Case Histories
Module Objectives

- Identify different size up considerations using photos from actual radioactive material transportation accidents.
- List issues that should be considered during development of a recovery plan.
- Identify common post-incident concerns that the IC should consider.
Seneca, Ohio
Transportation Accident
The truck hauling radioactive material contained 12 packages. Of the 12 packages it is estimated that 8 packages broke open and the contents (syringe containers) were spilled onto the highway. One of the packages remained in the pickup truck and was destroyed in the fire. However, the lead pigs located inside the destroyed package were only charred. The contents were intact.
Blackfoot, Idaho
Transportation Accident
FRUPICT II SHIPPING PACKAGE
MANUFACTURED FOR U.S.
DEPARTMENT OF ENERGY
UNDER DEPARTMENT OF ENERGY
CONTRACT DE-AC04-00AL66470
BY WESTINGHOUSE ENGINEERED
PRODUCTS DEPT.
PKG. ID NO: USA/9218/B(U)F-85
GROSS WEIGHT: 19,250 LBS
N 164
Denver, CO
Transportation Accident
**PER'S DECLARATION OF DANGEROUS GOODS**

Shipper: SpectraTek Services  
2726 Aztec NE Bldg B  
Albuquerque NM 87107  
505 888 0144

Consignee:  
PROTECHNICS INT'L INC.  
Randy Shamblin  
STATE ROUTE 14.  
Williams Town WV 26187  
Phone: (304) 482 1000

Two completed and signed copies of this declaration must be handed to the operator.

**TRANSPORT DETAILS:**
This shipment is within the limitations prescribed for:  
CARGO AIRCRAFT ONLY

**Airport of Departure:**  
ALBUQUERQUE, NM USA

**Airport of Destination:**  
Williams Town

Nature and Quantity of Dangerous Goods:  
UN 2915, Radioactive Materials, Type A package, 7

**Shipment Type:** RADIOACTIVE

<table>
<thead>
<tr>
<th>Pkg#</th>
<th>Radionuclide</th>
<th>Chemical Form</th>
<th>Physical Form</th>
<th>Activity</th>
<th>Warning labels</th>
<th>T.I./Surface</th>
<th>Waybill Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Iridium-192</td>
<td>Oxide</td>
<td>Solid-zw</td>
<td>8.88 GBq 240 mCi</td>
<td>Yellow III</td>
<td>7.0 (18 x 18 x 15)</td>
<td>175</td>
</tr>
<tr>
<td>2</td>
<td>Iridium-192</td>
<td>Oxide</td>
<td>Solid-zw</td>
<td>8.88 GBq 240 mCi</td>
<td>Yellow III</td>
<td>7.0 (18 x 18 x 15)</td>
<td>175</td>
</tr>
</tbody>
</table>

Total Number of Type A containers: 2  
Total Activity: 17.76 GBq 480 mCi  
Total T.I.: 14

WARNING! Failure to comply in all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties. This Declaration must not, in any circumstances, be completed and/or signed by a consolidator, a forwarder, or an IATA cargo agent.

24-Hour Emergency Response Phone Numbers:  
800-535-5053 or +1 352-323-3500 (collect)
<table>
<thead>
<tr>
<th>Page</th>
<th>Package Type</th>
<th>Radioactive Material</th>
<th>Activity</th>
<th>Radioactive Label</th>
<th>Total Dry Ice Weight ( )</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>A</td>
<td>7. UN2915</td>
<td>0 Gray</td>
<td>I White</td>
<td>100 LBS.</td>
</tr>
</tbody>
</table>

**Emergency Response**

- **Phone Number**: 505-975-7497
- **RS No.**: 163

**OFFICIAL SHIPPER'S CERTIFICATE**

- **Date/Time**: 14/01/08 14:00
- **Consignee's Signature**: unknown
- **Shippers Signature**: unknown

**Shippers Certificate**: The contents of this consignment are fully and accurately described above by proper labeling and are in proper condition for shipment and carriage by air. This shipment is intended for use in or pursuant to NRC regulations. The shipper is responsible for the contents, and the shipper certifies that the shipment is in compliance with all applicable regulations.

- **Carriers**: All carriers and vessels authorized to carry nuclear material.
- **Carry by**: Direct, indirect, or through vessel.
- **Carry in**: Unauthorized, authorized, or non-nuclear material.

**CONSIGNEE'S COPY**

- **Material**: 94426
- **Main Reason**: Storage or Transportation
- **Other**: Class 9

**CARGO TENDERED**: Yes/No: Yes

<table>
<thead>
<tr>
<th>Total Pieces</th>
<th>Total Weight</th>
<th>Total T</th>
<th>Shipping's Signature</th>
<th>Date/Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100</td>
<td></td>
<td>Unknown</td>
<td>14/01/08 14:00</td>
</tr>
</tbody>
</table>

**SHIPPERS CERTIFICATE**: The contents of this consignment are fully and accurately described above by proper labeling and are in proper condition for shipment and carriage by air. This shipment is intended for use in or pursuant to NRC regulations. The shipper is responsible for the contents, and the shipper certifies that the shipment is in compliance with all applicable regulations.

- **Carriers**: All carriers and vessels authorized to carry nuclear material.
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- **Carry in**: Unauthorized, authorized, or non-nuclear material.

**CONSIGNEE'S COPY**: The material is classified as Type A, Package 7. UN2915. The total dry ice weight is 100 LBS.

**Emergency Contact**: Phone Number: 505-975-7497

**RS No.**: 163

**Carriers**: All carriers and vessels authorized to carry nuclear material.

- **Carry by**: Direct, indirect, or through vessel.
- **Carry in**: Unauthorized, authorized, or non-nuclear material.

**Signatures**: Shippers and Consignees.

**Date/Time**: 14/01/08 14:00

**Consignee's Signature**: unknown

**Shippers Signature**: unknown
Recovery Planning Issues from a Transportation Accident
Formulating a Recovery Plan

• The IC is responsible for preparing a recovery plan
• The IC is responsible for coordinating with appropriate agencies
• DOE has a model procedure available for recovery planning available on their website
  • www.em.doe.gov/otem
• The following two slides contain recovery planning items for consideration:
Formulating a Recovery Plan

Recovery planning items:

• List the type, quantity, form, and extent of release
• Identify sampling issues and concerns
• Identify stakeholders and responsible parties
Formulating a Recovery Plan

Recovery planning items:

• Identify monitoring and dosimetry needs
• Identify potential impacts
• Identify issues regarding waste handling, storage, and transport
• Implement procedures for complete and proper maintenance of personnel accountability and exposure records
Terminating the Incident

• Address post-incident issues and concerns
  • Documentation
  • Personnel follow-up
  • Equipment Decontamination or Replacement
Terminating the Incident

Documentation

• All information, records, logs accumulated during incident should be completed, distributed, and filed for future reference

• Proper documentation is essential when attempting to recoup equipment and material costs associated with the incident
Terminating the Incident

Personnel Follow-up

• Exposure records and medical actions for each person involved in incident
• Bioassay sampling to detect internal contamination or continued medical surveillance
• Post-incident stress or trauma
• IC should work with Radiation Authority on personnel follow-up issues and concerns
Terminating the Incident

Equipment Decontamination or Replacement

• Work with Radiation Authority to ensure that all items involved in the incident have been properly surveyed
• Radiation Authority will assist in determining which items cannot be decontaminated
• Items that cannot be decontaminated will need to be replaced
Summary

After available information has been collected and reviewed, the IC is responsible for preparing a recovery plan.
Summary

Proper event documentation is essential when attempting to recoup equipment and material costs associated with the incident.
Summary

The IC needs to work with the state or local Radiation Authority to ensure that all equipment used in the incident has been surveyed then properly decontaminated or disposed of as needed.
Questions