

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

Region I

Report No. 30-5998/81-04

Docket No. 30-5998

License No. 37-611-09 Priority 1 Category B

Licensee: Automation Industries, Inc.
Kimberton Road
Phoenixville, PA 19460

Facility Name: Nuclear Encapsulation Facility

Investigation at: Phoenixville, PA

Investigation conducted: April 2, 3, 6, 7, 8, 1981

Investigators: Richard A. Matakas 6-29-81
R. A. Matakas, Investigation Specialist date signed

Phillip C. Jerman 6/30/81
P. C. Jerman, Radiation Specialist date signed

J. A. McGinness 6/30/81
J. A. McGinness, Radiation Specialist date signed

Approved by: John D. Kinneman 6/30/81
John D. Kinneman, Chief, Materials Radiological Protection Section date signed

Investigation Summary:

Investigation on April 2, 3, 6, 7, 8, 1981 (Investigation Report 30-5998/81-04)
Investigation initiated following notification by the licensee that they had received a source changer container from a customer with a dose rate at the surface of the container in excess of 200 mR/hr, the maximum permissible limit as set forth in 49CFR 173.393. The purpose of the investigation was to determine if the excessive dose rate was due to licensee handling of the package during an approximate thirty-minute period it had control of the package prior to recording the excessive dose rate.

SUMMARY

Investigation initiated on April 6, 1981 following notification by Automation Industries, Inc. (licensee) that they had received a source changer container from Birchfield, Inc., Bellevue, Washington, with a recorded dose rate at the surface of the container of 500 mR/hr, which is above the maximum permissible limit of 200 mR/hr as set forth in the Code of Federal Regulations (49 CFR 173.393). The purpose of the investigation was to determine if the excessive dose rate was due to licensee handling of the package during an approximate thirty-minute period it had control of the package prior to recording the excessive dose rate. Interviews with two NRC Region I Radiation Specialists indicated the container was initially surveyed upon receipt and found to be well within the allowable dose rate and the survey which was conducted thirty minutes later recorded an excessive dose rate leaving open the possibility that the high rate may have been a result of handling of the container by the licensee during the aforementioned thirty-minute time period. Interview with the Automation Industries employee who conducted both surveys, revealed that the high dose rate recorded during the second survey was taken from the front surface of the container and that this surface was not surveyed during the initial survey when the container was first received. Interviews with this same employee and the truck driver who delivered the container, indicate that the container may not have been properly packaged when it was received by Automation Industries. Examination of the Automation Industries facility and interviews with remaining Automation Industries employees indicate that the source changer container was not handled by anyone at the Automation Industries facility for the thirty-minute period between surveys.

BACKGROUND

Ms. J. A. McGinness, NRC Radiation Specialist, was interviewed by reporting investigator on April 3, 1981. She stated that on April 2, 1981, she was telephonically contacted by Mr. Earl Mayes, Automation Industries Radiation Safety Officer, who reported that Automation Industries had received a source changer container from a customer with a dose rate at the surface of the container of 500 mR/hr which is above the maximum permissible limit of 200 mR/hr. She said on April 3, 1981, she and Mr. P. J. Jerman, NRC Radiation Specialist, responded to Automation Industries, Phoenixville, Pennsylvania and interviewed Mr. Ed Shaffer, the Automation Industries employee who surveyed the container. She said the excessive radiation level reading apparently resulted from a source inside the container being improperly secured allowing it to emit a beam of radioactivity to the front surface of the container. She said the container arrived at Automation Industries at approximately 2:30 p.m. on April 2, 1981, and a quick survey of the container was conducted with the results being within acceptable levels. She indicated that during the interview with Shaffer, he indicated that the survey might not have been as thorough as it should have been. She said that Shaffer then left the container sitting near the inside door of the building and returned about thirty minutes later. She said Shaffer conducted a second survey at this time and recorded a dose rate of 500 mR/hr on the front surface of the container, finding that the pigtail which is attached to the source was exposed about two inches out of the shielding "J" tube. She concluded, stating that Shaffer further indicated that the inner and outer seal wires and the key to the container lock were missing from the package, indicating the package could have been mishandled during packing, shipping or during the thirty-minute period it was left unattended at Automation Industries.

DETAILS

1. Review of Automation Industries Shipping Records on April 6, 1981

Exhibit 1 is a Kulp and Gordon Motor Freight bill showing acceptance of source changer container SU-694, containing two iridium sources, serial numbers 13830 and 13983. Receipt is acknowledged on April 2, 1981, by Ed Shaffer. A notation on the documents indicates a surface dose rate for the container of "5 mR." Exhibit 2 is a copy of an extract from Automation Industries "Container Receipt Log" further acknowledging receipt of source changer container SU-694 showing a dose rate for the container of "500 mR." Exhibit 3 is a copy of the radioactive material container labels and source identification tags removed from container SU-694 by Automation Industries for record purposes (provided by Radiation Safety Officer, Earl Mayes). Exhibit 4 is a copy of the Automation Industries sales order indicating the date (February 9, 1981) on which Birchfield, Inc. received the source changer (SU-694) that was subsequently returned to Automation Industries on April 2, 1981. Exhibit 5 is a copy of an extract from Automation Industries Iridium-192 loading worksheet, initialed by "E S" (Ed Shaffer), showing the shipping date of source changer container SU-694 as February 9, 1981, to Birchfield, Inc. Exhibit 6 contains three photographs of source changer container SU-694 taken by reporting investigator at Automation Industries on April 7, 1981.

2. General Observations at the Automation Industries Facility

Exhibit 7 is a diagram of the Automation Industries facility located in Phoenixville, Pennsylvania. The shipping and receiving area and the shop and storage area is an open area without any walls, partitions or other major obstructions. Both offices have glass fronts allowing visual access to all areas in shipping and receiving and shop and storage areas to include the main entrance where the source changer container was located between 2:30 - 3:00 p.m. The probable locations of Automation Industries employees during the aforementioned time period has been noted on the diagram. The locations are based on interviews with each respective employee as reported INFRA. In addition to the noted location of employees, both Mr. Boyko and Mr. Santoro reported that part of their time during the aforementioned

time period was spent with two Navy inspectors in the area of the work bench in the shop and storage area. Facility Sign In/Sign Out records indicate that the Navy inspectors departed the building at 2:45 p.m. via the main entrance. Based on these interviews it is concluded that six employees had line of sight contact with the source changer container between 2:30 - 3:00 p.m. and within an approximate forty foot distance.

3. Interviews with Automation Industries (A. I.) Employees

Mr. Edward Shaffer, A. I. employee, was interviewed at his place of employment on 6-7 April 1981, by reporting investigator. Shaffer stated he took receipt of source changer container SU-694 from a Kulp and Gordon Motor Freight truck driver at about 2:30 p.m. on 2 April 1981. He said he conducted a quick survey of the container upon receipt surveying only the back and two sides of the package. He said he recorded a dose rate of 5 mR/hr on the back side of the container (Exhibit 8 is a simulation of the 5 mR/hr survey). He said he then set the container down by the entrance door in shipping and receiving and went into another room of the building to clean sources. He said at about 3:00 p.m. he returned to shipping and receiving, picked up the container, set it down on a nearby work bench (see Exhibit 7) and at this time noticed that the seal wire and key to the attached lock were missing. (Exhibit 9 is a photo of a source changer container, identical to SU-694, showing normal shipping locking procedures including key, lock and seal wire). He said he did not notice if the key and seal wire were missing from the container when he first accepted it at 2:30 p.m. He explained that all the keys and locks on all containers used by Automation Industries and its customers are interchangeable so he retrieved a key from the bench where he was working and opened the container. He said he immediately noticed that the right J-Tube plug was lying in the bottom of the container and the pig tail in the right hand tube was sticking out about two or three inches. He said the inside seal was also missing. He stated the pig tail is a "N-1" type and is 6 7/8 inches long. (Exhibit 10 is a photo simulation of the aforementioned condition of the container when opened by Mr. Shaffer; Exhibit 11 is a photo simulation showing proper packaging procedures.) Mr. Shaffer said that he was standing in front of any beam that may have been emitted from the source so he immediately pushed the pig tail back into the tube and closed the front of the container. He said he pointed the front of the container away from his person, opened it back up and exposed the pig tail in the same manner as when he found it. He said he then closed the container back up and surveyed the front of the container (which he had

failed to do upon acceptance) and recorded a dose rate of 500 mR/hr. He said he once again secured the container and reported his findings to facility supervision. (A photo simulation of the 500 mR/hr dose rate recorded by Shaffer is Exhibit 12.) A statement executed by Mr. Shaffer setting forth additional details is Exhibit 13.

4. Mr. Ronald Reise, A.I. Machinest, was interviewed at his place of employment by Investigator R. A. Matakas. Mr. Reise advised that he was working in the shop and storage area of the building on April 2, 1981 when the SU-694 source changer was delivered to Automation Industries by Kulp and Gordon Motor Freight. He said he did not pay too much attention to the delivery, did not actually see the source changer container but did see the truck driver who delivered it. He said deliveries of this type are normally placed next to the door in the shipping and receiving area. He said between the time the container was delivered and the time Ed Shaffer recorded the 500 mR/hr survey reading, he did not observe anyone "messing" with anything in the area by the door where the container had been temporarily stored; however, he did not know if he would have noticed any such activity in the area as he was talking with two visiting Navy inspectors and Mr. Steve Boyko at the time. He indicated that during the time the container was sitting by the entrance door, he was in the area of the shop and storage section of the building within plain sight and about twenty five feet away from the container.
5. Mr. Earl Mayes, A.I. Radiation Safety Officer, was interviewed at his place of employment by Investigator R. A. Matakas. He stated that he did not recall seeing the SU-694 source changer container being delivered nor did he notice the container sitting by the entrance. He said that between 2:30 and 3:15 p.m. he was either in his office or the hot cell control room. He said he first became aware of the presence of the container at about 3:15 p.m. when he was notified by Ed Shaffer of the 500 mR/hr surface reading on the container. He said he subsequently notified the NRC, Region I, of the high surface reading.
6. Mr. Steve Boyko, A.I. Acting Production Manager, was interviewed at his place of employment on April 7, 1981, by reporting investigator. Mr. Boyko stated that he did not actually see the Kulp and Gordon Motor Freight shipment come in nor did he see the source changer container sitting by the door in shipping and receiving. He said he did not become aware of the presence of the source changer container until about 3:00 p.m. when Ed Shaffer reported to him

that he had accepted a source changer container with a dose rate at the surface of 500 mR/hr. He said that the thirty minutes prior to being notified by Shaffer, he (Boyko) was either at his desk in his office or near the work bench in the shop and storage area.

7. Mr. Robert Fredericks, A.I. Radiation Technician, was interviewed at his place of employment on April 7, 1981, by reporting investigator. Mr. Fredericks said that on April 2, 1981, he spent just about the entire day in the hot cell control room and was not aware of the presence of the source changer container until sometime after Ed Shaffer reported a problem with it.
8. Mr. Raymond Megay, A.I. Radiation Technician, was interviewed at his place of employment on April 7, 1981, by reporting investigator. He said sometime around 2:30-3:00 p.m. on April 2, 1981, Lenny, the truck driver for Kulp and Gordon Motor Freight, brought something to Automation Industries but he (Megay) was not aware of what the shipment consisted of. He said he was working in the area of shipping and receiving at the time but did not notice a source changer sitting by the door nor did he handle such a container. He did not indicate knowledge of anyone handling said container.
9. Mike Santoro, A.I. employee, was interviewed at his place of employment on April 8, 1981, by reporting investigator. He said he first became aware that Automation Industries had received a source changer on April 2, 1981, when during that afternoon Ed Shaffer told Steve Boyko that he had received a source changer with the "plug off". Mr. Santoro said he was sitting in his office with Boyko at the time. He said that during the preceding thirty minutes, he was either in his office or near the bench in the shop and storage area talking with some Navy inspectors. He did not notice the container by the door.
10. Mrs. Debra Brunovszky, A.I. Administrative Assistant, was interviewed at her place of employment on April 8, 1981, by reporting investigator. Mrs. Brunovszky stated that she was aware of the receipt of a source changer container from Kulp and Gordon at about 2:30 p.m. on April 2, 1981, because she had to process the paper work for it. She said she observed the container sitting by the door between the time it was received and 3:00 p.m. because she was sitting at her desk the whole time with a direct line of sight at the container. She said the only time she left her desk was for about a thirty-second period when she dropped off the shipping papers at the door next to where the container was sitting. She said at no time did she see anyone tamper with or go near the container during the

aforementioned time period. She opined that she felt she would have noticed anyone near the container, especially because certain individuals are not allowed to handle any type of radioactive material. She indicated that the only people who got near the container during this time were the two visiting Navy inspectors who walked by it when they departed the facility at 2:45 p.m. She said at about 3:00 p.m. she observed Ed Shaffer pick the container up and set it down on a nearby work bench. She said she observed Shaffer open up the container at which time it was obvious to her something was wrong because he immediately closed it back up and subsequently reported that one of the sources "was hanging out" to Mr. Boyko. She said Mr. Mayes had been in the office with her during the preceding thirty minutes and during most of the time in question, both Mr. Santoro and Mr. Boyko were in the next office (see Exhibit 7).

11. Contact with Kulp & Gordon Motor Freight

Mr. Ronald Kulp, owner of Kulp and Gordon Motor Freight, was interviewed at his place of business on April 7, 1981, by reporting investigator. Mr. Kulp identified Leonard Baranoski as his employee who delivered the source changer container to Automation Industries on April 2, 1981. He said the shipment originated from Washington State and was passed from trailer to trailer about five times. He said Baranoski would have delivered the container from the Phoenixville terminal to the A.I. facility. Mr. Kulp took reporting investigator to Kulp and Gordon Van Trailer Number 79 which he identified as the trailer used by Mr. Baranoski. Both reporting agent and Mr. Kulp conducted a search of the trailer to determine if possibly the key and or seals that were supposed to be attached to the source changer container, had been knocked off in transit. Mr. Kulp said that the trailer is normally used every day; however, it had not been cleaned since the April 2, 1981 delivery to Automation Industries. The search met with negative results.

12. Mr. Leonard Baranoski, Kulp and Gordon Motor Freight Truck Driver, was contacted by reporting agent on April 8, 1981. Mr. Baranoski recalled making a delivery to Automation Industries on April 2, 1981. He said upon arrival, he rang the bell and a "young kid" (Ed Shaffer) came to the door and removed the container from his trailer. He said the container was sitting at the rear of the trailer bed and he (Baranoski) never handled it. He said he recalled seeing a lock on the container but did not recall seeing either an attached key or seal wire. He did not provide any additional pertinent information.

PHILADELPHIA
PHONE: 215-143-9710
DOWNTOWN AREA
PHONE: 215-269-2111

KG
KULP & GORDON
MOTOR FREIGHT

CONSIGNEE'S MEMO

Q 025025 1

P.O. BOX 623 - PHOENIXVILLE, PA. 19460
PHONE: 215-933-7725

AUTOMATIC INDS
RT 113 SOUTH
PHOENIXVILLE, PA. 19460

SHIPPER
BIRMINGHAM
BIRCHFIELD INC
BELLEVUE WASHINGTON
PH 28-46393-0



DATE
4 1 81

C/C

C/C

NO. PCS	DESCRIPTION	WEIGHT	RATE	PREPAID	COLLECT	
1	CTM SOURCE CHANGER IR 192 RADIOACTIVE MATERIAL SN 69 SN 13630 10 CURIES AND SN 13503 YELLOW 10 CURIES TYPE B RADIOACTIVE YELLOW 10 LABEL TRANSPORT INDEX LESS THAN 2.0 RADIOACTIVE MATERIALS SmR 4-2-81	70	N	10.95		
				C. O. D.		
				C. O. D. FEE		
				TOTAL DUE		

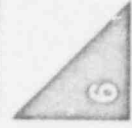
P/U 7453

000'

B/C

K & G

C/C



CONSIGNEE'S LOSS AND DAMAGE MUST BE REPORTED PROMPTLY TO CARRIER

CONSIGNEE'S MEMO

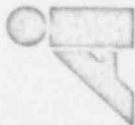
AND/OR

RECEIVED PAYMENT

[Signature]

CASH FREIGHT BILL

Per

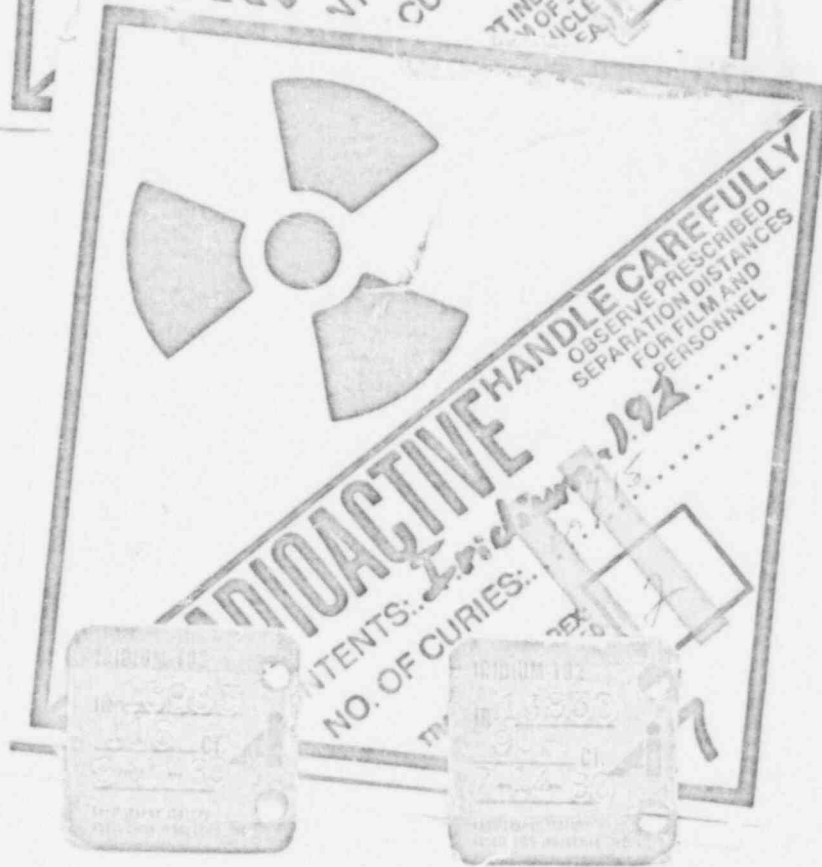
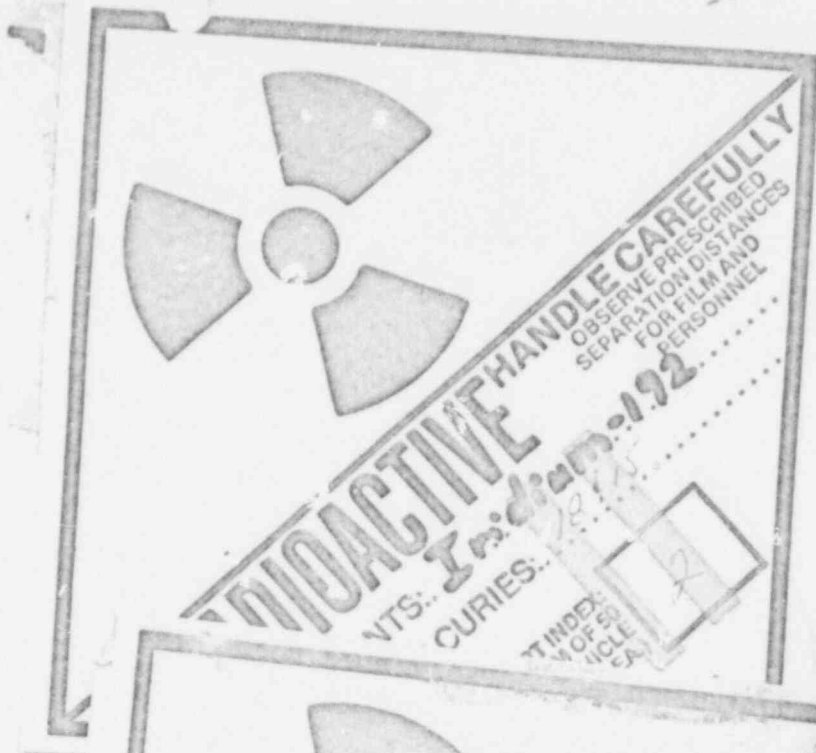


AUTOMATION INDUSTRIES, INC.
SPERRY DIVISION

CONTAINER RECEIPT LOG

DATE REC'D	Container Number	Source Number	Copies	As of Date	Customer	Trans Yes	Tube No.	Loops 200 MR
4-2-81	SU- 694	13983	116	9-4 80	BIRCHFIELD, INC. BELLEVUE, WA	~ 10.0	✓	RECKEK 500
4-2-81	SU- 694	13830	90	7-14 80	BIRCHFIELD, INC. BELLEVUE, WA	~ 10.0	✓	RECKEK 500

NOTE: REPORTED TO:
REGIONS F, N.R.C.
ON 4/11/81





AUTOMATION INDUSTRIES, INC.
SPERRY DIVISION

Shelter Rock Road
 Danbury, Conn. 06810

NUCLEAR ENCAPSULATION FACILITY
 ROUTE 113 SOUTH
 PHOENIXVILLE, PA. 19460
 TEL. 215-933-8961

CUSTOMER CODE ✓	SALES ORDER NO. 80-1110-1	DATE ENTERED 2-6-81	CUSTOMER PURCHASE ORDER NO. 2469	SLSM. STATE	INV.
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INVOICE NUMBER _____

INVOICE DATE _____

DATE SHIPPED 2-9-81

SHIPPED VIA Air Freight

Birchfield, Inc. 1515 128th NE Place Bellevue, WA 98004	Same...
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FOB Phoenixville, PA	PR. BILL.	PPD	COLL.	TERMS XX N/30
REQUESTED ROUTING Cargo-Only Aircraft Federal Express	YES	NO	SCHEDULED DEL. DATE 2-9-81	

NO. PKGS.	WEIGHT
1 Box @	58#

ITEM	QUANTITY	CODE	DESCRIPTION	UNIT PRICE	BACK OFFERED	SHIPPED	AMOUNT
1	1		IRIDIUM-192 SCURCE 100 CURIES. ACTIVE SIZE 1"x1" SOURCE S/N 14352 PIGTAIL MODEL 520-009 FOR USE IN MODEL 520 NO. CURIES 100.	\$565.00	0	1	\$565.00
2	1		RETURNABLE SHIPPING CONTAINER (PROPERTY OF AUTOMATION IND.) MUST BE RETURNED PREPAID TO AUTOMATION IND., RT. #113 SOUTH, PHOENIXVILLE, PA., WITHIN 10 DAYS AFTER RECEIPT. (VALUE \$1200.00) (NOTE)—IF CONTAINER IS NOT RETURNED WITHIN THE ALLOTTED 10 DAYS, A DEMURRAGE SERVICE CHARGE OF \$5.00 FOR EACH ADDITIONAL DAY WILL BE INVOICED AGAINST YOUR ACCOUNT. (ABOVE DEMURRAGE CHARGE DOES NOT APPLY TO CUSTOMER OWNED CONTAINERS) CONTAINER SER. NO.: SU-694			1	N/C
TOTAL BILLING-----							\$565.00

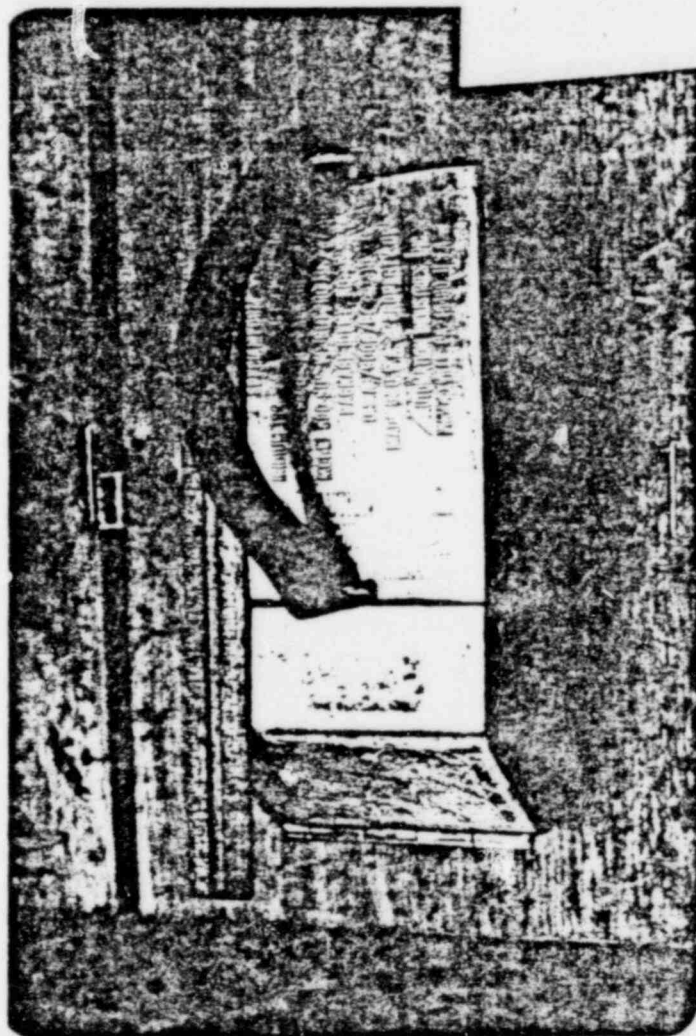
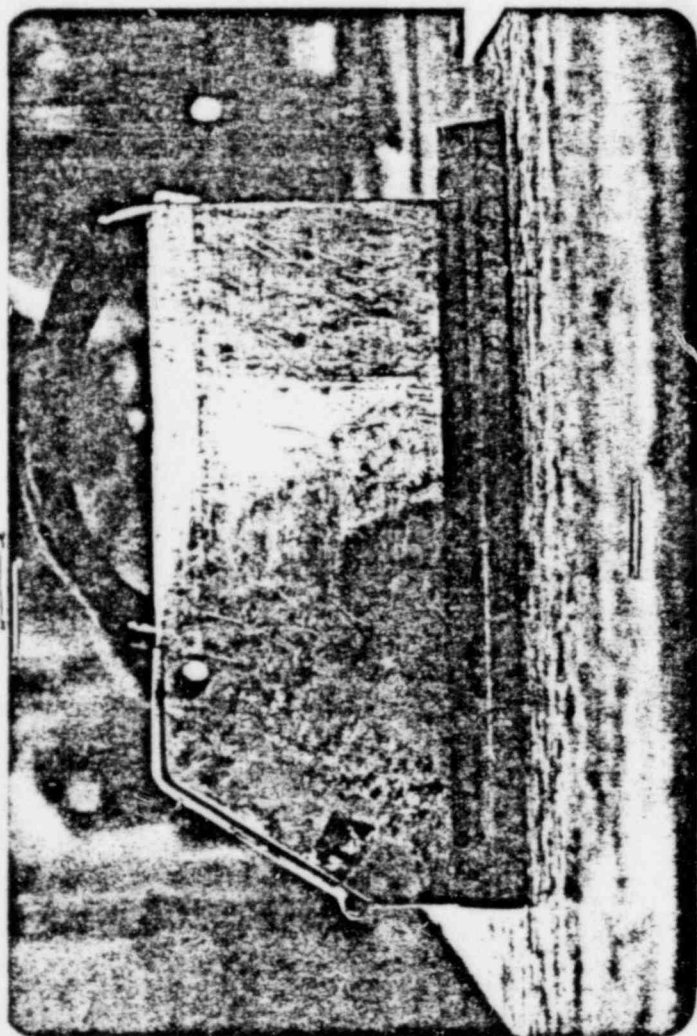
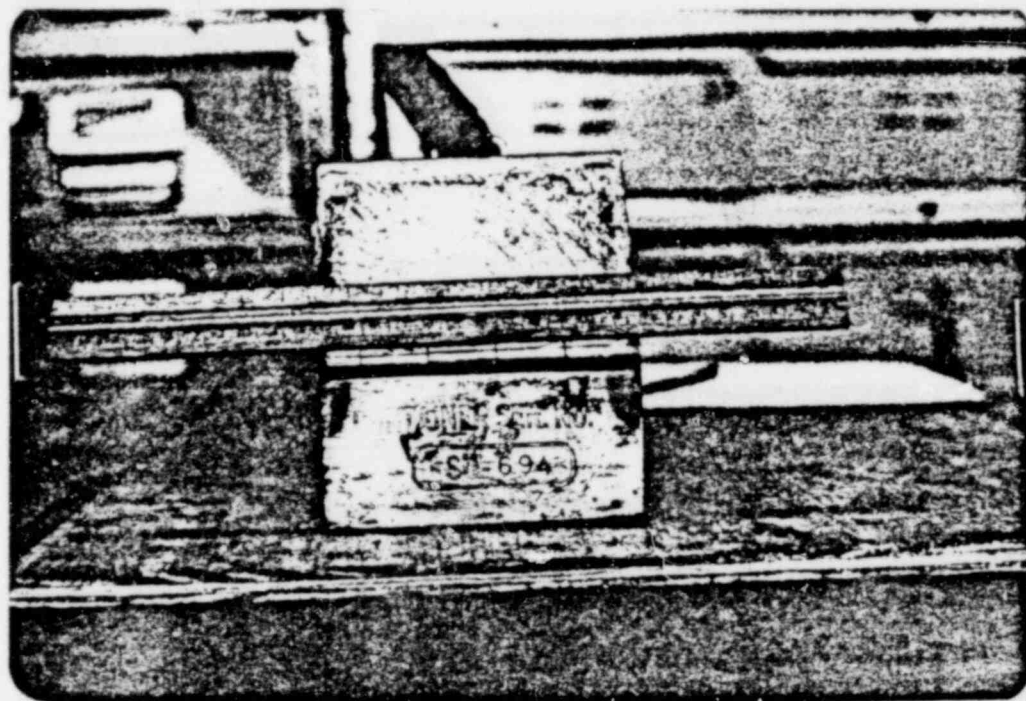
RADIOACTIVE MATERIAL, SPECIAL FORM, N.O.S.
 TYPE "B" CONTAINER RADIOACTIVE YELLOW III
 LABEL APPLIED TRANSPORT INDEX 2.0
 MAXIMUM SURFACE RADIATION 40 MR/HR
 REMOVABLE CONTAMINATION FROM 100 SQ. CM.
 WIPE (AVERAGE), LESS THAN 2,000 DPM.

DELIVERY CHARGES	
PAY THIS AMOUNT	\$565.00

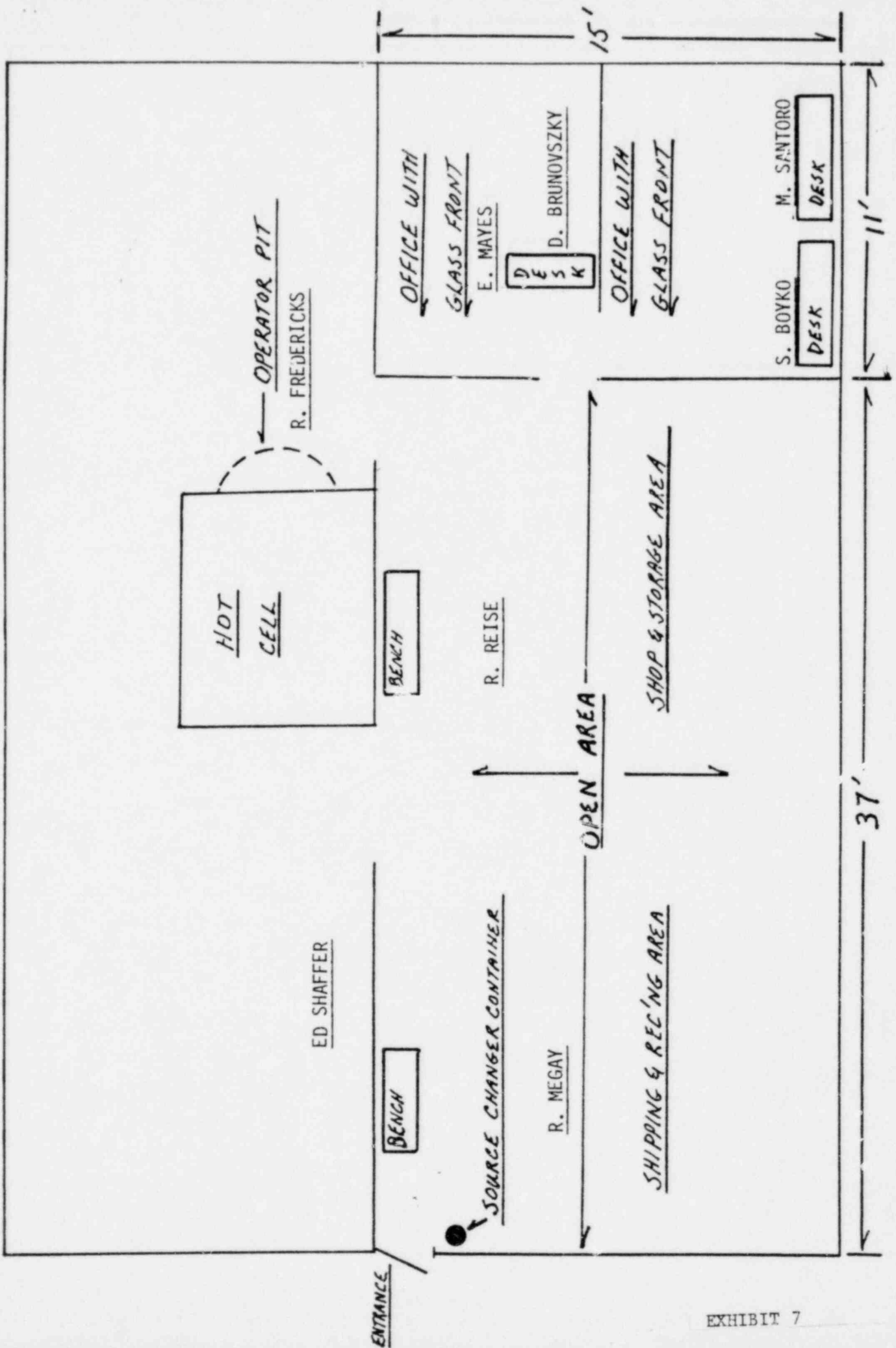
EXHIBIT 4
PACKING LIST

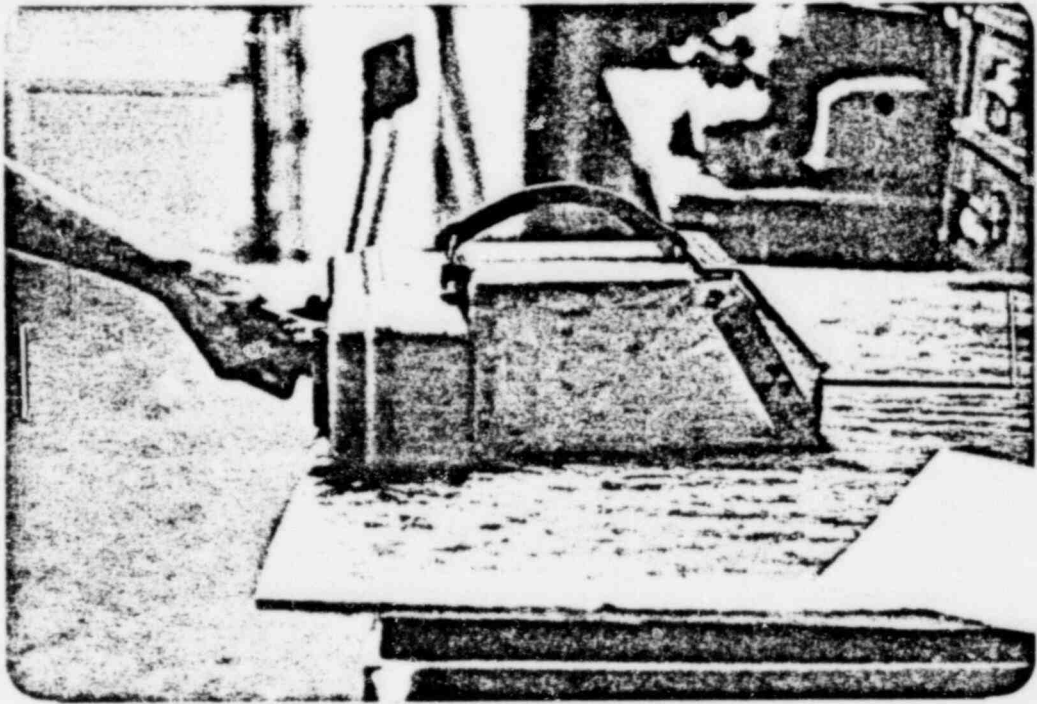
LOADING WORKSHEET - IRIIDIUM 192

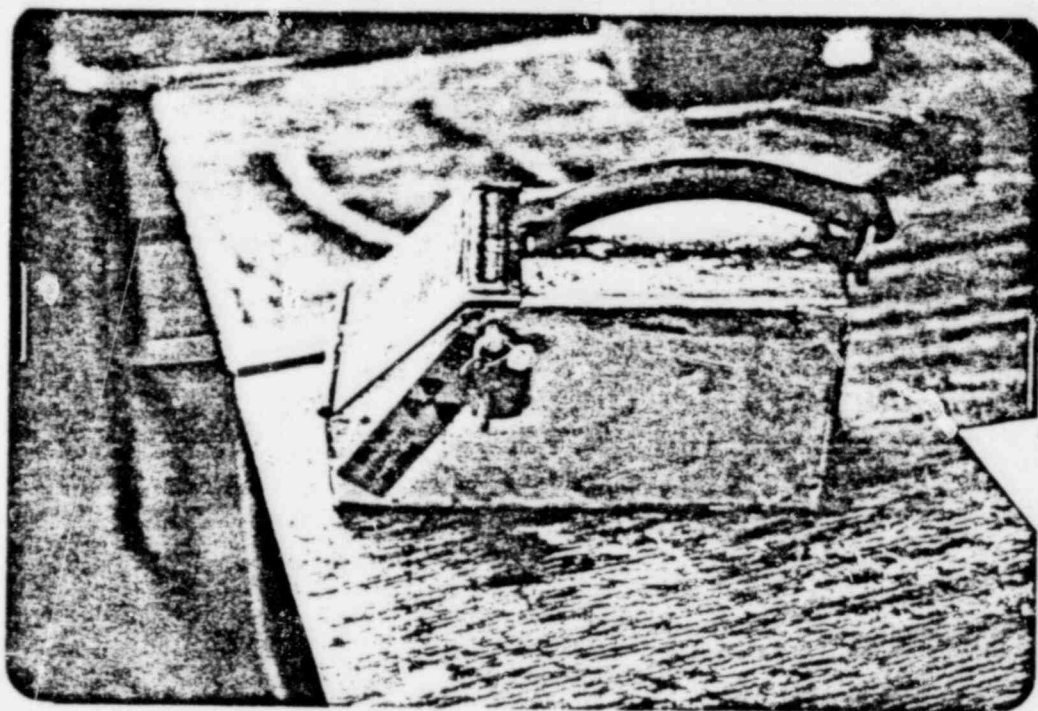
S.O.	CUSTOMER	REQ.	SOURCE NO.	MODEL	DATE LOADED CURIES	PHY. SIZE	H.P. CK.	V.A.L.	PHY. SIZE	CONT.	SHIP DATE	NO.	DUE DATE
15240	B+W - Belmont	25 1/16	14345	N-3 520.010	2-6 105	10-T	SL			5- 189			
15240	B+W - Rochester	25 1/16	14346	N-3 520.010	2-6 105	10-T	SL			5- 189			
1116	Carson - 16 Tr. 1	100	14347	N-3 520.010	3-10 23	2-K	SL			5- 189	2/9		3/11
1116	Carson - 16 Tr. 2	100	14348	N-3 520.010	2-9 101	10-T	SL			5- 189	2/9		
1159	Carson - 16 Tr. 3	100	14349	N-3 520.010	2-9 101	10-T	SL			5- 189	2/9		
1591-0	MISS Bryce Carlson	100	14350	N-3 520.010	2-11 36	3-T	SL			5- 189	2/12		
1005-1	Point Ref. For 1-9	100	14351	N-3 520.010	2-9 106	2-A 6-T	SL			5- 189	2/9		
111-1	Carson - 16 Tr. 4	100	14352	N-3 520.010	2-9 102	10-T	SL			5- 189			
111-1	Carson - 16 Tr. 5	100	14353	N-3 520.010	2-10 102	10-T	SL			5- 189			
111-1	Carson - 16 Tr. 6	100	14354	N-3 520.010	2-11 112	10-T	ES			5- 189			2/16
111-1	BRNZIL - M. DEDINI, S.A.	100	14355	N-3 520.010	2-11 115	3-A 3-T	SL			5- 189			2/11
111-1	Philc Nova 1 J. 1	100	14356	N-3 520.010	2-11 107	1-A 8-T	SL			5- 189			
111-1	H. Johnson 16 Tr. 1	100	14357	N-3 520.010	3-23 28	2-K	SL			5- 189	2/23		

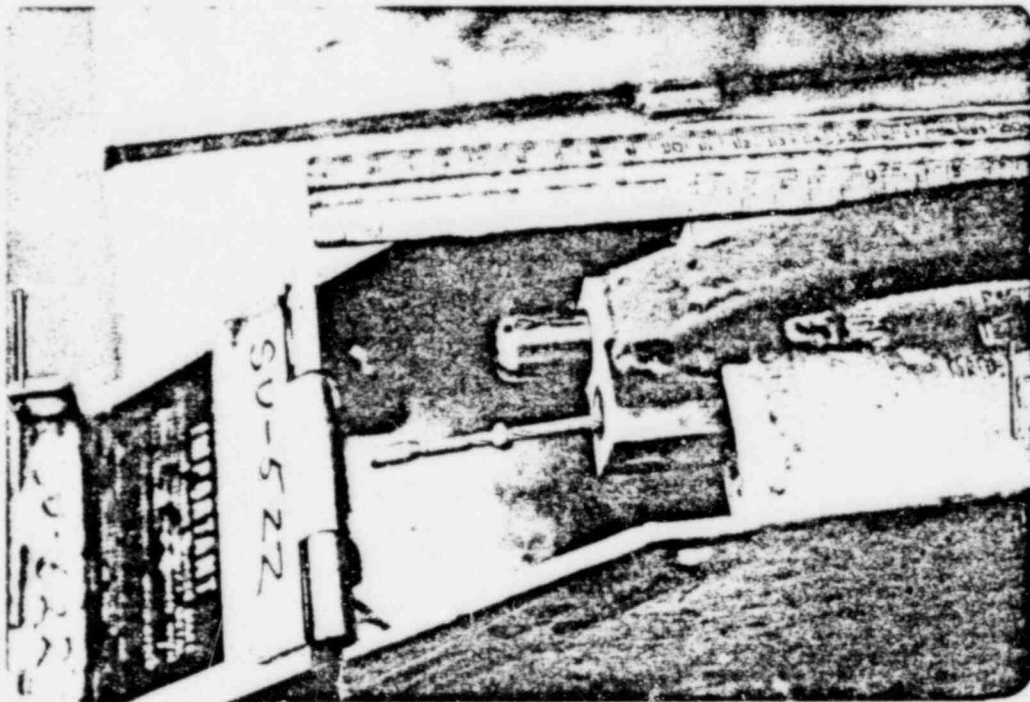


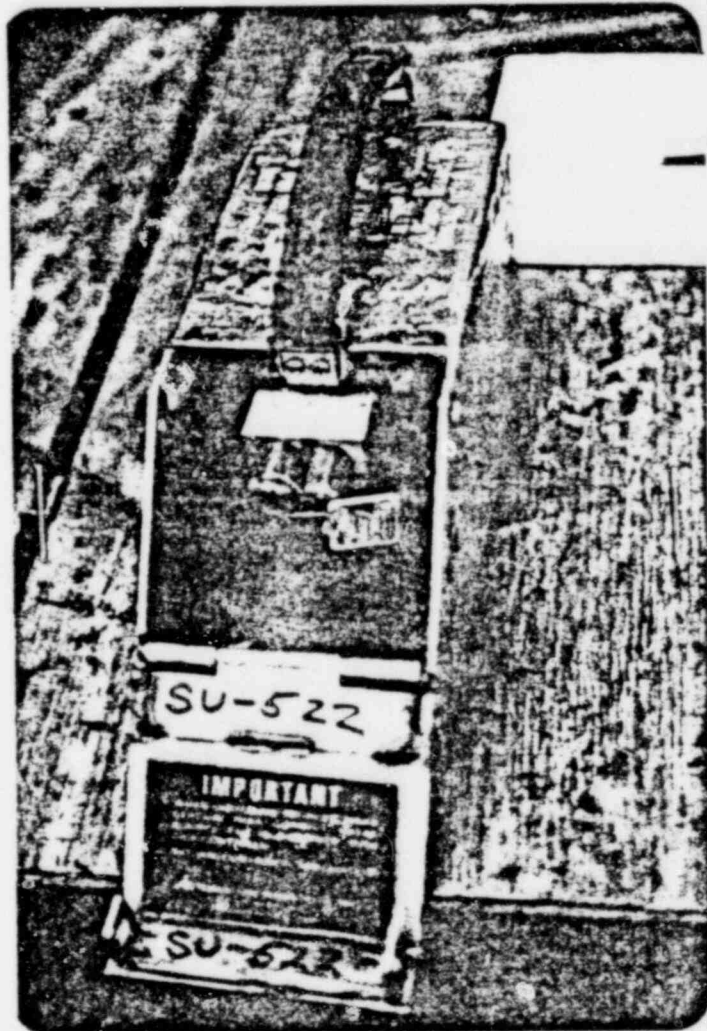
AUTOMATION INDUSTRIES FACILITY













STATEMENT BY MR. EDWARD SHAFFER AT AUTOMATION INDUSTRIES ON 6/7 APRIL 1981

EL I, MR. EDWARD SHAFFER, HEREBY MAKE THE FOLLOWING VOLUNTARY STATEMENT TO MR. R. A. MATAKAS WHO IS KNOWN TO ME AS AN INVESTIGATOR WITH THE NUCLEAR REGULATORY COMMISSION. I MAKE THIS STATEMENT WITH NO THREATS HAVING BEEN MADE OR PUNISHMENT HAVING BEEN EXTENDED TO ME. I HAVE BEEN EMPLOYED BY AUTOMATION INDUSTRIES SINCE NOVEMBER 1980. *EL*

EL AT APPROXIMATELY 2:30 ON APRIL 2, 1981, I ACCEPTED ONE SOURCE CHANGER CONTAINER CONTAINING TWO IRIIDIUM-192 SOURCES, SERIAL NUMBERS 13983 AND 13830. THE SERIAL NUMBER OF THE CONTAINER WAS SU-694 AND IT WAS BEING DELIVERED BY KULP AND GORDON MOTOR FREIGHT OUT OF PHOENIXVILLE, PA. THE SHIPPER OF THE CONTAINER WAS BIRCHFIELD INC., BELLVUE, WASHINGTON. THE CONTAINER WAS PROPERLY MARKED AS CONTAINING RADIO-ACTIVE MATERIAL. AFTER SIGNING THE FREIGHT BILL I SET THE CONTAINER DOWN ON A CAN JUST INSIDE THE SHIPPING AND RECEIVING SECTION OF THE BUILDING. I THEN SURVEYED THE CONTAINER USING A 592B VICTOREEN INSTRUMENT, SERIAL NUMBER 5677, WHICH HAD BEEN RECENTLY CALIBRATED. I TOOK READINGS ON THE BACK AND TWO SIDES OF THE CONTAINER BUT I DID NOT TAKE READINGS FROM THE TOP, BOTTOM OR FRONT OF THE CONTAINER. NORMALLY, ON THIS TYPE OF CONTAINER, THE HIGHEST READINGS ARE OBTAINED FROM THE BACK SIDE OF THE CONTAINER AND ON THIS OCCASION I GOT A READING OF 5mR, WHICH IS WELL WITHIN ACCEPTABLE LIMITS. IT TOOK ME LESS THAN ONE MINUTE TO CONDUCT THE SURVEY AND AFTER DOING SO I LEFT THE CONTAINER SITTING BY THE DOOR AND WENT INTO ANOTHER ROOM IN THE BUILDING TO CLEAN SURFACES. AT ABOUT 3:00 PM I RETURNED TO THE SHIPPING AND RECEIVING AREA, PICKED-UP THE CONTAINER AND SET IT DOWN ON A NEARBY WORK BENCH. AT THIS TIME I NOTICED THAT THE CONTAINER WAS LOCKED BUT THE WIRE SEAL AND KEY WERE MISSING. THESE TWO ITEMS ARE NORMALLY ATTACHED TO THE LOCKING MECHANISM WITH THE LOCK. WE FURNISH BIRCHFIELD INC. WITH THE LOCKS, KEYS AND SEALS AND WE HAVE NUMEROUS IDENTICAL LOCKS, KEYS AND SEALS WITH ALL THE LOCKS AND KEYS BEING INTERCHANGEABLE. THE ONLY IDENTIFICATION ON THE SEALS ARE THE INITIALS "AII" THAT WE IMPRINT ON THE LEAD. IN THIS INSTANCE, BECAUSE THE *EL*

page 1 of 3
EL

KEY WAS MISSING, I HAD TO USE ONE OF OUR EXTRA KEYS TO UNLOCK THE CONTAINER.

I REALLY DID NOT NOTICE IF THE KEY AND SEAL ^{wire} WERE MISSING FROM THE CONTAINER WHEN I FIRST ACCEPTED IT AND SET IT NEXT TO THE DOOR. ALSO, WHEN I PICKED THE CONTAINER UP FROM NEXT TO THE DOOR AT 3:00 PM, I DID NOT NOTICE THAT IT HAD ^{or had not} BEEN DISTURBED IN ANY MANNER FROM WHEN I ORIGINALLY PLACED IT THERE AT ABOUT 2:30 PM. IMMEDIATELY UPON OPENING THE FRONT OF THE CONTAINER, I NOTICED THAT THE RIGHT J-TUBE PLUG WAS LYING IN THE BOTTOM OF THE CONTAINER AND THE PIG TAIL IN THE RIGHT HAND TUBE WAS STICKING OUT ABOUT TWO OR THREE INCHES. I WAS STANDING DIRECTLY IN FRONT OF ANY BEAM THAT MIGHT HAVE BEEN EMITTED SO I IMMEDIATELY PUSHED THE PIG TAIL BACK INTO THE TUBE AND CLOSED THE FRONT OF THE CONTAINER. I KNEW THAT IT WOULD BE IMPORTANT TO GET A SURVEY READING OF THE CONTAINER IN THE ORIGINAL CONDITION ^{as} AS I FOUND IT SO I CAREFULLY OPENED BACK UP THE CONTAINER AND EXPOSED THE PIG TAIL IN APPROXIMATELY THE SAME POSITION AS I ORIGINALLY DISCOVERED IT. I THEN CLOSED THE CONTAINER BACK UP AND SURVEYED THE FRONT OF THE CONTAINER USING THE SAME VICTOREEN INSTRUMENT THAT I USED DURING THE ORIGINAL SURVEY. LIKE I SAID I DID NOT SURVEY THE FRONT OF THE CONTAINER WHEN I FIRST RECEIVED IT, BUT UPON DOING SO ON THIS OCCASION I GOT A READING OF 500mR. I THEN PUT THE PIG TAIL BACK INTO THE J-TUBE, CLOSED THE CONTAINER AND NOTIFIED MR. BOYKO OF THE INCIDENT. TO THE BEST OF MY MEMORY DURING THE THIRTY MINUTE PERIOD THE CONTAINER WAS LEFT UNATTENDED BY THE DOOR, RAY MEGAY WAS WORKING NEARBY IN SHIPPING AND RECEIVING, MR. ^{Boylko} ~~SANTORO~~ AND RONNIE REISE WERE TALKING WITH TWO NAVY INSPECTORS ABOUT TWENTY FEET AWAY, DEBBIE, OUR SECRETARY, WAS SITTING AT HER DESK, MR. ^{Santoro} ~~BOYKO~~ WAS IN HIS OFFICE AND THE ^{Radiation Safety Office} ~~PLANT MANAGER~~, MR. EARL MAYS, WAS IN HIS OFFICE. I BELIEVE BOB FREDERICKS WAS BACK IN THE HOT CELL ^{Control} ROOM. I HAVE SUBSEQUENTLY CHECKED THE J-TUBE PLUGS TO DETERMINE IF THE THREADS WERE BAD AND I FOUND THE PLUG THREADS TO BE IN GOOD CONDITION GIVING NO INDICATION THEY COULD HAVE VIBRATED OFF. I LOOKED ^{Ed}

CONTINUATION OF STATEMENT BY MR. EDWARD SHAFFER AT AUTOMATION INDUSTRIES

EL INSIDE THE CONTAINER TO TRY AND LOCATE THE SEAL WIRE THAT IS NORMALLY INSERTED INTO THE J-TUBE PLUGS BUT I COULD NOT FIND ONE. SOMETIME WE GET CONTAINERS BACK WITHOUT SEAL WIRES ON THE OUTSIDE OF THE CONTAINER BUT TO MY KNOWLEDGE WE HAVE NEVER GOT ONE BACK WITHOUT THE SEAL WIRE ON THE INSIDE OF THE CONTAINER CONNECTED TO THE J-TUBE PLUG. THE CONTAINERS, LOCKS, KEYS AND SEAL WIRES ARE PROVIDED TO THE CUSTOMERS BY US (AUTOMATION INDUSTRIES) AND I ALWAYS SEND EXTRA SEAL WIRES WITH THE CONTAINERS WHEN I SEND THEM BACK TO THE CUSTOMERS. MR. MATAKAS HAS INFORMED ME THAT OUR RECORDS INDICATE THAT I WAS THE ONE WHO SENT THE CONTAINER IN QUESTION (#694) TO BIRCHFIELD INC. BUT I DO NOT SPECIFICALLY RECALL DOING SO. LIKE I SAID I ALWAYS SEND THE CUSTOMER SEAL WIRES FOR USE IN RETURN SHIPMENTS AND IF THEY DID NOT GET THEM OR LOST THEM ALL THEY HAD TO DO IS CALL AND WE WOULD HAVE SENT THEM SOME MORE. *EL*

SIGNED: Edward O. Shaffer
DATE/TIME: 4-7-81 9:30 am.

WITNESS: *Richard L. Holt*
INVESTIGATION SPECIALIST, NRC

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