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Level 2 Administrative Procedure

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9	Minor Revision/Periodic Review. Added Step 6.1.11 D for clarification.	All

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1.0 PURPOSE

- 1.1** This procedure provides guidance for establishing a uniform set of actions and instructions for shipping hazardous and/or radioactive samples, including but not limited to laboratory related standards, sources, and equipment.
- 1.2** This document implements applicable regulatory requirements. They are listed in Appendix A, *Regulatory Requirements Flow Down*.

2.0 SCOPE AND APPLICABILITY

- 2.1** This Level 2 procedure applies to all hazardous samples and laboratory standards shipped by Fluor-BWXT Portsmouth LLC (FBP) at the Portsmouth Gaseous Diffusion Plant (PORTS) in conjunction with FBP-ER-PRO-00298, *Process for Preparation of Department of Transportation (DOT) Non-Regulated and Regulated Shipments*, when shipping for Environmental Remediation (ER).
- 2.2** This procedure applies to the preparation of packages/packaging containing hazardous material samples, standards, sources, and equipment.

3.0 GENERAL INFORMATION

None

4.0 USE REFERENCES

- A.** FBP-BS-PRO-00062, *Records Management Process*
- B.** FBP-ER-PRO-00270, *Waste Sampling*
- C.** FBP-ER-PRO-00275, *Sample Chain-of-Custody*
- D.** FBP-ER-PRO-00298, *Process for Preparation of Department of Transportation (DOT) Non-Regulated and Regulated Shipments*
- E.** FBP-MC-PL-00002, *Nuclear Materials Control and Accountability (NMC&A) Plan for the Facilities Managed by Fluor-BWXT Portsmouth LLC*
- F.** FBP-RP-PRO-00036, *Radiological Surveys for the Receipt, Transport, and Movement of Radioactive Materials*
- G.** FBP-WM-PL-00051, *Transportation Training Plan*
- H.** FBP-WM-PRO-00044, *Preparing Off-Site Shipments of Hazardous Materials*

5.0 RESPONSIBILITIES

5.1 Sampling Team Supervisor

Directs the activities of the sampling team for the correct application of this procedure.

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5.2 Sampling Team/Sample Custodian/Sample Management Office (SMO)

Provides technical direction and information regarding sample constituents and quantities.

5.3 Qualified Worker

Performs field operations as directed.

5.4 Transportation Specialist (TS)

Provides technical direction and information regarding shipping and packaging requirements for the specific types of material. Ships materials on behalf of Department of Energy (DOE).

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6.0 ACTIONS

6.1 Planning

NOTE

In addition to the requirements of this procedure when shipping National Security Assets such as Confidential-National Security Information (CNSI), Secret-National Security Information (SNSI), Confidential-Restricted Data (CRD), Secret Restricted Data (SRD), Unclassified Controlled Information (UCI), Unclassified Controlled Nuclear Information (UCNI), and/or Export Controlled Information (ECI), contact Site security contractor for guidance and specific requirements on security plans as applicable.

SMO/Sampling Team Supervisor

- 6.1.1 Ensure that personnel that are performing transportation related duties such as packaging, marking and labeling per this procedure are trained in accordance with FBP-WM-PL-00051, *Transportation Training Plan*.
- 6.1.2 Provide any and all relevant information, (i.e., historical data, process knowledge, surveys, etc.) on material to Waste Disposition Specialist (WDS)/TS.

WDS/SMO

- 6.1.3 Provide to TS and Sampling Team Supervisor the following information, as applicable:
 - List of chemicals or preservatives, and their concentrations; Safety Data Sheets (SDSs), if applicable. (see Appendix C, *Non-regulated Quantities of Preservatives*.)
 - Historical analytical data from sampling site
 - Radiological survey results or indication that the material is not radioactively contaminated

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TS

- 6.1.4** Classify material and select approved packaging as well as carrier (e.g., Fed Ex) and method (i.e., air, ground, etc.) in accordance with 49 CFR and/or International Air Transport Association (IATA) regulations.

NOTE

When samples are shipped by air, packaging must be designed and constructed to prevent leakage caused by altitude and temperature changes during transport.

- 6.1.5** Transmit classification, packaging, and carrier/method information to the Sampling Team/Sample Custodian/SMO.

Sampling Team/Sample Custodian/SMO

- 6.1.6** Ensure the limits specified in Appendix C are met for quantities of preservatives

TS

- 6.1.7** Verify the receiving facility's Nuclear Regulatory Commission (NRC) radiological license status and limits are not exceeded, and are authorized to receive materials before shipment by verifying the Facility Authorized for Radioactive Material Receipt box on form FBP-ER-PRO-00298-F01, *Environmental Remediation, Information/Authorization Form*, has been checked Yes.

NOTE

If the shipment contains **either** 0.5-gram Uranium enriched in ^{235}U (special nuclear material) **or** 500 grams of depleted/normal Uranium (source material), a DOE/NRC 741 form will be provided by Nuclear Materials Controls and Accountability (NMC&A).

- 6.1.8** Request or verify request has been made for a Nuclear Transaction Report (DOE/NRC 741) from NMC&A (5 days prior to shipment where possible).
- 6.1.9** Determine appropriate marking, labeling, and placarding requirements.
- 6.1.10** Provide marking, labeling, and placarding information to the Sample Custodian/SMO.
- 6.1.11** Prepare appropriate shipping papers as required for the mode of shipment/transport:
- A.** For ground transport, complete a Bill of Lading (BOL).
 - B.** For air transport of samples, complete an *Airbill*.

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- C. For air transport of samples that qualify as dangerous goods (i.e., they failed exemption criteria), use a Shipper's Declaration of Dangerous Goods form (see Appendix E, *Example of a Dangerous Goods Checklist for a Non-Radioactive Shipment*). MUST USE APPROVED SOFTWARE for FedEx unless Class 7 material. For Class 7 material per IATA limitation FX-18, use an appropriate format/template as illustrated in Appendix D, *Example of a Shipper's Declaration for Dangerous Goods Form*.
- D. For ground shipments use FBP-WM-PRO-00044-F07 *Transportation Regulatory Compliance Checklist*.
- E. Legibly sign "Fluor-BWXT Portsmouth LLC, for The U.S. Department of Energy" (when applicable).
- F. Print or type shipper's name and contract number on appropriate shipping documents.

6.1.12 Generate or obtain the following documentation (for the Shipment Documentation Folder [SDF]), as applicable, for the selected mode of transport:

- Advanced shipment notification to intended receiving facility
- All documentation used to determine characterizations/classification
- Any additional documentation required by the intended receiving facility
- Chain-of-custody (COC)
- Checklists, as appropriate
- Documentation (e.g., email) of departure notification to Plant Shift Superintendent (PSS), and NMC&A
- Emergency Response Guide (ERG) with Department of Transportation (DOT) proper shipping names
- FBP-WM-PRO-00044-F01, *Fluor-BWXT Portsmouth LLC (FBP) Shipment Document Folder Checklist*
- FBP-WM-PRO-00044-F10, *Fluor-BWXT Portsmouth LLC on Behalf of USDOE Instructions Regarding Enroute Security and Controls for Shipments Consigned as Exclusive Use (Sole Use or Full Load)*, as applicable
- Inbound and outbound radiological surveys of the conveyance (FBP-RP-PRO-00001-F01, *Radiological Survey Form*) that have been signed by the Radiation Protection (RP) Supervisor (per FBP-RP-PRO-00036, *Radiological Surveys for the Receipt, Transport, and Movement of Radioactive Materials*), as applicable

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- Materials inspection checklist (sampling team)
- Notice to transport to intended receiving facility
- Portsmouth Material Accountability System (PORTSMAS) report
- Pre-shipment radiological surveys of the individual containers (FBP-RP-PRO-00001-F01) that have been signed by the RP Supervisor (per FBP-RP-PRO-00036, *Radiological Surveys for the Receipt, Transport, and Movement of Radioactive Materials*)
- Radiological surveys of packages (coolers, etc.)
- Radiological surveys of samples
- Regulated asbestos waste shipment record
- Reviewed and final copy of DOE/NRC Form 741 from NMC&A
- Safe volume sampling log
- Security Plan Documentation
- Shipping Order form (sampling team)
- Shipping papers (e.g., BOL or Uniform Hazardous Waste Manifest [UHWL]), Shipper's Declaration (3 copies) and ERG Guide
- Special nuclear material exemption certificate to intended receiving facility
- Specific instructions on preferred and prohibited routes

6.2 Packaging

Qualified Worker/Sample Shipment Team

- 6.2.1 Maintain COC for individual sample containers per FBP-ER-PRO-00275, *Sample Chain-of-Custody*; initiate COC for package.
- 6.2.2 Package samples per TS's guidance in accordance with 49 CFR and/or IATA and in accordance with FBP-ER-PRO-00298, *Process for Preparation of Department of Transportation (DOT) Non-Regulated and Regulated Shipments*.
 - **IF** required by the laboratory, **THEN** include cooling media in the package as needed to maintain temperature control.

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- When shipping solids samples (i.e., paper wipes, light soils, etc.) without the presence of liquids, include a thermal temperature blank (a 125-milliliter polypropylene bottle filled with clean tap water and bagged in a 2-mil minimum thickness sealable bag).

- 6.2.3** Attach COC documentation, sealed from moisture, to inner surface of package (e.g., cooler lid) for off-site commercial carrier shipment.

NOTE

Custody may be transferred to the driver when transporting samples site to site. The COC may be carried external to the cooler. All COC requirements are in effect.

- 6.2.4** Attach Tamper-Indicating Device (TID) to package.

- 6.2.5** Request radiological shipment surveys on individual containers and packages prepared for shipment.

6.3 Shipment

TS

- 6.3.1** Review the paperwork, marking, and labeling of the package with the latest edition of the IATA Dangerous Goods Regulations and Dangerous Goods Checklist for Non-Radioactive and Radioactive Shipments (see Appendix E and Appendix F respectively for examples).

- Using the IATA regulations, verify all reference sections called out on the checklist are checked Yes, No or N/A for all the required paperwork, markings, and label(s).

- 6.3.2** Ensure an additional peer review is performed by a WM TS trained and qualified to IATA regulations.

- In addition to the requirements of Step 6.3.1, compare the hazard class/sub class on the Shipper's Declaration to the hazard class/sub class label(s) applied to the package, making sure they match.

- 6.3.3** Retain a copy of SDF (including but not limited to the shipping papers, chain-of-custody documentation, sampling log, radiological survey results, etc.) in accordance with FBP-BS-PRO-00062, *Records Management Process*, and the requirements of 49 CFR 172.201.

- 6.3.4** Return the shipping papers (3 copies) of the shipper's declaration and ERG Guide to SMO to include with package.

Qualified Worker/Sampling Team

- 6.3.5** Submit package and paperwork to carrier for shipment.

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- 6.3.6 Notify receiving laboratory of date/time package was submitted for shipment, and any tracking information.

TS

- 6.3.7 Supply a scan or copy of the shipping paper and applicable ERG (e.g., via email) to the PSS, NMC&A, and the Transportation Manager.
- 6.3.8 Track shipment(s) to delivery; resolve any issues. If based on the tracking of the shipment via FedEx Ship Manager software, the shipment is not received on the expected date of arrival by the consignee then a notification to a DOE representative must be made as per DOE guidelines.
- 6.3.9 **IF** the shipment contained *either* fissile material *or* more than a Type A quantity of radioactive materials, **THEN** notify the consignee to verify the expected date of arrival and any special loading or unloading instructions.

7.0 RECORDS

7.1 Records Generated

Documents in SDF

7.2 Requirements

- A. Records generated or received as a result of performing this procedure shall be managed in accordance with FBP-BS-PRO-00062, *Records Management Process*.
- B. Per 49 CFR 172.201 (e) *Retention and Recordkeeping for Shipping Papers Required by 172.200* (a), for a hazardous waste, the shipping paper copy must be retained for 3 years after the material is accepted by the initial carrier. For other hazardous materials, the shipping paper must be retained for 2 years after the material is accepted by the initial carrier.

8.0 DEFINITIONS/ACRONYMS

8.1 Definitions

- A. **Hazardous Material** – Any substance or material which has been designated by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce.
- B. **Limited Quantity** – The maximum amount of a hazardous material for which there is a specific labeling or packaging exception.
- C. **Material of Trade** – An item that meets the definition in 49 CFR 171.8 and is limited to the specifications in 49 CFR 173.6.
- D. **Package** – Any receptacle, together with its contents (e.g., box or cooler), used to hold a sample of hazardous material for transport.

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- E. Packaging** – Any receptacle and other components or materials necessary for the receptacle to perform its containment function.
- F. Proper Shipping Name** – Name given to a hazardous material as shown in Roman print (font) in the Hazardous Materials Table in 49 CFR 172.101.
- G. Qualified Worker** – FBP personnel who are trained, qualified, and authorized to perform work at the PORTS worksite.
- H. Sample** – A small portion of water, soil, air, or other material that is collected for the sole purpose of testing to determine its characteristics or composition.
- I. Sample Custodian** - performs sampling, labeling, and storage of samples, retaining custody control of samples until sample are relinquished to appropriate personnel. Performs related duties as assigned.
- J. Sampling Team Supervisor** - directs the sample technicians in the day to day field activities, assigns duties as necessary to complete sample schedules.
- K. Shipping Paper** – Shipping order, *Airbill* form, *Shipper's Declaration of Dangerous Goods* form, bill of lading, manifest, or other shipping document serving a similar purpose and containing information required by 49 CFR 172.202, 172.203, and 172.204 as well as International Civil Aviation Organization (ICAO) technical instructions (10.8) for the safe transport of dangerous goods by air.
- L. Transportation Specialist**– Individual or organization that offers for transport or shipment a material meeting the DOT definition of a “hazardous material.”

8.2 Acronyms

- A. BOL** – Bill of Lading
- B. COC** – Chain-of-Custody
- C. ER** – Environmental Remediation
- D. ERG** – Emergency Response Guidebook
- E. IATA** – International Air Transport Association
- F. NMC&A** – Nuclear Materials Controls and Accountability
- G. NRC** – Nuclear Regulatory Commission
- H. PSS** – Plant Shift Superintendent
- I. RP** – Radiation Protection
- J. SDF** – Shipment Documentation Folder

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- K. SMO** – Sample Management Office
- L. TS** – Transportation Specialist
- M. WDS** – Waste Disposition Specialist

9.0 SOURCE REFERENCES

- A.** DOE/NRC 741 form, *Nuclear Material Transaction Report*
- B.** *Emergency Response Guidebook*
- C.** FBP-MC-PL-00002, *Nuclear Materials Control and Accountability (NMC&A) Plan for the Facilities Managed by Fluor-BWXT Portsmouth LLC*
- D.** IATA, *Dangerous Goods Checklist for a Radioactive Shipment* (from IATA’s *Dangerous Goods Regulations*)
- E.** IATA, *Dangerous Goods Regulations*, latest edition
- F.** International Atomic Energy Agency (IAEA) *Regulations for the Safe Transport of Radioactive Material*
- G.** *Hazardous Materials Packaging and Transportation Safety*, Department of Energy (DOE) Order 460.1D, U.S. DOE, Washington, D.C.
- H.** Title 10 CFR 71, NRC, *Packaging and Transportation of Radioactive Material*
- I.** U.S. Department of Transportation (DOT), *Hazardous Materials Regulations*, 49 CFR Parts 100–199
- J.** U.S. Environmental Protection Agency (EPA), *Regulations and Standards*, 40 CFR Parts 261–262 and 264–270

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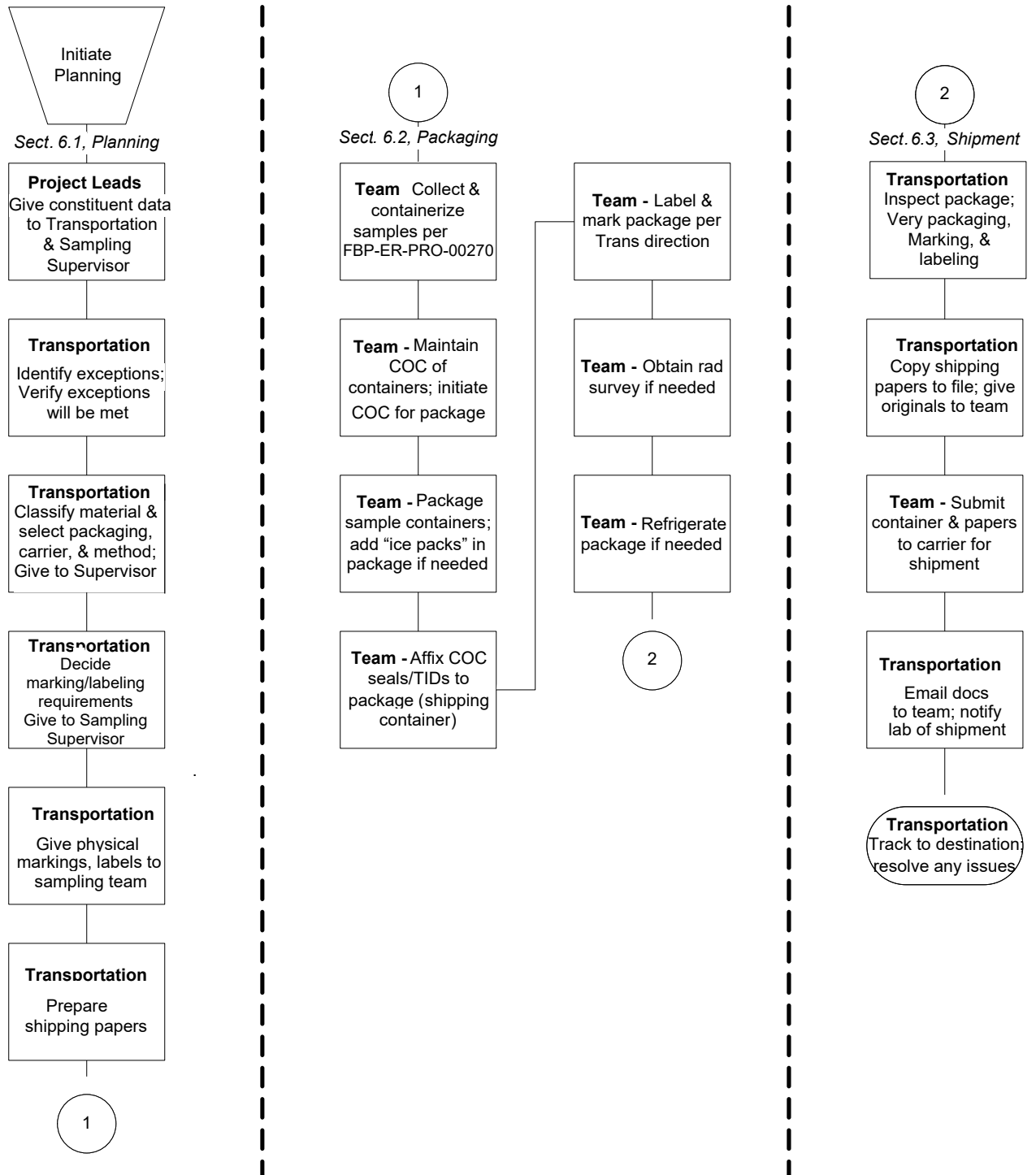
Appendix A
REGULATORY REQUIREMENTS FLOW DOWN

1. DOE/NRC 741 form, *Nuclear Material Transaction Report*
2. DOE Order 460.1D, *Hazardous Materials Packaging and Transportation Safety*
3. IATA, *Dangerous Goods Regulations*
4. International Atomic Energy Agency (IAEA), *Regulations for the Safe Transport of Radioactive Material*
5. Title 10 CFR 71, NRC, *Packaging and Transportation of Radioactive Material*
6. U.S. Department of Transportation (DOT), *Hazardous Materials Regulations*, 49 CFR Parts 100–199
7. U.S. Environmental Protection Agency (EPA), *Regulations and Standards*, 40 CFR Parts 261–262 and 264–270

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Appendix B

HAZMAT SAMPLE SHIPPING FLOW CHART



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Appendix C NON-REGULATED QUANTITIES OF PRESERVATIVES


When any sample is to be shipped by common carrier or sent through the United States Mails, it must comply with the Department of Transportation Hazardous Materials Regulations (49 CFR 172). The person offering such material for transportation is responsible for ensuring such compliance.

For the preservation requirements, the Office of Hazardous Materials, Materials Transportation Bureau, Department of Transportation has determined that the Hazardous Material Regulations do not apply to the following materials:

<u>Preservative</u>	<u>In water solutions at concentrations not to exceed:</u>
Hydrochloric Acid (HCl)	0.15% (pH \approx 1.9 or greater)
Nitric Acid (HNO ₃)	0.28% (pH \approx 1.62 or greater)
Sulfuric Acid (H ₂ SO ₄)	0.38% (pH \approx 1.15 or greater)
Sodium Hydroxide (NaOH)	0.20% (pH \approx 12.3 or less)

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Appendix D
EXAMPLE OF A SHIPPER'S DECLARATION FOR DANGEROUS GOODS FORM

SHIPPER'S DECLARATION FOR DANGEROUS GOODS				(Provide at least three copies to the airline.)				
Shipper			Air Waybill No.					
Consignee			Page of Pages					
			Shipper's Reference Number (optional)					
<p><i>Two completed and signed copies of this Declaration must be handed to the operator</i></p>								
<p>TRANSPORT DETAILS</p> <p>This shipment is within the limitations prescribed for: (delete non applicable)</p> <table border="1"> <tr> <td>PASSENGER AND CARGO AIRCRAFT</td> <td>CARGO AIRCRAFT ONLY</td> </tr> </table> <p>Airport of Departure</p> <p>Airport of Destination:</p>			PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY	<p>WARNING</p> <p>Failure to comply with all respects with the applicable Dangerous Goods Regulations may be in breach of the applicable law, subject to legal penalties.</p> <p>Shipment type: (delete non-applicable) <input type="checkbox"/> NON-RADIOACTIVE <input type="checkbox"/> RADIOACTIVE</p>			
PASSENGER AND CARGO AIRCRAFT	CARGO AIRCRAFT ONLY							
NATURE AND QUANTITY OF DANGEROUS GOODS								
Dangerous Goods Identification								
UN or ID No.	Proper Shipping Name	Class or Division (Subsidiary Risk)	Packing Group	Quantity and type of packaging	Packing Inst.	Authorization		
Additional Handling Information								
<p>I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labelled/placarded, and are in all respects in proper condition for transport according to applicable International and National Governmental Regulations. I declare that all of the applicable air transport requirements have been met.</p>				<p>Name/Title of Signatory</p> <p>Place and Date</p> <p>Signature (A typed signature may be used if the origin and destination are in the United States or its territories.)</p>				
Emergency Telephone Number								
<p>FOR RADIOACTIVE MATERIAL SHIPMENT ACCEPTABLE FOR PASSENGER AIRCRAFT, THE SHIPMENT CONTAINS RADIOACTIVE MATERIAL INTENDED FOR USE IN OR INCIDENT TO RESEARCH, MEDICAL DIAGNOSIS, OR TREATMENT. ADR EUROPEAN TRANSPORT STATEMENT: CARRIAGE IN ACCORDANCE WITH 1.1.4.2.1</p>								

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Appendix E
EXAMPLE OF A DANGEROUS GOODS CHECKLIST
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DANGEROUS GOODS CHECKLIST FOR A NON-RADIOACTIVE SHIPMENT

The recommended checklist appearing on the following pages is intended to verify shipments at origin.

Never accept or refuse a shipment before all items have been checked.

Is the following information correct for each entry?

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A
1. Two copies in English and in the IATA format including the air certification statement [8.1.1, 8.1.2, 8.1.6.12]	<input type="checkbox"/>	<input type="checkbox"/>	
2. Full name and address of Shipper and Consignee [8.1.6.1, 8.1.6.2]	<input type="checkbox"/>	<input type="checkbox"/>	
3. If the Air Waybill number is not shown, enter it. [8.1.6.3]	<input type="checkbox"/>		
4. The number of pages shown [8.1.6.4]	<input type="checkbox"/>	<input type="checkbox"/>	
5. The non-applicable Aircraft Type Deleted or not shown [8.1.6.5]	<input type="checkbox"/>	<input type="checkbox"/>	
6. If full name of Airport or City of Departure or Destination is not shown, enter it. [8.1.6.6 and 8.1.6.7] Information is optional	<input type="checkbox"/>		<input type="checkbox"/>
7. The word "Radioactive" deleted or not shown [8.1.6.8]	<input type="checkbox"/>	<input type="checkbox"/>	
Identification			
8. UN or ID Number, preceded by prefix [8.1.6.9.1, Step 1]	<input type="checkbox"/>	<input type="checkbox"/>	
9. Proper Shipping Name and the technical name in brackets for asterisked entries [8.1.6.9.1, Step 2]	<input type="checkbox"/>	<input type="checkbox"/>	
10. Class or Division, and for Class 1, the Compatibility Group, [8.1.6.9.1, Step 3]	<input type="checkbox"/>	<input type="checkbox"/>	
11. Subsidiary Risk, in parentheses, immediately following Class or Division [8.1.6.9.1, Step 4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Packing Group [8.1.6.9.1, Step 5]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quantity and Type of Packing			
13. Number and Type of Packages [8.1.6.9.2, Step 6]	<input type="checkbox"/>	<input type="checkbox"/>	
14. Quantity and unit of measure (net, or gross followed by "G" as applicable) within per package limit [8.1.6.9.2, Step 6]	<input type="checkbox"/>	<input type="checkbox"/>	
15. When different dangerous goods are packed in one outer packaging, the following rules are complied with:			
- Compatible according to Table 9.3.A.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- UN packages containing Division 6.2 [5.0.2.11(c)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- "All packed in one (type of packaging)" [8.1.6.9.2, Step 6(f)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Calculation of "Q" value must not exceed 1 [5.0.2.11 (g) & (h); 5.0.3.2; 8.1.6.9.2, Step 6(g)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Overpack			
- Compatible according to Table 9.3.A. [5.0.1.5.1 and 5.0.1.5.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Wording "Overpack Used" [8.1.6.9.2, Step 7]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packing Instructions			
17. Packing Instruction Number [8.1.6.9.3, Step 8]	<input type="checkbox"/>	<input type="checkbox"/>	
Authorizations			
18. Check all variable special provisions. The Special Provision Number if A1, A2, A51, A81, A88, A99 or A130 [8.1.6.9.4, Step 9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Indication that governmental authorization is attached, including a copy in English and additional approvals for other items under [8.1.6.9.4, Step 9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Additional Handling Information			
20. The mandatory statement shown for self-reactive and related substances of Division 4.1 and organic peroxides of Division 5.2, or samples thereof and for PBE [8.1.6.11.1, 8.1.6.11.2 and 8.1.6.11.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Name and Telephone Number of a responsible person for Division 6.2 Infectious Substance shipment [8.1.6.11.4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Name and Title (or Department) of Signatory, Place and Date indicated and Signature of Shipper [8.1.6.13, 8.1.6.14 and 8.1.6.15]	<input type="checkbox"/>	<input type="checkbox"/>	
23. Amendment or alteration signed by Shipper [8.1.2.6]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Appendix E
EXAMPLE OF A DANGEROUS GOODS CHECKLIST
FOR A NON-RADIOACTIVE SHIPMENT
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	YES	NO*	N/A
AIR WAYBILL—HANDLING INFORMATION			
24. The statement: "Dangerous goods as per attached Shipper's Declaration" or "Dangerous Goods as per attached DGD" [8.2.1(a)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. "Cargo Aircraft Only" or "CAO", if applicable [8.2.1(b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. Where non-dangerous goods are included, the number of pieces of dangerous goods shown [8.2.2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACKAGE(S) AND OVERPACKS			
27. Packaging conforms with packing instruction and is free from damage or leakage [The relevant PI and 9.1.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Same number and type of packagings and overpacks delivered as shown on DGD [9.1.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Markings			
29. UN Specification Packaging, marked according to 6.0.4 and 6.0.5:			
— Symbol and Specification Code	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
— X, Y or Z meets or exceeds Packing Group/Packing Instruction requirements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
— Gross Weight within limits (Solids, Inner Packagings or IBCs[SP A179])	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
— Infectious substance package marking [6.5.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. The UN or ID number(s) [7.1.5.1(a)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. The Proper Shipping Name(s) including technical name where required [7.1.5.1(a)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. The full name(s) and Address(es) of Shipper and Consignee [7.1.5.1(b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. For consignments of more than one package of all classes (except ID 8000 and Class 7) the net quantity, or gross weight followed by "G", as applicable, unless contents are identical, marked on the packages [7.1.5.1(c)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. Carbon Dioxide, Solid (Dry Ice), the net quantity marked on the packages [7.1.5.1(d)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. The Name and Telephone Number of a responsible person for Division 6.2 Infectious Substances shipment [7.1.5.1(e)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. The Special Marking requirements shown for Packing Instruction 202 [7.1.5.1(f)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Limited Quantities mark [7.1.5.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. The Environmentally Hazardous Substance Mark [7.1.6.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labelling			
39. The label(s) identifying the Primary risk as per 4.2, Column D [7.2.3.2; 7.2.3.3(b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. The label(s) identifying the Subsidiary risk, as per 4.2, Column D [7.2.3.2; 7.2.6.2.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. Cargo Aircraft Only label [7.2.4.2; 7.2.6.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. "Orientation" labels on two opposite sides, if applicable [7.2.4.4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. "Cryogenic Liquid" labels, if applicable [7.2.4.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. "Keep Away From Heat" label, if applicable [7.2.4.5]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. All required labels are displayed correctly [7.2.6] and all irrelevant marks and labels removed [7.1.1; 7.2.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For Overpacks			
46. Packaging Use markings and hazard and handling labels, as required must be clearly visible or reproduced on the outside of the overpack [7.1.4.1, 7.2.7]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. The word "Overpack" marked if markings and labels are not visible [7.1.4.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. If more than one overpack is used, identification marks shown and total quantity of dangerous goods [7.1.4.2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. "Cargo Aircraft Only" restrictions [5.0.1.5.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GENERAL			
50. State and Operator variations complied with [2.8]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. Cargo Aircraft Only shipments, a cargo aircraft operates on all sectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments:			
Checked by:			
Place:		Signature:	
Date:		Time:	

* IF ANY BOX IS CHECKED "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.

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Appendix F
EXAMPLE OF A DANGEROUS GOODS CHECKLIST FOR A RADIOACTIVE SHIPMENT
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DANGEROUS GOODS CHECKLIST FOR A RADIOACTIVE SHIPMENT

The recommended checklist appearing on the following pages is intended to verify shipments at origin.

Never accept or refuse a shipment before all items have been checked.

Is the following information correct for each entry?

SHIPPER'S DECLARATION FOR DANGEROUS GOODS (DGD)

	YES	NO*	N/A
1. Two copies in English and in the IATA format including the air certification statement [10.8.1.2; 10.8.1.4, 8.1.1 and 10.8.3.12.2]	<input type="checkbox"/>	<input type="checkbox"/>	
2. Full name and address of Shipper and Consignee [10.8.3.1, 10.8.3.2]	<input type="checkbox"/>	<input type="checkbox"/>	
3. If the Air Waybill number is not shown, enter it. [10.8.3.3]	<input type="checkbox"/>	<input type="checkbox"/>	
4. The number of pages shown [10.8.3.4]	<input type="checkbox"/>	<input type="checkbox"/>	
5. The non-applicable Aircraft Type deleted [10.8.3.5]	<input type="checkbox"/>	<input type="checkbox"/>	
6. If full name of Airport or City of Departure or Destination is not shown, enter it. [10.8.3.6 and 10.8.3.7]	<input type="checkbox"/>	<input type="checkbox"/>	
7. The word "Non-Radioactive" deleted [10.8.3.8]	<input type="checkbox"/>	<input type="checkbox"/>	
Identification			
8. UN Number, preceded by prefix "UN" [10.8.3.9.1, Step 1]	<input type="checkbox"/>	<input type="checkbox"/>	
9. Proper Shipping Name [10.8.3.9.1, Step 2]	<input type="checkbox"/>	<input type="checkbox"/>	
10. Class 7 [10.8.3.9.1, Step 3]	<input type="checkbox"/>	<input type="checkbox"/>	
11. Subsidiary Risk, in parentheses, immediately following Class [10.8.3.9.1, Step 4] and Packing Group if required for Subsidiary Risk [10.8.3.9.1, Step 5]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Quantity and Type of Packing			
12. Name or Symbol of Radionuclide(s) [10.8.3.9.2, Step 6 (a)]	<input type="checkbox"/>	<input type="checkbox"/>	
13. A description of the physical and chemical form (if in other form [10.8.3.9.2, Step 6 (b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. "Special Form" (not required for UN 3332 or UN 3333) or low dispersible material [10.8.3.9.2, Step 6 (b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. The number and type of packages and the activity in becquerel or multiples thereof in each package. For Fissile Material the total weight in grams or kilograms of fissile material may be shown in place of activity [10.8.3.9.2, Step 7]	<input type="checkbox"/>	<input type="checkbox"/>	
16. For different individual radionuclides, the activity of each radionuclide and the words "All packed in one" [10.8.3.9.2, Step 7]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Activity within limits for Type A packages [Table 10.3.A], Type B, or Type C (see attached competent authority certificate)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Words "Overpack Used" shown on the DGD [10.8.3.9.2, Step 8]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Packing Instructions			
19. Category of package(s) or overpack [10.8.3.9.3, Step 9 and Table 10.5.C]	<input type="checkbox"/>	<input type="checkbox"/>	
20. Transport Index and dimensions (Length x Width x Height) for Category II and Category III only [10.8.3.9.3, Step 9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. For Fissile Material the Criticality Safety Index or the words "Fissile Excepted" [10.8.3.9.3, Step 9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Authorizations			
22. Identification marks shown and a copy of the document in English attached to DGD for the following [10.8.3.9.4, Step 10; 10.5.7.2.2]:			
- Special Form approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Low dispersible material approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Type B package design approval certificate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
- Other approval certificates as required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Additional Handling Information [10.8.3.11]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Name and Title (or Department) of Signatory, Place and Date indicated [10.8.3.13 and 10.8.3.14] and Signature of Shipper [10.8.3.15]	<input type="checkbox"/>	<input type="checkbox"/>	
25. Amendment or alteration signed by Shipper [10.8.1.7]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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Appendix F
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	YES	NO*	N/A
AIR WAYBILL—HANDLING INFORMATION			
26. The statement: "Dangerous goods as per attached Shipper's Declaration" or "Dangerous Goods as per attached DGD" [10.8.8.1(a)]	<input type="checkbox"/>	<input type="checkbox"/>	
27. Cargo Aircraft Only or CAO, if applicable [10.8.8.1(b)]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Where non-dangerous goods are included, the number of pieces of dangerous goods shown [10.8.8.2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
PACKAGE(S) AND OVERPACKS			
29. Same number and type of packagings and overpacks delivered as shown on DGD	<input type="checkbox"/>	<input type="checkbox"/>	
30. Unbroken transportation seal [10.6.2.4.1.2] and package in proper condition for carriage [9.1.3; 9.1.4]	<input type="checkbox"/>	<input type="checkbox"/>	
Markings			
31. The UN Number [10.7.1.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	
32. The Proper Shipping Name [10.7.1.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	
33. The full Name and Address of the Shipper and Consignee [10.7.1.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	
34. The permissible gross weight if it exceeds 50 kg [10.7.1.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Type A packages, marked as per 10.7.1.3.4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. Type B packages, marked as per 10.7.1.3.5	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. Type C packages, Industrial Packages and packages containing Fissile material marked as per 10.7.1.3.6, 10.7.1.3.3 or 10.7.1.3.7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Labelling			
38. Two correctly completed Radioactive Hazard labels on opposite sides [10.7.3.3; 10.7.4.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	
39. Applicable label(s) identifying the Subsidiary [10.7.3.2; 10.7.4.3]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Two Cargo Aircraft Only labels if required on the same surface near the Hazard labels [10.7.4.2.4; 10.7.4.3.1; 10.7.4.4.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. For fissile materials, two correctly completed Criticality Safety Index (CSI) labels on the same surface as the hazard labels [10.7.3.3.4; 10.7.4.3.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. All displayed labels correctly affixed and irrelevant marks and labels removed [10.7.1.1; 10.7.2.1; 10.7.4]	<input type="checkbox"/>	<input type="checkbox"/>	
For Overpacks			
43. Packaging markings as required must be clearly visible or reproduced on the outside of the overpack [10.7.1.4.1]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. If more than one overpack is used, identification marks shown and total quantity of dangerous goods [10.7.1.4.2]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. Hazard labels reflect total for overpack [10.7.3.4]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GENERAL			
46. State and Operator variations complied with [2.8]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. Cargo Aircraft Only shipments, a cargo aircraft operates on all sectors	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Packages containing Carbon dioxide solid (dry ice), the marking, labelling and documentary requirements complied with [Packing Instruction 954; 7.1.5.1 (d); 7.2.3.9]	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Comments: _____			

Checked by: _____

Place: _____ Signature: _____

Date: _____ Time: _____

*** IF ANY BOX IS CHECKED "NO", DO NOT ACCEPT THE SHIPMENT AND GIVE A DUPLICATE COPY OF THIS COMPLETED FORM TO THE SHIPPER.**