



Office of Environmental Health & Safety
Health Physics
5425 Woodward, Suite 300
Detroit Michigan 48202
(313) 577-1200, FAX (313) 993-4079
<http://www.oehs.wayne.edu>



November 14, 2016

To: U.S Nuclear Regulatory Commission
Material Licensing Section,
Region III
2443 Warrenville Road, Suite 210
Lisle, IL 60532

Subject: Closure of NRC License 21-00741-14(Docket No.030-33995) following decommissioning of irradiators

Dear Sir/ Madam,

This letter is to request closing out our NRC License with respect to the information detailed above.

All three irradiators mentioned in this license have been removed from our institution with the assistance from the Off-site Source Recovery Program (OSRP) sponsored by the Department of Energy (DOE).

The documents including wipe test survey results obtained during the close out and the Authorization of Transfer/Relinquishment of Ownership/Custody (ATRO) are submitted with this letter.

If any further questions arise, please contact me at 313-577-0019 or by email at msriniva@wayne.edu

Thank you.

Sincerely,

Maha Srinivasan MS
Health Physicist & RSO

Enclosures attached.



CERTIFICATE OF DISPOSITION OF MATERIALS

Estimated burden per response to comply with this mandatory collection request: 30 minutes. This submittal is used by NRC as part of the basis for its determination that the facility is released for unrestricted use. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to Infocoll@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0028), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE NAME AND ADDRESS

Wayne State University
5425 Woodward Avenue, Suite 300
Detroit, MI 48202

LICENSE NUMBER

21-00741-14

DOCKET NUMBER

030-33995

LICENSE EXPIRATION DATE

February 28, 2018

A. LICENSE STATUS (Check the appropriate box)

- ☐ This license has expired. ☒ This license has not yet expired; please terminate it.

B. DISPOSAL OF RADIOACTIVE MATERIAL

(Check the appropriate boxes and complete as necessary. If additional space is needed, provide attachments)

The licensee, or any individual executing this certificate on behalf of the licensee, certifies that:

- ☐ 1. No radioactive materials have ever been procured or possessed by the licensee under this license.
- ☒ 2. All activities authorized by this license have ceased, and all radioactive materials procured and/or possessed by the licensee under this license number cited above have been disposed of in the following manner.
- ☐ a. Transfer of radioactive materials to the licensee listed below:
- ☒ b. Disposal of radioactive materials:
- ☐ 1. Directly by the licensee:
- ☒ 2. By licensed disposal site:
Southwest Research Institute
San Antonio, TX
- ☐ 3. By waste contractor:
- ☐ c. All radioactive materials have been removed such that any remaining residual radioactivity is within the limits of 10 CFR Part 20, Subpart E, and is ALARA.

C. SURVEYS PERFORMED AND REPORTED

- ☒ 1. A radiation survey was conducted by the licensee. The survey confirms:
- ☒ a. the absence of licensed radioactive materials
- ☐ b. that any remaining residual radioactivity is within the limits of 10 CFR 20, Subpart E, and is ALARA.
- ☒ 2. A copy of the radiation survey results:
- ☒ a. is attached; or ☐ b. is not attached (Provide explanation); or ☐ c. was forwarded to NRC on: _____ Date _____
- ☐ 3. A radiation survey is not required as only sealed sources were ever possessed under this license, and
- ☐ a. The results of the latest leak test are attached; and/or ☐ b. No leaking sources have ever been identified.

The person to be contacted regarding the information provided on this form:

NAME	TITLE	TELEPHONE (Include Area Code)	E-MAIL ADDRESS
MAHA SRINIVASAN	Health Physicist & RSO	3135771200	msriniva@wayne.edu

Mail all future correspondence regarding this license to

5425 Woodward Avenue, Suite 300, Detroit, MI 48202. Email: msriniva@wayne.edu

C. CERTIFYING OFFICIAL

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT

PRINTED NAME AND TITLE
MAHA SRINIVASAN, Health Physicist & RSO

SIGNATURE

DATE

11/14/2016

WARNING: FALSE STATEMENTS IN THIS CERTIFICATE MAY BE SUBJECT TO CIVIL AND/OR CRIMINAL PENALTIES. NRC REGULATIONS REQUIRE THAT SUBMISSIONS TO THE NRC BE COMPLETE AND ACCURATE IN ALL MATERIAL RESPECT. 18 U.S.C. SECTION 1001 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.



International Threat Reduction, Group NEN-3
Off-Site Source Recovery Program (OSRP)
P.O. Box 1663, Mail Stop: E539
Los Alamos, New Mexico 87545
505-606-0362/Fax: 505-665-7913

Date: September 27, 2016
Refer to: NEN-3:16-086

Cynthia D. Pederson
Regional Administrator
U.S. NRC Region III
2443 Warrenville Road, Suite 210
Lisle, Illinois 60532-4352

Re: ATRO #2016:48 License MI No: 21-00741-14

Dear Mrs. Cynthia D. Pederson:

Enclosed please find a signed *Authorization to Transfer/Relinquishment of Ownership* form concerning:

Wayne State University
5425 Woodward Ave., Suite 300
Detroit, MI 48202

The radioactive sources described on the form have been removed from Wayne State University, MI and are in storage at Southwest Research Institute, San Antonio, TX. The sources have been transferred to Department of Energy (DOE) ownership and are stored under DOE license exemption.

This action was completed as part of the Off-Site Source Recovery Program (OSRP) managed by this office. If you need any further information on this action, please contact me 505-606-0362.

Sincerely,


Justin Griffin
OSRP Team Leader

JG/TW

Cy: Maha Srinivasan, Wayne State University
Temeka Taplin, DOE, NA-211
NEN3/OSRP File, MS: E539

ATRO # 2016:48

Off-Site Source Recovery Project
Authorization to Transfer/Relinquishment of Ownership/Custody

SOURCE OWNER: Wayne State University
LICENSE: MI - Region III
No.: 21-00741-14
CONTACT NAME: Maha Srinivasan
ADDRESS: 5425 Woodward Ave. Suite 300
Detroit, MI 48202

TELEPHONE: 313-577-0019
FAX: 313-993-4079

Pursuant to its authority under the Atomic Energy Act, the U.S. Department of Energy (DOE) National Nuclear Security Administration (NNSA) has directed Los Alamos National Security, LLC (LANS), to recover and store excess, unwanted, abandoned, orphan radioactive sealed sources and other radioactive material sources on behalf of DOE/NNSA.

LANS has determined that the sealed source(s) identified below meet the requirements of the Los Alamos National Laboratory Off-Site Source Recovery Project and, on behalf of DOE/NNSA, authorizes Wayne State University to transfer the sealed source(s) to the following designated LANS support subcontractor: Southwest Research Institute.

Wayne State University affirms it is the owner/custodian of the sealed source(s) identified below, and hereby irrevocably relinquishes all rights, title and ownership/custody in the sealed source(s) to DOE/NNSA in furtherance of the OSRP. LANS accepts the sealed sources on behalf of DOE/NNSA, pursuant to DOE/NNSA contract no. DE-AC52-06NA25396, upon the execution of the loading of the sources into a certified DOE-owned transportation container observed by a representative of the OSRP/LANS.

SOURCE INFORMATION

Isotope:	Mfr/Model:	Serial No:	SFC No.:	Original Curies (Date):	Decayed Curies (Date):
137Cs	AECL/C-161	51a*		1.708E+03 (4/1/80)	7.460E+02 (3/24/16)
137Cs	AECL/C-161	51b*		1.708E+03 (4/1/80)	7.460E+02 (3/24/16)
137Cs	ICN/3252	G-218**		2.500E+02 (1/1/63)	7.339E+01 (3/24/16)

*Sources from Gammacell 40, SN: 51

**Source from US Nuclear GR-6A, SN:0101

SOURCE OWNER:

OFFICIAL NAME/TITLE: Philip R. Cunningham, Ph.D.
NAME (Please Print or Type)

SIGNATURE [Signature]

Assoc. V.P. Research
TITLE (Please Print or Type)

DATE 7/8/16

LANS AUTHORIZATION:

OFFICIAL NAME/TITLE: Team Leader, Off-Site Source Recovery Project

SIGNATURE JUSTIN M. GRIFFIN

DATE 13 JUL 16

ACKNOWLEDGEMENT OF RECEIPT BY DESIGNATED OSRP REPRESENTATIVE:

OFFICIAL NAME/TITLE: Frank Cocina
NAME (Please Print or Type)

SIGNATURE [Signature]

SEP. RATA - Gamma Recovery Coordinator
TITLE (Please Print or Type)

DATE 7/29/2016

FORM APPROVED

7/8/16
OFFICE OF THE
GENERAL COUNSEL

Los Alamos
NATIONAL LABORATORY



ATRO # 2016:49

Off-Site Source Recovery Project
Authorization to Transfer/Relinquishment of Ownership/Custody

SOURCE OWNER: Wayne State University
LICENSE: MI - Region III
No.: 21-00741-14
CONTACT NAME: Maha Srinivasan
ADDRESS: 5425 Woodward Ave. Suite 300
Detroit, MI 48202

TELEPHONE: 313-577-0019
FAX: 313-993-4079

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Wayne State University affirms it is the owner/custodian of the sealed source(s) identified below, and hereby irrevocably relinquishes all rights, title and ownership/custody in the sealed source(s) to DOE/NNSA in furtherance of the OSRP. LANS accepts the sealed sources on behalf of DOE/NNSA, pursuant to DOE/NNSA contract no. DE-AC52-06NA25396, upon the execution of the Acknowledgment of Receipt of the source(s) or container(s) by the designated LANS support subcontractor below.

SOURCE INFORMATION

Isotope:	Mfr/Model:	Serial No.:	SFC No.:	Original Curies (Date):	Decayed Curies (Date):
137Cs	JLS/6810-G	1010*		1.000E+04 (4/16/82)	4.578E+03 (3/24/16)

*Source from JLS Mark 1-68, SN:1010

SOURCE OWNER:

OFFICIAL NAME/TITLE: Philip R. Cunningham, Ph.D.
NAME (Please Print or Type)

SIGNATURE 

Assoc. V.P. Research
TITLE (Please Print or Type)
DATE 7/6/16

LANS AUTHORIZATION:

OFFICIAL NAME/TITLE: Team Leader, Off-Site Source Recovery Project

SIGNATURE Justin M. Griffin 

DATE 13 JUL 16

ACKNOWLEDGEMENT OF RECEIPT BY DESIGNATED LANS SUPPORT SUBCONTRACTOR:
Southwest Research Institute

OFFICIAL NAME/TITLE: Dino Raman
NAME (Please Print or Type)

SIGNATURE 

Principal Tech
TITLE (Please Print or Type)
DATE 8/1/16

FORM APPROVED

Laboratory Initial/Closure Audit Report

Authorized User: Health Physics		Lab Location: 025 Life Science		<input checked="" type="checkbox"/> Closeout <input type="checkbox"/> Initial	
Surveyor Name(s): R. Boyd		Lab Phone:		Date of Survey: 8/2/16	
				Isotopes: Cs-137	

Initial Inspection		Closeout Inspection	
-	+	-	+
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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Meter #1 Type:	Serial:	Cal Date:	Meter #2 Type:	Serial:	Cal Date:

Comments:

- Irradiator has been decommissioned by J.L. Shepherd.

- Two wipes were taken. 1 on the floor where the instrument use to sit, 2 on the shell that covered the instrument.

Survey for Closeout Nuclides used and Survey Results (DPM / 100 sqcm) Wipes Nuclides: Cs-137 Bkg: 34 High: 35 Contamination? None Meter Nuclides: _____ Bkg: _____ High: _____ Contamination? _____ Survey instrument used: Manuf / MN / SN (& probe MN / SN) Packard 2900 429277	<div style="text-align: center;"> 2- shell of instrument <div style="display: flex; align-items: center; justify-content: center;"> <div style="border: 1px solid black; width: 50px; height: 50px; display: flex; align-items: center; justify-content: center; margin: 10px;"> 1 </div> <div style="margin-left: 10px;"> spot where irradiator sat </div> </div> </div>
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Contact Name:	Contact Signature:	Date:	Surveyor Initials:
			<i>[Signature]</i>

Protocol# 10 - 10 min dual window analysis.lsa

User: HP

10minute

Assay Definition-

Assay Description:

Assay Type: DPM (Dual)

Report Name: Report1

Output Data Path: C:\Packard\Tricarb\Results\HP\10 min dual window analysis

Raw Results Path: C:\Packard\Tricarb\Results\HP\10 min dual window

analysis\20160802_0955.results

RTF File Name: C:\Packard\Tricarb\Results\HP\10 min dual window analysis\Report1.rtf

Comma-Delimited File Name: C:\Packard\Tricarb\Results\HP\10 min dual window

analysis\Report1.txt

Assay File Name: C:\Packard\TriCarb\Assays\10 min dual window analysis.lsa

Count Conditions-

Nuclide: 3H-32P

Quench Indicator: tSIE/AEC

External Std Terminator (sec): 0.5 2s

Pre-Count Delay (min): 0.00

Quench Sets:

Low Energy: 3H-UG

Mid Energy: 14C-UG

Count Time (min): 10.00

Count Mode: Normal

Assay Count Cycles: 1

Repeat Sample Count: 1

#Vials/Sample: 1

Calculate % Reference: Off

Background Subtract: Off

Low CPM Threshold: Off

2 Sigma % Terminator: Off

Regions	LL	UL
A	0.0	16.0
B	16.0	1700.0
C	0.0	0.0

Count Corrections-

Static Controller: On

Luminescence Correction: On

Colored Samples: On

Heterogeneity Monitor: n/a

Coincidence Time (nsec): 18

Delay Before Burst (nsec): 75

Half Life-

Half Life Correction: Off

Regions	Half Life	Units	Reference Date	Reference Time
A				
B				
C				

Cycle 1 Results

S#	Count Time	CPMA	DPM1	CPME	DPM2	SIS	tSIE	MESSAGES
1	10.00	11	12	26	34	356.17	415.28	BKG
Missing vial 2.								
3	10.00	6	0	26	35	271.62	298.93	Floor
4	10.00	10	10	26	33	341.14	385.42	Shell
Missing vial 5.								
6	10.00	12	13	28	37	281.79	391.70	1- upper
7	10.00	9	7	27	35	288.20	326.59	2- lower

025
Life Science
GC-40

8/2/16 11:14:30 AM QuantaSmart (TM) - 1.31 - Serial# 429277

Page # 2

Protocol# 10 - 10 min dual window analysis.lsa

User: HP

10minute

8	10.00	10	10	24	31	353.96	413.043- upper
9	10.00	10	9	28	36	366.80	375.934- lower

GC-40

Laboratory Initial/Closure Audit Report

Authorized User: Health Physics		Lab Location: 212 Karmanos		<input checked="" type="checkbox"/> Closeout <input type="checkbox"/> Initial	
Surveyor Name(s): R. Boyd		Lab Phone:		Date of Survey: 8/17/16	
				Isotopes: CS-137	

Initial Inspection <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>-</td><td>+</td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> <tr><td><input type="checkbox"/></td><td><input type="checkbox"/></td></tr> </table> <ol style="list-style-type: none"> 1 Warning placard posted 2 RaM sticker is on placard 3 NRC 3 form posted 4 RaM storage locations posted 5 Hood labeled and certified 6 Record keeping book is present 7 Dosimetry needs have been discussed 8 Waste supply needs have been discussed 9 Survey equipment is functional and cal'd 	-	+	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Closure Inspection <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td>-</td><td>+</td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> <tr><td><input checked="" type="checkbox"/></td><td><input checked="" type="checkbox"/></td></tr> </table> <ol style="list-style-type: none"> 1 All RaM has been removed from the lab 2 All Waste has been removed from the lab 3 All radioactive warning positngs have been removed 4 Survey was not necessary 5 Survey was completed (see below) 6 Area is free from contamination 7 8 9 	-	+	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Meter #1 Type	Serial	Cal Date	Meter #2 Type	Serial	Cal Date

Comments:

- Irradiator has been decommissioned by J.L. Shepherd.

- Two wipes were taken on the floor, 1 where the instrument use to sit, 2 by the door.

Survey for Closureout <hr/> Nuclides used and Survey Results (DPM / 100 sqcm) <hr/> Wipes Nuclides: CS-137 <hr/> Bkg: 50 High: 50 Contamination? None <hr/> Meter Nuclides: _____ <hr/> Bkg: _____ High: _____ Contamination? _____ <hr/>	<div style="position: relative; height: 200px;"> <div style="position: absolute; top: 10%; left: 40%;">2</div> <div style="position: absolute; bottom: 10%; left: 10%;"> <div style="border: 1px solid black; width: 30px; height: 30px; display: flex; align-items: center; justify-content: center;">1</div> <div style="margin-left: 10px;">Spot where irradiator sat</div> </div> <div style="position: absolute; bottom: 10%; right: 10%;"> <div style="border: 1px solid black; width: 80px; height: 30px; display: flex; align-items: center; justify-content: center;">bench</div> </div> </div>
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Survey instrument used: Manuf / MN / SN (& probe MN / SN) Packard 2900 429277			
Contact Name:	Contact Signature:	Date:	Surveyor Initials:

8/17/16 2:45:33 PM

QuantaSmart (TM) - 1.31 - Serial# 429277

Page # 1

Protocol# 1 - wipe tests.lsa

User: Svoboda

Contamination Survey

Assay Definition-

Assay Description:

Assay Type: Direct DPM

Report Name: Report1

Output Data Path: C:\Packard\Tricarb\Results\Svoboda\wipe tests

Raw Results Path: C:\Packard\Tricarb\Results\Svoboda\wipe tests\20160817_1439.results

RTF File Name: C:\Packard\Tricarb\Results\Svoboda\wipe tests\Report1.rtf

Comma-Delimited File Name: C:\Packard\Tricarb\Results\Svoboda\wipe tests\WENDY.csv

Assay File Name: C:\Packard\TriCarb\Assays\wipe tests.lsa

Count Conditions-

Nuclide: Direct DPM 3H-UG

Quench Indicator: tSIE/AEC

External Std Terminator (sec): 0.5 2s

Pre-Count Delay (min): 0.00

Quench Set:

Low Energy: 3H-UG

Count Time (min): 1.00

Count Mode: Normal

Assay Count Cycles: 1

#Vials/Sample: 1

Normalization Std DPM: 133300

Repeat Sample Count: 1

Calculate % Reference: Off

Background Subtract: Off

Low CPM Threshold: Off

2 Sigma % Terminator: Off

Regions	LL	UL
A	0.0	2000.0

Count Corrections-

Static Controller: On

Luminescence Correction: On

Colored Samples: n/a

Heterogeneity Monitor: n/a

Coincidence Time (nsec): 18

Delay Before Burst (nsec): 75

Half Life-

Half Life Correction: Off

Regions	Half Life	Units	Reference Date	Reference Time
A				

Cycle 1 Results

Count	Time	S#	LUM	MESSAGES	CPMA	Custom1
1.00	1	3			35	
1.00	2	0			39	
1.00	3	44			37	

DPM1

50 BxG

48 floor under irradiator use to S.t

50 floor by door

212 Karmanos

Laboratory Initial/Closure Audit Report

Authorized User Health Physics		Lab Location 329 Scott Hall		<input checked="" type="checkbox"/> Closeout <input type="checkbox"/> Initial	
Surveyor Name(s) R. Boyd		Lab Phone:		Date of Survey 8/11/16	
				Isotopes: CS-137	

Initial Inspection <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%; text-align: center;">-</td><td style="width: 5%; text-align: center;">+</td><td style="width: 90%;"></td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>1 Warning placard posted</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>2 RaM sticker is on placard</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>3 NRC 3 form posted</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>4 RaM storage locations posted</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>5 Hood labeled and certified</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>6 Record keeping book is present</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>7 Dosimetry needs have been discussed</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>8 Waste supply needs have been discussed</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>9 Survey equipment is functional and cal'd</td></tr> </table>	-	+				1 Warning placard posted			2 RaM sticker is on placard			3 NRC 3 form posted			4 RaM storage locations posted			5 Hood labeled and certified			6 Record keeping book is present			7 Dosimetry needs have been discussed			8 Waste supply needs have been discussed			9 Survey equipment is functional and cal'd	Closure Inspection <table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 5%; text-align: center;">-</td><td style="width: 5%; text-align: center;">+</td><td style="width: 90%;"></td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">X</td><td>1 All RaM has been removed from the lab</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">X</td><td>2 All Waste has been removed from the lab</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">X</td><td>3 All radioactive warning positngs have been removed</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>4 Survey was not necessary</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">X</td><td>5 Survey was completed (see below)</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;">X</td><td>6 Area is free from contamination</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>7</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>8</td></tr> <tr><td style="text-align: center;"> </td><td style="text-align: center;"> </td><td>9</td></tr> </table>	-	+			X	1 All RaM has been removed from the lab		X	2 All Waste has been removed from the lab		X	3 All radioactive warning positngs have been removed			4 Survey was not necessary		X	5 Survey was completed (see below)		X	6 Area is free from contamination			7			8			9
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Meter #1 Type:	Serial:	Cal Date:	Meter #2 Type:	Serial:	Cal Date:

Comments:

- Irradiator has been decommissioned by J.L. Shepherd

- Two wipes were taken on the floor, 1 where the instrument use to sit, 2 by the door.

Survey for Closureout <hr/> Nuclides used and Survey Results (DPM / 100 sqcm) <hr/> Wipes Nuclides: CS-137 <hr/> Bkg: 49 High: 66 Contamination? None <hr/> Meter Nuclides: <hr/> Bkg: High: Contamination? <hr/>	<div style="display: flex; justify-content: space-around; align-items: center;"> <div style="border: 1px solid black; padding: 10px; margin: 10px;"> 2 </div> <div style="border: 1px solid black; padding: 10px; margin: 10px;"> 1 </div> </div> <p style="text-align: right; margin-top: 20px;">Spot where irradiator sat</p>
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Survey instrument used: Mamf / MN / SN (& probe MN / SN)
Packard 2900 429277

Contact Name:	Contact Signature:	Date:	Surveyor Initials:

Protocol# 1 - wipe tests.lsa

User: Svoboda

Contamination Survey

Assay Definition-

Assay Description:

Assay Type: Direct DPM
 Report Name: Report1
 Output Data Path: C:\Packard\Tricarb\Results\Svoboda\wipe tests
 Raw Results Path: C:\Packard\Tricarb\Results\Svoboda\wipe tests\20160811_0943.results
 RTF File Name: C:\Packard\Tricarb\Results\Svoboda\wipe tests\Report1.rtf
 Comma-Delimited File Name: C:\Packard\Tricarb\Results\Svoboda\wipe tests\WENDY.csv
 Assay File Name: C:\Packard\TriCarb\Assays\wipe tests.lsa

Count Conditions-

Nuclide: Direct DPM 3H-UG
 Quench Indicator: tSIE/AEC
 External Std Terminator (sec): 0.5 2s
 Pre-Count Delay (min): 0.00
 Quench Set:
 Low Energy: 3H-UG
 Count Time (min): 1.00
 Count Mode: Normal
 Assay Count Cycles: 1
 #Vials/Sample: 1
 Normalization Std DPM: 133300
 Repeat Sample Count: 1
 Calculate * Reference: Off

Background Subtract: Off
 Low CPM Threshold: Off
 ? Sigma * Terminator: Off

Regions	LL	UL
A	0.0	2000.0

Count Corrections-

Static Controller: On
 Colored Samples: n/a
 Coincidence Time (nsec): 18
 Luminescence Correction: On
 Heterogeneity Monitor: n/a
 Delay Before Burst (nsec): 75

Half Life-

Half Life Correction: Off

Regions	Half Life	Units	Reference Date	Reference Time
A				

329 Scott Hall

Cycle 1 Results

Count	Time	S#	LUM	MESSAGES	CPMA	Custom1	DPM1
1.00	1	6			35		49 BKG
1.00	2	26			33		50 Floor - under irradiator use to S. +
1.00	3	43			46		66 Floor by door

Forster, Sara

From: M Srinivasan <msriniva@wayne.edu>
Sent: Monday, November 14, 2016 1:02 PM
To: Forster, Sara
Subject: [External_Sender] Irradiator license closure application
Attachments: WayneStateULicense14closure.pdf

Dear Ms. Forster,

Please find in attached file, the request to close our license (21-00741-14) due to removal of irradiators.

Let me know if the reviewer needs any more information.

Thank you.

Sincerely,
Maha

Maha Srinivasan, MS
Health Physicist & Radiation Safety Officer
Wayne State University
5425 Woodward, Suite 300
Detroit, MI 48202
Phone: 313-577-0019
www.oehs.wayne.edu

From: Forster, Sara <Sara.Forster@nrc.gov>
Sent: Monday, November 14, 2016 11:48 AM
To: M Srinivasan
Subject: RE: Irradiator license closure information

Dear Ms. Srinivasan... I am in the office through Tuesday 11/22 so you may send the request to me (as a pdf file attached to an email message) anytime between now and then.

Sincerely,

Sara A. Forster, Health Physicist Licensing Reviewer
U.S. Nuclear Regulatory Commission - Region III
Division of Nuclear Materials Safety
2443 Warrenville Rd. - Ste. 210

Lisle, IL 60532-4352
sara.forster@nrc.gov
Direct: (630) 829-9892
Facsimile: (630) 515-1078



From: M Srinivasan [mailto:msriniva@wayne.edu]
Sent: Monday, November 14, 2016 10:46 AM
To: Forster, Sara <Sara.Forster@nrc.gov>
Subject: [External_Sender] Irradiator license closure information

Dear Ms. Forster,

I am in the process of submitting a license closure (Form 314) to NRC due to removal of irradiators from our campus.

Please let me know to whom I can send the paperwork since I don't have the generic email information for the material licensing branch. Would that be okay if I send to you.

Thank you,
Maha

Maha Srinivasan, MS
Health Physicist & Radiation Safety Officer
Wayne State University
5425 Woodward, Suite 300
Detroit, MI 48202
Phone: 313-577-0019
www.oehs.wayne.edu