

CRAMER & LINDELL ENGINEERS, INC.

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ATTACHMENT K

SHIPPING CONTAINER QUALITY ASSURANCE REQUIREMENTS

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SHIPPING CONTAINER QUALITY ASSURANCE REQUIREMENTS

1. SCOPE

This QA program is limited to fulfilling the requirements of 10CFR71 for shipping containers used by the Company to transport sealed radioactive sources. Design and fabrication of shipping containers shall not be conducted under this Quality Assurance Program.

2. ORGANIZATION

The final responsibility for this Quality Assurance Program rests with the Company whose organizational structure is included in our Radiation Safety Manual.

The Radiation Safety Officer is responsible for overall administration of the program, training and certification, document control and auditing. The Senior Site Radiographers are responsible for handling, storing, shipping, inspection, test, operating status and record keeping and are directly accountable to the Radiation Safety Officer on all radiation safety matters. Responsibilities are further defined in the Radiation Safety Manual, Section 5 and Attachment H.

3. QUALITY ASSURANCE PROGRAM

This QA program, although limited in scope, is conducted in accordance with the Company's normal QA policies. For this program, this requires that all procedures necessary for the safe use and control of shipping containers be written and defined by the Radiation Safety Manual and that only properly trained, competent personnel shall conduct the defined operations, inspections or tests. Also, the RSO shall assure that all shipping containers are designed and manufactured in accordance with 10CFR71 by certification from the manufacturer.

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4. DOCUMENT CONTROL

All documents pertaining to radiation safety program are controlled by the RSO and are included in our Radiation Safety Manual. This manual is distributed to all company employees involved in working with radioactive materials. Distribution of the manual and revisions are controlled in a positive manner.

5. HANDLING, STORAGE AND SHIPPING

All operations involving the handling, storage and shipping of packages for certain special form radioactive material will be done in accordance with our Radiation Safety Manual. No shipments will be made unless all test, certifications, acceptances and final inspections have been completed.

6. INSPECTION, TEST AND OPERATING STATUS

The RSO shall assure radiographic personnel conduct inspections and test as follows:

a. Receipt Inspection: The following inspections shall be conducted at receipt.

1. Survey
2. Visual inspection for correct marking and damage
3. Manufacturer's documentation

The survey results will be recorded on the shipping papers.

b. In-process Inspection and Tests: The following inspections and tests shall be conducted as required.

1. Leak tests
2. Visual inspection and survey when damage is suspected
3. Daily and quarterly inspections and maintenance

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c. Final Inspection: The following inspections shall be conducted immediately prior to shipping equipment off site.

1. Survey
2. Proper labeling
3. Proper preparation for shipping (bolts tightened, seals in place, source identification tag attached, etc.)
4. Shipping papers are complete and in order (shippers certificate, bill of lading, etc.)

7. NONCONFORMANCES

On discovery of a nonconformance the container will immediately be surveyed. If the radiation level exceeds 200 mr/hr at the surface or 10 mr/hr at 1 meter, the restricted area shall be established and the RSO notified. He shall direct resolution of the nonconformance. Surveillance of the restricted area shall be maintained until the nonconformance is resolved. If the survey meets the above levels, the equipment shall be moved to a locked secure area. The RSO shall be notified of the nonconformance and he shall provide resolution.

8. QUALITY ASSURANCE RECORDS

All shipping container records will be maintained along with the other required radiation safety documents. All records are reviewed quarterly as part of the internal audit program.

9. AUDITS

Audit of this Quality Assurance program will be conducted on an annual basis.

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SHIPPING CONTAINER
QUALITY ASSURANCE AUDIT CHECKLIST

	<u>SAT.</u>	<u>UNSAT.</u>
1. <u>Receipt Inspections</u>		
a. Are radiation surveys conducted on receipt?	_____	_____
b. Are surveys conducted within allowable time limits?	_____	_____
c. Are visual inspections conducted on receipt?	_____	_____
d. Are current "Certificates of Compliance" on file?	_____	_____
e. Have received sources been leak tested within six months?	_____	_____
f. Were leak tests within allowable limits?	_____	_____
2. <u>In-Process Inspections of Tests</u>		
a. Leak tests conducted within last 6 months.	_____	_____
b. Daily and quarterly maintenance inspections conducted.	_____	_____
c. Inspections conducted when damage is suspected.	_____	_____
3. <u>Inspections Prior to Shipment</u>		
a. Radiation surveys conducted.	_____	_____
b. Surveys within allowable limits.	_____	_____
c. Proper radioactive labels affixed.	_____	_____
d. Properly prepared for shipment (bolts, tightened, seals in place, source I.D. tag attached, etc.)	_____	_____
e. Shipper's certificate properly prepared.	_____	_____
f. Bills of lading properly prepared.	_____	_____
4. Notices of Receipt received from consignee.	_____	_____

Date: _____ Auditor _____

Approval _____
Radiation Safety Officer

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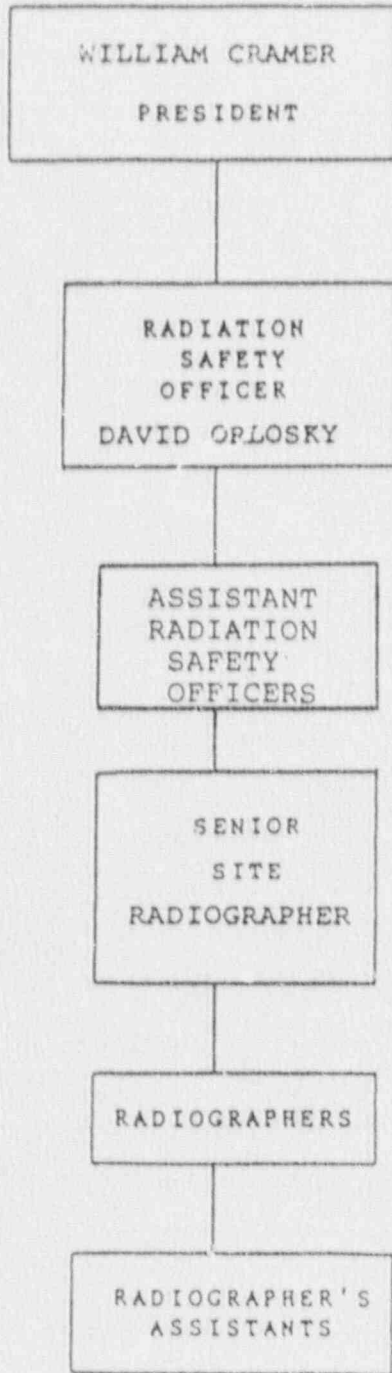
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CHAPTER FOUR

ORGANIZATIONAL STRUCTURE

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ORGANIZATIONAL STRUCTURE



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