

PCN _____

STDR 218 - 1/2 _____

REVISED _____

DATE 30 APRIL 1970 _____

HAZARDOUS STDR

SRV RADIONUCLIDE CONTROL
HANDLING AND INSTALLATION

PROJECT 223 _____

SUBMITTED UNDER FO4701-68-C-0034 _____

**MCDONNELL DOUGLAS ASTRONAUTICS COMPANY
EASTERN DIVISION**

Saint Louis, Missouri 63166 (314) 232-0232

A1294

THIS DOCUMENT, STDR 218, HAS BEEN PREPARED, REVIEWED, AND APPROVED BY THE FOLLOWING:

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K. D. Sennert
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J. T. Mayes 5/8/70
J. T. MAYES

INSERT LATEST CHANGED PAGES.
DESTROY SUPERSEDED PAGES.

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INTRODUCTION

THIS DOCUMENT PROVIDES THE DETAILED PROCEDURES TO BE FOLLOWED FOR ALL OPERATIONS DIRECTLY INVOLVING THE RADIONUCLIDE MATERIAL ASSOCIATED WITH THE SRV. THE SPECIFIC OPERATIONS COVERED ARE:

- 1) RECEIVING AND STORAGE OF RADIONUCLIDE MATERIAL
- 2) INSTALLATION OF BODY HEATSHIELD PLUGS
- 3) INSTALLATION ON SRV NOSE TIP.
- 4) SRV NOSE TIP ABORT PROCEDURE.

TEST REQUIREMENTS AND PREPARATION

1.1 GENERAL REQUIREMENTS - TEST DATA SHALL BE RECORDED IN SPACES PROVIDED WITHIN THE TEST PROCEDURE. THE TEST ENGINEER OR HIS DESIGNEE WILL USE THE TEST SUMMARY SHEETS TO DESCRIBE TEST EVENTS, SUCH AS DOWN TIME, DISCREPANT CONDITIONS AND CORRECTIVE ACTION. THE COMPLETED DOCUMENT WITH ALL DATA ENTERED, SHALL BE RETAINED BY QUALITY ASSURANCE FOR HISTORICAL DATA.

1.2 REFERENCE DOCUMENTS

- ° 67A315006 INSTRUMENTATION ASSY. FWD BODY
- ° 67A325006 INSTRUMENTATION AFT BODY
- ° GROUND SAFETY DATA AND PROCEDURES, MDAC REPORT H275
- ° 67A300001 NOSE ASSY 2A-7

1.3 SAFETY - IN ADDITION TO OBSERVING NORMAL ROUTINE SAFETY PRECAUTIONS, SPECIAL PRECAUTIONS ASSOCIATED WITH RADIOACTIVE MATERIAL WILL BE IN EFFECT. ONLY ESSENTIAL PERSONNEL WILL BE ALLOWED IN RADIATION CONTROLLED AREAS. THESE PERSONNEL MUST WEAR RADIATION MONITORING DEVICES DISTRIBUTED BY THE SAFETY ENGINEER. AT COMPLETION OF OPERATIONS AND UPON LEAVING THE CONTROLLED AREA, ALL PERSONNEL WILL TURN IN THEIR MONITORING DEVICE TO THE SAFETY ENGINEER. SPECIFIC SAFETY REQUIREMENTS ARE CONTAINED WITHIN MDAC REPORT H275, GROUND SAFETY DATA AND PROCEDURES.

1.4 TEST CONFIGURATION - SPECIFIC CONFIGURATION REQUIREMENTS ARE DEFINED WITHIN THIS PROCEDURE.

1.5 SUPPORT AND CLEARANCE

1.5.1 THE VAFB BIOLOGICAL ENVIRONMENTAL HEALTH OFFICE MUST BE NOTIFIED AT LEAST 24 HOURS PRIOR TO ARRIVAL OF RADIOACTIVE MATERIAL AT VAFB.

1.5.2 THE VAFB FIRE DEPARTMENT MUST BE NOTIFIED OF INITIAL STORAGE LOCATION AND SCHEDULE OF ALL MOVES FOR THE RADIOACTIVE MATERIAL.

1.6 SYMBOLS AND ABBREVIATIONS

VOON	VEHICLE TEST CONDUCTOR
TE	TEST ENGINEER
MESH	MECHANICAL SYSTEMS AND HANDLING ENGINEER
MECH	MECHANICAL
MSE	MCDONNELL SAFETY ENGINEER
MQA	MCDONNELL QUALITY ASSURANCE
PAB-2	PAYLOAD ASSEMBLY BUILDING #2
PAB-1	PAYLOAD ASSEMBLY BUILDING #1

TEST PREPARATION SHEET NO. 1TEST EQUIPMENT READINESS SUMMARY

<u>SYSTEM</u>	<u>P/N</u>	<u>NOMENCLATURE</u>	<u>SER. NO.</u>	<u>INSP</u>
<u>EQUIPMENT FOR SEQUENCE 01-000</u>				
MSE	740D	VICTOREEN SURVEY METER	_____	_____
	541	VICTOREEN POCKET DOSIMETER	_____	_____
MESH	N/A	RADIATION WARNING SIGNS	_____	_____
	N/A	STANDS AND ROPE	_____	_____
<u>EQUIPMENT FOR SEQUENCE 02-000</u>				
MSE	740D	VICTOREEN SURVEY METER	_____	_____
	541	VICTOREEN POCKET DOSIMETER	_____	_____
MESH	N/A	RADIATION WARNING SIGNS	_____	_____
	N/A	STANDS AND ROPE	_____	_____
		HEATSHIELD RADIONUCLIDE BONDING AGENT	_____	_____
		COTTON GLOVES, CLEAN	_____	_____
		CLEAN WIPING CLOTHS	_____	_____
		FORK LIFT	_____	_____
<u>EQUIPMENT FOR SEQUENCE 03-000</u>				
MSE	740D	VICTOREEN SURVEY METER	_____	_____
	541	VICTOREEN POCKET DOSIMETER	_____	_____
MESH	N/A	RADIATION WARNING SIGNS	_____	_____
	N/A	STANDS AND ROPE	_____	_____
		FORK LIFT	_____	_____
<u>EQUIPMENT FOR SEQUENCE 04-000</u>				
MSE	740D	VICTOREEN SURVEY METER	_____	_____
	541	VICTOREEN POCKET DOSIMETER	_____	_____

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<u>SYSTEM</u>	<u>P/N</u>	<u>NOMENCLATURE</u>	<u>SER. NO.</u>	<u>INSP.</u>
MESH	N/A	RADIATION WARNING SIGN		
		HEATSHIELD PLUG BONDING AGENT		
	N/A	COTTON GLOVES, CLEAN		
	N/A	CLEAN WIPING CLOTHS		
	67D800007	TOOL - SRV NOSE TIP HANDLING		
	67D800019	MOBILE STAND, SHIELDED CONTAINER		
	67D800001	SLING ASSY., RV EQUIP. HOISTING		
	67D800027	KIT, SPANNER WRENCH, HEATSHIELD PLUG		
	N/A	STOP WATCH		

TEST ENGINEERDATE

TEST PREPARATION SHEET NO. 2MASTER CHECK LIST

1. CHECK LIST FOR SEQUENCE 01-000.
 - A. NOTIFY VAFB BIOLOGICAL ENVIRONMENTAL HEALTH OFFICE, AT LEAST 24 HOURS IN ADVANCE, OF ARRIVAL OF RADIONUCLIDE SHIPMENT.
 - B. NOTIFY VAFB FIRE DEPARTMENT OF STORAGE LOCATION AND TIME SCHEDULE OF THE RADIONUCLIDES.
 - C. VERIFY TEST EQUIPMENT READINESS PER TPS NO. 1 FOR SEQUENCE 01-000.
 - D. VERIFY STORAGE AREA IS CLEARED AND ROPE STANDS ARE IN PLACE.
2. CHECK LIST FOR SEQUENCE 02-000.
 - A. VERIFY TEST EQUIPMENT READINESS PER TPS NO. 1 FOR SEQUENCE 02-000.
 - B. MOVE RADIONUCLIDE SHIPPING CONTAINER TO VICINITY OF SRV. ROPE OFF AREA AROUND VEHICLE AND CONTAINER AND DESIGNATE WITH RADIATION WARNING SIGNS.
3. CHECK LIST FOR SEQUENCE 03-000
 - A. VERIFY TEST EQUIPMENT READINESS PER TPS NO. 1 FOR SEQUENCE 03-000.
4. CHECK LIST FOR SEQUENCE 04-000.
 - A. VERIFY TEST EQUIPMENT READINESS PER TPS NO. 1 FOR SEQUENCE 04-000.
 - B. LOAD NOSE TIP CONTAINER ON FLAT BED TRUCK AND MOVE TO STAGING AREA.
 - C. LOCATE THE FOLLOWING ITEMS ON MISSILE SERVICE TOWER LEVEL 66.
 - 67D800007 TOOL, SRV NOSE TIP HANDLING
 - 67D800019 MOBILE STAND, SHIELDED CONTAINER
 - 67D800027 KIT, SPANNER WRENCH
 - GLOVES
 - CLEAN WIPING CLOTHS

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67A300013-5 NOSE TIP ATTACH PINS (2 EACH)

67A300005-1 HEATSHIELD PLUG

67A300005-3 HEATSHIELD PLUG

D. VERIFY LEVEL 66 WORKSTAND (GFE) IN PLACE.

TEST ENGINEER

DATE

SECTION II

SEQUENCE	SYSTEM AREA	DESCRIPTION		REMARKS																											
01-000		<u>RECEIVING, STORAGE AND HANDLING OF HEATSHIELD RADIONUCLIDE BODY PLUGS</u>																													
01-001	MESH		VERIFY TPS NO. 2 FOR SEQUENCE 01-000 COMPLETED.																												
01-002	MESH	MSE	VERIFY/ISSUE RADIATION MONITORING DEVICES WORN BY ALL PERSONNEL INVOLVED.																												
01-003	MESH	MSE	RECORD SHIPPING CONTAINER EXTERNAL RADIATION LEVEL MARKED ON CONTAINER. RADIATION LEVEL _____																												
01-004	MESH	MSE	USING THE 740D SURVEY METER, PERFORM A RADIATION SURVEY OF THE SHIPPING CONTAINER PRIOR TO REMOVING FROM TRUCK. RECORD MEASURED LEVEL _____. VALUE SHOULD NOT EXCEED 200 MR/HR.																												
01-005	MESH	MECH	USING FORKLIFT, REMOVE SHIPPING CONTAINER FROM TRUCK AND PLACE IN DESIGNATED STORAGE AREA IN PAB-2.																												
01-006	MESH	MECH MSE	ROPE OFF AREA AROUND SHIPPING CONTAINER GREATER THAN 2 MR PER HOUR AND IDENTIFY WITH RADIATION WARNING SIGNS. MINIMUM DISTANCE TO BE ROPED OFF IS 5 FEET.																												
01-007	MESH	MECH	OPEN CONTAINER AND QUICKLY INSPECT FOR QUANTITY & PHYSICAL DAMAGE. QUANTITIES REQUIRED ARE: <table><thead><tr><th></th><th><u>QUANTITY</u></th><th><u>P/N</u></th></tr></thead><tbody><tr><td>FOR 2-A7</td><td>1</td><td>67A710006-11CSGA7</td></tr><tr><td></td><td>1</td><td>67A710006-11CSGA11</td></tr><tr><td></td><td>1</td><td>67A710006-13CSGA6</td></tr><tr><td></td><td>1</td><td>67A710006-13CSGA8</td></tr><tr><td>FOR 2-A3</td><td>1</td><td>67A710006-15CSGA7</td></tr><tr><td></td><td>1</td><td>67A710006-15CSGA11</td></tr><tr><td></td><td>1</td><td>67A710006-17CSGA6</td></tr><tr><td></td><td>1</td><td>67A710006-17CSGA8</td></tr></tbody></table>		<u>QUANTITY</u>	<u>P/N</u>	FOR 2-A7	1	67A710006-11CSGA7		1	67A710006-11CSGA11		1	67A710006-13CSGA6		1	67A710006-13CSGA8	FOR 2-A3	1	67A710006-15CSGA7		1	67A710006-15CSGA11		1	67A710006-17CSGA6		1	67A710006-17CSGA8	
	<u>QUANTITY</u>	<u>P/N</u>																													
FOR 2-A7	1	67A710006-11CSGA7																													
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	1	67A710006-13CSGA8																													
FOR 2-A3	1	67A710006-15CSGA7																													
	1	67A710006-15CSGA11																													
	1	67A710006-17CSGA6																													
	1	67A710006-17CSGA8																													
01-008	MESH	MECH	CLOSE CONTAINER																												
01-009	MESH	MSE	PERFORM RADIATION SURVEY TO VERIFY CONTAINER IS PROPERLY CLOSED.																												

SEQUENCE	SYSTEM AREA	DESCRIPTION		REMARKS
02-000		<u>RADIONUCLIDE BODY PLUG INSTALLATION</u>		
02-001	MESH		VERIFY TPS NO. 2 FOR SEQUENCE 02-000 IS COMPLETE.	
02-002	MESH	MSE	VERIFY/ISSUE RADIATION MONITORING DEVICES TO ALL INVOLVED PERSONNEL. MONITOR PLUG INSTALLATION.	
02-003	MESH	MECH	REMOVE BOLTS HOLDING CONTAINER LID DOWN. DO NOT OPEN.	
02-004	MESH	MECH	PREPARE BODY PLUG BONDING AGENT PER DIRECTIONS ON DRAWING 67A315006 OR 67A325006.	
02-005	MESH	MECH	INSTALL PLUGS PER DRAWINGS: A) 67A315006 FOR FWD BODY B) 67A325006 FOR AFT BODY	
02-006	MESH	MSE	ROPE OFF AREAS GREATER THAN 2 MR PER HOUR AND IDENTIFY WITH RADIATION WARNING SIGNS.	

SEQUENCE	SYSTEM AREA	DESCRIPTION		REMARKS
03-000		<u>RECEIVING, STORAGE AND HANDLING OF RADIOACTIVE NOSE TIP</u>		
03-001	MESH		VERIFY TPS 2 FOR SEQUENCE 03-000 HAS BEEN COMPLETED.	
03-002	MESH	MSE	VERIFY/ISSUE RADIATION MONITORING DEVICES TO ALL PERSONNEL INVOLVED. MONITOR OPERATION.	
03-003	MESH	MSE	RECORD SHIPPING CONTAINER EXTERNAL RADIATION LEVEL MARKED ON CONTAINER. RADIATION LEVEL _____	
03-004	MESH	MSE	USING THE 740D SURVEY METER PERFORM A RADIATION SURVEY OF THE SHIPPING CONTAINER PRIOR TO RE- MOVING FROM TRUCK. RECORD MEASURED VALUE _____. MEASURED VALUE SHOULD NOT EXCEED 200 MR/HR.	
03-005	MESH		USING FORK LIFT TRANSPORT SHIPPING CONTAINER TO DESIGNATED STORAGE AREA IN PAB-2.	
03-006	MESH	MECH MSE	ROPE OFF AREA AROUND SHIPPING CONTAINER WITH RADIATION LEVEL GREATER THAN 2 MR PER HOUR AND IDENTIFY WITH RADIATION WARNING SIGNS.	

SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
04-000		<p><u>INSTALLATION OF SRV NOSE TIP</u></p> <p><u>NOTE:</u> THIS PROCEDURE DEFINES THE STEPS REQUIRED FOR INSTALLING THE NOSE TIP. THE INTEGRATED MASTER COUNTDOWN WILL CONTROL THE INSTALLATION SCHEDULE.</p> <p><u>CAUTION:</u> THE NOSE TIP CONTAINS RADIOACTIVE MATERIAL (TANTALUM 182). REMAIN AS FAR AS POSSIBLE FROM THE NOSE TIP AT ALL TIMES.</p>	
04-001	MESH	VERIFY TPS #2 FOR SEQUENCE NO. 04-000 HAS BEEN COMPLETED.	
04-002	VCON	<p>PERFORM COMMUNICATION CHECK AND VERIFY FOLLOWING PERSONNEL ON STATION.</p> <p>MESH _____</p> <p>MECH-1 _____</p> <p>MECH-2 _____</p> <p>MSE _____</p> <p>MQA _____</p> <p>CRANE OPERATOR _____</p>	
04-003	MESH	MSE VERIFY/ISSUE RADIATION MONITORING DEVICES TO ALL PERSONNEL INVOLVED IN THE OPERATION.	
04-004	VCON	REQUEST FLAT BED TRUCK TO MOVE FROM STAGING AREA TO BASE OF GANTRY.	
04-005	MESH	NOTIFY VCON WHEN FLAT BED IS IN POSITION UNDER MST CRANE.	
04-006	VCON	MSE VERIFY RADIATION WARNING SIGNS ARE DISPLAYED.	
04-007	VCON	NOTIFY SRS TEST CONDUCTOR READY TO BEGIN INSTALLATION. REQUEST ALL NON-ESSENTIAL PERSONNEL TO CLEAR NOSE TIP AREA.	
04-008	MESH	VERIFY ALL NON-ESSENTIAL PERSONNEL HAVE CLEARED AREA.	
04-009	VCON	MESH START NOSE TIP INSTALLATION.	
04-010	MESH	MECH ATTACH 67D800001 SLING TO CRANE HOOK.	
04-011	MESH	MECH REMOVE THE TWO HANDKNOB FASTENERS ON OUTER LID.	
04-012	MESH	MECH ATTACH SLING TO THE 4 LIFTING LUGS ON OUTER LID.	

SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
04-013	MESH	CRANE OP	HOIST LID AND SET ASIDE.
04-014	MESH	CRANE OP	POSITION SLING OVER INNER CONTAINER.
04-015	MESH	MECH	ATTACH SLING TO FOUR LIFTING LUGS.
04-016	MESH	CRANE OP	HOIST INNER CONTAINER TO LEVEL 66.
04-017	MESH		NOTIFY VCON UPON ARRIVAL TO LEVEL 66.
04-018	MESH	CRANE OP	LOWER INNER CONTAINER INTO MOBILE STAND. DISCONNECT SLING.
04-019	MESH	MECH	MOVE MOBILE STAND TO POSITION UNDER CHAIN HOIST. LOCK CASTERS. NOTIFY VCON STEP COMPLETE.
04-020	VCON		NOTIFY SRS TEST CONDUCTOR READY TO INSTALL NOSE TIP. REQUEST ALL NON ESSENTIAL PERSONNEL ON MST LEVELS 57 AND ABOVE TO CLEAR AREA.
04-021	MESH		VERIFY ALL NON ESSENTIAL PERSONNEL HAVE CLEARED AREA.
04-022	MESH		VERIFY FOLLOWING: A) WORK PLATFORM INPLACE B) PLATFORMS ABOVE WORK PLATFORM OPEN C) TRIDENT ACCESS DOOR OPEN <u>CAUTION:</u> AT ALL TIMES REMAIN AS FAR AS POSSIBLE FROM THE NOSETIP. ALL OPERATIONS ARE TO BE DONE AS QUICKLY AS POSSIBLE.
04-023	MESH	MECH	USING CHAIN HOIST REMOVE CONTAINER LID. LEAVE SUSPENDED.
04-024	MESH	MSE	START STOP WATCH
04-025	MESH	MECH	ATTACH 67D800007 HANDLING TOOL TO SLEEVE ON SIDE WITH INDEX MARK.
04-026	MESH	MECH	LIFT NOSE FROM CONTAINER AND MATE WITH SRV. ALIGN AZIMUTH INDEX MARKS.

SEQUENCE	SYSTEM AREA	DESCRIPTION		REMARKS
04-027	MESH	MECH	INSTALL THE TWO NOSE TIP ATTACH PINS (67A300013).	
04-028	MESH	MECH	REMOVE HANDLING AGE.	
04-029	MESH	MECH	APPLY BONDING AGENT TO HEATSHIELD PLUGS. SCREW PLUGS INTO SHIELD UNTIL FLUSH WITH SURFACE. WIPE EXCESS BONDING AGENT FROM SURFACE.	
04-030	MESH	ALL	VACATE AREA OF NOSE TIP.	
04-031	MESH		NOTIFY VOON INSTALLATION COMPLETE.	
04-032	MESH	MSE	STOP THE STOP-WATCH, RECORD ELAPSED TIME. _____	
04-033	MESH	MSE	PERFORM AREA RADIATION SURVEY AND MARK AREA.	
04-034	VOON		NOTIFY SRS NOSE INSTALLED AND READY FOR TRIDENT ACCESS DOOR INSTALLATION.	
04-035	MESH	MECH	SECURE ALL NOSE TIP AGE.	
04-036	MSE		GATHER POCKET DOSIMETERS AND RECORD EXPOSURE VALUES FOR EACH INDIVIDUAL.	

SEQUENCE	SYSTEM AREA	DESCRIPTION	REMARKS
05-000		<u>SRV NOSE TIP ABORT PROCEDURE</u>	
05-001	MESH	MSE	VERIFY/ISSUE RADIATION MONITORING DEVICES TO ALL PERSONNEL INVOLVED IN OPERATION.
05-002	VOON		REQUEST FLATBED TRUCK, WITH OUTER CONTAINER TO RETURN TO BASE OF MST.
05-003	MESH	MECH	VERIFY/RETURN HANDLING AGE TO MST LEVEL 66.
05-004	MESH		NOTIFY VOON UPON CREW ARRIVAL TO LEVEL 66. <u>CAUTION:</u> REMAIN AS FAR AS POSSIBLE FROM THE NOSE TIP AT ALL TIMES.
05-005	VOON	MESH	START NOSE TIP REMOVAL.
05-006	MESH	MECH	POSITION INNER CONTAINER UNDER CHAIN HOIST. RAISE LID AND LEAVE SUSPENDED.
05-007	MESH	MECH	REMOVE THE TWO NOSE TIP ATTACH PIN HEATSHIELD PLUGS.
05-008	MESH	MECH	SECURE 67D800007 HANDLING TOOL AND SLEEVE TO NOSE TIP.
05-009	MESH	MECH	REMOVE THE TWO NOSE TIP ATTACH PINS.
05-010	MESH	MECH	RETURN NOSE TO SHIELDED CONTAINER.
05-011	MESH	MECH	LOWER LID AND SECURE TO CONTAINER.
05-012	MESH	MECH CRANE OP	ATTACH 67D800001 SLING TO CRANE.
05-013	MESH	MECH	ATTACH SLING TO THE FOUR LIFTING LUGS.
05-014	MESH	CRANE OP	TRANSFER INNER CONTAINER TO OUTER CONTAINER ON FLATBED TRUCK.
05-015	MESH	MECH CRANE OP	DISCONNECT SLING FROM INNER CONTAINER AND ATTACH TO THE FOUR LIFTING LUGS ON OUTER CONTAINER LID.
05-016	MESH	MECH CRANE OP	HOIST LID AND SET ON OUTER CONTAINER.

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TEST SUMMARY SHEETSHEET 2 OF 2

VEHICLE NUMBER _____

DATE _____

THIS IS TO SIGNIFY THAT A TEST AS DEFINED BY THIS PROCEDURE HAS BEEN COMPLETED. CHANGES TO THIS PROCEDURE MADE DURING THIS TEST ARE SUMMARIZED ON THE PCN SUMMARY. PROBLEMS ENCOUNTERED ARE LISTED ON THE ANOMALY REPORT SUMMARY, AND THE PRECEEDING TEST SUMMARY SHEETS. THE SYSTEMS TESTED ARE APPROVED AS READY FOR THE FOLLOWING ACTIVITY:

VEHICLE TEST CONDUCTOR_____
DATE

JUN 16 1967

CO:RM
24-4113-8
(667)

Monsanto Company
800 North Lindberg Boulevard
St. Louis, Missouri 63166

Attention: Mr. L. C. Weger
Safety Manager
Research Center

Gentlemen:

Thank you for your letter of June 7, 1967, with enclosure,
providing us with the additional information on your leaking
iodine 125 sealed sources as requested in our letter of May 16,
1967.

Your cooperation with us is appreciated.

Very truly yours,

Robert Handler, Acting Chief
Enforcement Branch
Division of Compliance

bcc: CO:HQ)
CO:III)
Leak Source File:EB) w/cpy ltr 6-7-67
Public Document Room)
WOMiller, DML:IB)
REG Reading File)

9702070467 1P

A/169

OFFICE ▶	CO:EB					
SURNAME ▶	Handler:jtl					
DATE ▶	14-67					

Monsanto

C O M P A N Y

800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
(314) OXford 4-1000

June 7, 1967

Mr. Robert Handler, Acting Chief
Enforcement Branch
Division of Compliance
U.S. Atomic Energy Commission
Washington, D. C. 20545

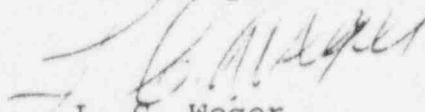
Dear Sir:

Re: CO:RH, 24-113-8 (G67)

Attached is a copy of the Leaking Source Report covering our iodine 125 sources which we reported as leaking in earlier correspondence.

As we earlier stated, these had been returned to the supplier for disposal.

Sincerely,



L. C. Weger
Safety Manager
Research Center

cc: M. L. Unland

9702070463 2pp

Leaking Source Report

- 1) Name of Source Manufacturer _____
- 2) Source Model No. _____
- 3) Source Serial No., if known _____
- 4) Model number and manufacturer of device in which source was used, if any. _____
- 5) Radioisotope _____
- 6) Amount of Radioactivity in Source _____
- ✓ 7) Date Source Received August 1966 _____
- 8) Amount of Removable Contamination Found _____ microcuries
- 9) Date of Leak Test _____
- 10) Action taken immediately following leak test with respect to withdrawal of equipment from use and the decontamination, repair or disposal of equipment.

- ✓ 11) Type of equipment and physical conditions under which source was used.
Model AM-1 Mossbauer Analyzer

- ✓ 12) Apparent or suspected cause of source failure.
Unknown

NAME _____

ADDRESS _____

LICENSE NO. _____

9-63

CO:RE
24-113-8 (067)

MAY 16 1967

Monsanto Company
800 North Lindberg Boulevard
St. Louis, Missouri 63166

Attention: Mr. L. C. Weger
Safety Manager
Research Center

Gentlemen:

Thank you for your letter of May 8, 1967, with enclosures, informing us of leak tests which revealed the presence of removable contamination on your iodine 125 sources. So that our records will be complete, we will appreciate your completing those portions of the enclosed form which we have marked and returning one copy of the completed form to us.

Very truly yours,

Robert Handler, Acting Chief
Enforcement Branch
Division of Compliance

Enclosures:
Leaking Source Report forms

bcc: CO:HQ

CO:III

ReG Reading File

LEAk Source File:EB

Public Document Room

W.O. Miller, DML:IB

} w/cpy ltr 5/8/67

9702070455 1p

OFFICE ▶

CO:EB

REHandler:jtl

SURNAME ▶

DATE ▶

5-15-67

Monsanto

C O M P A N Y

800 N. Lindbergh Boulevard
St. Louis, Missouri 63166
(314) OXford 4-1000

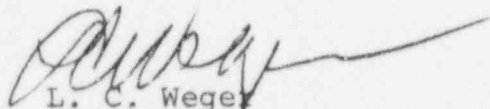
May 8, 1967

Director, Materials Licensing
U. S. Atomic Energy Commission
Washington, D.C. 20545

Dear Sir:

Attached are copies of a letter of transmittal
and wipe test forms relative to Iodine 125
sources, which were found to have mild leakage
and which have been returned to the supplier
in accordance with provisions of our license
number 24-113-8(G67).

Sincerely,


L. C. Weger
Safety Manager
Research Center

cc: Director
Region 3
AEC
Oakbrook Professional Bldg.
Oakbrook, Illinois 60523

O. P. Tanner

RECEIVED
1967 MAY 11 AM 10 48
U.S. ATOMIC ENERGY COM. DIV.
MAIL & RECORDS SECTION

9702070439 4pp

April 18, 1967

Mr. Carl Seidel
Nuclear Science and Engineering Corp.
P. O. Box 10901
Pittsburgh, Pa. 15236

Dear Sir:

Enclosed are two ~~sources~~^{I-25} sources which we purchased from NSC.
Please dispose of them as discussed in our phone conversation
of 4/17/67.

Also, find enclosed two cold source holders which I purchased
on 9/16/66. These are the holders which do not fit our apparatus.
As I have already received the replacements and they are satis-
factory, no further action is required. Thank you for your
cooperation and advice.

Sincerely,

Mark L. Unland

Mark L. Unland

Encl.
/mac

NUCLEAR CONSULTANTS DIVISION
MALLINCKRODT CHEMICAL WORKS
ST. LOUIS, MISSOURI

Attn. James L. Ogilvie - S. Bldg.
Name Monsanto Chemical
Address 800 N. Lindbergh Blvd.
City St. Louis,
State Missouri

TEST ANALYSIS REPORT (Page 1 of 2)

The results of the ☐ leak ☒ wipe testing performed at your facility on
3/31/67 and 4/14/67 are as follows:

<u>Sample Description</u>	<u>Radio Isotope</u>	<u>Radioactivity of Test</u>
1 mc - 6/63	Co57	less than .003 uc
200 mc 5/64 Ser. #073	Tritium	less than .001 uc
Barber Colman Chromatograph Model #20 Prop #RC280067	Sr90	less than .001 uc
Barber Colman Chromatograph Rm Q4-18	Sr90	less than .002 uc
Aerograph 200 Prop #0190519	Tritium	less than .001 uc
Mossbauer Source #315 10 mc 7/1/66 .001"Cu	Co57	leaking-more than 1 uc
* 10 mc 3/18/65 Source #3	I-125	less than .003uc

Stan A. Huber, B.S.
Physicist

NOTE: 10CFR34 Section 25(C) Code of Federal Regulations, USAEC Byproduct Material License conditions or applicable regulations of the State of Not Applicable
Department of Public Health, Rule Not Applicable sets the maximum permissible level of removable contamination at ☒ .005µc, ☐ .05µc.

NUCLEAR CONSULTANTS DIVISION
MALLINCKRODT CHEMICAL WORKS
ST. LOUIS, MISSOURI

Attn. James L. Ogilvie - S. Bldg.
Name Monsanto Chemical
Address 800 N. Lindbergh Blvd.
City St. Louis
State Missouri

TEST ANALYSIS REPORT (Page 2 of 2)

The results of the ☐ leak ☒ wipe testing performed at your facility on
3/31/67 and 4/14/67 are as follows:

<u>Sample Description</u>	<u>Radio Isotope</u>	<u>Radioactivity of Test</u>
3 mc 9/10/65	Co57	less than .002 uc
Density Gauge - Qualicon 506 Ser. #63 3/15/63	Cs 137	less than .002 uc
* Source #152-133 .001 cu I-125 20 mc 8/5/66		more than .01 uc (considered leaking)

The Co⁵⁷ Mossbauer Source #315 and the I-125 Source #152-133 are considered leaking. On discovery, these results were relayed to Monsanto by phone. The other sources are considered as not leaking.

* - Returned to mfg. 4/18/67

Stan A. Huber B.S.
Physicist

NOTE: 10CFR34 Section 25(C) Code of Federal Regulations, USAEC Byproduct Material License conditions or applicable regulations of the State of Not Applicable
Department of Public Health, Rule Not Applicable sets the maximum permissible level of removable contamination at ☒ .005 μ c, ☐ .05 μ c.



3/6/97

Attention All :

We have a new CF Subj file to add to our L-4-1PT50
list :

L-4-1PT50.7 for Employee Protection

Please add it to your pp 30 of 70 in your DD-02-FIL
Section of File Level EIM.

ONE COPY PER SECTION