a number of corrective actions in response to the circumstances giving rise to the first alleged violation. These corrective actions were set forth in SCJ's August 1, 1997 submission to NRC. For convenience, these corrective actions will be restated in this Reply.

**a)     Enhanced Training**

On November 23, 1996, SCJ began training all three shifts of the Waxdale production employees regarding the hazards associated with radiation sources located at Waxdale, the postings that identify such radiation sources, and the procedures that must be followed before any such sources may be moved or disconnected. This training included a discussion of the proper disposal of sources. The Radiation Safety Officer (RSO) conducted the initial training on line 515, the production line where the loss occurred.

Subsequent to this training effort, SCJ management decided to provide training to each and every Waxdale employee, including professional and clerical staff, regarding radiation sources and hazards and SCJ's policies to comply with its NRC license. The training initiative commenced on December 17 and 18, 1996 with top SCJ management and technical staff conducting three facility-wide meetings (one for each shift) to heighten employee awareness of the importance of following safety environmental requirements, including radiation safety. At the conclusion of each meeting, each Waxdale employee was required to pass a test on radiation safety. At present, all 1,500 Waxdale employees (with the exception of a small number on medical leave) have been trained and have passed this test.

SCJ has also enhanced its written training program that is given to all plant employees and contractors on a periodic basis. This training program includes a component dealing with the proper removal and disposal of all ID units containing licensed material.

**b)     Physical Source Modification**

SCJ has physically modified all units containing licensed material by attaching the units to the floor or other secure structures (e.g., conveyer line) with a "bolt boot" that prevents removal of the bolt without first removing the boot. The boot is locked in place with a combination lock that is accessible only by the RSO, ARSO and their managers. The lock is tagged with a warning sign stating that the lock may not be removed except by such personnel. This warning includes a statement that employees who do not follow these procedures shall be subject to disciplinary action, including termination.

Additionally, a metal warning sign has been permanently attached to each source containing licensed material to notify all personnel that the regulated source may not be removed without the approval of the RSO.

These measures ensure that only appropriate SCJ employees have access to sources containing licensed materials. By restricting source access to appropriate individuals, the likelihood of improper source disposal is substantially reduced.

**c) Management Control Systems**

SCJ's Senior Vice President issued a memorandum on November 22, 1996 to all managers, facilitators, professionals and production teams at the Waxdale facility directing all personnel to comply fully with radiation safety procedures specified by the RSO. The existing written program regarding the addition, relocation, or removal of sources containing licensed materials also has been modified to include requirements to document and log all removal, relocation and disposal activities which occur on licensed sources.

In addition, SCJ has revised its "Major Expenditure Authorization" (MEA) procedures to require that the RSO approve any MEA which entails the removal, replacement or addition of a source containing licensed material.

The above-described management control systems will substantially reduce the probability of improper source disposal because the systems restrict source access to properly trained SCJ employees who are aware of NRC regulations applicable to proper source disposal.

**d) Modified Scrapping Practices**

The informal scrapping practice that gave rise to the events resulting in the scrapping and disposal of certain metal parts of the ID Unit has been terminated. The Company now handles all scrap under a central system. Under this system, scrap material must be tagged as scrap when removed from service and must be taken as soon as practical to a centralized location. The actual sources are never to be included in the central scrap system.

**e) Disciplinary Action**

SCJ has taken disciplinary action against SCJ employees having primary responsibility for the inappropriate disposal of the licensed material.

**3. The Corrective Steps that Will Be Taken to Avoid Further Violations**

SCJ has completed all of the previously described corrective actions.

**4. The Date When Full Compliance Will Be Achieved**

Because of the aggressive corrective actions taken to date, SCJ believes it is currently in full compliance with 10 C.F.R. § 20.2001.



**B. Second Alleged Violation**

NRC's second alleged violation: concerns the unauthorized removal of the ID Unit by technically unqualified personnel. In particular, NRC refers to licensee condition 17 which requires in part that:

Installation, initial radiation survey, relocation, removal from service, maintenance, and repair of devices containing sealed sources shall be performed by Carmela M. Richards or by persons specifically licensed by the Commission or an Agreement State to perform such services.

NRC classifies this alleged violation and the third alleged violation in the aggregate as a Severity Level III violation. SCJ does not contest this alleged violation.

**1. The Reasons for the Violation**

NRC identified the causes of this alleged violation as the failure to notify the RSO prior to nuclear gauge removal due to deficiencies in the licensee's training program and misinterpretation of the licensee's procedures. SCJ does not contest NRC's determination of the causes of the violation.

**2. The Corrective Steps that Have Been Taken and the Results Achieved**

SCJ has undertaken a number of corrective actions in response to the circumstances giving rise to the second alleged violation.

**a) Enhanced Training**

As previously discussed under the corrective actions for the first alleged violation, SCJ has substantially enhanced training for all three shifts of Waxdale production employees with respect to the hazards associated with radiation sources. This training addresses, among other points, the requirement to have only authorized individuals remove any units containing licensed material.

**b) Physical Source Modification**

As described above under the corrective actions for the first alleged violation, SCJ has installed bolts, locks, and warning signs on all sources containing licensed material. These measures ensure that only appropriate SCJ employees have access to sources containing licensed materials. By restricting source access to appropriate individuals, the likelihood of removal of nuclear gauges from service by unauthorized individuals is substantially reduced.

c) **Management Control Systems**

As previously discussed under the corrective actions for the first alleged violation, SCJ has implemented a number of management control systems. The systems require the documentation and logging of all removal, relocation and disposal activities which occur on licensed sources.

In addition, SCJ's revised MEA procedures require that the RSO approve any MEA which entails the removal, replacement or addition of a source containing licensed material.

d) **Disciplinary Action**

SCJ has taken disciplinary action against the SCJ employees having primary responsibility for the circumstances giving rise to the unauthorized removal of the licensed material.

3. **The Corrective Steps that Will Be Taken to Avoid Further Violations**

SCJ has completed all of the corrective actions relating to the second alleged violation.

4. **The Date When Full Compliance Will Be Achieved**

SCJ believes that it is currently in full compliance with license condition 17.

C. **Third Alleged Violation**

The third alleged violation noted by NRC concerns the failure to secure the nuclear gauge from unauthorized access during storage. In particular, NRC cites to 10 C.F.R. § 20.1801, which states that "[t]he licensee shall secure from unauthorized removal or access licensed materials that are stored in controlled or unrestricted areas."

As previously mentioned, NRC classifies the second and third alleged violations in the aggregate as a Severity Level III violation. SCJ does not contest this violation.

1. **The Reasons for the Violation**

NRC identified the cause of this alleged violation to be the failure to consider that the nuclear gauge could be removed by unauthorized staff with heavy equipment after it was removed from installation. SCJ does not contest NRC's determination of the cause of the violation.

2. **The Corrective Steps that Have Been Taken and the Results Achieved**

SCJ has implemented a number of corrective actions as a result of the activities giving rise to the third alleged violation.

**a) Modified Scrapping Practices**

As noted above, the informal scrapping practices that gave rise to the events resulting in the scrapping of certain metal parts of the ID Unit have been terminated. The Company now handles all scrap under a central system. Under this system, scrap metal must be tagged as scrap when removed from service and must be taken as soon as practical to a centralized location. Radioactive sources are never to be included in this central scrap system.

**b) Enhanced Training**

The same enhanced training measures described above in discussing the second alleged violation also will act to prevent any recurrence of the facts giving rise to the third alleged violation by educating employees, among other points, of the procedures that must be followed before any radiation sources may be moved or disconnected.

**c) Management Control Systems**

As previously discussed under the corrective actions for the first alleged violation, SCJ has implemented a number of management control systems. These systems also address the secure storage of removed sources. For example, the existing written program regarding the addition, relocation or removal of sources containing licensed material was modified to include a requirement to log all removal, relocation and disposal activities involving licensed sources. This log will ensure that the location of all sources are known and will protect against unauthorized access during storage.

Additionally, as noted above, the modifications to the MEA procedure require that the RSO approve any MEA that entails the removal, replacement or addition of a source containing licensed material. The MEA procedure modifications will ensure that the RSO is aware of any activities involving a source containing a licensed material so that the source is properly accounted for at all times.

**d) Disciplinary Action**

SCJ has taken disciplinary actions against the SCJ employees having primary responsibility for the inappropriate storage of the licensed material.

**3. The Corrective Steps that Will Be Taken to Avoid Further Violations**

SCJ has currently implemented all of the previously described corrective actions in response to the third alleged violation.

**4. The Date When Full Compliance Will Be Achieved**

SCJ believes that it is currently in full compliance with 10 C.F.R. § 20.1801.



#### **D. Fourth Alleged Violation**

NRC's fourth alleged violation is the failure to immediately notify the NRC regarding the missing radioactive material. In support of this alleged violation, NRC cites to 10 C.F.R. § 20.2201. NRC classifies this alleged violation as a Severity Level IV violation. SCJ does not contest this violation.

##### **1. The Reasons for the Violation**

NRC identified the cause of this alleged violation to be a misinterpretation of the notification requirements in that the licensee did not consider the sealed source missing until it completed interviews of all individuals that might have had knowledge about the location of the sealed source.

SCJ does not contest NRC's determination of the cause of the alleged violation. SCJ would note, however, that condition 23 of its license requires SCJ to "conduct its program in accordance with the statements, representations, and procedures contained in [enumerated] documents including any enclosures." One such document is a letter dated December 9, 1994 with enclosures. One enclosure to this document is entitled "Radiation Protection Program Guideline." Section II of this document states that "Confirmation of lost or stolen sources will be reported to the NRC immediately" (emphasis added). Under this provision, which is part of SCJ's license, SCJ interpreted the requirement to report the source to NRC not to be triggered until it "confirms" that the source is lost or missing.

##### **2. The Corrective Steps that Have Been Taken and the Results Achieved**

Setting aside any difference of opinion on the timeliness of the notification, a number of the previously described corrective actions would serve to prevent a recurrence in the future of the circumstances giving rise to the fourth alleged violation. For example, the enhanced training includes a component on the procedures that must be followed before sources may be moved or disconnected. Because this training includes notifying the RSO prior to removing, storing or disposing of any source, the RSO should always know the location of the source prior to its proper removal from SCJ. Also, the source modification (e.g., bolt boot, lock, and warnings) ensure limited access to the source and enable the RSO/ARSO to be routinely aware of the source location. Further, the previously described management controls will ensure that the RSO knows the physical location of all sources at all times. Finally, as a result of this incident, SCJ appreciates more fully NRC's interpretation of the notification requirements.

Because of the corrective actions taken, SCJ is confident that in the future there will be no lost or missing units containing licensed material at the Waxdale facility. SCJ quickly responded to the loss of the Americium-241 source by thoroughly investigating the possible locations for the source and implementing a number of corrective actions. SCJ takes seriously the terms and conditions of its license from NRC for the use of licensed materials at the Waxdale facility.

3. **The Corrective Steps that Will Be  
Taken to Avoid Further Violations**

SCJ has implemented all of the previously described corrective actions.

4. **The Date When Full Compliance Will Be Achieved**

SCJ is currently in full compliance with 10 C.F.R. § 20.2201.

III. **Conclusion**

SCJ regrets the issuance of the NRC NOV. SCJ is confident that the corrective actions implemented in response to the NOV will prevent future similar occurrences.