



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.8.1

Records and Reports

Peter C. Ernst

Consultant

International Atomic Energy Agency
Vienna, Austria

Argonne National Laboratory
Illinois, USA

MODULE 8

L.8.1

RECORDS AND REPORTS

BY

PETER C. ERNST

CONSULTANT

RECORDS AND REPORTS

INTRODUCTION

DATA AND QA RECORDS

SHIPPING DOCUMENTS

REPORTS

INTRODUCTION

DURING THE ENTIRE PROCESS OF PREPARATION AND SHIPMENT OF SPENT FUEL ASSEMBLIES, MANY RECORDS AND REPORTS ARE GENERATED.

THIS PRESENTATION DESCRIBES SOME REPRESENTATIVE RECORDS. IT IS BY NO MEANS COMPLETE AS EACH FACILITY WILL HAVE ITS OWN REQUIREMENTS.

ONE OF THE PURPOSES OF THESE RECORDS AND REPORTS IS TO DEMONSTRATE COMPLIANCE WITH VARIOUS REQUIREMENTS.

NOTE: Each facility will need to meet the requirements of its regulatory body, individual contracts (DOE and other), cask vendor, shipper and any other jurisdictions whose approval is required for the shipment .

DATA AND QA RECORDS

THE FOLLOWING LIST PRESENTS A REPRESENTATIVE SET OF DATA SHEETS TO RECORD THE INFORMATION REGARDING THE RECEIPT, LOADING, PRE-SHIPMENT TESTING AND SHIPMENT OF SPENT FUEL. COPIES OF THESE FORMS MAY BE FOUND IN APPENDIX VII OF THE GUIDELINES DOCUMENT.

Spent Fuel Assembly Cropping Record

Form SFS-F01 records information on the fuel assemblies cropped for a spent fuel shipment. Information included is the ID of an assembly, the time and date of the cropping, verification of the ID and condition, as well as the storage locations before and after the cropping.

Receiving Radiation Survey Report

Form SFS-F02 records the radiation dose rates at the time of receiving the equipment. Information included is the date and time; location; reading; and corrective actions, if required.

Receiving Contamination Survey Report

Form SFS-F03 records the contamination survey results at the time of receiving the equipment. Information included is the date and time; swipe location; gross, background and net counts; and corrective actions, if required.

Standard And Special Tools Checklist

Form SFS-F04 provides a checklist for the Standard Tools to be supplied by the facility and the Special Tools supplied by the cask vendor.

Basket Loading Sheet

There is one Form SFS-F05 generated for each transfer basket. Each form contains the assigned Transfer Lot Number and the ID's of the assemblies put in the identified basket locations.

Spent Fuel Assembly Loading Record

Form SFS-F06 records the loading of the fuel assemblies into the transfer baskets. Information included is the ID of the fuel assemblies loaded, the time and date of their loading, the lot number of the basket loaded, verification of their ID and condition, as well as their storage locations before loading and the basket position they were loaded into.

Transfer Flask Survey Report

Form SFS-F07 records the results of the Transfer Flask Radiation and Contamination Survey. Information included is the transfer lot number; date and time of transfer; two sets of four external radiation readings; background and cask swipe counts; and any incidents. There is one report generated for each transfer lot.

Pre-Shipment Radiation Survey Report

Form SFS-F08 records the radiation dose rates of equipment surveyed during the pre-shipment preparations. Information included is the date and time; location; reading; and corrective actions, if required.

RECORDS (continued)

Pre-Shipment Contamination Survey Report

Form SFS-F09 records the contamination survey results of equipment surveyed during the pre-shipment preparations. Information included is the date and time; swipe location; gross, background and net counts; and corrective actions, if required.

Final Outgoing Survey Report

Form SFS-F10 records the results of the final outgoing radiation and contamination survey of the loaded truck and trailer. This report forms part of the legal record and must be verified by the Health Physicist.

Pre-Shipment Task Record

Form SFS-F11 records the completion of the various pre-shipment tasks, along with any necessary remarks.

Work Completion Checklist

Form SFS-F12 records the completion of all of the significant tasks.

SHIPPING DOCUMENTS

THE RECORDS PRESENTED BELOW INCLUDE SEVERAL NEEDED TO COMPLETE THE SHIPPING DOCUMENTATION.

REPRESENTATIVE RECORDS INCLUDE:

1. **PACKING LIST**
A list of all the documents accompanying the shipment.
2. **BILL OF LADING**
This describes the shipment in form and detail according to an internationally recognized format.
3. **CARGO MANIFEST**
A detailed description for the items in the shipment according to an internationally recognized format. This document accompanies the shipment to its destination.
4. **LOCAL ROUTING TO PORT OF EXPORT**
The safeguarded route to the point of export for the shipment.
5. **TRANSPORTATION PLAN**
The Transportation Plan for the complete shipping route.
6. **LOCAL CUSTOMS FORMS**
Customs forms for the consignor's country.
7. **PROFORMA INVOICE**
A Proforma Invoice is required for Customs purposes.
8. **EXPORT PERMIT**
An Export License may be needed by the facility.

SHIPPING DOCUMENTS (Continued)

9. IMO DANGEROUS GOODS DECLARATION

The IMO Dangerous Goods Declaration indicates compliance with international shipping regulations and describes the shipment and contents as required for international commerce.

10. VENDOR'S CASK CERTIFICATE

Cask certificate from Competent Authority for cask vendor's country.

11. LOCAL CASK ENDORSEMENT

Cask endorsement from Competent Authority for facility's country.

12. TRANSIT COUNTRIES' CASK ENDORSEMENTS

Cask endorsements from Competent Authorities for any transit countries.

13. USDOT CASK REGISTRATION

Certificate for cask from USDOT.

14. CERTIFICATE OF RADIATION CONTROL

A Certificate of Radiation Control or other such Health Physics document certifies the radiation and contamination condition of the shipping package at the time of departure from the facility.

15. CERTIFICATE OF FINANCIAL SECURITY

This demonstrates the facility's financial responsibility regarding the shipment.

16. CUSTOMS POWER OF ATTORNEY

This document gives the carrier or other party permission to act on behalf of the facility for shipment formalities.

SHIPPING DOCUMENTS (Continued)

17. INSTRUCTIONS TO DRIVERS AND CARRIERS

Instructions to the drivers and carriers regarding emergency plans, physical protection, reporting requirements and escort arrangements, etc.

18. EMERGENCY INSTRUCTIONS

Instructions regarding actions to be taken in the event of an emergency including telephone numbers for various emergency services en route.

19. INSTRUCTIONS TO ESCORTS

Instructions for the escorts regarding their responsibilities and communication information.

20. HAND TO HAND RECEIPT

A Hand to Hand receipt is required for physical protection reasons. It ensures the proper transfer of responsibility for the shipment along the route.

21. CASK LOADING ARRANGEMENT

Copies of the cask loading arrangements for the Receiver.

22. FINAL OUTGOING SURVEY REPORT

The results of the final radiation and contamination survey.

23. LOCAL COUNTRY MATERIAL TRANSFER FORMS

Three copies of the local material transfer forms with note to Receiver.

24. LETTER TO RECEIVER

SHIPPING DOCUMENTS (Continued)

25. PERMISSION TO SHIP

A copy of the official notification from the Receiver that they are ready to receive the shipment.

26. COMPLIANCE CHECKLIST

Form which records the completion of all of the significant tasks and compliance with all requirements.

REPORTS

FOLLOWING THE COMPLETION OF THE SHIPMENT, A REPORT SHOULD BE PREPARED FOR THE FILES.

IN ADDITION, REPORTS MAY NEED TO BE PREPARED FOR THE REGULATORY BODY, THE OPERATING ORGANIZATION AND OTHERS.

THE FORMS AND DOCUMENTS ITEMIZED IN THE FOLLOWING LIST ARE THE NECESSARY RECORDS AND REPORTS THAT HAVE TO BE KEPT FOR AT LEAST TWO YEARS FOLLOWING A SPENT FUEL SHIPMENT.

THESE FORMS AND THE INFORMATION CONTAINED IN THEM ARE LEGAL EVIDENCE OF COMPLIANCE WITH APPROPRIATE PROCEDURES. AS SUCH THEY SHOULD BE COLLECTED TOGETHER TO FORM A REPORT AFTER EACH SHIPMENT.

REPORTS (Continued)

REPRESENTATIVE RECORDS INCLUDE:

1. DATA RECORDS
2. QA RECORDS
3. SHIPPING DOCUMENTS
4. TRANSPORTATION PLAN
5. EMERGENCY INSTRUCTIONS
6. PHYSICAL PROTECTION INSTRUCTIONS
7. INSTRUCTIONS TO ESCORTS
8. MISCELLANEOUS RECORDS