

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 999-90003/85-110(DRSS)

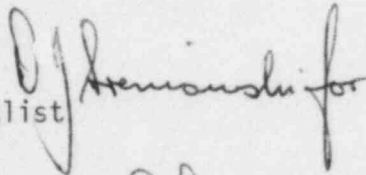
Docket No. 999-90003

Licensee: DelMonte Corporation  
One Market Plaza  
San Francisco, CA 94119

Inspection Conducted: September 25 through October 10, 1985

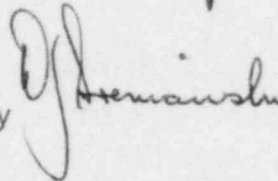
Onsite Inspection Conducted On: October 3, 1985  
Located At: DelMonte Corporation  
506 W. North Street  
Plymouth, Indiana

Inspector: T. L. Simmons  
Radiation Specialist



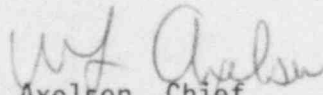
10/29/85  
Date

Reviewed By: D. J. Sreniawski, Chief  
Nuclear Materials Safety  
Section 2



10/29/85  
Date

Approved By: W. L. Axelson, Chief  
Nuclear Materials Safety  
and Safeguards Branch



10/29/85  
Date

Inspection Summary

Inspection on September 25 through October 10, 1985

(Report No. 999-90003/85-110(DRSS))

Areas Inspected: Special safety inspection of the circumstances involving a gauge containing radioactive material retrieved from a scrap yard. This inspection included a review of records, letters and documents, and interviews with individuals involved. The inspection involved a total of 21 hours by one NRC inspector.

Results: Three violations were identified: (1) 10 CFR 31.5(c)(2) - failure to perform leak tests at required intervals (Section 3); (2) 10 CFR 31.5(c)(3) - removal from installation by unauthorized individuals (Section 3); (3) 10 CFR 31.5(c)(8) - unauthorized disposal of byproduct material (Section 3).

## DETAILS

### 1. Persons Contacted

F. Calhoun, President, Industrial Dynamics Co. Ltd., Torrence, California  
R. Ohms, Foreman, Milupa Corporation, East Troy, Wisconsin  
R. Filter, Plant Manager, Milupa Corporation, East Troy, Wisconsin  
J. Newton, QA Manager, DelMonte Corporation, Dayton, New Jersey  
\*K. Peacock, Plant Manager, DelMonte Corporation, Plymouth, Indiana  
\*D. Stevenson, Engineer, DelMonte Corporation, Plymouth, Indiana  
P. Martin, DelMonte Corporation, Plymouth, Indiana  
M. Morris, Manager, Franklin Scrap Yard, Plymouth, Indiana  
J. VanKirk, Driver, Franklin Scrap Yard, Plymouth, Indiana  
B. Mervis, Manager, Mervis and Sons Scrap Yard, Kokomo, Indiana  
C. Holderead, Director, Civil Defense Office, Marshall County, Indiana  
R. Hudson, Civil Defense Office, Indianapolis, Indiana  
H. Stocks, Indiana State Board of Health  
W. Spain, Director, Corporate Quality Assurance and  
Regulatory Affairs

\*Present at exit interview (via telephone).

### 2. Purpose of Inspection

This was a special inspection to review the circumstances surrounding an americium-241 gauge found in a scrap yard. This incident was reported to NRC Region III by the Indiana State Board of Health on September 25, 1985.

### 3. Inspection Findings

A 100 millicurie americium-241 gauge was discovered at a Kokomo, Indiana scrap yard on or about September 19, 1985. The gauge was part of a load of scrap sent there for cutting by the Franklin Scrap Yard of Plymouth, Indiana. The gauge was returned to Plymouth by a Franklin Scrap Yard driver on September 20, 1985 because it was labeled "radioactive material." Yard personnel notified the local Civil Defense Office the following Monday (September 23). Civil Defense personnel, upon confirming that the device was radioactive, transported it to the Indiana State Board of Health (see Attachment A - Civil Defense report). Indiana State Board of Health (ISBH) personnel performed a leak test, a radiation survey, and photographed the device (see Attachment B - ISBH memo and photos). No leakage was detected. They also arranged to ship the device to the manufacturer. Upon receipt, the manufacturer verified the integrity of the source (see Attachment C - leak test results).

It was determined by device and source serial numbers that the gauge was purchased from Industrial Dynamic Company, Ltd. of Torrence, California by RJR Foods of Winston-Salem, North Carolina in 1979. The device was installed by the manufacturer in a plant located in East Troy, Wisconsin (see Attachments D and E).

The gauge was removed from installation sometime after March 8, 1980 by RJR Foods/DelMonte personnel and placed into storage at its Dayton, New Jersey plant (see Attachment F). Removal of a generally licensed nuclear gauge from installation by a general licensee is in violation of 10 CFR 31.5(c)(3), which states that the removal from installation of a generally licensed device containing radioactive material shall be performed by a person holding a specific license or an Agreement State licensee to perform such activities.

At some time after October 1980 the gauge, along with other surplus equipment, was transferred to the DelMonte plant in Plymouth, Indiana where it was placed in storage. In August 1985, DelMonte personnel discarded the gauge as scrap which was sold to Franklin Scrap Yard. Disposal of licensed material in this manner is a violation of 10 CFR 31.5(c)(8), which states that a general licensee shall dispose of the device containing byproduct material only by transfer to persons holding a specific license or an Agreement State to receive the device.

In addition, the last leak test of the gauge was performed in March 1980 by the manufacturer. No leak tests were performed while the gauge was in storage. Failure to perform six month leak tests is a violation of 10 CFR 31.5(c)(2), which states any person who acquires, receives, possesses or uses by-product material in a device pursuant to a general license shall assure that the device is tested for leakage of radioactive material at no longer than six month intervals.

Three violations were identified.

#### 4. Exposure Estimate

The only person determined to be in proximity of the gauge was the driver who transported the device from Kokomo, Indiana to Plymouth, Indiana. The driver stated that the trip took about 1-1/2 hours and that the gauge was on the front seat, four feet away from him. It is not known whether the device was in the on or off position at this time. However, the device was in the on position when confiscated by the ISBH. Accordingly, assuming that the device was in the on position, the following exposure estimates were made based on the Indiana State Board of Health's radiation survey:

The source is 0.8 inches from the surface of the device.

The radiation level was 200 mR/hr at the surface of the device.

The exposure rate (E) calculated for a distance of 4 ft. would be:

$$E = 200 \text{ mR/hr} \frac{(0.8'')^2}{(48'')^2} = 0.06 \text{ mR/hr}$$

The dose (D) to the truck driver would be:  
 $D = 0.06 \text{ mR/hr @ 4 ft.} \times 1\text{-}1/2 \text{ hrs.}$   
 $D = 0.08 \text{ mR @ 4 ft.}$

Worst Case: device 2 feet from driver  
 $D = 0.33 \text{ mR @ 2 ft.}$

In both cases, driver at 4 ft. or at 2 ft., would have resulted in a dose to the driver of less than 0.5 mR which represents no significant health hazard.

#### 5. Exit Interview

On October 3, 1985, the inspector met with those individuals denoted in Section 1 of this report. The discussion included a review of the incident, the licensee's corrective measures taken, and potential NRC enforcement action. This matter was also discussed with Mr. W. Spain, Director, Corporate Quality Assurance and Regulatory Affairs on October 4, 1985. Mr. Spain submitted, in a letter dated October 7, 1985 (see Appendix 3), further corrective measures to be taken by DelMonte.

#### 6. Enforcement Conference

An Enforcement Conference was held by telephone on October 21, 1985 to discuss the findings of an NRC special safety inspection conducted on September 25 through October 10, 1985. The conference was conducted between Messrs. Spain and Fish of DelMonte's staff, and Mr. J. A. Hind and members of the NRC Region III staff. The purpose of the conference was to (1) discuss the apparent violations, their significance and causes, and the licensee's corrective actions; (2) determine whether there were any aggravating or mitigating circumstances, and (3) obtain other information which could help determine the appropriate enforcement action.

Mr. J. A. Hind, Director, Division of Radiological Safety and Safeguards, opened the conference by describing the purpose and scope of the meeting as well as the NRC enforcement policy and concerns raised as a result of the September 25 through October 10, 1985 inspection.

The apparent violations were reviewed with the licensee. The licensee representatives were not in disagreement with the facts as stated. The licensee representatives were informed that the unauthorized removal and disposal of the gauge could represent a Severity Level III violation pursuant to NRC policy.

Attachments:

- A. Civil Defense Report
- B. Indiana State Board of  
Health Memo and  
Photographs of Device
- C. Industrial Dynamics Co.  
Ltd. Leak Test Results
- D. Industrial Dynamics Co.  
Ltd. Shipping Record
- E. Industrial Dynamics Co.  
Ltd. Service Record
- F. Correspondence/Milupa  
and RJR Foods

Appendix:

- 1. Chronology of Events  
Concerning Filter Gauge
- 2. Sample Package Sent to  
General Licensees by  
Industrial Dynamics
- 3. DelMonte Corporation  
Letter dated 10/03/85