ENVIRONMENTAL MANAGEMENT PROGRAM

1. PROGRAM NAME:	NIEHS Radioactive Waste Management Program

2. Significant Environmental Aspect(s):	**3. Document Control Code:**	EMP-2007-RadWaste
	4. Date:	11/23/2007
Radioactive Waste	**5. Program Lead:**	Paul Johnson - HSB

6. Goals and Objectives

Five-year Goals(s):	Annual Objective(s):	Performance Indicator(s)	Resource requirements
Reduce radioactive waste generation by encouraging careful research planning methods and use of short half-life radioisotopes	Maintain compliance with the NC Hazardous Waste Permit	Results of regulatory compliance inspections and internal compliance audits	
	Maintain compliance with the NRC Radiation License	Results of regulatory compliance inspections and internal compliance audits	
	Maintain and Promote institute Waste Minimization Program	Percentage of radioactive waste resulting from research and support activities	

7. Reason(s) for Significance:

Health & safety impact
Cost
Legal Liability

8. Potential Environmental Impacts:

Land contamination; exposure to human and animal populations.

9. Legal and Other Requirements (Specify):

NRC, DOT, EPA and N.C. Hazardous Waste Regulations.

10. Program Description:

Radioactive waste resulting from laboratory research and mission support functions is collected on a daily basis and managed at the NIEHS/EPA Waste Handling Facility (WHF), Building 108. Waste must be managed in accordance with the USNRC license. Waste that is regulated by EPA (Mixed/Radioactive) must be stored, treated, and/or disposed according to EPA's Resource Conservation and Recovery Act (RCRA) and NRC. Radioactive wastes with active half-lives of 100 days or less are held onsite for a decay of no less than 10 half-lives. All other radioactive wastes are treated onsite in accordance with appropriate permits or shipped offsite for ultimate treatment and disposal.

11. Operational Controls					
Activity	**Controls**	**Responsible Position/Group**	**Monitoring**	**Records**	**Comments**
Laboratory research projects involving radioactive material (radioactive waste)	Review and approval of heath and safety radiation research protocols; Waste Manual, Section F- Radioactive Waste; Radiation Safety Guide, Chapter 5, Section C- Disposal of Radioactive Wastes Health and Safety Manual, Chapter 6- Radioactive Waste Disposal;	HSB Radiation Safety Officer HSB Hazardous Waste Manager HSB Radiation Safety Officer HSB Safety Officer	Program Reviewed Annually Periodic lab inspections	Protocol documents and protocol database	
Laboratory research projects involving radioactive material and hazardous chemicals (mixed/radioactive waste)	Waste Manual Section E- Multi - Hazard Waste, Part E- Hazardous Chemical- Radioactive Waste Radiation Safety Guide, Chapter 5, Section C- Disposal of Radioactive Wastes	HSB Hazardous Waste Manager HSB Radiation Safety Officer	Program Reviewed Annually Periodic lab inspections	Protocol documents and protocol database	

Laboratory research projects involving radioactive materials and medical/pathological materials (mixed hazardous/pathological waste)	Waste Manual Section E- Multi - Hazard Waste, Part C- Hazardous Chemical-Medical/Path Waste Radiation Safety Guide, Chapter 5, Section C- Disposal of Radioactive Wastes	HSB Hazardous Waste Manager HSB Radiation Safety Officer	Program Reviewed Annually Periodic lab inspections	Protocol documents and protocol database	
Laboratory research projects involving radioactive materials, hazardous chemicals and medical/pathological materials (mixed chem./rad/path waste)	Waste Manual Section E-Multi-Hazard Waste, Part D- Hazardous Chemical/Medical/Path/ Radioactive Waste Radiation Safety Guide, Chapter 5, Section C- Disposal of Radioactive Wastes	HSB Hazardous Waste Manager HSB Radiation Safety Officer	Program Reviewed Annually Periodic lab inspections	Protocol documents and protocol database	
Preparation, packaging and transport of radioactive waste from research laboratories to the Building 108 Waste Management Facility	Waste Manual Sections B & E- Chemical Waste and Multi-Hazard Waste NCDENR Hazardous Waste Permit Hazardous Waste Management SOP	HSB Hazardous Waste Manager HSB Hazardous Waste Specialist		Hazardous Waste Database – Waste Management Records and Reports	

Storage of Radioactive Waste materials pending disposal	Hazardous Waste Permit MOU between NIEHS and EPA on Building 108 Operations USNRC License Application Hazardous Waste Management SOP	HSB Hazardous Waste Manager HSB Radiation Safety Officer HSB Hazardous Waste Specialist	Daily and Weekly inspections	Hazardous Waste Database – Waste Management Records and Reports	
Onsite decay/disposal/incineration of radioactive waste material	MOU between NIEHS and EPA on Joint Use of the Incineration Plant (Bldg 106) Hazardous Waste Management SOP USNRC License Application NC DENR DAQ Air Quality Permit	NIH/ORF Project Officer for the NVT contract HSB Hazardous Waste Specialist HSB Radiation Safety Officer HSB Environmental Compliance Officer		Incineration/Sink Disposal Inventory and Authorizations Hazardous Waste Database – Waste Management Records and Reports	
Offsite shipment and disposal of radioactive and mixed/radioactive waste	MOU between NIEHS and EPA on Building 108 Operations Hazardous Waste Management SOP's Contract for the	Waste Manager HSB Hazardous Waste Specialist Hazardous Waste	Annual Inspections Continuous compliance monitoring Periodic Disposal	Hazardous Waste Database – Waste Management Records and Reports NCDENR Biennial Report	

	Disposal of Hazardous Waste- Statement of Work	Management & Disposal Contract Project Officers	Facility Audits	Shipment Manifests Certificates of Disposal/ Destruction	

12. Action Plan: Structure, Authorities, Responsibilities

Targets/Milestones to meet Annual Objectives	Timeframe	Responsible Party/ Job Function
Conduct internal audit(s) of Building 108 operations	Weekly	Hazardous Waste Manager / HSB
Conduct internal audit(s) of lab practices concerning radioactive waste	Annual	Radiation Safety Officer / HSB
Conduct internal audit(s) of air quality compliance	Annual	Environmental Compliance Officer / HSB
Provide annual introductory training on institute waste management policies and procedures.	Annual	Hazardous Waste Manager / HSB

13. Relevant Document(s)

Document Name	Location	File Custodian
NIEHS Waste Manual	Web	Hazardous Waste Manager/HSB
NIEHS Radiation Safety Guide	Web	Radiation Safety Officer/HSB
North Carolina DENR Hazardous Waste Permit	Electronic/Hardcopy	Hazardous Waste Manager/HSB
USNRC License	Electronic/Hardcopy	Radiation Safety Officer/ HSB
Hazardous Waste Management Standard Operating Procedures	Electronic/Hardcopy	Hazardous Waste Specialist/ HSB
MOU between NIEHS and EPA on Building 108 Operations	Electronic/Hardcopy	Hazardous Waste Manager/HSB
MOU between NIEHS and EPA on Joint Use of the Incineration Plant (Bldg 106)	Electronic/Hardcopy	NIH/ORF Project Officer for the NVT contract
NIEHS Health & Safety Manual	Web-based	Safety Officer/ HSB

14. Competence of persons responsible

Title	Basis for Competence
HSB/Hazardous Waste Manager/Project Officer	Professional level education and experience
HSB/Hazardous Waste Specialist/Project Officer	Professional level education and experience
HSB/Safety Officer	Professional level education and experience

Principle Investigators	Introduction to Health & Safety at NIEHS, Introduction to Radiation Safety, Principle User Radiation Training.
NIH/ORF Project Officer	Professional level education and experience
HSB/Radiation Safety Officer	Professional level education and experience
HSB/Environmental Compliance Officer	Professional level education and experience

15. Authorization	
Name / Signature:	William K. Steinmetz
Date:	November 29, 2007