

PHILIPS HEALTHCARE

Trainee Name:	
Trainee Signature:	
Date:	

Course Title	Local Course Code	Revision
Dangerous Goods & Hazardous Materials Management	5111-0339	E

By submitting this form, I agree that I have completed the required training for this course and understand the material and the impact on my job responsibility.

Signed by 3rd Party Contractor Training Representative:

_____ Date: _____

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Document Number: **5111-0339E**
Title: **Dangerous Goods and Hazardous Material Management**
Effective Date: **See PDM**

Approvals:	Title	Name	Date
Process Owner:	EHS Engineer	Amy Wallace	See PDM
Designated User(s):	Manager Quality & Regulatory Affairs (Canada)	Melissa Lake	See PDM
	Logistics Manager (AllParts Medical)	James Akins	See PDM

Note: The Process Owner and Designated User names are here for reference only and may not be current. See PDM for the current Process Owner and Designated User names.

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Rev	Major / Minor	Description
E	Major	Changed Name from Material Recycling and Disposition to Dangerous Goods and Hazardous Material Management; Edited All Sections; Added Sections 4, 6, Addenda A and Dangerous Goods Awareness Training Powerpoint reference.
A-D		See Matrix

1.0 PURPOSE AND SCOPE

1.1. Purpose

Philips Healthcare is committed to providing a safe, healthful, compliant and environmentally sustainable work environment. In an effort to enhance our environmental stewardship, Philips undertakes every action possible to reduce excess

material, to re-use excess parts whenever possible and follow through with proper recycling channels whenever feasible.

This policy is intended to review the Dangerous Good Compliance requirements for handling, storage and transportation of dangerous goods as well as the proper recycling and disposition of these excess materials which may be regulated by the Environmental Protection Agency, Department of Transportation or other State or local agency. The additional goal is to ensure excess materials that cannot be reduced at the source or reused are safely and compliantly handled, stored, disposed and/or recycled.

1.2. Scope

This policy applies to all Philips Healthcare North America (PHNA) employees, temporary employees, contractors and vendors working for or on behalf of Philips who by reason of their job responsibilities may affect the safety and complaint handling, storage, disposition and transportation of dangerous goods or other hazardous, regulated materials.

2.0 EXPLANATION OF KEY TERMS

AllParts Medical (APM)	A subsidiary of Philips Multi-Vendor who provides: technical support, technical training, pre-owned medical equipment and replacement parts for the medical imaging industry.
Blue Room	Parts Return Depot for Philips
Dangerous Goods	Substances or materials with the potential to cause injury or harm to people, property, or the environment when transported in commerce.
GHS	Globally Harmonized System Classification and Labeling of Chemicals
Multi-Vendor	Imaging vendors other than Philips, ie: GE, Siemens, Toshiba
Recyclable	Products containing components/materials that can be extracted and reused

3.0 ROLES AND RESPONSIBILITIES

3.1 Executive Management

Executive Management maintains the end line responsibility to ensure occupational health, safety and environmental compliance is incorporated into every business related task. Executive Management is responsible for providing Managers with the means and motivation to comply with all Philips policies and regulatory compliance manners.

3.2 Managers/Supervisors

Managers have direct oversight of the daily work activities and shall ensure that employees understand what equipment parts or excess materials may be regulated as dangerous goods and abide by the required handling, shipping and disposal procedures as outlined in this policy.

3.3 Environmental, Health & Safety Engineer (EHS)

The EHS Engineer provides technical guidance to personnel at all levels of responsibility on environmental, safety and health and regulatory compliance matters and maintains oversight of the PHNA Health and Safety Program, 5100-0010. The EHS Engineer shall review this program on a periodic basis to ensure the requirements outlined in this policy are current and the outlined work practices are aligned to current regulations.

3.4 Employees

All employees shall plan and conduct operations to ensure compliance with the requirements outlined in this procedure. Employees shall understand what consists of a hazardous material and their appropriate control measures to ensure compliance with the applicable regulations regarding their use, storage, shipment and disposal. All employees shall understand the hazards of the hazardous materials with which they work, the appropriate control measures, safe work practices, handling, shipping and disposal requirements. Employees shall never dispose of hazardous materials via sanitary trash or sanitary sewer. Employees should contact the EHS Engineer at ehs.field@philips.com for any questions on hazardous material management or disposal procedures.

4.0 DANGEROUS GOODS AWARENESS TRAINING

Individuals who, by reason of their job responsibilities, may directly or indirectly affect Dangerous Goods Transportation safety shall receive *Dangerous Goods Awareness Training*. Training shall be conducted initially upon hire and every two years thereafter. Dangerous Goods Awareness training powerpoint can be found in the reference section of this document. Dangerous Good Awareness training roles include, but are not limited to:

- Field Service Engineers
- National Service Specialists
- Regional Service Managers
- Purchasing Personnel
- Environmental Health and Safety personnel
- Customer Service Representatives

4.1 General Dangerous Goods Awareness Training Shall Include:

1. **General Awareness/familiarization** - Employees shall be provided general awareness/familiarization training designed to provide familiarity with the requirements of the regulations and to enable the employee to recognize and identify Dangerous Goods.
2. **Function Specific** – Employees must be provided function-specific training concerning DG regulations that are specifically applicable to the functions the employee performs.
3. **Safety training** – must include the following, where appropriate:
 - Emergency response information.

- Measures to protect the employee from the hazards associated with hazardous materials to which they may be exposed in the workplace; including specific measures the hazmat employer has implemented to protect employees from exposure.
- Methods and procedures for avoiding accidents, such as the proper procedures for handling packages containing hazardous materials.

4. Security awareness training – Employees must receive training that provides awareness of security risks associated with hazardous materials transportation and methods designed to enhance transportation security. This training must include a component covering how to recognize and respond to possible security threats.

5.0 EXAMPLES OF DANGEROUS GOODS









Employees may be expected to handle, store, return or dispose of excess materials and parts. These materials may be designated as hazardous or otherwise regulated due to their constituents and the potential impact they can have on the environment. Regulating bodies may include, but are not limited to the Department of Transportation (DOT), Occupational Safety and Health Administration (OSH) or the Environmental Protection Agency (EPA) requiring specific procedures for handling, transportation, storage and disposal of hazardous materials. The following outlines a list of potentially hazardous materials requiring control measures to ensure employee safety and compliance with these regulating bodies.

The parts identified below require special handling and disposal provisions:

5.1 Batteries

- Nickel Cadmium	- All Cell Phone Varieties
- Nickel Metal Hydride	- Lithium Metal
- Lithium Ion	- Alkaline
- AED MRx, MX-40 and XL	- Button Cell
- Nickel Zinc	- Other Dry Cell Batteries
- Lead Acid	

5.2 Hazardous Chemicals Classes common in Field Service Activities includes, but is not limited to:

Types of Chemical	Examples Include	Hazards	GHS Hazard Symbol
Paints	Repair Paints, Spray Paints	Flammability, skin & eye irritation,	
Batteries	Lithium, Lead Acid Batteries	Corrosivity, flammable, skin irritant, dangerous for environment	
Glues/ Adhesives	Loctite / Adhesives	Flammable, skin irritant, toxic to aquatic life	
Aerosols	WD 40, Teflon Stray, Adhesive spray, Cleaners	Flammability, skin & eye irritants	
Lubricants	Lubricating Grease	Flammable, skin irritant, toxic to aquatic life	
Flammable Liquids	Isopropyl Alcohol / Opti Clean / Paints	Flammability, eye irritant	
Compressed Gasses	Anesthetic Cal Gas, Helium Gas	cryogenic burns, suffocation in high concentrations;	
Cryogenic Liquid Helium	Liquid Helium	cryogenic burns, suffocation in high concentrations;	

5.3 Used Electronic Equipment – Equipment containing circuit boards

5.4 Mercury Containing Lamps & Switches

5.5 Cathode Ray Tubes (CRTs) & Monitors

6.0 HAZARDOUS MATERIAL MANAGEMENT

6.1 Driving with Hazardous Materials

Employees who transport hazardous materials in their vehicles as part of their regular job function are covered under the Materials of Trade exceptions found in 49CFR 173.6. To comply with the Materials of Trade exception requirements it is very important employees do the following when transporting hazardous materials in their vehicles:

1. Packages must be leak tight for liquids and gases, and be securely closed.
2. Packages must be secured in the vehicle to prevent shifting and to protect them from damage.
3. Employees should take extra caution to temperature fluctuations. Hazardous materials should not be stored in vehicles when they will be exposed to extreme heat or cold.
4. Each hazardous material must be packaged in the manufacturer's original packaging, or a packaging of equal or greater strength and integrity.
5. Each package must be marked with the proper shipping name or common name of the material contained in the package (i.e. isopropyl alcohol, paint, lithium batteries, etc.)

6. The gross weight of all packages containing hazardous materials may not exceed 200 kg or 440 pounds.

6.2 Storage of Hazardous Materials at Home

Employees who work remotely may have small amounts of excess hazardous materials that they need to store at home. Employees must comply with the following when storing materials at home:

- Packages must be leak tight for liquids and gases, and be securely closed.
- Packages of hazardous materials must be stored in a location where they will not be exposed to extreme heat or cold.
- Incompatible materials should be segregated based on hazard class/compatibility (Do not store alcohols or solvents next to acids or bases)
- Packages of hazardous materials must be stored in a secure location and protected from damage. Hazardous materials should be stored in the manufacturer's original packaging, or a packaging of equal or greater strength and integrity.

7.0 RETURNING REGULATED MATERIALS

Typically, the facility or customer site is considered the generator of any waste or excess material as they own the equipment and any by-products or waste from the equipment. Whenever possible, regulated or recyclable material like batteries, chemicals and mercury containing equipment should be disposed of or recycled on location at the facilities recycling area or waste area as applicable. When the site does not have proper outlets for recycling and/or disposition, it is the employee's responsibility to ensure these items are properly and compliantly managed and recycled or disposed.

Certain parts obtained from Spare Parts Supply (SPS) are considered hazardous materials per the Department of Transportation. Philips has classified these hazardous materials/parts into three risk categories. The ability to return a hazardous material to SPS is dependent upon the part's risk category. To determine if you have a high risk and/or unreturnable part please visit the Dangerous Good SharePoint Site.

Dangerous Goods SharePoint:

<https://share-intra.philips.com/sites/STS20130419150002/Dangerous%20Goods%20%20SPS%20and%20UPS/Forms/AllItems.aspx>

7.1 Philips Hazardous Materials Risk Categories:

Risk Category	Regulatory Concern	Part Description	Return Control	Return Status
High Risk (178 Parts = 1 ZREP)	FSE's not trained per (DOT) requirements to execute returns of Hazardous Materials	All other Hazardous Materials	Unreturnable	DO NOT RETURN under any Circumstances
Medium Risk (101 Parts)	<ol style="list-style-type: none"> 1. Need HazMat Label 2. Shipping Document 3. Returned Via Ground 	Lithium Ion Batteries*	<p>US ONLY: UPS Stores will Pack and Ship Medium Risk batteries</p> <p>CANADA: Recycle or Dispose Locally</p>	Returnable (if not damaged in a manner which creates a safety concern)
Low Risk (90 Parts)	<ol style="list-style-type: none"> 1. Need HazMat Label 2. Returned Via Ground 	Lead acid Batteries / Non-Spillable battery	<p>US ONLY: UPS Stores will Pack and Ship Low Risk batteries</p> <p>CANADA: Recycle or Dispose Locally</p>	Returnable (if not damaged in a manner which creates a safety concern)

***NOTE:** Lithium batteries identified by the manufacturer as being defective for safety reasons, or that have been damaged, that have the potential of producing a dangerous evolution of heat, fire or short circuit are **forbidden for transport** (e.g. those being returned to the manufacturer for safety reasons).

7.1.1 High Risk Parts:

High Risk parts may **ONLY** be shipped by individuals who are trained and certified to ship hazardous materials. FSE are not trained or certified in shipping hazardous materials and therefore cannot return these high risks parts to SPS under any circumstances. This “no return” policy applies to the USA & Canada.

If you have a High Risk part that is no longer needed you may:

1. Retain the part for a future service call.
2. Notify your Supervisor – (Perhaps another FSE in close proximity can use the part)
3. Dispose of the part according to local regulations. Please consult with local facility management to determine if customer has an outlet where you can compliantly recycle or dispose of the part. If there is no onsite management of the part available, contact EHS Engineer, Amy Wallace at ehs.field@philips.com for complaint disposal options.

7.1.2 Medium & Low Risk Parts

US ONLY: Medium and Low Risk parts can only be returned by an authorized shipper. If a low or medium risk part needs to be returned take the part and the box it arrives in to any UPS Store®. The UPS Store will use the Philips Healthcare account number to compliantly pack and ship your return for you. You will not be charged by the store. Follow all other standard returns processes.

To find the closest UPS store please visit <http://www.theupsstore.com/> and type in your postal code.

CANADA: Canada currently does not have agreement in place with UPS to ship batteries. Canada FSEs will need to recycle and or dispose locally. Most healthcare facilities have an on-site recycling area, please check with the site for recycling options first. If additional assistance is needed for disposal/recycling please contact the EHS Engineer, Amy Wallace @ ehs.field@phlips.com.

8.0 MANAGEMENT OF NON-RETURNABLE & EXCESS HAZARDOUS MATERIALS

When a part cannot be returned and proper outlet does not exist on location for disposal or recycling, follow the guidelines below.

8.1 Batteries

The recycling, management and disposition of various types of batteries will fit into one of these three categories:

- 1) Rechargeable Batteries,
- 2) Single Use Batteries and
- 3) Sealed Lead Acid batteries greater than 11 lbs.

8.1.1 Recycling Rechargeable Batteries

Call2Rcycle will accept the Following Rechargeable Batteries:

- Nickel Cadmium (Ni-Cd)
- Nickel Metal Hydride (Ni-MH)
- Lithium Ion (Li-Ion)
- AED MRx, MX-40 and XL
- Nickel Zinc (Ni-ZN)
- Small Sealed Lead Acid (SSLA/Pb)
- All cell phone varieties
- Or any individual dry cell rechargeable battery weighing 11 lbs or less.

If you have any of the rechargeable batteries listed above, follow these steps:

1. Go to Call2Recycle Website at: www.call2recycle.org
2. Type in your Zip Code in the “Drop Off Location” box
3. Take your recyclable batteries to the nearest participating drop off location that will accept batteries at NO CHARGE.

8.1.2 Accumulation of Batteries

US ONLY: If you accumulate *many batteries on a continual basis*, you have the option to ship the batteries as an individual collector. To do so, contact Call2Recycle at customerservice@call2recycle.org or call 877-723-1297 to set up recurring logistical arrangements for shipment. You will be provided with free boxes and pre-paid UPS Ground postage. Batteries should NEVER accumulate for more than 12 months.

8.1.3 Rechargeable Batteries Greater than 11 lbs.

Uninterrupted Power Supply (UPS) Batteries can often exceed Call2Recycle’s acceptance weight limit of 11 lbs. for Rechargeable Batteries. UPS batteries are typically sealed lead acid batteries. If you have rechargeable batteries greater than 11 lbs., contact the EHS Engineer at ehs.field@philips.com for guidance on disposal options.

Individual UPS batteries may need to be removed from the metal housing in order to meet shipping weight, return requirements.

8.1.4 Single Use Batteries

Single use batteries typically include:

- Alkaline
- Carbon Zinc
- Lithium Metal
- Button Cell / Coin Cell

For local disposal options go to:

1. Call2Recycle website at: www.call2recycle.org
2. Type in your zip code in the “Drop Off Locations”
3. Take your batteries to the local disposal agency

8.2 Excess Chemicals (Hazardous & Non-Hazardous)

Contact site facility management to determine if an on-site waste stream exists for disposal of excess chemicals. If locale site facility management does not have a proper disposal method contact your EHS Engineer at ehs.field@philips.com.

If you need to locate a Safety Data Sheet (SDS) to determine hazardous constituents go to:

- Efasim: <http://www.efasim4you.philips.com/efasim/login.htm>
- Enter User Id: **fasim1239**
- Enter Password: **welcome**

8.3 Used Electronic Equipment

Electronic equipment is comprised of many recyclable materials in the form of precious and non-precious metals. All electronic equipment shall be either returned for repair and reused or recycled. NEVER dispose of electronic equipment into the sanitary trash. Contact the local site facility management to determine if a proper electronic recycling stream exists.

8.3.1 Coded Electronic Equipment

- Some Philips parts considered repairable and are coded with the following codes, these circuit boards shall be returned to the Blue Room.
 - ZREP – Return and Repair
 - ZRET - Return
 - ZRFA – Return

8.3.2 Multi-Vendor circuit boards will not be “coded,” however there may still be value in reuse or repair of these circuit boards. To determine if a Multi-Vendor circuit board has potential value either through re-use or repair, please contact James Akins with AllParts Medical at: james.akins@philips.com.

8.3.3 Non-Repairable Circuit Boards

Non-repairable circuit boards shall be recycled. To properly recycle:

1. Check with the customer site facility management to see if an on-site recycling stream exists.
2. If an on-site recycling stream for electronic waste does not exist at customer sites check to see if there is a nearby Philips location where your used or unrepairable circuit boards can be taken.
3. If there is not a nearby Philips location, AllParts Medical will accept non-repairable circuit boards. If possible, it is advisable to accumulate enough circuit boards until a sufficient volume can be collected to offset cost of shipping. To send non-reusable/non-repairable circuit boards to AllParts Medical, follow these guidelines:
 - a. Use your best judgment to ensure you have enough circuit boards, in weight or by volume, to offset the shipping costs;
 - b. Send an email to James Akins at James.akins@philips.com notifying of the return for recycling purposes
 - c. Ensure there is a clearly stated note inside the box indicating circuit boards are excess equipment from the field being sent to APM for repair, reuse or recycling.

8.4 Other Electronic Equipment

All other electronic equipment includes any other item, whether as a whole, or in part which may possess internally circuit boards or other hazardous constituents. This includes, but is not limited to items such as CRTs, Monitors, handheld devices, computer equipment, electronic tools, etc. As with other regulated materials, contact the local on-site facility management to determine if they have a proper outlet for recycling or disposition. If not, please contact the EHS Engineer at ehs.field@philips.com for disposal and recycling options.

8.4.1 Mercury Containing Lamps and Metal Halide Lamps

Contact facility management for local on-site disposal/recycling options. If there is no onsite recycling available, contact the EHS Engineer at ehs.field@philips.com for recycling options.

8.4.2 E-Waste computer equipment assigned to the Field Sales and Service Employee

For anyone who needs to get dispose of IT equipment assigned to them (not product), i.e. Computers, hard drives, docking stations and accessories (less keyboards and mice) Contact:

- **United States**
Ship to Bothell Site:
Attn: IT Asset Manager
22100 Bothell Everett HWY
Bothell WA. 98021-8431
- **Canada**
Ship to the Philips Canada Markham Office
Attn: IT Delivery Manager
281 Hillmount Road
Markham, Ontario
Canada
L6C 2S3

9.0 SHIPPING & LABELING of BIOHAZARDOUS CONTAMINATED EQUIPMENT

If equipment or parts destined for return shipping are expected or may be reasonably anticipated to be contaminated with blood or other potentially infectious materials (OPIM), decontamination, as outlined in the Bloodborne Pathogens Exposure Control Plan, 5100-0012, is required before any item or part may be shipped. If decontamination is NOT feasible proper shipping procedures must be followed to properly contain the contamination, warn downstream recipients and comply with regulatory requirements.

9.1 Packaging and Labeling

If decontamination is not feasible, the contaminated or potentially contaminated equipment must be shipped in accordance with this procedure outlined below. A quick reference guide which can be printed and saved is also available in Addenda A of this

document, *Shipping Contaminated Parts*. This procedure outlines how to box, tag and offer for shipment, a known contaminated part or OPIM.

The following instructions outlined, comply with OSHA's Bloodborne Pathogen Standard, 29 CFR 1910.1030:

1. Apply a biohazard label to the equipment, which identifies or states which specific portion of the equipment has not been decontaminated. Biohazard labels can currently be ordered from the Club Colors website at:

<https://philips.ccbands.com/philips-specialties-1/philips-specialties/safety>

2. Place the item into a primary leak proof container (box, bag, etc.) encasing the item to be shipped; if the leak proof container can be punctured it must be placed into a secondary container;
3. Close the leak proof container holding the contaminated equipment;
4. Place an orange or red biohazard label on the outside of the leak proof container.
5. Place the Primary, labeled container, or box into a secondary shipping box. This secondary box does NOT need to be labeled with a bio-hazard sticker and may be offered for shipment per normal shipping procedures.

NOTE: *The U.S. Department of Transportation (DOT) 49 CFR 173.134 (b), **does not** regulated shipments of used contaminated medical equipment as hazardous if it conforms to the packaging requirements stated above which are in compliance with OSHA 29 CFR 1910.1030. This exemption (173.134 b) does not apply to equipment being sent for disposal. In Canada, if medical equipment that is not a dangerous good is contaminated with a substance that may be potentially infectious but the equipment is contained in the packaging stated above, it would not be subject to Transportation of Dangerous Goods regulations.*

10.0 BIOHAZARDOUS WASTE DISPOSAL

The performance of decontamination may result in the generation of materials requiring disposal via biohazardous waste. These materials may include but are not limited to personal protective equipment, disinfectant materials and expendable equipment components.

10.1 Decontaminated Waste Articles/Disposable Parts

Material or equipment that has been thoroughly decontaminated and do not contain any other regulated components i.e. circuit boards, batteries etc may be disposed of as ordinary waste.

10.2 Disposal of Biohazardous Contaminated Waste

Materials or equipment that are not destined for return shipping and remain contaminated or cannot be decontaminated must be disposed of as biohazardous contaminated waste. This requires placement within a biohazard labeled container suitable for such waste. Two types of containers are specified depending upon whether the contaminated materials are sharps or other regulated waste.

- Contaminated sharps are to be discarded as soon as feasible in containers that are closable, leak proof, puncture resistant, red in color and are labeled with the biohazard legend.
- Other regulated waste is to be placed in containers that are closable, constructed to contain all contents and prevent leakage, red in color and are labeled with the biohazard legend. Ex: Biohazard bag

NOTE: Some materials may be regulated by other criteria such as environmental standards or DOT standards aforementioned in this document.

11.0 REFERENCED DOCUMENTS

- 5100-0012, Bloodborne Pathogens Exposure Control Plan
- 5100-0028, Quality System Document Compliance Matrix
- Addenda A, PHNA Shipping Contaminated Parts/Equipment
- 5111-0339, Dangerous Goods Awareness Training PowerPoint










When decontamination is not feasible on equipment which contains either:

1. **Known contamination OR**
2. **Is reasonably expected to be contaminated with blood or Other Potentially Infectious Material (OPIM),**

Ensure the following shipping procedure is followed to warn downstream recipients and comply with Department of Transportation and OSHA regulatory requirements.

This quick guide provides step-by-step instructions to compliantly prepare and offer for shipment an item that is known or reasonably believed to be contaminated.

How to Ship Contaminated Parts			
1	Don PPE		→ Put on Personal Protective Equipment.
2	Primary Leak Proof Container		→ Drain any free liquid if necessary and then place the contaminated equipment into a primary leak proof container (box, bag, etc.)
3	Label Primary Container		→ Close the leak proof container → Label primary container with biohazard label.
4	Label Secondary Container		→ Place primary labeled container into a secondary container. The secondary container must be watertight. → Label Secondary Container with biohazard label
5	Internal Packaging		→ Pack the secondary container into a shipping box, with sufficient cushioning material to prevent movement.
6	Include Contamination List		→ Include a List in the shipping box Identifying: 1. <u>Item Contaminated</u> i.e.: “Pot” 2. <u>Type of Contamination</u> , if known: i.e. “Blood” 3. <u>Specific location of the contamination on the part</u> i.e.: “Inside Internal Connection”
7	Offer for Shipment		→ Prepare for shipment per normal shipping/return procedures. NOTE: Do NOT put a biohazard label on the shipping box! <i>When packed as outlined in this document, contaminated equipment may be offered for shipment per normal shipping procedures.</i>

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