



ITT Corporation

ITT Defense Communications Division

Defense-Space Group

100 Kingsland Road

Clifton, New Jersey 07014

(201) 284-0123

May 7, 1985

Mr. John D. Kinneman, Chief  
Nuclear Materials Section A  
Nuclear Materials & Safeguards Branch  
U.S. Nuclear Regulatory Commission  
631 Park Ave.  
King of Prussia, PA 19406

License No. 29-09807-2

Dear Mr. Kinneman:

As was requested in your letter of 3/14/85, the attached documentation provides information regarding proper disposal of all radioactive material for which the subject license was obtained. Please retire the subject license as the material is no longer in ITT's possession.

Sincerely,

Alan J. Leibowitz  
Environmental Health & Safety Specialist

AJL:bs

cc: E. Baker  
R. English

8506100030 850530  
REG1 LIC30  
29-09807-02 PDR



ITT Corporation

ITT Defense Communications Division

Defense-Space Group

100 Kingsland Road  
Clifton, New Jersey 07014  
(201) 284-0123

May 7, 1985

Mr. Steven Black  
Teledyne Isotopes  
Westwood Laboratories  
50 Van Buren Ave.  
Westwood, NJ 07572

Dear Mr. Black:

With the material contained in the attached can ITTD CD has consigned to Teledyne Isotopes all items listed on Nuclear Regulatory Commission license 29-09807-02 (see attached list) for proper disposal. Permit Number 8-1084 has been obtained from the State of Washington and generator #NJD 05-811-2947 from U.S. Ecology to ensure proper disposal of this waste.

All waste was prepared as required by Teledyne including encasement of the  $Ra^{226}$  calibration disk in cement weighing over 2 lbs. for disposal.

I appreciate your assistance in this disposal operation. If there should be any further questions, please contact me at (201) 284-3549.

Sincerely,

Alan U. Leibowitz  
Environmental Health & Safety Specialist

AJL:bs

Attachment

## (Application for Byproduct Material License)

6-(b) Chemical and/or Physical Description of Material.(1) In Custody of ITTAV:(1.1) Calibrated Light Source, U. S. Radium Laboratories Model 706.

(1.1.1) Physical Description. Luminescent disc, approximately 10 mm in diameter, encapsulated in a hard plastic cylinder approximately 14 mm in diameter and 12 mm high. Base of cylinder is sealed in a small brass socket, having a threaded stud at its bottom for mounting.

(1.1.2) Active Material:  $H^3$ .

(1.1.3) Number of Pieces: One.

(1.1.4) Weight: 5.5 grams, the bulk of which comprises the plastic capsule and brass base.

(1.1.5) Data on Base: USRL, S/N 51649, January 1964,  $H^3$  gas, 0.3 C. (The entry of 0.3C is considered to be in error.....see par (1.1.6) below).

(1.1.6) Measured Radioactivity Level: 0.2 mr/hour, with probe touching the specimen (17 January 1979).

(1.2) Calibrated Light Source, U. S. Radium Laboratories Model 706-1.

(1.2.1) Physical Description. Same as (1.1.1) above.

(1.2.2) Active Material:  $C^{14}$ .

(1.2.3) Number of Pieces: Two.

(1.2.4) Weight: 3.1 grams, each unit. The bulk of this weight comprises the weight of the plastic capsule and the brass base.

(1.2.5) Data on Base: USRL S/N's 51651 and 51652, January 1964,  $C^{14}$ , 1.8 mC (each capsule).

(1.2.6) Measured Radioactivity Level:

S/N 51651: 0.3 mr/hour	}	(17 January 1979)
S/N 51652: 0.5 mr/hour		

## (Application for Byproduct Material License)

6-(b) Chemical and/or Physical Description of Material (continued).(2) In Custody of ITTDCD:(2.1) Radiation Calibration Disc.

- (2.1.1) Physical Description: Thin disc, approximately 30 mm in diameter, encapsulated in a hard plastic outer disc, approximately 35 mm in diameter and 4 mm thick.
- (2.1.2) Active Material: Radium<sup>226</sup>.
- (2.1.3) Number of Pieces: One.
- (2.1.4) Weight: 4.1 grams, the bulk of which is the weight of the outer plastic envelope.
- (2.1.5) Data on Base: Nuclear Corporation of America.
- (2.1.6) Measured Radioactivity Level: 8.0 mr/hour, with probe touching the disc (17 January 1979).

(2.2) Irradiated Semiconductor Specimens.

ITTDCD is currently holding several samples of neutron-irradiated semiconductors (diodes, transistors, and integrated circuits) as indicated in the listing below. These samples were irradiated during the period of June 1974 through June 1976; and are being held for reference, in connection with several current in-house development programs requiring nuclear hardening design. None of these specimens exhibit any radioactivity above 0.2 mr/hour (the detection sensitivity of ITT's gamma radiation survey meter).

Item No.	Generic Nomenclature	Number of Pieces	Aggregate Weight, Grams	Radioactivity Level, mr/hour
1.	1N5199	Six	6.7	Less than 0.2
2.	1N4245A	Four	1.6	"
3.	1N4619	Six	1.2	"
4.	1N4454	Six	1.1	"
5.	1N4942	Six	2.4	"
6.	1N5312	Six	1.3	"
7.	1N5550	Six	4.7	"
8.	1N5711	Five	0.5	"



## (Application for Byproduct Material License)

6-(b) Chemical and/or Physical Description of Material (continued).(2) In Custody of ITTDCD (continued)(2.2) Irradiated Semiconductor Specimens (continued)

Item No.	Generic Nomenclature	Number of Pieces	Aggregate Weight, Grams	Radioactivity Level, mr/hour
9.	1N5765	Six	1.6	Less than 0.2 <sup>4</sup>
10.	1N23WE	Six	16.0	"
11.	1N251	Five	1.2	"
12.	1N645	Five	1.1	"
13.	1N758	Six	1.2	"
14.	1N941A	Six	1.2	"
15.	HP-5082-0180	Six	1.0	"
16.	HP Impatt	One	.01	"
17.	2N491A	Three	3.0	"
18.	2N918	Six	2.0	"
19.	2N4229A	Three	2.8	"
20.	2N2857	Five	1.6	"
21.	2N2905	Five	5.4	"
22.	2N3823	Six	1.6	"
23.	2N3860	Six	1.5	"
24.	2N3866	Five	7.3	"
25.	2N5397	Six	1.7	"
26.	2N6116	Four	1.3	"
27.	4N23	Four	3.4	"
28.	Siliconex P-238	Five	1.8	"
29.	MSC-80195-1	One	1.7	"
30.	K-2616	Six	1.9	"
31.	2N1772A	Four	25.1	"
32.	2N1776A	Four	25.2	"
33.	2N4931	Six	6.8	"
34.	2N2323	Seven	6.3	"
35.	GA-300A	Two	0.7	"

## (Application for Byproduct Material License)

6-(b) Chemical and/or Physical Description of Material (continued).(2) In Custody of ITTDCD (continued)(2.2) Irradiated Semiconductor Specimens (continued)

Item No.	Generic Nomenclature	Number of Pieces	Aggregate Weight, Grams	Radioactivity level, mr/hour
36.	S-7319 ( $\mu$ A740C)	Four	3.5	Less than 0.2
37.	LM-108-AH	Two	1.8	"
38.	LM-139	One	1.4	"
39.	$\mu$ A-741-HM	Six	5.2	"
40.	$\mu$ A-723	Five	5.1	"
41.	$\mu$ A-747-HM	Three	2.6	"
42.	MC-1550G	Six	4.9	"
43.	MC-1556	Two	1.9	"
44.	NE-566-T	Three	2.7	"
45.	SG-1401-T	Five	4.5	"
46.	$\mu$ A-733-HM	Six	5.3	"
47.	LM-100-H	Three	2.8	"
48.	MC-1558-G	Four	3.7	"
49.	S-5556-T	Six	5.2	"
50.	Unitrode 1131660G-1	Five	53.1	"
51.	Semtech SCFS-10,000	Four	249.0	"
52.	Gen Semicond. 1.5K-20CA	Seven	9.9	"
53.	2N6054	Five	33.2	"
54.	2N3902	Five	42.4	"
55.	2N6056	Six	41.0	"
56.	2N3055	Six	78.1	"
57.	1N4527	Five	66.7	"
58.	1N5332	Six	80.6	"
59.	40-RCS-80	Twenty	396.0	0.4

## (Application for Byproduct Material License)

6-(b) Chemical and/or Physical Description of Material (continued),(2) In Custody of ITTDCD (continued)(2.2) Irradiated Semiconductor Specimens (continued)

Item No.	Generic Nomenclature	Number of Pieces	Aggregate Weight, Grams	Radioactivity Level, mr/hour
60.	HP-5082-7000	One	2.9	Less than 0.2
61.	1N1202A	Six	33.9	"
62.	2N5344	Six	37.1	"
63.	2N3441	Five	27.1	"
64.	2N3223	Six	37.5	"
65.	2N3584	Six	35.2	"
66.	MC-4044L	Two	4.2	"
67.	HPROM 1024B	One	2.2	"
68.	SN-54121J	Four	8.3	"
69.	SN-5410J	Three	6.1	"
70.	ITT-312-1D1	Six	12.1	"
71.	SN-5493J	Six	12.1	"
72.	ITT-332H-1D	Six	12.2	"
73.	ITT-342-5D	Six	12.1	"
74.	ITT-362	Four	8.2	"
75.	HP-8256-5B	Three	6.2	"
76.	MN-301-H	Two	3.1	"
77.	SP-622B	Two	1.9	"
78.	OP0-54	One	2.2	"
79.	$\mu$ A711-HM	Four	3.8	"
80.	$\mu$ A710	Five	11.2	"
81.	LM-18 (LM2719)	Four	3.6	"
82.	MM-4015-AD	Two	2.7	"
83.	9615-DM	Two	2.9	"
84.	SVT-6002	Three	44.0	"
85.	9614-DM	Two	2.9	"
86.	1N-3890	Four	21.3	"

1461.6 Grams, Total Weight

Sheet 8 of 21 Sheets.





PAGE 10F 2

USE THIS NO. ON ALL  
CONTINUATION PAGES ➔ **61048**

4. CONTINUED TO

☒ C. NOT FOR  
RECORD - INFORMATION  
ONLY 177-2411

☐ P.O. BOX 478  
HART RD. 12 mi. S of  
BARTY, NY 12003

CARRIER Welding & Welding Supply  
CARRIER EPA, 471 and  
ADDRESS Welding & Welding Supply  
CITY Welding & Welding Supply STATE NY ZIP 12075

PHONE 201-664-9021

CASH TYPE \_\_\_\_\_ CASH DATED/EXPIRATION DATE \_\_\_\_\_

[illegible]

**TERMS AND CONDITIONS**

**A.** This upon inspection and acceptance of the equipment by US Ecology and an appropriate regulatory authority, use to the waste which conforms to Company's representations and shall thereafter transfer from the Customer and be owned by US Ecology.

**B.** WAIVER OF PRODUCTS. Customer represents and warrants that this use is in the Remediation Waste Management & Disposal Manual as first and approved in all respects and in accordance with all applicable governmental laws, rules, regulations and the assigned facility owner.

**C. REPRESENTATION.** Customer agrees to indemnify US Ecology, its officers, employees and agents against all loss and liability, including a full loss of liability, resulting from the use of the waste to comply in all respects to the Remediation Waste Management & Disposal Manual or the equipment set to meet the standards provided by the Department of Transportation or any other governmental agency having jurisdiction over such matters.

**FOR US ECOLOGY'S USE ONLY**

**LOAD EVALUATION**

TYPE OF CONTAINER	CONTAINER/CONT. WT.	# OF PERIS	CU. FT. PER TYPE
CRUMPS			
OTW-2500	7.50		
50	4.01		
5	0.87		
OTW-40			
BRICKS			
18 S-25			
36 S-25			
CANAL LININGS			
OTHERS			
Subtotal			
TOTALS			

☐ Check notes at a later date. (S. 100000)

☐ Major Road Inspection completed

☐ Container(s) damaged

☐ Damaged container(s) removed

☐ No container(s) on first load

☐ No container(s) on second load

☐ No container(s) on third load

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