

Radiation Safety Officer
Alaska Regional Hospital
2801 DeBarr Rd.
Anchorage, AK 99504
Re: NRC license # 50-18244-01

11 Feb 2008

Ms. Janine Katanic, Ph.D.
Health Physicist
Div. of Nuclear Materials Safety
611 Ryan Plaza Dr., Suite 400
Arlington, TX 76011-8064

Attached are the various documents you requested.


I have not yet been able to extract the municipal fire code section or the JCAHO sections that specifically ban the use of locks on patient rooms but I am told by the Nursing administration that for fire code reasons you cannot have a lock on the outside of a patient door, and for JCAHO reasons you cannot have a lock that locks from the inside.

Unless you believe that we have to have durable or mechanical barriers to prevent people from doing something that they know they shouldn't, it would seem that the yellow tape with the radiation hazard logo on it, taped across the door at multiple levels, should suffice. No such tape was on the door when you entered because the room had been cleared. Room 549 is similarly taped shut when the activity in room 548 is such that measurements in Room 549 exceed permitted levels.

I hope this serves to convince you that we have an effective AND reasonable approach to keeping safe the staff and public from the risks associated with brachytherapy on the inpatient ward, our temporary deficiencies with the junior technologist notwithstanding.

As before, please let me know by e-mail or by phone messages if you need anything else. If the Nursing administrators can produce the codes regarding locking patient doors, I will forward them to you.

Cordially,


Bradley K. Cruz, MD

RECEIVED

FEB 12 2008

DNMS

**Alaska Regional Hospital
Anchorage, Alaska**

Nuclear Medicine Department
I-131 Therapy room release readings
double checks
pg.1

- Patient admit date 9-13-07 Dose 102.6 mCi I-131
- Discharge date 9-14-07
- Room release date 9-15-07 *******NO*******

Initial readings from JT. Double checked by ST, found a book, pillow and trash bag with above acceptable readings. Removed said material, rechecked and all below acceptable levels. Counseled JT in what was missed, and how ST found said items. Counseled JT on correct procedures to find contamination with survey meter, and how to decontaminate areas of contamination.

- Patient admit date 10-4-07 Dose 100.6 mCi I-131
- Discharge date 10-5-07
- Room release date 10-5-07 *******N/A*******

JT not involved with dosing or checking for room release.

- Patient admit date 10-15-07 Dose 98.1 mCi I-131
- Discharge date 10-16-07
- Room release date 10-17-07 *******NO*******

Initial readings by JT. Double checked by ST, found the mattress and sink above acceptable levels. Removed mattress to storage room, decontaminated sink, rechecked and all below acceptable levels. Counseled JT in what was missed, and how ST found said items. Counseled JT on correct procedures to find contamination with survey meter, and how to decontaminate areas of contamination.

- Patient admit date 10-24-07 Dose 154.9 mCi I-131
- Discharge date 10-25-07
- Room release date 10-30-07 *******OK*******

Initial readings by JT. Contaminated areas found by JT, mattress and sink. Double checked by ST and confirmed findings. Removed mattress and stored in hot storage room. Decontaminated sink with radiac-wash over a couple days. Rechecked and all areas below acceptable levels.

**Alaska Regional Hospital
Anchorage, Alaska**

Nuclear Medicine Department
I-131 Therapy room release readings

double checks (cont.)

pg. 2

- Patient admit date 11-1-07 Dose 102.3 mCi I-131
- Discharge date 11-2-07
- Room release date 11-2-07 *****OK*****

Initial readings by JT. All removable contamination was removed and all hot trash removed and stored in hot storage. Rechecked by ST and all areas below acceptable levels.

- Patient admit date 11-7-07 Dose 103.5 mCi I-131
- Discharge date 11-8-07
- Room release date 11-11-07 *****OK*****

Initial readings by JT. All removable contamination was removed and all hot trash removed and stored in hot storage. Rechecked by ST and all areas below acceptable levels.

- Patient admit date 12-18-07 Dose 103.7 mCi I-131
- Discharge date 12-19-07
- Room release date 12-20-07 *****OK*****

Initial reading by JT. All removable contamination was removed and all hot trash removed and stored in hot storage. Rechecked by ST and all areas below acceptable levels.

- Patient admit date 1-8-08 Dose 102.5 mCi I-131
- Discharge date 1-9-08
- Room release date 1-11-08 *****OK*****

Initial readings by JT. All removable contamination was removed and all hot trash removed and stored in hot storage. Rechecked by ST and all areas below acceptable levels.

- Patient admit date 1-14-08 Dose 104.2 mCi I-131
- Discharge date 1-15-08
- Room release date 1-23-08 *****OK*****

**Alaska Regional Hospital
Anchorage, Alaska**

**Nuclear Medicine Department
I-131 therapy room release readings
double checks (cont.)
*pg. 3***

Initial readings by JT. Contamination noted on mattress and sink front. Decontamination done on mattress and reduced readings below acceptable levels. Sink readings after decontamination only reduced to 3.0 mR/hr. Under advice from RSO took radiac wash and let it soak into sink counter top. Rechecked again and reading dropped to 2.0 mR/hr. Continued doing this over the next few days. By 1-23-08 in the AM, after a final cleaning with radiac wash, the reading on sink counter top was below acceptable levels to allow release for use.

- Patient admit date 1-24-08 Dose 105.0 mCi I-131
- Discharge date 1-25-08
- Room release date 1-28-08 *****N/A*****

JT not involved with dosing or checking for room release.

- Patient admit date 1-29-08 Dose 107.5 mCi I-131
- Discharge date 1-30-08
- Room release date 1-31-08 *****OK*****

Initial readings by JT. Contaminated areas found and all hot trash removed and stored in hot storage room. Double checked by ST and confirmed findings. All surveyed areas below acceptable levels.

JT – Staff nuclear medicine technologist
ST- Supervisor of nuclear medicine department

As of 2-4-08

(7) consecutive acceptable room release surveys performed by JT.

Supervisor Nuclear Medicine

Date

Radiation Safety Officer

Date

ST

ALASKA REGIONAL HOSPITAL INPATIENT I-131 THERAPY WRITTEN DIRECTIVE WORKHEET AND ROOM SURVEY

[2 pages]

Room # 548 Date Ordered: 9-12-07 Authorized User: [Signature]
 Dose Ordered: 100 mCi p.o. for: 9-13-07
date

Patients ID identified by:

Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:

Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:

Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:

Initials RB/RC Dose measured and administered 2 capsules 102.6 mCi Time of administration 11:45

Room Prep

Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair *No chair*

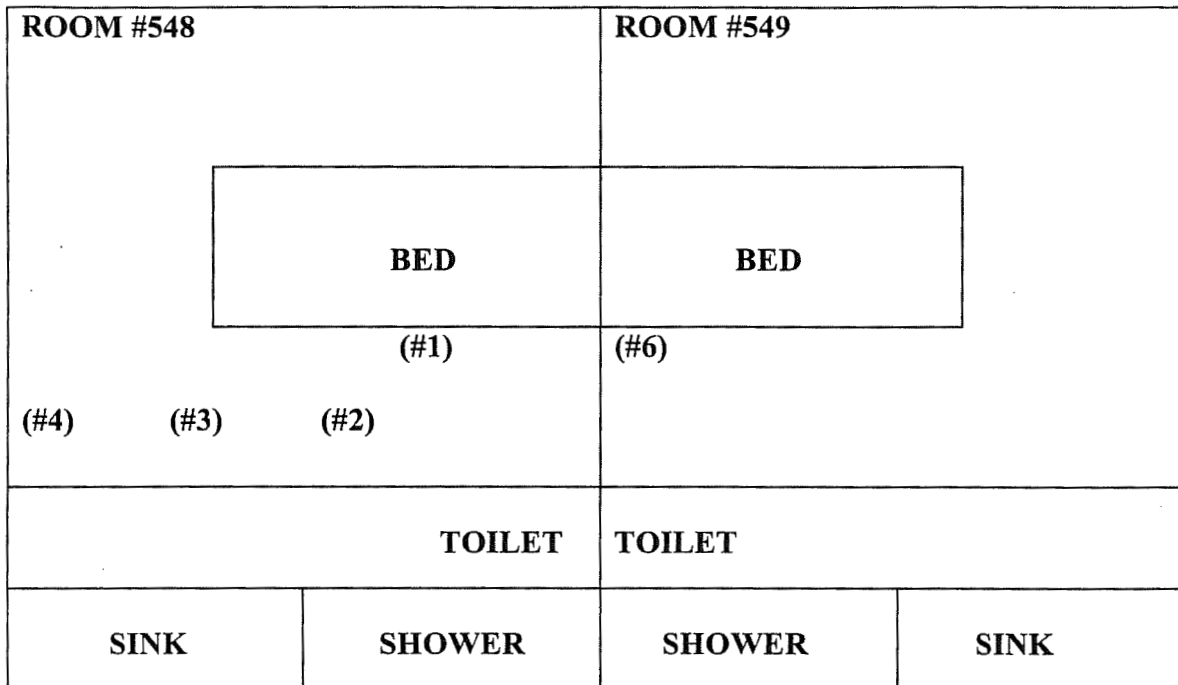
THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: [Signature] DATE: 9/13/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1145 9-13-2007	70 mR/hr	23 mR/hr	0.25 mR/hr	0.35 mR/hr	0.16 mR/hr	0.09 mR/hr
1155 9-14-2007	20 mR/hr	4.5 mR/hr	0.6 mR/hr	0.16 mR/hr	0.12 mR/hr	0.10

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
9/13/07	0.03 mR/hr	242996	1.3 mR/hr	PMB
9/14/07	0.03 mR/hr	"	1.3 mR/hr	PMB
9/15/07	0.04 mR/hr	242990	1.3 mR/hr	[Signature]




SURVEY BACKGROUND READING
 .03 mR/hr

WIPE BACKGROUND READING
 287 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	.06	41
Chair if present	—	—
Sink and counter	.08	46
Toilet	.2	34
Hall door	.03	10
Telephone	.05	20
Shower	.06	48
Table top	.07	16
TV controler	.06	42

Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: PMB Date: 9-14-07 Room released and ready for use: 9-15-07 1655


Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

ALASKA REGIONAL HOSPITAL
 NUCLEAR MEDICINE DEPARTMENT
 I-131 DOUBLE CHECKS
 CLEARING ROOM 548 POST THERAPY

Date of monitoring 9-15-07

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	.04	39	—	Room 2nd floor Room 7
Chair if present	—	—	—	
Sink and counter	1.3	224.6	54	
Toilet	1.3	89		
Hall door	.04	43		
Telephone	.04	101		
Shower	.04	140		
Table tp	.04	60		DMV back .3 mR/hr.
TV controller	.04	85		
				Trash removed
				Room DMV back
				(1) Back Trash .06 mR/hr.

Background reading/survey meter

.04 mR/hr

Background reading/well counter

259 DPM

Survey meter check reading

1.3 mR/hr

Date and time room released for use:

9/15/07 1655

Peter Sporkin, CHMT
 printed name

[Signature]
 signature

ST

ALASKA REGIONAL HOSPITAL INPATIENT I-131 THERAPY WRITTEN DIRECTIVE WORKSHEET AND ROOM SURVEY

[2 pages]

Room # 548 Date Ordered: 10/2/07 Authorized User: R (CHUNG)
 [REDACTED] Dose Ordered: 100 mCi p.o. for: 10/4/07
 date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RC Dose measured and administered 100.6 mCi Time of administration 1350

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair
 no chair

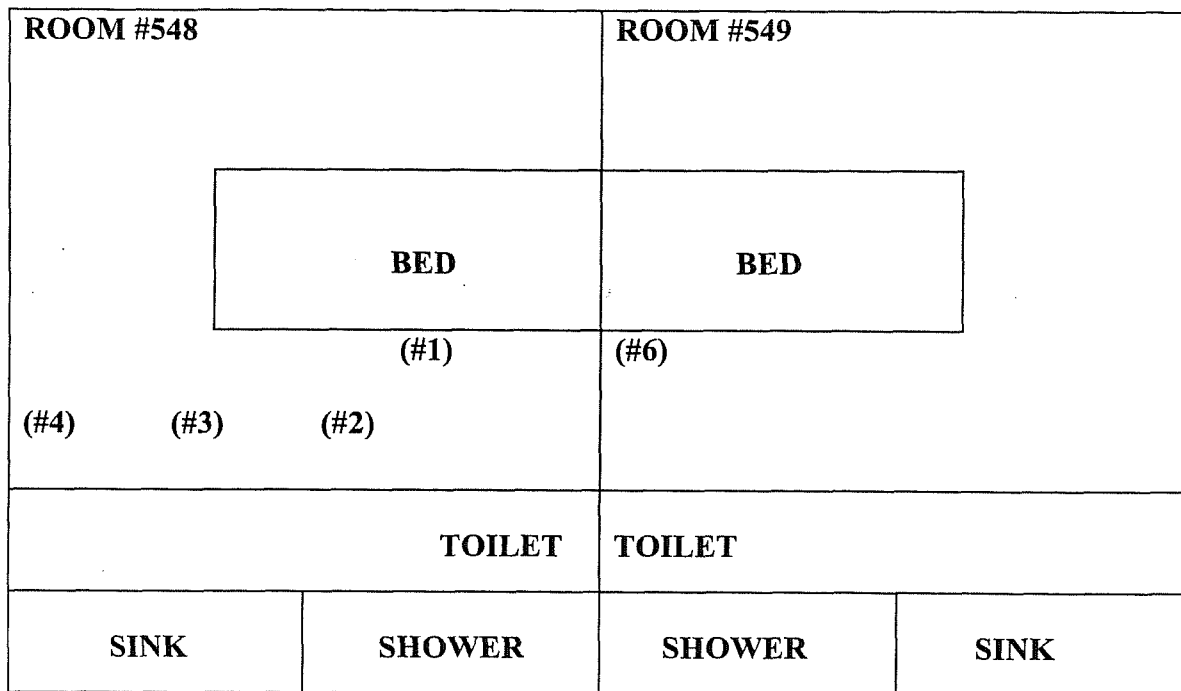
THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: R DATE: 10/4/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1400/10-4-07	99 mR/hr	2.0 mR/hr	2 mR/hr	0.4 mR/hr	0.3 mR/hr	0.23 mR/hr
1230 10-5-07	13.0	3.0	1.0	.15	.1	.1
1						

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
10/4/07	.04 mR/hr	# 242990	1.3 mR/hr	RCB
10/5/07	.04 mR/hr	# 242990	1.3 mR/hr	RCB
10/5/07	.04 mR/hr	# 242990	1.3 mR/hr	RCB



SURVEY BACKGROUND READING
.04 mR/hr

WIPE BACKGROUND READING
200 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	.06	12.0
Chair if present	N/A	N/A
Sink and counter	.06	14
Toilet	.15	15
Hall door	.04	10
Telephone	.04	9
Shower	.04	<846
Table top	.04	<846
TV controler	.04	17

Patient release criteria:

Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: [Signature]

Date: 10/5/07

Room released and ready for use: 1605 [Signature]

Action Levels: Surveys 0.5 mR/hr

Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

ST

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKSHEET AND ROOM SURVEY**

[2 pages]

Room # 548 Date Ordered: 10/11/07 Authorized User: Richard Chung M.D.
[REDACTED] Dose Ordered: 100 mCi p.o. for: 10/15/07
10 date
RC

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RB Dose measured and administered 98.1 mCi Time of administration 1315

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair
No chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

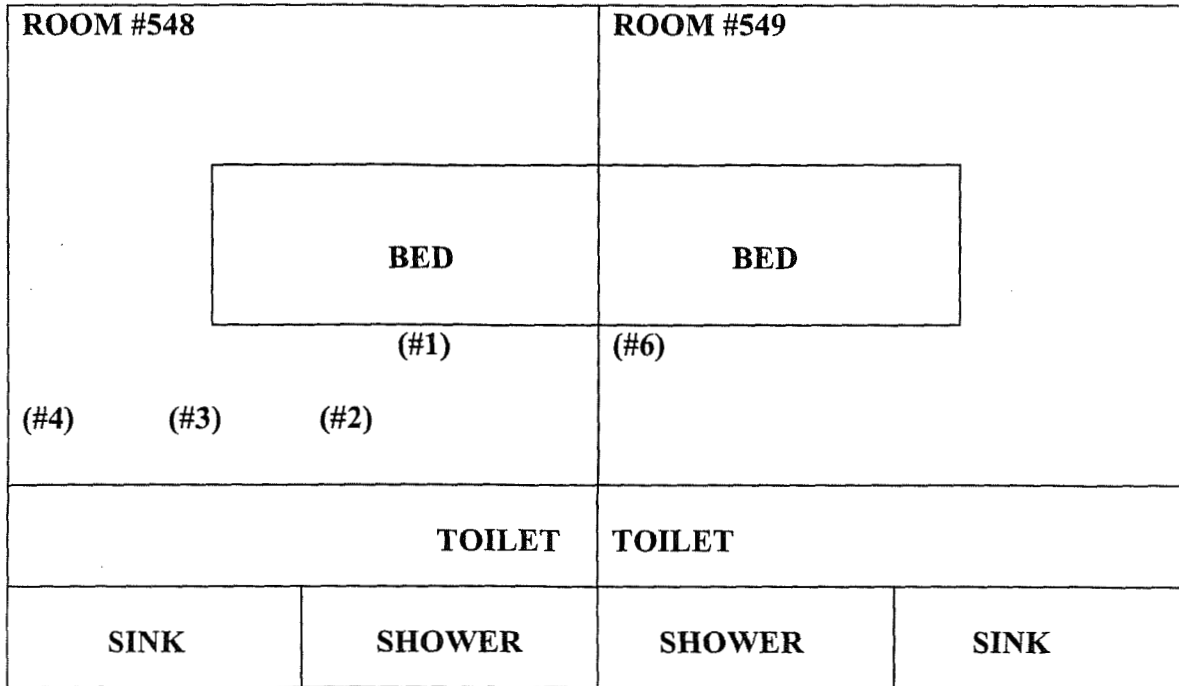
R CHUNG

AUTHORIZED USER: R DATE: 10/15/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1315 10/15/07	115 uR/hr	39	1.4	0.07	0.03	0.05
1140 10/16/07	25.0	5.0	1.2	0.06	0.02	0.02

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
10-15	0.02 mR/hr	242990	1.3 uR/hr	PMB
10-16	.03 mR/hr	242990	1.3 mR/hr	PMB
10-17	.03 uR/hr	242990	1.3 mR/hr	PMB
10-17	.05 mR/hr	242990	1.3 mR/hr	PMB



SURVEY BACKGROUND READING

0.04 mR/hr

WIPE BACKGROUND READING

_____ DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	0.06	73
Chair if present	N/A	N/A
Sink and counter	2.0	146
Toilet	3.0	117
Hall door	0.05	61
Telephone	0.07	87
Shower	0.4	44
Table top	0.08	37
TV controler	0.05	37

Patient release criteria:

Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: [Signature]

Date: 10/23/07

Room released and ready for use: [Signature]

P. Stinson

Action Levels: Surveys 0.5 mR/hr

Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 10-17-07

Re-wipe 10-18-07
BVE 274

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed				
Chair if present	.05	70.77		Pillow 1.0 mR/hr - To Storage
Sink and counter			178	
Toilet	2.0	2135		DRAIN (READING AT FRONT + TOP OF SINK)
Hall door	3.0	78.46		IN TOILET (READING AT SEPT. 3.00)
Telephone	.04	112.3		
Shower	.05	38.46		
Table tp	.06	42.5		
TV controller	.06	64.62		
	.05	41.54		
				Trash removed
				* MATTRESS 1.2 mR/hr TOP LEFT CORNER.
				Room Closed. Will RE-CHECK.

Background reading/survey meter

1.04 mR/hr

Background reading/well counter

275 DPM

Survey meter check reading

1.3 mR/hr

Date and time room released for use: 10/23/07 0845

Peter A. Stumcken, RN

printed name

signature

10/23/07
0830 ✓ Bed AT SURFACE .7 mR/hr
AT 2" .08 mR/hr.
Plastic Sheet + Cloth Sheet
AT SURFACE = .03 mR/hr 10/24/07

8

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKHEET AND ROOM SURVEY**

[2 pages]

ST

Room # 548 Date Ordered: 10/22/07 Authorized User: Richard Chung M.D
[REDACTED] Dose Ordered: ~~150~~ 150 mCi p.o. for: 10/24/07
date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age 10/24/07, endmt.

Patient Dose:
 Initials PMB Dose measured and administered 154.9 mCi Time of administration 4:00 pm

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair No chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: [Signature] (CHUNG) DATE: 10/24/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1345 10-24-07	120 mR/hr	30 mR/hr	0.40 mR/hr	0.52 mR/hr	0.45 mR/hr	0.2 mR/hr
1450 10-25-07	26 mR/hr	4.8 mR/hr	0.58 mR/hr	0.14 mR/hr	0.11 mR/hr	0.13 mR/hr

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
10-24-07	0.02	242990	01.3 mR/hr	PMB
10-25-07	0.02	242990	01.3 mR/hr	PMB
10-26-07	0.02	242990	01.3 mR/hr	PMA
10-29-07	0.02	242990	01.3 mR/hr	PMB

ROOM #548			ROOM #549	
BED (#1)			BED (#6)	
(#4)	(#3)	(#2)		
TOILET			TOILET	
SINK	SHOWER		SHOWER	SINK

SURVEY BACKGROUND READING
0.02 mR/hr

WIPE BACKGROUND READING
303 DPM c/s/min

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	1.6	0
Chair if present	N/A	N/A
Sink and counter	1.4	45
Toilet	2.5	69
Hall door	0.65	9
Telephone	0.06	0
Shower	0.9	34
Table top	0.05	8
TV controler	0.26	31

Patient release criteria:

Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: Ar Date: 10/31/07 Room released and ready for use: Dr

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name _____

Date 10/24/07

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Dosim 10/24/07
Rt Releases 10/25/07

10/31/07
MISTAKES
REMOVED
STAY

Date of monitoring 10/30/07

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	1.5	1.58		
Chair if present	X			
Sink and counter	4.0 / .01	23.08		DRAIN / SINK FAULT X
Toilet	3.0 / .03	29.23		L SEAT FRONT / RIMO LEVEL.
Hall door	1.03	33.85		
Telephone	1.04	56.92		CLEANING AND
Shower	1.04	12.31		Down to .4 mR/hr
Table tp	1.04			
TV controller	1.04			
				Trash removed

Background reading/survey meter

.03 mR/hr

Background reading/well counter

302 DPM

Survey meter check reading

1.3 mR/hr

Date and time room released for use: 10/30/07 1200

PETER A. STOKINGER

printed name

[Signature]

signature

ROOM RELEASED AFTER
MATTRESS REMOVED, AND
CONSULTATION 2 DR. CHIZ
ABOUT SINK + TOILET REMOVED

SA

ALASKA REGIONAL HOSPITAL INPATIENT I-131 THERAPY WRITTEN DIRECTIVE WORKSHEET AND ROOM SURVEY

[2 pages]

Room # 548 Date Ordered: 10/31/07 Authorized User: Richard Chung M.D.
[REDACTED] Dose Ordered: 100 mCi p.o. for: 11/1/07
[REDACTED] date

Patients ID identified by:

Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:

Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:

Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age


Patient Dose:

Initials RC Dose measured and administered 102.3 mCi Time of administration 12⁴⁵ pm

Room Prep

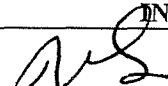

Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair
No chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER:  DATE: 11/1/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1250 11-1-07	60.0	12.0	1.0	.6	.6	.4
1145 11-2-07	11.0	3.0	1.08	1.08	1.08	1.08


DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
11-1-07	1.05	242990	1.3 mR/hr	
11-2-07	1.04	242990	1.3 mR/hr	

ROOM #548			ROOM #549	
BED (#1)			BED (#6)	
(#4)	(#3)	(#2)		
TOILET			TOILET	
SINK	SHOWER		SHOWER	SINK



SURVEY BACKGROUND READING
1.05 mR/hr

WIPE BACKGROUND READING
272 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	1.08	16
Chair if present	N/A	
Sink and counter	0.1	23
Toilet	0.3	84
Hall door	1.05	14
Telephone	1.05	10
Shower	1.06	≤ 2000
Table top	1.05	17
TV controler	1.05	28

11-2-07
 2 BAGS
 TRASH TO
 STORAGE for
 DECONTAMINATION


Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials:  Date: 11-2-07 Room released and ready for use: 1700 

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name ^f

Date 11-1-07

Pg. 2

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 11-2-07

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	.06	7	—	
Chair if present	N/A	N/A	—	
Sink and counter	.12	28	—	
Toilet	.13	36	—	
Hall door	.06	17	—	
Telephone	.04	101	—	
Shower	.04	73	—	
Table tp	.04	54	—	
TV controller	.04	26	—	
				Trash removed
				No Additional

Background reading/survey meter

.04 mR/hr

Background reading/well counter


203 DPM

Survey meter check reading

13 mR/hr

Date and time room released for use: 11-2-07 1200

printed name _____

 Robert Christ
signature

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKHEET AND ROOM SURVEY**

[2 pages]

Room # 548 Date Ordered: 11/2/07 Authorized User: Richard Chung M.D
[REDACTED] Dose Ordered: 100 mCi p.o. for: 11/7/07
[REDACTED] date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age Depo provera shot.

Patient Dose:
 Initials RB Dose measured and administered 103.5 mCi Time of administration 1730

Room Prep
 Initials PB Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair No chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: [Signature] DATE: 11/7/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1730 / 11-7-07	115	25	1.8	0.34	0.29	0.16
1530 / 11-8-07	21	4.1	0.35	0.2	0.18	0.09

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
11-7	0.03	242990	01.3	PB
11-8	0.02	242990	1.3	PB
11-10	0.03	242990	1.3	PB
11-11	0.02	242990	1.3	PAS

SX

ROOM #548			ROOM #549		
BED (#1)			BED (#6)		
(#4)	(#3)	(#2)			
TOILET			TOILET		
SINK	SHOWER		SHOWER	SINK	

SURVEY BACKGROUND READING
06 mR/hr

WIPE BACKGROUND READING
201 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	1.2	50
Chair if present	N/A	N/A
Sink and counter	0.6	51
Toilet	0.9	53
Hall door	0.04	68
Telephone	0.03	96
Shower	0.3	62
Table top	0.08	72
TV controler	0.06	85

Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: RWP Date: 11-10-07 Room released and ready for use: 11-11-07

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name _____

Date 11-7-07

Pg. 2

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 11-11-07

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	1.0	17	-	REMOVING MATRESS
Chair if present	N/A	N/A	-	
Sink and counter	1.08	19	-	REMOVING WAST BOWL
Toilet	1.3	101	-	REMOVING WAST BOWL
Hall door	1.06	73	-	
Telephone	1.06	64	-	
Shower	1.06	28	-	
Table tp	1.06	34	-	
TV controller	1.00	48	-	
				Trash removed
				CORRE WIPES FROM

Background reading/survey meter

Background reading/well counter

Survey meter check reading

1.06 mR/hr

211 DPM

1.3 mR/hr

Date and time room released for use: 11-11-07 0900

PATIENT

printed name



signature

SF

ALASKA REGIONAL HOSPITAL INPATIENT I-131 THERAPY WRITTEN DIRECTIVE WORKSHEET AND ROOM SURVEY

[2 pages]

Room # 548 Date Ordered: 12/17/07 Authorized User: Richard Chang M.D
 Pa [REDACTED] Dose Ordered: 100 mCi p.o. for: 12/18/07
 date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RC Dose measured and administered 103.7 mCi Time of administration 1630

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair No chair

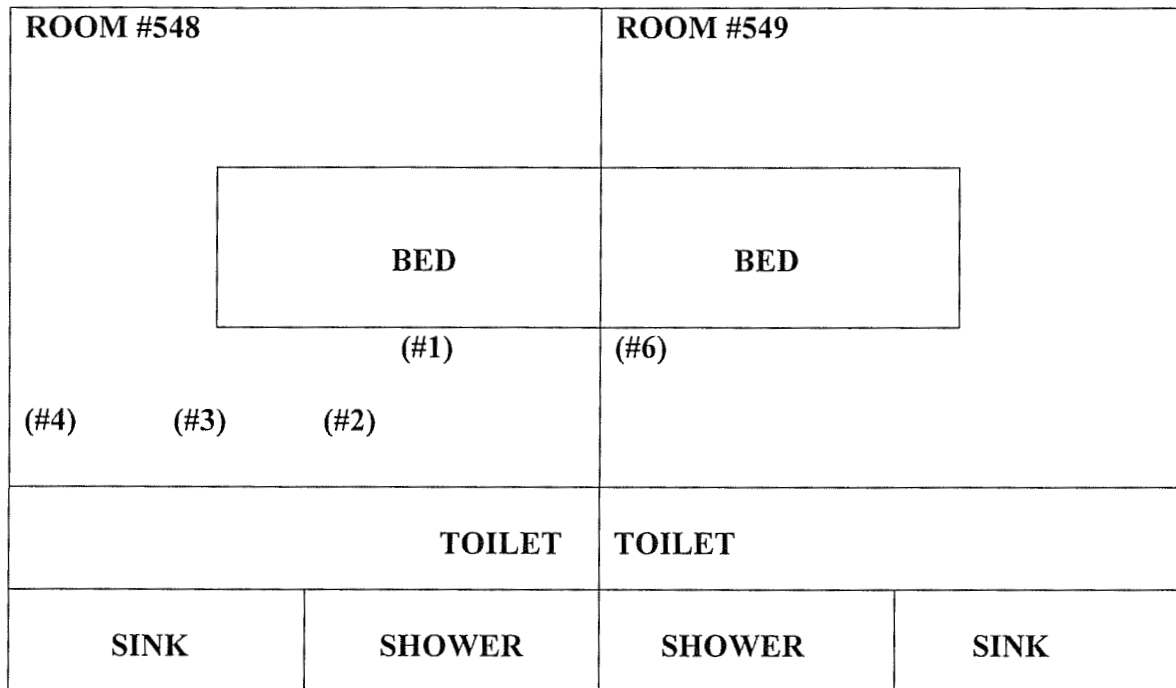
THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: [Signature] DATE: 12/18/07

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
12/18/07 1645	6.8 mR/hr	11 mR/hr	3 mR/hr	0.6 mR/hr	0.2 mR/hr	0.14 mR/hr
12/19/07 1240	17.0	4.0	1.3	1.3	1.5	1.1

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
12/18/07	0.03 mR/hr	242990	1.3 mR/hr	RCB
12/19/07	0.04 mR/hr	242990	1.3 mR/hr	[Signature]




SURVEY BACKGROUND READING
0.03 mR/hr


WIPE BACKGROUND READING
267 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	0.04	17
Chair if present	—	—
Sink and counter	0.2 mR/hr	23
Toilet	0.4 mR/hr	47
Hall door	0.03	28
Telephone	0.04	36
Shower	handle - 0.4 mR/hr	14
Table top	0.05	15
TV controler	0.04	6

Patient release criteria:

Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: 

Date: 12/20/07 Room released and ready for use: 

AFTER DOUBLE CHECK

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name _____

Date 12-18-07

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 12/20/07

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	104	16		
Chair if present				
Sink and counter	125	27		
Toilet	135	37		
Hall door	104	28		
Telephone	104	17		
Shower	Average - 1.3	12		
Table tp	104	4		
TV controller	104	41		
				Trash removed
				None Measured

Background reading/survey meter
104 mR/hr

Background reading/well counter
274 DPM

Survey meter check reading
1.3 mR/hr

Date and time released for use:

1000 12/20/07


printed name

[Signature]

signature

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKHEET AND ROOM SURVEY**

[2 pages]

Room # 548 Date Ordered: 1/7/08 Authorized User: Richard Chung M.D.
 Dose Ordered: 100 mCi p.o. for: 1/3/08
date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

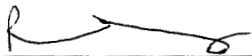
Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RB Dose measured and administered 102.5 mCi Time of administration 1525

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow ~~chair~~ No chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

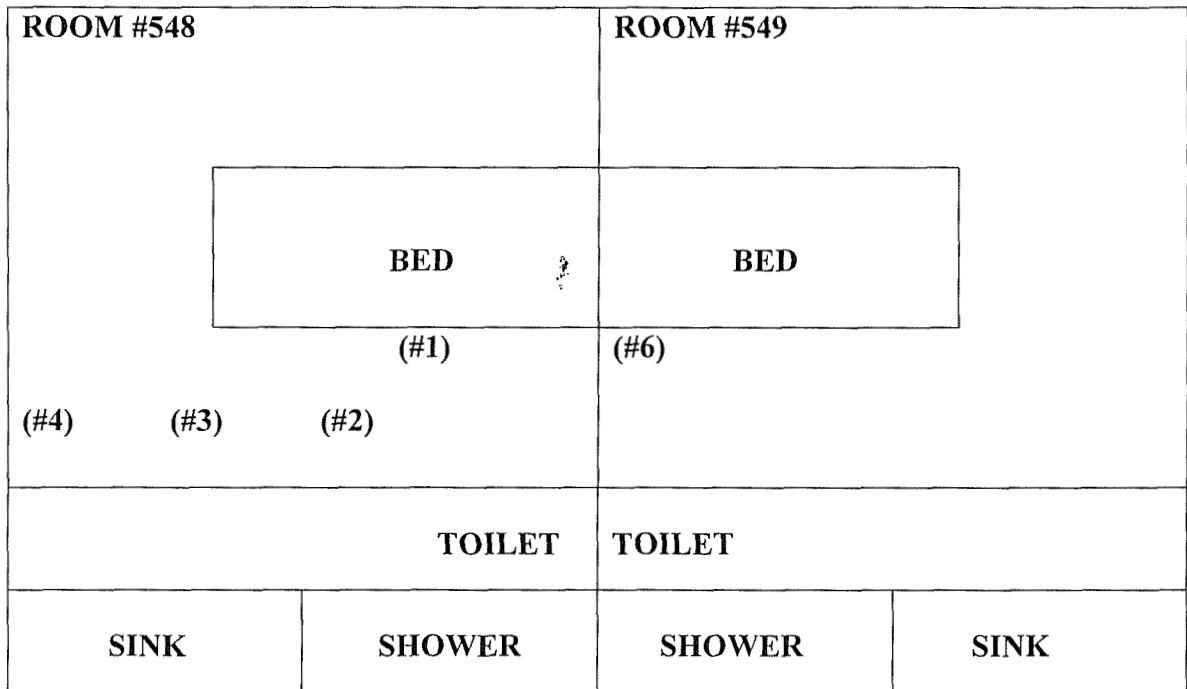
AUTHORIZED USER:  DATE: 1/8/08

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1540 1/8/08	70.0	21.0	3.9	2.1	0.41	0.37
1400 1/9/08	35.0	5.5	1.8	0.2	0.1	0.15
0430 1/11/08						

DATE	BKG READING	SURVEY METER #	^{PMB} CK SOURCE READING	TECH. INIT.
1/8/08	0.01	242990	1.3 mR/hr	PMB
1/9/08	0.03	242990	1.3 mR/hr	PMB
1/11/08	0.02	242990	1.3 mR/hr	PMB







SURVEY BACKGROUND READING
0.03 mR/hr

WIPE BACKGROUND READING
 _____ DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	0.45	60.0
Chair if present	N/A	N/A
Sink and counter	0.3	0
Toilet	0.4	104
Hall door	0.03	121.5
Telephone	0.03	76.9
Shower	0.17	49.2
Table top	0.03	67.7
TV controler	0.06	84.0

Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials:  Date: 1-11-08 Room released and ready for use: 

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name _____

Date 1/8/08

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 1-11-08

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	.04	17		
Chair if present	N/A			
Sink and counter	.3	23		
Toilet	.25	48		DRAIN/HANDLES
Hall door	.04	12		ON RIM/SEAT DOWN • 10 mcp
Telephone	.04	9		
Shower	.06	21		
Table tp	.04	13		
TV controller	.04	18		
				Trash removed
				NO ADDITIONAL

Background reading/survey meter

.04 mR/hr

Background reading/well counter

207 DPM

Survey meter check reading

1.3 mR/hr

Date and time room released for use:

Peter A. Storkheim,

printed name

[Signature]

signature

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKSHEET AND ROOM SURVEY**

[2 pages]

Handwritten mark

Room # 548 Date Ordered: 11/11/08 Authorized User: Richard Chung M.D.
[REDACTED] Dose Ordered: 100 mCi p.o. for: 11/11/08
date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RC Dose measured and administered 104.2 mCi Time of administration 1445

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair *No chair*

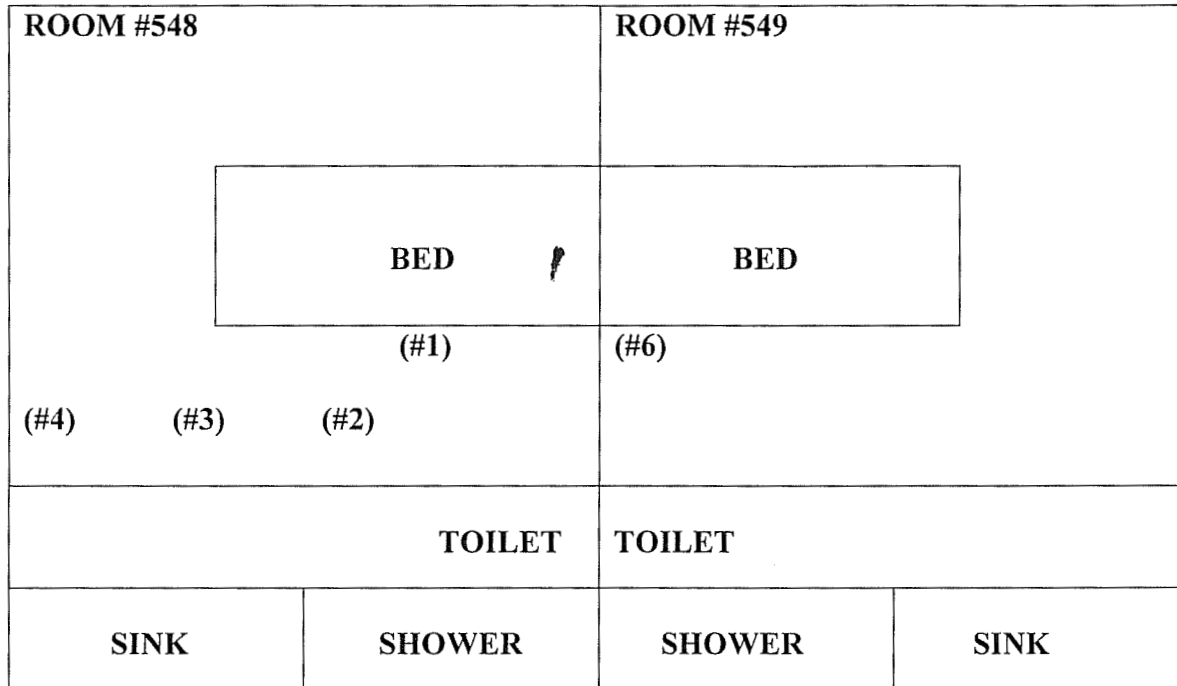
THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: *Richard Chung* DATE: 1-14-08

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1450 1-14-08	70.0	12.0	1.5	1.3	0.2	0.2
1415 1-15-08	35.0	5.9	0.6	0.2	1.3	1.2
1500 1-23-08	EMPTY ROOM SINK + COUNTER			0.2 ROOM		

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT
1-14-08	0.04	242990	1.3 mR/hr	<i>RC</i>
1-15-08	0.04	242990	1.3 mR/hr	<i>PMB</i>
1-23-08	0.04	242990	1.3 mR/hr	<i>RC</i>



104.2
mCi
I-131
[Signature]

SURVEY BACKGROUND READING _____ mR/hr

WIPE BACKGROUND READING _____ DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	1.3	138
Chair if present	N/A	N/A
Sink and counter	3.0	35
Toilet	0.8	71
Hall door	0.04	100
Telephone	0.11	74
Shower	1.1	86
Table top	0.05	138
TV controler	0.08	88

Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: [Signature] Date: 1/23/08 Room released and ready for use: [Signature]

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 1-23-08

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	1.06	6		
Chair if present	N/A	N/A		
Sink and counter	3.10	104		
Toilet	2.03, 3	94		RAVIAL WASH OVER 8 DMS
Hall door	1.06	17		DOWN TO .5 mR/hr on 1-23-08
Telephone	1.04	26		
Shower	1.64	38		
Table tp	1.04	18		
TV controller	1.04	64		
				Trash removed

Background reading/survey meter 1.04 mR/hr

Background reading/well counter 197 DPM

Survey meter check reading 1.3 mR/hr

Date and time room released for use: 1-23-08 1500

(PATENT) Robert A. [Signature]

printed name

signature

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**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKHEET AND ROOM SURVEY**

[2 pages]

Room # 548 Date Ordered: 1/22/08 Authorized User: R. Chung
 P [REDACTED] Dose Ordered: 100 mCi p.o. for: 1/24/08 date

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials RC Dose measured and administered 105 mCi ^{1/10/08} Time of administration 1325 ^{Husb had vasectomy.}

Room Prep
 Initials RC Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair No chair

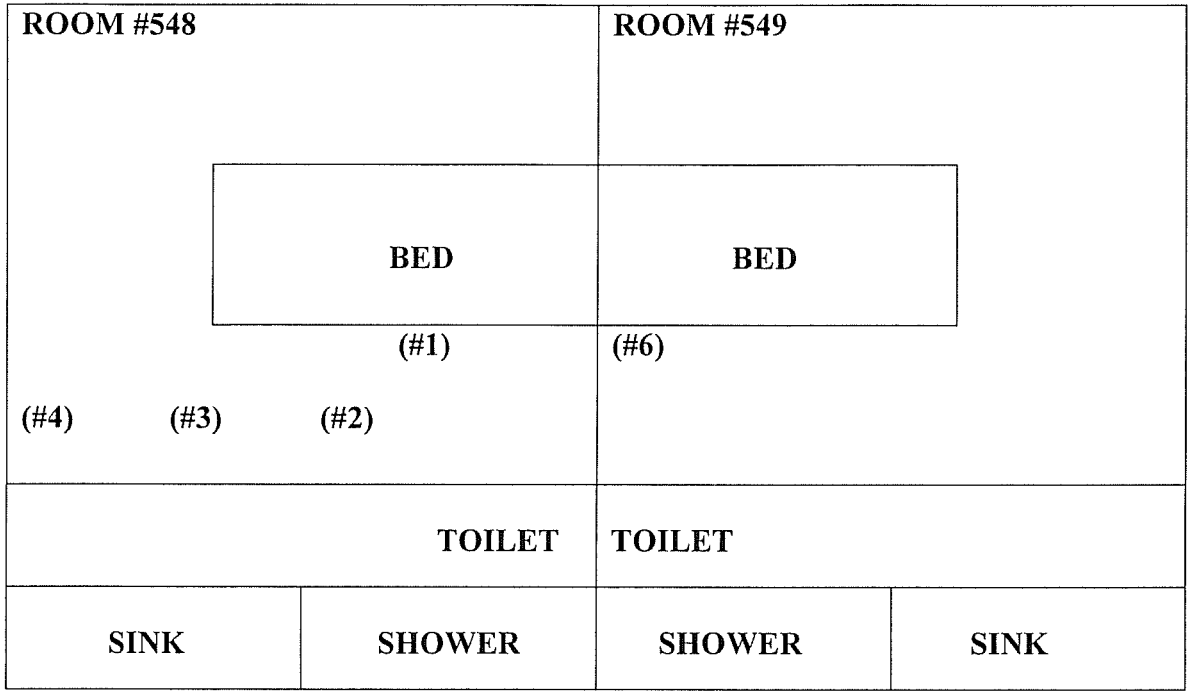
THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: R. Chung DATE: 1/24/08

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1325 1-24-08	60.0	8.0	2.0	.8	.6	.4
1305 1-25-08	18.0	3.5	1.0	.1	.1	.08

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INT.
1/24/08	.06	242990	1.3 mR/hr	
1/25/08	.06	242990	1.3 mR/hr	
1/28/08	.06	242990	1.3 mR/hr	



SURVEY BACKGROUND READING
0.06 mR/hr

WIPE BACKGROUND READING
217 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
Bed	.08	16
Chair if present	N/A	—
Sink and counter	.2	24
Toilet	.3	27
Hall door	.06	34
Telephone	.06	17
Shower	.08	12
Table top	.06	7
TV controler	.06	31

3 BAGS
 TRASH.
 1-28-08

Patient release criteria: Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: Date: 1/28/08 Room released and ready for use:

Action Levels: Surveys 0.5 mR/hr Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name _____ Date 1-24-08

**ALASKA REGIONAL HOSPITAL
INPATIENT I-131 THERAPY WRITTEN DIRECTIVE
WORKSHEET AND ROOM SURVEY**

[2 pages]

Room # 548 Date Ordered: 1/16/08 Authorized User: Richard Chung M.D.
 Pa [REDACTED] Dose Ordered: 100 mCi p.o. for: 1/22/08
 date 1/29/08

Patients ID identified by:
 Initials RC states own name photo ID ID bracelet
 relative states own birthdate states own SSN

Informed Consent:
 Initials RC Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC reg. guide 8.39 Table 2

Patient not pregnant, based on:
 Initials RC hysterectomy celibacy ^(1/8/08) negative pregnancy test male
 normal menses < 2 weeks ago past child bearing age

Patient Dose:
 Initials PMB Dose measured and administered 107.5 mCi Time of administration 1400

Room Prep
 Initials PMB Trash bags set up Valuables removed Room 549 empty and labeled
 entire floor faucet handles bathroom floor toilet lid TV remote
 telephone table top bed controls pillow chair no chair

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

AUTHORIZED USER: [Signature] DATE: 1/29/08

*****EXPOSURE RATE (mR/hr)*****

Time/Date	[1] midline bedside	[2] midline 1 meter	[3] midline 3 meters	[4] doorway	[5] hallway	[6] Rm 549
1400 1/29/08	55	17	3.5	0.4	0.2	0.16
1300 1/29/08	30	4.4	0.4	0.15	0.1	0.05

DATE	BKG READING	SURVEY METER #	CK SOURCE READING	TECH. INIT.
1/29/08	0.02 mR/hr	242990	1.3 mR/hr	PMB
1/30/08	0.03 mR/hr	242990	1.3 mR/hr	PMB

ROOM #548			ROOM #549	
BED (#1)			BED (#6)	
(#4)	(#3)	(#2)		
TOILET			TOILET	
SINK	SHOWER		SHOWER	SINK

SURVEY BACKGROUND READING

0.06 mR/hr

WIPE BACKGROUND READING

303 DPM

Location of survey/wipe	mR/hr	net DPM from well counter
1 Bed	0.16	351
2 Chair if present	N/A	N/A
2 Sink and counter	0.5	30.4
3 Toilet	0.8	9
4 Hall door	0.07	78
Telephone	0.06	76
Shower	0.7	66
Table top	0.09	15
TV controler	0.08	77

Patient release criteria:

Reading must be less than 7.0 mR/hr at 1 meter from midline of patient. In accordance with NRC Reg. guide 8.39, Table 2, Column 1

Tech initials: [Signature]

Date: 1-31-08

Room released and ready for use: [Signature]

0800

Action Levels: Surveys 0.5 mR/hr

Wipes: 200 DPM/100 cm sq.

All contaminated linen and trash stored for decay to background level.

All surveys will be performed with probe as close to surface as possible without contaminating probe.

All wipes will be performed individually, and cover an area of 100 cm. sq.

Patient Name [Redacted]

Date 1-29-08

Pg. 2

[Handwritten mark]

ALASKA REGIONAL HOSPITAL
NUCLEAR MEDICINE DEPARTMENT

I-131 DOUBLE CHECKS
CLEARING ROOM 548 POST THERAPY

Date of monitoring 7-31-08

Location of survey and wipe	Reading mR/hr	Wipe net DPM well counter	Re-wipe if needed net/DMP	Location of high reading
Bed	.08	175.4	—	CLEANING SPOT - REMOVABLE
Chair if present	NA			
Sink and counter	N 0.3	103.1	—	
Toilet	0.4	101.5	—	REMOVABLE ON FRONT BOWL
Hall door	.06	104.4	—	
Telephone	.06	112.1	—	
Shower	.08	109.3	—	
Table tp	.06	100.7	—	
TV controller	.06	98.3	—	
				Trash removed
				WIPES FROM BUS +
				TOILET. PUT IN LOMB
				TRASH TRASH

Background reading/survey meter

1.06 mR/hr

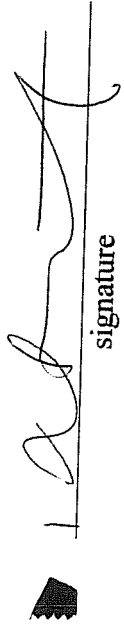
Background reading/well counter

240 DPM

Survey meter check reading

13 mR/hr

Date and time room released for use: 7-31-08 0800

 signature

ALASKA REGIONAL HOSPITAL 2801 DEBARR RD. ANCHORAGE, AK 99508	DEPARTMENT: NUCLEAR MEDICINE SECTION
POLICY TITLE: I-131 THERAPEUTIC PROCEDURE POLICY NUMBER: 310.10	EFFECTIVE DATE: OCTOBER 2005 SUPERSEDES: JULY 1996 AUTHORIZED BY:

1. For all I-131 Therapies (in-patient or out-patient) a radiologist must consult with the referring physician before scheduling the exam. The radiologist will then inform Nuclear Medicine personnel when to schedule the patient and the amount of I-131 to be ordered. (**The authorized user(s) in Radiation Therapy may order exams without consulting with a Radiologist.**)
2. A Written Directive from the authorized user must be obtained prior to ordering the radiopharmaceutical. There are separate forms located in the Nuclear Medicine department for in-patient and out-patient procedures. See policies #310.30 and 310.40 respectively.
3. All I-131 therapy patients must be fasting for at least 2 hours prior to the administration of the dose. They should be off any thyroid medicine(s) for up to 6 weeks (a reference sheet is located in Nuclear Medicine) and should not have had any iodinated contrast material (CT,IVP,etc.) for at least 1 month prior to appointment date. For in-patient therapies, a serum TSH level should be above 40. All this to be determined by ordering physician.
4. The 5th floor Nursing Supervisor and Ward Clerk should be notified when an in-patient therapy is scheduled. They will ensure the necessary room preparations are taken care of. The patient must be placed in **room 548**, which is a private room with private bath.
5. Scheduling personnel will schedule the appropriate procedure and block off the appropriate time slot for the Nuclear/Rad. room. This is to give the radiologist time to consult with the patient if needed.
6. The following forms must be completed:
 - Out-Patient Therapy Written Directive
 - In-Patient Written Directive and Worksheet
 - Patient consent form
 - Patient to receive verbal instructions and handout about I-131 precautions
7. In addition to the above forms, the following items must be posted on the door of the in-patient room (in accordance with 10 CFR 20.203):
 - Radioactive Materials sign (can be found in adjacent Safe Room)
 - In-Patient Written Directive and Worksheet
 - Instructions to visitors and nurses
 - Nurse log in sheet
8. Immediately following therapeutic dosing of in-patient, surveys of the patient will be conducted by Nuclear Medicine personnel. Surveys will be performed at patient side, 1 meter from umbilicus,

I-131 THERAPEUTIC PROCEDURE, CONT.

POLICY #310.10

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3 meters from umbilicus, doorway to room, hallway, and in adjoining room 549 with meter adjacent to wall at head of bed. Survey and record these readings daily on the written directive. The patient cannot be released until the measured dose rate from the patient is less than 7.0 mR/Hr at a distance of 1 meter or the activity in the patient is less than 30.0mCi (10 CFR 35.75).

9. **Room 549 should remain empty.** Post a "Radioactive Area" sign on the door to room 549. Place tape across the door in an X formation to ensure no entry to the room.
10. Patients will utilize only disposable items while confined to room 548 and will be instructed to place waste (with the exception of liquids) in specially labeled containers/bags. 3 bags are to be used; 1] linen, 2] paper trash, 3] food/garbage. Unused liquids will be disposed of into the toilet followed by 3 or more flushes.
11. All items will be considered contaminated until checked with a survey meter and if not distinguishable from background will be placed in normal trash and/or linen. Items requiring radioactive disposal will be placed in the Radioactive Decay-in-Storage area for no less than 10 half-lives.
12. Before the therapy room can be released for future patient care, area surveys and wipe tests must be performed to ensure no removable contamination exists. Surveys and wipe areas are: patient bed, telephone, bedside table, door to bathroom, toilet, sink, shower, and chair if there is one. The room must not be reassigned until removable contamination is less than 200 dpm/100 square cm (10CFR35.315).
13. The thyroid burden of each individual who helped prepare or administer the dosage of I-131 must be made within 3 days after administering the dosage (10CFR35.315). See policy #310.10A. This applies only to I-131 supplied in solution. **As of 7-2005 all I-131 is being supplied in capsule form.**
14. The Radiation Safety Officer must be notified immediately if the patient dies or has a medical emergency (extension 1247 or 1290).

**THIS PROCEDURE IS BEING KEPT IN THE MANUAL IN CASE
THE RADIOPHARMACY IS UNABLE TO PROVIDE I-131 IN CAPSULE FORM
AND WOULD HAVE TO RESORT TO SOLUTION FORM.**

ALASKA REGIONAL HOSPITAL 2801 DEBARR ROAD ANCHORAGE, ALASKA 99508	DEPARTMENT: NUCLEAR MEDICINE CATEGORY: SECTION:
POLICY TITLE: QUALITY MANAGEMENT PROGRAM	EFFECTIVE DATE: OCTOBER 2005 SUPERSEDES: OCTOBER 1994
POLICY NUMBER: 310.20	AUTHORIZED BY:

1. An Authorized User must sign and date a Written Directive specifying the dosage and rout of administration of the radiopharmaceutical, for any dose of I-131 in excess of 30 microCuries (uCi). Such Written Directive will be made prior to ordering the dose and prior to the administration of the dose except in the uncommon situation when an Oral Directive or Oral Revision is made.

Oral Directive or an Oral Revision to a previously Written Directive is acceptable if, because of the patient's condition, it is judged that a delay to provide a Written Directive or Written Revision would jeopardize the patient's health. In such a case a Written Directive or Written Revision should be made and documented in the patient's record within 24 hours of the therapeutic administration or the issuance of the Oral Directive or Oral Revision.

The preferred form for the Written Directive for I-131 is either the Inpatient or Outpatient worksheet/written directive. A medical prescription, or a written doctors order for an inpatient is also acceptable. The Written Directive, whatever its form, will be kept on record for three years.

2. An I-131 Written Directive worksheet is to be completed in all cases. (see attachments) The identification, dosage, and consent verifications are to be completed prior to administering the dose.
3. Before the administration of the radiopharmaceutical, the user or qualified worker will verify the patients identity by asking certain questions as noted on Written Directive worksheets, and document on worksheets.
4. Before the administration of the radiopharmaceutical, the user or qualified worker will verify the details of the Written Directive (or Oral Directive/Revision) and that the details of the administration at hand are in agreement. This includes measuring the dose of I-131 in a dose calibrator and the results compared with the prescribed dose.
5. Before administering the radiopharmaceutical, the risks and benefits of the procedure are to be explained to the patient who must then sign an Informed Consent. Furthermore, the precautions by which the patient may reduce the likelihood of, or limit contamination of his/her environment must be explained and a set of instructions issued. Issuance of these instructions is to be documented on the I-131 Worksheet by the counseling User or Worker.
6. The licensed user will strongly encourage all workers to seek guidance if they do not understand the details of the Directive or how to carry them out. Any questions or problems are to be voiced and resolved prior to proceeding with the administration.

QUALITY MANAGEMENT PROGRAM (cont.)

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7. **An Authorized User, after administering the dose will sign the worksheet documenting the administered dose.**
8. **For patients treated as inpatients, the lower portion of the Inpatient I-131 worksheet is completed at the end of the patient's hospitalization.**
9. **The record of an I-131 therapy will consist of the Written Directive, the appropriate I-131 worksheet, the nurse instruction/sign in sheet and the dictated procedure note. Each case record will be kept on file for 3 years (or more at the discretion of the facility) from the date of the administration of the dose.**
10. **Any deviation, recordable event, misadministration or other problem identified after the administration of the dose is to be brought to the attention of an Authorized User and/or Radiation Safety Officer as soon as possible after it is identified. Such events, depending on their gravity may be discussed at the Radiation Safety Committee meeting. Even if not discussed at the RSC meeting, the deviation or other problem, and the response or solution to it, will be documented on the record of the case (which, as mentioned above, is kept for three years or more). Such response will occur within thirty days of the discovery of the recordable event or misadministration.**
11. **Annual review of the I-131 Therapy QM Program will be performed and will include review of a representative number of randomly selected cases, if not all cases, from the preceding 12 months since the previous review. The number of cases to be reviewed, if not all, will be based on the statistical sampling principles and acceptance tables of 10CFR32.100 based on a 10% lot tolerance defect rate. (see attachment #2) If misadministration or recordable events are discovered, the number of cases to be reviewed will be expanded to include all cases. Each case selected will be examined for the presence of a complete, signed Written Directive and compliance with the Written Directive in regards to the verification of the identity of the patient, the administered dosage and route, the documentation of the consent and instructions for the patient. The QM Program review will be discussed at the following RSC meeting, distributed to relevant managers and departments, and filed for review by NRC inspectors, and kept on file for three years.**
12. **Any revisions to the QMP are to be submitted to the NRC for review and comment within 30 days after the revisions are finalized.**
13. **Recordable events: Within 30 days of a recordable event, all relevant facts must be assembled identifying corrective action taken to prevent a recurrence. Records must be retained for a period of three years. A recordable event is if an administered dose is, greater or lesser than 10% of the prescribed dose, dosed without a written directive, or the dosage is not recorded on the daily logs/written directive.**

**QUALITY MANAGEMENT PROGRAM (cont.)
POLICY # 310.20
PAGE 3**

- 14. Misadministration: The NRC Operators Center (301) 951-00550 must be notified within one calendar day after a misadministration. Within 15 days of the discovery, a written report must be sent to Region IV. This report must include the licensee's name, prescribing physician's name, a description of the event, why it occurred. Also to include any effect on the patient, and improvements needed in the QM Program to halt reoccurrences. Include what information was presented to the patient. Do not include any information on the patient. The licensee must inform the patient and the referring physician within 24 hours of the discovery of a misadministration. The referring physician can determine, based on medical judgment, that the patient should not be informed. If the patient can not be notified within 24 hours, they should be notified as soon as possible. Appropriate medical care for the patient not be delayed. The patient will also be informed in writing within 15 days of the discovery. This may include either a copy of the report sent to the NRC or a description of the event and the consequences as they may affect the patient. The patient must also be informed that they may obtain a copy of the NRC report if desired. Records of misadministration must be kept for 5 year and include names of all individuals involved including the patient, patients social security number or ID number, a description of the misadministration, why and how it occurred, affect on the patient, and improvements needed/made to prevent recurrences.**

A misadministration is an administered dose, to the wrong patient, wrong radiopharmaceutical, or the dose differs from the prescribed dose by more than 10%, plus or minus.

APPROVED:

Radiation Safety Officer

Date

The number of patient cases to be sampled will be based on the principles of statistical acceptance using acceptance sampling tables of 10CFR32.110, assuming an error rate (lot tolerance percent defective) of 10 percent. (See table) For each patient case, a comparison will be made, prior to implantation between what was administered versus what was prescribed in the written directive relative to the radioisotope, number of sources and source strengths; and after implantation but prior to completion of the procedure: the radioisotope, treatment site and total source strength and exposure time (or, equivalently, total dose). Program reviews will be documented and distributed to all appropriate management and departments.

Lot Tolerance Percent Defective
10.0 Percent:

Lot Size	Sample Size	Acceptance Number
1 to 20	All	0
21 to 50	17	0
51 to 100	20	0
101 to 200	22	0
201 to 800	23	0
801 to 100,000	39	1

Lot Tolerance Percent Defective
5 Percent:

Lot Size	Sample Size	Acceptance Number
1 to 30	All	0
31 to 50	30	0
51 to 100	37	0
101 to 200	40	0
201 to 300	43	0
301 to 400	44	0
401 to 2,000	45	0
2001 to 100,000	75	1

Should either a misadministration or a recordable event be uncovered during a review of the QMP, the number of cases sampled will be increased to those indicated by using the acceptance sampling table of 10CFR32.110 for a Lot Tolerance Percent Defective rate of 5%.

**ALASKA REGIONAL HOSPITAL
NURSING INSTRUCTION SUMMARY
I-131 RADIOTHERAPY RADIATION PRECAUTIONS**

1. **Read and/or review** the Nursing P & P on the care of inpatients given radio-iodine treatment.
2. **Verify** with Nuclear Medicine at ext. 1290 that Room 548 is properly prepared and that Room 549 is empty, closed and posted with a radiation sign. Order Radiation/Isolation cart from central supply.
3. **Notify:** Dietary that the patient will need disposable meal tray service.
Housekeeping to suspend services to the room until cleared by the RSO after completion of the therapy
Admissions to make sure Room 549 is closed for admission of any patient.
Lab to get any required blood-work drawn prior to administration of the radio-iodine. Labs drawn after administration of the dose are to be labeled "radioactive".
Nuclear Medicine that the patient's admission procedure is complete and is available for dose administration.
4. **Only RN's (non-pregnant) will care for the patient.** Once the dose is administered, LPN's, PCA's, unit secretaries, student nurses, and other hospital employees not wearing dosimetry badges are not permitted in the room. All RN's caring for the patient during the treatment period will wear a radiation dosimetry badge on their collar.
5. **Visitation is restricted** to non-pregnant adults and subject to time and distance limits set by the RSO. No visitors in the room. Patient is to remain in bed behind shields while visitors are at the door to the room.
6. **Follow isolation precautions** when caring for the patient. Leave gloves in the radioactive disposable waste bag, and wash your hands outside the room.
7. **Review** the written instructions for contamination prevention/limitation with the patient (before dose administration) and again at discharge.
8. **Spillage:** Notify the RSO at ext. 1246, if there is any radioactive spillage.
If the patient vomits within the first 24 hours after the administration of the dose, consider the vomitus radioactive.
All urine and feces are radioactive, particularly the urine. Spillage of either of these merits a call to the RSO/Nuclear Medicine.
If you or your clothing becomes contaminated, or thought to be contaminated, notify the RSO/Nuclear Medicine. Wash with hot soapy water the contaminate parts, go to the edge of the plastic floor covering nearest the door, and wait for the RSO/Nuclear Medicine. Patient is to remain in bed behind the shields.
9. **Do not release the room** to admitting or housekeeping until it is cleared by the RSO/Nuclear Medicine.

ALL NURSES CARING FOR THIS PATIENT MUST SIGN THE NURSING LISE BELOW

- | | |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |

This sheet must be permanently maintained in the patients inpatient chart after discharge.

Authorized User Signature _____ Date _____

RSO ext. 1246 XXXXXXXXXXXXXXXXXXXX Nuclear Medicine Technologist ext. 1290

Patient Name _____ Date In _____ Date Out _____

**I-131 OUTPATIENT
WRITTEN DIRECTIVE AND WORKSHEET
POLICY # 310.37**

Date dose ordered _____ Dose ordered _____ mCi

Date of therapy _____

Patient Name _____ Date _____

PRIOR TO ADMINISTERING DOSE

_____ Patient Identification verified by at least two of the following;

Patient states name Patient states date of birth

Patient states social security number

Positive photo ID Positive ID band

Positive ID by relative

_____ Informed Consent obtained

_____ Patient is not pregnant based on;

Hysterectomy Celibacy Male

Negative serum HCG Negative pregnancy urine test

Past child bearing age

_____ Dose measured and administered: _____ mCi Sodium Iodine I-131

_____ Time of administration

PATIENT RELEASE CRITERIA

Patient dose administered is less than 30 mCi of I-131

Instructions to patient on how to keep exposure to other individuals ALARA were provided in accordance with NRC Reg. Guide 8.39, table 2.

Reviewed by: _____ Date _____

Authorized User

**ALASKA REGIONAL HOSPITAL
I-131 (INPATIENT) THERAPY WORKSHEET
WRITTEN DIRECTIVE AND ROOM SURVEY**

Room # _____ Date dose ordered _____ Physician name _____
 Patient name: _____ Dose administered: _____ mCi Date: _____

Patients ID verified with: [] states own name [] states own birthdate [] ID bracelet
 _____ [] photo ID [] states own SSN [] relative

Informed Consent: _____ Informed consent obtained and instructions provided to patient/family on how to keep exposure to other individuals ALARA (as low as reasonably achievable) NRC Reg. Guide 8.39 Table 2.

Patient is not pregnant based on: [] hysterectomy [] celibacy [] male
 _____ [] negative pregnancy test [] past child bearing age [] normal menses less than 2 weeks ago.

Administered Dose: _____ Dose measured and administered: _____ mCi Time: _____

Room preparation: [] trash bags set up [] valuables removed [] Room 549 empty

Plastic covering: [] entire floor [] faucet handles [] toilet lid
 _____ [] TV remote [] bed controller [] table top
 [] telephone [] chair if present [] door knobs

THE PLAN OF TREATMENT IS IN ACCORDANCE WITH THE WRITTEN DIRECTIVE

Authorized User _____ Date _____

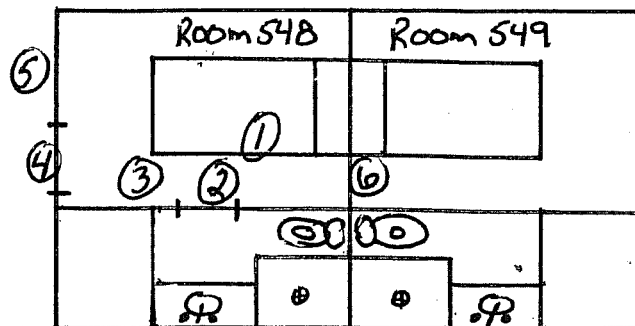
*******EXPOSURE RATE (mR/hr)*******

Time/Date	[1] bedside midline	[2] 1 meter midline	[3] 3 meters midline	[4] doorway	[5] hallway	[6] Rm 549

SURVEY METER USED: _____ TECHNOLOGIST: _____

Patient Release Criteria: Reading must be less than 7.0 mR/hr at 1 meter midline of patient. [NRC Reg Guide 8.39 Column 1]

Location	mR/hr	Wipe dpm	Wipe bkg.
BED			
CHAIR			
SINK			
TOILET			
DOOR			
TELEPHONE			
SHOWER			
TABLE TOP			
BACKGROUND			



Technologist Initials: _____ Date: _____ Room released and ready for use: _____

RSO/representative

Action levels: 0.5 mR/hr 200 dpm/100cm sq.

Contaminated linens and waste transported and stored in D.I.S. room in basement