

**PERMIT FOR RADIOACTIVE MATERIAL
NEW MEXICO STATE UNIVERSITY**

Permit No.:

Application Date:

Expiration Date:

In reliance on statements made by the applicant, a permit is hereby issued authorizing the applicant to receive, acquire, own, possess, and transfer radioactive material below, and to use such material for the purpose(s) and at the place(s) designated. This permit is subject to all applicable rules, regulations, and orders of the appropriate governing agency and the Radiation Safety Officer.

1. Name:

Dept:

Phone:

2. Location:

**3. Radioactive
Material**

**License
Citation**

**4. Chemical and/or
Physical Form**

**5. Maximum amount of
radioactivity which may be
possessed at any one time**

Unless otherwise specified, the authorized place of use is stated in item 2 above. All rules, regulations and conditions contained in the New Mexico Environment Department Radiation Protection Regulations 20.3 NMAC, the New Mexico State University License and the New Mexico State University Radiation Safety Manual will apply.

Approval Date _____

By _____

Radiation Safety Officer

Date Authorized _____ RSO _____

NMSU Requirements for Sewage Disposal of Aqueous Waste Contaminated with Radioactivity

1. Permittee will monitor disposal activity to ensure all criteria are met.
2. Permittee will clearly mark one sink "Caution Radioactive Material" for sewage disposal and restrict facilities personnel from working on such sink until surveyed for contamination.
3. Permittee ensures that the monthly maximum and concentration limits for materials disposed of through the sanitary sewer system must not exceed the limits specified in Table 13.1 below.
4. The material must be readily soluble or readily dispersible biological material in water and not otherwise regulated as hazardous or toxic.
5. Permittee ensures accurate records of all sewerage disposal will be maintained and submitted to the RSO on or with the semiannual Radioactive Materials Inventory (Form RS-6).

Table 13.1 Permittee Limits for Sewage Disposal of Soluble Radioactivity in Aqueous Waste

Isotope	Maximum Monthly Sewer Disposal per Permittee ¹		Monthly Average Concentration Allowable in Sewer Water ² (: Ci/mL)
	mCi	: Ci	
³ H	0.8	800	1x10 ⁻²
¹⁴ C	0.15	150	3x10 ⁻⁴
³² P	0.033	33	9x10 ⁻⁵
³⁵ S	0.033	33	1x10 ⁻³
⁴⁵ Ca	0.033	33	2x10 ⁻⁴
¹²⁵ I	0.033	33	2x10 ⁻⁵
All Uranium	0.033	33	3x10 ⁻⁶

¹ Maximum allowable monthly quantity of drain disposed isotope per authorized Permit (based on 50 Permittees x 10%)

² Maximum allowable monthly concentration if diluted by the average monthly quantity of sewage (16.9 x 10⁶ gallons) released into the sewer by the licensee, specified in 20 NMAC 3.1, Subpart 4, Appendix B, Table III.

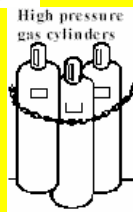
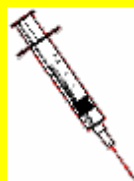
Sewage Disposal Log

Date	Isotope	Material Description	Total Activity (: Ci)	Disposer's Initials

CAUTION



RADIOACTIVE MATERIALS



**Hazards within lab:
Radioactive Materials,
Compressed Gases,
Biohazard, Sharps,
Acids and Bases,
Flammable Liquids**

KEEP DOOR CLOSED

Primary Contact:

Katrina Doolittle 646-5427

Second Contact:

Russ Johnson 646-1023

Building Monitor/Safety:

David Shearer 646-3053

Director:

Katrina Doolittle 646-5427

Fire/Police/Ambulance:

911

**Envir. Health & Safety
(or RSO, if needed):**

646-3327

FORM RS-3 (revised 9/05)



New Mexico State University
Environmental Health & Safety
MSC 3578
ph. 646-3327
fax 646-7898

MEMORANDUM

TO: Dr. Katrina Doolittle
Environmental Health & Safety

FROM: Environmental Health & Safety

DATE: September 6, 2005

RE: Directions to complete the RS-4 Radioactive Materials Inventory Report

In order to keep our records as up to date as possible, please take a moment and review all the information on the attached "RS-4 Radioactive Inventory Materials Report". These forms contain the most recent information the EH&S has for your laboratory. Please note any changes directly on the forms and return with your signature and date to the EH&S on or before 10/06/2005.

To facilitate your review of the attached forms, we have identified the major concerns for each section:

Section 1. PERMITTEE INFORMATION:

Are the names and phone numbers listed here current?

Section 2. NUCLIDE INVENTORY QUANTITIES

This section shows each individual radionuclide we show that you have on hand. Is this accurate? Cross out the radionuclides you no longer have on hand and return the completed usage log (RS-7) as the nuclide has been expended.

Section 3. LABORATORY PERSONNEL:

Is this an accurate listing of the personnel currently working with radioactive material in your lab?

Section 4. AUTHORIZED RADIOACTIVE MATERIAL LAB LOCATIONS:

Is this a comprehensive and accurate listing of all the locations where your sources of radiation are used or stored?

Section 5. SURVEY METERS:

Is this the survey meter that is currently in use?

Section 6. AUTHORIZED SEWERAGE DISPOSAL:

Complete only if you are authorized to dispose liquids via the sanitary sewer system.

Your prompt attention to this authorization review is greatly appreciated. If our office can provide any assistance during your inventory, please call us at 646-3327.

This inventory is Correct / Not Correct (circle one). If inventory is not correct, you must include supporting documentation with this inventory and return to the Environmental Health and Safety Department.

Signature: _____

Date: _____

RS-4 RADIOACTIVE MATERIAL INVENTORY REPORT

SECTION 1: PERMITTEE INFORMATION

Permittee : Doolittle, Katrina	Alternate: Mr. Russell Johnson	Inventory Date: 09/06/2005
Department: Environmental Health & Safety	Phone: (505)646-1023	Permit Number: 00000
Office Phone: (505)646-3327	E-Mail: rujohnso@nmsu.edu	Permit Expires: 09/30/2008
Lab Phone: (505)646-5036		Page Number: 1
Fax: (505)646-7898		
E-Mail: kadoolit@nmsu.edu		

SECTION 2 : NUCLIDE INVENTORY & QUANTITIES

<u>Nuclide</u>	<u>Compound</u>	<u>Possession Limit</u>	<u>Per Order Limit</u>	<u>Unit</u>
Ba-133	Sealed Source	0.02200	0.00000	
H-3	standards	0.10000	0.00000	
C-14	standards	0.10000	0.00000	

Isotope : Ba-133 GL 00000

<u>Ship Code</u>	<u>Date</u>	<u>Transaction Code</u>	<u>Activity</u>	<u>Unit</u>	<u>Compound</u>	<u>Non-Decayed Activity</u>	<u>Decayed Activity</u>	<u>CK if Correct</u>
050823000	12/14/2004	SHP	0.02200	mCi	SEALED SOURCE	0.02200	0.02051	_____

On Hand Amount : 0.02051 mCi

Possession Limit : 0.02200 mCi

Available to Purchase : 0.00149 mCi

I agree with the balances shown for this isotope. _____ initial

Isotope : C-14 A 00000

<u>Ship Code</u>	<u>Date</u>	<u>Transaction Code</u>	<u>Activity</u>	<u>Unit</u>	<u>Compound</u>	<u>Non-Decayed Activity</u>	<u>Decayed Activity</u>	<u>CK if Correct</u>
050829000	12/13/2004		0.00010	mCi	standards	0.00010	0.00010	_____
050829002	12/13/2004		0.00010	mCi	standards	0.00010	0.00010	_____
050829003	12/13/2004		0.00010	mCi	standards	0.00010	0.00010	_____

On Hand Amount : 0.00030 mCi

Possession Limit : 0.10000 mCi

Available to Purchase : 0.09970 mCi

I agree with the balances shown for this isotope. _____ initial

Isotope : H-3 P 00000

<u>Ship Code</u>	<u>Date</u>	<u>Transaction Code</u>	<u>Activity</u>	<u>Unit</u>	<u>Compound</u>	<u>Non-Decayed Activity</u>	<u>Decayed Activity</u>	<u>CK if Correct</u>
050829001	12/13/2004		0.00019	mCi	standards	0.00019	0.00018	_____
050829004	12/13/2004		0.00002	mCi	standards	0.00002	0.00002	_____
050829005	12/13/2004		0.00002	mCi	standards	0.00002	0.00002	_____

On Hand Amount : 0.00022 mCi

Possession Limit : 0.10000 mCi

Available to Purchase : 0.09978 mCi

I agree with the balances shown for this isotope. _____ initial

SECTION 3 : LABORATORY PERSONNEL

<u>Employee Name</u>	<u>Type</u>	<u>Dosimetry</u>	<u>Extremity</u>	<u>Whole</u>	<u>None</u>	<u>Training History</u>
Doolittle Katrina	PH		03/12/2001	RAD1		Radiation Safety I
Ferguson Erin	GDS		09/02/2004	RAD1		Radiation Safety I
Johnson Russell	SPC		02/20/2001	RAD2		Radiation Safety II

RS-4 RADIOACTIVE MATERIAL INVENTORY REPORT

SECTION 3 : LABORATORY PERSONNEL

<u>Employee Name</u>		<u>Type</u>	<u>Dosimetry</u>		<u>Training History</u>	
			<u>Extremity</u>	<u>Whole</u>	<u>None</u>	
Kazmarek	Drew	STF		01/22/2001	RAD2	Radiation Safety II
Lambeth	Justin	UGR		07/02/2002	RAD2	Radiation Safety II
Shearer	David	STF		01/22/2001	RAD2	Radiation Safety II
Terebenetz	Susan	STF		01/22/2001	RAD2	Radiation Safety II

GDS=Grad Student
SPC=Specialist

UNS=Unspecified
PH= Permit Holder

UGR=Undergraduate
FAC =Faculty

TEC=Technician
STF=Staff

SECTION 4 : AUTHORIZED RADIOACTIVE MATERIAL LAB LOCATIONS

<u>Building</u>	<u>Room/Lab</u>	<u>Phone</u>	<u>Primary</u>	<u>Type</u>
Environmental Health & Safety	ARC109			
Environmental Health & Safety	HWS			

SECTION 5 : SURVEY METERS

<u>Manufacturer</u>	<u>Model</u>	<u>Serial #</u>	<u>Display</u>	<u>Calibration Expires</u>
Ludlum	3	32657	mR/hr	11/24/06
Bicron	Micro Rem	B853M	microrem	12/18/05
Ludlum	9	208699	mR/hr	06/30/06
Ludlum	2221	127243	cpm	06/21/06

SECTION 6 : AUTHORIZED SEWAGE DISPOSAL

Sewage disposal during this inventory period (check) yes no

If yes, indicate isotope _____ and total activity disposed of in mCi _____.

New Mexico State University
Environmental Health & Safety

RADIOACTIVE MATERIAL WIPE TEST & USAGE LOG SHEET

Authorized User:	Tracking/Inventory # :
Lot Number:	P.O. Number:
Receipt Date:	Radionuclide:
Lab Contact:	Compound:
Contact Phone:	Number of Containers:
Vendor:	Activity/Container (mCi):

Package Receipt Survey Results

Wipe Test Instrument:	Make:	Model:	Serial #:
Package Wipe Test:		dpm/100cm ²	Container Wipe Test: dpm
DOT Labeling:			
Survey Instrument:	Make:	Model:	Serial #:
Package Surface Reading:		mR/hr	Comments:

Container Disposal Record/Usage Record

Used By	Date	Activity Removed (mCi)	Dry Decay Storage	Dry Non Decay	Aqueous Liquid	LSC EQ	LSC Vials	Other (explain)

When isotope is expended, return sheet to EH&S at MS 3578, attn: RSO.

Signature _____ Date/Time: _____

CONTAMINATION MONITORING REPORT

Date:	Time:	Location:		
Surveyor:		Reviewed by:		
Purpose of Survey:				
Instruments Used				
Model No:	Serial No:	Calibration Date	Efficiency	Background Reading
1.				
2.				
Item or Location	Dose Rate mR/hr	Contamination CPM or DPM		Swipe Result in disintegrations per minute
		Alpha	Beta/Gamma	
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
Sketch Item or Map Area:				

SHIPPING LIMITED QUANTITY OF RADIOACTIVE MATERIAL

_____ (Requestor's name) To: _____ (Receiver's name)
 _____ (Department, MSC) _____ (address)

New Mexico State University, Box 30001

Las Cruces, New Mexico 88003

NMSU License # AB-151

Receiver's RAM License # _____

Permittee Phone # _____

Date Shipped: _____

NMSU RSO: Katrina Doolittle

Receiving RSO: _____

RSO phone #: 505-646-3327

Receiving phone#: _____

RSO fax #: 505-646-7898

Receiving fax#: _____

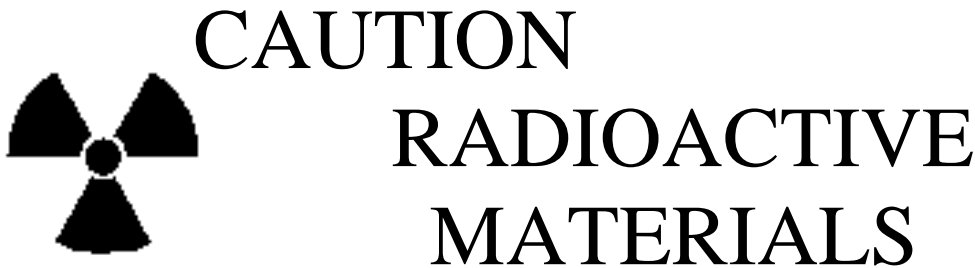
RSO email: kadoolit@nmsu.edu

Receiving email: _____

(Emergency Contact: INFOTRAK 1-800-535-5053)

Material being shipped:	Isotope(s):	Quantity:
The Shipper listed above certifies that the agent receiving this shipment has a current Radioactive Materials License to receive these materials and a copy of their license will be kept on file at NMSU for three years from this date.		

TO BE PLACED IN or ON PACKAGE



CHECK ONLY ONE

- "This package conforms to the conditions and limitations and specified in 49 CFR 173.421 for RADIOACTIVE MATERIALS, EXCEPTED PACKAGE-LIMITED QUANTITY OF MATERIAL, UN2910"
- "This package conforms tot he conditions and limitations specified in 49 CFR 173.424 for RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-INSTRUMENTS OR ARTICLES, UN2911"
- "This package conforms tot he conditions and limitations specified in 49CFR 173.426 for RADIOACTIVE MATERIAL, EXCEPTED PACKAGE ARTICLES MANUFACTURED FROM NATURAL or DEPLETED URANIUM, or NATURAL THORIUM, UN2909"
- "This package conforms to the conditions and limitations specified in 49 CFR 173.428 for RADIOACTIVE MATERIAL, EXCEPTED PACKAGE-EMPTY PACKAGING, UN2908"

SHIPPING OTHER THAN LIMITED QUANTITY OF RADIOACTIVE MATERIAL

_____ (Requestor's name) To: _____ (Receiver's name)
 _____ (Department, MSC) _____ (address)

New Mexico State University, Box 30001

Las Cruces, New Mexico 88003

NMSU License # AB-151

Receiver's RAM License # _____

Permittee Phone # _____

Date Shipped: _____

NMSU RSO: Katrina Doolittle

Receiving RSO: _____

RSO phone #: 505-646-3327

Receiving phone#: _____

RSO fax #: 505-646-7898

Receiving fax#: _____

RSO email: kadoolit@nmsu.edu

Receiving email: _____

(Emergency Contact: INFOTRAK 1-800-535-5053)

The Shipper certifies that the materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Dept. of Transportation.

TO BE PLACED IN or ON PACKAGE



**CAUTION
 RADIOACTIVE MATERIALS**

AS APPROPRIATE, COMPLETE ONLY ONE BOX BELOW PER CONTAINER

Radioactive Material (RAM)

Describe package contents	Isotope(s): Activities: _____ mCi _____ Mbq	Placard Required (check) _____ (White I) _____ (Yellow II) _____ (Yellow III)	Transport Index if applicable
---------------------------	--	--	-------------------------------

Proper Shipping Name: Radioactive Material, Type A package, UN 2915

Gauge/Sealed Source

Describe package contents: (include Serial Number)	Isotope(s): Activities: _____ mCi _____ Mbq	Placard Required (check) _____ (White I) _____ (Yellow II) _____ (Yellow III)	Transport Index if applicable
--	--	--	-------------------------------

ShipName: Radioactive Material, Type A package, Special Form, Non-fissile/fissile excepted UN 3332 RQ

SURVEY RECORD FOR UNCONDITIONAL RELEASE

Permittee:	Isotopes Permitted				
Name:	Max. Quantity (mCi)				
Date:	Surveyor:				

AREA OR DEVICE

Building:	Room/Area:
Equipment Description:	

SURVEY METER RESULTS

Instrument:	Calibration Date:	Background:
Type	Measurement and Unit	Comments:

SWIPE TEST RESULTS

Instrument:	Calibration Date:	Avg. background:
Location	Results	Comments:
Map Attached: Y N	Swipe Report Attached: Y N	

According to the results indicated above, these areas are decommissioned and released for unrestricted use.

Radiation Safety Officer Signature

Date

NMSU RADIATION MACHINE SURVEY
MEDICAL / DENTAL EQUIPMENT

Licensee's name _____ Dept. _____

Surveyor's name _____ Date _____

EH&S surveys are conducted to meet the requirements of NMED 20.3.8.803 B (1) which requires surveys be accomplished at intervals no more than 12 months after initial equipment installation. *Note: Administrative only. Does not replace technical survey or calibration by manufacturer, licensed vendor, or NMED personnel.*

Section I: Description

Equipment type _____ (use NMED descriptions)

_____ medical _____ dental

_____ Diagnostic/Therapeutic Use (complete Sections I and II)

_____ Training Only/No Human Exposure (complete Sections I and III)

Manufacturer / Model _____

Physical Location _____

Section II: Survey for Diagnostic or Therapeutic Units

Criteria References:

- 1) 20 NMED 3.1, Subpart 6 "X-Rays in the Healing Arts"
- 2) 20 NMED 3.4, Subparts 405-412 "Standards for Protection Against Radiation"
- 3) 3) 20 NMED 3.20 Subparts 200-300 "Radiology Technology Certification"

Section 20.3.6 Equipment Requirements

602A Administrative Requirements

Warning label on console present "Warning: X-ray may be dangerous unless operator or exposure instructions are observed" _____ yes _____ no _____ NA

Written safety procedures are available and training provided before use?
_____ yes _____ no

To include: Technique factors per exam _____ yes _____ no _____ NA (automatic)

Film type used _____ yes _____ no _____ NA (digital record)

Focal distance per exam _____ yes _____ no _____ NA

Patient gonad shielding per exam _____ yes _____ no _____ NA

General Information (per 20.3.602A and 20.3.20.300)

1. The primary operator is:
 certified RT limited radiologic practitioner other
2. Who is in the room during routine exposures?

3. Are ancillary staff used to hold a patient? yes no NA
 Are mechanical devices used for holding? yes no NA
 Does ancillary staff use dosimetry? yes no NA
 Are patient holders shielded ? yes no NA
4. Are all exposures authorized by a physician (by physician's request)?
 yes no NA
5. Do you have a pregnancy policy regarding exposures? yes no
 Describe: _____
6. Who in the department wears dosimetry? _____
 How often are dosimeters changed out/rotated? _____
 Exposure reports are maintained by EH&S and in the department.
 yes no NA
7. Calibration, maintenance, modifications on the machine by the certified vendor are maintained in the department yes no NA
8. X-ray exam log is maintained in the department.
 yes no NA
 average number of exams per month _____
9. Type of special procedures facility is capable of _____ or none

Note: 20 NMAC 3.1.603C-G and 604 A-I are reserved for NMED technical surveys.

Section III: Survey for Training Units

1. The primary operator is:

_____ certified RT _____ limited radiologic practitioner _____ other

2. Who is in the room during routine exposures?

3. Are all exposures authorized by a physician (by physician's request)?

_____ yes _____ no _____ NA

4. Who in the department wears dosimetry? _____

How often are dosimeters changed out/rotated? _____

Exposure reports are maintained by EH&S and in the department.

_____ yes _____ no _____ NA

5. Calibration, maintenance, modifications on the machine by the certified vendor are maintained in the department _____ yes _____ no _____ NA

6. (602A Administrative Requirements)

Warning label on console present "Warning: X-ray may be dangerous unless operator or exposure instructions are observed"

_____ yes _____ no _____ NA

Written safety procedures are available and training provided before use?

_____ yes _____ no To include:

Technique factors per exam _____ yes _____ no _____ NA (automatic)

Film type used _____ yes _____ no _____ NA (digital)

Focal distance per exam _____ yes _____ no _____ NA

Patient gonad shielding per exam _____ yes _____ no _____ NA

NMSU RADIATION MACHINE SURVEY
ANALYTICAL EQUIPMENT

Licensee's name _____ Dept. _____

Surveyor's name _____ Date _____

EH&S surveys are conducted to meet the requirements of NMED 20.3.8.803 B (1) which requires surveys be accomplished at intervals no more than 12 months after initial equipment installation.

Section I: Description

Equipment type _____
(use NMED RCB machine descriptions)

Manufacturer / Model _____

Physical Location _____

Section II: Survey

Criteria References:

- 1) 20 NMED 3.1, Subpart 8 "Radiation Safety Requirements for Analytical X-Ray Equipment
- 2) 20 NMED 3.4, Subparts 405-412 "Standards for Protection Against Radiation"

Section 20.3.8.802 Equipment Requirements

802 A Open beam auto shut-off safety device is present _____ yes _____ no
If no, explain _____

802 B, C, D, E, F Labeled warning devices are present _____ yes _____ no
X-ray On/Off _____ yes _____ no _____ NA
Shutter status as Open/Closed _____ yes _____ no _____ NA
Label (High Intensity Beam) on housing _____ yes _____ no _____ NA
Label (Equipment Produces Rad When Energized) _____ yes _____ no _____ NA
Label (Radioactive Material) _____ yes _____ no _____ NA
"X-Ray On" Light near switch _____ yes _____ no _____ NA
"X-Ray On" Light near shutter (rad material only) _____ yes _____ no _____ NA

802 G At any rating, leakage from tube housing is < 2.5 mRrem/hr at 5 cm from closed shutters.
_____ yes _____ no
(measure reading _____ instrument type _____)

802 H At any rating, leakage from external protective cabinet is < 0.25 mRrem/hr at 5 cm.
_____ yes _____ no _____ NA
(measure reading _____ instrument type _____)

Section 20.3.8.803 Area Requirements

803 A Shielding is present, equipment arranged, and access controls present in the area to ensure doses do not exceed occupational dose limits (see NMAC 20.3.4.405-412).

_____ yes _____ no

803 B Surveys were done to equipment following change in initial arrangement, number or type of local components, maintenance, unusual dose rates detected, abnormalities.

_____ yes _____ no _____ NA

803 C Area or room posted "Caution, X-Ray Equipment" _____ yes _____ no

Section 20.3.8.804 Operating Requirements

804 A Operating Procedures available to users. _____ yes _____ no

804 B Is one able to bypass a system safety device? _____ yes _____ no

If yes, explain. _____

Section 20.3.8.805 Personnel Requirements

805 A Personnel receive safety training prior to operating equipment

_____ yes _____ no

If no, explain _____

Includes equipment radiation hazards _____

safety equipment and devices _____

normal operating procedures _____

emergency operations (ie, injuries) or contacts _____

805 B Finger/wrist dosimeters provided for users if open beam and no safety devices

_____ yes _____ no _____ NA

If no or NA, explain _____

Based on the survey, the licensee is in compliance with NMED regulations and NMSU radiation safety requirements. _____ yes _____ no

RSO Signature

Date

**RADIOACTIVE MATERIALS
Bill of Lading**

OWNER: _____ (print name)

New Mexico State University
PO Box 30001 MSC _____
Las Cruces, New Mexico 88003-8001

PHONE: (505) _____

EMERGENCY ASSISTANCE:
Nuclear Regulatory Commission emergency (301-816-5100)
INFOTRAC 24-hour number 1-800-535-5053
New Mexico State University RSO: 505-646-3327
Troxler, Inc. (for Troxler gauges):

INSTRUMENT MANUFACTURER, MODEL NUMBER:

SERIAL NUMBER: _____
NMSU NUMBER: _____

PROPER SHIPPING NAME:
Radioactive Material Type A Package Special Form
Non-fissile/Fissile Excepted UN 3332 RQ

RADIONUCLIDE (special form): _____

ACTIVITY: _____ (mCi) _____ (GBq)

CATEGORY OF LABEL APPLIED: _____

TRANSPORT INDEX: TI = _____

PACKAGE TYPE: Type A

DIMENSIONS: _____ (cm. or in.)

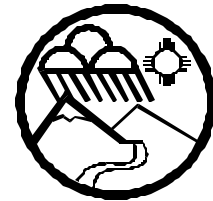
"Shipper certifies that the above named materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation."

_____ (RSO or Shipper's signature)



GARY E. JOHNSON
GOVERNOR

State of New Mexico
Environment Department
RADIATION CONTROL BUREAU
1190 St. Francis Dr., 87505
P.O. Box 26110, 87502-6110
Santa Fe, New Mexico
Telephone (505) 476-3236
Fax (505) 476-3232



PETER MAGGIORE
SECRETARY

RPS-13

OCCUPATIONAL EXPOSURE RECORD FOR A MONITORING PERIOD

See Accompanying Instructions

1. NAME (LAST, FIRST, M.I.)			2. IDENTIFICATION NUMBER		3. ID TYPE	
4. SEX ___ MALE ___ FEMALE		5. DATE OF BIRTH		6. MONITORING PERIOD		
7. LICENSEE NAME		8. LICENSE NUMBER(S)		9A. ___ ROUTINE ___ ESTIMATE		9B. ___ ROUTINE ___ PSE
INTAKES				DOSES (in Rem)		
10A. RADIO- NUCLIDE	10B. CLASS	10C. MODE	10D. INTAKE in μ Ci	Deep Dose Equivalent (DDE)		11.
				Eye Dose Equivalent to the Lens of the Eye (LDE)		12.
				Shallow Dose Equivalent Whole Body (SDE, WB)		13.
				Shallow Dose Equivalent Max. Extremity (SDE, ME)		14.
				Committed Effective Dose Equivalent (CEDE)		15.
				Committed Dose Equivalent Maximally Exposed Organ (CED)		16.
				Total Effective Dose Equivalent (TEDE) (Sum Blocks 11 and 15)		17.
19. COMMENTS				Total Organ Dose Equivalent, Max. Organ (Sum Blocks 11 and 16)		18.
20. LICENSEE SIGNATURE				21. DATE PREPARED		

INSTRUCTIONS FOR PREPARATION OF FORM RPS-13

(All doses should be stated in Rems)

1. Type or print the full name of the monitored individual in the order of last name (include "Jr.", "Sr.", "III", etc.), first name, and middle initial.

2. Enter the individual's identification number, including punctuation. This number should be the 9-digit social security number if at all possible. If the individual has no social security number, enter the number from another official identification such as a passport or work permit.

3. Enter the code for the type of identification used as shown below:

<u>CODE</u>	<u>ID TYPE</u>
SSN	U. S. Social Security Number
PPN	Passport Number
CSI	Canadian Social Insurance Number
WPN	Work Permit Number
IND	INDEX Identification Number
OTH	Other

4. Check the box that denotes the sex of the individual being monitored.

5. Enter the date of birth of the individual being monitored in the format MM/DD/YYYY.

6. Enter the monitoring period for which this report is filed. The format should be MM/DD/YYYY - MM/DD/YYYY.

7. Enter the name of the licensee.

8. Enter the license number or numbers.

9A. Place an "X" in Record or Estimate. Choose "Record" if the dose data listed represent a final determination of the dose received to the best of the licensee's knowledge. Choose "Estimate" only if the listed dose data are preliminary and will be superseded by a final determination resulting in a subsequent report. An example of such an instance would be dose data based on self-reading dosimeter results and the licensee intends to assign the record dose on the basis of TLD results that are not yet available.

9B. Place an "X" in either Routine or PSE. Choose "Routine" if the data represent the results of monitoring for routine exposures. Choose "PSE" if the listed dose data represents the results of monitoring of planned special exposures received during the monitoring period. If more than one PSE was received in a single year, the licensee should sum them and report the total of all PSEs.

RPS-13, 2/2002, SAM

10A. Enter the symbol for each radionuclide that resulted in an internal exposure recorded for the individual, using the format "Xx-###x", for instance Cs-137 or Tc-99m.

10B. Enter the lung clearance class as listed in Appendix B to 10 CFR Part 20.1001-2401 (D, W, Y, V, or O for other) for all intakes by inhalation.

10C. Enter the mode of intake. For inhalation, enter "H", for absorption through the skin, enter "B", for oral ingestions, enter "G", for injection, enter "J".

10D. Enter the intake of each radionuclide in μCi .

11. Enter the deep dose equivalent (DDE) to the whole body.

12. Enter the eye dose Equivalent (LDE) recorded for the lens of the eye.

13. Enter the shallow dose equivalent recorded for the skin of the whole body (SDE, WB).

14. Enter the shallow dose equivalent recorded for the skin of the extremity receiving the maximum dose (SDE, ME).

15. Enter the committed effective dose equivalent (CEDE) or "NR" for "Not Required" or "NC" for "Not Calculated".

16. Enter the committed dose equivalent (CDE) recorded for the maximally exposed organ or "NR" for "Not Required" or "NC" for "Not Calculated".

17. Enter the total effective dose equivalent (TEDE). The TEDE is the sum of Items 11 and 15.

18. Enter the total organ dose equivalent (TODE) for the maximally exposed organ. The TODE is the Sum of Items 11 and 16.

19. **COMMENTS:**

In the space provided, enter additional information that might be needed to determine compliance with limits. An example might be to enter the note that the SED, ME was the result of exposure from a discrete hot particle. Another possibility would be to indicate that an overexposed report has been sent to NRC in reference to the exposure report.

20. Signature of the person designated to represent the licensee.

21. Enter the date the form was prepared.

MEMORANDUM

November 18, 2005

To: All Radioactive Material and X-Ray Equipment Permittees

From: Katrina Doolittle, Director and Radiation Safety Officer

Subject: 2005 Revised Radiation Safety Manual

The way in which radioactive materials are received and shipped at NMSU has changed. Environmental Health & Safety performs these functions to ensure compliance with DOT regulations. We also provide new services including inventory tracking, leak testing of sealed sources and x-ray surveys. These new procedures and a description of our radiation safety training program are described in the revised sections of the Radiation Safety Manual (RSM) attached. The RSM has been reviewed and accepted by members of the University Radiation Safety Committee, September 2005. The RSM is intended to provide guidance for Permittees and other users of radioactive materials and x-ray equipment as to the various regulations and requirements under which we operate.

Please review the letter from the Chair of the Radiation Safety Committee, and the revised sections to familiarize yourself with the new protocols and standards. You should have your staff attend Radiation Safety Training in the near future to ensure they understand the new procedures as well.

To economize, we are only providing the sections of the RSM that have changed. Please insert the revised sections into your 3-ring binder and remove the corresponding outdated material. Please keep the old sections that are not being replaced as that information is still pertinent.

The revised/new sections include:

- ' Memo from the Chair, Table of Contents and the body pages 1-48
- ' Appendix A - Forms & Reports
- ' Appendix B - Training Requirements
- ' Appendix G - Receiving & Shipping Radioactive Materials
- ' Insert 2005 BEIR Report into Appendix O
- ' *Appendix P - for Nuclear Gauge Permittees only*
- ' *Appendix Q - for X-ray Permittees only*

If you do not currently have a Radiation Safety Manual in your possession, please contact EH&S at 646-3327 and we will send you the complete manual in a 3-ring binder with purple cover.



State of New Mexico

NOTICE TO EMPLOYEES

STANDARDS FOR PROTECTION AGAINST RADIATION (20.3.4 NMAC) NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS: INSPECTIONS (20.3.10 NMAC)



Environment Department

YOUR EMPLOYER'S RESPONSIBILITY

Your employer is either licensed or registered to utilize sources of radiation in accordance with the New Mexico Radiation Protection Regulations (20.3 NMAC).

Your employer is required to:

- Apply the regulations to work involving sources of radiation.
- Post or make available to you a copy of the regulations, license, and operating procedures that apply to work you are engaged in, and explain their provisions to you; post Notices of Violation involving radiological working conditions and orders.

If a company violates the requirements, it can be fined or have its license modified, suspended or revoked.

YOUR RESPONSIBILITY AS A WORKER

You should familiarize yourself with those provisions of the regulations and the operating procedures that apply to the work you do. You should observe their provisions for your own protection and the protection of your co-workers. If you observe a violation, you should report it.

REPORTS ON YOUR RADIATION EXPOSURE HISTORY

If you work where personnel monitoring is required, your employer must:

- Give you a written report if you receive an exposure in excess of any limit as set forth in the regulations or in the license,
- Advise you of your dose annually, and
- Give you a written report of your radiation exposure upon termination of your employment.

INSPECTIONS

All licensed and registered activities are subject to inspection by representatives of the Environment Department. During inspections,

Department inspectors may confer privately with workers. A worker, or representative of workers, may request an inspection by sending a signed notice of the alleged violation of the Act, regulations, or license condition.

CONTACTING THE RADIATION CONTROL BUREAU

You can contact the Radiation Control Bureau of the New Mexico Environment Department at the address and phone number listed below:

RADIATION CONTROL BUREAU

1190 St. Francis, 87505
P.O. Box 26110, 87502-6110
Santa Fe, New Mexico
Telephone (505) 476-3236
Fax (505) 476-3232

REGULATIONS

The regulations are available on the internet at:

<http://nmenv.state.nm.us/nmrcb/home.html>

Then click on "REGULATIONS".

POSTING REQUIREMENT

Copies of this notice must be posted in a sufficient number of places to permit employees working in or frequenting any portion of a restricted area to observe a copy.

SAMPLE ORGANIZATION
RADIATION SAFETY OFFICER
2 SCIENCE ROAD
GLENWOOD, IL 60425

LANDAUER®

Landauer, Inc. 2 Science Road Glenwood, Illinois 60425-1586
Telephone: (708) 755-7000 Facsimile: (708) 755-7018
www.landauerinc.com



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RADIATION DOSIMETRY REPORT

ACCOUNT NO.	SERIES CODE	ANALYTICAL WORK ORDER	REPORT DATE	DOSIMETER RECEIVED	REPORT TIME IN WORK DAYS	PAGE NO.
103702	RAD	9920800151	06/11/99	06/07/99	4	1

PARTICIPANT NUMBER	NAME			DOSIMETER	USE	RADIATION QUALITY	DOSE EQUIVALENT (MREM) FOR PERIODS SHOWN BELOW			QUARTERLY ACCUMULATED DOSE EQUIVALENT (MREM)			YEAR TO DATE DOSE EQUIVALENT (MREM)			LIFETIME DOSE EQUIVALENT (MREM)			RECORDS FOR YEAR	INCEPTION DATE (MM/YY)
	ID NUMBER	BIRTH DATE	SEX				DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE	DEEP DDE	EYE LDE	SHALLOW SDE		
FOR MONITORING PERIOD:																				
0000H	CONTROL CONTROL CONTROL			J P U	CNTRL CNTRL CNTRL		M M M	M M M	M M M										5	07/97 07/97 07/97
00191	ADDISON, JOHN 136235111	08/31/1961	M	J P U	WHBODY RFINGR		90 60 30	90 60 30	90 60 30	90 60 30	90 60 30	100 70 30	100 70 30	100 70 30	200 170 30	200 170 30	200 170 30	1	07/97	
00192	JORGENSEN, MIKE 471740095	10/04/1968	M	P U	WHBODY RFINGR		M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	5	07/97 07/97	
00193	THOMAS, LEE 384846378	11/22/1964	M	P U	WHBODY RFINGR		ABSENT ABSENT					M M	M M	M M	M M	M M	M M	M M	5	07/97 07/97
00196	WALKER, JANE 587336640	06/09/1960	F	P U	WHBODY		3 3 3	3 3 3	3 3 3	12 11 11	12 11 11	12 11 11	22 21 21	22 21 21	22 21 21	22 21 21	22 21 21	5	11/97	
00197	EDWARD, CHRIS 486435774	02/14/1966	M	P U	WHBODY		M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	5	01/98	
00198	ZERR, ROBERT 982446591	07/15/1945	M	P U	WHBODY NOTE		40 CALCULATED	40 CALCULATED	40 CALCULATED	160 CALCULATED	160 CALCULATED	160 CALCULATED	200 CALCULATED	200 CALCULATED	200 CALCULATED	240 CALCULATED	240 CALCULATED	240 CALCULATED	5	07/98
00199	ADAMS, JANE 335148421	04/25/1951	F	P U	WHBODY		M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	5	07/98	
00200	MEYER, STEVE 416395847	03/21/1947	M	P U	COLLAR WAIST ASSIGN NOTE RFINGR	PL	105 M 4	105 M 105	105 M 105	6 CALCULATED	162 CALCULATED	165 CALCULATED	11 CALCULATED	327 CALCULATED	334 CALCULATED	51 CALCULATED	1247 CALCULATED	1284 CALCULATED	5	08/98 08/98
00202	HARRIS, KATHY 182235519	06/15/1972	F	P U	WHBODY RFINGR		M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	M M M	4	02/98 02/98

QUALITY CONTROL RELEASE: VS

20 - PR 6774 - RPT130 - N1

- 02013

M: MINIMAL REPORTING SERVICE OF 1 MREM
ELECTRONIC MEDIA TO FOLLOW THIS REPORT

Accredited by the National Institute of Standards and Technology through **NVLAP***