

# METALS EVALUATION & TESTING, Inc.

2275-E FREED WAY • PITTSBURG, CALIFORNIA 94565-5007 • (415) 432-6823  
35 HEGENBERGER PLACE • OAKLAND, CALIFORNIA 94621

NON-DESTRUCTIVE TESTING & INSPECTION SERVICE • WELDER QUALIFICATIONS & PROCEDURES

## QUALITY ASSURANCE PROGRAM

FOR

USE, MAINTENANCE AND REPAIR OF SHIPPING CONTAINERS  
FOR RADIOACTIVE MATERIAL

### MAIN OFFICE

Metals Evaluation & Testing, Inc.  
35 Hegenberger Place  
Oakland, California  
94621  
(510) 638-3034

PREPARED BY *[Signature]* DATE 12-01-91

APPROVED BY \_\_\_\_\_ DATE \_\_\_\_\_

AUTHORIZED BY *[Signature]* DATE 12-03-91

9203040312 911203  
PDR ADOCK 071\*\*\*\*\*  
C PDR



## **QUALITY ASSURANCE PROGRAM**

### **1.0 ORGANIZATION**

**1.1** The final responsibility for the Quality Assurance Program for Part 71 requirements rest with **Metals Evaluation & Testing, Inc.** Design and fabrication of radioactive material shipping packages shall not be conducted under this Quality Assurance Program. The Quality Assurance Program is implemented using the following organization:

**1.1.1** The Radiation Safety Officer is responsible for overall administration of the Program, training and certification, document control, and auditing.

**1.1.2** Radiographers are responsible for handling, storing, shipping, inspection, test, operating status and record keeping

### **2.0 QUALITY ASSURANCE PROGRAM**

**2.1** The management of **Metals Evaluation & Testing, Inc.** establishes and implements this Quality Assurance Program. Training for all QA functions, prior to engagement in these functions, is required according to written procedures. QA Program revisions will be made according to written procedures with management approval. The QA Program will ensure that all defined QA procedures, engineering procedures, and specific provisions of the package design approval are satisfied. The QA Program will emphasize control of the characteristics of the package which are critical to safety.

**2.2** The Radiation Safety Officer shall assure that all radioactive material shipping packages are designed and manufactured under a Quality Assurance Program approved by the Nuclear Regulatory Commission for all packages designed or fabricated after July 1, 1978. This requirement can be satisfied by receiving a certification to this effect from the manufacturer.

**2.3** Written procedures and instructions for implementing the Quality Assurance Program are contained in the Radiation Safety Program.

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## **QUALITY ASSURANCE PROGRAM**

### **3.0 DOCUMENT CONTROL**

- 3.1** All documents related to a specific shipping package will be controlled through the use of written procedures. All document changes will be performed according to written procedures approved by management.
- 3.2** The Radiation Safety Officer shall insure that all QA functions are conducted in accordance with the latest applicable changes to these documents.

### **4.0 HANDLING, STORAGE AND SHIPPING**

- 4.1** Written safety procedures concerning the handling, storage and shipping of packages for certain special form radioactive material will be followed. Shipments will not be made unless all tests, certifications, acceptances, and final inspections have been completed. Work instructions will be provided for handling, storage and shipping operations.
- 4.2** Radiography personnel shall perform the handling, storage and shipping operations.

### **5.0 INSPECTION, TEST AND OPERATING STATUS**

- 5.1** Inspection, test and operating status of packages for certain special form radioactive material will be indicated and controlled by written procedures. Status will be indicated by tag, label, marking or log entry. Status of nonconforming parts or packages will be positively maintained by written procedures.
- 5.2** Radiography personnel shall perform the regulatory required inspections and tests in accordance with written procedures. The Radiation Safety Officer shall ensure that these functions are performed.

### **6.0 QUALITY ASSURANCE RECORDS**

- 6.1** Records of package approvals (including references and drawings), inspections, tests, operating logs, audit results, personnel training and



## QUALITY ASSURANCE PROGRAM

qualifications and records of shipments will be maintained. Descriptions of equipment and written procedures will also be maintained.

**6.2** These records will be maintained in accordance with written procedures. The records will be identifiable and retrievable. A list of these records, with their storage locations, will be maintained by the Radiation Safety Officer.

### **7.0 AUDITS**

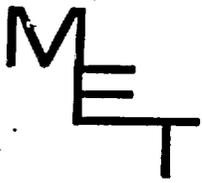
**7.1** Audits for verification of compliance with the Quality Assurance Program will be conducted as described below:

**7.1.1** Each completed "Radioactive Material Transfer Report" form (attached) will be reviewed by the Radiation Safety Officer, or his designee, when it is received. This review will check for proper completion of all appropriate portions of the form.

**7.1.2** The Radiation Safety Officer, or his designee, will conduct periodic inspection of shipping containers for damage, proper labeling and identification.

**7.1.3** Management will conduct periodic audits on the Radiation Safety Officer for compliance with the Program's procedures.

**7.2** Results of audits will be maintained. Audit reports will be evaluated and deficient areas corrected. Personnel performing audits shall have no direct responsibility in the activity being audited.



## **QUALITY ASSURANCE PROGRAM**

### **ORGANIZATIONAL STRUCTURE**

**Brook Massey  
President**

**Brook Massey  
Radiation Safety Officer**

**Tim Massey  
Alternate Radiation Safety Officer**

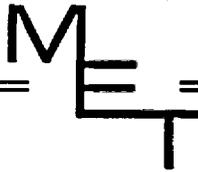
**Tom W. Cuthbertson  
Outside Consultant  
(R.S. Consultant)**

**Radiographers**

**Radiographers'  
Assistant**

**Trainee  
Radiographers**

**USE, MAINTENANCE AND REPAIR OF SHIPPING CONTAINERS  
FOR RADIOACTIVE MATERIAL**



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## QUALITY ASSURANCE PROGRAM INSPECTION/AUDIT REPORT

- 1. Copy of Quality Assurance Program on file \_\_\_\_\_
- 2. Quality Assurance Program adequately established \_\_\_\_\_
- 3. Record of Inspections being maintained \_\_\_\_\_
- 4. Records of "Radioactive Material Transfer Reports" completed and maintained \_\_\_\_\_
- 5. Adequate control of shipping container being maintained \_\_\_\_\_
- 6. Inspection of shipping container for compliance with program requirements \_\_\_\_\_

### SHIPPING CONTAINER

Container shall be a "Type B" designed to meet with requirements of DOT

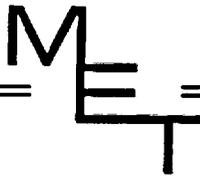
- 1. Shipping Container S/N \_\_\_\_\_
- 2. Condition of Container \_\_\_\_\_
- 3. Labeled Danger Aircraft Only \_\_\_\_\_
- 4. Package Certificate Affixed \_\_\_\_\_
- 5. Labeled with Package Certificate (model or Identification No.) \_\_\_\_\_
- 6. Labeled with "Radioactive Material Special Form N.O.S." \_\_\_\_\_
- 7. Labeled "Type B" \_\_\_\_\_
- 8. Shipping Label Affixed \_\_\_\_\_
- 9. Radioactive Yellow Labels Affixed  
Type of Label: Yellow II   
Yellow III

Remarks \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

- No items of noncompliance found
- Areas of noncompliance found \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Audit Conducted By \_\_\_\_\_ Date \_\_\_\_\_

Radiation Safety Officer \_\_\_\_\_ Date \_\_\_\_\_



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## RADIOACTIVE MATERIAL TRANSFER REPORT

Isotope \_\_\_\_\_ Source S/N \_\_\_\_\_ Curies \_\_\_\_\_ Date \_\_\_\_\_

EXPOSURE DEVICE -----  SOURCE CHANGER

Make \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

EXPOSURE DEVICE -----  SOURCE CHANGER

Make \_\_\_\_\_ Model \_\_\_\_\_ Serial No. \_\_\_\_\_

Transferred From \_\_\_\_\_ To \_\_\_\_\_

### Reason For Transfer:

New Source Requested  Source Returning  Malfunction or Damaged

Mechanical Defects or Malfunctions \_\_\_\_\_

Shipment Prepared By \_\_\_\_\_ Authorized By \_\_\_\_\_

### SHIPPING CONTAINER

Container shall be a "Type B" designed to meet with requirements of DOT

- |   |  |
|---|--|
| 1. Shipping Container S/N _____   | 6. Labeled with "Radioactive Material Special Form N.O.S." _____                         |
| 2. Condition of Container _____   | 7. Labeled "Type B" _____  |
| 3. Labeled Danger Aircraft Only _____                                   | 8. Shipping Label Affixed _____  |
| 4. Package Certificate Affixed _____                                    | 9. Radioactive Yellow Labels Affixed   |
| 5. Labeled with Package Certificate (model or Identification No.) _____ | Type of Label: Yellow II <input type="checkbox"/><br>Yellow III <input type="checkbox"/> |

### SURVEY OF MATERIAL PRIOR TO SHIPMENT

Surface of Exposure Device/Changer \_\_\_\_\_ MR/HR At 40" (1 meter) \_\_\_\_\_

Surface of Shipping Container \_\_\_\_\_ MR/HR At 40" (1 meter) \_\_\_\_\_

### SURVEY OF MATERIAL AS RECEIVED

Surface of Shipping Container \_\_\_\_\_ MR/HR At 40" (1 meter) \_\_\_\_\_

Surface of Exposure Device/Changer \_\_\_\_\_ MR/HR At 40" (1 meter) \_\_\_\_\_