A. Purpose

This SOP outlines the procedure for extramural shipment of RAM from/to Lamont-Doherty Earth Observatory. Radioactive materials may not be transferred to any person or institution outside of the location specified for the use of such materials without written approval of the Radiation Safety Officer (RSO).

B. Applicability/scope

This policy applies to the transfer of radioactive materials for research purposes to institutions outside of Columbia University (including Morningside Campus, Manhattanville Campus, Nevis Laboratories and Lamont-Doherty Earth Observatory), Barnard College, New York Presbyterian Hospital/Columbia University Medical Center, Allen Hospital and New York State Psychiatric Institute.

C. Definitions

- EH&S – Environmental Health & Safety
- LDEO – Lamont-Doherty Earth Observatory
- PI – Primary investigator
- RAM – Radioactive material
- RSO – Radiation Safety Officer
- SSCP - Safety, Security, Communications & Property personnel who are appropriately trained

D. Procedures

1. Research Scientist or Principle Investigator (PI) shall review the PI’s permit and make sure that any addition of RAM for possession meets permit conditions
2. Complete the Application to Use RAM Offsite 180 days prior to the cruise or field use if RAM will be used on a non-Columbia University facility or research vessel, or 90 days prior if RAM will be used on a Columbia University research vessel.
3. Provide specific information on the radioisotope, activity, pieces of packages that will be shipped, weight per piece, and any subsidiary hazards (ignitable, corrosive, reactive or toxic) in the applicable form(s)
4. Submit the completed form(s) to Manager of Safety, Security, Communications & Property (SSCP) at LDEO and the Radiation Safety Officer (RSO)
5. Devise a shipping plan that meets DOT requirements with assistance from the Manager of SSCP and RSO to identify shipment method (by ground/air/water), shipment carrier, documentations for custom (if shipping abroad)
6. Upon approval of the application, the Research Scientist or PI shall start preparation of the shipment:
Extramural Shipment of RAM from/to Lamont-Doherty Earth Observatory

- Obtain a copy of the RAM license or permit from the RSO to provide for custom (if shipping abroad)
- Purchase appropriate RAM containers (if applicable)
- Complete radiation survey of RAM by qualified personnel 24hrs prior to shipping

7. After shipment is completed, PI should reach out to RSO to update the PI’s permits if needed
8. If any RAM waste is generated and need to be disposed of, Consult with the RSO, ship board personnel, and the RSO at any host university involved to ensure the waste is handled properly.

E. Responsibilities

Research Scientist or PI:
- Submit complete application forms with detailed information on the radioisotope, activity, pieces of packages that will be shipped, weight per piece, and any subsidiary hazards to the Manager of SSCP and RSO
- Devise a shipping plan with assistance from the Manager of SSCP and RSO

Manager of SSCP:
- Assist Research Scientist or PI coordinating with Columbia University EH&S (RSO) devising a shipment plan

RSO:
- Assist Research Scientist or PI with devising a shipment plan and provide guidance on DOT requirements (see references)
- Review and approve application(s)
- Provide a copy of the RAM license or permit to the Research Scientist or PI (if needed)
- Update the PI’s permit after the shipment (if needed)

F. Emergency Contact

- Radiation Safety: (212)854-8749
- LDEO Safety, Security, Communications & Property: (845)365-8822
- Research Compliance & Training, Export Control: (212)851-9822

G. Medical Surveillance - N/A

H. Recordkeeping - N/A

I. Appendices - N/A

J. Forms
Extramural Shipment of RAM from/to Lamont-Doherty Earth Observatory

Application to Use RAM Offsite

K. References

Procedure for Shipping Limited Quantities of Radioactive Materials
Procedure for Shipping Exempt Radioactive Materials
RAM Waste Pickup Request

L. Acknowledgements - N/A