Ohio Army National Guard

AGOH PAM 200-1

Hazardous Materials & Waste Management Plan

Supersedes AGOH PAM 200-1 Hazardous Materials and Waste Management Plan dated July 2005.

July 2016

Chapter 1. Introduction

This Hazardous Materials and Waste Management Plan, hereafter referred to as the HMWMP or the Plan,) prescribes policies, responsibilities, and procedures for storing and managing hazardous materials (HM), recyclable materials and wastes within the Ohio Army National Guard (OHARNG). The plan is written to ensure OHARNG compliance with applicable federal, state, and local laws and regulations as specified in Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*. This plan supersedes the Adjutant General of Ohio Pamphlet (AGOH PAM) 200-1 dated July 2005 and all previous versions. Only the online version of this plan posted to the OHARNG Environmental Homepage on TAGNET will be deemed current, all other copies will be marked **reference only.**

This plan is formatted like an Army Technical Manual (TM), with easy-to-follow procedures and many visual cues. To use this plan, look on the front cover to see what chapter contains the needed information and then flip to the tab for that chapter or check the Table of Contents for the specific subject.

This chapter addresses the following topics:

1.1 Purpose and Scope

This Plan documents the OHARNG Hazardous Materials and Hazardous Waste Management Programs. It applies to the following:

a. All activities under OHARNG command.

b. All activities that generate waste while using OHARNG training sites.

c. All training conducted outside the State of Ohio or on active duty installations within the state, unless host activity regulations or standard operating procedures dictate otherwise.

d. All activities permanently located on active duty installations, unless host activity regulations or standard operating procedures dictate otherwise.

e. Restoration activities on all installations, training sites or ranges, including other locations under OHARNG ownership or operation unless otherwise specified by a Memorandum of Understanding (MOU), Memorandum of Agreement (MOA), Inter-service Support Agreement (ISSA), or as specified by the Environmental Program Manager.

1.2 Reviews and Revisions

The Environmental Office Hazardous Waste Manager will review the Plan at least once every two years and, if necessary, make necessary modifications as required due to regulatory, military and operational changes. The Adjutant General (TAG) will administer, oversee, review, and approve any changes or modifications to the Plan.

1.3 Applicable Regulations

State Regulations

The Ohio Public Employment Risk Reduction Program, managed by the Ohio Bureau of Workers' Compensation, enforces regulations for handling and storing hazardous materials (HM). The Ohio Environmental Protection Agency (Ohio EPA) enforces regulations for hazardous waste (HW) generation and management specific to Ohio. State HW regulations are codified in the Ohio Administrative Code (OAC), Chapter 3745. The Ohio Department of Transportation (ODOT) enforces regulations for transportation of HM. This Plan complies with the following:

a. OAC 3745-19 (open burning)
b. OAC 3745-20 (asbestos)
c. OAC 3745-27 (scrap tires and infectious waste)
d. OAC 3745-49 through 57 and 3745-59 for (Hazardous Waste)
e. OAC 3745-58 (recyclable materials)
f. OAC 3745-71 (lead)
g. OAC 3745-273 (universal waste)
h. OAC 3745-279 (used oil)
i. OAC 3745-400-04 and 05 (construction and demolition debris)
j. OAC 4167 (hazardous materials)

Federal Regulations

The OHARNG must manage hazardous materials (HM) in accordance with (IAW) Occupational Safety and Health Administration (OSHA), Department of Transportation (DOT), and Emergency Planning and Community Right-to-Know Act (EPCRA) regulations and guidelines. Waste must be managed IAW the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA). Additional requirements for handling special waste types are required by the Toxic Substances Control Act (TSCA) and the Federal Insecticide Fungicide, and Rodenticide Act (FIFRA). The Federal Facilities Compliance Act (FFCA), another RCRA amendment, further requires that all Department of Defense (DoD) federal enclaves comply with federal hazardous waste (HW) laws and regulations.

Title 40 of the Code of Federal Regulations (CFR) codifies federal solid waste management regulations. The U.S. Environmental Protection Agency (EPA) Region 5 enforces these regulations, except in cases when the state of Ohio has primacy (state regulations referred to in the previous section). This plan provides procedures for complying with the following parts of 40 CFR:

a. Part 260 through Part 272 (hazardous waste)

b. Part 273 (universal waste)

c. Part 279 (used oil)

d. Part 61, Subpart M (asbestos)

e. Part 761 (polychlorinated biphenyls (PCBs))

The OHARNG also must comply with the following regulations for hazardous materials:

a. 49 CFR Parts 105 through 180(U.S. Department of Transportation (DOT) requirements)

b. 29 CFR Part 1910 (U.S. Occupational Safety and Health Administration (OSHA) requirements)

Military Regulations

The OHARNG must comply with Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*, dated 13 December 2007, which contains Army policy for HM and HW management. Specifically, this plan provides procedures for complying with Chapter 7 (Pollution Prevention), Chapter 9 (Materials Management), and Chapter 10 (Waste Management) of AR 200-1. DA PAM 710-7, *Hazardous Material Management Program*, dated 25 June 2013, provides standards for centralized control and management of hazardous materials. In addition,

the OHARNG must comply with DoD Regulation 4500.9-R, known as the Defense Transportation Regulations (DTR) when transporting HM across public roadways.

Executive Orders

The OHARNG must also comply with Executive Order 13693, *Planning for Federal Sustainability in the Next Decade*, dated 19 March 2015.

Local Regulations, Ordinances, and Codes

AR 200-1 requires compliance with local environmental regulations. This includes National Fire Protection Association codes as required by local fire departments. Consult with the OHARNG Environmental Office regarding local regulations. In the absence of specific regulations, use Best Management Practices (BMP) to minimize the amount of hazardous substances released to the environment.

1.4 Contractual Obligations

The OHARNG routinely contracts for services related to environmental compliance. Services include waste analysis, transportation, and disposal. Contracts may include requirements that are more stringent than OHARNG regulations. The OHARNG will comply with all HW disposal contract restrictions that do not violate any regulation, order, ordinance, code, or other regulatory requirement.

1.5 OHARNG Environmental Office Contacts

Table 1-1. Environmental Office Contacts

Adjutant General's Department ATTN: NGOH-IMR-ENV 2825 West Dublin Granville Road Columbus, Ohio 43235-2789	
Title	**Commercial Phone Number**
Environmental Program Manager	(614) 336-7095
State Environmental Supervisor	(614) 336-7395
Fort Ohio Environmental Supervisor	(614) 336-6568
Hazardous Waste Manager (HWM)	(614) 336-7394
Fort Ohio Environmental Compliance	(614) 336-4918
EPAS Assessors	(614) 336-7329 or (614) 336-7079

1.6 Description of OHARNG Operations

The OHARNG provides organized, trained, and equipped military units to execute assigned federal and state missions. Their federal mission is to provide and mobilize combat-ready forces in support of national military strategy. The OHARNG protects life and property, preserves peace and order, and provides public safety missions under state authorities.

The OHARNG manages facilities for mustering troops and supplies, active training sites, military vehicle and equipment maintenance shops, and restoration locations. This includes operating maintenance facilities such as the Combined Support Maintenance Shop (CSMS), the Army Aviation Support Facilities (AASF), Field Maintenance Shops (FMS), Unit Training Equipment Sites (UTES), U.S. Property and Fiscal Office (USPFO) Warehouse, local armories or armed forces readiness centers (AFRC), and other similar facilities throughout the state.

1.7 Responsibilities

All references to legal requirements in this plan refer to the laws, rules, regulations, and executive orders applicable to the OHARNG. Responsibilities defined in this plan apply to the management of hazardous materials and hazardous waste and the implementation of pollution prevention and source reduction initiatives. Staff responsibilities are defined as follows:

The Adjutant General (TAG)

a. Ensures compliance with all applicable aspects of Department of Defense (DoD) environmental policies and programs.

b. Ensures compliance with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

c. Establishes and emphasizes environmental policy for the OHARNG.

d. Establishes and emphasizes environmental management system (eMS) policy for the OHARNG IAW ISO14001 guidelines.

Assistant Adjutant General (Army) (ATAG)

a. Assumes the duties and responsibilities of TAG in his/her absence.

b. Ensures compliance with all applicable aspects of the Department of the Army (DA) environmental policies and programs.

c. Ensures compliance with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

d. Ensures resources are available to implement the OHARNG Environmental Program.

e. Establishes the Environmental Quality Control Committee (EQCC), which oversees compliance with environmental laws and regulations and reviews and approves recommendations and decisions made by the EQCC.

f. Establishes policies and guidance to protect and conserve environmental resources.

g. Ensures environmental impacts are considered during planning and execution of the OHARNG mission.

Chief of Staff (CoS)

a. Ensures the TAG's and ATAG's environmental policies are implemented across the force.

b. Ensures units and activities appoint a Primary and Alternate Facility Environmental Coordinator.

c. Ensures units and activities appoint a Primary and Alternate Environmental Compliance Officer (ECO).

d. Co-chairs

the EQCC.

e. Serves as the eMS Manager.

Deputy Chief of Staff-Logistics (DCSLOG)

a. Serves as a member of the EQCC.

b. Ensures all OHARNG logistics and maintenance operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

c. Appoints appropriate staff to the eMS Cross-Functional Team and ensures participation in the annual eMS Aspects and Impacts Analysis process.

d. Ensures environmental impacts are considered during planning and execution of all DCSLOG missions.

Deputy Chief of Staff-Logistics, Command Transportation Office (DCSLOG-CTO)

a. Ensures all OHARNG transportation operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Coordinates review and documentation of proposed changes to transportation operations with the OHARNG Environmental Office to ensure compliance with environmental policies, regulations, and best management practices.

c. Provides "Hazardous Materials Familiarization and Safety in Transportation" (AMMO-67) training as required (every two years) and to new personnel.

d. Ensures senior transportation office staff participation in the annual eMS Aspects and Impacts Analysis process.

Deputy Chief of Staff-Logistics, Logistics Management Officer (DCSLOG-LMO)

a. Ensures all OHARNG logistics operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Coordinates review and documentation of proposed changes to logistics operations with the OHARNG Environmental Office to ensure compliance with environmental policies, regulations, and best management practices.

c. Ensures logistics personnel that routinely handle hazardous materials and hazardous waste attend the annual Hazardous Materials and Hazardous Waste Management course.

d. Ensures senior logistics staff participation in the annual eMS Aspects and Impacts Analysis process.

e. Ensures waste generation is minimized whenever possible by utilizing alternative source reduction techniques, pollution prevention technology, green procurement opportunities, and recycling initiatives.

Surface Maintenance Officer (SMO)

a. Ensures all ongoing OHARNG surface maintenance operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Coordinates review and documentation of proposed changes to surface maintenance operations and activities to ensure compliance with environmental policies, regulations, and best management practices.

c. Ensures vehicle and equipment maintenance personnel that routinely handle hazardous materials and hazardous waste attend the annual Hazardous Materials and Hazardous Waste Management course.

d. Ensures senior SMO staff participation in the annual eMS Aspects and Impacts Analysis process. Participation will include representatives from the FMSs, the CSMS, and the UTES.

e. Ensures waste generation is minimized whenever possible by utilizing alternative source reduction techniques, pollution prevention technology, green procurement opportunities, and recycling initiatives.

f. Ensures that all OHARNG petroleum, oil and lubricant (POL) storage, transfer, and dispensing activities at the FMSs, CSMS, and UTES are conducted IAW OHARNG standard operating procedures (SOPs) and all applicable federal, state, and local requirements.

g. Ensures all FMSs, the CSMS, and the UTES appoint a Primary and Alternate Environmental Compliance Officer (ECO). Copies of the appointment memorandums will be forwarded to the Environmental Office's Hazardous Waste Manager.

State Aviation Officer (SAO)

a. Ensures all ongoing OHARNG aviation operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Coordinates review and documentation of proposed changes to aviation operations and activities to ensure compliance with environmental policies, regulations, and best management practices.

c. Ensures aviation personnel that routinely handle hazardous materials and hazardous waste attend the annual Hazardous Materials and Hazardous Waste Management course.

d. Ensures senior aviation staff participation in the annual eMS Aspects and Impacts Analysis process. Participation will include representatives from the AASFs.

e. Ensures waste generation is minimized whenever possible by utilizing alternative source reduction techniques, pollution prevention technology, green procurement opportunities, and recycling initiatives.

f. Ensures that all OHARNG POL storage, transfer and dispensing activities at the AASFs are conducted IAW OHARNG standard operating procedures (SOPs) and all applicable federal, state, and local requirements.

g. Ensures AASFs appoint a primary and alternate Environmental Compliance Officer (ECO). Copies of the appointment memorandums will be forwarded to the Environmental Office's Hazardous Waste Manager.

h. Serves as a member of the EQCC.

Assistant Quartermaster General (AQM)

a. Ensures all ongoing OHARNG state facility maintenance, repair, and construction operations and activities, to include asbestos abatement and lead remediation project, are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Ensures all ongoing OHARNG state procurement operations and activities, are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

c. Coordinates review and documentation of proposed changes to state facility maintenance, repair, and construction operations and activities to ensure compliance with environmental policies, regulations, and best management practices.

d. Ensures facilities maintenance and repair personnel that routinely handle hazardous materials and hazardous waste attend the annual Hazardous Materials and Hazardous Waste Management course.

e. Ensures senior quartermaster general staff participation in the annual eMS Aspects and Impacts Analysis process.

f. Co-chairs the Environmental Quality Control Committee (EQCC),.

g. Ensures the OHARNG eMS policy and significant environmental aspects are communicated to vendors and contractors conducting business with the OHARNG.

Construction and Facilities Management Officer (CFMO)

a. Ensures all ongoing OHARNG federal facility maintenance, repair, and construction operations and activities, to include asbestos abatement and lead remediation project, are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Ensures all ongoing OHARNG federal procurement operations and activities, are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

c. Ensures waste generation is minimized whenever possible by utilizing alternative source reduction techniques, pollution prevention technology, green procurement opportunities, and recycling initiatives.

d. Coordinates review and documentation of proposed changes to federal facility maintenance, repair, and construction operations and activities to ensure compliance with environmental policies, regulations, and best management practices.

e. Ensures senior CFMO staff participation in the annual eMS Aspects and Impacts Analysis process.

f. Serves as the eMS Advisor.

g. Serves as a member of the EQCC.

h. Establishes the qualified recycling program IAW the Ohio Qualified Recycling Program Business Plan dated 12 Dec 12, ensuring adequate resources are available to sustain the program.

i. Manages the OHARNG pest management program, utilizing innovative integrated pest management techniques to meet source reduction goals.

j. Manages the OHARNG solid waste management program, ensuring waste generation is minimized whenever possible to include employment of alternative source reduction techniques, pollution prevention technology, green procurement opportunities, and recycling initiatives to meet waste diversion goals.

Environmental Program Manager

a. Reviews OHARNG operations and activities to ensure they are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Manages the HW program IAW with all applicable federal, state, and local environmental laws and regulations.

c. Manages the qualified recycling program IAW the Ohio Qualified Recycling Program Business Plan, dated 12 Dec 12.

d. Under the direction of the CFMO, serves as the subject matter expert for and adviser to the TAG, the EQCC, and the OHARNG on HW management issues, policies, and programs.

e. Develops HW management procedures, policies, regulations, and best management practices to ensure OHARNG compliance with all applicable federal, state, and local environmental laws and regulations.

f. Coordinates, consults, and cooperates directly with federal, state, and local authorities and regulatory agencies to ensure the OHARNG remains in compliance with applicable solid and hazardous waste management requirements.

g. Conducts annual eMS Aspects and Impacts Analysis.

h. Conducts annual HM and HW Management course.

i. Reports solid and hazardous waste generation and disposal data to the Department of Defense through National Guard Bureau.

j. Ensures resource requirements are identified and secured for the management of solid waste and HW programs; including funds for equipment, studies, operational costs, maintenance costs, treatment, storage or disposal, and waste minimization.

k. Conducts annual compliance and eMS assessments utilizing the Environmental Performance Assessment System (EPAS), developing and implementing corrective action plans to address noted deficiencies.

l. Coordinates and conducts quarterly EQCC meetings, serving as subject matter experts and technical advisors to the EQCC.

m. Serves as the eMS Facilitator.

n. Coordinates emergency spill response efforts.

o. Manages and coordinates implementation of the Integrated Pest Management Program

United States Property & Fiscal Officer (USPFO)

a. Ensures all ongoing OHARNG federal procurement operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

b. Ensures all ongoing OHARNG federal property management operations and activities, to include the management of fuel and ammunition, are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

c. Coordinates review and documentation of proposed changes to federal procurement and property management operations and activities to ensure compliance with environmental policies, regulations, and best management practices.

d. Manages funds derived from the sale of recyclable commodities and contracts to sustain the OHARNG recycling program IAW the Ohio Qualified Recycling Program Business Plan dated 12 Dec 12.

e. Ensures USPFO personnel that routinely handle hazardous materials and hazardous waste attend the annual HM and HW Management course.

f. Ensures the USPFO Warehouse appoints a primary and alternate ECO. Copies of the appointment memorandums will be forwarded to the Environmental Office's Hazardous Waste Manager.

g. Ensures senior USPFO staff participation in the annual eMS Aspects and Impacts Analysis process.

h. Ensures the OHARNG eMS policy and significant environmental aspects are communicated to vendors and contractors conducting business with the OHARNG.

i. Serves as a member of the EQCC.

Environmental Compliance Officer (ECO)

Ensures unit operations and activities are conducted IAW with all applicable federal, state, and local environmental laws and regulations, and OHARNG environmental policies and programs, to include the guidelines and best management practices outlined in this plan.

Facility Environmental Coordinator (FEC)

a. Serves as the point of contact for environmental issues at the facility under his/her control. At multi-unit armories and facilities, the parent unit Administrative Officer will be appointed the FEC. In single unit armories, the Readiness NCO will be appointed. The FEC at training sites will be the training site manager. At maintenance facilities, the shop chief or facility commander will be appointed, unless co-located with an armory.

b. Identifies environmental resource needs for his/her facility.

c. Executes environmental requirements as they affect his/her facility.

d. Ensures environmental awareness and compliance of workers at their facility.

e. Reports violations and deficiencies to the Environmental Office through the chain of command.

f. Must have access to all areas where HMs and wastes are generated, stored, and/or accumulated.

Environmental Quality Control Committee (EQCC)

a. Advises TAG on hazardous material and waste management priorities, policies, strategies, and programs.

b. Reviews annual compliance and eMS assessments conducted by the Environmental Office and approves corrective action plans required to address noted deficiencies.

c. Convenes quarterly, or as necessary.

Safety and Occupational Health Manager (SOHM)

a. Prescribes and provides proper personal protective equipment (PPE) to ensure the safety of OHARNG personnel while conducting the environmental compliance program.

b. Prescribes and reviews proper safety equipment for managing the health and safety program.

c. Funds and implements Hazard Communications (HAZCOM) training and other training requirements to ensure compliance with federal, state, and Army safety standards.

d. Serves as a member of the EQCC.

1.8 Submitting Changes to this Plan

Any suggestions, comments, or proposed changes regarding this plan should be forwarded to the Hazardous Waste Manager for consideration. This plan is maintained as an electronic eMS document on the OHARNG Environmental Management System website. All other versions, copies or printed versions of the plan are obsolete. Printed copies are to be used as **reference only and marked accordingly**.

Chapter 2. Setting Up Hazardous Material Storage Areas

References:

- 29 Code of Federal Regulations (CFR) Part 1910.101 (compressed gases, general requirements)
- 40 CFR Part 264.175 (hazardous waste storage requirements)
- Ohio Administrative Code (OAC) 3745-55-75 (HM and HW storage requirements)
- Army Regulation 200-1, *Environmental Protection and Enhancement*, Chapter 9 (materials management)
- Army Regulation 200-1, *Environmental Protection and Enhancement*, Chapter 10 (waste management)
- Technical Manual (TM) 38-410, *Storage and Handling of Hazardous Materials*
- Military Standard (MIL STD) 101 (color coding and marking compressed gas cylinders)
- Compressed Gas Association Pamphlet P-1-1965 (handling, storage, and use of all compressed gas cylinders)
- American National Standards Institute (ANSI) Z-49.1 (handling, storage, and use of all compressed gas containers for welding and cutting)
- National Fire Prevention Association (NFPA) 55, *Standard for the Storage, Use, and Handling of Compressed and Liquefied Gases in Portable Cylinders*

This chapter addresses the following topics:

2.1 Storage Cabinets

All cabinets must meet National Fire Protection Association (NFPA) Code 30 and OSHA requirements for approved storage cabinets.

The cabinet color depends on the HM type. **If you have an older version of a cabinet, you are not required to repaint it.**

HM Type	Cabinet Color
Flammables	Yellow
Corrosives	Blue
Oxidizers	Red
Pesticides	Green

Keep cabinets clean and orderly, and maintain all structural integrity and hardware, including doors, hinges, and shelves. Do not remove the door or ventilation bungs, penetrate the wall, modify ventilation, or otherwise modify the cabinet. Keep cabinet doors closed when materials are not being transferred.

To set up a cabinet, complete the following steps:

Step 1. Coordinate with the Battalion S4 to request a DA Form 3953 to obtain a HM cabinet and submit to Environmental Office for approval.

Step 2. Use the following guidelines to select a location for the cabinet:

a. Locate the cabinet indoors in a well-ventilated area near the location that HM will be used.

b. Maintain easy access to the cabinet.

c. Do not block doors.

d. Do not place the cabinet near doors, exits, pathways, or stairs.

e. Do not place the cabinet in break rooms, latrines, and offices.

f. Do not place the cabinet near floor drains, drainage channels, or areas with high foot or vehicle traffic.

g. As a BMP, properly ground flammable material cabinets.

Step 3. Assign a four-character identifier to each cabinet and mark it on the front top right corner. This identifier will consist of one of the four abbreviations listed below used to differentiate cabinet contents and a two-digit sequential number (e.g., FL

01, FL 02, etc.). For example, the cabinet shown below in Figure 2-1 is identified as FL 01. This number is needed for inventory and inspection purposes.

FL – Flammable cabinets

CL – Corrosive cabinets

OL – Oxidizer cabinets

PL – Pesticide cabinets

Figure 2-1. Flammable Storage Cabinet

Step 4. Post any warning signs required by the SOHM. Do not place unauthorized signs, labels, stickers, or markings on the cabinet.

Step 5. Ensure that an appropriately rated fire extinguisher (contact SOHM) and spill response equipment are located nearby.

Note: Each cabinet must have a unique four-character identifier. If another unit/activity shares a work area, coordinate with them so each number is used only once. If sharing an area with another activity, identify unit/activity on front top left corner. Not all HMs can be stored outdoors or in freezing environments. Check product labels and SDS to ensure proper storage of the HM.

2.2 Storage Rooms and Buildings

The Environmental Office must be notified prior to establishing an HM storage room or building, or modifying an existing location. Keep storage rooms and buildings clean and orderly. Maintain their structural integrity and hardware including doors, hinges, and shelves. Do not

remove doors, penetrate walls, alter the ventilation, or otherwise modify the room or building. Place HM containers with a total capacity of five gallons or more in a POL shed or portable secondary containment device. (If these storage means are not available, the storage area must be bermed to contain the volume of the area's largest container **OR** 10 percent of the total volume of all the area's containers, whichever is greater.)

To set up a storage room or building, complete the following steps:

Step 1. The Environmental Office must approve the proposed storage area.

Step 2. Provide primary and secondary containment. (See Appendix A) Secondary containment capacity must be the volume of the area's largest container **OR** 10 percent of the total volume of all the area's containers, whichever is greater.

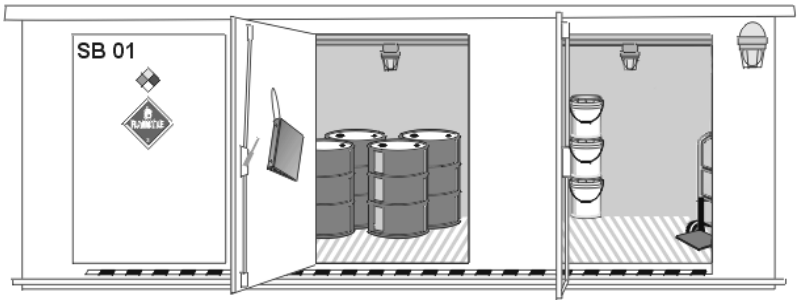
Note: The room floor space itself usually provides enough secondary containment; however, you need to ensure the spill cannot escape the room. You could equip, for example, each door with a sealed threshold. You can also store HM in pans or tubs on the shelf, making sure the HM is compatible with the container (for example, store acids in plastic tubs).

Step 3. Ensure that an appropriately rated fire extinguisher (contact the SOHM for approval) and spill response equipment are located nearby.

Step 4. Assign a four-character identifier to the storage room (SR) or storage building (SB) and mark it on all doors to the room. This identifier will consist of one of the two abbreviations used to identify a storage room or storage building and a two-digit sequential number (e.g., SB 01). See Figure 2-2. The number is needed for inventory and inspection forms. Ensure the HM storage is clean and organized and that all materials are compatible.

Note: Shelves and products in storage rooms and buildings do not have to be labeled. SDSs and inventories are still required.

Figure 2-2. Storage Building



Step 5. Post warning signs required by the SOHM. Do not place unauthorized signs, labels, stickers, or markings on the room or building.

2.3 Storage Racks

Notify the Environmental Office for approval to establish a HM storage rack or to modify an existing location.
To set up a storage rack, complete the following steps:

Step 1. Notify the Environmental Office of the proposed location before use.

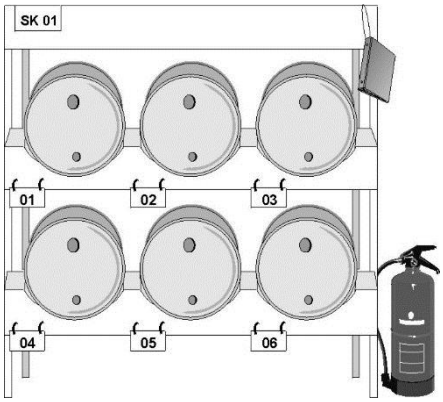
Step 2. Provide primary and secondary containment. Secondary containment capacity must be the volume of the rack's largest stored container **OR** 10 percent of the total volume of all rack's containers, whichever is greater. Place drip pans under active spouts, faucets, valves, and bungholes.

Step 3. Ensure that an appropriately rated fire extinguisher (contact SOHM) and spill response equipment are located nearby.

Step 4. Assign a two-letter, two-number identifier and mark it on the rack or on a sign near the rack. This identifier will consist of the abbreviation SK for Storage Rack and a two-digit sequential number (e.g., SK 01). See Figure 2-3 as an example.

Step 5. Post any warning signs required by the SOHM. Do not place unauthorized signs, labels, stickers, or markings on the rack.

Figure 2-3. Storage Rack



Note: Each rack must have a unique four-character identifier. If another unit/activity shares this rack, coordinate with them so the number is used only once. You may also identify unit/activity on rack or a sign near the rack.

2.4 Storage for Compressed Gases

Caution: **DO NOT** store compressed gas cylinders or bottles in an HM cabinet.

DO NOT use gas cylinders as rollers, supports, or any other unintended purpose.

DO NOT accept, issue, or use a gas cylinder with unidentified contents. If the contents are unknown label the cylinder "Contents Unknown" and return it to the supplier.

DO NOT place cylinders where they could become part of an electrical circuit.

DO NOT drop cylinders or allow them to strike against each other.

DO NOT alter or mark directly on the cylinders.

DO NOT remove labels applied by the gas manufacturer.

DO NOT lift cylinders with cranes or mechanical lifts unless properly fastened in appropriate containers, racks, or cradles.

DO NOT use rope, chain slings, or electromagnets to lift cylinders.

DO store liquefied flammable gas cylinders upright so the pressure relief valve is in direct contact with the vapor space in the cylinder.

DO separate all cylinders by compatibility.

DO keep cylinders at least 20 feet away from combustible materials or isolate them with five-foot high barriers of non-combustible materials with a minimum 30-minute fire resistance rating.

DO use a carton or crate to store small cylinders and bottles of compressed gas. Store the cartons or crates in low traffic areas or, preferably, on top of storage cabinets in HM storage areas. They must be in sight at all times.

Compressed gases are packaged under charged pressure in metal cylinders and must be handled with extreme care, particularly flammable and explosive gases.

When storing compressed gases, excluding fire extinguishers and aerosol cans, additional guidelines must be followed. A compressed gas is a gas that is packaged under charged pressure. Because compressed gases are under pressure, handle such gases with extreme care, particularly the flammable and explosive gases. For additional guidance concerning compressed gas storage requirements reference AR-700-68.

The SOHM is responsible for designing and approving compressed gas storage areas. The guidelines listed below will help you maintain those areas properly to protect human health and the environment.

a. Contact the SOHM for specific guidance in selecting or constructing a safe compressed gas storage location.

b. Ensure that all electrical installations meet electric code requirements.

c. Use skylights, if possible.

d. Construct storage area shelves, racks, and floors with noncombustible materials. Design them to safely support the cylinder weight.

e. Use chains or other clamps to anchor the cylinders to the wall or a stable structure to prevent them from falling over.

f. Label cylinders IAW MIL STD-101. Fill out tags with the proper name of the cylinder contents.

g. Ensure the area is well ventilated (complete change of air at least six times each hour).

h. Separate storage facilities from other buildings by at least 50 feet.

i. Store gases that support combustion in different sheds separated by 50 feet.

j. Keep dry vegetation and combustible materials at least 15 feet away from storage areas.

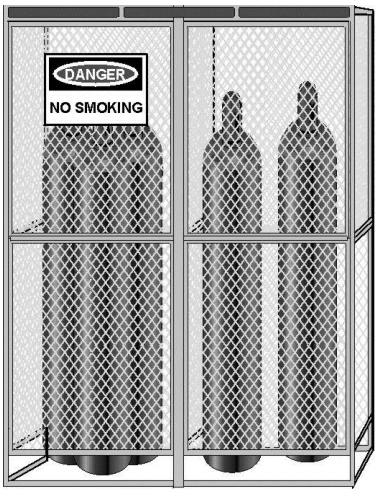
k. Keep cylinders out of the sun and off the ground (earth).

l. Protect storage areas from vehicular traffic.

m. Lock storage areas to prevent unauthorized entry.

n. Post NO SMOKING signs (see Figure 2-4). These can be ordered through SOHM.

Figure 2-4. Properly Stored Cylinders with NO SMOKING Sign



o. Do not allow open flames within 50 feet.

p. Place hazard identification signs such as FLAMMABLE at all entrances.

q. Ensure all cylinders are properly labeled (do not alter or remove the manufacturer's label from cylinders).

r. Store cylinders with the valve protection cap secured.

s. Store liquefied flammable gas cylinders upright or so the pressure-relief valve directly communicates with the vapor space of the cylinder.

t. Ensure cylinders are not located where they could become part of an electrical circuit.

u. Segregate incompatible or combustible materials by at least 20 feet (see "Determining Hazardous Material Compatibility" in this chapter for more information).

v. Isolate incompatible or combustible materials with a barrier of non-combustible material at least five feet high and with a minimum fire resistance rating of 30 minutes.

Inspecting Cylinders

Compressed gas cylinders must be included in the HMs inspection program. During cylinder inspection, check for the following:

a. Valve outlet connectors of both full and empty cylinders must have an authorized dust cap.

b. Oxygen cylinders must be free from grease and oil.

c. Empty cylinders must be tagged as "Empty" and stored away from full cylinders with the valves closed and protective valve caps in place.

Moving Cylinders

If you must move cylinders, note the following precautions:

a. Close cylinder valves before moving.

b. Do not lift cylinders by the valve protection cap.

c. Do not lift cylinders by cranes or mechanical lifts unless fastened in proper containers, racks, or cradles.

d. Do not use rope and chain slings or electromagnets to lift cylinders.

e. Only handle, ship, or store cylinders if they have valve protection caps.

f. Ensure that valve protection caps are installed before handling, shipping, or storage, except for the following cylinder types:

- Cylinders with less than 40 pounds capacity
- Cylinders with less than 625 cubic inch volumetric capacity
- Ram-bottom cylinders

Note: Not all HMs can be stored outdoors or in freezing environments. Check product labels and SDS to ensure proper storage of the HM.

Follow these guidelines to store gas cylinders outside:

a. Store cylinders outside only if the climate is favorable (i.e., not in extreme cold or heat). Keep cylinders out of the sun, directly off the ground, and away from areas where water can accumulate.

b. Store in covered, open-sided, non-combustible sheds on an above-grade concrete slab.

c. Do not heat the sheds, and store cylinders away from radiators and other sources of heat.

d. Separate cylinder storage facilities from other buildings, and segregate gases that support combustion with other gases within sheds by at least 50 feet.

e. Store oxygen cylinders and fuel gas cylinders (e.g., acetylene, propane, butane, etc.) in areas separated by at least 20 feet.

f. If the shed has one or more walls, ensure that air circulation is sufficient to provide a complete air exchange at least six times each hour.

g. Keep storage areas clear of dry vegetation and combustible materials by at least 15 feet.

h. Protect storage areas from vehicular traffic.

Note: See Waste Protocol Sheet for acetylene cylinders in Appendix B

2.5 Resources

Storage cabinets, buildings, and racks

Step 1. Contact the Environmental Office. The Environmental Office may have access to excess storage cabinets, buildings, and racks. If excess assets are not available, the Environmental Office can assist you with specifications for the purchase of approved storage cabinets, buildings, and racks and identify any facility specific requirements (gravel pads, secondary containment, etc.).

Note: The Environmental Office will work with state maintenance repair workers to obtain required storage cabinets through the AQG's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Signage and Placards

Step 1. Contact the SOHM. The SOHM may have required signage and placards on-hand. If the signage or placards are not on-hand, the SOHM may be able to purchase them for you. If the SOHM cannot provide the signage or placards they can help you put together a purchase request for DCSLOG-LMO. Placards may also be fabricated by the CSMS upon request.

Note: The Environmental Office will work with State Maintenance Repair workers to obtain required signage and placards through the AQM's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Secondary Containment and Spill Response Equipment

Step 1. Contact the Environmental Office. The Environmental Office may have what you need on-hand or have access to excess secondary containment (berms, plugs, etc.) or spill response equipment (spill kits, absorbents, etc.). If the assets are not readily available, the Environmental Office can assist you with specifications for the purchase of secondary containment and spill response equipment.

Note: The Environmental Office will work with State Maintenance Repair workers to obtain secondary containment and spill response equipment through the AQM's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a DA purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Compressed Gas Cylinder Cages, Racks, Cradles, etc.

Step 1. Contact the SOHM. The SOHM may be able to purchase cylinder cages, racks, and cradles for you. They may also be able to provide cylinder rings and tags. If the SOHM cannot purchase these items they can help you put together a purchase request for DCSLOG-LMO.

Note: State Maintenance Repair workers can obtain required compressed gas cylinder equipment directly through the AQM's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Chapter 3. Managing Hazardous Materials

References:

- 29 CFR Part 1910 Subpart H (hazardous materials)
- 40 CFR Part 264.175 (hazardous waste storage requirements)
- 40 CFR Part 265.176 (special ignitable or reactive material requirements)
- Ohio Administrative Code (OAC) 3745-55-75 (hazardous material and waste storage requirements)
- Army Regulation 200-1, *Environmental Protection and Enhancement*, Chapter 9 (materials management)
- DA PAM 710-7, *Hazardous Material Management Program*
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)
- Technical Manual (TM) 38-410, *Storage and Handling of Hazardous Materials*
- Military Standard (MIL STD) 101 (color coding and marking compressed gas cylinders)

Personnel must properly manage HM to minimize safety hazards. This chapter provides guidance for management of HM to include conducting inventories, ensuring material compatibility, extending shelf-life, and managing safety data sheets (SDS).

This chapter addresses the following topics:

The procedures outlined in this chapter are, at a minimum, pollution prevention best management practices (BMPs) for the management of HM. Implementation of these BMPs helps prevent and/or reduce waste generation and ensure the safety of personnel working with HM.

Note: The concepts presented in this chapter are also used to manage items not typically stored in one of the discussed storage areas, such as janitorial supplies.

3.1 Identifying and Conducting an Inventory of Excess and Obsolete Hazardous Materials

Most OHARNG facilities already manage HM in existing storage units. Clean out all existing storage units before implementing these procedures. Do not waste time and storage space numbering, labeling, and storing HM that may not be used. Check storage areas and containers for the following items and remove them from active storage:

- Excess inventory
- Rusted containers
- Products that are caking powdering
- Bulging or dented containers
- Containers with contents lost to evaporation
- Unlabeled or unidentifiable material that may be hazardous
- Leaking containers
- Broken glass containers
- Containers infested with rodents or insects/insect infestation
- Containers with hardening/liquefying products
- Expired Type I and II chemicals
- Obsolete chemicals for discontinued operations and activities

Walk through the facility and identify any unused, unneeded, unwanted or unserviceable HMs for turn-in. In addition to existing HM storage units, also check all other work areas where HMs

may have been used. Use any existing inventories to help determine unused, unneeded, unwanted or unserviceable items. Follow the applicable steps in Table 3-1 below for processing unused, unneeded, unwanted, or unserviceable HMs.

Table 3-1. Handling Unused, Unneeded, Unwanted, or Unserviceable HMs

If you find	Follow these procedures
HMs that are serviceable but no longer needed	• Turn the HMs into the USPFO Warehouse. The USPFO will try to redistribute the materials to units that need them. • If no one else can use the HMs, the USPFO will turn in the HM as waste.
HMs that are unserviceable or whose containers are damaged, leaking, or subject to leaking * For serviceable material in leaking or damaged containers, transfer the remaining material into a compatible container and label the new container with the required information	• Move HMs to a central location such as the waste storage area. • Find the SDS for each item. • Determine compatibility and segregate accordingly. • Turn in the HMs IAW the established procedures.
HMs missing labels	• If it is known what the material is, re-label the container and check serviceability and shelf-life. • If it is not known what the material is, contact the state HWM for guidance.

Note: The turn-in of HM is an ongoing process. While setting up the HM management system, leave shelf or floor space in one or more existing HM storage units as a temporary place for accumulating these turn-in items.

3.2 Obtaining and Cataloging Safety Data Sheets

SDSs provide compatibility information for specific HMs. In addition, they include information about associated hazards, specific handling procedures, and spill response measures. Each facility must maintain a binder that contains SDSs for all HMs being stored at the facility.

There must be an SDS binder(s) for each HM storage cabinet, room, building, or rack. This binder must contain an SDS for all HMs stored in that area. The binder must be accessible to all

facility personnel. The binder must be located at or near the storage unit and must be organized so that an SDS can be quickly located in case of a spill or personnel exposure.

This section explains how to obtain and catalog required SDSs. Follow the steps below for all HM storage units located at the facility. When completed, each HM storage unit will have its own SDS binder with numbered SDSs for each corresponding HM stored in the unit.

Step 1. Obtain an SDS for each HM at the facility from the Hazardous Materials Information Resource System (HMIRS). If the SDS is not available through HMIRS, try locating the SDS by:

a. Accessing http://www.msdsxchange.com.

b. Accessing http://hazard.com/msds/ .

c. Contacting the manufacturer or product distributor (vendor), if the SDS is not shipped with the HM.

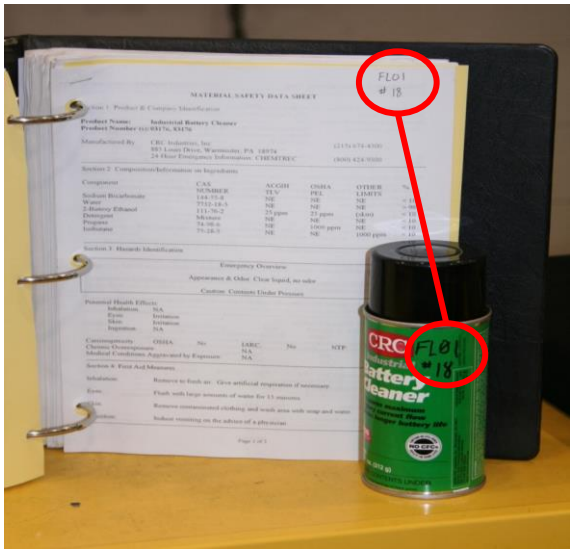
d. Contacting the General Services Administration (GSA) SDS Request Line at (886) 588-7659 or **MSDS@gsa.gov**.

If the SDS is still not available, contact the HWM. The SDS must be specific to the product's National Stock Number (NSN), if available, and CAGE number (manufacturer's code). These numbers are printed on the SDS and on the HM container for materials purchased through the federal supply system. For materials not purchased through the federal supply system, check the HMIRS to determine if the material has an NSN.

Step 2. Assign a unique number to each SDS and write the number on every container of that particular HM. OHARNG prefers facilities to follow this step to manage SDSs. This step allows you to place the SDSs in a binder in sequential order, making them easier to find and easier to insert new SDSs should new HMs be introduced to the facility. The numbering system used is up to the facility personnel, but should reflect the size of the facility. If the facility only has one HM cabinet or storage area, use a numbering system as simple as the one shown in the example and Figure 3-1 below. Larger facilities may want to use a more sophisticated numbering system as explained later in this chapter.

Example You use five HMs at your facility, and you have 10 containers of each. Starting with any one of the HMs, write a 1 on the SDS and on all containers of that HM. For the next HM, write a 2 on the SDS and on all containers of that HM. In sequential order, assign a number for the last three HMs.

Figure 3-1. Example SDS and HM Cataloging



Step 3. Create an index in the front of the binder(s) listing the SDSs. Any method or order is acceptable as long as the SDSs are organized and easily accessible. This binder must be organized so an SDS can be located quickly in case of a spill or exposure. The binder must be accessible at all times for review by employees or emergency personnel.

Step 4. When an item is no longer part of the HM inventory, remove the SDS from the binder(s). Establish an archive SDS binder to contain all SDSs for HM no longer used at the facility.

Note: Occupational Safety and Health Administration (OSHA) regulations require that lists of hazardous chemicals/materials used by each employee be maintained for at least 30 years, from the time the employee retired or stopped working at the facility. One of the ways to meet this requirement is to maintain the archive SDSs binder discussed in Step 5.

3.3 Determining Hazardous Material Compatibility

Using the SDSs, determine what types of materials can be stored together and what types must be segregated. The easiest way to determine compatibility is to use SDSs generated from the HMIRS, but three methods for determining compatibility are discussed in this section.

Method 1: Determining Compatibility Using HMIRS SDSs

Complete the following steps when using the HMIRS SDSs method for determining compatibility:

Step 1. From the SDSs obtained through HMIRS, find the Hazard Characteristic Code (HCC) under Physical Chemical Properties (Figure 3-2).

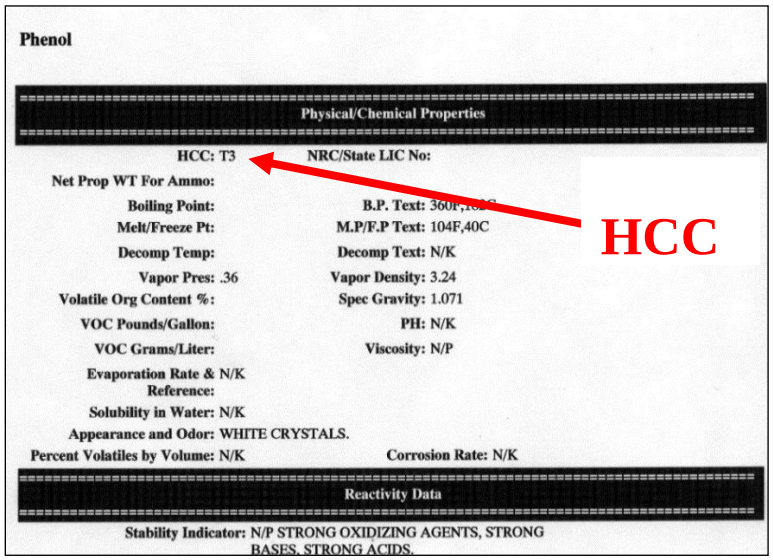
Step 2. Using the Storage Segregation Matrix (Table 3-2), find the HCC in the far left column.

Step 3. Follow the row across the table and locate the * marking.

Step 4. Follow the column up from the * marking to the Primary Segregation Letter. These letters stand for the following:

A	Radioactive	C	Corrosive
D	Oxidizer	E	Explosive
F	Flammable	G	Gas, Compressed
L	Low Hazard (General Purpose)	P	Peroxide, Organic
R	Reactive	T	Poison

Figure 3-2. SDS Showing HCC



Step 5. HMs may only be stored with items that have the same Primary Segregation Letter. For example, store Fs with other Fs (flammables with other flammables) and Cs with other Cs (corrosives with other corrosives).

Step 6. Return to the HM's HCC row and find the "Note" under the Secondary Segregation column. Go to the end of the table and read the definition of the note for any additional segregation requirements.

Example: A facility has an HM with an HCC of F6 (a corrosive alkali that is flammable) and an HM with an HCC of F7 (a corrosive acid that is flammable). Because they are both Fs, it first appears that they could be stored together. However, they both have a Secondary Segregation Note L, which states, "Separate from other flammables and flammables with secondary hazards by at least one four-foot aisle width."

Step 7. Stock HM cabinets, rooms, buildings, and racks based on the container size and compatibility criteria.

Table 3-2. Storage Segregation Matrix

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
A1	Radioactive, Licensed	*										Note A
A2	Radioactive, License Exempt	*										Note A
A3	Radioactive, License Exempt, Authorized	*										Note A
B1	Alkali, Corrosive Inorganic		*									Note B
B2	Alkali, Corrosive Organic		*									Note C
B3	Alkali, Low Risk							*				Note F
C1	Acid, Corrosive Organic		*									Note D
C2	Acid, Corrosive & Oxidizer, Inorganic		*									Note E
C3	Acid, Low Risk							*				Note F
C4	Acid, Corrosive & Oxidizer, Organic		*									Note D
C5	Acid, Corrosive & Oxidizer, Organic		*									Note E
D1	Oxidizer			*								None
D2	Oxidizer & Poison			*								Note G
D3	Oxidizer & Corrosive Acidic			*								Note G

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
D4	Oxidizer & Corrosive Alkali			*								Note G
E1	Explosive, Military				*							
E2	Explosive, Low Risk							*				Note A
F1	Flammable Liquid DOT PG I, OSHA IA					*						Note I
F2	Flammable Liquid DOT PG II, OSHA IA					*						Note I
F3	Flammable Liquid DOT PG III, OSHA II					*						Note I
F4	Flammable Liquid DOT PG III, OSHA II					*						Note I
F5	Flammable Liquid & Poison					*						Note K
F6	Flammable Liquid & Corrosive, Alkali					*						Note K
F7	Flammable Liquid & Corrosive, Acidic					*						Note K
F8	Flammable Solid					*						Note J
G1	Gas, Poison (Nonflammable)						*					Note L
G2	Gas, Flammable						*					Note M
G3	Gas, Nonflammable						*					Note N
G4	Gas, Nonflammable, Oxidizer						*					Note O
G5	Gas, Nonflammable, Corrosive						*					Note P
G6	Gas, Poison, Corrosive (Nonflammable)						*					Note Q
G7	Gas, Poison, Oxidizer (Nonflammable)						*					Note R
G8	Gas, Poison, Corrosive (Nonflammable)						*					Note S
G9	Gas, Poison, Flammable						*					Note T
K1	Infectious Substance										*	Note U
K2	Cytotoxic Drugs										*	Note V
M1	Magnetized Material							*				None
N1	Not Regulated as Hazardous							*				None
P1	Peroxide, Organic, DOT Regulated								*			None
P2	Peroxide, Organic (Low Risk)								*			None

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
R1	Reactive Chemical, Flammable									*		Note W
R2	Water-reactive Chemical									*		Note X
T1	DOT Poison – Inhalation Hazard										*	None
T2	UN Poison, Packing Group I										*	None
T3	UN Poison, Packing Group II										*	None
T4	UN Poison, Packing Group III							*				Note Y
T5	Pesticide, Low Risk							*				None
T6	Health Hazard							*				None
T7	Carcinogen (OSHA, NTP, IARC)										*	Note Z
V1	Miscellaneous Hazardous Materials – Class 9							*				None
V2	Aerosol, Nonflammable					*						Note BB
V3	Aerosol, Flammable					*						Note BB
V4	DOT Combustible Liquid, OSHA IIIA					*						None
V5	High Flashpoint Liquids, OSHA IIIB							*				None
V6	Petroleum Products							*				None
V7	Environmental Hazard							*				None
Z1	Article Containing Asbestos							*				None
Z2	Article Containing Mercury							*				None
Z3	Article Containing Polychlorinated Biphenyls (PCB)							*				None
Z4	Article, Battery, Lead Acid, Nonspillable							*				None
Z5	Article, Battery, Nickel Cadmium, Nonspillable							*				None
Z6	Article, Battery, Lithium									*		Note AA
Z7	Article, Battery, Dry Cell							*				None

Definition of Notes

Note A	Security Storage – Must be well ventilated with limited access.
Note B	Inorganic Alkali Storage – Store away from acids by at least one 4-foot aisle width and away from organic alkalis by at least one 4-foot aisle width.
Note C	Organic Alkali Storage – Store away from acids by at least one 4-foot aisle width and away from inorganic alkalis by at least one 4-foot aisle width.
Note D	Inorganic Acid Storage – Store away from alkalis (caustics) by at least one 4-foot aisle width and away from organic acids by at least one 4-foot aisle width. Separate from other acids with subsidiary risk labels by at least one 4-foot aisle width.
Note E	Organic Acid Storage – Store away from alkalis (caustics) by at least one 4-foot aisle width and away from inorganic acids by at least one 4-foot aisle width. Separate from other acids with subsidiary risk labels by at least one 4-foot aisle width.
Note F	Further separate into Acid and Alkali storage within the low hazard storage area to keep potentially incompatible products from mixing.
Note G	Separate from other oxidizers and oxidizers with secondary hazards by at least one 4-foot aisle width.
Note H	Magazine Storage.
Note I	Segregate into Flammable Liquid storage separate from flammable solids by at least one 4-foot aisle width.
Note J	Segregate into Flammable Solid storage separate from flammable liquids by at least one 4-foot aisle width.
Note K	Separate from other flammables and flammables with secondary hazards by at least one 4-foot aisle width.
Note L	Further segregate into Poison Gas storage within compressed gas area.
Note M	Further segregate into Flammable Gas storage within compressed gas area.

Definition of Notes

Note N	Further segregate into Non-flammable Gas storage within compressed gas area.
Note O	Further segregate into Oxidizer Gas within the Non-flammable Gas storage that is within the compressed gas area.
Note P	Further segregate into Corrosive Gas within the Non-flammable Gas storage that is within the compressed gas area.
Note Q	Further segregate into Corrosive Gas within the Poison Gas storage that is within the compressed gas area.
Note R	Further segregate into Oxidizer Gas within the Poison Gas storage that is within the compressed gas area.
Note S	Further segregate into Flammable Gas within the Poison Gas storage that is within the compressed gas area.
Note T	Further segregate into Corrosive and Oxidizer Gas within the Poison Gas storage that is within the compressed gas area.
Note U	Further segregate into Biomedical storage within the Poison storage area.
Note V	Further segregate into Medical Security storage within the Poison storage area.
Note W	Further segregate into Spontaneously Combustible storage within the Reactive storage area.
Note X	Should not store in areas protected with water sprinkler system. Fire protection should be non-water based.
Note Y	Store away from food.
Note Z	Further segregate within Poison storage area may be necessary if secondary hazards exist (i.e. flammable, corrosive, etc.).
Note AA	Separate from other products within the Reactive storage area.

Definition of Notes

Note BB Store aerosols from flammables by placing in separate room or barrier such as floor to ceiling wire mesh, chain link fence, etc. to protect personnel from aerosols that can become self-propelled projectiles.

Method 2: Determining Compatibility Using DOT Hazard Labels

Step 1. If an HMIRS generated SDS is not available, look on the container or the box it was shipped in for a DOT Hazard Label (See Figure 3-3).

Figure 3-3. Sample DOT Labels

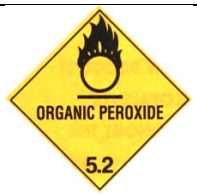
Step 2. If a DOT label is present, use Table 3-3 below to obtain an Interim HCC.

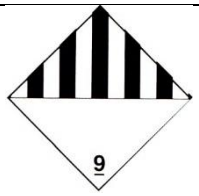
Step 3. Once you have the Interim HCC, go back to Table 3-2 and follow Steps 2 through 7 under Method 1 to determine compatibility.

Table 3-3. DOT Hazard Class Labels

DOT Label	DOT Hazard Class	Interim HCC	
		Primary	Secondary
	Explosive 1.1	E1	Magazine
	Explosive 1.2	E1	Magazine
	Explosive 1.3	E1	Magazine
	Explosive 1.4	E2	Security
	Explosive 1.5	E2	Security
	Explosive 1.6	E2	Security

DOT Label	DOT Hazard Class	Interim HCC	
		Primary	Secondary
	Poison Gas	G1	Poison Gas Cylinder
	Flammable Gas (Cylinder)	G2	Flammable Gas Cylinder
	Flammable Gas (Aerosol Non-refillable tank or Canister)	V3	Aerosol Containers
	Non-Flammable Gas	G3	Nonflammable Gas Cylinder
	Flammable Liquid	F1-F4	Flammable Liquid
	Flammable Solid	F8	Flammable Solid

DOT Label	DOT Hazard Class	Interim HCC	
		Primary	Secondary
	Spontaneously Combustible	R1	Spontaneously Combustible
	Dangerous When Wet	R2	Dangerous When Wet, No Water Sprinklers
	Oxidizer	D1	None Required
	Organic Peroxide	P1	None Required
	Poison	T2	None Required
	Harmful Keep Away From Food	T4	Away From Food
	Infectious Substance	K1	Biomedical

DOT Label	DOT Hazard Class	Interim HCC	
		Primary	Secondary
	Radioactive I	A1	Security
	Radioactive II	A1	Security
	Radioactive III	A1	Security
	Corrosive	C1, C2, C4, C5 (Acid)*	Acid
	Corrosive	B1, B2 (Alkali)*	Alkali
	Class 9	V1	None Required
Not Available	Magnetized Material	M1	None Required

Method 3: Determining Compatibility Using OSHA Precautionary Labels

Step 1. If an HMIRS generated SDS is not available, look on the HM container for an OSHA precautionary label. Precautionary labels start with signal words followed by specific handling precautions. The three signal words used are: Danger, Warning, and Caution. These signal words have the following meanings.

CAUTION! - Material will burn but is not extremely flammable and/or material is an irritant.

WARNING! - Material is flammable and will burn given the right circumstances and/or the material is toxic enough to cause sickness or severe irritation.

DANGER! - Material is either extremely flammable and will ignite easily and/or the material is toxic enough to cause serious injury or death.

Figure 3-4. Example Precautionary Label

WARNING! Contents under pressure. Do not puncture or incinerate. Do not store at temperatures above 120 degrees F°. Keep out of reach of children.

Step 2. If a precautionary label is present, use Table 3-4 below to obtain a Suggested Temporary HCC. Match the label with the "Signal Word" and "Statement of Hazard" in the first two columns of the table.

Step 3. Once you have the Suggested Temporary HCC from column 3, go back to Table 3-2 and follow Steps 2 through 7 under Method 1 to determine compatibility.

Table 3-4. Precautionary Labels

Signal Word	Examples of Statements of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
DANGER!	MAY BE FATAL IF SWALLOWED	T2	Poison	None Required
WARNING!	HARMFUL IF SWALLOWED	T3	Poison	None Required
WARNING!	HARMFUL IF SWALLOWED	T4	Low Hazard *	Away From Food
DANGER!	MAY BE FATAL IF ABSORBED THROUGH SKIN	T2	Poison	None Required
WARNING!	HARMFUL IF ABSORBED THROUGH SKIN	T6	Low Hazard *	None Required
DANGER!	MAY CAUSE (SEVERE) ** BURNS	C1, C2, C4, C5	Corrosive	Acid
DANGER!	MAY CAUSE (SEVERE) ** BURNS	B1, B2	Corrosive	Alkali
DANGER!	EXTREMELY FLAMMABLE	F1	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F2, F3	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F8	Flammable	Flammable Solid
CAUTION!	COMBUSTIBLE	F4	Flammable	Flammable Liquid
CAUTION!	COMBUSTIBLE	V4	Flammable	None Required
DANGER!	EXTREMELY FLAMMABLE, CATCHES FIRE IF EXPOSED TO AIR	R1	Reactive	Spontaneously Combustible

Signal Word	Examples of Statements of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
DANGER!	STRONG OXIDIZER, CONTACT WITH OTHER MATERIALS MAY CAUSE FIRE	D1	Oxidizer	None Required
DANGER!	MAY BE FATAL IF INHALED	T1	Poison	None Required
WARNING!	HARMFUL IF INHALED	T2	Poison	None Required
WARNING!	MAY CAUSE ALLERGIC RESPIRATORY REACTION	T6	Low Hazard *	None Required
CAUTION!	(VAPOR GAS) ** REDUCES OXYGEN AVAILABLE FOR BREATHING	T6	Low Hazard *	None Required
WARNING!	MAY CAUSE EYE IRRITATION	T6, C3, C4	Low Hazard *	None Required
WARNING!	MAY CAUSE IRRITATION	T6, C3, C4	Low Hazard *	None Required
WARNING!	MAY CAUSE ALLERGIC SKIN REACTION	T6, C3, C4	Low Hazard *	None Required
Please note that "None Required" means no additional storage requirements.				
* Material bearing precautionary label text will not be assigned a Low Hazard (General Purpose) location without notification and approval by the HWM.				
** Enter proper term as appropriate.				

3.4 Maintaining and Extending Shelf-Life

An effective waste-minimization program includes active life-cycle management of HMs before they turn into solid waste and potentially HW. One of the best and highest payback methods of doing that is to establish a good shelf-life extension program. Shelf-life is the total period of

time that an item may remain in the storage system and remain suitable for use. It begins with the date of manufacture, cure, assembly, pack, or inspect/ test/ restorative action. A shelf-life item is an item of supply having deteriorative or unstable characteristics to the degree that a storage-time period must be assigned to ensure that it will perform satisfactorily while in service.

Note: HMs purchased locally that do not have an expiration date have undetermined shelf-life.

Shelf-life Types

To determine if an item has a shelf-life or non-shelf-life item, look at the container label. If the container label does not have a test, inspection, or expiration date, it is not a shelf-life item. If the item is not a shelf-life item, use it indefinitely or until it becomes unserviceable. If the item is a shelf-life item, properly manage it as a Type I or Type II material, as explained below.

Type I Materials

Type I materials have an alphabetical shelf-life code and an expiration date. Type I materials are not extendible. DoD policy requires that Type I HMs be used or disposed of within 30 days of the expiration date. Type I materials are required to be marked with either the date manufactured, date cured, date assembled, or date packed (apply one as appropriate), as well as the expiration date.

Table 3-5. Type I Shelf-Life Codes

Shelf-life Code	Shelf-life (Months)	Shelf-life Code	Shelf-life (Months)
A	1	N	27
B	2	P	30
C	3	Q	36
D	4	R	48
E	5	S	60
F	6	T	84
G	9	U	96
H	12	V	108
I	72	W	60
J	15	X	CPC >60
K	18	Y	180
L	21	Z	240
M	24		

Type II Materials

Type II materials (90% of shelf-life material) have a numeric shelf-life code and a test or inspect date marked on the container. Type II materials are extendible. Every effort must be made to extend the life of the material until it is used. Type II items can be extended by visual inspection or laboratory analysis. Type II materials with a test date must only be extended using laboratory analysis.

Table 3-6. Type II Shelf-Life Codes

Shelf-life Code	Shelf-life (Months)	Shelf-life Code	Shelf-life (Months)
0	Non-deteriorative	5	18
1	3	6	24
2	6	7	36
3	9	8	48
4	12	9	60

Extending Type II Material

The extension time information used to extend shelf-life and establish the next test/inspection date can be obtained from the Material Quality Control Storage Standard (MQCSS).

To extend Type II shelf-life items, follow these steps:

Step 1. Visually inspect the containers. When conducting a visual inspection check for:

- Leakage, broken glass
- Rodent/insect infestation
- Hardening/liquefying
- Bulging containers
- Rust, caking, and powdering
- Liquid evaporation/condensation
- Proper label

If any containers and/or their contents are not in good condition, process them for disposal.

Step 2. Obtain extension information from MQCSS, depending on whether it is mission essential or not. Go to the OHARNG Shelf-Life Program on TAGNET for

additional guidance, tutorials and links to the FEDLOG system. If you do not use this method to obtain access to the system you will be blocked from the system due to current security setups by FEDLOG.

Step 3. If the item can be extended, mark the following data on the container with a shelf-life extension sticker DD Form 2477-3 (see example in Figure 3-5) or if space allows write the information directly on the container with a permanent marker: (label shown below is available at http://www.shelflife.hq.dla.mil/, similar labels may be used as long as the same information is recorded on the label). Additional labels can be obtained by contacting the USPFO or HWM.

a. Inspection/test date (day visually extended or QSL date)

b. Next inspection/test date

c. Authority (QSL, MQCSS, or laboratory name)

d. Initials of person who inspected and extended item

Figure 3-5. Sample Shelf-life Extension Sticker

SHELF-LIFE EXTENSION NOTICE

PER DoD 4140-27M, CONTAINERS REQUIRE REMARKING WITH EXTENDED SHELF-LIFE DATA.
UNITS OF ISSUE REQUIRE RE-MARKING UPON OPENING CONTAINER.

NSN: _____

CONTRACT NUMBER: _____

LOT/BATCH NUMBER: _____

DATE TESTED: _____

NEXT INSP/TEST DATE: _____

AUTHORITY: _____
(QSL, MQCSS, OTHER)

INSPECTED BY: _____
(ACTIVITY AND INSPECTOR'S NAME OR NUMBER)

DD FORM 2477-3 MAR 1999 Previous edition may be used until supply is exhausted

3.5 Selecting Hazardous Materials Storage Units

Select the appropriate type of storage unit for the HM. For small quantities of commonly used HM, use storage cabinets. For large quantities of HM, use HM structures such as storage rooms, buildings, or storage racks with built-in secondary containment.

Note: A MILVAN, CONEX, or any building without secondary containment is not an appropriate HM storage unit.

3.6 Stocking a Hazardous Materials Storage Location

As discussed in the beginning of this chapter, the procedures outlined below are BMPs that allow the user to prevent and/or reduce waste generation and ensure the safety of facility personnel working with HM.

Note: Check the hazardous compatibility of HM items before placing them in the storage location. Also, determine the amount of required shelf space needed for the storage of HM.

Step 1. Obtain an SDSs for each HM stocked in the storage unit.

Step 2. Start at the top shelf and move from left to right in each HM storage cabinet, designating the necessary shelf space for a specific HM item to be stored. Then, assign a two-digit sequential number to this space for each HM type. For example, assign each container of Product A as -01, Product B as -02, Product C as -03, etc. For storage racks and non-shelved HM in rooms or buildings, assign the numbers in the order that the HM appears on the rack or floor.

Note: Assign numbers to the material, *not* to the container. For example, there may be 10 eight-ounce bottles and 10 one-gallon buckets of Product X. Assign all 20 containers the same designation number.

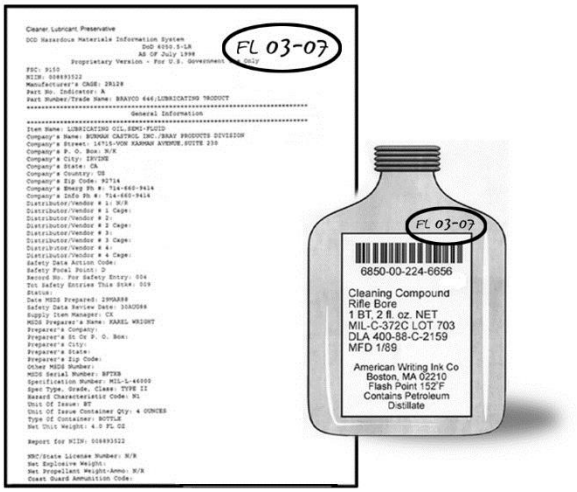
Different manufacturers produce similar HM. Each must have its own unique number. For similar products it is okay to add an alphabetic identifier (A, B, C, etc.) after the number, such as FL01-02A.

Step 3. Write the four-character storage unit number on each container of HM, followed by the two-digit sequential number assigned in Step 2 above. For example, the seventh item in Flammable Cabinet 03 will be FL 03-07. See Figure 3-6. Skip this step for individual containers stored in a bulk POL storage room/building.

Note: This number becomes the unique six-character HM designator for this material.

Step 4. Write this number on the SDS for that material. See Figure 3-6.

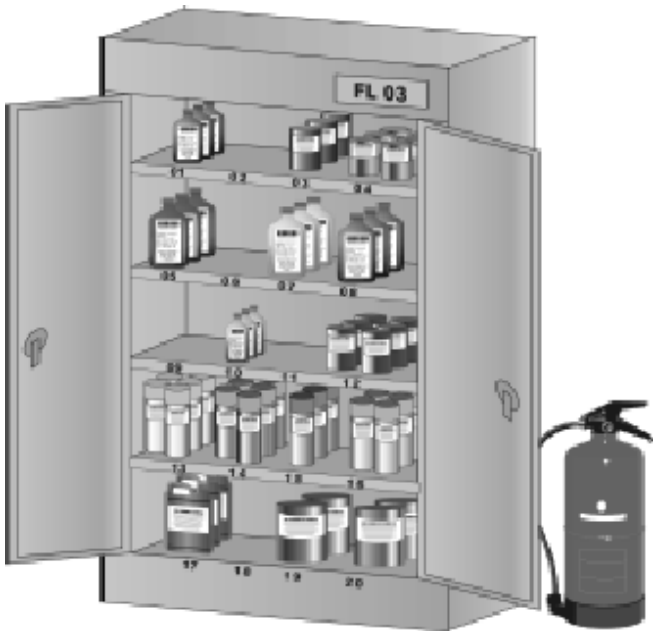
Figure 3-6. SDS/HM Container Numbering System



Step 5. Place all SDSs in sequential order in a binder and locate the binder at or near the storage unit. When completed, your cabinet should look like the one below in Figure 3-7.

Step 6. Ensure that fire extinguishers and/or spill response equipment/supplies are available to handle spills and leaks of HM contained in cabinets, lockers, rooms and buildings.

Figure 3-7. Cabinet Set and Numbering



Note: Use dry-erase magnetic strips or magnetics numbers and letters to label your HM cabinet and shelves

Caution: **DO NOT** store tools or personal items in any HM storage location.

DO NOT store combustible materials, such as cardboard, paper, or rags with flammable HM.

DO NOT store flammable or reactive HM within 50 feet of the property boundary.

DO NOT store HM in trailers, vehicles, personal cabinets, near floor drains, or in high foot or vehicular traffic areas.

DO NOT store pesticides in any HM storage cabinet.

DO NOT use wood or other combustible materials to construct additional or replacement storage shelving.

3.7 Maintaining and Tracking Inventory

Once storage units are stocked, perform an initial inventory of all HM in the storage location. Conduct **monthly** inventories thereafter, and update inventories when new products are added or

removed. Submit copies of all HM storage units' Inventory Forms upon request to the Environmental Office and retain copies on file for at least **three** years. This section explains how to conduct the HM inventory.

An example Hazardous Materials Storage Inventory Form, AGOH Form 200-1-1-R is provided in Appendix C and can be obtained in electronic format from the environmental website.

Conduct a Hazardous Material Inventory

To conduct an inventory, complete the following steps:

Step 1. Check that every container, bottle, can, box, etc. is labeled with the following:

- Product name
- Any warning of physical or health hazards listed on the SDS
- Six-digit HM identifier, if applicable

Step 2. Replace any labels that are missing or unreadable.

Step 3. Check the expiration, inspection, or testing dates on all HMs and manage as explained in the "Maintaining and Extending Shelf-life" section of this chapter.

Step 4. Obtain a Hazardous Materials Storage Inventory Form, AGOH Form 200-1-1-R, from Appendix C or electronic format from the environmental website.

Step 5. Complete the Hazardous Materials Storage Inventory Form for each HM location.

Note: Inventory any bulk fuel stored in aboveground storage tanks (ASTs) and fuel regularly stored in mobile refuelers. Record this inventory on a separate Hazardous Materials Inventory Form.

Step 6. Write the six-digit HM unit identifier in the "Storage Location" area and the "Facility Name" at the top of the form. Follow the notes in the key at the bottom of the Hazardous Materials Storage Inventory Form to complete the remaining entries.

Step 7. Maintain a copy of the Hazardous Materials Storage Inventory Form in a readily available location, such as in the front of the associated storage location's SDS binder, or in the supervisor's office (retain on file for at least three years).

Step 8. Submit copies of the Hazardous Materials Storage Inventory Form for all HM storage units to the HWM upon request.

Replenishing HM Stock

Step 1. Identify stock shortages by conducting periodic inspections (see Chapter 8). Replace shortages by ordering new items through the military supply system or by using a GPC if authorized. Purchase only the quantity needed for the specific mission or task. Ensure that items meet the Green Procurement Plan buying specifications, not all items have requirements but many do.

Step 2. If there is excess, call the USPFO Warehouse for proper turn in of the excess HM. If no other activity can use the excess, contact the HWM to arrange turn in of the HM.

Step 3. When restocking HM storage units, rotate the containers so that items that expire first are in the front. Remember, FIRST in, FIRST out.

Note: Always call the HWM before turning in or ordering new items that are potentially hazardous.

3.8 Fuel Can Storage

Storage of fuel in 5-gallon fuel cans must be kept to an absolute minimum. Bulk storage of fuel in 5-gallon cans between drills is not authorized. Units with 24 hour, on-call missions are the only exception. Units using fuel cans for bulk fuel storage must notify the Environmental Office to ensure compliance with federal, state, and local laws. The Environmental Office will assist the unit to determine secondary containment and spill response equipment requirements. A Spill Prevention, Control, and Countermeasure Plan (SPCCP) may be required. Do not store fuel cans, empty or full, on or in military vehicles or equipment when the vehicles or equipment are not in use. If absolutely necessary, fuel cans must be stored inside on spill containment pallets. Fuel used for lawn care and maintenance on a regular will be stored in commercially approved containers on secondary containment.

3.9 Lead Acid Battery Storage

Storage of lead acid batteries must be kept to an absolute minimum. Batteries must be stored on secondary containment. Do not store them near floor drains. Do not double stack batteries. Double stacking batteries increases the risk of damage to the batteries that could result in acid spills. 3

3.10 Resources

Shelf-life Extension Stickers

Contact the Environmental Office. The Environmental Office will provide shelf-life extension stickers upon request.

Secondary Containment and Spill Response Equipment

Step 1. Contact the Environmental Office. The Environmental Office may have what you need on-hand or have access to excess secondary containment (berms, plugs, etc.) or spill response equipment (spill kits, absorbents, etc.). If the assets are not readily available, the Environmental Office can assist you with specifications for the purchase of secondary containment and spill response equipment.

Note: The Environmental Office will work with State Maintenance Repair workers to obtain secondary containment and spill response equipment through the AQM's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a DA Form 3953 (Purchase Request and Commitment) will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Chapter 4. Waste Identification

References:

- 40 CFR Part 261, *Identification and Listing of Hazardous Waste*
- 40 CFR Part 262, *Standards Applicable to Generators of Hazardous Waste*
- OAC 3745-51, *Identification and Listing of Hazardous Waste*
- OAC3745-52, *(Hazardous Waste) Generator Standards*
- Army Regulation 200-1, *Environmental Protection and Enhancement*, Chapter 10 (waste management)
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

This chapter describes how to manage HW, UW, non-hazardous waste, recyclable/reusable materials, and general refuse at OHARNG facilities.

This chapter addresses the following topics:

OHARNG activities generate a wide variety of solid waste streams ranging from HW (such as used paint thinner) to general refuse (such as used MRE heaters). Generally, OHARNG's waste streams fall into one of the categories outlined in Table 4-1.

Table 4-1. Types of Waste

Type of Waste	Definition
HW	Defined as hazardous under RCRA, these waste streams must be managed IAW all applicable federal and state HW management regulations.
Universal Waste (UW)	These wastes include batteries, thermostats, mercury-containing devices, lamps, and pesticides that are defined as hazardous under RCRA. Although hazardous, they are subject to a reduced set of HW management regulations.
Recyclable/Reusable Wastes	As long as they are recycled or reused, these materials are either excluded from HW regulations or subject to reduced management requirements.
Non-RCRA Regulated Waste	This category includes wastes regulated by laws other than RCRA, such as the Toxic Substance Control Act (TSCA) (i.e. asbestos, PCBs) and state mandated HW.
Non-Hazardous Waste	These wastes are certain solid wastes that, although not hazardous, pose a potential threat if not properly managed.
General Refuse	These solid waste streams are not regulated as hazardous and do not pose an immediate threat. They may be thrown in the dumpster.

Note: This chapter describes waste management procedures that are common to all waste streams within a specific waste category; however, certain waste management procedures are specific to an individual waste stream. These waste-specific procedures are described in **Waste Protocol Sheets (WPS)** for OHARNG's most commonly generated waste streams. WPSs are located in Appendix B.

4.1 Hazardous Waste

HW is a solid waste that is not specifically excluded from regulation and meets one of the following criteria:

a. Exhibits one of the HW characteristics (ignitability, corrosivity, reactivity, or toxicity) identified in OAC 3745-51-20 through 3745-51-24. These HW

characteristics may be determined either by approved EPA test methods or by generator knowledge.

i. Ignitability: A waste is ignitable if it:

- Is a liquid and its flash point is less than 140 degrees F (60 degrees C), or
- Is an oxidizer or ignitable compressed gas as defined by US Department of Transportation regulations in 40 CRF Part 173.

ii. Corrosiveness: A waste is corrosive if it is:

- Aqueous and its pH is less than or equal to 2.0 or greater or equal to 12.5.

iii. Reactivity: A waste exhibits reactivity if it:

- Is normally unstable and readily undergoes a violent change without detonating.
- Reacts violently with water.

iv. Toxicity: The toxicity of a characteristic waste is determined by having a laboratory analyze an extract of the waste using the Toxicity Characteristic Leaching Procedure.

b. Listed in OAC 3745.

The Environmental Office has already determined which OHARNG common waste streams are HW. These OHARNG waste streams that are known or suspected of being hazardous are identified in Table 4-2.

Note: Table 4-2 lists only the OHARNG HWs generated on a routine basis. If a facility generates an HW not identified in Table 4-2 and suspects that it may be hazardous, they must contact the Environmental Office immediately for direction and guidance. If a facility changes the process that generates waste, they must notify the Environmental Office. The new waste streams must be re-characterized.

Table 4-2. Known or Suspected OHARNG Hazardous Waste Streams

Waste Stream	Description	Hazard
Absorbent, Hazardous	Absorbent pads, floor sweep, soil, etc.	Dependent on material absorbed.

Waste Stream	Description	Hazard
Aerosol Cans	Includes cans of spray paint, spray solvents, and pesticide aerosols.	**If Hazardous, Flammable/Toxic -** Aerosol cans may be hazardous due to ignitability (D001). NON-empty cans may also be hazardous due to their contents.
Battery Acid	Electrolyte.	**Corrosive.**
Brake Fluid, Silicone	Includes only brake fluids that are silicone based. Other brake fluids are considered used oil.	**If Hazardous, Toxic** – silicone brake fluid may be toxic for cadmium (D006). Material does not mix with used oil and is not able to be handled through the existing used oil program.
Ether Starter and Propane Cylinders	Small metal canisters and aerosol cans.	**Ignitable -** May contain trace amounts of ether or propane.
Fuel Filters (MOGAS/ JP-8)	Fibrous filter within metal casing.	**If Hazardous, Toxic -** Gasoline fuel filters may be toxic for benzene (D018).
MRE Heaters, unit meal size only (unused)	Unused heat packs that are components of MREs.	**Reactive -** MRE heaters are hazardous because they generate heat when exposed to water (D003).
NBC/CDE Kits	Small vials/packages of chemicals.	**Ignitable, Corrosive, and/or Toxic -** (D001, D002, D011 and U088).
"Ozzy" Mats, Hazardous	Filters that are part of the "Ozzy" parts cleaner.	**If Hazardous, Toxic -** Filters may be hazardous due to heavy metals or organic constituents.
Paint-Related Waste (Liquid)	Liquid paint residues and thinners.	**If Hazardous, Ignitable/Toxic -** Solvent-based or CARC paint may be hazardous due to ignitability (D001) or toxic due to heavy metals and/or organic constituents.
Pesticides	Includes insecticides, herbicides, and rodenticides.	**Toxic -** for active ingredient.
Petroleum Contaminated Solids	Petroleum contaminated soil, absorbents related to spill cleanup. Fluids that can be reclaimed can be recycled through the used oil program.	**If Hazardous, Toxic** – soils and absorbents may be toxic for benzene (D018).

Waste Stream	Description	Hazard
Rags and Patches, Hazardous	Weapons-cleaning and other rags and patches only.	**If Hazardous, Toxic** - Rags/patches used with Breakfree CLP manufactured before 1 January 1994 contain 1,1,1-Trichloroethane (F001/F002). Others may be hazardous due to lead (D008).
Respirator Cartridges	M-series protective gas mask filters.	**If Hazardous, Toxic** - Cartridges may be toxic due to chromium (D007).
Solvent Contaminated Solids	Includes adhesives, sealants, and epoxies.	**If Hazardous, Toxic** - Solvent-based wastes may be hazardous due to organic constituents.
Used Oil	Includes used petroleum based fluids, see WPS for complete list.	**Nonhazardous, if recycled** – Material is excluded from hazardous determination if properly handled and recycled.
Used Oil Filters (Terne-Plated)	Used oil filters that are coated with lead-containing material. To determine if terne-plated, call 1-800-99-FILTER.	**If Hazardous, Toxic** - Filters may be hazardous due to lead (D008).
Used Antifreeze	Typically contains ethylene glycol.	**If Hazardous, Toxic** – Used antifreeze may be hazardous due to lead (D008)
Zep Filters, Hazardous	Filters that are part of the Zep parts cleaner.	**If Hazardous, Toxic** - Filters may be hazardous due to heavy metals or organic constituents.

4.2 Universal Waste

UW is a category of HW subject to special regulations that are less stringent than normal HW management regulations. Reference the applicable WPS for more information on specific UWs. Table 4-3 lists common UW streams generated by the OHARNG.

Table 4-3. Common Universal Waste Streams Generated by the OHARNG

Waste Stream	Description	Waste Category (How to Manage)
Batteries (Miscellaneous)	**Includes** batteries such as Lithium, Magnesium, Mercury, and Nickel-Cadmium used for communication devices. May also include lead-acid batteries used in emergency lighting. Does not include alkaline batteries (do not contain mercury if manufactured after 1992).	Manage as **UW**. See the applicable **WPS** for more detail.
Lamps	Fluorescent light bulbs, mercury halide, mercury vapor, sodium halide, incandescent, etc.	Manage as **UW**. See the applicable **WPS** for more detail.
Mercury Containing Equipment	Heating and cooling control devices; thermometers; tilt switches; etc.	Call the HWM for disposal guidance.

4.3 Recyclable or Reusable Materials/Waste

Certain recyclable or reusable materials/wastes are subject to special regulations as long as they are reused, recycled, or reclaimed. Recyclable or reusable materials may be a subset of HW. Waste streams in this category are subject to special regulations if they are used, reused, or reclaimed. A full list of recyclable materials can be found on TAGNET at the **Qualified Recycling Program Homepage**. Common recyclable/reusable materials generated by the OHARNG are:

a. Used antifreeze (if non-hazardous after analysis)

b. Punctured aerosol cans for scrap metal

c. Batteries, lead-acid (undamaged)

d. Fuel, contaminated

e. Scrap metal and aluminum cans

f. Used oil

g. Used oil filters

h. Gas cylinders, including fire extinguishers

i. Cafeteria grease related to food preparation

j. Shop rags, laundered

k. Cardboard and paper

l. Copier and printer cartridges

m. Plastic water bottles

Note: If a facility generates a material that may be recycled or reused and is not identified above, they should call the Environmental Office for guidance and direction.

Recycling programs that address the specific needs of a facility can be established by working closely with the Environmental Office to identify applicable recyclables, local recyclers, and recycling methods that work for your specific location. Contact the Environmental Office for assistance in establishing a local recycling program.

Funds generated from the QRP are primarily used to sustain the program (pay recyclers, buy bins, develop marketing materials, etc.), support innovative recycling initiatives (paint can crushers, oil filter crushers, solvent recyclers, etc.), purchase environmental equipment (secondary containment, hazardous waste storage buildings, spill prevention), and energy reduction initiatives (energy audits, educational materials, etc.). Units can also submit requests morale, welfare, and recreational (MWR) equipment and initiatives. Requests for funds to support MWR equipment and initiatives are only approved if all QRP, recycling, environmental, and energy initiatives are fully funded. Submit requests for QRP funding to the Environmental Office's HWM for consideration.

4.4 Non-RCRA Regulated Waste

Non-RCRA regulated waste is waste that is not specifically regulated under RCRA; however, the waste is regulated by another regulation. For example, asbestos and polychlorinated-biphenyls (PCBs) are regulated under TSCA. Non-RCRA regulated wastes include:

a. Asbestos in brake pads and building materials

b. PCBs in oil such as transformers, ballasts and paint

c. Used Tires

If you think you have an issue with friable asbestos at your facility (damaged pipe wrap/insulation, broken floor tile, etc.), cordon off the area to prevent exposure and contact the SOHM immediately for further guidance. If you have a leaking transformer or light ballast that may contain PCBs, cordon off the area and contact the HWM immediately for further guidance. Radioactive waste is regulated by the Nuclear Regulatory Commission (NRC). All questions or concerns related to the management of radioactive materials should be referred to the SOHM.

4.5 Non-Hazardous Waste

Non-hazardous waste is a solid waste that is not listed under OAC 3745 and does not exhibit a hazardous characteristic under the regulatory definition. However, some non-hazardous wastes may still pose a potential threat to personnel and the environment if not properly managed. Common OHARNG generated non-hazardous wastes are:

a. Absorbent, Non-Hazardous

b. Dried Paint, Latex

c. Fuel Filters, Diesel

d. Grease, GAA

e. "Ozzy" Mats (If non-hazardous after analysis)

f. Paint-Related Waste, Solid (If non-hazardous after analysis)

g. Zep Filters (If non-hazardous after analysis)

Note: Call the Environmental Office if you generate a non-hazardous waste not identified above.

4.6 General Refuse

Caution: **DO NOT** throw liquids in the dumpster.

DO NOT throw more than one unused Meals Ready to Eat (MRE) heaters in the dumpster at a time.

DO NOT throw used weapons patches and rags in the dumpster.

DO NOT use the dumpster pad to store wood pallets, cardboard, etc.

DO NOT throw construction and demolition debris in the dumpster. Contractors are responsible for providing their own dumpsters for renovation and construction projects.

DO keep the lids and doors on your dumpsters closed to prevent exposure to rain and snow.

General refuse wastes pose little or no threat to human health and the environment and may be thrown in the dumpster. In addition to common garbage such as waste paper and food wrappers, general refuse can also include:

a. Used MRE heaters and single unused MRE heaters.

b. Used absorbent and floor sweepings containing non-hazardous materials

Note: Call the Environmental Office if you have questions concerning what can and cannot be disposed of in the dumpster. Call the Facilities Management Office to replace a dumpster if the lids or doors are missing or broken.

4.7 Process Wastes Managed Under Contract

These waste streams are those that do not leave the process from which they are generated until they are picked up by the service contractor. Currently, the main OHARNG in-process waste is oil/water separator (OWS) sludge. This sludge is not regulated as long as it remains on the OWS.

Note: Call the Environmental Office to service your OWS when the OWS is approximately 80% full. **Do not wait until the OWS is full.** It can take two to four weeks from the time you to call to get the OWS serviced. Sludge removed from the OWS may be regulated as a HW. Call the Environmental Office immediately for guidance and direction on having the waste characterized.

The CSMS currently manages other processes that may require testing prior to disposal including: radiator dip tank, paint booth filters and paint gun, battery room tank. Contact the Environmental Office before disposing of any wastes generated by these processes.

Chapter 5. Managing Waste

References:

- 40 CFR 261.5 (special requirements for hazardous waste generated by conditionally exempt small quantity generators)
- 40 CFR Part 262 (hazardous waste standards)
- 49 CFR Part 172 (transportation of hazardous materials)
- OAC 3745-51-05 (special requirements for hazardous waste generated by conditionally exempt small quantity generators)
- OAC 3745-51-06 (requirements for recyclable materials)
- OAC 3745-52 (hazardous waste generator standards)
- AR 200-1, *Environmental Protection and Enhancement*, Chapter 10 (hazardous waste)
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

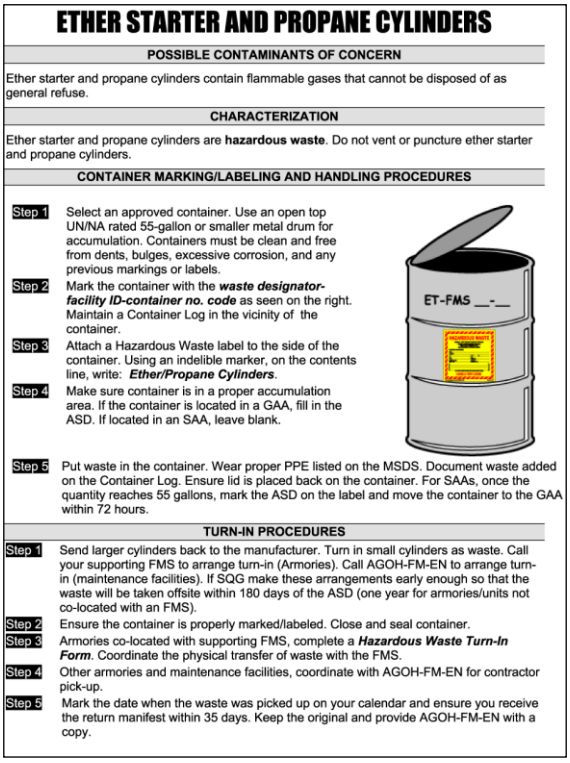
Topics covered in this chapter include:

5.1 Waste Management Made Easy – Waste Protocol Sheets

OHARNG facilities generate waste, whether it is residue from the use of products or products themselves that are no longer useful. Learning the detailed requirements of proper waste management can be very time consuming, especially if not performed every day. For example, the procedures for handling spent batteries are much different than those for managing waste paint thinner. In order to simplify the waste management process, specific handling procedures

for wastes commonly generated by the OHARNG have been developed in the form of Waste Protocol Sheets (WPSs). The WPSs are easy-to-follow, laying out step-by-step instructions on how to manage each waste stream. See Figure 5-1 for an example. Waste Protocol Sheets for most wastes you generate can be accessed on TAGNet's Environmental Management home page by clicking the "References" tab or by following the "Waste Protocol Sheet" hyperlink under the "Regulations, Plans, and Standard Operating Procedures" section of your unit's Environmental Homepage. Contact the Environmental Office if you can't locate a WPS for the waste you've generated. WPSs contain specific handling information such as container selection, marking, and labeling. These requirements are also explained in this chapter.

Figure 5-1. Example Waste Protocol Sheet



ETHER STARTER AND PROPANE CYLINDERS

POSSIBLE CONTAMINANTS OF CONCERN

Ether starter and propane cylinders contain flammable gases that cannot be disposed of as general refuse.

CHARACTERIZATION

Ether starter and propane cylinders are **hazardous waste**. Do not vent or puncture ether starter and propane cylinders.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

Step 1 Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.

Step 2 Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.

Step 3 Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Ether/Propane Cylinders***.

Step 4 Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.

Step 5 Put waste in the container. Wear proper PPE listed on the MSDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

Step 1 Send larger cylinders back to the manufacturer. Turn in small cylinders as waste. Call your supporting FMS to arrange turn-in (Armories). Call AGOH-FM-EN to arrange turn-in (maintenance facilities). If SQG make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).

Step 2 Ensure the container is properly marked/labeled. Close and seal container.

Step 3 Armories co-located with supporting FMS, complete a ***Hazardous Waste Turn-In Form***. Coordinate the physical transfer of waste with the FMS.

Step 4 Other armories and maintenance facilities, coordinate with AGOH-FM-EN for contractor pick-up.

Step 5 Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide AGOH-FM-EN with a copy.

Hard copies of WPSs are located in Appendix B. The hard copies in Appendix B are for reference only and may not be up-to-date. Check the website to ensure that you have the right version. Find the particular waste you are looking for and click to that sheet. It is very important that the waste meets the description in the WPS. If it does not, or if you cannot find your waste in the index, contact the HWM or the Environmental Office for guidance. Remember that not all waste types will have a WPS, only those that are considered commonly generated. Some sites may have specific wastes that are only generated at that location.

Only qualified OHARNG staff can determine the disposition of a material; whether or not it can be reissued, have its shelf-life extended, be recycled, or if it needs to be treated as a regulated waste and non-hazardous waste. Currently individuals at the Maintenance Shops, USPFO and Environmental Office are the only OHARNG staff qualified to determine if a material is hazardous waste based on training and experience.

Note: If a facility wants to add a WPS that is not in Appendix B, they may request one by contacting the Environmental Office's Hazardous Waste Manager.

5.2 Hazardous Waste Generator Status

The way HW is managed depends on the facility generator status. The Ohio EPA recognizes the following three hazardous waste generator status categories:

a. Conditionally exempt small quantity generators (CESQG)

b. Small quantity generators (SQG)

c. Large quantity generators (LQG)

As shown in Table 5-1, generator status depends on the quantity of waste generated per calendar month or the total quantity of HW on-site at any given time.

Table 5-1. Generator Criteria

Generator Status	Time Limit Once Waste is Placed in the GAA	Generation Quantity Limits (Hazardous Waste Generated per Calendar Month)	Accumulation Quantity Limits (Hazardous Waste Accumulated On-Site at Any Time)
CESQG	None*	No more than 220 pounds (lbs) HW (about ½ drum) or 2.2 lbs acute HW	No more than 2,200 lbs HW (about 5 drums) or 2.2 lbs acute HW
SQG	Regulatory limit 180 days	No more than 2,200 lbs (about 5 drums) HW or 2.2 lbs acute HW	No more than 13,200 lbs (about 33 drums) HW or 2.2 lbs acute HW
LQG	Regulatory limit 90 days	No limit	No limit

* At this time, armories and units do not generate HW. Staff at these locations may accumulate UW (See Table 4.1 Types of Waste) between turn-ins to their supporting shop. The Environmental Office recommends that armories/units co-located with an FMS turn in excess and obsolete materials every quarter and following annual training (AT).

Determining Hazardous Waste Generator Status

To accurately determine generator status, HW must be counted at the point of generation, regardless of whether the waste is first managed at a Satellite Accumulation Area (SAA) or a General Accumulation Area (GAA). Generator status is based on the quantity of HW generated during a calendar month. Follow the steps below to determine HW generator status:

Step 1. On the last day of each calendar month, gather **totals** of all the SAA and GAA container log binders.

Step 2. Sum the quantity of hazardous waste added to all of the containers during that month. If in doubt, contact the HWM.

Note: Do not count waste transferred from the SAA to the GAA. That would be double counting and will inflate the total quantity.

Step 3. Record the sum and associated generator status on the Hazardous Waste Generator Status Log, AGOH Form 200-1-17-R found in Appendix C. Maintain this log in the UECOs or Shop Chief's office.

Step 4. Email a copy of the Hazardous Waste Generator Status Log to the Hazardous Waste Manager by the COB on the 10th of the month for the prior month. Facilities that have more than one accumulation area should coordinate for all hazardous waste totals to be reported as one for the site.

Certain categories of HW do not have to be counted when determining your generator status. For example, HW managed under the UW regulations, used oil regulations, or lead-acid battery recycling provisions are not counted. Generators exceeding their accumulation quantity limit become regulated as the next level of generator. For example, CESQGs who accumulate more than 220 lbs of HW become SQGs. Likewise, SQGs who accumulate more than 2,200 lbs become LQGs. The generator status of each OHARNG facility is summarized below in Table 5-2.

Table 5-2. Facility Generator Status

Facility	Address	OH EPA ID Number	Status
FMS 1	2200 North Airport Road, Mansfield OH 44902	OHR000169698	CESQG
FMS 3	4303 Green Road, Cleveland OH 44128	OHD981193006	CESQG
FMS 4	4630 Allen Road, Stow OH 44224	OHD981193063	CESQG

Facility	Address	OH EPA ID Number	Status
FMS 6	5980 Airport Drive NW, North Canton OH 44720	OHD981192842	CESQG
FMS 8	4499 Hawk Drive, McConnelsville OH 43756	OHD981193089	CESQG
FMS 9	2154 Narrows Road, Chillicothe OH 45601	OHR000128611	CESQG
FMS 11	3000 Symmes Road, Hamilton, OH 45015	OHR000143057	CESQG
FMS 12	2555 County Line Road, Kettering OH 45430	OHD981192941	CESQG
FMS 13	1120 W. Blee Road, Springfield OH 45505	OHR000169706	CESQG
FMS 15	855 S. Collett Street, Lima OH 45804	OHD981192883	CESQG
FMS 17	1000 Lawrence Road, Bldg 2008, Port Clinton, OH 43452	OHD981192834	CESQG
FMS 18	7246 2nd Street, Bldg 846 Columbus OH 43217	OH0000004416	CESQG
USPFO Warehouse	3990 E. Broad Street, Bldg 5, Columbus, OH 43213	OHR000148007	CESQG
CSMS at DSCC	3990 E. Broad Street, Bldg 6, Columbus, OH 43213	OHR000148007	SQG
Camp Ravenna Joint Military Training Center	1438 SR 534 SW, Newton Falls OH 44044	OHD981192925	CESQG
AASF 1	5989 Airport Drive NW, North Canton OH 44720	OHD981192842	CESQG
AASF 2	7750 S. Access Road, Bldg 918, Columbus OH 43217	OH0000004416	CESQG
Beightler Armory	2825 West Dublin-Granville Road, Columbus OH 43235	OHD981192933	CESQG

HW generator status is determined on a month-to-month basis. Each time HW is added to a container, the date and quantity added must be documented on a Container Log, which is explained later in this chapter.

5.3 Setting up Hazardous Waste Accumulation Areas

Selecting and Preparing a Container

Only certain types of containers are authorized for accumulating waste. The type of container selected depends on the type of waste.

a. Removable head drums are commonly used for non-liquid wastes such as rags and filters.

b. Non-removable head drums (drums with bungholes) are used for liquids.

c. Boxes are sometimes the best containers for certain items like batteries, aerosol cans, and fluorescent lamps.

Note: A container is defined as any portable device, in which material is stored, transported, treated, disposed of, or otherwise handled. Non-bulk containers are typically 110 gallons or less.

The WPSs located in Appendix B list the container requirements for each waste stream (if there is not a WPS for your waste, contact the HWM). Drums must be clean and in good condition and able to withstand handling, transport, and long-term storage without leaking. Containers must not be creased, rusted, or dented and also must have appropriate sealing lids. Remove any previous markings and labels from the container or mask over with paint.

Under OAC regulations, there are two basic types of HW accumulation areas applicable to OHARNG operations: Satellite Accumulation Areas (SAA) and Generator Accumulation Areas (GAA).

Note: Most OHARNG facilities are CESQGs. CESQGs are not subject to SAA or GAA requirements; however, as a Best Management Practice, the OHARNG requires all HW generators comply with SAA or GAA accumulation standards.

SAAs are used to accumulate HW at, or near the point of generation. The SAA is under the control of the operator of the process generating the waste.

Example: An SAA may be a 55-gallon drum used to collect HW paint/solvent from spray booth operation. It would be located next to the paint spray booth. An SAA need not be established for every waste stream.

GAAs are used to accumulate HW before transport. Unlike SAAs, GAAs do not have to be under the direct control of a process operator, or be in close proximity to a process operation.

GAAs may even be physically located outside of a building and can include accumulation of wastes in containers or tanks.

Example: A GAA may be an HM storage building used to temporarily accumulate drums of waste paints, solvents, and other HW prior to shipment to an off-site facility.

Satellite Accumulation Areas

An SAA is a specific location at, or near a HW generating process. Up to 55 gallons of HW (or one quart of acute HW) may be accumulated at one SAA. Acute HW has a P List waste code identified in OAC 3745-51-33(E). Once this limit is reached, the container (or contents) must be transferred to the GAA within 72 hours, including weekends and holidays. If the entire container is transferred, an empty waste container should replace the filled container.

An SAA must be "under the control" of the process operator that generates the waste. "Under the control" means the process operator generating the waste must control the waste going into the SAA. This refers to the actual employee operating the production process or his/her immediate supervisor. As a rule, the SAA must be within visual range of the operator or be secure to prevent an accident or mismanagement of the waste.

Note: OAC 3745-52-34(C) does not dictate the number of containers or how many waste streams may accumulate in one SAA however, as a best management practice, SAAs at OHARNG facilities will follow the "one container, one waste stream" rule. Exceptions to the rule must be approved by the Environmental Office. In addition, the farther away from the point of generation, the less acceptable the area is as an SAA. For additional guidance, contact the HWM.

Setting Up a Satellite Accumulation Area

It may not be necessary to establish an SAA in all cases. It may be best to start accumulating waste directly at the GAA. Factors such as safety, the types of HW to be accumulated, the physical features of the accumulation area, and container management controls should be considered when deciding whether or not to establish an SAA. Perform the following steps when establishing an SAA:

Step 1. Before establishing an SAA, ask the following questions:

a. Does the container placed directly at, or near, the point of generation force a facility to violate OSHA requirements or otherwise create a safety hazard to employees or neighbors?

b. Does the waste pose a storage hazard or a danger to workers (i.e., ignitable, reactive) if stored directly next to the process area?

c. Is the area at the point of generation less protected than an area farther away?

d. Does an alternate location offer secondary containment, or is it closer to emergency equipment or spill control equipment?

e. Is waste added to the container infrequent enough to negate the purpose of having an area to conveniently accumulate waste?

STOP! If the answer to any of the above questions is yes, it may be best to establish a GAA instead of an SAA. Call the Environmental Office for guidance and direction.

Step 2. Select a well-ventilated indoor area, or an outdoor area that is under cover and fenced or otherwise secured, to prevent unauthorized access.

Note: An SAA may be a locked flammable storage cabinet, room, or building. If it is located outside, the process operator must keep the building locked when not in use.

Step 3. Make sure the area is out of employee traffic patterns.

Step 4. Plug any floor drains within 50 feet of the SAA.

Step 5. Select fire extinguishers that are compatible with the types of potential fire hazards present, and place them in a prominent location near the SAA. Coordinate with the SOHM for the proper type and location of extinguishers.

Step 6. Post a sign (Figure 5-2) in a visible location within the SAA that identifies the area as an SAA.

Figure 5-2. Sample SAA Sign

Step 7. If the HW to be accumulated in the SAA is a liquid, install a secondary containment structure such as a dike, curb, or spill pallet, and place adequate spill-response equipment and supplies nearby to contain up to a 55-gallon spill.

Step 8. Complete an Emergency Information Form and post it next to the telephone. For a copy of this form, see the Forms and Instructions section at the end of this chapter.

Step 9. Obtain a blank Container Log AGOH Form 200-1-8-R available in Appendix C or the environmental website.

Step 10. Place the log in a binder located close to the SAA.

Selecting and Preparing a Satellite Accumulation Area Container

Step 1. The type and size of the container depends on the type of waste being accumulated. Consult the WPS for the waste stream being managed in the SAA. Select the appropriate container that is compatible with the waste stream. Containers must be clean and in good condition without rust, dents, or corrosion. Boxes must be intact with lids or covers that fit.

STOP! Container standards are more stringent for GAAs. If the entire container will be transferred from the SAA to the GAA, select an approved container for GAAs.

Step 2. Remove or paint over any previous container markings and labels.

Step 3. In the case of flammable liquids, attach a bond wire to the SAA container to minimize friction and static charge buildup. When pouring flammable liquid wastes into the SAA container, connect the bond wire to the other container. An easy way to do this is by using alligator clips.

Marking and Labeling the Satellite Accumulation Area Container

Step 1. Mark the container with the words “Hazardous Waste,” or with words that identify the contents of the container.

Note: When marking the container, use at least one-inch letters and a color of paint that contrasts with the color of the container.

Step 2. Mark each waste container with the appropriate two, three, or four-letter designator, followed by the name of the facility and the container number. The designator should indicate the contents of the container as shown in Table 5-4 or for additional waste types not listed according to the WPS. If there is no listing or WPS available for your waste type, contact the HWM for assistance.

Example: The second drum containing contaminated fuel at FMS 1 should be marked as "FC – FMS 1 – #2." See Figure 5-3 below as an example.

Figure 5-3. Sample Drum Marking

Table 5-4. Container Markings

Waste / Recycle Stream	Marking
Absorbent, Hazardous	UA
Absorbent, Non-hazardous	NR-UA
Aerosol Cans, unpunctured	AC
Acetylene	AT
Antifreeze	NR-AF
Asbestos	AB
Batteries, Misc. (lithium, magnesium, mercury, and nickel-cadmium)	UB*
Battery Acid	BA
Dried Paint, Latex	NR-DP
Ether Starter and Propane Cylinders	ET
Liquid, Corrosive	LC
Liquid, Flammable	LF

Waste / Recycle Stream	Marking
Fuel, Contaminated	FC
Fuel Filers, Diesel	NR-UF
Fuel Filers, MOGAS/JP-8	FF
Grease, GAA	NR-UG
Lamps	LB*
Mercury Thermostats	MT
MRE Heaters unit meal size, Unused	MS
NBC/CDE Kits	NB
“Ozzy” Mats, Hazardous	OM
“Ozzy” Mats (Non-hazardous)	NR-OM
Paint–Related Waste (Liquid)	PO
Paint–Related Waste (Solid)	NR-PR
Pesticides	PE
Rags and Patches, Hazardous	RP
Respirator Cartridges	MS
Solvent Contaminated Solids	SO
Used Oil	UO
Used Oil Filters (Non-Terne Plated)	NR-UF
Used Oil Filters (Terne Plated)	OF
Used Shop Rags, Non-Hazardous	NR-SR
Zep Filters (Hazardous)	ZF
Zep Filters (Non-hazardous)	NR-ZF

* The drum marking should include the words “Universal Waste—Batteries” or “Universal Waste—Lamps.”

Step 3. Position the waste container so that the waste stream name is clearly visible.

Adding Waste to a Satellite Accumulation Area Container

Step 1. For solids, remove the lid and add waste.

Step 2. For liquids, remove bung and use a funnel to pour liquids or sludge through the bunghole into a non-removable head container. Add the waste without spilling or splashing.

Caution: Do not place liquids in removable head containers without permission from the Environmental Office.

Step 3. Replace the lid on the container. **Never leave it off!**

IMPORTANT: Do not accumulate HW in an open container. It is a serious violation of the HW regulations. A container holding HW must always be closed except when it is necessary to add or remove waste.

Step 4. Record the waste type and amount added to the container on the Container Log. Keep completed logs in a binder.

IMPORTANT: Facilities *must* keep an accurate log. The monthly HW generation rate determines the HW generator status for the facility.

Step 5. Stop adding waste when the waste level nears the top of the container. Maintain headspace as noted in Table 5-5.

Table 5-5. Container Headspace

Size of Container (gallons)	Headspace (inches)
55	4
30	3
15	2
less than 15	1
Aerosol Can Puncturing Unit containers (requires additional headspace to operate unit)	25% of drum capacity minimum

Step 6. When (or before) the 55-gallon limit is reached, move the entire container either to the GAA or transfer the contents to a GAA container within 72 hours, including weekends and holidays.

Step 7. If the entire SAA container is moved to the GAA, make sure the container is approved for GAAs. Then mark the accumulation start date (ASD) on the container. If only the contents are transferred to a GAA container, see the section "Adding Waste to a Generator Accumulation Area Container."

Note: The accumulation start date (ASD) is either the date the 55-gallon HW limit is reached at the SAA, or the date HW is first added to a new GAA container. There is no SAA time limit for less than 55 gallons of HW, but once 55 gallons is reached, the waste must be transferred to the GAA within 72 hours, including weekends and holidays.

Step 8. Note when the container becomes full and when the container (or contents) was transferred to the GAA on the Container Log. If the entire container is transferred to the GAA, transfer the log to the GAA log binder. If only the contents are transferred, continue to maintain the log in the SAA log binder. Start a new log for new waste.

Step 9. If only the contents of the container are transferred to the GAA, go to step one of "Adding Waste to a Generator Accumulation Area Container". If the entire container is transferred to the GAA, return to step one of "Selecting and Preparing a Satellite Accumulation Area Container".

Generator Accumulation Area

A GAA is an area where HW is accumulated by the generator for up to 90 days for LQGs, and 180 days for SQGs (or 270 days if waste is transported over 200 miles one way to a treatment, storage, or disposal facility). Although there is no accumulation time limit for CESQGs, OHARNG allows accumulation for up to one year.

Although there is no limit to the number of GAAs a facility can operate, each area is subject to the generator related clean-up requirements when the area is no longer in operation. Therefore, it is recommended that the generator minimize, when possible, the number of GAAs on site.

Setting up a Generator Accumulation Area

Perform the following steps to establish a GAA:

Step 1. Select a well-ventilated indoor area, or an outdoor area that is under cover and fenced or otherwise secured to prevent unauthorized access.

Step 2. Make sure the area is out of employee traffic patterns.

Step 3. Provide secondary containment to control and hold any accidental releases from accessing the environment.

Note: A typical GAA is a metal HM storage building. These units offer built-in secondary containment.

Step 4. Plug floor drains within 50 feet of the area.

Step 5. Provide a communication system such as a telephone, two-way radio, internal alarm, or buddy system.

Step 6. Select fire extinguishers compatible with the types of potential fire hazards present and place them in clearly visible response locations. Coordinate with the SOHM for the proper type, placement location and number of extinguishers.

Step 7. Ensure that the area is secure against unauthorized personnel.

Step 8. Post warning signs (Figure 5-4) in visible locations at the GAA. The signs must be readable from 50 feet away and contain the following information:

Figure 5-4. Sample GAA Sign

Step 9. Place adequate spill response equipment and supplies nearby to contain a spill.

Caution: Keep liquid waste containers within secondary containment such as dikes, curbs, or spill pallets.

Step 10. Install berms, curbs, walls, spill pallets, or other physical barriers to segregate incompatible wastes.

Step 11. Complete an Emergency Information Form AGOH Form 200-1-2-R and post it next to the telephone (see Appendix C).

Step 12. Obtain a blank Container Log (see Appendix C).

Step 13. Place the Container Log in a binder located close to the GAA.

Selecting and Preparing a Generator Accumulation Area Container

Containers (versus tanks) are the preferred waste accumulation method for OHARNG, but only certain types are authorized. The use of underground storage tanks (USTs) to accumulate HW is prohibited (AR 200-1, 5-2d). Do not affix the container to the wall or floor. Containers that are

bolted, strapped, or affixed in any way to the wall or floor are classified as above ground storage tanks (ASTs). The use of ASTs to store hazardous waste is prohibited at OHARNG facilities under most circumstances. Contact the Environmental Office for additional guidance if needed. The selected container type depends on the waste type, as follows:

a. Removable head containers are for non-liquid wastes such as absorbents, rags, and filters.

b. Non-removable head containers with bungholes are for liquids and sludge.

c. Boxes are the best containers for solid wastes like batteries.

To find out which type of container may be used for a specific waste stream, see the WPSs located in Appendix B.

Marking and Labeling the Generator Accumulation Area Container

Step 1. Mark each waste container with the appropriate two, three, or four-letter designator, followed by the name of the facility and the container number. See Figure 5-3 and Table 5-4.

Step 2. Obtain an HW label (Figure 5-5) for each waste container from the Environmental Office.

Figure 5-5. Sample Hazardous Waste Label

Note: The Environmental Office will stock and field required labels.

Step 3. Using a permanent black marker, write the name, address, EPA ID number of the facility, EPA Waste Code and Accumulation Start Date (see note below) on the label. See Table 5-2, Facility Generator Status, for the EPA ID number of the facility or online at the facility eMS Home Page. See WPS for the EPA Waste Code or with the HWM for determination based on analytical results.

Note: Do not write the ASD on the hazardous waste label until placing material in the container. If accumulating the hazardous waste for an extended length of time, consider using an SAA. Contact the HMW to ensure that the SAA location meets regulations if co-locating GAA and SAA containers. It is not necessary to write the Manifest Document Number or the DOT shipping information on the label until the waste is sent off site.

Step 4. Attach the label securely to the side of the container.

Step 5. Position waste container with the label clearly visible for inspection.

Adding Waste to a Generator Accumulation Area Container

Note: Wastes may be added directly to the GAA container as the waste is generated or transferred from the SAA.

Step 1. For solids, remove the lid and add waste.

Step 2. For liquids, remove the bung and use a funnel to pour liquids or sludge through the bunghole into a non-removable head drum. Add the waste without spilling or splashing. Replace the bungs when not in use, ensuring they are sealed with silicon or Teflon.

Caution: DO NOT place liquids in open-head drums without permission from the Environmental Office.

Step 3. Replace the lid or bungs on the container. N**ever leave them off!**

IMPORTANT: Do not accumulate HW in an open container. It is a serious violation of the HW regulations. A container holding HW must always be closed except when it is necessary to add or remove waste.

Step 4. Record the waste type and amount added to the container on the Container Log. Keep completed logs in facility records.

Note: The day the waste is first added to the container is the Accumulation Start Date (ASD). Record the ASD on the label. Be sure to keep an accurate log. The monthly HW generation rate determines the HW generator status for the facility.

Step 5. Stop adding waste when the waste level nears the top of the container. Maintain headspace as noted in Table 5-5.

Step 6. Once drums are filled, place ring bolts down.

5.4 Accumulating Other Wastes

OHARNG activities may utilize the standards for SAAs or GAAs to accumulate the following types of other wastes:

a. UWs (e.g., fluorescent light bulbs and lithium batteries)

b. Recyclable/reusable materials (e.g., lead-acid batteries and off-specification fuel)

c. Non-RCRA regulated and non-hazardous wastes

At a minimum, accumulation or storage areas for these wastes must be at a location that provides compatible storage, is protected from the elements, and is provided with a means of secondary containment to prevent potential release to the environment. The Generator Accumulation Area (GAA) Weekly Inspection Log, form AGOH Form 200-1-12-R, and the Satellite Accumulation Area (SAA) Weekly Inspection Log, form AGOH Form 200-1-13-R (see Appendix C) will be used for inspection of these areas.

Caution: When storing liquid recyclables, such as used antifreeze and used POLs in shop areas, provide a means to prevent release to floor drains and the environment.

To set up an accumulation area for these items, follow the steps below:

Step 1. Select a well-ventilated site indoors or a site outdoors that is under cover and fenced, or otherwise secured to prevent unauthorized access.

Step 2. Ensure the area provides a means to prevent release to floor drains or to the environment (e.g., secondary containment, berms, or spill pallets).

Step 3. Ensure fire extinguishers that are compatible with the types of potential fire hazards are present. Coordinate with SOHM for the proper type and location placement.

Step 4. Locate spill response equipment nearby in sufficient quantity and type to contain a spill.

Universal Waste

There are two categories of UW handlers: Small Quantity Handlers of Universal Waste (SQHUW) and Large Quantity Handlers of Universal Waste (LQHUW). SQHUWs accumulate less than 5,000 kg (11,000 lbs) of UW at any one time. LQHUWs accumulate greater than or equal to 5,000 kg of UW at any one time.

Currently, all OHARNG facilities that accumulate UW are SQHUWs. SQHUWs may accumulate UW on-site for up to one year. If greater than one year is required, the SQHUW must

prove that the accumulation is necessary to facilitate proper treatment, recovery, or disposal. If more than one year accumulation time is required, contact HWM. SQHUWs may send their UW to another handler or a destination facility.

Note: A conditionally exempt small quantity generator (CESQG) has the option of handling UW as an SQHUW or under the CESQG provisions. Because there is no accumulation time limit for CESQGs, the Environmental Office **may** allow OHARNG CESQGs to handle their UW as HW. This way, generators may accumulate **UNIVERSAL** wastes beyond the one-year accumulation period for SQHUW. Contact the Environmental Office for additional guidance.

Selecting and Preparing a Universal Waste Container

Any container approved for accumulating HW may be used for accumulating UW. For batteries, the suggested container is a cardboard box. Follow the steps below for selecting the proper container:

Step 1. Ensure the container is structurally sound.

Step 2. Ensure the lid is intact and fits the container.

Step 3. Ensure the container is compatible with the waste.

Step 4. Ensure the container lacks evidence of leakage, spillage, or damage that could cause leakage.

Step 5. Remove or paint over any previous container markings or labels.

Marking and Labeling a Universal Waste Container

Use the following procedure to mark and label UW containers:

Step 1. Using at least one-inch letters, mark each waste container with the appropriate two, three, or four-letter designator, followed by the name of the facility and the container number.

Step 2. Obtain an UW label (Figure 5-6) for each waste container from the Environmental Office. It may look like the picture below.

Figure 5-6. Sample Universal Waste Label

Step 3. Check the appropriate box on the label using a permanent black marker.

Step 4. Attach the label securely to the side of the container.

Step 5. Position container with the label clearly visible for inspection.

Adding Waste to a Universal Waste Container

Follow the procedure below to add UW to containers.

Step 1. Remove the lid and add waste.

Step 2. Record the ASD on the label.

Step 3. Replace the lid on the container, **never leave it off!** Containers holding UW must always be closed.

Step 4. Stop adding waste when the waste level nears the top of the container. Maintain container headspace IAW Table 5-5.

Non-hazardous Waste

Establishing an Area to Accumulate Non-hazardous Wastes

Nothing prohibits accumulating non-hazardous waste with HW in a GAA, but to avoid a potential mix up, accumulate non-hazardous waste in a POL area or establish a separate area. If using the same location, it is mandatory to ensure that recyclables and non-hazardous waste storage is clearly delineated from hazardous waste storage.

To establish a separate area for accumulating non-hazardous waste, follow the steps below:

Step 1. Select a well-ventilated indoor area, or an outdoor area that is under cover and fenced, or otherwise secured to prevent unauthorized access.

Step 2. Make sure the area is out of employee traffic patterns.

Step 3. Provide secondary containment to control and hold any accidental releases.

Caution: Keep liquid waste containers within secondary containment such as dikes, curbs, or spill pallets.

Step 4. Plug floor drains within 50 feet of the area.

Step 5. Select fire extinguishers compatible with the types of potential fire hazards present, and place them in clearly visible response locations. Coordinate with the SOHM for the proper type and location of extinguishers.

Step 6. Place adequate spill response equipment and supplies nearby to contain a spill.

Step 7. Install berms, curbs, walls, spill pallets, or other physical barriers to segregate incompatible wastes.

Step 8. Complete an Emergency Information Form AGOH Form 200-1-2-R and post it next to the telephone.

Selecting and Preparing a Non-hazardous Waste Container

The selected container type depends on the waste type, as follows:

a. Removable head drums are for non-liquid wastes such as filters.

b. Non-removable head drums with bungholes are for liquids such as antifreeze.

Any container approved for accumulating HW may be used for accumulating non-hazardous waste. The WPSs located in Appendix B identify acceptable containers for each waste stream. Follow the steps below for selecting the proper container:

Step 1. Ensure that the container is structurally sound.

Step 2. Ensure that the lid is intact and fits the container.

Step 3. Ensure that the container is compatible with the waste.

Step 4. Ensure that the container lacks evidence of leakage, spillage, or damage that could cause leakage.

Step 5. Remove or paint over any previous container markings or labels.

Marking a Non-hazardous Waste Container

Use the following procedure to mark non-hazardous waste containers:

Step 1. Using at least one-inch letters, mark each waste container with the appropriate two-, three-, or four-letter designator, followed by the name of the facility and the container number.

Step 2. Position container with marking clearly visible for inspection.

Adding Waste to a Non-hazardous Waste Container

The following procedures are general instructions that apply to any waste. Some wastes may require special handling. Check the WPS before adding it to the container.

Step 1. For solids, remove the lid and add waste.

Step 2. For liquids, remove the bung and use a funnel to pour liquids or sludge through the bunghole into a non-removable head drum. Add the waste without spilling or splashing. Replace the bungs when not in use, ensuring that they are sealed with silicon or Teflon.

Caution: **DO NOT** place liquids in removable head drums without permission from the Environmental Office.

Step 3. Replace the lid or bungs on the container. **Never leave them off!**

Step 4. Stop adding waste when the waste level nears the top of the container. Maintain container headspace as noted in Table 5-5.

Step 5. Once drums are filled, place ring bolts down.

Recyclable/Reusable Materials

Establishing an Area to Accumulate Recyclable/Reusable Materials

Nothing prohibits accumulating Recyclable/Reusable Materials with HW in a GAA, but to avoid a potential mix up, store these items in a POL area or establish a separate area. To establish a separate area, follow the steps below:

Step 1. Select a well-ventilated indoor area, or an outdoor area that is under cover and fenced, or otherwise secured to prevent unauthorized access.

Step 2. Make sure the area is out of employee traffic patterns.

Step 3. Provide secondary containment to control and hold any accidental releases.

Caution: Keep liquid waste containers within secondary containment such as dikes, curbs, or spill pallets.

Step 4. Plug floor drains within 50 feet of the area.

Step 5. Select fire extinguishers compatible with the types of potential fire hazards present, and place them in clearly visible response locations. Coordinate with the SOHM for the proper type and location of extinguishers.

Step 6. Place adequate spill response equipment and supplies nearby to contain a spill.

Step 7. Install berms, curbs, walls, spill pallets, or other physical barriers to segregate incompatible wastes.

Step 8. Complete an Emergency Information Form AGOH Form 200-1-2-R and post it next to the telephone.

Selecting and Preparing a Recyclable/Reusable Materials Container

The selected container type depends on the waste type, as follows:

a. Removable head drums are for non-liquid wastes such as scrap metal.

b. Non-removable head drums with bungholes are for liquids such as used oil or contaminated fuel.

Note: Lead-acid batteries must be stored on secondary containment pallets.. DO NOT double stack batteries!

Any container approved for accumulating HW may be used for accumulating Recyclable/Reusable Material. The WPSs located in Appendix B identify acceptable containers for each waste stream. Follow the steps below for selecting the proper container:

Step 1. Ensure the container is structurally sound.

Step 2. Ensure the lid is intact and fits the container.

Step 3. Ensure the container is compatible with the waste.

Step 4. Ensure the container lacks evidence of leakage, spillage, or damage that could cause leakage.

Step 5. Remove or paint over any previous container markings or labels.

Marking and Labeling a Recyclable/Reusable Materials Container

Use the following procedure to mark Recyclable/Reusable Material containers:

Step 1. Using at least one-inch letters, mark each waste container with the appropriate two-, three-, or four-letter designator, followed by the name of the facility and the container number.

Note: Lead-acid batteries accumulated on pallets awaiting turn-in do not have to be labeled as long as the area is identified as a used battery accumulation area.

Adding Recyclable/Reusable Material to a Container

The following procedures are general instructions that apply to any waste. Some wastes may require special handling. Check the WPS before adding it to the container.

Step 1. For solids, remove the lid and add waste.

Step 2. For liquids, remove bung and use a funnel to pour liquids or sludge through the bunghole into a non-removable head drum. Add the waste without spilling or splashing. Replace the bungs when not in use, ensuring they are sealed with silicon or Teflon.

Caution: **DO NOT** place liquids in removable head drums without permission from the Environmental Office.

Step 3. Replace the lid or bungs on the container. **Never leave them off!**

Step 4. Stop adding waste when the waste level nears the top of the container. Maintain container headspace IAW Table 5-5.

Step 5. Once drums are filled, place the ringbolts down.

General Refuse

General refuse must be properly disposed of in trash cans or dumpsters. A solid waste contractor will periodically empty the dumpster.

Note: **DO NOT** store cardboard, pallets, or other packing materials inside your dumpster enclosure or on the dumpster pad. Clearance must be maintained to allow room for the waste hauler to pick up the dumpster. Dumpster lids and doors remain closed at all times. If the lids or doors are broken, missing, or inoperable contact DIMR to have the dumpster replaced.

5.5 Waste Determination and Requesting Analysis of Waste

Waste determination is the process of determining if a waste is an HW. Waste determination can be accomplished through laboratory analysis or by applying knowledge of the hazardous characteristics of the materials or process that generated the waste. All waste determination records must be maintained for at least three years from the date the waste was last sent off site.

Waste determination, using knowledge of materials or process, can be accomplished through the use of SDSs. However, in some cases, SDSs do not include chemicals that make up less than 1% of the total constituents of the material. Therefore, in some cases, using knowledge of materials and process to characterize a waste as non-hazardous may be inadequate.

If the waste is not characterized through knowledge of its process (i.e., use of SDSs), it must be sampled and analyzed. Examples of waste streams that must be analyzed are OWS sludge, parts washer fluid and filters, paint barrier paper and debris, and contaminated soils.

To request a sample of the waste, contact the HWM. The HWM will draw the sample, arrange for the waste to be sampled, or provide instructions on how to sample the waste. Sampling results are typically returned within two to four weeks. The laboratory will send results directly to the HWM who will interpret them and provide guidance on disposing of your waste properly. The HWM will also file a copy of the laboratory results.

While waiting for the analytical results mark or label the container(s) with the ASD and the words “Pending Analysis”. Remember, the ASD begins the moment waste is put in the container, not after receiving the laboratory results. Contact the HWM for “Awaiting Analysis” labels. Containers marked as “Pending Analysis” must be placed in a GAA not at an SAA.

5.6 Using Overpack Drums

Overpack drums must be **UN 1A2, 1B2, 1N2**, or **1H2**, tested and marked for packing Group III or higher performance standards for liquids or solids. Use cushioning and absorption material to prevent excessive movement and to absorb free liquids. The cushioning and absorption material must be compatible with the HM in the drum. Mark the drum IAW the appropriate WPS and the word “Salvage” or “Salvage Drum.”

5.7 Managing Empty Drums

Empty drums that held HMs are not designated as hazardous and may be used on site for waste accumulation or turned in to the USPFO as a surplus drum (no rinsing is required). When all wastes or materials are removed from a drum using common practices such as pouring, pumping, etc., and no more than three percent of residue (approx. one inch) remains in the bottom, the drum is considered empty. If the drum cannot be emptied, it must be managed as a HW.

Store empty drums on their sides on a pallet or drum rack so they do not accumulate rainwater within the bung ring, causing them to rust. Clearly mark the word “Empty” on the top and side of each drum using stenciling, a paint pen, or labels. Remove or completely cover all other

labels or markings. Remove all residues from the outside of the drums. Contact the Environmental Office for the disposal of excess empty containers. Containers that held acute HW listed in 40 CFR 261.33 are designated as hazardous. Containers in this category are designated as "empty" if any of the following apply:

a. The container or inner liner has been triple rinsed using a solvent capable of removing the commercial chemical product or manufacturing chemical intermediate.

b. The container or inner liner has been cleaned by another method that has been shown in scientific literature, or by tests conducted by the generator, to achieve equivalent removal.

c. The container or inner liner preventing contact of the commercial chemical product or manufacturing chemical intermediate with the container has been removed.

5.8 Resources

Storage cabinets, buildings, and racks

Step 1. Contact the Environmental Office. The Environmental Office may have access to excess storage cabinets, buildings, and racks. If excess assets are not available, the Environmental Office can assist you with specifications for the purchase of approved storage cabinets, buildings, and racks and identify any facility specific requirements (gravel pads, secondary containment, etc.).

Note: The Environmental Office will work with state maintenance repair workers to obtain required storage cabinets through the AQG's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a DA Form 3953 (Purchase Request and Commitment) will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Signage and Placards

Step 1. Contact the SOHM. The SOHM may have required signage and placards on-hand. If the signage or placards are not on-hand, the SOHM may be able to purchase them for you. If the SOHM cannot provide the signage or placards they can help you put

together a purchase request for DCSLOG-LMO. Placards may also be fabricated by the CSMS upon request.

Note: The Environmental Office will work with state maintenance repair workers to obtain required signage and placards through the AQG's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request and Commitment) will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Secondary Containment and Spill Response Equipment

Step 1. Contact the Environmental Office. The Environmental Office may have what you need on-hand or have access to excess secondary containment (berms, plugs, etc.) or spill response equipment (spill kits, absorbents, etc.). If the assets are not readily available, the Environmental Office can assist you with specifications for the purchase of secondary containment and spill response equipment.

Note: The Environmental Office will work with state maintenance repair workers to obtain secondary containment and spill response equipment through the AQG's state property manager.

Step 2. Coordinate purchase through DCSLOG-LMO. Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Labels, Drums, and Other Universal and Hazardous Waste Management Supplies:

Contact your supporting Maintenance Shop. Maintenance shop supplies are routinely replenished by the Environmental Office. The shop may have what you need on-hand or have access to excess labels, drums, boxes, etc. secondary containment (berms, plugs, etc.) or spill response equipment (spill kits, absorbents, etc.). If the required supplies are not on hand the maintenance shop may request the supplies from the Environmental Office or you may be asked to contact the Environmental Office directly. Either way, the conduit for requesting and obtaining supplies is your supporting maintenance shop.

Note: The Environmental Office will work with state maintenance repair workers to obtain universal and hazardous waste management supplies through the AQG's state property manager.

Chapter 6. Hazardous Materials and Waste Turn-In Process

References:

- 40 CFR 261.5 (special requirements for hazardous waste generated by conditionally exempt small quantity generators)
- 40 CFR Part 262 (hazardous waste standards)
- 49 CFR Part 172 (transportation of hazardous materials)
- OAC 3745-51-05 (special requirements for hazardous waste generated by conditionally exempt small quantity generators)
- OAC 3745-51-06 (requirements for recyclable materials)
- OAC 3745-52 (hazardous waste generator standards)
- AR 200-1, *Environmental Protection and Enhancement*, Chapter 10 (hazardous waste)
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

The procedures described in this chapter apply to units/armories turning in excess and obsolete material to supporting maintenance facilities and maintenance facilities turning in HW. These procedures do not apply to items such as used oil and oil/water separator sludge that are picked up directly from the generator's facility by a contractor and taken to a designated treatment/recycling facility (see Chapter 5).

Topics covered in this chapter include:

6.1 When to Turn In Hazardous Materials for Units/Armories

Units/Armories will perform a monthly inspection on HM storage areas. They must transfer all excess and obsolete material to their supporting FMS every 180 days. The supporting FMS may

locate another unit that needs your excess. If a turned-in HM item cannot be used, the FMS will declare the item to be a waste.

6.2 When to Turn In Hazardous Waste for Maintenance Facilities

All maintenance facilities with an Ohio EPA generator ID number (refer to Chap. 5, Table 5.2) will perform a weekly inspection on all HM storage areas. They will schedule HW pickups through the HWM and HW will be transported directly to a treatment facility.

Conditionally Exempt Small Quantity Generators

CESQGs are subject to a reduced set of hazardous waste management regulations; however, the Environmental Office imposes certain best management practices that are more stringent than the regulations.

These best management practices are outlined below:

- Units/armories must transfer all excess and obsolete material to their supporting FMS semi-annually.
- FMSs, AASFs, UTES and the CSMS may not accumulate HW beyond 180 days or in quantities that exceed 13,200 pounds (see SQG requirements below).

Note: FMSs, AASFs, the UTES, and the CSMS may exceed the 180 day accumulation period if records show that they are consistently a CESQG and circumstances prohibit a timely pickup. Permission to exceed the 180 day accumulation period must be obtained in writing from the Environmental Office.

Small Quantity Generators

SQGs must transfer HW offsite within 180 days (270 days for SQGs who must transport their waste over a distance of 200 miles or more) or their facility becomes subject to RCRA permitting requirements. SQGs must also transfer their waste offsite before the quantity of waste on-site exceeds 6,000 kilograms (13,200 pounds).

Large Quantity Generators

LQGs must transfer HW offsite within 90 days or their facility becomes subject to permitting requirements. There are no accumulation quantity limits for LQGs.

6.3 Excess and Obsolete Material Turn-In Procedures for Units/Armories

When turning in excess and obsolete material, units and armories must follow this procedure:

Step 1. Call their supporting FMS to arrange turn-in.

Step 2. Check that containers are correctly marked and labeled IAW Chapter 5 and the WPS.

Step 3. Close and seal shipping boxes, containers, or drums, allowing the proper headspace IAW Chapter 5. When sealing boxes, use strapping tape or packing tape. For open-head drums, seal the drums with the ringbolts down. Screw locking nuts into the middle section of the bolt on the open-head drum before turn-in.

Step 4. For each waste stream, complete an Excess and Obsolete Hazardous Material Turn-in form, AGOH Form 200-1-9-R (see Appendix C).

Step 5. Provide an SDS for all excess and obsolete material being turned into the FMS.

Note: Units/Armories collocated with their supporting FMS do not need Shipping Papers for HM turned in to that FMS. However, coordinate with the Shop Chief prior to turn in. DO NOT just leave HM on the FMS's doorstep.

Step 6. Transport the excess and obsolete material IAW Chapter 7.

6.4 Hazardous Waste Turn-In Procedures for Maintenance Facilities

When turning in items, maintenance facilities must follow this procedure:

Step 1. Call the Environmental Office to arrange turn-in.

Step 2. Make sure the Inventory of Accumulated Waste, AGOH Form 200-1-16-R (see Appendix C) is completely filled out.

Step 3. Check that containers are correctly marked and labeled IAW Chapter 5 and the WPS.

Step 4. Close and seal shipping boxes, containers, or drums, allowing the proper headspace IAW Chapter 5. When sealing boxes, use strapping tape or packing tape. For open-head drums, seal the drums with the ringbolts down. Screw locking nuts into the middle section of the bolt on the open-head drum before turn-in.

Note: Do not worry about filling out HW Manifests or a Land Disposal Restrictions Notification Form (LDNF). The contractor will complete the manifest and LDNF. Maintain these forms in your files for at least 3 years.

6.5 Forms and Instructions

This section contains the following forms:

- DD Form 2890 (DOD Multimodal Dangerous Goods Declaration)
- DA Form 2765-1 (Request for Issue or Turn In)

DD Form 2890

DOD MULTIMODAL DANGEROUS GOODS DECLARATION

This form may be used as a dangerous goods declaration as it meets the requirements of SOLAS 74, Chapter VII, regulation 54; MARPOL 79/78, Annex III, Regulation 4.

1. SHIPPER/CONSIGNOR/SENDER	2. TRANSPORT DOCUMENT NUMBER	3. PAGE 1 OF PAGES	4. SHIPPER'S REFERENCE (TCN)

5. FREIGHT FORWARDER'S REFERENCE	6. CONSIGNEE	7. CARRIER *(To be completed by the carrier)*

24-HOUR EMERGENCY ASSISTANCE TELEPHONE NUMBERS:

DOD NON-EXPLOSIVE HAZMAT: **(800) 851-8061/ (804) 279-3131** AT SEA: COLLECT: **(804) 279-3131**	DOD HAZ CLASS 1 (EXPLOSIVES) ONLY: COLLECT: **(703) 695-4695/4696** or DSN: **225-4695/4696** (Watch Officer)	CHEMICAL/BIOLOGICAL WARFARE MATERIAL: **(410) 436-6200** DSN: **584-6200**	DOD SECURE HOLDING: **(800) 826-0794** *(For TSPs/drivers emergency secure holding issues, accidents, delays, and incidents)* OIL/CHEMICAL SPILLS: NRC & TERRORIST HOTLINE: **(800) 424-8802** AT SEA: COLLECT: **(202) 267-2675**	DOD RADIOACTIVE MATERIALS: COLLECT ARMY: **(703) 695-4695/4696** USAF: **(301) 981-5058** DLA: **(800) 851-8061** AT SEA: COLLECT: **(804) 279-3131** USN/MC: Use 24-hour emergency response number provided by activity.

8. THIS SHIPMENT IS WITHIN THE LIMITATIONS PRESCRIBED FOR: *(X as applicable)* ☐ MILITARY VESSEL ☐ COMMERCIAL VESSEL ☐ HIGHWAY/RAIL		9. CONTAINER PACKING CERTIFICATE OR VEHICLE PACKING DECLARATION, DD FORM 2781, IS ATTACHED *(X if applicable)*
10. VOYAGE DOCUMENT NUMBER AND SAILING DATE *(To be completed by the carrier)*	11. PORT/PLACE OF LOADING	

12. PORT/PLACE OF DISCHARGE	13. DESTINATION

14. SHIPPING MARKS	DESCRIPTION OF GOODS *(UN No., PSN, HC, SHC, PG, number and kind of package, and additional information as required by regulations)*	NET MASS/QTY *(kg/l)*	GROSS MASS *(kg)*

15. CONTAINER IDENTIFICATION NO./ VEHICLE REGISTRATION NO.	16. SEAL NUMBER(S)	17. CONTAINER/VEHICLE AND TYPE	18. TARE MASS *(kg)*

19. ADDITIONAL HANDLING INFORMATION

20. RECEIVING ORGANIZATION RECEIPT

Received the above number of packages/containers/trailers in apparent good order and condition, unless stated hereon:

a. RECEIVING ORGANIZATION REMARKS

b. HAULER'S NAME	c. VEHICLE REGISTRATION NO.	d. SIGNATURE AND DATE	e. DRIVER'S SIGNATURE

21. SHIPPER PREPARING THIS FORM

SHIPPER'S DECLARATION. 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 labeled/placarded and are in all respects in proper condition for transport according to applicable international and national government regulations.

a. NAME OF COMPANY/MILITARY UNIT	b. NAME/STATUS OF DECLARANT/CERTIFIER
c. PLACE AND DATE	d. SIGNATURE OF DECLARANT/CERTIFIER

DD FORM 2890, SEP 2015 PREVIOUS EDITION IS OBSOLETE. Adobe Designer 9.0

INSTRUCTIONS FOR COMPLETING DD FORM 2890, DOD MULTIMODAL DANGEROUS GOODS DECLARATION

Item 1. Shipper/Consignor/Sender. Enter the address and telephone number where the HAZMAT was certified.

Item 2. Transport Document Number (Ocean container shipments only). The vessel manifest number to which the Multimodal Dangerous Goods Declaration will be attached may be entered in this block. The shipper need not enter this number. The accepting operator may enter it at the time it is assigned. Leave blank for breakbulk shipments. Shipper enters container "V" number.

Item 3. Page __ of __ Pages. Enter the page number and total number of pages. Example: Page 1 of 1.

Item 4. Shipper's Content Reference Number (TCN). Enter the 17-character TCN.

Item 5. Freight Forwarder's Reference. Leave blank.

Item 6. Consignee. Enter the six-digit DODAAC and/or the in-the-clear geographical location of the ultimate consignee (if known). For shipments of infectious substances, enter also the full address, name and telephone number of a responsible person for contact in an emergency.

Item 7. Carrier. Enter Vessel Carrier Name. To be completed by the carrier.

24 Hour Assistance Telephone Number(s). Circle applicable emergency number(s).

Item 8. Shipment Within the Limitations Prescribed for Military Vessel/ Commercial Vessel/Highway/Rail. Mark X in the appropriate block.

Item 9. Container Certification/Vehicle Declaration. Declarant must mark X if applicable. U.S. Coast Guard or port officials may require verification of the container certification/vehicle declaration. DD Form 2781 is a detailed checklist which meets USCG/Customs requirements. DD Form 2781 must be signed and attached to DD Form 2890.

Item 10. Voyage Document Number and Sailing Date (To be completed by the carrier). Enter the voyage document number and the date of sail.

Item 11. Port/Place of Loading. Enter the three-digit POE code and/or the in-the-clear geographical location of the port of embarkation.

Item 12. Port/Place of Discharge. Enter the three-digit POD code and/or the in-the-clear geographical location of the port of debarkation.

Item 13. Destination (in the clear). Enter destination address.

Item 14. Shipping Marks.
1. The identification number prescribed for the material as shown in Column (4) of the Section 49 CFR 172.101 table;
2. The proper shipping name prescribed for the material in Column (2) of the Section 172.101 table;
3. The hazard class or division number prescribed for the material, as shown in Column (3) of the Section 172.101 table. The subsidiary hazard class or division number is not required to be entered when a corresponding subsidiary hazard label is not required. Except for combustible liquids, the subsidiary hazard class(es) or subsidiary division number(s) must be entered in parentheses immediately following the primary hazard class or division number. In addition: The words "Class" or "Division" may be included preceding the primary and subsidiary hazard class or division numbers. The hazard class need not be included for the entry "Combustible liquid, N.O.S." For domestic shipments, primary and subsidiary hazard class or division names may be entered following the numerical hazard class or division, or following the basic description.
4. The packing group in Roman numerals, as designated for the hazardous material in Column (5) of the Section 172.101 table. Class 1 (explosives) materials; self-reactive substances; batteries other than those containing lithium, lithium ions, or sodium; Division 5.2 materials; and entries that are not assigned a packing group (e.g., Class 7) are excepted from this requirement. The packing group may be preceded by the letters "PG" (for example, "PGII");
5. Enter additional information from the IMDG, chapter 5.4, as required (i.e. Marine Pollutant, Flashpoint, Toxin Inhalation Hazard, RQ, etc.).
6. Enter the number and kind of packaging.

Item 14. Shipping Marks (Continued).
7. Except for transportation by aircraft, the total quantity of hazardous materials covered by the description must be indicated (by mass or volume, or by activity for Class 7 materials) and must include an indication of the applicable unit of measurement, for example, "200 kg" (440 pounds) or "50L" (13 gallons). The following provisions also apply: For Class 1 materials, the quantity must be the net explosive mass. For an explosive that is an article, such as Cartridges, small arms, the net explosive mass may be expressed in terms of the net mass of either the article or the explosive materials contained in the article.
8. Ammunition transported by Government Vehicle, Unit will enter the total net quantity for non-explosive material in metric measure. U.S. measure may be added in parentheses underneath the metric measure. For ammunition, enter the total number of rounds/articles and NEW in kg. Exception: Net total quantity is not required for bulk packages, empty packages and cylinders of Class 2.
9. Radioactive material. The description for a shipment of a Class 7 (radioactive) material must include the following additional entries as appropriate:
a. The name of each radionuclide in the Class 7 (radioactive) material that is listed in Section 173.435 of this subchapter. For mixtures of radionuclides, the radionuclides required to be shown must be determined in accordance with Section 173.433(g) of this subchapter. Abbreviations, e.g., "99 Mo," are authorized.
b. A description of the physical and chemical form of the material, if the material is not in special form (generic chemical description) is acceptable for chemical form).
c. The activity contained in each package of the shipment in terms of the appropriate SI units (e.g. Becquerels (Bq), Terabecquerels (TBq), etc.). The activity may also be stated in appropriate customary units (Curies (Ci), milliCuries (mCi), microCuries (uCi), etc.) in parentheses following the SI units. Abbreviations are authorized. Except for plutonium-239 and plutonium-241, the weight in grams or kilograms of fissile radionuclides may be inserted instead of activity units. For plutonium-239 and plutonium-241, the weight in grams of fissile radionuclides may be inserted in addition to the activity units.

Item 15. Container ID Number/Vehicle Registration Number. Enter ID number of the container or vehicle registration number. A dash (-) or blank space is acceptable before the check digit.

Item 16. Seal Number(s). Enter seal number installed on container.

Item 17. Container/Vehicle and Type. Enter type and size of container (20 or 40 ft.) or vehicle description (e.g., HUMVEE).

Item 18. Tare Mass (kg). Enter tare weight of the container.

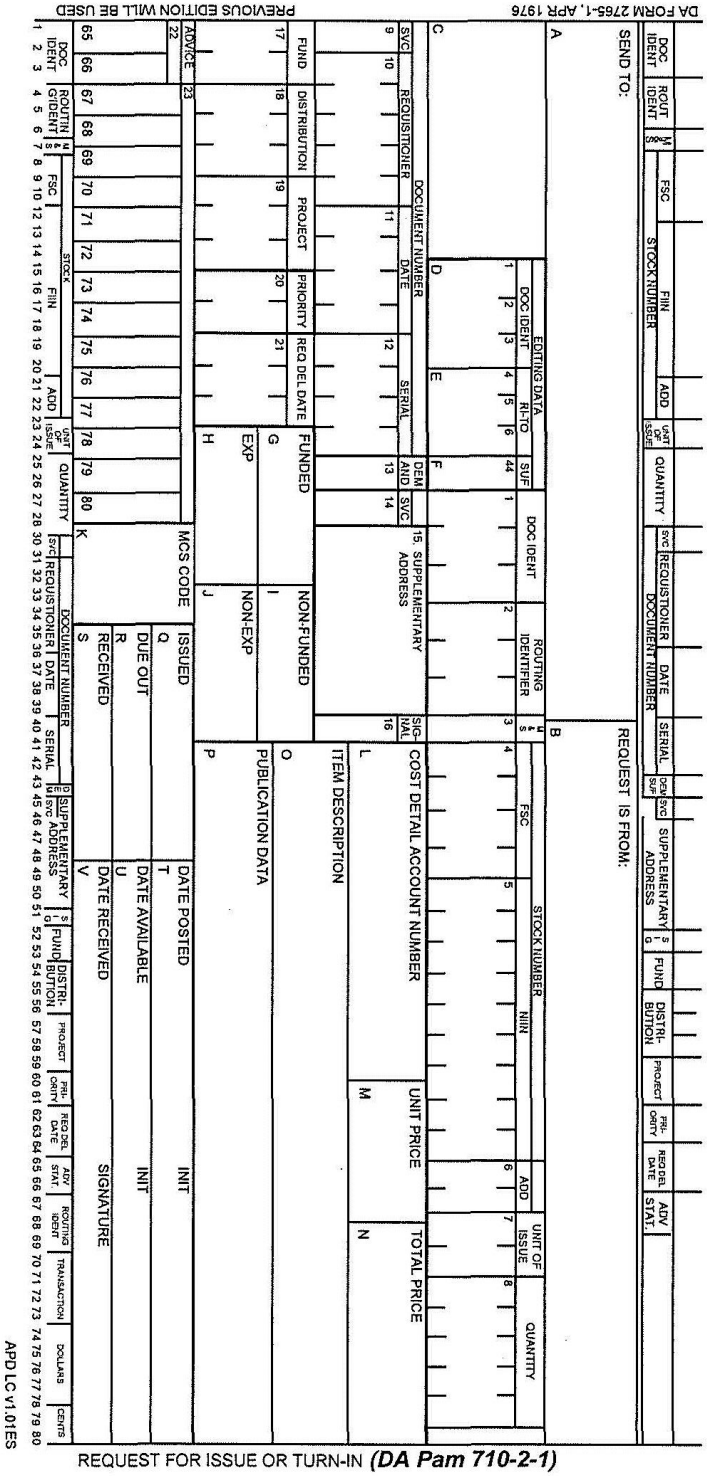
Item 19. Additional Handling Information.
If applicable, provide additional handling instructions.
Enter the Emergency Response Guide (ERG) Number(s) of the HAZMAT and attach the specific ERG page to DD Form 2890.
If applicable, drivers transporting regulated HAZMAT on European highways must be provided Transport Emergency Cards (TREMCARDS) in the host nation language which must be attached to the shipping papers.

Item 20. Receiving Organization Receipt. Leave blank as this will be filled out by the receiving organization. Signing this block states that the shipment is in good order, unless otherwise noted.

Item 21. Shipper Preparing This Form.
a. Name of Company/Military Unit. Enter the name of company.
b. Name/Status of Declarant/Certifier. Enter the name and status of the person signing the form.
c. Place and Date. Enter the place and date the material was certified.
d. Signature of Declarant/Certifier. The person who certifies on behalf of DoD that the shipment complies with the applicable regulatory requirements must sign the form.

DD FORM 2890 (BACK), SEP 2015

DA Form 2765-1



Chapter 7. Transporting Hazardous Material and Waste

References:

- 40 CFR Part 262 (hazardous waste standards)
- 40 CFR Part 263 (transportation of hazardous waste)
- 49 CFR Part 172 (transportation of hazardous materials)
- 49 CFR Part 177 (shipping of hazardous waste)
- OAC 3745-52 (hazardous waste generator standards)
- OAC 3745-53 (transportation of hazardous materials)
- AR200-11, *Environmental Protection and Enhancement*, Chapter 9 (hazardous materials)
- AR 200-1, *Environmental Protection and Enhancement*, Chapter 10 (hazardous waste)
- DoD 4500.9-R, *Defense Transportation Regulation, Part 2* (transportation of munitions)
- Technical Manual (TM) 38-410, *Storage and Handling of Hazardous Materials*
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

This chapter serves as a refresher guide, highlighting the primary steps to take when shipping HM. These procedures are specifically intended for trained and certified Hazardous Material/Waste Handlers only and are not intended for anyone unfamiliar with Department of Transportation HM/HW shipping requirements. The OHARNG is not authorized to routinely transport HW over public roadways. The OHARNG will use a contractor to pick up and transport HW from maintenance facilities to a treatment facility. In these cases, the contractor will provide all the necessary paperwork.

Topics covered in this chapter include:

7.1 Hazardous Material Transportation

Scenarios in which the OHARNG personnel transport HM across public roadways may include:

- Units transporting bulk fuel shipments to and from the field during annual training exercises
- Units transporting HM for turn-in to their supporting FMS
- FMS transporting HM for turn-in to the USFPO warehouse

The OHARNG must comply with certain DOT regulations when transporting HM across public roadways, including:

- Using proper shipping papers
- Marking and labeling the HM containers
- Placing appropriate vehicle placards
- Chock-blocking vehicle tires when parked

Note: HM vehicle drivers must have a valid Military Driver's License with a HM endorsement, the Army's Commercial Driver's License (CDL) counterpart. Refer to the training section of Chapter 8 for further details.

7.2 Preparing Shipping Papers

DOT requires shipping papers when transporting hazardous materials. OHARNG personnel should use DD Form 836, which meets all DOT shipping paper requirements. The shipping paper must contain the basic description, quantity, and emergency response information. A blank copy is provided in the "Forms and Instructions" section of Chapter 6.

Basic Description

The HM basic description must include the following information, contained in the table in 49 CFR 172.101:

- Proper shipping name
- Hazard class
- Identification number
- Packing group

The Reportable Quantity (RQ), found in 40 CFR 302.4; Technical Name, found in 49 CFR 172.202(d); and other information required under 49 CFR 172.203 must also be included.

Quantity

The shipping paper must list the quantity of transported waste.

Emergency Response Information

The shipping paper must contain emergency response contacts and telephone numbers.

7.3 Placing Vehicle Placards

Placards are required on the vehicle if transporting materials in any hazard class listed in Table 7-1, or if transporting more than 1,001 pounds of materials in any hazard class listed in Table 7-2 (49 CFR 172.504, Tables 1 and 2).

Step 1. Before accessing a public roadway, review the shipping papers or manifests to see if the shipment includes any amount of the hazard classes identified in Table 7-1 below (49 CFR 172.504, Table 1). If the shipment contains any quantity of these listed items, then display the appropriate placard on the vehicle.

Table 7-1. Table 1 Hazard Classes (49 CFR 172.504).

Hazard Class	Placard Name	49 CFR Reference
1.1	EXPLOSIVES 1.1	172.522
1.2	EXPLOSIVES 1.2	172.522
1.3	EXPLOSIVES 1.3	172.522
2.3	POISON GAS	172.540
4.3	DANGEROUS WHEN WET	172.548
5.2 (Organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE	172.552
6.1 (Inhalation hazard, Zone A or B)	POISON INHALATION HAZARD	172.555
7 (Radioactive Yellow Label only)	RADIOACTIVE	172.556

Step 2. Review the shipping papers or manifests to check the shipment for the hazard classes identified in Table 7-2 (49 CFR 172.504, Table 2) to determine if a placard is required for these materials. A placard is required if the total weight of materials is over 1,001 pounds for any hazard class listed.

Table 7-2. Table 2 Hazard Classes (49 CFR 172.504).

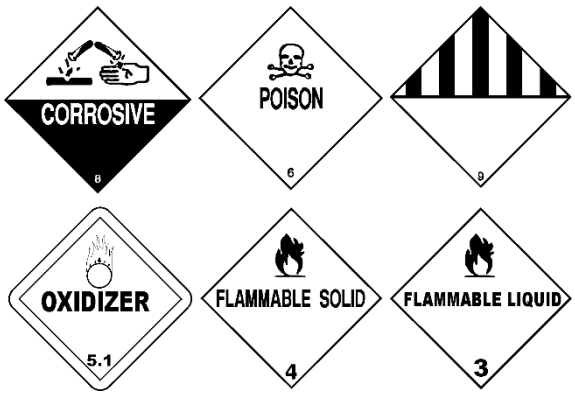
Hazard Class	Placard Name	49 CFR Reference
1.4	EXPLOSIVES 1.4	172.523
1.5	EXPLOSIVES 1.5	172.524
1.6	EXPLOSIVES 1.6	172.525
2.1	FLAMMABLE GAS	172.532
2.2	NONFLAMMABLE GAS	172.528
3	FLAMMABLE	172.542
Combustible Liquid	COMBUSTIBLE	172.544
4.1	FLAMMABLE SOLID	172.546
4.2	SPONTANEOUSLY COMBUSTIBLE	172.547
5.1	OXIDIZER	172.550
5.2 (Other than organic peroxide, Type B, liquid or solid, temperature controlled)	ORGANIC PEROXIDE	172.552
6.1 (Other than inhalation hazard, Zone A or B)	POISON	172.554
6.2	None	....
8	CORROSIVE	172.558
9	CLASS 9	172.560
ORM-D	None	....

Step 3. Select the appropriate placard from these listed hazard class tables. For items listed in Table 2, the DANGEROUS placard may be used unless:

- There is more than 5,000 pounds of a single hazard class material.
- The material was loaded at one stop.

Placards for other types of HM are found in 49 CFR 172, Subpart F.

Hazard Classes



Step 4. Securely attach the placards to all four sides of the vehicle so they are readily visible.

Step 5. Ensure that the placards are easily seen and not obstructed from view by ladders, pipes, doors, or other vehicle parts.

Step 6. Periodically check the placards while in transport to ensure that they remain in place and replace them if missing.

7.4 Resources

Vehicle Placards

Step 1. **Contact the SOHM.** The SOHM may have required signage and placards on-hand. If the signage or placards are not on-hand, the SOHM may be able to purchase them for you. If the SOHM cannot provide the signage or placards they can help you put together a purchase request for DCSLOG-LMO. Placards may also be fabricated by the CSMS upon request.

Step 2. **Coordinate purchase through DCSLOG-LMO.** Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Chapter 8. Training, Inspections, and Recordkeeping

References:

- 29 CFR 1910.120 (hazardous waste operations and emergency response – HAZWOPER)
- 40 CFR Part 262 (hazardous waste standards)
- 40 CFR Part 265.16 (training requirements for hazardous waste handlers)
- 49 CFR Part 172.704 (training requirements for hazardous material handlers)
- 49 CFR Part 177.800 (training requirements for shipping of hazardous materials)
- 49 CFR Part 177.816 (hazardous materials training requirements for drivers)
- OAC 3745-52 (hazardous waste generator standards)
- OAC 3745-65-16 (training requirements for hazardous material handlers)
- AR200-1, *Environmental Protection and Enhancement*, Chapter 9 (hazardous materials)
- AR 200-1, *Environmental Protection and Enhancement*, Chapter 10 (hazardous waste)
- DoD 4500.9-R, *Defense Transportation Regulation, Part 2* (transportation of munitions)
- Technical Manual (TM) 38-410, *Storage and Handling of Hazardous Materials*
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

This chapter provides information, instructions, and forms for required training, periodic internal inspections, and record keeping.

Topics covered in this chapter include:

8.1 Required Training

The following EPA, DOT and OSHA regulations require certain personnel to be properly trained when transporting or working with HM and/or HW.

- HW Management (EPA): 40 CFR 265.16 (OAC 3745-65-16) requires facility personnel to successfully complete classroom or on-the-job (OTJ) training that teaches them to perform their duties and ensure compliance at the facility.
- HM Management (DOT): 49 CFR 172.704 requires employees handling HM to undergo general awareness/familiarization training, function-specific training, and safety training.
- HM Transportation (DOT): 49 CFR 177.800 and 177.816 require drivers that transport HM to be properly trained in safety and vehicle operation.

Note: OHARNG must also abide by DOD regulations for HM transportation.

DOD 4500.9-R, Chapter 204, Section E, Paragraph 1(a) states that "All personnel involved with the preparation and shipment of HM for commercial or surface military transportation must receive training IAW 49 CFR 172.704 and DOD Component regulations".

DOD 4500.9-R, Chapter 204, Section E, Paragraph 1(b) states that "persons who certify HM on shipping papers, GBL, CBL, or DD Form 836 by any mode of transportation, military or commercial, and conduct function-specific training for subordinate personnel must successfully complete an approved hazardous materials certification course from one of the DOD schools".

- HW Operations and Emergency Response (HAZWOPER) (OSHA): 29 CFR 1910.120 (q)(6) requires an appropriate training level for employees expected to participate in HM clean up.
- Hazard Communication (HAZCOM) (OSHA): 29 CFR 1910.1200(h) requires facilities to train their employees about hazardous chemical exposure in the workplace.

The following outlined training program addresses HW management, OSHA, and spill-response training requirements. It also addresses DOT HM management and transportation requirements.

Hazardous Waste Management Training

Note: OHARNG personnel, including Traditional Guard members, who are responsible for handling or managing HW must complete training requirements before working unsupervised in a waste management position.

Federal and state HW training requirements do not apply to CESQGs. However, as a best management practice, the OHARNG requires personnel who handle HW at CESQG facilities to meet these training requirements.

Unit Environmental Compliance Officers and Maintenance Shop Supervisors

UECOs in maintenance operations are appointed by their supervisors to ensure that the facility is adhering to all environmental requirements, including HW management regulations. At FMSs and the UTES, Shop Chiefs should appoint someone to perform this function. At the CSMS, the superintendent appoints someone to perform this function. At AASFs, the Flight Facility Commander appoints someone to perform this function.

ECOs in maintenance operations and others who handle HW must successfully complete an HW training course. This course will be conducted by the Environmental Office. The training must describe proper handling and emergency procedures appropriate to the type(s) of HW generated by the activity, as well as information on how to comply with environmental federal, state, local, and Army regulations.

Training should address the following areas:

- Identifying and classifying HW
- Establishing and maintaining HW accumulation sites
- Labeling tanks and containers of HW
- Inspection procedures
- Recordkeeping
- Completing applicable forms
- Preventing and responding to spills

Personnel who handle HW must complete their training before they assume their duties, and must attend an annual refresher course thereafter.

Other Hazardous Waste Personnel

ECOs and Shop Chiefs must ensure that personnel who handle or manage HW receive required training on HW management procedures identified within this plan (including emergency response procedures). Initial training should be provided within six months of employment or assignment. In addition, there must be annual refresher training. It must be recorded and documented in the facility's training records.

Note: Documentation should also be placed in the HM/HW Management Binder.

Hazardous Material Training

HM personnel must successfully complete general awareness and familiarization training, function-specific training, and safety training upon assignment and then annually thereafter.

HM Transportation

Persons who transport, load, or unload HM must have the following DOT training:

- Initial training on HM packaging, labeling, marking, preparing shipping papers, and placing vehicle placards.
- Refresher training—required by DOD every two years

Only persons who have attended one of the following schools may certify the DD Form 836 (Shipping Paper):

- U.S. Army Ordnance Center and School
- 345th Technical Training Flight
- Naval Supply Corps School
- USACE Professional Development Support Center
- Defense Ammunition Center

Note: Maintain a roster listing those personnel in each unit and shop approved to transport HM. The roster could also be kept in this plan's binder.

DCSLOG-CTO maintains a list of certified personnel who have completed "HM Familiarization and Safety in Transportation" training.

Hazard Communication

Personnel who work with hazardous materials in the workplace are required by OSHA to have "Hazard Communication" or "Worker-Right-to-Know" training. This training is required:

- At initial job assignment
- Whenever workplace hazards change that may have a major effect on the HM type and quantity used and stored

Emergency Response

Persons assigned to Installation Response Team (IRT), Spill Response, or HM teams are required to have annual training. This training may include the following topics:

- Proper use of PPE
- Use of emergency equipment
- First aid
- Use of communications and alarm systems
- Emergency notification procedures and actions
- Response to fire and explosion
- Shut-down procedures
- Decontamination procedures

Note: Training requirements vary depending on assigned duties or response levels and are detailed in a Spill Prevention Control and Countermeasure (SPCC) Plan or an Installation Contingency Plan (ICP). Requirements may include annual spill training exercises.

Training Records

Training of personnel must be recorded on HM/ HW Training Record Form, AGOH Form 200-1-14-R (see Appendix C). Make copies of these documents to keep in the HM/HW Management Binder. Send a copy of the completed form to the Environmental Office.

8.2 Inspections

All OHARNG activities must conduct and record self-inspections of HM storage and HW accumulation areas. These inspections are described in this section.

HW Accumulation Areas

All FMSs, the AASFs, the USPFO Warehouse, and the CSMS are required to conduct weekly inspections of SAAs and GAAs. Supervisor must ensure that HW SAA and GAA inspections are annotated on either the Satellite Accumulation Area (AGOH Form 200-1-13-R) or the Generator Accumulation Area (AGOH Form 200-1-12-R) inspection form (see Appendix C). Inspection records must be maintained in the HW section of the HW/HM Management Binder. Inspection requirements for facilities at the Camp Ravenna Joint Military Training Center (CRJMTC), to include the UTES, are outlined in the CRJMTC Hazardous Waste Management Plan.

Note: CESQGs are not required to conduct inspections of their HW accumulation areas. However, as a best management practice, the OHARNG requires CESQGs to conduct weekly inspections of their SAAs and GAAs. CRJMTC is an LQG. HW management requirements for LQGs are much more stringent.

HM Storage Areas

All FMSs, the AASFs, the USPFO Warehouse, and the CSMS are required to conduct weekly inspections of HM storage rooms, buildings, cabinets, racks, etc. Units are required to conduct monthly inspections of HM storage areas under their direct control. State Maintenance Repair Workers are also required to conduct monthly inspections of HM storage areas under their direct control. Supervisors must ensure that HM storage area inspections are annotated on the Hazardous Material Storage Unit (AGOH Form 200-1-11-R) inspection form (see Appendix C). Inspection records must be maintained in the HM section of the HM/HW Management Binder. Inspection requirements for facilities at the Camp Ravenna Joint Military Training Center (CRJMTC), to include the UTES, are outlined in the CRJMTC Hazardous Waste Management Plan.

Motor Vehicle Storage Compounds

All FMSs, the AASFs, the USPFO Warehouse, and the CSMS are required to conduct weekly inspections of their motor vehicle storage compounds. All other OHARNG units/activities are required to conduct monthly inspections of motor vehicle storage compound areas under their direct control. Vehicles must be visually inspected for Class 2 or Class 3 leaks. Drip pans must be used to contain Class 2 and Class 3 leaks (see Chapter 9). The perimeter of the compound must be inspected for staining or free product. Spill response and reporting requirements must be initiated immediately upon the discovery of free product (see Chapter 9). Motor vehicle storage compound inspection records must be maintained in the spill section of the HW/HM Management Binder.

Semiannual Assistance Visits

OHARNG FMSs, AASFs, the UTES, the CSMS, and the USPFO Warehouse will receive semiannual assistance visits by the HWM. The intent of the visit is to identify and correct compliance deficiencies prior to internal and external EPAS audits. The visit is also an opportunity for shop personnel to identify ask questions and request additional support. The HWM will use the Environmental Compliance Checklist, AGOH Form 200-1-15-R (see Appendix C) to document the visit. The HWM will leave a completed copy of the checklist with the UECO and Shop Chief. Assistance visit records will be kept in the Environmental Programs Binder.

EPAS Assessments

Internal EPAS assessments, performed by EPAS assessors from the Environmental Office, will be conducted at all OHARNG FMSs, the AASFs, the UTES, the CSMS, and the USPFO Warehouse annually. CRJMTC, CPJTC, and CSJTC will also be assessed by Environmental Office annually. One-third of all OHARNG units will be assessed internally by the Environmental Office annually. Units/Activities may also request an EPAS assessment at any time. External EPAS assessments, performed by National Guard Bureau's Environmental Division, will be conducted every three to five years. All federal facilities and a select number of state facilities will be assessed. The number and type of facilities assessed during the external assessment depend on the resources available, current compliance risk, and past assessment results (internal and external). EPAS assessments are conducted using an EPAS checklist. Assessments result in findings posted to a database of record called WEBCASS. The findings are also posted on the unit's environmental homepage and the EPAS homepage on TAGNet. EPAS records must be maintained in the Environmental Programs Binder.

All OHARNG activities are also subject to external EPAS assessments conducted by the Army National Guard's Environmental Division (ARNG-ILE). The EPAS assessor will use the internal EPAS checklist. All findings will be written and posted by the assessor following the EPAS assessment. Keep the facility's copy of the posted finding in the HM/HW Management Binder. OHARNG units/armories will receive an internal EPAS assessment approximately every 3 years, or by request.

All OHARNG activities and units are also subject to inspections conducted by state and federal regulatory agencies. Local governments may also inspect for compliance with permits, local codes, or other regulations.

Note: All OHARNG activities and units must contact the Environmental Office immediately upon receipt of any correspondence from local, state, or federal regulatory agencies. Failure to respond in a timely manner to a regulatory agency may result in enforcement action and fines.

Notify the JOC immediately upon completion of the inspection at 1-888-637-9053. Immediately place a follow-up phone call to the Environmental Office at 614-336-7095 or 614-336-7395 after notifying the JOC.

Note: Any incident requiring a report to an external agency must be reported by 0800 the following day (TAG Information Requirement #4).

Send an e-mail to the Environmental Office containing all pertinent details of the visit. Attach copies of all inspection records, notes, or other correspondence left by the regulator. Forward original inspection records to the Environmental Office within 24 hours. Keep any records of these inspections in the Environmental Programs Binder.

Note: Inspectors from external agencies are authorized to conduct inspections at all state and federal facilities. They must present their credentials upon request. Although most regulators will communicate openly with you and answer any questions you may have, they are not required to divulge the reason for the inspection. Treat the inspector with respect. Comply with their requests to the greatest extent possible. Do not offer more information than what's requested by the regulator.

8.3 Recordkeeping

UECOs and/or Shop Chiefs must ensure that all necessary HW and HM records, plans, and files pertaining to their unit or facility are prepared, maintained, and updated. These records must be maintained in either the HM/HW Management Binder or the Environmental Programs Binder. Copies of all records covered in this chapter may also be posted to the unit's environmental homepage for quick and easy access. Contact the Environmental Office for assistance. When not otherwise specified, records must be retained for three years.

Hazardous Material/Hazardous Waste Management Binder

All OHARNG units or facilities that are HM and/or HW handlers must establish and maintain a HM/HW Management Binder (or series of binders). The binder should contain three sections: 1) HM records; 2) HW records; and 3) spill records. The binder(s) must include at least the following items:

Hazardous Material Section:

- Hazardous Materials Inventory Forms (see Chapter3)
- Request for Issue or Turn-In Forms DA Form 2765-1 (see Chapter 6)
- Hazardous Material Shipping Papers DD Form 836 (see Chapter 6)
- Hazardous Material Storage Unit Weekly Inspection Form (see Chapter 8)
- Hazardous Material/Hazardous Waste Training Report (see Chapter 8)

Hazardous Waste Section:

- Waste profile sheets, waste characterization information, or laboratory analyses (when performed) as provided by the Environmental Office

- Container Logs (see Chapter 5)
- Hazardous Waste Generator Status Log (see Chapter 5)
- Hazardous Waste Turn-In Forms (see Chapter 6)
- Satellite Accumulation Area Weekly Inspection Checklist (see Chapter 8)
- Generator Accumulation Area Weekly Inspection Checklist (see Chapter 8)
- Hazardous Material/Hazardous Waste Training Report (see Chapter 8)
- HWM's Environmental Compliance Checklist (see Chapter 8)

Spill Section:

- Emergency Information Form (see Chapter 3)
- ISCP (and any records required under that plan)
- SPCC Plan (and any records required under that plan)
- Completed Spill Incident Report Forms (see Chapter 9)

Environmental Programs Binder:

- EPAS Findings
- Training Records
- Appointment Orders

Note: Keeping training records and appointment orders in a single Environmental Programs Binder is a best management practice that makes inspections and assessments much faster and easier for all parties involved.

8.4 Reporting

All units and facilities are required to submit reports (with supporting records and documents to the Environmental Office upon request. These reports may include copies of all inventory sheets, container logs, and inspection sheets.

Chapter 9. Spill Response, Reporting, and Prevention Procedures

References:

- 40 CFR Part 262 (hazardous waste standards)
- 40 CFR Part 265, Subpart D (contingency plans and emergency procedures)
- 40 CFR Part 302 (hazardous substance spill reportable quantities and notification)
- OAC 3745-52 (hazardous waste generator standards)
- OAC 3745-65-50 (contingency plans and emergency procedures)
- OAC 3745-65-51 (contingency plan implementation)
- OAC 3745-65-52 (contingency plan contents)
- OAC 3745-65-53 (contingency plan recipients)
- OAC 3745-65-54 (contingency plan amendment requirements)
- OAC 3645-65-55 (emergency coordinator requirements)
- OAC 3645-65-56 (emergency procedures)
- AR200-1, *Environmental Protection and Enhancement*, Chapter 11 (hazardous substances spills)
- Executive Order 13693, *Planning for Federal Sustainability in the Next Decade* (energy efficiency and waste minimization)

This chapter provides information on how to conduct spill procedures as outlined below:

Topics covered in this chapter include:

Note: Some OHARNG facilities have a Spill Prevention Control and Countermeasure Plan (SPCCP). This plan describes the steps necessary to respond to a spill. The spill procedures described in this chapter only apply to facilities without an SPCCP.

9.1 Spill Response Equipment

At a minimum, units/facilities will maintain the following spill-response equipment on-site. They can use items from existing stock and/or request items through regular supply channels.

- Removable head drum (NSN 8110-00-082-2626 or 8110-00-292-8121)
- Non-spark shovel and other cleanup equipment
- Open-head overpack/salvage drum
- Baking soda for battery acid spills
- Metal or plastic funnels
- 55-gallon drums with bungs, and other containers in sizes appropriate to the amount HM/HW being stored/generated
- Extra bungs
- Flammable storage grounding rod and cable with clips for funnel or safety can
- Drum covers
- Signs (NO SMOKING, IN USE (For drums being filled), and HAZARDOUS WASTE STORAGE AREA – UNAUTHORIZED PERSONNEL KEEP OUT (for waste storage))
- Hazard Placards
- Impervious rubber gloves, apron, and splash shield
- Paint for masking, stenciling, and labeling
- Appropriate DOT and HW labels, if required, and permanent marking pens
- Caustic soda for acid neutralization
- pH paper

- Absorbent pads, absorbent socks/booms, and absorbent (e.g. speedy dry)
- Plastic bags
- Sand bags
- Squeegee

9.2 Spill Response and Reporting Procedures

Facility that generate HW are required to have a HW contingency plan that addresses emergency spill response procedures. The HW contingency plan is designed to minimize hazards to human health or the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste.

Note: Units do not generate or transport hazardous waste. Units transport and turn-in excess or obsolete HM to supporting maintenance facilities. Trained personnel at the maintenance facilities make the determination if the excess or obsolete HM are HW.

Facilities that store or transport hazardous substances (HM and POL) are also required to have contingency plans that address emergency spill response procedures. For facilities that have an SPCCP, the SPCCP serves as the contingency plan. SPCCPs are designed to address HW, HM, and POL emergency response procedures. For all facilities that do not have an SPCCP and generate HW or store or transport HM or POL, AGOH Form 200-1-6-R, Emergency Spill Response Procedures (see Appendix C) serves as the required contingency plan. Facilities that do not have an SPCCP must follow the guidelines outlined on AGOH Form 200-1-6-R, Emergency Spill Response Procedures (see Appendix C). The Emergency Spill Response Procedures form and the Spill Incident Report form, NGOH Form 200-1-7-R (see Appendix C) must be posted on the bulletin board, at all refueling points, in all vehicles transporting POL or HM, and in the convoy commander's vehicle. The steps described on the Emergency Spill Response Form are explained below:

Step 1. Designate an On-Scene Coordinator (OSC).

Note: RCRA requires that each facility appoint as an Emergency Coordinator(s) an employee who is either on the facility premises or on call and can reach the facility quickly. This Emergency Coordinator, also known as the On-Scene Coordinator (OSC), is responsible for coordinating all emergency response measures (see Chapter 1).

Step 2. POL, HM, or HW spills, fires, or explosions, must be reported immediately to the OSC by the first person to observe or discover the incident.

Step 3. The OSC must notify the Joint Operations Center (JOC) immediately at **1-888-637-9035** unless the spill occurs at the Camp Ravenna Joint Military Training Center (CRJMTC) or the Camp Perry Joint Training Center (CPJTC). At CRMTC and CPJTC notify Range Control. Range Control will coordinate with unit and make the required notifications to the JOC and the Environmental Office. OSCs at all other locations must follow up the phone call to the JOC with a phone call to the Environmental Office at **(614) 336-7095** (Environmental Program Manager)**, (614) 336-7395** (State Environmental Supervisor), or **(614) 336-6568** (Fort Ohio Environmental Supervisor.

Note: Spills of hazardous substances and POL spills over 25 gallons or that leave a visible sheen on the surface of the water must be reported within 30 minutes to the Ohio EPA Emergency Response Section and, depending on the hazardous substance, to the National Response Center. Failure to report these spills within 30 minutes could result in enforcement action and fines. OSCs must always notify the Environmental Office within 24 hours of all spills, regardless of the type or the amount of the spill. If the spill is a threat to human health or safety call 911, notify the Ohio State Highway Patrol (by District) and/or the local Fire Department.

Step 4. Identify the spilled substance and evaluate the hazard.

WARNING: Resist the urge to rush in. Do not become an accident statistic or part of the problem. If in doubt, stay out.

Step 5. Secure the scene. Set up an adequate perimeter to assure the safety of bystanders. Limit access to the spill.

Step 6. Contain the spill and stop its source (if possible). The source may be stopped by:

- Set containers upright or roll them over so the hole is facing up.
- Close valves and turn off power to pumps.
- Place leaking drums in compatible DOT-approved overpack drums.
- Transfer material in a leaking container to another container.
- Patch holes.
- Move the container to a location where it poses less of a threat.

WARNING:	**DO NOT** take any unnecessary risks that place you, other responders, or bystanders at risk! Always enter the spill area upwind, uphill, or upstream. Use the appropriate personal protective equipment (PPE). Prevent spills from flowing into drainage ditches, storm and sewer drains, and bodies of water. Earthen dams and sandbags are effective for this purpose. Aside from ensuring human health and safety, the highest priority is preventing the spill from entering state's waters/waters of the U.S. *by any means possible*.

Step 7. Refer to DOT's *Emergency Response Guidebook*, if available.

WARNING:	Turn off all sources of ignition (pumps, motors, etc.). Do not allow matches, lighters, smoking, vehicles, or any sparking machines into the spill area.

Step 8. OSCs must complete a Spill Report (see Appendix C). Send the completed form to the Environmental Office and retain a copy in the spill section of the HW/HM Binder.

9.3 Spill Prevention

Most spills in the OHARNG do not result from catastrophic equipment failure or a blatant disregard for environmental rules and regulations. Most spills in the OHARNG result when soldiers do not pay attention to detail or fail to follow established protocols due to time constraints. Here are some basic rules to follow to prevent unnecessary and expensive spills:

- Conduct routine inspections of HM and HW storage areas as outlined in Chapter 8
- Turn in rusted, bulging, dented or leaking HM containers
- Conduct routine inspections of motor vehicle storage compounds as outlined in Chapter 8
- Ensure a strong preventative maintenance program is in place which addresses inspecting all vehicles and equipment in the unit's motor vehicle storage compound for conditions that could lead to leaks or spills of POL or other HM.
- Promptly submit work orders schedule repairs for equipment and vehicles with Class 2 or Class 3 leaks (see Section 9.4)
- Contain Class 2 and Class 3 leaks with drip pans until the equipment or vehicle can be repaired
- Know where spill kits are located and how to use them

- Use appropriately sized secondary containment

Note: Secondary containment systems must have sufficient capacity to contain 10% of the volume of all stored containers or 100% of the volume of largest container, whichever is greater. Placing a 5-gallon POL container on top of a 55-gallon drum stored in a secondary containment system designed for a 55-gallon drum defeats the purpose of the secondary containment system.

- Incorporate spill response and prevention into the risk management process
- Incorporate spill prevention planning on Deliberate risk Assessment Worksheets (DRAW), DD Form 2977, prior to the execution of training operations, to include convoy and fueling operations

Note: Spill incidents can be significant threats to human health and safety. Considering spill response and prevention when conducting risk analysis is mandatory and should be second nature to OHARNG soldiers. At a minimum everyone involved in the mission should know where fuel and POL assets are located, when and how to deploy secondary containment, where spill kits are located and how to use them, who to call in the event of a spill (JOC, Environmental Office, 911, etc.) and who is in charge in the event of a spill (OSC). Conducting spill response and prevention briefings during convoy operations are especially important. Mobile fuel assets and fuel points are especially vulnerable to accidents and spills.

- Replace unserviceable secondary containment
- Unless otherwise specified in writing by a Battalion Commander, mobile fuel tanks must be filled from the bottom up to reduce the risk of catastrophic equipment failure during commercial refueling operations
- Deploy secondary containment properly

Note: Deploy secondary containment on level surfaces. Deploying secondary containment on a slope decreases the storage capacity. Letting the containment system fill with rainwater also decreases the storage capacity. Placing bricks, tires, etc., on the sidewalls of portable secondary containment to keep it from filling with rainwater defeats the purpose of the secondary containment system. If the secondary containment system fills with rainwater **DO NOT** release rainwater from any secondary containment system without consulting the Environmental Office or Range Control first! Letting any part of the mobile fuel tanker hang over the portable secondary containment system is also unacceptable. Secondary containment must be placed under the nozzle during fueling operations.

- Do not use POL trucks or trailers to store bulk or excess POL between drill weekends or annual training periods

Note: Use racks, cages, etc. to store and secure POL when the POL truck or trailer is in motion. Stacking POL containers increases the risk of damaging the container. Unsecured containers can shift while the truck or trailer is in motion, damaging containers and increasing the likelihood of a spill. POL trailers do not come equipped with secondary containment. Any product spilled in the trailer will leak out onto the ground or highway. Secondary containment systems are available and can be purchased for POL trailers. Contact the Environmental Office for more information.

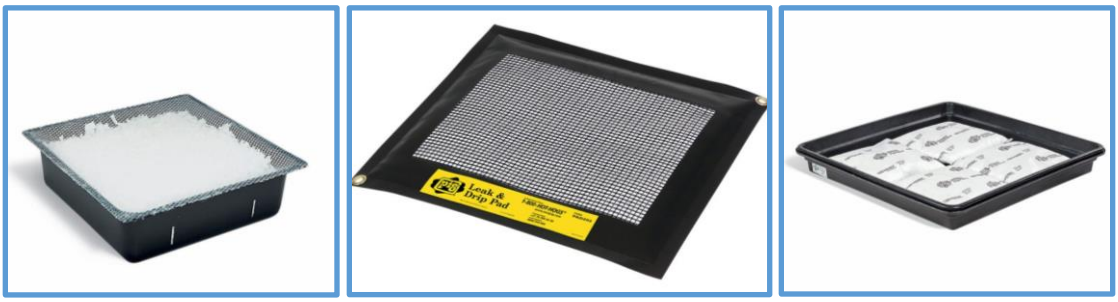
9.4 Class 2 and 3 Equipment and Vehicle Leaks

Class 2 and 3 leaks are responsible for most of the POL stains in motor vehicle storage compounds. A Class 2 leak forms a drip. A Class 3 leak forms a drip that drops to the ground. Class 2 and 3 leaks lead to reportable spills if they are not addressed as soon as they are discovered. All vehicles and equipment with Class 2 or Class 3 leaks must use a drip pan to contain the leak until the vehicle or equipment can be repaired. Unless otherwise specified by an SPCCP or other local regulation, **there is no legal requirement for non-leaking equipment and vehicles to have drip pans.** If you have military vehicles and equipment parked/stored at your location, you are required to have drip pans on hand to handle any Class 2 or 3 leaks that may occur. You aren't required to deploy the drip pans unless you observe a leak.

Authorized Drip Pans

Figure 9-1 shows different types of drip pans authorized for use. **Only use the large black rubber drain pans used for draining fluids from equipment as a last resort!** Water accumulates in these drain pans, creating a spill incident when they overflow or are overturned. Authorized drip pans have weighted bottoms to keep them from blowing away or tipping over. The drip pans usually employ weep holes or wire mesh to prevent water from accumulating in the pan. The drip pans contain an oil only absorbent that allows water to pass through the pan.

Figure 9-1. Examples of Authorized Drip Pans*



***Note: The products pictured above are examples only. Equivalent products are authorized.**

Use of Drip Pans

Change out the absorbents when they become saturated with product. Saturated absorbents must be placed in a trash bag, labeled, and turned in to the supporting maintenance facility for proper disposal. If a drip pan should happen to fill with water, **DO NOT** dump it out in the parking lot. **DO NOT** dump the oily water down any drain! **DO NOT** dump the contaminated water into a used oil container. Remove as much oily sheen from the water as you can using oil only absorbents pads. The pads can be thrown in the trash as long as they aren't saturated with product, i.e. you can't wring any product out with your hands. Place the non-saturated absorbent pads in a trash bag and seal the bag before placing it in the dumpster. Saturated pads must be placed in a trash bag, labeled, and turned in to the supporting maintenance facility for proper disposal. The water can be dumped into a wash rack's OWS once the sheen is gone. If the sheen cannot be removed the water needs to be containerized and turned in to the unit's supporting maintenance facility for proper disposal. Contact the Environmental Office if further assistance is required.

9.5 Resources

Secondary Containment and Spill Response Equipment

Step 1. **Contact the Environmental Office.** The Environmental Office may have what you need on-hand or have access to excess secondary containment (berms, plugs, etc.) or spill response equipment (spill kits, absorbents, etc.). If the assets are not readily available, the Environmental Office can assist you with specifications for the purchase of secondary containment and spill response equipment.

Note: The Environmental Office will work with state maintenance repair workers to obtain secondary containment and spill response equipment through the AQG's state property manager.

Step 2. **Coordinate purchase through DCSLOG-LMO.** Contact the DCSLOG-LMO to determine proper procurement procedures. DCSLOG-LMO may authorize the use of a Government Purchase Card (GPC) for the purchase. If DCSLOG-LMO does not authorize the use of the GPC for the purchase, a purchase request will be required. All purchase requests must be approved by DCSLOG-LMO. Units must submit purchase requests through the Battalion S4. AASFs must submit purchase requests through the SAO. FMSs, the CSMS, and the UTES must submit purchase requests through the SMO. The Warehouse must submit purchase requests through the USPFO.

Appendix A

Appendix A Glossary and Acronyms

Glossary

The following definitions are specific to this Plan. In some cases, these definitions may vary from those found in the regulations as they are summarized or are a composite of definitions from different regulations.

Accumulation – The process of collecting waste in containers or tanks on site prior to shipping to a Treatment, Storage, and Disposal Facility (TSDF). Waste can be accumulated at satellite accumulation points and hazardous waste storage areas.

Activity – A unit or organization that performs a function or mission, or a group or facility on an installation assigned space for a common usage or function and held operationally accountable by an authority other than the Installation Commander.

Acute Hazardous Waste – The commercial hazardous chemical products, manufacturing hazardous chemical intermediates, and off-specification commercial hazardous chemical products or manufacturing hazardous chemical intermediates listed in 40 CFR 261.33(e), (P-listed Hazardous Wastes).

Accumulation Start Date (ASD) – The date when a HW first becomes subject to the accumulation time limits. This is the date the waste is first placed into a container within a GAA or the date the 55-gallon quantity limitation is exceeded at an SAA

Conditionally Exempt Small Quantity Generator (CESQG) – Activities that follow the guidelines listed below:

a. Generate no more than 100 kg/mo (220 lb/mo) of HW.

b. Accumulate no more than 1,000 kg (2,200 lb) of HW on site at any one time.

c. Generate less than 100 kg (220 lb) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of any acute waste release as long as no more than a total of 1 kg (2.2 lbs) of acute HW was released.

d. Generate no more than 1 kg/month (2.2 lbs/month) of acute HW.

Environmental Quality Control Committee (EQCC) – Serves as the advisory committee to the Adjutant General on all environmental issues, such as environmental priorities, policies, strategies and programs.

Generator Accumulation Area (GAA) – One location for activities to accumulate HW until it can be removed. Waste may be accumulated in a GAA for no more 90 days after the ASD at LQGs or for no more than 180 days after the ASD at SQGs. Waste may be accumulated initially in a GAA or placed in the GAA after initial accumulation in an SAA.

Hazardous Chemical – Any element, chemical compound, or mixture of elements and compounds that is a physical hazard or a health hazard. Hazardous chemicals are any items requiring an MSDS, to include batteries, filters, and other solids, liquids, or gases. Chemicals with physical hazards include combustible liquids, compressed gases, explosives, flammables, organic peroxides, oxidizers, and pyrophoric chemicals that will ignite spontaneously in air, unstable chemicals, and water-reactive chemicals. Chemicals with health hazards are those for which there is significant evidence that the chemical has an acute or chronic effect on the health of exposed people.

Hazardous Material (HM) – All HMs are considered hazardous chemicals, but not all hazardous chemicals are hazardous materials. Defined by the DOT, it is anything that due to its chemical, physical, or biological nature causes safety, public health, or environmental concerns when transported in commerce. HMs includes HW and materials exhibiting explosive, flammable, corrosive, and oxidizing properties.

Hazardous Materials Information Resource System (HMIRS) – A multiple compact disc set and website sponsored by the Defense Logistics Agency. The HMIRS contains MSDSs for chemicals procured through military supply channels. To get a copy of the HMIRS compact disc set, call (570) 895-6622 commercial or 795-6622 DSN.

Hazardous Waste (HW) – A solid waste is a HW if it meets the following criteria and it is not specifically excluded from regulation as a HW:

a. It is specifically listed as such in 40 CFR Part 261, Subpart D.

b. It is ignitable, corrosive, reactive, or toxic as measured by standard test methods or as can be reasonably determined by generators through knowledge of the waste generating process.

HM Employee – Personnel in the OHARNG who load, unload, or handle HMs or prepare them for shipment and/or persons responsible for HMs transportation safety or who operate a vehicle used to transport HMs.

Large Quantity Generator (LQG) – An activity that generates 2,200 pounds or more of hazardous waste in a calendar month. An LQG may accumulate HW for no more than 90 days after the ASD.

Manifest – A shipping document that must accompany HW to the Treatment, Storage, and Disposal Facility (TSDF).

Personal Protective Equipment (PPE) – Any protective clothing or device worn by the employee to prevent contact with, and exposure to, HMs in the work area. Examples include protective aprons, goggles, face splash shields, eye protection, and various types of respiratory protection.

Pollution Prevention – Is a concept of reducing wastes and emissions by changing the processes or way waste is generated. The goal is to reduce the volume or toxicity of pollutants released to land, air, and water. Pollution prevention also aims at conserving our natural resources.

Primary Containment – The first level of containment, that is, the inside portion of the container that comes into immediate contact on its inner surface with the material being contained.

Recyclable/Reusable Materials – These materials are either excluded from HW regulations or subject to reduced management requirements as long as they are recycled.

Safety Data Sheet (SDS) – A collection of information required by the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard. An SDS includes the identity of hazardous chemicals, health and physical hazards, exposure limits, and safety precautions.

Satellite Accumulation Area (SAA) – A designated point where a generator may accumulate up to 55 gallons of HW or one quart of acutely HW. Each SAA must be at or near the point of generation, and must be under the control of the operator of the process generating the waste. Once the accumulated waste at an SAA equals 55 gallons, it must be marked with the ASD and moved within 72 hours to the GAA.

Secondary Containment – An impermeable physical barrier specifically designed to prevent release into the environment of materials that have breached primary containment. Secondary containment systems include, but are not limited to, tank dykes, curbing around process equipment, drainage collection systems into segregated oily drain systems, the outer wall of double walled tanks etc.

Small Quantity Generator (SQG) – An activity that generates more than 220 pounds but less than 2,200 pounds of HW per month, and does not accumulate more than 2,200 pounds of HW at any one time. A SQG may accumulate HW for no more than 180 days from the ASD. SQGs located more than 200 miles from a HW TSDF may accumulate HW for no more than 270 days from the ASD.

Solid Waste – All discarded materials including solids, semi-solids, sludges, liquids, and compressed gases are solid wastes unless excluded by regulation. A discarded material is any material that is abandoned, recycled, or considered inherently waste-like.

Spill – The accidental leaking, pumping, emitting, discharging, emptying, or dumping of waste or materials to the environment (air, water, or soil).

Transfer – The physical movement of waste from one activity or point to another, such as from an SAA to a GAA or off site to a TSDF.

Treatment, Storage, and Disposal Facility (TSDF) – Treatment, storage, and disposal facilities (TSDF) are the last link in the cradle-to-grave hazardous waste management system.

Universal Waste (UW) – Defined in 40 CFR Part 273, UWs include certain batteries, pesticides, mercury thermostats, and lamps.

Used Oil – Any oil that has been refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. This includes, but is not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids, and hydraulic fluids. For the purposes of this Plan, used oil does not include transformer oil or other dielectric fluids.

Acronyms

AASF	Army Aviation Support Facility
AGOH-FM-EN	Environmental Section of the Facilities Management Office
AGOH PAM	Adjutant General's Department Pamphlet
ASD	Accumulation Start Date
AST	Aboveground Storage Tank
AT	Annual Training
ATAG	Assistant Adjutant General
BMP	Best Management Practice
CAGE	Manufacturer's Number
CARC	Chemical Agent Resistant Coating
CDL	Commercial Drivers License
CESQG	Conditionally Exempt Small Quantity Generator
CFMO	Construction and Facilities Management Office
CFR	Code of Federal Regulations
CLP	Cleaner, Lubricant, Preservative
COS	Chief of Staff
CSMS	Combined Support Maintenance Shop
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DCSLOG	Deputy Chief of Staff – Logistics
DCSLOG-CTO	Deputy Chief of Staff – Logistics, Command Transportation Office
DCSLOG-LMO	Deputy Chief of Staff – Logistics, Logistics Management Officer
DoD	Department of Defense
DOL	Directorate of Logistics
DOT	Department of Transportation
DRMO	Defense Reutilization and Marketing Office
DTR	Defense Transportation Regulations
UECO	Environmental Compliance Officer
EBS	Environmental Baseline Study
ECPM	Environmental Compliance Program Manager
ENMP	Environmental Noise Management Plan
EPA	United States Environmental Protection Agency
EPS	Environmental Protection Specialist
EQCC	Environmental Quality Control Committee

FEC	Facility Environmental Coordinator
FEDLOG	Federal Logistics Data System
FFAC	Federal Facilities Compliance Act
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FMS	Facility Maintenance Shop
GAA	Generator Accumulation Area
GSA	General Services Administration
HAZCOM	Hazard Communication
HAZMAT	Hazardous Material/Hazardous Waste
HAZWOPER	Hazardous Waste Operations and Emergency Response
HM	Hazardous Materials
HMWMP	Hazardous Materials and Waste Management Plan
HMIRS	Hazardous Materials Information Resource System
HSMS	Hazardous Substance Management System
HSWA	Hazardous and Solid Waste Amendments
HW	Hazardous Waste
HWM	Hazardous Waste Manager
IAW	In Accordance With
IDT	Inactive Duty Training
IMPAC	International Merchant Purchase Authorization Card
ISCP	Installation Spill Contingency Plan
lbs	Pounds
LDNF	Land Disposal Notification Form
LDR	Land Disposal Restriction
LPL	Local Purchase List
LQG	Large Quantity Generator
LQHUW	Large Quantity Handlers of Universal Waste
MEK	Methyl Ethyl Ketone
MIL STD	Military Standard
MQCSS	Material Quality Control Storage Standard
MRE	Meal-Ready-Eat
MSDS	Material Safety Data Sheet(s)
NA	North American
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NRC	National Regulatory Commission

NSN	National Stock Number
OAC	Ohio Administrative Code
OHARNG	Ohio Army National Guard
OSC	On-scene Coordinator
OSHA	Occupational Safety and Health Administration
OWS	Oil/Water Separator
PCB	Polychlorinated Biphenyl
Plan	OHARNG Hazardous Material and Waste Management Plan
POL	Petroleum, Oil, and Lubricant
PPE	Personal Protective Equipment
QM	Quartermaster
QSL	Quality Status Listing
RCRA	Resource Conservation and Recovery Act
RQ	Reportable Quantity
SAA	Satellite Accumulation Area
SAO	State Aviation Officer
SMM	Surface Maintenance Manager
SOHM	Safety and Occupational Health Manager
SOP	Standard Operating Procedure
SPCC	Spill Prevention Control and Countermeasures Plan
SPCP	Spill Prevention Contingency Plan
SQG	Small Quantity Generator
SQHUW	Small Quantity Handlers of Universal Waste
TAG	Adjutant General of Ohio
TM	Technical Manual
TSCA	Toxic Substance Control Act
TSDF	Treatment, Storage, and Disposal Facility
U.S.	United States
UECO	Unit Environmental Compliance Officer
USPFO	United States Property and Fiscal Office(r)
UST	Underground Storage Tank
UTES	Unit Training Equipment Site
UW	Universal Waste
WPS	Waste Protocol Sheet

Appendix B

ABSORBENT, HAZARDOUS

POSSIBLE CONTAMINANTS OF CONCERN

Absorbents, such as Kitty Litter, etc., may be contaminated with any number of chemicals used in the shop. The most likely contaminants are POLs that may be flammable and/or toxic. Other contaminants include solvents or acetone.

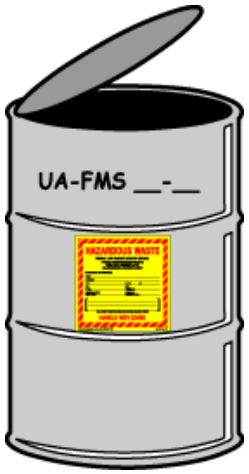
CHARACTERIZATION

This WPS is for used absorbent determined by analysis to be **hazardous waste.** These absorbents as well as those contaminated with non-POL hazardous materials such as solvents or acetone must be managed as **hazardous waste**. Refer to the WPS created for the contaminant for information on management of these wastes as well as this WPS.

POL-contaminated absorbents, such as New Pig® Blankets, rags, paper wipes and towels, and pads, are to be placed in a drum of suitable size and managed as **non-hazardous waste.** Check the Absorbents Non-Hazardous WPS for management of those items.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Waste Absorbents***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy

ABSORBENT, NON-HAZARDOUS

POSSIBLE CONTAMINANTS OF CONCERN

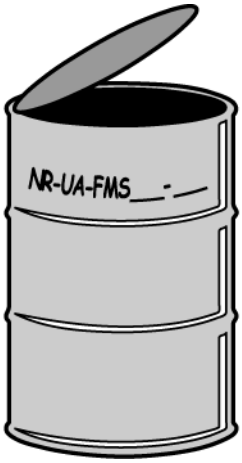
POL contaminates such as brake fluid and engine oil are the contaminants of concern.

CHARACTERIZATION

This WPS is for used for absorbent determined by analysis to be **non-hazardous waste.** POL-contaminated absorbents, such as New Pig® Blankets, rags, paper wipes and towels, and pads, are to be placed in a drum of suitable size and managed as **non-hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for disposal guidance.

ACETYLENE CYLINDERS

POSSIBLE CONTAMINANTS OF CONCERN

Acetylene cylinders eventually reach the end of their useful life. The end is signaled when they fail either a periodic hydrostatic test or their re-qualification tests. This WPS is for used for cylinders that are no longer functional.

CHARACTERIZATION

Some older acetylene cylinders contain asbestos. Today, most cylinders contain silica lime slurry put in during the manufacturing process. The slurry is hardened and baked. Acetylene is dissolved into the liquid acetone in acetylene cylinders. The acetone must be handled appropriately. A new Model 420 acetylene cylinder contains almost eight gallons of liquid acetone. If not removed and recycled it has the potential to leach into the groundwater.

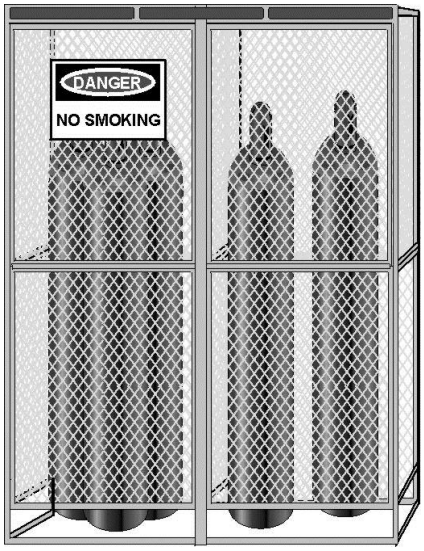
Most cylinders will be able to be recycled using Step 1 & 2 of the Turn-In Procedures below.

TURN-IN PROCEDURES

1. *Determine if the cylinder is marked as a mil-spec item. If so, then make arrangements to turn-in to the USPFO.*

2. *If the cylinder is not mil-spec, then* call the cylinder distributor for pick-up of empty and/or unserviceable cylinders. Distributors are responsible for disposition of cylinders. Distributors may use a designated hazardous waste landfill to dispose of cylinders with the acetone in it. However, more typically, acetone is baked out of the old cylinder at a recycling facility and reclaimed.

3. If the distributor is not available, call *NGOH-IMR-ENV* to arrange for a disposal service. A disposal service will be responsible for removing and recycling the acetone, de-valving, and damaging the valve's inlet threads. For older cylinders that may contain asbestos, the disposal service will contain the asbestos in a non-friable form and remove and recycle the acetone. The cylinder is rendered unserviceable and transported to a Subtitle D landfill.



AEROSOL CANS

(Before Draining/Puncturing)

POSSIBLE CONTAMINANTS OF CONCERN

This WPS is for the accumulation of aerosol cans before they are drained and punctured. Aerosols may be flammable, corrosive and/or toxic and may be hazardous waste or acutely hazardous waste, depending on the contents of the cans and the gas involved.

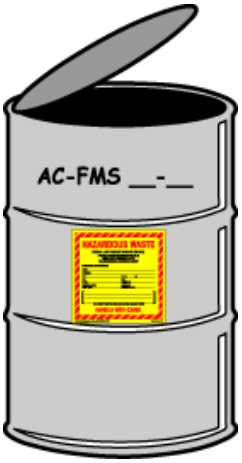
CHARACTERIZATION

While accumulating used aerosol cans on site they may be considered reactive **hazardous waste**. However, aerosol cans are non-hazardous if vented (punctured) and empty.

Used aerosol cans that still contain material shall be turned in to any collocated maintenance shop for ultimate disposal. The cans will be punctured and emptied of contents using appropriate equipment at these locations. Punctured cans should be managed as scrap metal and recycled. An aerosol can is considered “empty” if the pressure inside the cylinder equals or nearly equals atmospheric pressure and no material remains in the can.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Aerosol Cans***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV. **Punctured cans must be recycled as scrap metal**.
5. If aerosols cannot be punctured and are turned in for disposal, mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

AEROSOL CAN CONTENTS

POSSIBLE CONTAMINANTS OF CONCERN

This WPS is for liquid waste from aerosol cans. Liquids generated from the aerosol can puncturing process may be flammable and/or toxic and may be hazardous waste or acutely hazardous waste, depending on the contents of the can and the gas involved.

CHARACTERIZATION

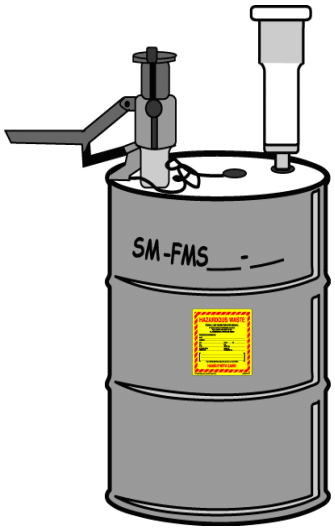
Liquids resulting from puncturing of aerosol cans will be managed as **hazardous waste**. The waste generated from this procedure will be collected in an appropriately sized drum beneath the functioning aerosol can puncturing equipment. The size of drum used should depend on the amount of cans punctured. A 30-gallon drum is recommended.

Contact the HWM to determine which aerosol cans may be vented into the same container. The most common aerosols are spray paints, solvents and lubricants.

NEVER vent ether, caustics or pesticides (including insecticides, fungicides, or rodenticides) in the same container as paints and lubricants. Also, DO NOT mix incompatible liquids together as this could result in an explosion.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Maintenance shops with an aerosol can puncturing systems use a closed top UN/NA rated 30-gallon metal drum for accumulation. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right (example for spent solvent mix). Maintain a Container Log in the vicinity of the container. **Make sure container is in an established SAA.**
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write the name of the waste stream. For example, ***spent solvent mix.*** Add facility EPA ID # and Waste Code D001. Other waste codes may apply depending on aerosol can contents, contact Hazardous Waste Manager for assistance.



4. Put waste in the container per the following instructions:
   a. Don safety goggles.
   b. Do not smoke of have an open flame.
   c. Remove cap from can prior to insertion.
   d. Insert aerosol can “nozzle end down.”
   e. Always lower and engage top plate.
   f. Tighten lock knob against can being punctured.
   g. Push handle down firmly.

5. Put waste in the container per the following instructions (Continued):
   h. Wait 20 seconds to allow residual liquids to drain into drum before removing punctured can.
   i. After removing can, lower sliding cover plate to seal collection drum.
   j. <u>DO NOT</u> puncture ether, pesticides or caustics into this container.
   k. Drums must be grounded.
   l. Ensure filter unit is in place.
   m. Do not use on drum with less than 20-gallon capacity or headspace.
   n. Always operate in a well ventilated area.
   o. Change filter when saturated or as specified by the manufacturer every 3-6 months.
   p. Recycle punctured cans as scrap metal.
   q. Contact NGOH-IMR-ENV for proper disposal of spent filter and drum.
6. Document the number of cans punctured on the Waste Accumulation Log. It should take a long time to fill the drum. However, when the drum is full, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.
5. After waste pickup, file manifest documents in the Hazardous Material and Waste Binder. Once the waste is treated and disposed, the final manifest documents will be posted to the FMS or unit eMS Home Page depending on final pickup location.

ANTIFREEZE

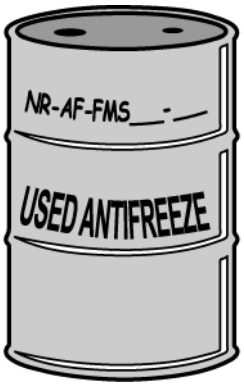
POSSIBLE CONTAMINANTS OF CONCERN

Antifreeze typically contains ethylene glycol. However, other formulations have been developed recently using less toxic chemicals. Used antifreeze may contain toxic metals such as copper, zinc, lead, cadmium and chromium.

CHARACTERIZATION

Analytical results have shown that used antifreeze is hazardous for most facilities. The HWM will sample used antifreeze at each facility on a yearly basis to determine the appropriate disposal procedure, container marking/labeling and handling procedures. If used antifreeze tests non-hazardous, it can be recycled. Call the HWM if unsure the analytical result of your used antifreeze.

1. Select an approved container. Use a closed top UN/NA rated 55-gallon or smaller *blue plastic corrosive safe drum* for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Containers must also be stenciled or labeled as ***"Used Antifreeze."*** DO NOT label containers as "Waste Antifreeze."
3. Make sure container is in a proper accumulation area.
4. Put used antifreeze in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
5. If used antifreeze is determined to be hazardous through analysis, attach a **Hazardous Waste** label to the side of the container. Using an indelible marker, on the contents line, write the name of the waste stream. For example, **Used Antifreeze**.



TURN-IN PROCEDURES

1. Only approved locations shall generated used antifreeze (locations will active EPA Waste ID numbers).
2. Ensure the container is properly marked. Close and seal container.
3. If used antifreeze is non-hazardous, the UECOs can contact the HWM or the recycling facility directly to schedule a POL pickup of used oil, used antifreeze and offspec fuel. If used antifreeze is hazardous, coordinate the pickup through the HWM.

ASBESTOS

Brake Shoes, Clutch Plates, Fire Suits, and Blankets

POSSIBLE CONTAMINANTS OF CONCERN

Refer to WPS-08 for non-automotive asbestos related waste handling. Asbestos is a naturally occurring mineral that takes the form of hollow, microscopic fibers that are nearly indestructible. It can be densely packed into a tough, flexible, and very useful material. Asbestos that is **"friable"** may be crumbled, pulverized or reduced to powder in your hand when dry. Friable asbestos has the potential to release asbestos fibers that can become airborne, and potentially create a health hazard.

These health hazards include: asbestosis, an irreversible scarring of the lungs; pleural disease, thickening of the surrounding lung tissue; lung cancer, tumors that are usually fatal; and mesothelioma, cancer of the chest cavity or abdomen that is always fatal.

CHARACTERIZATION

Asbestos containing materials (ACM) are managed as TSCA Regulated Waste.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container (OR asbestos bag). Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels. Double bag waste using the 6-mil.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Also affix the asbestos label or mark on the drum the following language: DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD
   R.Q., ASBESTOS CLASS 9 NA 2212, III.
   Add generator name and facility address marking.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Readiness Centers). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Readiness centers co-located with supporting FMS, coordinate the physical transfer of waste with the FMS. Other readiness centers and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick up.

4. Asbestos brake shoes may be taken to a qualified vendor to be relined. If transporting to the vendor, brake shoes must be cleaned and bagged. Maintenance facilities, contact NGOH-IMR-ENV for pickup/disposal guidance.

ASBESTOS

Asbestos Containing Materials, non-automotive

POSSIBLE CONTAMINANTS OF CONCERN

Refer to WPS-07 for automotive asbestos related waste handling. Asbestos Containing Materials (ACM) is used in building materials and other items as a fire retardant. ACM may be siding, shingles, caulking, spray-on acoustical, ceiling panels, flooring, mastic, piping, etc. Contact a certified asbestos building inspector from the NGOH-IMR-ENV to determine if building materials do contain asbestos. Special training to deal with ACM hazards is required for waste handlers.

Asbestos is a naturally occurring mineral that takes the form of hollow, microscopic fibers that are nearly indestructible. It can be densely packed into a tough, flexible, and very useful material. Asbestos that is **"friable"** may be crumbled, pulverized or reduced to powder in your hand when dry. Friable asbestos has the potential to release asbestos fibers that can become airborne, and potentially create a health hazard.

These health hazards include: asbestosis, an irreversible scarring of the lungs; pleural disease, thickening of the surrounding lung tissue; lung cancer, tumors that are usually fatal; and mesothelioma, cancer of the chest cavity or abdomen that is always fatal.

CHARACTERIZATION

ACM are managed as TSCA Regulated Waste.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container (OR asbestos bag). Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels. Double bag waste using the 6-mil bags.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Also affix the asbestos label or mark on the drum the following language: DANGER CONTAINS ASBESTOS FIBERS AVOID CREATING DUST CANCER AND LUNG DISEASE HAZARD R.Q., ASBESTOS CLASS 9 NA 2212, III. Add generator name and facility address marking.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Readiness Centers). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).

2. Ensure the container is properly marked. Close and seal container.
3. Readiness centers co-located with supporting FMS, coordinate the physical transfer of waste with the FMS. Other readiness centers and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick up.

BATTERIES, LEAD - ACID

POSSIBLE CONTAMINANTS OF CONCERN

The cells of a lead-acid battery contain lead and lead dioxide and an acidic electrolyte solution of sulfuric acid. The electrolyte is a strong corrosive and reactive agent.

There are two types of lead-acid batteries: sealed batteries without vent-filler caps and vented batteries with vent-filler caps for servicing the battery.

The batteries should be kept cool, dry, and away from open flame, heat and combustibles. Do not store them in a way that they may leak.

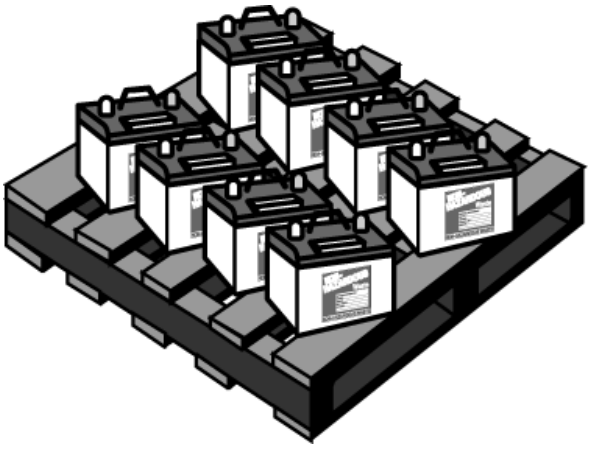
Containers holding broken, leaking batteries, or liquid or solid waste from lead-acid batteries should be marked as "Hazardous Waste."

CHARACTERIZATION

Lead-acid batteries are managed as **recyclable materials**. It is illegal to dispose of a lead-acid battery in a landfill or an incinerator.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Until batteries are exchanged, stack them on pallets in an area with secondary containment.
2. Mark and label the batteries or battery storage area "Lead-Acid Batteries."
3. Make sure pallet is in a proper accumulation area.
4. Put batteries on the pallet. Wear proper PPE listed on the SDS.
5. When ready for turn-in; a contractor picks up and replaces batteries at each maintenance shop, as needed.



BATTERIES, MISCELLANEOUS

Lithium, Nickel-Cadmium, Magnesium, and Mercury

POSSIBLE CONTAMINANTS OF CONCERN

Lithium Batteries. Lithium-sulfur dioxide batteries contain pressurized sulfur dioxide gas and lithium-thionyl chloride batteries contain liquid thionyl chloride that, upon exposure to air, vaporizes. Both gases are highly toxic.

Magnesium Batteries. Magnesium batteries contain an electrolyte of an aqueous solution of magnesium bromide or magnesium perchlorate. These chemicals can emit highly toxic fumes when heated.

Mercury Batteries. These batteries contain mercury and mercuric oxide, and a potassium hydroxide (KOH) or sodium hydroxide electrolyte. Mercury is a listed hazardous metal and highly toxic.

Nickel-Cadmium (Ni-Cd). There are two kinds of Ni-Cd batteries: sealed non-serviceable batteries without vent-filler caps (dry) and serviceable vented batteries with vent-filler caps (wet). The cell of a Ni-Cd battery typically contains cadmium, nickel, and a caustic electrolyte solution of potassium hydroxide (KOH). Cadmium is a listed hazardous metal and highly toxic.

Lead-Acid (Non-Automotive). These batteries are managed as universal waste only if the one-for-one battery exchange contractor will not accept them.

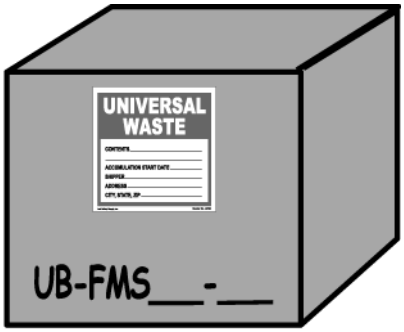
Alkaline Batteries manufactured after 1992 do not contain mercury and may be disposed as refuse.

CHARACTERIZATION

Lithium, nickel-cadmium, magnesium, and mercury batteries are **universal waste**. If any batteries are damaged or drained, the electrolyte solution or any materials coming into contact with the solution, including the battery casing, should be disposed of as **hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. The suggested container is a sturdy box for accumulation.
2. Mark and label the container. Fill out and attach a Universal Waste label to the side of the container. Mark the container using an indelible marker, on the Contents line, write: ***Used Batteries.***
3. Segregate batteries by type in separate plastic sealable bags within the bucket.
4. Make sure container is in a proper accumulation area. Fill in the ASD immediately. Put waste in the container. Wear proper PPE listed on the SDS.



TURN-IN PROCEDURES

A CESQG has the option of handling UW as an SQHUW or under the CESQG provisions. Because there is no accumulation time limit for CESQGs, NGOH-IMR-ENV **may** allow OHARNG CESQGs handle its UW as HW. This way, generators may accumulate **UNIVERSAL** wastes beyond the one-year accumulation period for SQHUW.

1. Call NGOH-IMR-ENV to arrange for a pick up.

BATTERY ACID

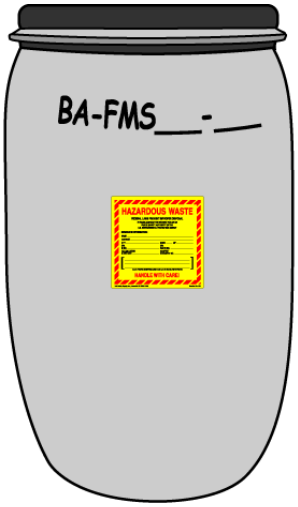
POSSIBLE CONTAMINANTS OF CONCERN

Battery acid has a low pH and will eat though fabric and burn skin.

CHARACTERIZATION

Battery acid is corrosive and must be managed as a **hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES



1. Select an approved container. Use a closed-head UN/NA rated 55-gallon or smaller poly drum for corrosive accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Battery Acid***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.
5. Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

ETHER STARTER AND PROPANE CYLINDERS

POSSIBLE CONTAMINANTS OF CONCERN

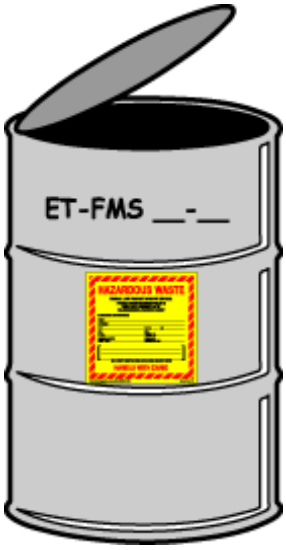
Ether starter and propane cylinders contain flammable gases that cannot be disposed of as general refuse.

CHARACTERIZATION

Ether starter and propane cylinders are **hazardous waste**. Do not vent or puncture ether starter and propane cylinders.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Ether/Propane Cylinders***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



5. Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Send larger cylinders back to the manufacturer. Turn in small cylinders as waste. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

E-WASTE

POSSIBLE CONTAMINANTS OF CONCERN

E-waste is a popular, informal name for electronic products nearing the end of their "useful life." Computers, televisions, VCRs, stereos, copiers, and fax machines are common electronic products. E-waste often has hazardous or toxic components that pollute the environment if they are improperly managed. Some of these components, such as heavy metals, are also valuable materials that can be extracted, recycled and reused to make new equipment. As our old electronic equipment becomes outdated, it is important that we think carefully about reusing and recycling materials, instead of just throwing equipment in landfills. According to the Environmental Protection Agency (EPA), more than four million tons of e-waste go to U.S. landfills each year.

E-Waste includes, but not limited to the following:

CHARACTERIZATION

Many electronic items are recyclable.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. The suggested container is a sturdy box for accumulation.
2. Mark and label the container. Fill out and attach a Non-hazardous Waste label to the side of the container. Mark the container using an indelible marker, on the contents line, write: **E-Waste.**
3. Make sure container is in a proper accumulation area and it not in the way of heavy traffic.

TURN-IN PROCEDURES

1. Unit level/Maintenance Shop – Refer to the USPFO Warehouse Customer Turn-in Checklist
2. Unserviceable Computers must have the hard drive removed by the NGOH-G6 or SASMO
3. A Statement must be affixed to the CPU stating that the hard drive was removed. **NOTE: the turn-in will be rejected if the statement is missing.**

FIRE EXTINGUISHERS

POSSIBLE CONTAMINANTS OF CONCERN

There are primarily two groups of fire extinguishers (FE) at the Ohio Army National Guard:

The first group of FE is ones that are part of Real Property. These FE were provided with the building when it was built, or the building was retrofitted with them to comply with Safety regulations and to satisfy state and local municipal fire safety requirements.

The other type of FE are ones that come as Basic Issue Items (BII) with military equipment such as wheeled vehicles, tanks, helicopters, etc. If it is a standard piece of equipment that is supposed to be with a military piece of equipment for that equipment to be considered fully operational, then that FE is BII.

FE can contain several different fire suppressants including, but not limited to:

- Water, H2O
- Carbon Dioxide, CO2
- Halon or refrigerants
- Dry Chemical

CHARACTERIZATION

Identification of the FE contents is important to final disposition. Most fire extinguishers contain non-hazardous gases, wetting or dry agents. The exception is Halon or refrigerant containing FE that contains ozone-depleting chemicals (ODCs). FE containing ODCs require special handling and are required to be recycled by the Department of Defense.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. If discharged, and then proceed to Step 2. Identify the FE contents. If the FE contains a refrigerant, then submit to the supporting maintenance shop for the unit. These will need to be job ordered to the CSMS for proper refrigerant collection and turn-in to DOD.
2. All other FE contents need to be identified as Real Property or BII.

   Real Property is managed by the Facility Management Branch of the DIMR. Contact the State Maintenance contact that supports the real property for the facility.

   BII must be properly turned in to the USPFO Warehouse. The warehouse will determine which FE must be turned in to a depot, re-issued where needed in the State, or properly disposed.

TURN-IN PROCEDURES

1. Unit level – Turn-In FE containing refrigerants and BII type to USPFO. Real Property FE not containing refrigerants turn-in to State Maintenance staff.
2. Maintenance Shop – Follow unit level instructions. Secure all refrigerant containing fire extinguishers for job order to CSMS for refrigerant turn-in.

   NOTE: Unit level and Maintenance shops can also call their local fire department for BII FE. Some fire departments have an exchange program available. Individuals can exchange their used extinguisher for one that is refilled and ready for use.

FUEL, CONTAMINATED

POSSIBLE CONTAMINANTS OF CONCERN

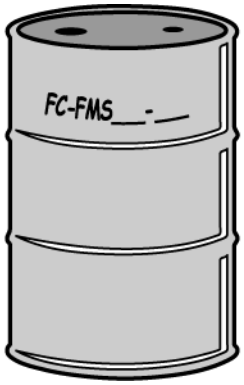
Unleaded gasoline (MOGAS) and JP-8 are toxic and flammable. MOGAS contains volatile organic compounds (VOCs) such as benzene, xylene, toluene, and ethylbenzene. JP-8 may contain VOCs such as benzene, toluene, trimethylbenzene and xylene. Diesel fuel #2 consists of a mixture of "long-chain" hydrocarbons and can be a flammable liquid depending on the manufacturer and specification.

CHARACTERIZATION

As long as fuel is ultimately used for its intended purpose, even if it is off-spec or contaminated, it is not a waste. For example, fuel may be used onsite in equipment such as ground power equipment and lawn mowers. Also, fuel sent off-site under contract is also burned for energy recovery. Therefore, this material is not a waste.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use a closed-head UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in/recycling (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.

FUEL FILTERS, DIESEL

POSSIBLE CONTAMINANTS OF CONCERN

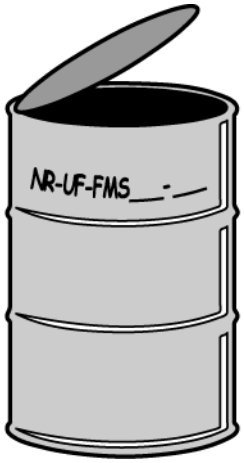
Diesel fuel filters consist of a mixture of "long-chain" hydrocarbons and can be a flammable liquid depending on the manufacturer and specification.

CHARACTERIZATION

This WPS is for used for diesel fuel filters determined by analysis to be **non-hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container. Do not mix diesel fuel filters with JP-8 or MOGAS filters.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for guidance.

FUEL FILTERS, JP-8 AND MOGAS

POSSIBLE CONTAMINANTS OF CONCERN

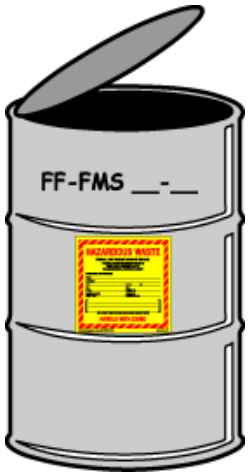
Unleaded gasoline (MOGAS) and JP-8 are toxic and flammable. MOGAS contains volatile organic compounds (VOCs) such as benzene, xylene, toluene, and ethylbenzene. JP-8 may contain VOCs such as benzene, toluene, trimethylbenzene and xylene.

CHARACTERIZATION

This WPS is for used for fuel filters determined by analysis to be hazardous. These fuel filters are managed as **hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***JP-8/MOGAS Fuel Filters***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



5. Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Waste Turn-In Form***. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

GREASE, GAA

POSSIBLE CONTAMINANTS OF CONCERN

Petroleum based grease, commonly known as grease, automotive and artillery (GAA) normally only contain low concentrations of toxic metals.

CHARACTERIZATION

General Automotive and Artillery (GAA) grease is characterized as **non-hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.

INK CARTRIDGES

POSSIBLE CONTAMINANTS OF CONCERN

Printer inks can be toxic to the environment but not all printer inks are hazardous. The level of toxicity of printer inks depends on the components from which they are made of. Most of the printer and ink manufacturers today produce petroleum-based inks. The principle environmental hazard of ink toner cartridges is landfill consumption. Businesses worldwide dispose of thousands of ink toner cartridges each day. A discarded ink toner cartridge is not biodegradable and takes up land fill space virtually forever. On the other hand, a recycled ink toner cartridge can be reused up to ten times without product degradation. In North America, more than 40,000 tons of plastic and metal is saved from landfills annually as a result of cartridge recycling. Many ink toner dealers as well as local suppliers will accept used ink toner cartridge.

CHARACTERIZATION

Ink toner cartridges are a recyclable item.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. For bulk storage, select an approved container. The suggested container is a sturdy box for accumulation.
2. For a one for one exchange, send the used cartridge back in the back that the new cartridge came in.
3. Make sure container is in a proper accumulation area.

TURN-IN PROCEDURES

Ink toner cartridges can be recycled in one of the following way:

1. Many toner and ink cartridges can be refilled and reused up to ten times. Many retail stores such as Best Buy, Staples, Office Depot, and Office Max will either refill or collect ink cartridges. (NOTE: Payment for cartridges cannot be accepted for turning in cartridges to local venders)
2. Companies such as Hewlett Packard and Xerox provide recycling services for their own cartridges. These services often involve ordering a prepaid envelope to mail cartridges directly back to the manufacture.
3. Take ink cartridges to the USPFO.

LAMPS

Fluorescent, Mercury Vapor, Neon, Sodium Bulbs

POSSIBLE CONTAMINANTS OF CONCERN

Small quantities of mercury, antimony, cadmium, barium, and lead are used to manufacture fluorescent bulbs and high intensity discharge (HID) lamps such as, high pressure sodium and mercury vapor lamps.

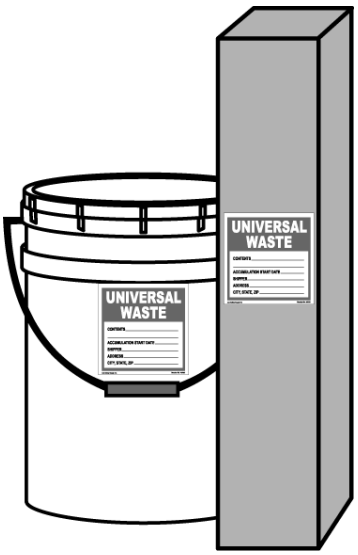
Always wear gloves when handling broken light bulbs. Universal wastes will ultimately go to a recycler. Recyclers separate the tubes into their component materials—glass, metal, phosphor powder, and mercury—so that these materials can be recycled or reused.

CHARACTERIZATION

All spent lamps including fluorescent bulbs and HID lamps are **universal wastes**. Place broken lamps in a 5-gallon plastic pail and manage as **universal waste**. Contact the HWM for labeling information.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an appropriate container. An appropriate container for light bulbs is a box or bucket large enough to hold the bulbs. Contact the HWM if you have questions about appropriate containers.
2. Ensure the box or bucket is serviceable and all printing is legible. Attach a Universal Waste label to the side of the container. On the contents line, write: ***Used Lamps*.**
3. Fluorescent bulbs are now recycled. Using an indelible marker, mark the container “Used Lamps.” Make sure container is in a proper
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
5. Process the container for turn-in IAW Chapter 6 of the HMWMP. **Remember not to exceed the one-year accumulation time limit for universal waste (SQGs and LQGs only).**



GENERAL INFORMATION/SHIPPING INFORMATION

A CESQG has the option of handling UW as an SQHUW or under the CESQG provisions. Because there is no accumulation time limit for CESQGs, NGOH-IMR-ENV **may** allow OHARNG CESQGs handle its UW as HW. This way, generators may accumulate **UNIVERSAL** wastes beyond the one-year accumulation period for SQHUW.

1. Call NGOH-IMR-ENV to arrange for a pick up.
2. Ensure each container is properly marked. Close and seal container.
3. NGOH-IMR-ENV can pick up the bulbs during routine site visits.
4. Complete the Universal Waste Turn-In Form prior to the site visit.

MEDICAL WASTE– USED & CONTAMINATED

POSSIBLE CONTAMINANTS OF CONCERN

This type of waste includes items that are contaminated with bodily fluids or may have come into contact with other biohazards and may include:

- Used needles
- Used gauze, tubing
- Materials, contaminated with blood and bodily fluids
- Used rapid response testing kits

Additional items of concern would include pharmaceuticals, chemicals, radioactive materials and heavy metals that are used in the medical setting. These items should be packaged separately from the items listed above. Fully disclose contents when turning in materials.

CHARACTERIZATION

Only trained individuals should handle. Sharps, blood, infectious and items contaminated with bodily fluids are considered to be infectious waste. If the waste contains pharmaceuticals, chemicals, radioactive materials or heavy metals then the material will need further characterization.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Wear proper PPE for the type of material handled. Bags and boxes that are labeled can be obtained from USPFO. Biohazard bag NSN is 6530-01-107-5798. Infectious waste must be packaged separately from other medical materials including pharmaceuticals, chemicals, radioactive materials and heavy metals, if possible. Disclose all contents using DA3161.
2. Used and unused sharps must be in a closed sharps container. Sharp container NSN 6530-01267-2545 may be used. Other used and contaminated materials must be in a closed biohazard bag or non-leaking container marked with biohazard label.
3. Unit staff can store Medical Waste while arranging pickup by USPFO Warehouse in a manner that does not produce odors and attract insects/vermin. Complete container log and mark each container of medical waste to match the container log. Use naming convention MW-unit name--##, see AGO PAM 200-1, chapter 5 for marking and labeling containers properly.
4. USPFO staff trained in hazardous, medical and radioactive waste characterization evaluates disclosed material listing for items that may be considered a hazardous waste. Contact the Hazardous Waste Manager or Radiation Safety Manager, if items of concern are present to assist with waste characterization.
5. A copy of the pickup documentation (manifest) is left with the POC at pickup location. Send a scan or hardcopy to the Environmental Office Hazardous Waste Manager.

TURN-IN PROCEDURES

1. Unit level – Contact USPFO Warehouse for turn-in of labeled/ marked infectious medical waste containers. Complete DA 3161 for drugs including NDC Lot # and expiration date. Only vehicles registered for medical infectious waste by Ohio EPA may transport infectious medical waste. No other waste type can be transported in the same shipment. FMS staff cannot accept infectious medical waste.
2. USPFO Warehouse staff will characterize all waste types received and properly package materials for shipment. The container log used for each container will serve as a record of waste generated monthly. Trained staff will prepare all medical waste for shipments to outside vendors.

MERCURY THERMOSTATS

POSSIBLE CONTAMINANTS OF CONCERN

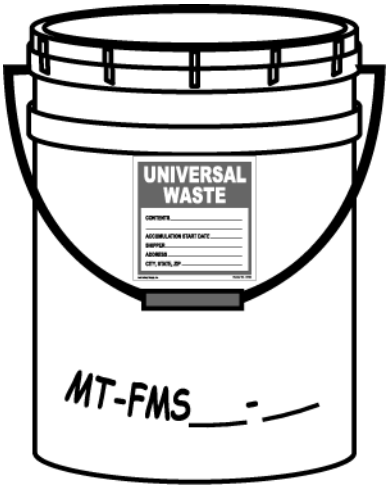
Thermostats contain mercury.

CHARACTERIZATION

All **spent mercury thermostats are** universal wastes.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an appropriate container. An appropriate container for thermostats is a bucket large enough to hold the bulbs. Contact the HWM if you have questions about appropriate containers.
2. Ensure the box or bucket is serviceable and all printing is legible. Attach a Universal Waste label to the side of the container. On the contents line, write: ***Used Mercury Thermostats*.**
3. Make sure container is in a proper accumulation area. Fill in the ASD.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
5. Process the container for turn-in IAW Chapter 6 of the HMWMP. **Remember not to exceed the one-year accumulation time limit for universal waste (SQGs and LQGs only).**



GENERAL INFORMATION/SHIPPING INFORMATION

A CESQG has the option of handling UW as an SQHUW or under the CESQG provisions. Because there is no accumulation time limit for CESQGs, NGOH-IMR-ENV **may** allow OHARNG CESQGs handle its UW as HW. This way, generators may accumulate **UNIVERSAL** wastes beyond the one-year accumulation period for SQHUW. Contact NGOH-IMR-ENV for guidance/authorization.

1. Call NGOH-IMR-ENV to arrange for a pick up.
2. Ensure each container is properly marked. Close and seal container.
3. NGOH-IMR-ENV can pick up the thermostats during routine site visits.
4. Complete the Universal Waste Turn-In Form prior to the site visit.

MRE HEATERS, UNUSED

POSSIBLE CONTAMINANTS OF CONCERN

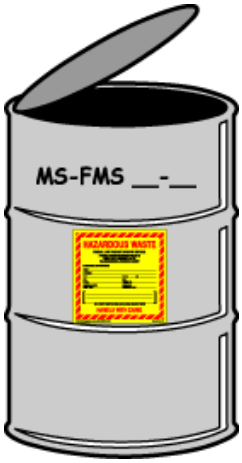
The heaters consist of a plastic bag containing a piece of fiberboard and powdered magnesium or magnesium alloys along with other materials.

CHARACTERIZATION

Unused MRE heaters are a reactive solid and therefore a hazardous material. If disposing of large quantities of unused MRE heaters, manage as a **hazardous waste**. Contact the HWM for further instructions.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open head UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Unused MRE Heaters***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the material will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

NBC/CDE KITS

(M229, M256, M256A1, M28, M29, M258, M258A1, and M280)

POSSIBLE CONTAMINANTS OF CONCERN

The M229 is a three-part refill kit: Part A contains potassium hydroxide, which is a colorless, viscous liquid with no odor; Part B contains silver nitrate and ethyl alcohol (ethanol), which is a colorless liquid; Part C contains diethyl phthalate, which is a colorless, odorless liquid.

M256, M256A1, M28, and M29 detector tickets contain methyl alcohol and ligroine. The kits are portable, expendable items capable of detecting and identifying hazardous concentrations of nerve and blister agents and cyanide. Each kit consists of 12 disposable plastic sampler-detectors (ticket or card), one booklet of M8 paper, and a set of instruction cards. Each ticket (card) contains laboratory filter paper test spots for the various agents. Dispose of M8 and samplers separately.

M258, M258A1, and M280 Skin Decontamination Kits contain various chemicals. Vial #I of the M258 and M258A1 decon kits contains ethanol, phenol, sodium hydroxide, ammonia, and the rest water. Vial #2 of the M258 and M258A1 contains ethanol, zinc chloride, water, and Chloramine "B". The M280 kit packets contain similar contaminants. The M258 and M280 decontamination kits listed on this WPS are obsolete. Use or function all kits, unless you have a significant quantity, and throw in the trash. For significant quantities, contact the HWM for specific handling procedures.

CHARACTERIZATION

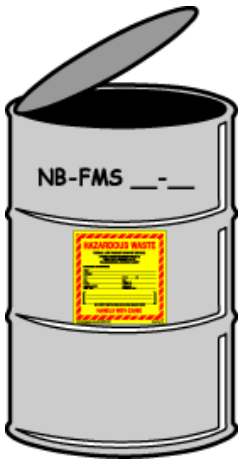
The M229 refill kit, when disposed of, is a **hazardous waste** for ignitability, corrosivity, and toxicity (D001, D002, D011 and U088).

M256, M256A1, M28, and M29 detector tickets may be hazardous waste depending on how they are managed. If the kits are disposed of as a whole, they are **hazardous waste**. If the kits are used or functioned, they are **non-hazardous waste** and may be thrown in the trash.

M258, M258A1, and M280 Skin Decontamination Kits may be hazardous waste depending on how they are managed. If the kits are disposed of as a whole, they are **hazardous waste**. If the kits are used or functioned, and the material is allowed to dry, they are **non-hazardous**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***NBC/CDE Kits***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Contact USPFO for disposition. If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Complete DA Form 2765-1. Turn-ins will be marked “FOI” (found on installation) in the publication block.
4. Items do not require reclassification prior to turn-in. Equipment received from the Central Issue Facility (CIF) must be turned in to the CIF to have items removed from the individuals’ OCIE record.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

DRIED PAINT, LATEX

POSSIBLE CONTAMINANTS OF CONCERN

Latex paints and primers contain water and small amounts of other materials (glycols, etc.) to keep the paint liquid and uniform. The water is essentially nontoxic, and the other materials are present in such small amounts that they do not present any demonstrable toxicity. Latex paints are also referred to as vinyl, acrylic, or water-based paints.

CHARACTERIZATION

Old latex paint and primer are most often **non-hazardous waste**. Water-based specialty paints such as acrylic latexes, sign paints, and other water-based specialty paints should be evaluated for their hazardous properties before disposal.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for disposal guidance.

PAINT - RELATED WASTE (LIQUID)

POSSIBLE CONTAMINANTS OF CONCERN

Solvent-based paints, primer and stains contain organic solvents such as mineral spirits, alcohols, acetates, and aliphatic solvents. Oil-based paints, primer, and stains are regulated due to their flammability and the presence of regulated solvents. They also contain regulated metals including cadmium, chromium, lead, silver, barium, mercury, arsenic, and selenium.

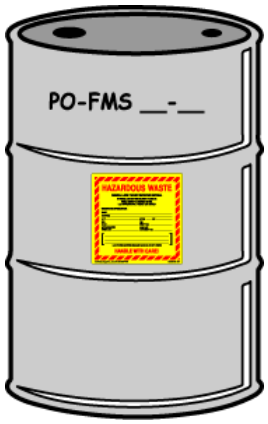
Do not mix different types of paints or solvents unless directed to do so by the HWM. If the manufacturer's label is missing or illegible, label the container with a description of its contents. If unsure of its contents, the product should be assumed to be solvent-based.

Store containers of paint waste in a well-ventilated area. Never dispose of paint or paint waste by pouring it on the ground or into a drain. Do not dry out oil-based paint containers, or spread out on cardboard to dry, etc. Never let paint containers sit open to evaporate – the fumes are toxic.

CHARACTERIZATION

Waste oil-based paints, primers, and stains are **hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES



1. Select an approved container. Use a closed-head UN/NA rated 55-gallon or smaller metal drum (open top drum may be used if paint is semi-solid consistency) for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Paint – Related Waste (Liquid)***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.
5. Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

PAINT - RELATED WASTE (SOLID)

POSSIBLE CONTAMINANTS OF CONCERN

Paint waste solids may contain residue such as solvents, heavy metals, etc., that are used in the manufacturing of the paint used. This waste stream may include: Barrier Paper, Masking Tape, Paint Booth Filters, Gloves, Stir Sticks, Mixing Implements, Sandpaper, and Paint Chips/Dust.

CHARACTERIZATION

This WPS is for used for paint waste solids determined by analysis to be **non-hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.

PCB (POLYCHLORINATED BIPHENYLS)

POSSIBLE CONTAMINANTS OF CONCERN

PCBs have been demonstrated to cause cancer, as well as a variety of other adverse health effects on the immune system, reproductive system, nervous system, and endocrine system. Although no longer commercially produced in the United States, PCBs may be present in products and materials produced before the 1979 PCB ban. Products that may contain PCBs include:

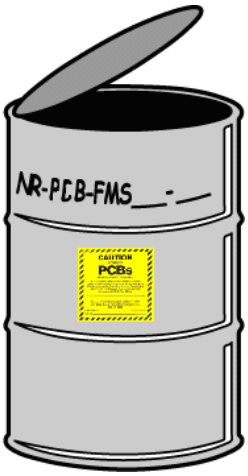
- Transformers and capacitors
- Oil used in motors and hydraulic systems
- Old electrical devices or appliances containing PCB capacitors
- Oil based paint
- Fluorescent light ballasts

CHARACTERIZATION

Look at item for label or wording for “no” PCB’s, if found then item does not fit this protocol. PCB oil and PCB containing equipment containing 50ppm or greater are managed as Non-RCRA Regulated Waste.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container (OR asbestos bag). Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Unit level - UECO completes unit hazardous material turn-in form and copies SDS to accompany material for turn-in to supporting shop. UECO should review material to ensure that label is legible and add any additional information related to material (i.e. used, contaminated, expired shelf-life, no longer used at location, excess, etc.)
2. Maintenance shop staff receives excess and obsolete materials and turn-in paperwork from unit personnel.
3. Maintenance Shop UECO evaluates material for disposition and handles material accordingly. This material may need to be sampled to determine disposition. Any questions or requests for sampling should be directed to the Hazardous Waste Manager at ext. 7394.

PESTICIDES

POSSIBLE CONTAMINANTS OF CONCERN

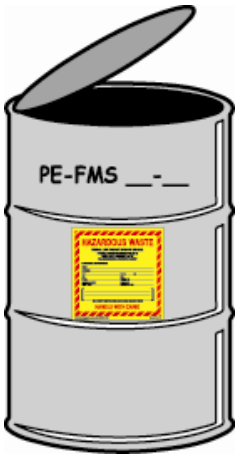
Pesticide ingredients vary. See the SDS.

CHARACTERIZATION

Accumulate aerosol cans of pesticides and turn in as **hazardous waste**. Do not vent and puncture the cans. Upon discovery of other unauthorized items such as Round-Up, call the Pest management Coordinator at X7079.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Pesticides***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the material will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Material Turn-In Form***. Coordinate the physical transfer of material with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

Rags and patches, hazardous

NOTE: Camp Ravenna, Camp Perry, and Camp Sherman have local policies and procedures for the collection, handling, storage, and turn-in of hazardous rags and patches. Consult with Range Control.

POSSIBLE CONTAMINANTS OF CONCERN

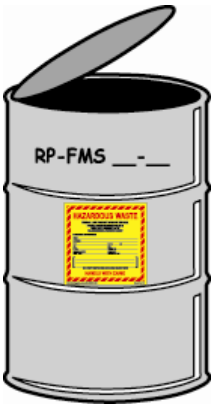
Rags and patches may be contaminated with any number of chemicals used in the shop. The most likely contaminants are POLs, adhesives, and solvents that may be flammable and/or toxic.

CHARACTERIZATION

This WPS is for used rags and patches determined by analysis to be **hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Rags and Patches***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



5. Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a Hazardous Waste Turn-In Form. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

Air drying solvent-contaminated rags is not a legal method to remove free liquids. Disposal of solvents by pouring them into containers of used rags, or mixing any other hazardous wastes also is not legal.

Ensure contaminated rags from more than one process with incompatible solvents are not stored in the same container. On-site documentation must be available for review showing the rags are sent to a suitable laundry (e.g., invoices or contractual agreement).

REFRIGERANTS

POSSIBLE CONTAMINANTS OF CONCERN

Refrigerants are also known as Ozone Depleting Chemicals (ODCs). There are two types of ODCs as defined by the Clean Air Act administered by the US Environmental Protection Agency: Class I and Class II. Class I ODCs are no longer produced and were phased out for use at OHARNG locations. ODCs release to the atmosphere causes the destruction of the ozone layer. Although no longer commercially produced in the United States, ODCs may be present in products and materials. Products that may contain ODCs include:

- Fire suppression systems
- Large building chillers and fixed air-conditioning systems
- Air conditioning in Non-Tactical and Non-GSA vehicles
- Walk-in refrigerators and freezers

CHARACTERIZATION

Only certified technicians should handle servicing of refrigerant containing equipment and refrigerant chemicals. Only refrigerant recovery equipment registered with USEPA can be used when collecting refrigerants.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Only certified technicians are to handle refrigerants. Select an approved collection container, government issued containers can be requisitioned from DLA, see turn-in instructions below for more info. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***type of refrigerant***. Two toned containers or other markings should designate the container as holding recovered material.
3. Secure refrigerant container in cage or other hazardous material storage area. Treat as compressed gas cylinder.

TURN-IN PROCEDURES

1. Unit level – UECO contacts supporting maintenance shop for immediate turn-in or servicing of refrigerant containing equipment.
2. Maintenance shop staff receives refrigerant containing equipment and if certified technicians on staff with USEPA registered equipment, can service Motor Vehicle Air Conditioning (MVAC) or MVAC-like. All other types of equipment need to be job ordered to the CSMS.
3. Maintenance shop certified technician: excess material turn-in should review DLA Ozone Depleting Substances (ODS) Reserve website for up-to-date procedures for turn-in of ODCs at: http://www.dscr.dla.mil/userweb/AviationEngineering/OZONE/index.htm Maintenance Shop evaluates all material for disposition and handles material accordingly. Contact USPFO or staff that can certify loads to properly ship to DLA ODS Reserve. Contact Hazardous Waste Manager with turn-in details. Any questions or requests for sampling should be directed to the Hazardous Waste Manager at ext. 7394.

RESPIRATOR CARTRIDGES

(M9, M17, M24, M25, M40, M40A1, M48A1)

POSSIBLE CONTAMINANTS OF CONCERN

M9/M17/M24/M25 mask filters that contain ASC Whetlerite charcoal contain heavy metal chemical compounds. The contaminant of concern is Chromium VI.

M40/M40A1/M42/M48A1 mask filters that contain ASC Whetlerite charcoal contain heavy metal chemical compounds. The contaminants of concern are Chromium VI and Silver.

CHARACTERIZATION

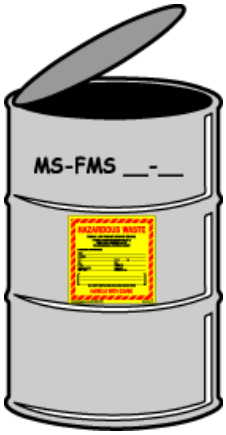
If filter elements are not in the masks or not in the sealed foil package then dispose of filters NSN 4240-00-165-5026, as hazardous waste-chromium (D007). If filter elements are in the M17 Series CB Protective Masks or are in the foil packages turn in filters, as is, for sale.

The M11 canister for the M9 gas mask has ASC Whetlerized charcoal and has NSN 4240-00-112-9365. The M10A1 canister is used with the M24 and M25 masks. ASC Whetlerized charcoal has NSN 4240-00-127-7186.

If these masks are equipped with the C2 (black body) ASC Whetlerized charcoal filled canister NSN 4240-01-119-2315 or NSN 4240-21-871-7842, remove the C2 canister and manage as a **hazardous waste**-chromium (D007). For those M40/M42 series masks containing the C2A1 (green body) ASZM TEDA charcoal filled canister, NSN 4240-01-361-1319, remove the C2A1 canister and manage as **non-hazardous waste**. Manage the M48A1 ASZM TEDA canister, NSN 4240-01-363-1311, with the C2A1 canisters.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Respirator Cartridges***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

SOLVENT CONTAMINATED SOLIDS

POSSIBLE CONTAMINANTS OF CONCERN

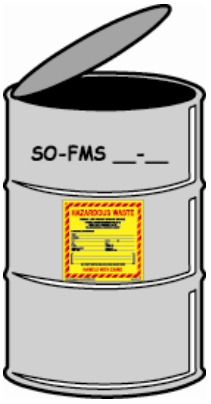
Solids may be contaminated with any number of chemicals used in the shop. The most likely contaminants are POLs, adhesives, and solvents that may be flammable and/or toxic.

CHARACTERIZATION

This WPS is for used for solvent contaminated solids determined by analysis to be **hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Solvent Contaminated Solids***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a **Hazardous Waste Turn-In Form**. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

Air drying solvent-contaminated solids is not a legal method to remove free liquids. Disposal of solvents by pouring them into containers of used rags, or mixing any other hazardous wastes also is not legal.

Solids must be stored in non-leaking, closed, fire-resistant containers and kept away from sources of ignition. Containers must be in good condition and sufficient to prevent the release of contaminants to the air.

USED BRAKE FLUID, SILICONE

POSSIBLE CONTAMINANTS OF CONCERN

Used silicone brake fluid contains heavy metals such as chromium, cadmium and lead and is considered to be hazardous waste.

CHARACTERIZATION

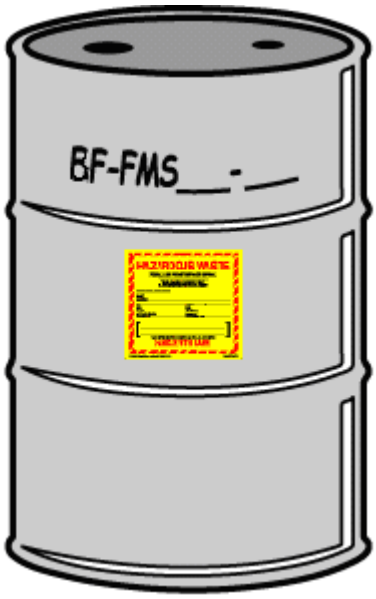
DO NOT place silicone brake fluid or other silicone based materials in the used oil container. Addition of hazardous waste to used oil will disrupt the current recycling program for used oil eliminating the material for reuse. Silicone material will settle to the bottom of the used oil tank and also cause gauge failure due to sludge buildup and require maintenance.

In addition, metal chips (unless they are recycled as scrap metal), absorbents, and floor sweepings that come in contact with used silicone brake fluids must be managed as hazardous waste.

Test results on file confirm that this material meets the definition of hazardous waste for cadmium.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use a closed-head UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Containers must also be labeled with a hazardous waste label, with Waste Code D006. Complete the rest of the hazardous label with facility name, address and EPA ID #. Add accumulation start date when drum is full or waste will no longer be added.
3. Make sure container is in a proper accumulation area.
4. Put material in the container and complete container log for each container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Unit level – UECO completes unit hazardous material turn-in form and copies SDS to accompany material for turn-in to supporting shop. UECO should review material to ensure that label is legible and add any additional information related to material (i.e. used, contaminated, expired shelf-life, no longer used at location, excess, etc.)
2. Maintenance shop staff receives excess and obsolete materials and turn-in paperwork from unit personnel.
3. Maintenance Shop UECO evaluates material for disposition and handles material accordingly. Any questions should be directed to the Hazardous Waste Manager at ext. 7394.

USED OIL

Motor Oil, Differential Fluid, Transmission Fluid, Hydraulic Oil, Gear Oil, and Lubricating Oil

POSSIBLE CONTAMINANTS OF CONCERN

Used oil potentially contains traces of metals such as chromium, cadmium and lead. Chromium, cadmium, and lead are hazardous metals.

CHARACTERIZATION

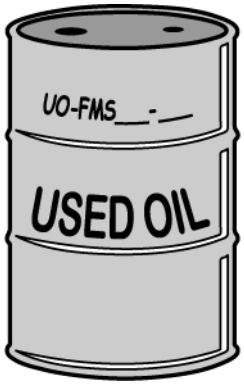
Used petroleum-based and synthetic oils (but not vegetable- or animal-based oils) can be recycled. Petroleum solvents are not considered used oil.

No solvents or other hazardous waste can be mixed with used oil. If hazardous waste has been mixed with oil, the mixture must be managed as hazardous waste. Incidental amounts of fuels such as JP-8 and diesel may be combined with used oil. **DO NOT place MOGAS or silicone brake fluid in the used oil container.**

Metalworking fluids can be managed as used oil unless they contain chlorinated compounds. If the fluids contain chlorine, they are hazardous waste. In addition, metal chips (unless they are recycled as scrap metal), absorbents, and floor sweepings that come in contact with chlorinated fluids must - like the fluids - be managed as hazardous waste.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use a closed-head UN/NA rated 55-gallon or smaller metal drum for accumulation, if your facility does not have a used oil convault or tank. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Containers must also be stenciled or labeled as ***"Used Oil."*** DO NOT label containers as "Waste Oil."
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in/recycling (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up for recycling.

USED OIL FILTERS (NON-TERNE PLATED)

POSSIBLE CONTAMINANTS OF CONCERN

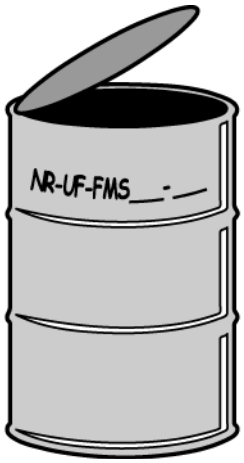
Used oil filters potentially contain traces of metals such as chromium, cadmium and lead. Chromium, cadmium, and lead are hazardous metals.

CHARACTERIZATION

This WPS is for used oil filters determined by analysis to be **non-hazardous waste**.

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Maintenance facilities without crushers will take containerized filters to the CSMS to crush and recycle as scrap metal. Maintenance facilities with crushers will hot drain filters for 24 hours, crush, containerize and recycle as scrap metal. Do NOT take loose, bagged or individual crushed filters to USP&FO Warehouse for recycling – filters must be containerized to prevent residual free-flowing liquids.
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.

USED OIL FILTERS (TERNE PLATED)

POSSIBLE CONTAMINANTS OF CONCERN

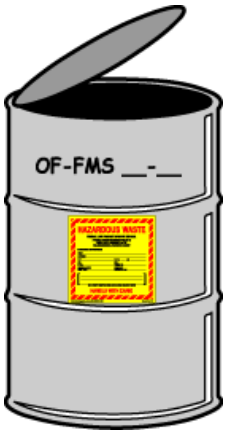
Used oil filters potentially contain traces of metals such as chromium, cadmium and lead. Chromium, cadmium, and lead are hazardous metals. To determine if your oil filter is terne-plated, review the SDS for terne plating or lead alloy or call (800) 99-FILTER.

CHARACTERIZATION

Terne-plated filters contain lead and are therefore **hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Terne-Plated Used Oil Filters***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Waste Turn-In Form***. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

USED SHOP RAGS, NON-HAZARDOUS

POSSIBLE CONTAMINANTS OF CONCERN

Used shop rags may be contaminated with any number of chemicals used in the shop. The most likely contaminants are POLs, adhesives, and solvents that may be flammable and/or toxic.

CHARACTERIZATION

This WPS is for used for rags determined by analysis to be **non- hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
2. Ensure the container is properly marked. Close and seal container.
3. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
4. FMS's coordinate pickups directly with the contractor.

ZEP FILTERS, HAZARDOUS

POSSIBLE CONTAMINANTS OF CONCERN

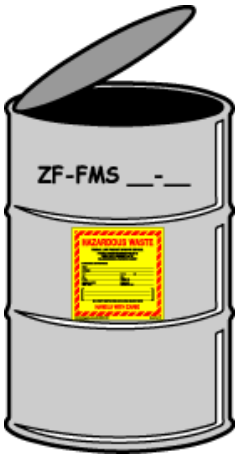
Possible contaminants in these systems include used oil from vehicle parts, metal parts coatings, and paint residues that are removed in the parts washers.

CHARACTERIZATION

This waste protocol sheet is for used for parts washer (Zep) filters determined by analysis to be **hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right. Maintain a Container Log in the vicinity of the container.
3. Attach a Hazardous Waste label to the side of the container. Using an indelible marker, on the contents line, write: ***Zep Filters***.
4. Make sure container is in a proper accumulation area. If the container is located in a GAA, fill in the ASD. If located in an SAA, leave blank.



Put waste in the container. Wear proper PPE listed on the SDS. Document waste added on the Container Log. Ensure lid is placed back on the container. For SAAs, once the quantity reaches 55 gallons, mark the ASD on the label and move the container to the GAA within 72 hours.

TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities). If SQG, make these arrangements early enough so that the waste will be taken offsite within 180 days of the ASD (one year for armories/units not co-located with an FMS).
2. Ensure the container is properly marked/labeled. Close and seal container.
3. Armories co-located with supporting FMS, complete a ***Hazardous Waste Turn-In Form***. Coordinate the physical transfer of waste with the FMS.
4. Other armories and maintenance facilities, coordinate with NGOH-IMR-ENV for contractor pick-up.
5. Mark the date when the waste was picked up on your calendar and ensure you receive the return manifest within 35 days. Keep the original and provide NGOH-IMR-ENV with a copy.

ZEP FILTERS, NON-HAZARDOUS

POSSIBLE CONTAMINANTS OF CONCERN

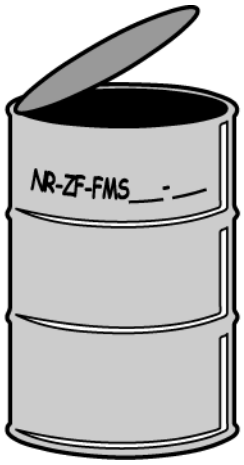
Possible contaminants in these systems include used oil from vehicle parts, metal parts coatings, and paint residues that are removed in the parts washers.

CHARACTERIZATION

This waste protocol sheet is for used for parts washer (Zep) filters determined by analysis to be **non-hazardous waste.**

CONTAINER MARKING/LABELING AND HANDLING PROCEDURES

1. Select an approved container. Use an open top UN/NA rated 55-gallon or smaller metal drum for accumulation. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
2. Mark the container with the ***waste designator-facility ID-container no. code*** as seen on the right.
3. Make sure container is in a proper accumulation area.
4. Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.



TURN-IN PROCEDURES

1. Call your supporting FMS to arrange turn-in (Armories). Call NGOH-IMR-ENV to arrange turn-in (maintenance facilities).
1. Ensure the container is properly marked. Close and seal container.
2. Armories co-located with supporting FMS, coordinate the physical transfer of waste with the FMS.
3. Maintenance facilities and armories, coordinate with NGOH-IMR-ENV for disposition.

Appendix C

Forms and Checklists

See the *Hazardous Materials and Waste Home Page*