



**IAEA/ANL
Interregional Training Course**



**Technical and Administrative Preparations
Required for Shipment of Research Reactor
Spent Fuel to Its Country of Origin**

Argonne National Laboratory
Argonne, IL
13 - 24 January 1997

Lecture L.10.1

Review Prior to Shipment

**A. Francis DiMeglio
Consultant**

International Atomic Energy Agency
Vienna, Austria

Argonne National Laboratory
Illinois, USA

MODULE 10

L.10.1

REVIEW PRIOR TO SHIPMENT

BY

**A. FRANCIS DIMEGLIO
CONSULTANT**

PRE-SHIPMENT CHECKLIST

BEFORE ARRIVAL OF CASK

1. CONTACT REGULATORY BODY FOR DISCUSSION OF LOCAL RULES AND REGULATIONS.
2. CLASSIFY FUEL ASSEMBLIES AND SELECT ASSEMBLIES TO BE RETURNED.
3. SELECT CASK
4. DECIDE TO TRIM OR NOT TO TRIM FUEL ASSEMBLIES.
5. NEGOTIATE CONTRACT WITH DOE.
6. COMPLETE APPENDIX A AND B TO CONTRACT.
7. NEGOTIATE CONTRACT WITH CASK VENDOR AND CONTRACT CARRIER.
8. DEVELOP QA PLAN.
9. DETERMINE RESPONSIBILITY FOR PASSAGE THROUGH TRANSIT COUNTRIES
10. DEVELOP PROCEDURES AND TRAIN STAFF ON NEW PROCEDURES.
11. DEVELOP A RESPONSIBILITY MATRIX.

PRE-SHIPMENT CHECK LIST (CONTINUED)

12. REGISTER AS CASK USER.
13. DETERMINE ROUTING FROM ORIGIN TO DESTINATION.
14. CHECK PHYSICAL SECURITY PLANS.
15. INSPECT ALL FLOOR SHORING AND HOISTING EQUIPMENT.
16. CHECK ALL EQUIPMENT NEEDED FOR RECEIPT OF CASK.
17. OBTAIN CUSTOMS EXPORT AND IMPORT FORMS, COMPLETE AND DISTRIBUTE.
18. OBTAIN SHIPPING DATE FROM DOE.
19. ARRANGE FOR ARMED ESCORTS, AS REQUIRED.
20. ARRANGE FOR DELIVERY OF CASK.

PRE-SHIPMENT CHECK LIST (CONTINUED)

AFTER ARRIVAL OF CASK

21. PERFORM ARRIVAL TESTS USING WRITTEN PROCEDURES AND CHECK LISTS.

21A. EXTERNAL RADIATION LEVEL.

21B. EXTERNAL CONTAMINATION.

21C. EQUIPMENT INVENTORY.

21D. INTERNAL CONTAMINATION.

21E. POISON TEST.

22. LOAD CASK USING WRITTEN PROCEDURES AND CHECK LISTS.

23. PRE-SHIPMENT INSPECTIONS AND TESTS USING WRITTEN PROCEDURES AND CHECK LISTS.

23A. CRITICALITY.

23B. EXTERNAL CONTAMINATION.

23C. EXTERNAL RADIATION LEVELS.

23D. CASK TEMPERATURE.

23E. CASK PRESSURE.

23F. CASK COOLANT ACTIVITY.

23G. CASK CLOSURE SEALS.

23H. EQUIPMENT TIE DOWNS.

24. DRIVER INSTRUCTIONS.

25. DRIVER'S SURVEY EQUIPMENT CALIBRATION.

26. PREPARE SHIPPING PAPERS AND BILL OF LADING.

PRE-SHIPMENT CHECK LIST (CONTINUED)

AT TIME OF SHIPMENT DISPATCH

27. NOTIFY LOCAL REGULATORY BODY WHEN SHIPMENT LEAVES.

28. NOTIFY DOE.

29. NOTIFY TRANSIT COUNTRIES, AS REQUIRED.

30. NOTIFY SRP OR INEL.