U.S. NUCLEAR REGULATORY COMMISSION
OFFICE OF INSPECTION AND ENFORCEMENT

Region I

Report No. 030-08681/79-01

Docket No. 030-08681

License No. 29-00055-14 Priority 2 Category D

Licensee: Teledyne Isotopes, Inc.
50 Van Buren Avenue
Westwood, New Jersey 07675

Facility Name: Teledyne Isotopes, Inc.

Inspection at: Westwood, New Jersey

Inspection conducted: June 21, 1979

Inspectors: John E. Glenn — July 2, 1979
John Glenn — date signed
Radiation Specialist

date signed

date signed

Approved by: Robert D. McClintock — 7/2/79
Robert McClintock, Chief — date signed
Materials Radiological Protection
Section

Inspection Summary:

Inspection on June 21, 1979 (Report No. 030-08681/79-01)
Areas Inspected: Special, unannounced inspection of the radiation protection program including the scope of operations, liquid waste disposal, and tour of facilities. The inspection involved 5 hours on site by one NRC inspector.
Results: No items of noncompliance or deviations were identified.

Details

1. Persons Contacted

*Steven Black, Assistant RSO
*Eugene O'Brien, Vice President for Administration

*denotes those present at exit interview.

2. Licensee Action on Previous Inspection Findings

(Closed) Noncompliance (30-8681/78-01): Failure to evaluate airborne concentrations in the breathing zone of individuals working in the waste storage areas. The inspector found that air samples had been taken on a routine basis since the last inspection. The highest levels of Iodine-125 measured by the licensee were less than ten percent of the maximum permissible concentration in air.

3. Scope of Operation

Activities authorized by license number 29-00055-14 are limited to receipt, possession, and storage of licensed waste materials. Transfer of this material is permitted to authorized land burial sites.

Licensee representatives stated that waste material is received from approximately thirteen states in the Northeastern United States. All waste material is brought to the Westwood facility prior to reshipment to land burial site's Radioactive waste, except transuranics, had been shiped to the Barnwell, South Carolina land burial site prior to recent amendments to the burial sites license. Teledyne representatives stated that they now expected to ship all radioactive waste to Richland, Washington for land burial. The representatives stated that they have not, and do not intend to, ship waste to Beatty, Nevada.

A review of shipping records and receipts indicated that the majority of radioactive waste was coming from commercial, academic, and medical research labs. This waste consisted mainly of tritium, carbon-14, and other beta emitters. Inventory records showed that on June 21, 1979 the licensee possessed less than 200 curies of tritium, less than 3.2 curies of other byproduct material, no special nuclear material and less than 2 pounds of source material as prepackaged waste for land site burial. A review of representative shipping papers indicated that roughly one third of the packages of waste contained liquids.

4. Liquid Waste Disposal

Licensee records show that until recently drums containing liquids, including liquid scintillation vials, were shipped for burial at the Barnwell, South Carolina location. On June 4, 1979, the licensee received a copy of ammendment 25, to Chem-Nuclear Systems, Incorporated's South Carolina License. This ammendment prohibited the receipt of tulene or other organic liquids and containers which had contained such liquids.

The licensee had previously instructed customers to identify drums containing scintillation vials and to fill such drums with sufficient absorbent material to absorb twice the volume of liquid within the drum. Licensee representatives noted they are not authorized to open drums to determine compliance with these instructions. Due to the difficulty of assuring that improper materials are not shipped to the South Carolina Facility, the licensee has decided to ship all radioactive waste to the Richland, Washington site. Licensee representatives noted that one shipment had already been returned from South Carolina for failing to meet the new requirements. The shipment consisted of:

(1) A drum containing liquid waste from Delaware Medical Laboratories of Wilmington, Delaware. Chem-Nuclear stated the liquid should have been packaged in a double-wall container.

(2) A drum containing liquid waste from Community General Hospital of Reading, Pennsylvania for the same reason as above.

(3) A drum containing scintillation vials from Drexell University.

(4) A large crate from GE in Philadelphia containing a contaminated oven because the container was not a "strong, tight container".

(5) A drum containing animal carcasses because they had been shipped more than 72 hours previous to receipt and had not been refrigerated.

On June 12, 1979 Teledyne informed customers of the new requirements and announced a two dollar per cubic foot surcharge for all waste shipped to Richland, Washington. Licensee representatives expressed the opinion that with most shipments the hazard was due to the chemical and physical properties of the toluene and not due to the radioactive materials.

5. Tour of Facilities

The inspector made a tour of the warehouse storage facilities for packaged radioactive waste. The inspector noted that the warehouse was posted "Caution - Radioactive Materials" and that the entrance was locked.

Radiation levels measured in the unrestricted area immediately adjacent to the warehouse were indistinguishable from natural background (0.01 to 0.02 milliroentgens per hour). The highest radiation levels measured in accessible areas within the restricted area were 0.3 milliroentgens per hour. Smears of accessible surfaces were made by the inspector and were counted in the Region I laboratory. All smears showed less than 20 dpm of removable contamination per 100 cm^2. These results were in agreement with the licensees surveys.

6. Exit Interview

The inspector met with the licensee representative (denoted in para 1) at the conclusion of the inspection. The inspector summarized the purpose and the scope of the inspection and the findings.