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MEMORANDUM FOR: Robert E. Browning, Deputy Director
Division of Waste Management

Ross A. Scarano, Branch Chief
Low-Level Waste Licensing Branch

THRU: Paul H. Lohaus, Section Leader
Low-Level Waste Licensing Branch

FROM: Ken Jackson, Senior Project Manager
Low-Level Waste Licensing Branch

SUBJECT: TRIP REPORT - MEETING WITH TELEDYNE ISOTOPES,
WESTWOOD, NEW JERSEY - NON-FUEL CYCLE WASTE
SEPTEMBER 30, 1982

Enclosed find trip report on meeting with Teledyne Isotopes held
September 30, 1982 in Westwood, New Jersey.

Original Signed By

Ken Jackson, Senior Project Manager
Low-Level Waste Licensing Branch

Enclosure: as stated above

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NAME : KJackson : : : : : : :
DATE : 82/10/19 : : : : : : :

Trip Report - Meeting with Teledyne Isotopes,
Westwood, New Jersey - Non-Fuel Cycle Waste
September 30, 1982

Attendees:

<u>Teledyne</u>	<u>Brookhaven National Laboratory (BNL)</u>	<u>Nuclear Regulatory Commission (NRC)</u>
Steve Black, RSO	D. Dougherty R. Barletta	K. Jackson

The meeting at Teledyne was one in a series of visits to non-fuel cycle waste generators by BNL and NRC, in order to expand the data base on the chemical and physical characteristics of low-level waste generated by non-fuel cycle industries and institutions. The goal of these efforts is to permit a better understanding of the variety of waste products now being disposed of by commercial shallow land burial. Teledyne was selected for a follow-up visit based on its responses to a telephone survey conducted in June 1982 by BNL.

Mr. Steve Black, RSO, was our contact and host for the meeting. The discussions held with Mr. Black were open and free-ranging regarding Teledyne's work. Teledyne Isotopes is a many-faceted company (see attached brochure) which also serves as a broker for LLW. Mr. Black stated that Teledyne's waste load is stable, although they have lost 45% of their customers since 1979. The reason for the large drop-off was attributed to the increased costs of disposal-the loss was mostly small hospitals and clinical laboratories, which ostensibly now store their waste for decay or take advantage of the changes in Part 20. One of the concerns of Teledyne from a business standpoint is whether their weight per unit volume is increasing, since they suspect that many of their customers are using Sears - type compactors (Teledyne thinks maybe illegally). Teledyne estimates that an average of 20 drums per month waste generation would make a compactor viable. Teledyne has recently applied to NRC for approval of a compactor (July 14, 1982). Paul Guinn of FC is the cognizant individual. Future plans of Teledyne include picking up waste from out-of-state, compacting it, and re-manifesting it for shipment. In response to the question as to the effect of this activity on Compacts, particularly the data keeping activities that we are currently trying to get a handle on, Mr. Black suggested that Teledyne could go into the Compact area, package waste within that area

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and ship to the Compact's disposal site if the site is within Teledyne's current range.

Teledyne does very little direct packaging of waste and when it does, the work is performed under the waste generator's license . What Teledyne does is to supply containers, absorbent (vermiculite) and polyliners. Depending on the customer's need, they will do whatever is necessary on a consulting basis. Each customer is supplied with a set of packaging instructions, and must certify to Teledyne that the waste has been packaged according to the instructions.

Types of waste normally handled by Teledyne are: (1) dry solids, which will be sorted into compactible and non-compactible wastes; (2) both exempt and non-exempt scintillation vials; (3) small volume liquid (aqueous) non-scintillation material; (4) absorbed bulk liquids; (5) animal carcasses; (6) tritium gas (one customer); (7) special form (sealed sources, density meters, etc.) Approximately 96-98% of the waste is Class A. The tritium waste as described by Teledyne would potentially be Class B (about 30 curies per drum). The quantity of this waste is about 1 drum per month and consists of glass ampules filled with tritium gas. We asked if the method of packaging was known and Mr. Black did not have an immediate answer. Subsequently, we learned by telephone conversation that there is no special manner in which this waste is packaged.

Some sealed sources may also be Class B. Low activity sources are packaged in a box which is centered in a drum to prevent shifting. High activity sources are placed in a drum, centered and stabilized by plywood discs above and below the source, and surrounded by packaging material. Teledyne currently does not handle TRU waste, except for some smoke detectors. Density meters containing amounts of cesium-137, strontium-90, or cobalt-60 which would place them in Class B or Class C waste category are also shipped by Teledyne. Mr. Black was asked if he could perform a summary of representative Class B type shipments over a selected period of time. He agreed to send this information to Jackson. We will subsequently follow up on this information with Teledyne. With reference to improved packaging, Mr. Black expressed an interest in Plasti-Drum Corporation's 7A Polyethylene container. Barletta gave him Plasti-Drum's address.

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Teledyne currently ships approximately 45,000 cubic feet of waste per year. About fifty to one hundred drums of the waste shipped is non-LSA. There is virtually no hold-up (storage) of the waste.

Teledyne is considering seeking a license to perform the complete job of packaging for many of the smaller waste generators. In this way they feel they will assure that a good fraction of the waste is consistently packaged. I commended this move, since it would remove much of the doubt and uncertainty of small waste generators in relation to Part 61 requirements.

Another discussion centered around the question of de-minimus levels of activity. I stated that NRC had acted in those circumstances where waste activity concentration is of no radioactive concern, and that NRC is addressing this issue on a case-by-case basis.

Mr. Black conducted a tour of the Teledyne facilities, including the waste handling area, where we were able to observe some loading activities. Departure was at 4:30 p.m.

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