



The Inspection of Research Laboratories

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Introduction

- What is being Inspected
- Remit of Inspection
- Aspects particular to Research Laboratories



Remit of inspection

UK Regulatory System

- **HSE/NII**
 - Ionising Radiation Regulations 1999
 - Nuclear Installations Act 1965
- **Dept for Transport**
 - Radioactive Material (Road Transport) Regs 2002
- **SEPA (& EA)**
 - Radioactive Substances Act 1993
 - The HASS (Scotland) Directions 2005

Radioactive Substances Act 1993 (RSA 93)

- Primary purpose of RSA 93 is to control radioactive wastes
- As radioactive wastes are potentially harmful, it is important not only that they are disposed of safely, but also that they are not produced in unnecessary quantities
- It is therefore necessary to control the use of radioactive materials as well as the wastes themselves

Remit of Inspection

- **Registration**
 - Keeping & use
 - identification
 - holdings
 - facilities
 - procedures
 - record keeping
 - security
 - notifications

Remit of Inspection

- **Authorisation**
 - Accumulation and disposal
 - waste minimisation
 - disposal routes
 - decay store
 - facilities
 - procedures
 - record keeping
 - Security
 - Qualified Expert

Aspects particular to research laboratories

- **The Users**
 - Multiple users
 - Control of purchase
 - Control of use
 - Control of disposal

RADIOCHEMICAL STOCK RECORD CARD

SOURCE NO: 532008

ACTIVITY: 37MBq

STORAGE PLACE: 4°c LAB 619.

[illegible]

DATE OF FINAL DISPOSAL:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
TOTAL ACTIVITY DISPOSED TO DRAIN:																																																																																																			

RADIOCHEMICAL STOCK RECORD CARD

USER/GROUP: M. EDWARD

SOURCE NO: PE-1

CAUTION
 THIS SINK IS USED
FOR THE DISPOSAL
OF RADIOACTIVE
ISOTOPES

Clipboard with a document titled "Radioactive Waste Disposal Log" and a table for recording disposal data.

Date	Isotope	Activity (Bq)	Disposal Method				Signature
			Volume (L)	Concentration (Bq/L)	Final Disposal	Remarks	
11/11/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/12/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/13/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/14/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/15/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/16/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/17/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/18/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/19/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/20/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/21/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/22/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/23/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/24/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/25/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/26/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/27/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/28/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/29/11	Na-22	1000	1.0	1000 Bq/L	Disposal		
11/30/11	Na-22	1000	1.0	1000 Bq/L	Disposal		





Aspects particular to research laboratories

- The Users
 - Multiple users
 - Project work
 - Academics

Aspects particular to research laboratories

- The Sources
 - H-3, C-14, P-32, S-35, I-125, I-131
 - Specially synthesised
 - Historical
 - Old sources



Aspects particular to research laboratories

- Security
 - Segregation
 - Labelling
 - Identification
 - Access









Aspects particular to research laboratories

- Disposal Routes
 - Novel techniques
 - Segregation at lab
 - Decay store

P³²/P³³
WASTE

S³⁵
WASTE

WEIGHT & RCG
IN POLY
TATION ONLY
WASTE FOR
PROPERLY

S³⁵
RADIOACTIVE

NHS
TREATMENT
WASTE FOR



3 H
Bin 2

72

12



Disposal Routes



Practical Aspects of Regulation - Inspection

- Display of Certificates - section 19

A close-up photograph of a metal safe door. On the left is a circular handle with a red indicator light. To the right of the handle is a numeric keypad with buttons for digits 0-9 and a small red light above the 0 button. The safe is mounted on a wall.