

**UNITED STATES ARMY FIRES CENTER OF EXCELLENCE
AND FORT SILL**

HAZARDOUS MATERIAL AND WASTE MANAGEMENT PLAN

Managing Hazardous Material
Managing Hazardous Waste
Turning in Hazardous Waste
Turning in Hazardous Material
Training and Inspections
Spill Response



Fort Sill, Oklahoma

September 2014

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Chapter 1. Introduction

This Hazardous Material and Waste Management Plan prescribes responsibilities, policies, and procedures for managing hazardous materials and wastes at the U.S. Army Fires Center of Excellence and Fort Sill (USAFCOEFS) required by Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*. This Plan is written to ensure Fort Sill's compliance with applicable federal, state, and local laws and regulations.

Purpose and Scope

This Plan documents the Fort Sill hazardous materials and waste management program. It applies to the following:

- All organizations and activities located on Fort Sill
- Any outside organization or activity training at Fort Sill

Reviews and Revisions

The Fort Sill Environmental Quality Division (EQD) will review this Plan at least once every two years. All Environmental Officers (EOs), as well as any other Fort Sill personnel directly involved in hazardous material (HM) or hazardous waste (HW) management, are encouraged to provide comments and input to this Plan. To do so, complete DA Form 2028 located at the end of this chapter and forward to the EQD at the Post Environmental Office.

Applicable Regulations

State Regulations

The Oklahoma Department of Environmental Quality (ODEQ) has obtained primacy from the Environmental Protection Agency (EPA) to enforce solid and hazardous waste management standards. These standards are contained in Title 252 of the Oklahoma Administrative Code, Chapter 205, Hazardous Waste Management, and Chapter 515, Solid Waste Management.

Federal Regulations

In order to comply with the Federal Facilities Compliance Act, Fort Sill must manage its waste in accordance with (IAW) the Resource Conservation and Recovery Act (RCRA), as amended by the Hazardous and Solid Waste Amendments (HSWA). Federal waste management regulations are codified in Title 40 of the Code of Federal Regulations (CFR). This Plan provides procedures for complying with the following parts of 40 CFR:

- Part 260 through Part 272 for the regulation of hazardous waste
- Part 273 for the regulation of universal waste
-

- Part 279 for the regulation of used oil Fort Sill must also comply with the following:
- Defense Transportation Regulations which incorporate by reference 49 CFR Parts 170 through 177 regarding hazardous materials transportation
- 29 CFR Part 1910 regarding employee safety

Military Regulations

Fort Sill personnel must comply with AR 200-1, *Environmental Protection and Enhancement*, which contains Army policy for hazardous material and waste management. This Plan provides procedures for complying with these regulations. The following table cross-references the major program requirements of AR 200-1, Chapter 9 (Materials Management) and Chapter 10 (Waste Management) with this Plan.

Table 1-1. Major Program Requirements of AR 200-1

AR 200-1 Reference	Major Program Requirement	Plan Reference
9-1 d	HM Management Program for identifying, storing, and transporting hazardous materials	Chapters 2, 3, and 4
	<ul style="list-style-type: none"> • HM Inventory 	Chapter 2
	<ul style="list-style-type: none"> • Transporting HM 	Chapter 4
	<ul style="list-style-type: none"> • Designing Storage for HM 	Chapter 2
	<ul style="list-style-type: none"> • Disposing of HM 	Chapters 3 and 4
	<ul style="list-style-type: none"> • Managing Excess HM 	Chapters 2 and 4
	<ul style="list-style-type: none"> • HM Not Owned by the Army 	Chapter 2
	<ul style="list-style-type: none"> • Best Management Practices 	Throughout this Plan
	<ul style="list-style-type: none"> • Accounting for Credit Card Purchases 	Chapter 2
	<ul style="list-style-type: none"> • Cradle-to-Grave Tracking 	Chapters 3 and 4
9-2 b(4)	Asbestos Management	
9-2 c(4)	PCB Management	Chapter 3 (see DPW)
9-2 d(4)	Lead-based Paint Management	
10-1 d	Hazardous Waste Regulatory Compliance	Chapters 3, 4, and 5
10-1 d(1)	RCRA Compliance Waste Streams	Chapter 3, App. A
10-1 d(2)	Hazardous Waste Training	Chapter 5
10-1 d(3)	Develop and Implement Hazardous Waste Management Plan to include the identification, storage, and transporting of HW; training of personnel; tracking manifests; and maintaining required records.	
	<ul style="list-style-type: none"> • RCRA Compliance Waste Streams 	Chapter 3, App. A
	<ul style="list-style-type: none"> • Waste Accumulation, Storage, and Transfer Facilities 	Chapters 3 and 4
	<ul style="list-style-type: none"> • Hazardous Waste Inventory 	Chapter 3
	<ul style="list-style-type: none"> • Transporting Hazardous Waste 	Chapter 4
	<ul style="list-style-type: none"> • Disposing of Hazardous Waste 	Chapters 3 and 4
10-1 d(4)	Maintain Appropriate Hazardous Waste Records	
10-1 d(5)	Reporting Requirements	
10-1 d (6)(7)(8)(9)	Local Procedures and Responsibilities	Chapter 1
	Minimizing Waste by Preventing Pollution	Throughout
5-4	Storage, Handling, Application, and Disposal of Pesticides	Chapters 3 and 4, Page A-30
5-4c	Disposing of Samples or Waste Pesticides and Pesticide Containers	Chapters 3 and 4, Page A-30

Responsibilities

The following responsibilities are organized according to the USAFCOEFS.

Environmental Quality Division (EQD)

The EQD will:

- Coordinate, inspect, or manage all aspects of installation actions relative to environmental regulations.
- Serve as the single point of contact for federal, state, and local agencies with regard to environmental permits, interpretation of regulatory requirements, and coordination and resolution of noncompliance issues or findings.
- Monitor installation compliance with federal, state, and local environmental requirements, including activities of tenants and sub-installations, and recommend to the Installation Commander necessary or advisable changes in policies to improve program management.
- Prepare all required status and compliance reports relative to solid and hazardous waste management, in accordance with applicable federal, state, and local regulatory requirements.
- Advise all waste generating activities of federal, state, local, and Army requirements for managing solid and hazardous waste, including requirements for permits, reporting, and recordkeeping to ensure compliance.
- Advise the Installation Commander on the most cost-effective and efficient means of waste storage, treatment, and disposal, to include the sighting of new waste management facilities.
- Provide technical assistance and guidance to hazardous waste generating activities, tenants, and operators of RCRA hazardous waste treatment, storage and disposal units.
- Ensure hazardous wastes are properly identified, segregated, and weighed pursuant to federal, state, and Army requirements prior to release for transportation or disposal.
- Coordinate the analysis of waste to determine if it is hazardous and provide copies of waste analysis prior to release for off-post transportation or release to the Defense Logistics Agency Disposition Services (DLADS).
- Coordinate an installation-wide inventory of all hazardous waste generated and identify the waste generating activities annually.
- Establish, monitor, and execute programs in waste management, including waste minimization, resource recovery, reutilization, and recycling.
 - Immediately advise the Installation Commander of the receipt of enforcement notices of violation, consent orders, or compliance agreements.
 - Exercise staff responsibility for directing and coordinating the Hazardous Waste Management Program.

Medical Department Activity (MEDDAC)

The MEDDAC will:

- Provide for the disposal of non-RCRA regulated medical, dental, and veterinary supplies and infectious waste in accordance with AR 40-5, federal and state laws and regulations, and this plan.
- Provide the Installation Commander with the solid waste and hazardous waste management implications of new and revised MEDDAC practices for review and concurrence.
 - Prepare and maintain a management plan for the disposal of medical wastes.
 - Provide work place guidance on daily use of personal protective equipment, including respirators required for personnel involved in surveys, spill response, confined space entry, and abatement actions.
 - Perform physical examinations before placement, annually during employment, and at the termination of employment for personnel working with asbestos, lead-based paint, or other hazardous materials, as required by TB MED 513.
 - Maintain health records of all personnel and former employees involved in working with asbestos, lead-based paint, and hazardous materials as required by AR 40-5 and AR 40-66.
 - Program and budget adequate resources to accomplish medical support responsibilities for the installation and supported activities.
 - Provide expertise in compliance matters associated with Occupational Safety and Health Administration (OSHA) health-related federal, state, and local requirements.
 - Exercise staff responsibility for administrative monitoring and medical surveillance of all personnel working on Fort Sill for hazardous and toxic occupational health hazards.

Preventive Medicine Activity

The Preventive Medicine Activity will:

- Conduct field investigations and special studies to support environmental management programs and recommend measures required for protection of health.
- Provide technical assistance in the identification of wastes and guidance on the health aspects of the management and disposal of hazardous and toxic materials.
- Forward all requests for Environmental Health and Engineering Services support from the U.S. Army Public Health Command (USAPHC) through the Chief, Preventive Medicine Activity, MEDDAC, to the Director of Health Services. The primary responsibilities for medical surveillance of pollution sources are assigned to the Director of Health Services with cooperation and support from the Safety Office and the EQD.

Public Affairs Office (PAO)

The PAO will:

- Ensure that the public is informed of Fort Sill's accomplishments in environmental protection, enhancement, and management.
- Develop public information plans to stimulate active support of the environmental program throughout commands down to the individual soldier and civilian employee.
- Coordinate with the EQD to release appropriate information concerning environmental matters.
- Coordinate and conduct public involvement activities (e.g., public meetings and public hearings) that satisfy the requirements of environmental permits and National Environmental Policy Act (NEPA) activities. Assist in the preparation of public involvement activities sponsored by other agencies.

Safety Office

The Safety Office will:

Assist EQD, MEDDAC, and other activities on Fort Sill in applying safety procedures and standards.

Logistics Readiness Center (LRC)

The LRC will:

- Monitor the use of hazardous materials to achieve progress in meeting federal and Army hazardous waste minimization goals and requirements and provide quarterly progress reports to EQD.
- Provide a semiannual report to the Installation Commander recommending opportunities for, and progress in achieving, a reduction in the use and toxicity of hazardous materials, following the concurrence of EQD.
 - Manage and dispose of radioactive materials.
 - Advise installation units and activities on proper requirements for packaging, labeling, and shipping of solid and hazardous material.
 - Monitor supply items to identify those that may be categorized as hazardous and/or toxic, and report them to EQD. LRC will monitor the supply, usage, and disposal of radioactive materials other than medical supplies, and assist MEDDAC with disposal of excess or waste radioactive materials.

Other Staff Directorates, Activities, and Subordinate Commands

Other staff directorates, activities, and subordinate commands will:

- Integrate environmental protection, conservation, and preservation into the planning and execution of the Fort Sill mission to the fullest extent feasible.
- Establish an organizational structure to plan, execute, and inspect established environmental and conservation programs within their area of responsibility.
- Appoint in writing an Environmental Officer and alternate, as needed, to assure compliance with directives.
- Provide required input to the Installation Status Report, Part II (Environment).
- Be fully aware of and comply with all applicable federal, state, and local laws and regulations, both substantive and procedural, for generating, treating, storing, disposing of, and transporting solid and hazardous waste, including the terms and conditions of state and federal solid and hazardous waste permits and reporting requirements.
- Ensure that program and budget requests identify resource requirements to manage solid and hazardous waste programs, including waste minimization, and to achieve and maintain compliance.
- Encourage the use of joint or regional resource recovery with federal and nonfederal agencies (including commercial waste treatment) when advantageous, cost-effective, or more efficient to Fort Sill.
- Minimize the generation and land disposal of solid wastes and hazardous wastes by promoting waste minimization.
- Generate, transport, store, and dispose of wastes such as pesticides; hazardous chemical stocks; medical, dental and veterinary supplies; radioactive materials; propellant; explosive and pyrotechnic materials; explosive ordnance; or chemical warfare agents in a manner that protects public health and the environment.

Environmental Officer (EO)

The EO will:

- Implement the procedures established by this Plan.
- Conduct inspections (or ensure that inspections are conducted) of waste accumulation areas.
- Implement hazardous waste spill procedures when necessary.
- Function as a liaison on all environmental issues between the unit and the EQD.
- Notify the EQD of changes to operations, including process changes, new waste streams, materials used, and materials stored.
- Ensure that appropriate unit personnel receive the proper level of waste management training.
- Ensure that unit regulated waste is turned in to EQD in a timely manner, to include wastes generated during training exercises.

Table 1-2 contains a list of the unit/site required functions, where the information concerning these functions is located in this plan, and the frequency in which these activities must take place.

Table 1-2. EO Compliance Table

Function	Information Location	Frequency			
		Weekly	Monthly	Quarterly	Annually
Hazardous Materials					
Inventory	Chapter 2			X and whenever new supplies are obtained and old supplies depleted	
Shelf Life Update	Chapter 2			X	
Inspection	Chapter 2	X			
Hazardous Waste					
Accumulation Point Inspection	Chapter 3	X			
Training					
Hazardous Communication	Chapter 5				X*
Hazardous Waste	Chapter 5				X*
HAZMAT (Dept. of Transportation [DOT]) Personnel	Chapter 5				Biennial*
Environmental Officer	Chapter 5				X*

* Initial training also required upon assignment.

Forms for Submitting Changes to This Plan

This section includes DA Form 2028 to be completed to submit changes to this plan.

DA Form 2028

RECOMMENDED CHANGES TO PUBLICATIONS AND BLANK FORMS <small>For use of this form, see AR 25-30; the proponent agency is OAASA</small>						<small>Use Part II (reverse) for Repair Parts and Special Tool Lists (RPSTL) and Supply Catalogs/Supply Manuals (SC/SM).</small>	<small>DATE</small>
<small>TO: (Forward to proponent of publication or form) (Include ZIP Code)</small>						<small>FROM: (Activity and location) (Include ZIP Code)</small>	
PART I - ALL PUBLICATIONS (EXCEPT RPSTL AND SC/SM) AND BLANK FORMS							
<small>PUBLICATION/FORM NUMBER</small>						<small>DATE</small>	<small>TITLE</small>
<small>ITEM</small>	<small>PAGE</small>	<small>PARA-GRAPH</small>	<small>LINE</small>	<small>FIGURE NO.</small>	<small>TABLE</small>	<small>RECOMMENDED CHANGES AND REASON</small>	
<small>* Reference to line numbers within the paragraph or subparagraph.</small>							
<small>TYPED NAME, GRADE OR TITLE</small>						<small>TELEPHONE EXCHANGE/AUTOVON, PLUS EXTENSION</small>	
						<small>SIGNATURE</small>	

DA FORM 2028, FEB 74

REPLACES DA FORM 2028, 1 DEC 68, WHICH WILL BE USED.

USAPA V3.01

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Chapter 2: Managing Hazardous Materials

Nearly all facilities on Fort Sill use HMs, which are essentially those items requiring a Safety Data Sheet (SDS) (formerly known as Material Safety Data Sheet or MSDS). The EO for the facility is responsible for properly maintaining HM to minimize safety hazards, prevent spills, and reduce hazardous waste generation. This chapter provides detailed guidance for managing HM. It addresses the following topics in the order one should follow when setting up an HM program for the first time:

- Identifying unwanted or unserviceable HM
- Obtaining and cataloging SDSs for each HM
- Determining HM compatibility
- Maintaining and extending HM shelf life
- Selecting HM storage units (includes Storing Compressed Gases)
- Stocking HM storage locations
- Conducting HM inventories

Follow the procedures outlined in this chapter as a minimum requirement for hazardous materials management. While each of the steps may not be required by regulation, they comprise a system that allows the user to prevent and/or reduce waste generation (i.e., pollution prevention), and ensure the safety of facility personnel working with HM.

Identifying Unwanted and Unserviceable HM

Removing unwanted and unserviceable HM from facilities is key to minimizing safety hazards, preventing spills, and reducing/eliminating hazardous waste generation. Approximately 60% of the hazardous waste generated by the DoD comes from unused HM. To identify and remove unwanted and unserviceable HM, complete the following steps:

1. Walk around the entire facility and check closets, wall lockers, storage rooms, etc., for HM. Collect containers that are:
 - Unwanted (excess) or unserviceable HM
 - Unlabeled or unidentifiable material that may be hazardous
 - Damaged, leaking, or subject to leaking
 - Type I shelf-life items that have expired and cannot be renewed
 - Type II shelf-life items that can no longer be extended
2. Obtain SDSs, as described in the next section, for all the unwanted and unserviceable HM and process them for turn-in IAW Chapter 4.

Obtaining and Cataloging Safety Data Sheets

SDSs provide compatibility information for HMs. They also contain information about the manufacturer, the chemical ingredients, associated hazards, specific handling procedures, and

spill response measures. Each facility must maintain a master binder that contains SDSs for all the HM being stored at the facility. This section explains how to obtain and catalog required SDSs.

1. Obtain an SDS for each HM at the facility. SDSs can be obtained from the Hazardous Materials Information Resource System (HMIRS). You will first need to establish an account on HMIRS. Access HMIRS at

<http://www.logisticsinformationservice.dla.mil/hmirs/default.aspx>; click System Access; click on Register for HMIRS. SDSs can also be obtained by accessing:

<http://www.msdssearch.com/>. If the SDS is not available through HMIRS, request assistance from the EQD, or the manufacturer. The SDS must be specific to the product's National Stock Number (NSN) and CAGE number (manufacturer's code). These numbers are printed on the SDS and on the HM container.

2. Create a master binder with all SDSs and centrally locate it 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.

3. Create an index in the front of the binder(s) listing the SDSs. Place all SDSs in the binder in an order such that they can be easily found. A preferred method for managing SDSs is to assign a unique number to each SDS and write the number on every container of that HM. This step allows an SDS to be placed in a binder in sequential order, making it easier for employees to find and easier to insert new SDSs.

EXAMPLE: There are five HMs in your facility, and you have ten 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. For the next HM, assign the number 3, and so on. Place the SDSs in the binder in numerical order (i.e., 1, 2, 3 ...).

Determining Hazardous Material Compatibility

Once the SDSs are obtained for all the HM at the facility, the EO must determine compatibility of the material. Flammables, for instance, must not be stored with oxidizers. The easiest way to determine compatibility is to use SDSs generated from the HMIRS. There are two other ways to determine compatibility, as well. All three are discussed in this section.

Method 1: Determining Compatibility Using HMIRS Generated SDSs

When using the HMIRS SDSs method for determining compatibility, complete the following steps:

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

Figure 2-1. SDS Showing HCC

Phenol	
Physical/Chemical Properties	
HCC: T3	NRC/State LIC No:
Net Prop WT For Ammo:	
Boiling Point:	B.P. Text: 360F,182C
Melt/Freeze Pt:	M.P./F.P Text: 104F,40C
Decomp Temp:	Decomp Text: N/K
Vapor Pres: .36	Vapor Density: 3.24
Volatile Org Content %:	Spec Gravity: 1.071
VOC Pounds/Gallon:	PH: N/K
VOC Grams/Liter:	Viscosity: N/P
Evaporation Rate & N/K	
Reference:	
Solubility in Water: N/K	
Appearance and Odor: WHITE CRYSTALS.	
Percent Volatiles by Volume: N/K	Corrosion Rate: N/K
Reactivity Data	
Stability Indicator: N/P STRONG OXIDIZING AGENTS, STRONG BASES, STRONG ACIDS.	
Stability Condition To Avoid: MAY DISCOLOR ON EXPOSURE TO LIGHT.	
Materials To Avoid:	
Hazardous Decomposition TOXIC FUMES OF:CO, CO2.	
Products:	
Hazardous Polymerization N/P	
Indicator:	
Conditions To Avoid NONE SPECIFIED BY MANUFACTURER.	
Polymerization:	
Toxicological Information	
Toxicological Information: N/P	
Ecological Information	
Ecological: N/P	
MSDS Transport Information	
Transport Information: N/P	
Regulatory Information	
Sara Title III Information: N/P	

HCC

2. Using the Storage Segregation Matrix in Table 2-1, find the matching HCC located in the far left column.
3. Follow the row across the table and locate the * marking.

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

5. Hazardous materials 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).

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

For example: A facility has an HM with a HCC of F7 (a corrosive alkali that is flammable) and an HM with an HCC of F6 (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."

7. Once compatibility is determined, the EO must store the HM accordingly. Go to "Selecting HM Storage Units" section in this chapter for more guidance.

Table 2-1. 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 & Oxidizer, Inorganic		*									Note D

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
C2	Acid, Corrosive, Organic		*									Note E
C3	Acid, Low Risk							*				Note F
C4	Acid, Corrosive & Oxidizer, Organic		*									Note E
C5	Acid, Corrosive & Oxidizer, Organic		*									Note E
D1	Oxidizer			*								None
D2	Oxidizer & Poison			*								Note G
D3	Oxidizer & Corrosive Acidic			*								Note G
D4	Oxidizer & Corrosive Alkali			*								Note G
E1	Explosive, Military				*							
E2	Explosive, Low Risk							*				Note A
F1	Flammable Liquid DOT PG I, OSHA IA					*						Note J
F2	Flammable Liquid DOT PG II, OSHA IA					*						Note J
F3	Flammable Liquid DOT PG III, OSHA II					*						Note J
F4	Flammable Liquid DOT PG III, OSHA II					*						Note J
F5	Flammable Liquid & Poison					*						Note L
F6	Flammable Liquid & Corrosive, Acidic					*						Note L
F7	Flammable Liquid & Corrosive, Alkali					*						Note L
F8	Flammable Solid				*							Note K

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
G1	Gas, Poison (Nonflammable)						*					Note M
G2	Gas, Flammable						*					Note N
G3	Gas, Nonflammable						*					Note P
G4	Gas, Nonflammable, Oxidizer						*					Note R
G5	Gas, Nonflammable, Corrosive						*					Note S
G6	Gas, Poison, Corrosive (Nonflammable)						*					Note T
G7	Gas, Poison, Oxidizer (Nonflammable)						*					Note U
G8	Gas, Poison, Corrosive (Flammable)						*					Note V
G9	Gas, Poison, Flammable						*					Note W
K1	Infectious Substance										*	Note X
K2	Cytotoxic Drugs										*	Note Y
M1	Magnetized Material							*				None
N1	Not Regulated as Hazardous							*				None
P1	Peroxide, Organic, DOT Regulated								*			None
P2	Peroxide, Organic (Low Risk)								*			None
R1	Reactive Chemical, Flammable									*		Note Z

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
R2	Water Reactive Chemical									*		Note AA
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 BB
T5	Pesticide, Low Risk							*				None
T6	Health Hazard							*				None
T7	Carcinogen (OSHA, NTP, IARC)										*	Note CC
V1	Miscellaneous Hazardous Materials – Class 9							*				None
V2	Aerosol, Nonflammable					*						Note EE
V3	Aerosol, Flammable					*						Note EE
V4	DOT Combustible Liquid, OSHA IIIA					*						None
V5	Hi-Flash Point Liquids, OSHA IIIB							*				None
V6	Petroleum Products							*				None
V7	Environmental Hazard							*				None
Z1	Article Containing Asbestos							*				None

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
Z2	Article Containing Mercury							*				None
Z3	Article Containing Polychlorinated Biphenyls (PCB)							*				None
Z4	Article, Battery, Lead Acid, Non-spillable							*				None
Z5	Article, Battery, Nickel Cadmium, Non-spillable							*				None
Z6	Article, Battery, Lithium									*		Note DD
Z7	Article, Battery, Dry Cell							*				None

DEFINITION OF NOTES

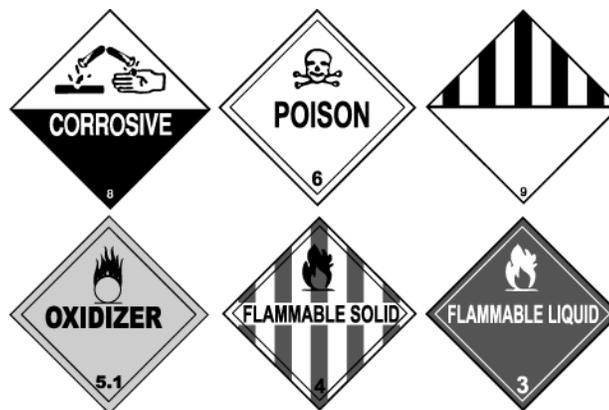
- NOTE A Security Storage – must be well ventilated with limited access.
- NOTE B Inorganic Alkali Storage – store away from acids by at least one 4-foot aisle width and away from organic alkalis by at least one 4-foot aisle width.
- NOTE C Organic Alkali Storage – store away from acids by at least one 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 segregate 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 J Segregate into Flammable Liquid storage separate from flammable solids by at least one 4-foot aisle width.
- NOTE K Segregate into Flammable Solid storage separate from flammable liquids by at least one 4-foot aisle width.
- NOTE L Separate from other flammables and flammables with secondary hazards by at least one 4-foot aisle width.
- NOTE M Further segregate into Poison Gas storage within compressed gas area.
- NOTE N Further segregate into Flammable Gas storage within compressed gas area.
- NOTE P Further segregate into Non-flammable Gas storage within compressed gas area.
- NOTE R Further segregate into Oxidizer Gas within the Non-flammable Gas storage that is within the compressed gas area.
- NOTE S Further segregate into Corrosive Gas within the Non-flammable Gas storage that is within the compressed gas area.

HCC	Hazard Characteristics Group Name	Primary Segregation										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
NOTE T		Further segregate into Corrosive Gas within the Poison Gas storage that is within the compressed gas area.										
NOTE U		Further segregate into Oxidizer Gas within the Poison Gas storage that is within the compressed gas area.										
NOTE V		Further segregate into Corrosive Gas and Poison Gas within the Flammable Gas storage that is within the compressed gas area.										
NOTE W		Further segregate into Flammable Gas within the Poison Gas storage that is within the compressed gas area.										
NOTE X		Further segregate into Biomedical storage within the Poison storage area.										
NOTE Y		Further segregate into Medical Security storage within the Poison storage area.										
NOTE Z		Further segregate into Spontaneously Combustible storage within the Reactive storage area.										
NOTE AA		Should not store in areas protected with water sprinkler system. Fire protection should be non-water based.										
NOTE BB		Store away from food.										
NOTE CC		Further segregate within Poison storage area may be necessary if secondary hazards exist (i.e. flammable, corrosive, etc.).										
NOTE DD		Separate from other products within the Reactive storage area.										
NOTE EE		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

1. If an HMIRS-generated SDS is not available, look for a DOT Hazard Label on the container or the box the HM was shipped in.

Figure 2-2. Sample DOT Labels



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

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

Table 2-2. DOT Labels

DOT Label	Interim HCC	Recommended Storage Area	
		Primary	Secondary
Explosive 1.1	E1	Explosive Magazine	NA
Explosive 1.2	E1	Explosive Magazine	NA
Explosive 1.3	E1	Explosive Magazine	NA
Explosive 1.4	E2	Explosive	Security
Explosive 1.5	E2	Explosive	Security
Explosive 1.6	E2	Explosive	Security
Poison Gas	G1	Compressed Gas	Poison Gas Cylinder
Flammable Gas (Cylinder)	G2	Compressed Gas	Flammable Gas Cylinder
Flammable Gas (Aerosol Non-refillable Tank or Canister)	V3	Flammable	Aerosol Containers
Nonflammable Gas	G3	Compressed Gas	Nonflammable Gas Cylinder
Flammable Liquid	F1-F4	Flammable	Flammable Liquid
Flammable Solid	F8	Flammable	Flammable Solid
Spontaneously Combustible	R1	Reactive	Spontaneously Combustible
Dangerous When Wet	R2	Reactive	Dangerous When Wet, No Water Sprinklers
Oxidizer	D1	Oxidizer	None Required
Organic Peroxide	P1	Peroxide Organic	None Required
Poison	T2	Poison	None Required
Harmful Keep Away From Food	T4	Low Hazard	Away From Food
Infectious Substance	K1	Poison	Biomedical
Radioactive I	A1	Radioactive	Security
Radioactive II	A1	Radioactive	Security
Radioactive III	A1	Radioactive	Security
Corrosive	C1, C2, C4, C5 (Acid)*	Corrosive	Acid
Corrosive	B1, B2, B3 (Alkali)	Corrosive	Alkali
Class 9	V1	Low Hazard	None Required
Magnetized Material	M1	General Purpose	None Required

* If it is not known whether a corrosive is an acid or an alkali, look on the SDS or contact the HMIRS for a technical determination.

Method 3: Determining Compatibility Using OSHA Precautionary Labels

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.

Figure 2-3. 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.

2. If a precautionary label is present, use Table 2-3 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. The statement of hazard won’t always be exact. Choose the one that best describes the hazard.

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

Table 2-3. 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!	CAUSES (SEVERE)** BURNS	C1, C2, C4, C5	Corrosive	Acid
DANGER!	CAUSES (SEVERE)** BURNS	B1, B2	Corrosive	Alkali
DANGER!	EXTREMELY FLAMMABLE	F1	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F2, F3, F4	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F8	Flammable	Flammable Solid
CAUTION!	COMBUSTIBLE	V4	Flammable	None Required

Signal Word	Examples of Statements of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
DANGER!	EXTREMELY FLAMMABLE, CATCHES FIRE IF EXPOSED TO AIR	R1	Reactive	Spontaneously Combustible
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!	CAUSES EYE IRRITATION	T6, C3, B3	Low Hazard*	None Required
WARNING!	CAUSES IRRITATION	T6, C3, B3	Low Hazard*	None Required
WARNING!	MAY CAUSE ALLERGIC SKIN REACTION	T6, T5, C3, B3	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 EQD.

** Enter proper term as appropriate.

Maintaining and Extending Shelf Life

Units can acquire the Shelf Life data on products by contacting LRC, 442-1905.

Setting up Storage Areas

Storage Lockers

Storage lockers are intended for use in the immediate work area. They should be National Fire Protection Association (NFPA) approved and should contain only small quantities of HM that are used in the facility on a daily basis. Lockers should not be “stuffed” with HM such that they become a tinderbox should a fire break out. Store excess containers of HM in storage rooms or buildings away from the work area.

Use the lockers for their intended purpose. For instance, do not store non-flammables, such as oil, in a Flammables Locker. Only store flammables (those with a flashpoint <200°F) in

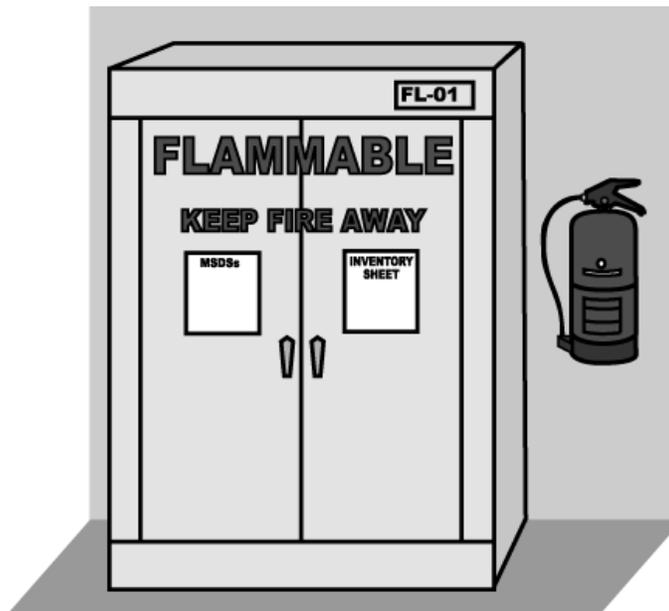
Flammables lockers. Keep lockers clean and orderly, and maintain all structural integrity and hardware, including doors, hinges, and shelves. **Do not remove the door or ventilation bungs**, penetrate the wall, modify ventilation, or otherwise modify the locker. Keep locker doors closed. To set up a locker, complete the following steps:

1. Select a location for the locker:
 - Locate the locker indoors in a well-ventilated area near where the HM will be used, or outdoors under cover.
 - Maintain easy access to the locker; do not block doors or place “stuff” on the locker.
 - Do not place the locker near doors, break rooms, bathrooms, offices, or other occupied non-shop areas.
 - Do not place the locker near floor drains, drainage channels, or areas with high foot or vehicle traffic.

2. Mark and label the locker. Coordinate with the EQD and Fire Department to ensure that the locker is appropriately labeled. Do not place unauthorized signs, labels, stickers, or markings on the locker.

3. Ensure that an appropriately rated fire extinguisher and spill response equipment are located nearby.

NOTE: To make it easier to track HM usage, conduct inventories, and ensure that HM is stored in its proper location, consider assigning a four-character identifier to the locker and mark it on the front, top, right corner (See Figure 2-4). This identifier will consist of one of the three abbreviations used to differentiate locker contents and a two-digit sequential number (e.g., FL 01). The abbreviations are: FL – Flammable Locker, CL – Corrosive Locker, OL – Oxidizer Locker.

Figure 2-4. Flammable Storage Locker

Storage Rooms and Buildings

Storage rooms and buildings (Safe Store®) are intended for storage of backup supplies of HM not kept in storage lockers and large containers of HM (>1 gallon). Locate storage rooms and Safe Store® out and away from the work area. Keep them clean and orderly, and maintain all structural integrity and hardware including doors, hinges, and shelves. Do not remove doors, penetrate walls, modify ventilation, or otherwise modify the room or building, if it has already been approved. To set up a storage room or building, complete the following steps:

1. Have the EQD, Fire Department, or designated representative approve the location chosen.
2. Provide primary and secondary containment as required by 40 CFR Part 264.175(b)(3). Secondary containment should be 10 percent of the total volume of all containers, or the volume of the largest container, whichever is greater.

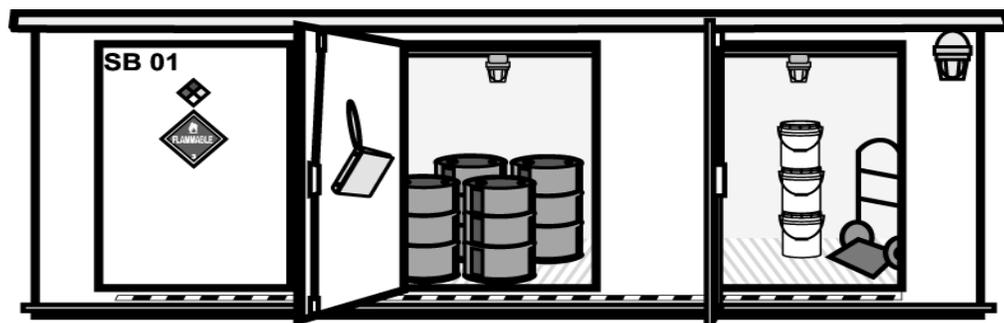
NOTE: For storage rooms, the floor space itself usually provides enough secondary containment. However, ensure that the spill cannot escape the room. For example, equip each door with a sealed threshold, or store HM in pans or tubs on the shelf, making sure the HM is compatible with the container.

3. Ensure that an appropriately rated fire extinguisher/extinguisher system and spill response equipment are located nearby.
4. Mark and label the storage area. Coordinate with the EQD and Fire Department to ensure that the storage area is appropriately labeled. Do not place unauthorized signs, labels, stickers, or markings on the storage area. Placards for storage buildings can be ordered at

<http://www.grainger.com>. Unit Movement (Building 2276, 442-3661) supplies placards for vehicles.

NOTE: To make it easier to track HM usage, conduct inventories, and to ensure HM is stored in its proper location, consider assigning a four-character identifier to the storage area and mark it on each storage area door (See Figure 2-5). This identifier will consist of one of the two abbreviations used to differentiate contents and a two-digit sequential number (SB 01, SB 02 etc.). The abbreviations are: SB – Storage Building, SR – Storage Room

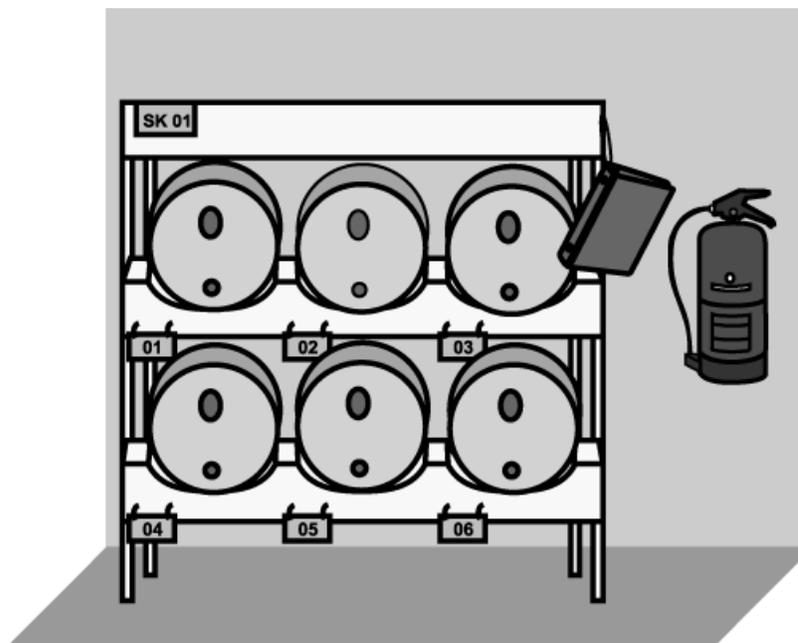
Figure 2-5. Safe Store® Building



Storage Racks

To set up a storage rack, complete the following steps:

1. Have the EQD and Fire Department approve the location chosen.
2. Provide primary and secondary containment. Secondary containment must be 10 percent of the total volume of containers, or the volume of the largest container, whichever is greater. If stored outside, provide enough secondary containment to contain a spill from the largest single container, plus an additional 10 percent. For instance, if the largest container is 55 gallons, provide 55 gallons of secondary containment plus 10%, or 5.5 gallons (a total of 60.5 gallons). Place drip pans under dispensing faucets or valves.
3. Ensure that an appropriately rated fire extinguisher and spill response equipment are located nearby.
4. Mark and label the storage rack. Coordinate with the EQD and Fire Department to ensure that the storage area is appropriately labeled. Do not place unauthorized signs, labels, stickers, or markings on the storage rack.

Figure 2-6. Storage Rack**Storage for Compressed 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.

CAUTION **DO NOT use cylinders as rollers or supports, or for any other unintended purpose.**
DO NOT accept, issue, or use a cylinder unless the contents are identified.

The EQD and Fire Department are 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.

- Ensure that only non-combustible or limited-combustible materials are used for shelves, racks, and floors.
- Ensure that the area is well-ventilated (complete change of air at least six times each hour).
- Separate storage facilities from other buildings by at least 50 feet.
- Store gases that support combustion in different sheds separated by 50 feet.
- Keep dry vegetation and combustible materials at least 15 feet away from storage areas.
- Keep cylinders out of the sun and off the ground (earth).

- Protect storage areas from vehicular traffic.
- Lock storage areas to prevent unauthorized entry.
- Post NO SMOKING signs.
- Do not allow open flames within 50 feet.
- Place hazard identification signs such as FLAMMABLE at all entrances.
- Ensure that all cylinders are properly labeled (do not alter or remove the manufacturer's label from cylinders).
- Store cylinders with the valve protection cap secured.
- Secure cylinders you are using or storing so they do not fall over.
- Store liquefied flammable gas cylinders upright or so the pressure-relief valve directly communicates with the vapor space of the cylinder.
- Ensure that cylinders are not located where they could become part of an electrical circuit.
- Segregate incompatible or combustible materials by at least 20 feet (see Determining Hazardous Material Compatibility in Chapter 2 for more information).
- 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.

Moving Cylinders

If you must move cylinders, note the following precautions:

- Only handle, ship, or store cylinders if they have valve protection caps.
- Close cylinder valves before moving cylinders.
- Do not lift cylinders by the valve protection cap.
- Do not lift cylinders by cranes or mechanical lifts unless fastened in proper containers, racks, and cradles.
- Do not use rope and chain slings or electromagnets to lift cylinders.

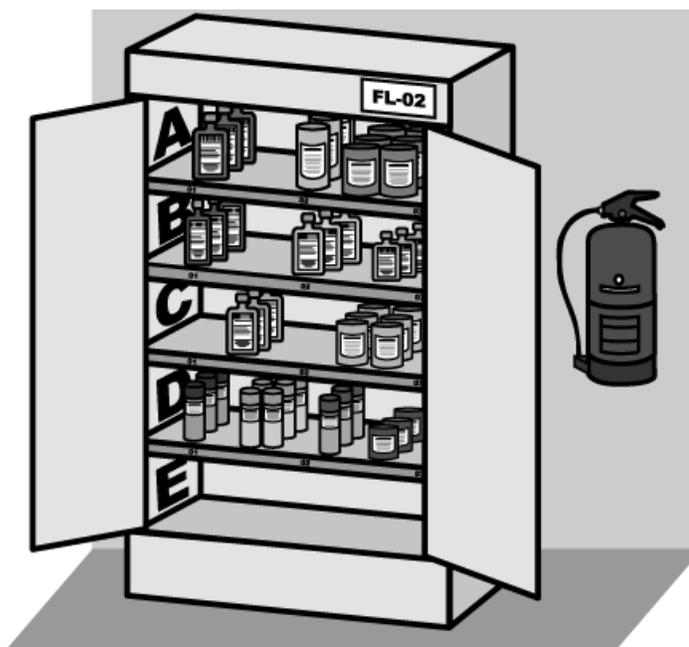
The following items do not require valve protection caps:

- Small cylinders with a capacity of less than 40 pounds
- "Ram-bottom" type cylinders
- Cylinders with less than 625 cubic inches of volumetric capacity, such as medical gases

Stocking an HM Storage Locker

1. Check the compatibility of HM items before placing them in the storage locker.
2. Determine the amount of required shelf space needed for the storage of HM.
3. Ensure that all HM containers have labels and place them in the storage unit in an orderly fashion (see Figure 2-7). Rotate the containers so that items that expire first are in the front. Remember: FIRST in, FIRST out.

Figure 2-7. Locker Set



Maintaining and Tracking Inventory

Once storage units are stocked, perform an initial inventory of all HM in the storage location. Take quarterly inventories thereafter based on the calendar year. It is also mandatory to update inventory whenever new supplies are obtained or old supplies are depleted. This section explains how to conduct the HM inventory.

An example Hazardous Materials Storage Inventory Form is provided at the end of this chapter. Use of this form is not mandatory if the site is using an alternate form that contains the same information. In addition to the inventory requirement, HM storage units should be inspected weekly. Refer to Chapter 5 for further instruction on conducting these inspections and maintaining the inspection logs.

Conducting an HM Inventory

To conduct an inventory, complete the following steps:

1. Check that every container, bottle, can, box, etc., is labeled with the following and replace any labels that are missing or unreadable:

- Product name
- Any warning of physical or health hazards listed on the SDS

2. Check the expiration, inspection, or testing dates on all shelf life HM and manage by calling the LRC.

3. Complete a Quarterly Hazardous Materials Storage Inventory Form for each HM location (Use of this form is not mandatory if you are using an alternate form that contains the same information). An example of this form is on page 2-20. To obtain a computer fillable form, call the EQD.

4. Maintain a copy of the Hazardous Materials Storage Inventory.

NOTE: After each inventory, replace shortages by ordering new items. Purchase only the quantity needed for the specific mission or task. When restocking HM storage units, rotate the containers so that items that expire first are in the front. Remember: **FIRST in, FIRST out**. After restocking remember to **UPDATE** inventory.

Chapter 3. Managing Waste

This chapter describes how to manage wastes generated at Fort Sill facilities, including hazardous waste (HW), universal waste (UW), non-hazardous industrial waste (NHIW), special waste, and general refuse. The following topics are covered:

- Waste Management Made Easy—Waste Protocol Sheets
- Waste Categories
- Waste Accumulation Areas—Satellite Accumulation Points
- Selecting an Accumulation Container
- Adding Waste to the Container
- Using Overpack Drums
- Managing Empty Drums
- Forms and Instructions

Waste Management Made Easy—Waste Protocol Sheets (WPSs)

All Fort Sill facilities generate waste, whether it is residue from the use of products or products themselves that are no longer useful. Learning the intricacies of proper waste management can be very difficult, especially if you don't do it every day. For example, the procedures for handling asbestos 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 at Fort Sill have been developed in the form of Waste Protocol Sheets. The WPSs are easy to follow, laying out step-by-step how to manage each waste stream. These WPSs can be found in Appendix A of this plan.

To use the WPSs, turn to Appendix A, page A-3 to find the “Waste Protocol Sheet Index.” Find the particular waste you are looking for and turn to that sheet. The handling procedures are self-explanatory. 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 EQD for guidance.

NOTE: If you want a WPS that is not in Appendix A, you may request one by completing DA Form 2028, and submitting it to the EQD, or you can call EQD at 442-3266.

Waste Categories

Fort Sill activities generate a wide variety of regulated waste, both hazardous and non-hazardous, that falls into one of the following categories.

Hazardous Waste (HW)

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

- It is ignitable, corrosive, reactive, or toxic as measured by standard test methods or as can be reasonably determined by knowledge of generators.
- It is specifically listed as a hazardous waste in 40 CFR 261, Subpart D.



NOTE: Solid wastes are discarded materials including solids, semi-solids, sludges, liquids, and compressed gases. A discarded material is any material that is abandoned or recycled, or is considered inherently waste-like.

Do not store HW in underground storage tanks.

Universal Waste (UW)

UW is a type of HW category subject to special regulations that are less stringent than normal HW regulations. The EPA has identified the following items as UW: batteries, pesticides, thermostats, mercury-containing devices, and pesticides. **Mercury-containing lamps, non-vehicle lead acid batteries, and lithium batteries, with the exception of lithium-sulfur dioxide and lithium-thionyl chloride, are managed as UW at Fort Sill. The other items are managed as HW.**



Non-Hazardous Industrial Waste (NHIW)

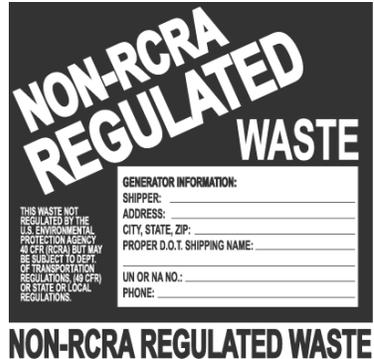
NHIWs, as the name suggests, are certain industrial waste streams not regulated as hazardous but may pose a potential environmental danger if improperly handled. NHIWs are regulated by Oklahoma and include:

- Non-hazardous unusable industrial or chemical products (outdated and off-specification products),
- Non-hazardous solid waste generated by the release of an industrial product to the environment (spill residue), or
- Non-hazardous solid waste generated by a manufacturing or industrial process (ground plastic media), and
- Many NHIWs are recyclable, including used oil, and contaminated fuel.



Special Waste (Non-RCRA Regulated Waste)

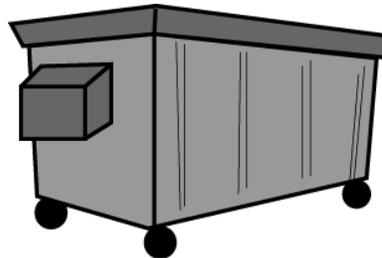
Special wastes are those wastes that are not hazardous but which, because of their nature or volume, require special or additional handling. Special wastes include, but are not limited to, PCBs*, tires, asbestos wastes*, spent herbicide and pesticide containers (from pest shop), sludge, septic tank pumpings, grease trap wastes, dead animals, waste fats and oils, and process residues and wastes.



*Directorate of Public Works (DPW) is responsible for managing PCBs and asbestos.

General Refuse

General refuse are those wastes that pose little or no threat to human health and the environment. It includes wastes such as paper, plastic, food, etc. General refuse may be thrown in the dumpster provided it is free of liquids. By Regulation, disposal of hazardous wastes regulated infectious wastes, radioactive wastes, regulated PCB wastes, or off post waste is prohibited. **If unsure what can be thrown in the dumpster, call EQD.**



Generating and Accumulating Waste

Many activities/facilities at Fort Sill generate regulated hazardous and non-hazardous wastes. These wastes must be accumulated temporarily at the generating facility in accumulation points or turned in through EQD immediately upon generation. The only exception is used oil, which must be placed in “Lube Cubes[®]” located at maintenance shops.

All wastes must be accumulated in approved containers. The WPSs in Appendix A provide specific guidance on container selection and what action to take with each waste stream.

HW Satellite Accumulation Points

Facilities may accumulate HW in a 55-gallon drum, ensuring a 4-inch headspace, (see WPSs for list of HW) or one quart of acutely HW in containers *at or near* the point of generation where wastes initially accumulate. This area is commonly referred to as a HW Satellite Accumulation Point (SAP). An SAP must be under the control of the EO of the process generating the waste. “Under control” means that the person generating the waste controls what waste is put in the container. Once a 4-inch headspace in a 55-gallon drum is reached at an SAP, the generator must mark the date on the container (this becomes the accumulation start date [ASD]) and move it to the Environmental Yard within 72 hours (including weekends and holidays).

NOTE: Because the definition of an SAP is somewhat subjective, the EQD will determine where an SAP may be located. Do not establish SAPs without EQD approval.

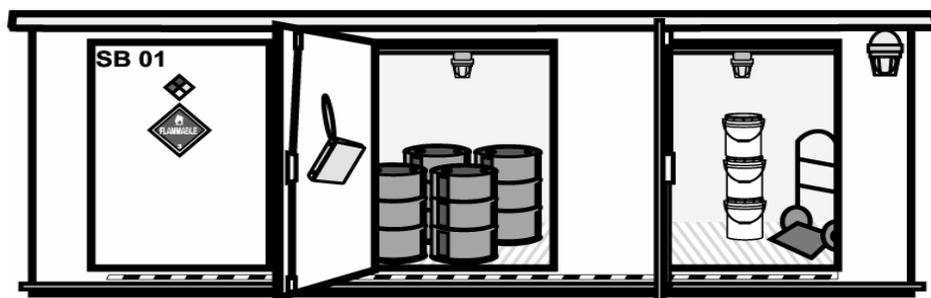
The purpose of an SAP is to allow you some relief from having to take your waste each time to the Environmental Yard. Regulators closely inspect SAPs, so special care should be taken in managing them.

Non-HW Accumulation Points

Non-hazardous waste accumulation points are locations at a facility such as a Safe Store[®] building or other designated area where non-hazardous regulated waste can be temporarily accumulated prior to turn in to EQD. Non-HW accumulation points are for those wastes listed in the WPS that are not characterized hazardous waste. Examples of non-HW include *absorbents, oil and fuel filters, contaminated fuel, GAA grease, used oil, latex paint, and shop rags*. **Always provide secondary containment for liquid wastes.**

Once a 4-inch headspace in a 55-gallon drum is reached at a Non-HW accumulation point, the generator must mark the date on the container and move it to the Environmental Yard within 72 hours (including weekends).

Figure 3-1. Safe Store® Building



Rules for Managing SAPs

1. Each container in an SAP must be marked immediately upon first drop IAW the WPS in Appendix A. If you cannot find a WPS for your waste stream, contact the EQD for guidance.
2. Containers must be provided secondary containment.
3. **Once a 4-inch headspace in a 55-gallon container is reached at an SAP the waste generator must mark the container with the date it became full, (the ASD), and move it to the Environmental Yard within 72 hours (including weekends and holidays). Do not place another drum into operation at the SAP until the first drum is turned in.**
4. All SAPs must be inspected weekly using the Accumulation Point Weekly Inspection Checklist located in Chapter 5.
5. Each container in an SAP must be kept closed except when filling.

Obtaining a Waste Accumulation Container

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

- Open-head drums are commonly used for non-liquid wastes such as rags and filters.
- Closed-head drums (drums with bung holes) are used for liquids.
- Boxes are the best container for fluorescent light tubes.

NOTE: A container is defined as any portable device in which material is stored. Transport a 55-gallon drum, ensuring 4-inch headspace or less.

The WPSs located in Appendix A list the container requirements for each waste stream. If there is not a WPS for your waste, contact the EQD. New containers must be used for turn-ins. If a turn-in comes to EQD in a used drum it will be the unit's responsibility to transfer the waste into a new container. Drums must be clean and in good condition and able to withstand handling, transport, and long-term storage without leaking or rupturing.

Containers must not be creased, rusted, or dented and must also have appropriate sealing lids. Ensure there are no previous markings or labels on the container. Finally, make sure the container is compatible with the waste. All flammable waste must be in metal drums and all corrosive waste must be in poly drums.

Approved containers can be obtained from the Environmental Yard. To get a container, go to the EQD. The EQD will help you select the right kind of container at no cost. No paperwork is needed.

Adding Waste to Containers

These procedures are general instructions that apply to any waste. Some wastes may require special handling. Before adding waste to a container, check the WPS.

1. Ensure that the container is appropriate for the waste you are accumulating and that it is marked properly with content, i.e. Used Fuel, **upon first drop**.
2. Don the proper personal protective equipment (PPE) before handling waste.
3. Open the container and add the waste. Use a funnel to pour liquids into drums. **DO NOT** mix different waste streams in the same container. **Whenever adding flammable liquid to a steel drum, ensure that the drum is properly grounded.**
4. Replace the lid or bungs on the container.
5. When the level of the waste is near the top of the container, **STOP** adding waste. **Maintain headspace in the container as noted below.**

<u>Size of Container</u>	<u>Amount of Headspace</u>
55 gal.	4 inches
30 gal.	3 inches
15 gal.	2 inches
Less than 15 gal.	1 inch

Using Overpack Drums

An overpack drum is a plastic or metal container that can hold a smaller container that is leaking or could potentially leak. If you need to overpack a drum for some reason, call the EQD immediately.

When using an overpack container, mark it IAW the appropriate WPS. Always mark content name on outside of drum, i.e., Used Paint, Used Grease.



Managing Empty Drums

Used drums, whether metal or plastic, that have been emptied of their contents are regulated and must be properly managed. A drum is considered empty when all wastes or materials are removed using common practices such as pouring, pumping, etc., and no more than three percent of residue (approx. 1 inch) remains in the bottom. Empty drums cannot be reused and must be recycled or taken to the landfill.

Metal Drums

Empty used metal drums must be triple-rinsed at the Environmental Yard or at a wash rack on post, crushed, and recycled as scrap metal. EQD has a drum crusher at Building 2511 available to Fort Sill units.

Empty used empty 5 gallon containers are tripled rinsed and taken to the landfill or if metal recycled as scrap metal uncrushed.

Plastic Drums

Empty used plastic drums should be triple-rinse at the EQD yard or an authorized wash rack and take it to the landfill.

Store empty drums on their sides on a pallet or drum rack so they do not accumulate rainwater (causing metal drums to rust). Use stenciling, a paint pen, or labels to clearly mark the word “empty” on the top and side of each drum. Remove all other labels or markings. Remove all residues from the outside of the drums.

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Chapter 4. Turning In HM and Waste

The EQD has made hazardous material and waste turn-in at Fort Sill extremely easy and convenient. Generators need only coordinate with EQD by phone (442-3266), and deliver the waste to the Environmental Yard. The procedures for turning in HM, HW, non-RCRA regulated waste, and UW are presented in this chapter.

Funding Requirements

The EQD will generate document numbers and pay for HW disposal costs except as noted below. Organizations below must pay for their HW disposal at the time of turn-in (funding code must be presented).

1. Non-Army Tenants and activities funded through an operating fund (Defense Business Operating Fund and Army Working Capital Fund, a procurement fund (Procurement of Ammunition, Army), a research and development fund (Research, Development, Test, and Evaluation and Army Test and Evaluation Command activities), and other DoD funded activities (primarily Defense Logistics Agency, Medical Command, Defense Commissary Agency).

2. Non-appropriated funds activity if not included in an ISSA or MOA.

3. Any unit / organization that must dispose of HM as HW because of gross negligence in ordering and failure to manage shelf life.

Turning in HM and Waste to the EQD

The EQD operates the Environmental Yard Monday through Friday, 0730-1500. The Environmental Yard is a central waste management point designed to temporarily hold large volumes of waste prior to shipment off-post. To turn in unwanted, unserviceable, or overstocked HM, HW, UW, and non-RCRA regulated waste, follow the steps below:

1. Close the waste container and make sure it is marked with its contents. For drums, ensure that drum rings are seated with bolts down and tight or/bungs are in and tight. Double-check drum rings for tightness. When drums are being moved, rings often become loose if they weren't completely tightened initially.

NOTE: Remember to allow for headspace in drums as specified on page 3-6.

2. Segregate materials that are being transported to prevent accidental mixing of incompatible wastes or incompatible materials (Use the compatibility chart in Chapter 2). Consider making more than one trip. The following general guidelines apply for segregating wastes:

- Acid containers must be separated from caustic soda solutions, boiler compounds, radiator shop descaling compounds, other caustic degreaser/cleaners, and ignitable compounds.
- Antifreeze containers must be separated from acids and caustic compounds.

- Fire-resistant hydraulic fluid containers must be separated from acids and caustic compounds.
- Methyl ethyl ketone (MEK) and paint thinners containing MEK must be separated from acids.

3. Load containers on a *government vehicle* and ensure that they are secured using a rope, strap, or some other method. Do not transport HM or HW in a privately owned vehicle (POV). Do not transport damaged containers.

NOTE: Personnel turning in liquid wastes to the Environmental Yard in open-top drums or in damaged drums will have to pump the waste into a bung drum, rinse out the old damaged drum, and crush it.

4. Transport unwanted, unserviceable, or overstocked HM, HW, non-RCRA regulated waste, and UW to the Environmental Yard Building 2515, and report to one of the turn-in specialists. See Figure 4-1 for directions. It is preferred that you come in from the north on the gravel road just off of Hunt Road. However, you can also use the one-way paved blacktop alleyway off of Ringgold Road.

5. Assist EQD personnel in off-loading the waste.

NOTE: If you have a one-time turn-in of HM or HW, coordinate with the EQD via telephone (442-3266) and take it to Environmental Yard right away. The staff there will accept it, segregate it, and process it for disposal. Follow steps 1–5 above.

Figure 4-1. Aerial Photograph of Waste Turn-In Access Route



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Turning In Vehicle Lead-Acid Batteries

Vehicle lead-acid batteries must be turned in for recycling when no longer serviceable.

Units/Activities:

1. Requisition/pick-up lead-acid batteries by completing DA Form 2765-1, possessing a current DA Form 1687 and presenting each of these forms to the LRC SSA located at Building 2243.
2. Accumulate vehicle lead-acid batteries only in designated areas having secondary containment
3. Turn-in vehicle lead acid batteries by completing DA Form 2765-1 (IAW Figure 4-2) and presenting to LRC SSA located at Building 2243.
4. If the unit has enough lead-acid vehicle batteries to palletize, transport in the following configuration: palletize, stacked no more than three rows high, with a minimum of 1-inch thick honeycomb cardboard buffering between each stack, and securely shrink-wrapped to each other and the pallet.

Broken, leaking, lead-acid vehicle batteries should be labeled “Used Batteries” and turned in to EQD as a waste. See Waste Protocol Sheet on page A-22.

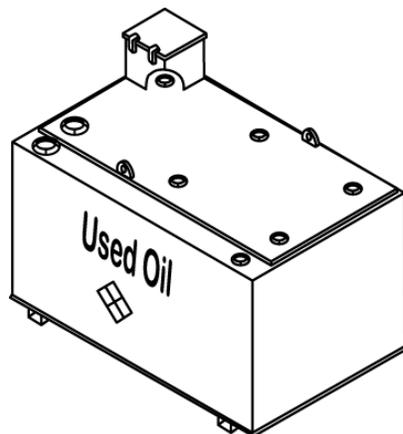
Figure 4-2. DA 2765-1 for Battery Turn-In

*

- | | |
|-------------------------------------|-------------------------------|
| 1. Unit Point of Contact | 7. Accounting Processing Code |
| 2. Logistics Readiness Center (LRC) | 8. Unit Price |
| 3. Unit Name | 9. Total Price |
| 4. National Stock Number | 10. Document Number |
| 5. Unit of Issue | 11. Item Description |
| 6. Quantity | 12. Priority Code |

Turning In Used Oil

A contractor picks up used oil placed in a Lube Cube® on a routine basis. Call Safety Kleen, 405-745-2025, to have your uncontaminated oil picked up. When calling Safety Kleen, provide them with your name, point of contact name (if different), point of contact phone number, and location of pick-up. It is important to have Safety Kleen give you the date and time of pick-up and arrange to have someone available to meet them when they arrive to pick up your used oil. Used oil that is contaminated with fuel, solvents or antifreeze cannot be placed in Lube Cubes and must be accumulated in drums within HW accumulation points. Turn in contaminated oil to EQD in drums following the “Turning In Waste” procedures listed above. See the Used Oil WPS for further guidance.



NOTE: Lube Cubes are not to be used for the storage or placement of rainwater collected in oil collection pans (drip pans). Do not put this material in the Lube Cubes. Contact the EQD for information concerning proper disposal of this waste.

Transporting HM/HW on Fort Sill

Activities generating regulated waste are responsible for transporting the waste to the Environmental Yard for turn-in. No paperwork is needed as long as the transportation is confined to the post. **Under no circumstances should Fort Sill units or activities self-transport waste off-post.** The regional DLADS is the only authority authorized to transport regulated waste off post to a designated Treatment, Storage, and Disposal Facility (TSDF) for proper treatment, disposal, and/or reuse/recycle. The DLADS, or his/her designees, will arrange for any off-post transportation of regulated waste IAW all applicable federal, state, and Army regulations.

Oil/Water Separator Cleanout

Units needing their oil/water separators cleaned out are required to contact DPW Construction Branch, 442-3898. The DPW will inspect the oil/water separator and set up cleanout with the Environmental Quality Division.

NOTE: Units must transport hazardous waste in government vehicles only. Under no circumstances should a POV be used to transport hazardous waste.

Chapter 5. Training, Inspections, and Recordkeeping

This chapter gives information, instructions, and forms for required training, periodic internal inspections, and recordkeeping.

Hazardous Waste Training Regulatory Drivers

There are several regulatory agencies/bodies (federal, state, and military) that govern various types of HW training (environmental, transportation, safety, and health). This chapter gives information, instructions, and forms for complying with all applicable HW training requirements. Table 5-1 below shows the types of training and the authority under which it is regulated.

Table 5-1. Hazardous Waste Training Category and Associated Regulatory Agency/Body

Hazardous Waste Training Category	Federal Regulatory Agency	State Regulatory Agency	Military Regulatory Body
Environmental	EPA	ODEQ	DA and USAFCEFS
Transportation ¹	DOT	Oklahoma DOT	DoD and DA
Safety and Health	OSHA	Oklahoma Dept. of Labor	DoD, DA and USAFCEFS

This section outlines the comprehensive Fort Sill hazardous waste training program. This program incorporates all applicable aspects of environmental, transportation, safety, and health components described herein.

Federal Regulations

- 40 CFR 265.16 requires that facility personnel working at the Environmental Yard successfully complete classroom within 6 months after their hire date (with an annual refresher) that teaches them to perform their duties to ensure that the facility is compliant with RCRA.
- 29 CFR 1910.120 (q)(6) requires the appropriate level of Hazardous Waste Operations and Emergency Response (HAZWOPER) training for employees who are expected to participate in cleaning up hazardous waste.
- 29 CFR 1910.1200(h) requires Hazard Communication (HAZCOM) training to be given to employees about the hazardous materials to which they could potentially be exposed to.

State Regulations

- 40 CFR 262.34 and 265.16 contain the EPA hazardous waste training regulations.

¹ Hazardous waste transportation training is required by DOT (49 CFR 172.704), DoD (DoD 4500.9-R), and the Army (AR 200-1) which only applies to transportation over public highways. This Plan only applies to hazardous wastes being transported to the 90-day lot. Fort Sill soldiers shall not transport hazardous waste off-post. Therefore, hazardous waste transportation training is not required.

- OSHA safety and health training regulations and Section 380:40-1-22 (Safety Programs) requires that appropriate safety training be provided to all employees, including management, no less than **quarterly**.

Military Regulations

- DoD Instruction 6050.5 requires that employees undergo HAZCOM training.
- DoD 4500.9-R, Chapter 204, Section D, Paragraph 1(a) states that “all personnel involved with the preparation and shipment of hazardous material (HAZMAT) for commercial or surface military transportation must receive training in accordance with 49 CFR 172.704 and DoD Component regulations.”
- AR 200-1 requires EO training.
- 40 CFR 265.16 and 49 CFR 172.704 requires that all newly assigned employees who handle hazardous waste (or are tasked with environmental duties) successfully complete 40 hours of environmental training. EOs and POL Handlers must also participate in annual refresher training.

Fort Sill Hazardous Waste Training Program

The Fort Sill Hazardous Waste Management Training Program incorporates the federal, state, and Army/Fort Sill environmental, transportation, and safety/health regulations listed above.

NOTE: This section identifies the *who, what, when, and how* with respect to hazardous waste training.

Who Needs Hazardous Waste Training

The general categories of personnel requiring hazardous waste training are:

- Personnel who directly handle hazardous wastes, or may be potentially exposed to hazardous waste, (maintenance workers and drivers who deliver hazardous waste to the Environmental Yard)
- Personnel who are assigned an environmental duty (Supervisors, EOs)

When Hazardous Waste Training is Required

EOs and POL Handlers must receive training within 6 months after their hire date (with an annual refresher) that teaches them to perform their duties. Initial and annual training is recommended to ensure that EOs receive adequate training and remain compliant at their facilities. OPORD 14-006 signed by CG requires all EO's and alternates to take the online Corp of Engineer training which can be found at <https://mscoe.bb.wood.army.mil>. At website enter CONUS in search box and enroll.

How Hazardous Waste Training Should be Conducted

EOs and POL Handlers will receive required training by way of 40-hour Hazardous Waste Generator classroom instruction. Available training dates can be found on the www.gbpartnership.com website or by calling GBK Partnership at 888-408-0700. All training should be recorded and documented in the facility's training records.

Required Inspections

All Fort Sill environmental activities are subject to inspections by EQD, DoD, and state and federal regulatory agencies. Local government agencies may also inspect for compliance with permits, local codes, or other regulations. To ensure that you are prepared, comply with the Weekly Environmental Inspection Log provided on page 5-7.

Periodically, EQD personnel will conduct internal audits using the checklist to ensure post compliance. Should anyone representing agencies other than EQD request to inspect your facility for environmental compliance, immediately notify the EQD by telephone (442-3266).

Inspecting Accumulation Points

As a best management practice, inspect accumulation points weekly using the Weekly Environmental Inspection Log located on page 5-7. Use a separate log for each accumulation point and for each calendar month (allow space on the log for each week of the month). File completed log sheets in the facility records and **maintain for a minimum of 3 years**.

Required Recordkeeping

Training Records

In accordance with 40 CFR 265.16(d), each unit will maintain the following training information in their records:

- Job title for each hazardous waste job position and name of the person filling the job (provide copy to EQD)
- A written job description for each position
- A written description of the type and amount of training required for each position
- Records that indicate the dates when training was successfully completed by each person

Inspection Records

Maintain the following inspection records for no less than three years from the date of the inspection:

- Copies of Weekly Environmental Inspection Logs
- Copies of any internal inspections conducted by EQD
- Copies of Environmental Performance Assessment System (EPAS) results
- Copies of POL Containment Drainage Record

Other Records

In addition to training and inspection records, maintain the following documents:

- Any EQD memos or Letters of Instruction (LOI) related to HW management
- Spill records
- A copy of this Plan
- A copy of the Spill Prevention Control and Countermeasure Plan/ Installation Spill Contingency Plan

Each generator will maintain records in an orderly manner. One method of accomplishing this is establishing a hazardous waste management binder.

NOTE: It is the responsibility of the EO to ensure that all required hazardous waste records and plans for the unit or facility are maintained.

Other Inspections and Tests

Water Buffalo Inspections are done by Preventive Medicine, Building 2775, 442-3175 / 254-466-0882.

Fuel samples for testing are taken to LRC Freight Movement, Building 2243, 442-6702.

Testing of fuel tankers (sniff test) before maintenance or shipping is done at LRC Welding Shop, Building 2281, 442-3451. Prior to a sniff test the fuel tankers are required to be purged and cleaned. Contact EQD for guidance.

Forms and Instructions

This section contains the following forms and instructions:

- Individual Hazardous Waste Training Record
- Weekly Environmental Inspection Log
- POL Containment Drainage Record

Fort Sill	
Weekly Environmental Inspection Log	
DATE:	WEATHER:
Y N NA	Are weekly environmental inspection logs (this checklist) filed and retained for a three year period?
Y N NA	Has an Environmental Officer been appointed in writing?
Y N NA	Have the appropriate personnel been properly trained in the following: used oil and spent solvent management, fueling procedures, good housekeeping practices, proper painting (touch up) procedures, used battery management, inspection procedures, SWP3 plan maintenance, and recordkeeping procedures?
Y N NA	Are spill plans, storm water pollution prevention plans, HMWMP, SOPs and emergency response kits readily available?
Y N NA	Are all POL storage areas identified in the storm water (SWP3) and spill (SPCC) plans?
Y N NA	Are the refuse containers (dumpsters etc.) closed to ensure no storm water violations?
Y N NA	Are curbs or other drainage areas clean of debris and/or trash? Are the outfalls clean with no evidence of spills or accumulation of pollution?
Y N NA	Is the facility inspected after every rainfall event to determine if spill/drip pans and/or secondary containment structures contain contamination and were properly drained? Note: Uncontaminated rain water can be emptied at the site.
Y N NA	Is the POL containment drainage record completed when rainwater is drained from secondary containment?
Y N NA	Are awareness signs properly posted and maintained?
Y N NA	Are good housekeeping and best management practices being observed? Are drip pans being properly used and maintained, are emergency spill kits readily available and adequately stocked, are leaks, spills and oil stains cleaned up in a timely manner?
Y N NA	Are all POL containers/vessels, including mobile fuel tankers, staged in sufficient secondary containment?
Y N NA	Are designated storage areas located away from storm drains and/or storm water outfalls?
Y N NA	Are everyday in use items stored in spill containment and protected from precipitation?
Y N NA	Are vehicles and other stored equipment checked for leaks and spills cleaned up immediately?
Y N NA	Do oil spills receive adequate attention (proper use of sorbents, proper contact with sorbents –rubbing with boot, and/or all stains capable of creating a discharge or sheen removed)?
Y N NA	Are all containment systems in good working order and functioning properly?

Y N NA	Are the oil water separators being maintained?
Y N NA	Have storage tanks, piping, valves and equipment been visually inspected for defects or leaks?
Y N NA	Is the interstitial space free of liquids and all alarms on tanks and separators working properly?
Y N NA	Is there an inventory of hazardous materials and MSDS/SDS located at this site?
Y N NA	Is hazardous waste being accumulated at a Satellite Accumulation Point only?
Y N NA	Are hazardous materials/waste stored in a manner that protects them from storm water, properly labeled, and segregated?
Y N NA	Are wastes being accumulated in proper containers and tightly closed when not in use?
Y N NA	Are all containers marked IAW the waste protocol sheet?
Y N NA	Are markings visible and is there adequate aisle space?
Y N NA	Are all containers free of corrosion, bulges or damages and not leaking?
<i>For questions on environmental compliance, call 442-3266.</i>	
Unit/Building Inspected:	
Inspector and Telephone Number:	

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Chapter 6. Spill Response

RCRA requires that Large Quantity Generators, such as Fort Sill, have a contingency plan (40 CFR Part 265 Subpart D) describing the action that facility personnel must take to minimize hazards from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste. The procedures described in this chapter fulfill these requirements.

Fort Sill is also following an existing Spill Prevention, Control and Countermeasure Plan (SPCCP)/ Installation Spill Contingency Plan (ISCP) required under AR 200-1, 40 CFR Part 112, and 40 CFR Part 265 Subpart D. Table 6-1 below compares the RCRA contingency plan requirements to the SPCCP/ISCP. The RCRA contingency plan described in this chapter is consistent with the Fort Sill SPCCP/ISCP..

**Table 6-1. RCRA Contingency Plan Requirements
Referenced in ISCP/SPCC Plan**

RCRA Contingency Plan Requirement	Regulation (40 CFR)	SPCCP/ISCP Plan Section where Requirement is Addressed
A description of actions facility personnel must take in response to fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water at the facility.	265.52(a)	SPCCP/ISCP Section 6.0
A description of arrangements agreed to by local police departments, fire departments, hospitals, contractors, and state and local emergency response teams to coordinate emergency services.	265.52(c)	SPCCP/ISCP Section 3.0
A list of names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator.	265.52(d)	SPCCP/ISCP Section 3.1
A list of all emergency equipment at the facility, the location, and a physical description of each item on the list, and a brief outline of its capabilities.	265.52(e)	SPCCP/ISCP Section 9.0
An evacuation plan (if warranted) describing signal(s) to be used to begin evacuation, evacuation routes, and alternate evacuation routes.	265.52(f)	SPCCP/ISCP Section 6.2.5

Spill Response Actions

Small Spills

In accordance with the SPCCP/ISCP, a small spill is considered to be 5 gallons or less of POL that does not enter a storm drainage ditch, storm drain or water body.

Clean up of small spills is the responsibility of the product users in the motor pools, maintenance shops, or wherever the small spill occurs. If a small spill occurs, take the following action:

1. Immediately notify your supervisor or EO. The supervisor or EO will confirm the spill and contact 911 if:
 - a. a spill of POL enters a drainage ditch, storm drain, or water body;
 - b. a POL spill covers a surface area greater than 100 square feet;
 - c. any quantity of hazardous or extremely hazardous substance is spilled;
 - e. the spill causes an immediate safety or environmental hazard; or
 - f. the spill is beyond your capabilities to contain and clean up.
2. Turn off all sources of ignition. While wearing the proper PPE consistent with your level of training (face shield, apron, goggles, etc.), and without placing yourself at risk of injury, attempt to stop the spill source by closing valves, shutting off pumps, uprighting the drum, etc.
3. Eliminate, stop, or slow the source of the spill to prevent any further release.
 - a. Set containers upright or roll them over so the hole is facing upward.
 - b. Close valves and turn off power to pumps.
 - c. Place leaking drums in compatible DOT-approved overpack drums.
 - d. Transfer material from a leaking container to functional container.
 - e. Patch holes in the leaking container.
 - f. Relocate container to where it poses less of a threat.

4. Control the lateral spread of the spill. All drains should be plugged and absorbent pads or booms put in place to stop the migration of the spill.

NOTE: Every effort should be made to prevent the spill from reaching drains in buildings or in parking areas.

5. Contain the spill using dry sweep, absorbent socks, absorbent pads, soil, etc. All residual contamination must be removed. Applying dry sweep and scrubbing can remove stains on pavement or asphalt. Excavate contaminated soil until no visual or other evidence of spilled material remains.

6. Collect contaminated items such as soil, absorbent material, PPE, etc. and place in a suitable container for turn in for disposal.

7. Contact the EQD to verify that the affected areas have been adequately remediated. The EQD will provide any technical assistance with the clean up including the turn-in of contaminated material.

Large Spills

Clean up of large spills is the responsibility of the Installation Response Team (IRT). If a large spill occurs, take the following action:

1. Immediately call 911. Personnel answering the call for assistance will notify the Fort Sill Directorate of Emergency Services (DES) as appropriate to provide initial response to an emergency situation. Upon arrival, the responding agency (the Fire Department for hazardous substance incidents) shall appoint an Installation On-Scene Coordinator (IOSC). The IOSC is responsible for mobilization of the members of the IRT based on the situation.

2. If potential hazards posed by the spill are unknown, evacuate the spill site until emergency services personnel arrive. In such situations, it is critical to provide the 911 operators with as much information as possible so that the initial response agencies can be as prepared as possible for the situation.

3. Take action to minimize impacts from the spill while waiting for emergency services personnel to arrive. If the type of material spilled is known and there is no immediate safety hazard, attempt to stop or control the spill to minimize further impacts.

4. Once emergency services personnel arrive, cooperate with the response team and provide them with any information possible.

NOTE: These actions should be limited to only properly trained personnel under the supervision of the supervisor or EO. Always wear the proper PPE.

Reporting

Incidents involving a spill of any quantity are required to be reported within 72 hours of the event to the EQD on the Spill or Incident Report Record. Fax to 580-442-7209.

Arrangement with Local Authorities

The authorities that would respond to a large spill include:

- Fort Sill Fire Department
- EQD
- EO
- DES
- DPW
- MEDDAC

Installation On-Scene Coordinator

The IOSC is the senior fire official on duty for the Post. The Fort Sill Fire Department is manned 24 hours a day, 365 days a year. The IOSC is responsible for coordinating all emergency response measures. This IOSC must be thoroughly familiar with all aspects of the facility's contingency plan, all operations and activities at the facility, the location and characteristics of waste handled, the location of all records within the facility, and the facility layout. In addition, this person must have the authority to commit the resources needed to carry out this RCRA contingency plan.

After a spill event, the IOSC must prepare a detailed follow-up report and submit it to the EQD within three working days after the spill. The report will contain all relevant information concerning the cause of the spill and will list the precautions that will be taken in the future to prevent recurrence.

Emergency Response Equipment

The EO must keep on hand at all times enough spill equipment and supplies to respond to a 55-gallon spill. Ensure that the materials on hand are compatible with the material you are cleaning up. For instance, do not use sawdust on acid spills. Contact the EQD for assistance in selecting spill response supplies. Remember to promptly clean and restore to good/ready condition any equipment you use, and replace any materials used.

Spill or Incident Report Record

Date: _____	Time: _____	Location of Incident: _____
Unit/Organization: _____	Point of Contact: _____	
Phone Number: _____	Substance/Material Released: _____	
Stock Number and Manufacturer of Substance/Material Released: _____		
Quantity Released: _____		
Environment Affected:		
<input type="checkbox"/> Confined Within Building	<input type="checkbox"/> Pavement	<input type="checkbox"/> Gravel <input type="checkbox"/> Soil <input type="checkbox"/> Storm Drain
<input type="checkbox"/> Water	<input type="checkbox"/> Air	<input type="checkbox"/> Other (Describe) _____
Source and Cause of Release or Incident: _____		
Actions Taken To Contain/Mitigate the Release or Incident: _____		
Units/Organizations Responding to the Release or Incident: _____		
Weather Conditions: _____		
Actions Taken to Cleanup/Mitigate the Release or Incident: _____		
Disposition of Waste Generated During Cleanup/Mitigation Activities: _____		
Actions Taken to Prevent Reoccurrence: _____		
_____	_____	_____
Person Completing Record	Signature	Date

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Chapter 8. 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 the Environmental Yard.

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).

Hazardous Chemical – Any element, hazardous chemical compound, or mixture of elements and compounds that is a physical hazard or a health hazard. Hazardous chemicals are any items requiring an SDS; this includes batteries, filters, and other solids, liquids, or gases. Chemicals with physical hazards include combustible liquids, compressed gases, explosives, flammables, organic peroxides, oxidizers, 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. See 29 CFR 1910.1200, Appendix A, and Appendix B for further definitions, explanations, and criteria for identifying hazardous chemicals.

Hazardous Material – Defined by the U.S. Department of Transportation (DOT), it is anything that due to its chemical, physical, or biological nature causes safety, public health, or environmental concerns when transported in commerce. Hazardous materials include hazardous waste 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 SDSs for chemicals procured through military supply channels.

Hazardous Waste – Hazardous waste is a solid waste that is not specifically excluded from regulation as a hazardous waste and meets one of the following criteria:

- It is ignitable, corrosive, reactive, or toxic as measured by standard test methods or as can be reasonably determined by knowledge of generators
- It is specifically listed as a hazardous waste in 40 CFR 261, Subpart D

HAZMAT Employee – Personnel that load, unload, or handle hazardous materials or prepare them for shipment and/or persons responsible for hazardous materials transportation safety or who operate a vehicle used to transport hazardous materials.

Personal Protective Equipment (PPE) – Any protective clothing or device worn by the employee to prevent contact with, and exposure to, hazardous materials in the work area. Examples include protective aprons, goggles, face splash shields, eye protection, and various types of respiratory protection.

Safety Data Sheet (SDS) – Formally referred to as MSDS, 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 Point (SAP) – A designated point where a generator may accumulate hazardous waste in a 55-gallon drum, always **ensuring a 4-inch headspace** per drum, or 1 quart of acutely hazardous waste. Each SAP must be at or near the point of generation, and must be under the control of the EO of the process generating the waste. Once a 4-inch headspace in a 55-gallon drum of the accumulated waste at an SAP is reached, it must be marked with the accumulation start date (ASD) and moved within 72 hours to the Environmental Yard.

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).

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, brake fluids, and hydraulic fluids. For the purposes of this Plan, used oil does not include transformer oil or other dielectric fluids.

Acronyms

AR	Army Regulation
ASD	accumulation start date
CFR	Code of Federal Regulations
DES	Directorate of Emergency Services
DLADS	Defense Logistics Agency Disposition Services
DoD	Department of Defense
DOT	Department of Transportation
EO	Environmental Officer
EOC	Emergency Operations Center
EPA	Environmental Protection Agency
EPAS	Environmental Performance Assessment System
EQD	Fort Sill Environmental Quality Division
HAZCOM	Hazard Communication
HAZMAT	hazardous material
HAZWOPER	Hazardous Waste Operations and Emergency Response
HCC	Hazard Characteristic Code
HM	hazardous material
HMIRS	Hazardous Materials Information Resource System
HSWA	Hazardous and Solid Waste Amendments
HW	hazardous waste
IAW	in accordance with
IOSC	Installation On-Scene Coordinator
IRT	Installation Response Team
ISCP	Installation Spill Contingency Plan
LOI	Letter of Instruction
LRC	Logistics Readiness Command
MEK	methyl ethyl ketone
MSDS	material safety data sheet
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHIW	non-hazardous industrial waste
NSN	National Stock Number
OAC	Oklahoma Administrative Code
ODEQ	Oklahoma Department of Environmental Quality
OSHA	Occupational Safety and Health Administration
PAO	Public Affairs Office

PCB	polychlorinated biphenyl
POL	petroleum, oil, and lubricants
POV	privately owned vehicle
PPE	personal protective equipment
RCRA	Resource Conservation and Recovery Act
SAP	Satellite Accumulation Point
SDS	Safety Data Sheet
SPCCP	Spill Prevention, Control, and Countermeasure
SSA	Supply Support Activity
TSDF	Treatment, Storage, and Disposal Facility
UN	United Nations
USAFCOEFS	United States Army Fires Center of Excellence and Fort Sill
USAPHC	United States Army Public Health Command
UW	universal waste
WPS	Waste Protocol Sheet

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Appendix A. Waste Protocol Sheets

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ABSORBENTS-USED

POSSIBLE CONTAMINANTS OF CONCERN

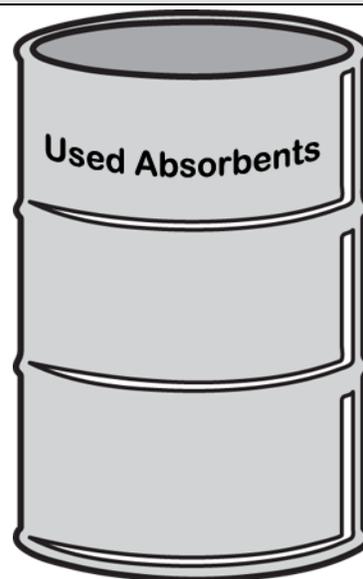
Absorbent material (e.g., dry sweep, cloth towels, booms, etc.) saturated with POL or other materials may be flammable and/or toxic.

CHARACTERIZATION

Absorbent materials contaminated with POL are considered **non-hazardous waste**. Absorbent material contaminated with other hazardous material such as paint thinner may be hazardous.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Double-bag used absorbent materials. Consider using an open-top drum lined with a bag to accumulate the absorbent material, or some other method.
- Step 2** Mark containers with the words "Used Absorbents" before adding any waste.
- Step 3** Make sure containers are in the proper accumulation point.
- Step 4** Put waste in the bags. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container or bag is closed.
- Step 5** When the bag is full, or sooner as needed, take the absorbents (no free liquids) to the Fort Sill landfill. Turn in absorbents containing free liquids to the EQD IAW the turn-in procedures listed in Chapter 4.



GENERAL INFORMATION

Keep absorbents contaminated with hazardous waste separate from POL-saturated absorbents and turn in to EQD. Call the EQD if you clean up anything other than POL. They will provide guidance for proper disposal.

ADHESIVES AND SEALANTS

POSSIBLE CONTAMINANTS OF CONCERN

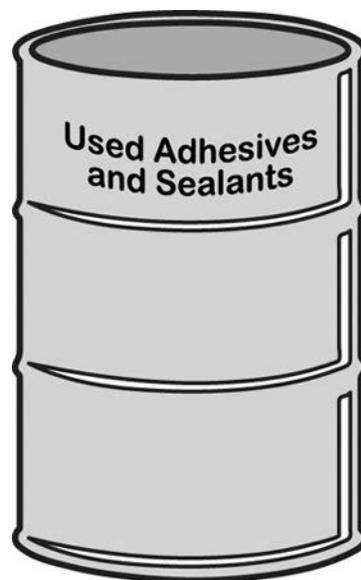
Adhesives and sealants are made up of combinations of chemicals suspended in a solvent that partially evaporates during use. The solvents found in these products vary, but some common ones include 1,1,1-trichloroethane, MEK, and toluene. Adhesives and sealants may also be flammable and may contain heavy metals such as lead, chromium, and cadmium. Refer to the SDS for specific hazards.

CHARACTERIZATION

Spent adhesives and sealants, and wastes generated from use of these materials such as gloves, stir sticks, and old material removed during replacement, are considered **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain an open-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with the words "Used Adhesives and Sealants" before adding any waste.
- Step 3** Make sure container is in a designated SAP within secondary containment.
- Step 4** Put waste and waste containers in the drum. Do not pour liquids in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

None

AEROSOL CANS

POSSIBLE CONTAMINANTS OF CONCERN

Aerosols may be flammable, reactive, corrosive, and/or toxic depending on the contents of the cans and the gas involved.

CHARACTERIZATION

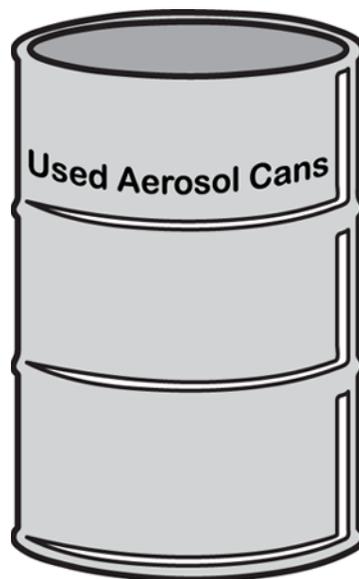
Aerosol cans that are no longer serviceable (e.g., broken nozzle), but that are still under pressure and/or still contain their contents, are **hazardous waste** and must be collected and turned in to EQD.

Empty aerosol cans are **non-hazardous** and may be thrown in the trash. For the can to be empty, there should be no product remaining in the can, and the pressure of the propellant should be unable to propel any more material from the can. If the can is empty of all liquids, gases, and propellants, it may be disposed in the Fort Sill landfill.

NOTE: Empty aerosol cans that once held acutely hazardous chemicals or pesticides are hazardous. Call the EQD for guidance.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** If accumulating non-empty cans, obtain an open-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with the words "Used Aerosol Cans" before adding any waste.
- Step 3** Make sure container is in a designated SAP within secondary containment.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Make sure all aerosol cans are completely empty before taking to the Fort Sill Landfill.

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 low concentrations of toxic metals such as copper, zinc, lead, cadmium, chromium, and selenium. Each year an analysis is performed to determine any presence of toxic metals. Used filters and sludge from antifreeze recycling machines may also contain ethylene glycol and heavy metals.

CHARACTERIZATION

Currently used antifreeze is considered a **hazardous industrial waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a closed-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with words "Used Antifreeze" before adding any waste.
- Step 3** Make sure container is in the proper accumulation point within secondary containment.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, **ensuring a 4" headspace**, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Used antifreeze must be turned in to the EQD.

AQUEOUS PARTS WASHER—IMPULSE II

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. Metal contaminants including chromium, cadmium, and lead, may be found in the cleaning solutions. Each year an analysis is performed to determine any presence of toxic metals or flammability.

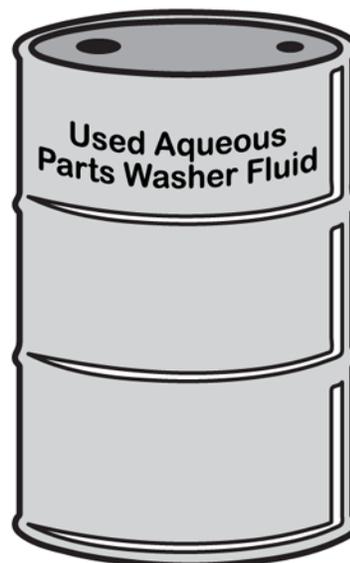
CHARACTERIZATION

Currently aqueous parts washer (APW) wash water is considered a **non-hazardous industrial waste** and must be turned in to the EQD.

The skimmer used oil is recyclable and should be placed in a Lube Cube.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a closed-top, UN/NA-rated, 55-gallon poly drum from EQD IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with the words “Used” Aqueous Parts Washer Fluid” before adding any waste.
- Step 3** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 4** Take the drum immediately to the EQD or place it in a SAP within secondary containment.
- Step 5** When the SAP container becomes full, **ensuring a 4” headspace**, turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Water-based systems may have several waste streams including the water solution in the main tank, the sludge solution in the main tank, and the oil sludge in the skimmer tank.

Do not put solvents or solvent-wet parts in aqueous parts washers. This will result in foaming and damage to the machine, and the solution will have to be disposed of as a waste.

Do not clean weapons, paintbrushes, drip pans, or empty POL containers in aqueous parts washers.

For additional guidance refer to the Impulse II Aqueous Parts Washer Operational Guidelines memorandum, 8 September 2014 (found in Appendix B).

ASBESTOS

Brake Shoes, Clutch Plates, Fire Suits, and Blankets

POSSIBLE CONTAMINANTS OF CONCERN

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**," or easily crumbled, pulverized, or reduced to powder in your hand when dry has the potential to release asbestos fibers that can become airborne, and potentially create a health hazard. Some diseases associated with asbestos exposure include:

Asbestosis – a progressive, non-cancerous and irreversible scarring of the lungs that can produce shortness of breath. Typical latency period is over 20 years.

Pleural disease – plaque deposits or a thickening of the thin tissue that separates the lungs from the other organs in the body.

Lung cancer – cancerous tumors that have a latency period of 20 to 30 years, usually fatal.

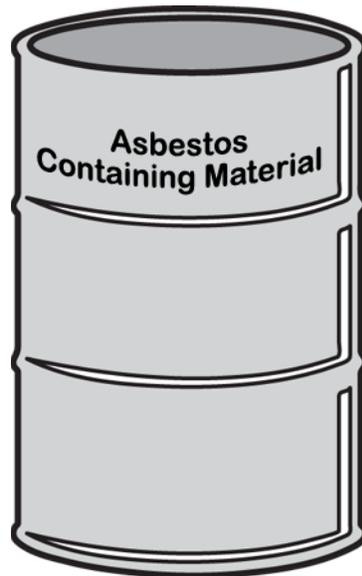
Mesothelioma – a cancer in the lining of the chest cavity or abdomen, very rare but always fatal.

CHARACTERIZATION

Asbestos-containing materials (ACMs) are managed as **Special Waste (Non-RCRA Regulated Waste)**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Coordinate with EQD before handling any asbestos. If approved to accumulate asbestos on site, obtain an open-top, UN/NA-rated, 55-gallon metal drum lined with a properly marked polyethylene bag from EQD IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with the words "Asbestos-Containing Material" before adding any waste.
- Step 3** Make sure container is in the proper SAP.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container. Seal the bag with duct tape once full.
- Step 5** Within 365 days, or when the container becomes full, whichever occurs first, mark the date on it and contact EQD at 442-3266.



GENERAL INFORMATION

Other than the occasional asbestos brake shoes, personnel must not handle asbestos. Personnel changing out asbestos brake shoes must follow specific procedures to avoid exposure. Coordinate with the EO for guidance. The EQD will coordinate all asbestos management and disposal.

BATTERIES—NON-LEAD-ACID

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. For additional guidance refer to Management of Lithium Sulfur Dioxide Batteries memorandum, 8 September 2014 (found in Appendix B).

Magnesium Batteries. Magnesium batteries contain an electrolyte of an aqueous solution of magnesium bromide or magnesium perchlorate and/chromium. 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. 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.

CHARACTERIZATION

Lithium-sulfur dioxide, lithium thionyl chloride, nickel-cadmium, magnesium, and mercury batteries are **hazardous waste**. If the 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**.

HANDLING PROCEDURES

Lithium Batteries. **DO NOT DISCHARGE** and turn in to EQD as soon as possible.

Magnesium Batteries. Turn in to EQD as soon as possible.

Mercury Batteries. Turn in to EQD as soon as possible.

Nickel-Cadmium. Turn in to EQD as soon as possible.

GENERAL INFORMATION

Segregate batteries by type. Store batteries away from moisture.

Small alkaline batteries such as AAA, AA, C, and D type may be thrown in the trash.

CALCIUM HYPOCHLORITE

POSSIBLE CONTAMINANTS OF CONCERN

Calcium hypochlorite is generally available as a white powder, pellets, or flat plates. Calcium hypochlorite decomposes in water to release chlorine and oxygen. Calcium hypochlorite is toxic by the oral and dermal routes and can react to release chlorine or chloramine which can be inhaled.

CHARACTERIZATION

Unused calcium hypochlorite is considered a **hazardous waste**.

HANDLING PROCEDURES

- Step 1** Turn in to EQD unused calcium hypochlorite in the container it came in as soon as it is declared a waste at the unit. Do not accumulate on site.
- Step 2** Ensure that containers are marked or labeled with the contents.

GENERAL INFORMATION

Calcium hypochlorite should be stored in a dry, well-ventilated area at a temperature below 120°F, separated from acids, ammonia, amines, and other chlorinating or oxidizing agents.

FILTERS—FUEL

Diesel, JP-8, and MOGAS

POSSIBLE CONTAMINANTS OF CONCERN

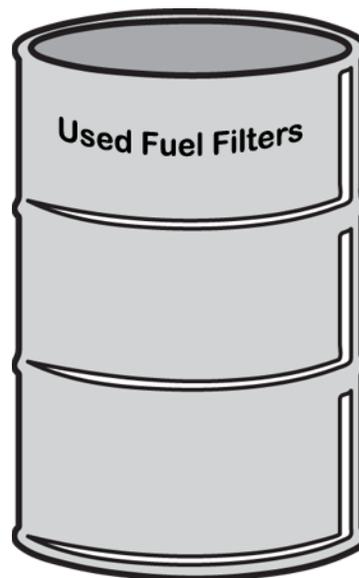
JP-8 and MOGAS may contain VOCs such as benzene, toluene, trimethylbenzene, and xylene in varying levels. Refer to the SDSs for specific hazards.

CHARACTERIZATION

Fuel filters are **non-hazardous industrial wastes** and cannot be thrown in the dumpster.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Air dry the fuel filters and place them in an open-top drum. Obtain drums from EQD IAW Chapter 3.
- Step 2** Mark container holding fuel filters with the words “Used Fuel Filters.”
- Step 3** Make sure containers are in the proper accumulation point within secondary containment.
- Step 4** Put waste in the containers. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container or bag is closed.
- Step 5** When the container is full, or sooner as needed, take the fuel filters directly to the Fort Sill Landfill. Landfill personnel will inspect the filters prior to disposal.



GENERAL INFORMATION

Landfill personnel will advise units on what actions are necessary to meet disposal standards should they reject any fuel filters.

FILTERS—OIL

POSSIBLE CONTAMINANTS OF CONCERN

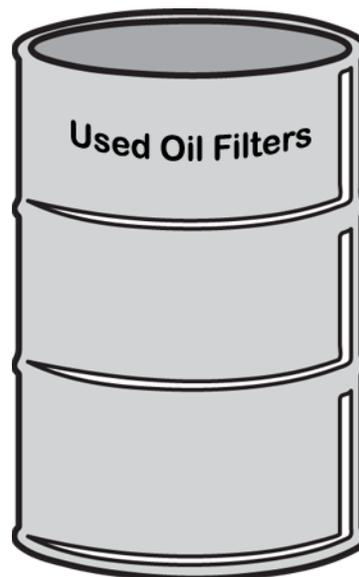
Oil filters may contain heavy metals such as cadmium and chromium. Terne-plated oil filters contain a lead alloy. Refer to the SDS for specific hazards.

CHARACTERIZATION

Non-terne plated oil filters free of oil are **non-hazardous solid waste**. Terne-plated oil filters, often found on large equipment, are **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Let the oil filters drain 24 hours prior to containerizing them. Collect oil filters and terne-plated oil filters separately. **Contact EQD immediately if you have a terne-plated filter.** Use an open-top drum lined with a bag to accumulate the filters.
- Step 2** Mark containers holding oil filters with the words “Used Oil Filters”.
- Step 3** Make sure containers are in the proper accumulation point within secondary containment.
- Step 4** Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container is full, or sooner as needed, take the oil filters to EQD for crushing. Crush only one filter at a time. After crushing, double bag the filters and take them to the landfill. Units will need to provide their own bags. Coordinate with EQD a time to crush the oil filters. **Turn in terne-plated oil filters immediately as a hazardous waste IAW the procedures in Chapter 4.**



GENERAL INFORMATION

The EQD maintains an oil filter crusher. When taking oil filters to EQD, provide enough manpower to operate the crusher.

FUEL—CONTAMINATED

MOGAS, JP-8, and Diesel

POSSIBLE CONTAMINANTS OF CONCERN

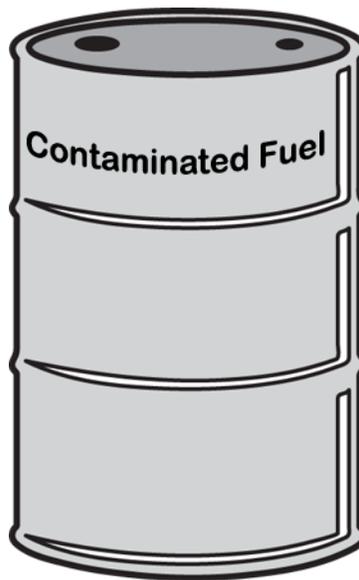
Unleaded gasoline (MOGAS) and JP-8 are toxic and flammable. MOGAS contains volatile organic compounds (VOCs) such as benzene, xylene, toluene, and ethylbenzene. JP-8 may contain VOCs such as benzene, toluene, trimethylbenzene, and xylene. Diesel fuel #2 consists of a mixture of "long-chain" hydrocarbons and can be a flammable liquid depending on the manufacturer and specification. Refer to the SDS for specific hazards.

CHARACTERIZATION

Fuel contaminated with antifreeze, solvents, or other chemicals must be managed as a **hazardous waste**. Depending on the chemical and the amount of the chemical mixed with the fuel will determine how to classify the waste. Call EQD if you have concerns about your fuel.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a closed-top, UN/NA-rated, 55-gallon metal drum from EQD IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark and label the container "Contaminated Fuel" before adding waste.
- Step 3** Make sure container is in the proper accumulation point within secondary containment.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure bung cap is placed back on the container.
- Step 5** When the container becomes full, **ensuring a 4" headspace**, turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Units can mix different kinds of fuel in one drum.

FUEL—UNCONTAMINATED

MOGAS, JP-8, and Diesel

POSSIBLE CONTAMINANTS OF CONCERN

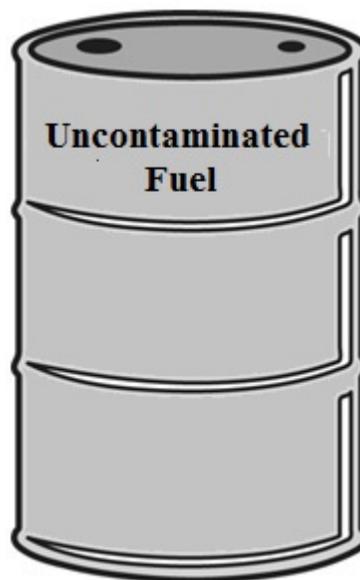
Unleaded gasoline (MOGAS) and JP-8 are toxic and flammable. MOGAS contains volatile organic compounds (VOCs) such as benzene, xylene, toluene, and ethylbenzene. JP-8 may contain VOCs such as benzene, toluene, trimethylbenzene, and xylene. Diesel fuel #2 consists of a mixture of "long-chain" hydrocarbons and can be a flammable liquid depending on the manufacturer and specification. Refer to the SDS for specific hazards.

CHARACTERIZATION

Fuel with water, oil, or simply no longer needed, must be managed as a **non-hazardous industrial waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a closed-top, UN/NA-rated, 55-gallon metal drum from EQD IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark and label the container "Uncontaminated Fuel" before adding waste.
- Step 3** Make sure container is in the proper accumulation point within secondary containment.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure bung cap is placed back on the container.
- Step 5** When the container becomes full, **ensuring a 4" headspace**, turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Units can mix different kinds of fuel in one drum. The DLADS sells off-specification uncontaminated fuel as a material.

GAA GREASE

POSSIBLE CONTAMINANTS OF CONCERN

GAA grease contains petroleum hydrocarbons and additives. Refer to the SDS for specific hazards.

CHARACTERIZATION

Grease contaminated with dirt, water, or other materials is a **non-hazardous industrial waste** due to the petroleum constituents.

HANDLING PROCEDURES

- Step 1** Turn-in unused or old GAA grease in the containers it came in as soon as it is declared a waste at the unit. Do not accumulate on site.
- Step 2** Ensure that containers are marked with the contents.

GENERAL INFORMATION

Upon delivery of the GAA grease to the Environmental Yard, be prepared to help EQD consolidate the containers into 55-gallon drums.

IT-48WC WEAPONS CLEANING SYSTEM

Filters and Solvent

POSSIBLE CONTAMINANTS OF CONCERN

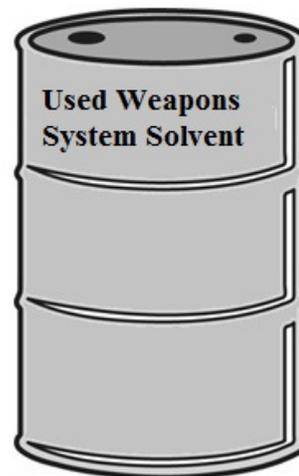
The solvent, the used Edge Tek Filters, and the debris collected from the pre-filter screen and baskets are contaminated with lead residue after cleaning weapons. Lead is a characteristic toxic metal.

CHARACTERIZATION

The solvent, the used Edge Tek Filters, and the debris collected from the pre-filter screen and baskets are **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a 5-gallon bucket for accumulating filters and debris. The bucket must be clean and free from any previous markings or labels.
- Step 2** Mark the bucket with words "Used Weapons System Filters" before adding any waste.
- Step 3** Make sure bucket is in the proper SAP within secondary containment.
- Step 4** Put waste in the bucket. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.
- Step 6** Obtain a closed-top, UN/NA-rated 55-gallon drum for accumulating used solvent. The drum must be clean and free from dents, bulges, excessive corrosion, any previous markings or labels.
- Step 7** Mark the drum with words "Used Weapons System Solvent" before adding any waste.
- Step 8** Put waste in the drum, **ensuring a 4' headspace**. Wear proper PPE listed on the SDS. Ensure bung cap is placed back on the drum.
- Step 9** When draining is complete, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Debris accumulated in the IT-48WC Weapons Cleaning System basket should be dumped onto paper towels, allowed to air dry, and then placed into the 5-gallon bucket used to accumulate the filters for the machine. The IT-48WC system is authorized for weapons cleaning only. No automotive parts, paint brushes, etc., are allowed to be cleaned in the system. It is recommended that units lock the system closed when it is not in use. For additional guidance refer to IT-48WC Weapons Cleaning System memorandum, 8 September 2014 (found in Appendix B).

Contact the EQD When solvent is no longer serviceable. Skysol Solvent (NSN 6850-01-381-4401) may be ordered by calling Inland Technology at 1-800-523-3100.

IT-32 AND IT-48 PARTS CLEANING SYSTEM

Filters and Solvent

POSSIBLE CONTAMINANTS OF CONCERN

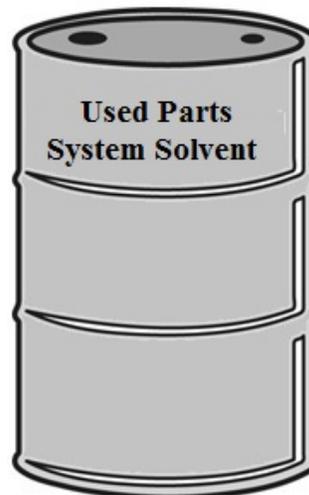
The solvent, the used Edge Tek Filters, and the debris collected from the pre-filter screen and baskets may be contaminated with a number of chemicals used in parts cleaning. Each year an analysis is performed to determine toxicity and flammability.

CHARACTERIZATION

The solvent, the used Edge Tek Filters, and the debris collected from the pre-filter screen and baskets are **non-hazardous industrial waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a 5-gallon bucket for accumulating filters and debris. The bucket must be clean and free from any previous markings or labels.
- Step 2** Mark the bucket with words "Used Parts System Filters" before adding any waste.
- Step 3** Make sure bucket is in the proper SAP within secondary containment.
- Step 4** Put waste in the bucket. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full turn it in to EQD IAW the procedures listed in Chapter 4.
- Step 6** Obtain a closed-top, UN/NA-rated 55-gallon drum for accumulating used solvent. The drum must be clean and free from dents, bulges, excessive corrosion, any previous markings or labels.
- Step 7** Mark the drum with words "Used Parts System Solvent" before adding any waste.
- Step 8** Put waste in the drum, **ensuring a 4" headspace**. Wear proper PPE listed on the SDS. Ensure bung cap is placed back on the drum.
- Step 9** When draining is complete, turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Debris accumulated in the IT-32 and IT-48 Parts Cleaning System basket should be dumped onto paper towels, allowed to air dry, and then placed into the 5-gallon bucket used to accumulate the filters for the machine. The IT-32 and IT-48 systems are authorized for parts cleaning only. No weapons, paint brushes, etc., are allowed to be cleaned in the system. It is recommended that units lock the system closed when it is not in use. For additional guidance refer to IT-32 and IT-48 Parts Cleaning System memorandum, 8 September 2014 (found in Appendix B).

Contact the EQD when solvent is no longer serviceable. Skysol Solvent (NSN 6850-01-381-4401) may be ordered by calling Inland Technology at 1-800-523-3100.

LAMPS

Fluorescent, Mercury Vapor, Neon, Sodium, and Halogen Lamps

POSSIBLE CONTAMINANTS OF CONCERN

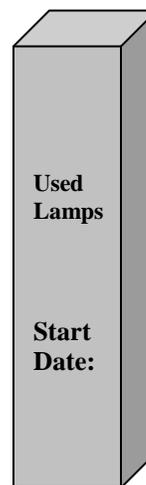
Small quantities of mercury, antimony, cadmium, barium, and lead are used to manufacture fluorescent lamps and high-intensity discharge (HID) lamps such as halogen, high-pressure sodium and mercury vapor lamps.

CHARACTERIZATION

All spent lamps, fluorescent and HID, are **universal wastes**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Lamps should be collected in the boxes they came in or in other packaging that will minimize breakage during normal handling conditions. Contact the EQD to order boxes designed specifically for waste collection and transportation.
- Step 2** Mark the container with the words "Used Lamps"
Also, write on the container the Organization/ Unit's name, phone number, and date the accumulation began.
- Step 3** Make sure container is in the proper SAP.
- Step 4** Put lamps in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** Every 6 months, or when the box becomes full, whichever occurs first, turn lamps in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Care must be taken to ensure lamps are not broken. Residue from broken lamps must be cleaned up and turned in to EQD immediately. Remember to always wear gloves when handling unbroken or broken lamps. Hazardous waste generator training is required for staff assigned responsibility for managing lamp accumulation points.

The EQD must be notified in writing of any lamp accumulation points that are established. Try to minimize the number of accumulation points.

For additional guidance refer to the Management of Used Fluorescent and High Intensity Discharge (HID) Lamps memorandum, 8 September 2014 (found in Appendix B).

Lead-Acid Batteries

(GEL and NON-GEL)

(Non-Vehicle)

POSSIBLE CONTAMINANTS OF CONCERN

The cells of gel and non-gel lead-acid battery contain lead and lead dioxide. Non-gel lead acid batteries also contain an acidic electrolyte solution of sulfuric acid. The solution is very corrosive.

CHARACTERIZATION

Non-vehicle lead-acid batteries are managed as a **universal waste** and turned in to EQD. It is illegal to dispose of a lead-acid battery in a dumpster or at the landfill.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Until batteries are turned in, stack them within secondary containment. **Do not double stack batteries**
- Step 2** Mark the batteries or battery storage area "Used Batteries."
- Step 3** Make sure batteries are in a proper SAP.
- Step 4** Turn in batteries to EQD IAW the procedures in Chapter 4.

GENERAL INFORMATION

Batteries should be kept cool, dry, and away from open flame, heat, and combustibles. Do not store them in a way that might cause leakage.

Remember to always wear proper PPE listed on the SDS.

See procedures for turning in Vehicle Lead-Acid batteries chapter 4.

Lead-Acid Batteries

(Damaged/Leaking)

(Vehicle/Non-vehicle)

POSSIBLE CONTAMINANTS OF CONCERN

The cells of gel and non-gel lead-acid battery contain lead and lead dioxide. Non-gel lead acid batteries also contain an acidic electrolyte solution of sulfuric acid. The solution is very corrosive.

CHARACTERIZATION

Damaged or leading vehicle and non-vehicle lead-acid batteries are managed **as a hazardous waste** and turned in to EQD. It is illegal to dispose of a lead-acid battery in a dumpster or at the landfill. **Only broken, leading vehicle batteries are turned into EQD. See page 4-4 for vehicle lead acid battery turn-in.**

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Until batteries are turned in, stack them within secondary containment. **Do not double stack batteries**
- Step 2** Mark the batteries or battery storage area "Used Batteries."
- Step 3** Make sure batteries are in a proper SAP.
- Step 4** Turn in batteries to EQD IAW the procedures in Chapter 4.

GENERAL INFORMATION

Batteries should be kept cool, dry, and away from open flame, heat, and combustibles. Do not store them in a way that might cause leakage.

Remember to always wear proper PPE listed on the SDS.

See procedures for turning in Vehicle Lead-Acid batteries in chapter 4.

M229 REFILL KIT

POSSIBLE CONTAMINANTS OF CONCERN

Contaminants of concern in the M229 Refill Kit include potassium hydroxide, ethanol, and diethyl phthalate.

CHARACTERIZATION

The refill kit, when disposed of, is a **hazardous waste** for ignitability and toxicity.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in to EQD unused M229 kits in the boxes they came in as soon as they are declared a waste at the unit. Do not accumulate on site.
- Step 2** Ensure that boxes are marked with the contents.

GENERAL INFORMATION

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 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

POSSIBLE CONTAMINANTS OF CONCERN

The chemicals used in manufacturing the detector tickets are numerous. The contaminants of concern, however, are methyl alcohol, ligroine, and mercury.

CHARACTERIZATION

Detector tickets on this WPS must be managed as a **hazardous waste**. All kits contain the same hazardous waste characteristic: ignitability.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in to EQD unused kits in the boxes they came in as soon as they are declared a waste at the unit. Do not accumulate on site.
- Step 2** Ensure that boxes are marked with the contents.

GENERAL INFORMATION

The kit is a portable, expendable item 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 KIT

POSSIBLE CONTAMINANTS OF CONCERN

Vial #I of the M258 decon kit contains ethanol, phenol, sodium hydroxide, ammonia, and the rest water. Vial #II contains ethanol, zinc chloride, and the rest water. The internal ampoule in the vial contains 16 grams; in the packet, mixed with dry towellette 1 gram chloramine "B." The M280 kit packets each contains 10 times the amount that is in the M258A1 kit packets.

CHARACTERIZATION

All kits contain the same **hazardous waste** characteristic: ignitability. Whether the kits are hazardous waste depends 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 allowed to dry, they are non-hazardous.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in to EQD unused decontamination kits in the boxes they came in as soon as they are declared a waste at the unit. Do not accumulate on site.
- Step 2** Ensure that boxes are marked with the contents.

GENERAL INFORMATION

None

MRE HEATERS

POSSIBLE CONTAMINANTS OF CONCERN

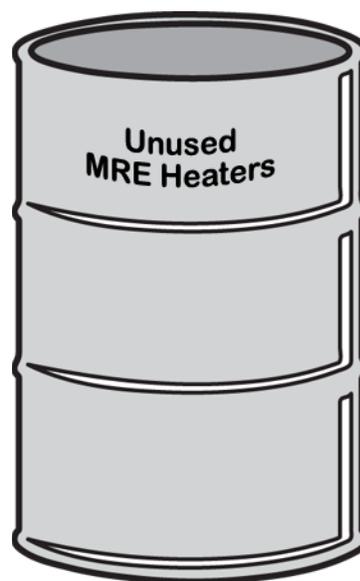
Meals Ready-to-Eat (MRE) heaters consist of a plastic bag containing a piece of fiberboard and powdered magnesium or magnesium alloys along with other materials.

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 EQD for further instructions.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** For large quantities of MRE heaters, obtain an open-top, UN/NA-rated metal drum from EQD IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container with the words “Unused MRE Heaters” before adding any waste.
- Step 3** Make sure container is in the proper SAP.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

None

OWS/SUMP WASTEWATER AND SLUDGE

POSSIBLE CONTAMINANTS OF CONCERN

Contaminants found in oil-water separator (OWS) and sump wastewater/sludge will depend on the processes and materials used in the surrounding area. Likely contaminants include metals.

CHARACTERIZATION

The residues or sediments that settle out of liquid solutions range in consistency from slurries to sludge. These residues or sediments may be hazardous waste, depending on the constituents of the original solution.

GENERAL INFORMATION

The EQD conducts OWS sampling and clean out. If your OWS needs servicing, contact the DPW Construction Branch, 442-3898 to verify servicing is required. DPW will then notify EQD.

The EQD will schedule the clean out of sumps, sludge pits, and OWSs as needed.

PAINT AND PRIMER—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. Latex house paint manufactured before 1992 likely contains mercury. Latex paint manufactured before 1978 likely contains lead. Refer to the SDS for specific hazards.

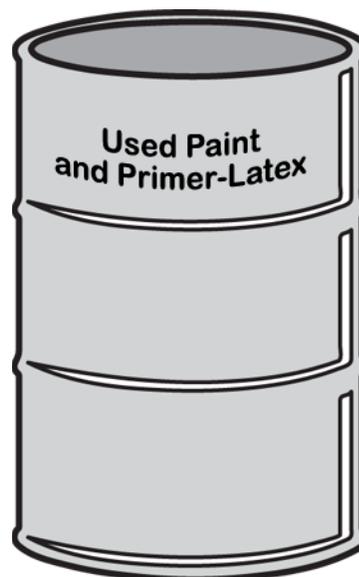
CHARACTERIZATION

Latex paint and primer are most often **non-hazardous industrial waste**. Latex paint, however, depending on when it was manufactured, may contain constituents that make it hazardous. If you're not sure if it contains mercury or lead, check the label and call EQD. Most house paint manufactured after 1991 has no lead or mercury and is therefore non-hazardous.

Tarps, rollers, brushes, gloves, and stir sticks that have dried may be taken to the landfill.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in individual containers of latex paint or latex primer or obtain an open-top, UN/NA-rated drum (metal or poly) from EQD for accumulating individual paint container. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the drum with words "Used Paint and Primer-Latex", if containing both or "Used Paint" if only containing paint, before adding any waste.
- Step 3** Make sure container is in the proper accumulation point within secondary containment.
- Step 4** Put waste in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

If not reused, **dried** paintbrushes, rollers, and stir sticks used to apply latex paint and primer may be taken to the landfill. **Empty cans of latex paint (less than 1 inch of paint left) that have solidified may also be taken to the landfill. Cans that contain lead based paint must be turned in to EQD.**

Wastewater from latex paint cleanup can be put into the sanitary sewer. Do not put into storm drains or septic systems. Where possible, reuse the wastewater by allowing solids to settle out and pouring off the water into another container. The latex solids can then be dried out and managed as latex paint waste.

PAINT—NON-LATEX

Paints in Cans, Paint Booth Paint

POSSIBLE CONTAMINANTS OF CONCERN

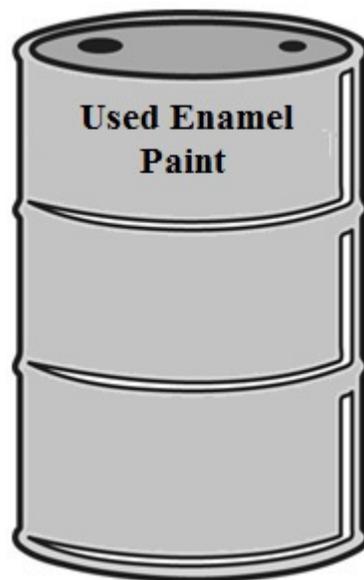
Solvent-based paints, primer, and stains contain organic solvents such as mineral spirits, alcohols, acetates, and aliphatic solvents. Oil-based paints, primer, and stains are regulated due to their flammability and the presence of regulated solvents. They also contain regulated metals including cadmium, chromium, lead, silver, barium, mercury, arsenic, and selenium. Refer to the SDS for specific hazards.

CHARACTERIZATION

Waste oil-based paints, primers, and stains are **hazardous waste**. When cleaning up after painting, remove all **excess** paint from tarps, rollers, brushes, etc., and dispose of as hazardous waste. Tarps, rollers, brushes, gloves, and stir sticks that have dried and are no longer needed may be taken to the landfill.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in individual containers of oil-based paint or obtain an open-top, UN/NA-rated metal drum from EQD for accumulating individual paint cans; and a closed-top UN/NA-rated metal drum for paint booth paint. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the drum with words “Used Paint” before adding any waste.
- Step 3** Make sure container is in the proper SAP within secondary containment.
- Step 4** Put individual cans of waste in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Do not mix different types of paints or solvents unless directed to do so by the EQD. 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.

Empty cans of non-latex paint (less than 1 inch of paint left) that have solidified may also be taken to the landfill.

Store containers of paint 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.

PAINT BOOTH WASTE--SOLID

Barrier Paper, Masking Tape, Paint Booth Filters, Gloves, Stir Sticks, Mixing Implements, Sandpaper, and Paint Chips/Dust

POSSIBLE CONTAMINANTS OF CONCERN

Paint booth waste will contain residue such as solvents, heavy metals, etc., that are used in the manufacturing of the paint used.

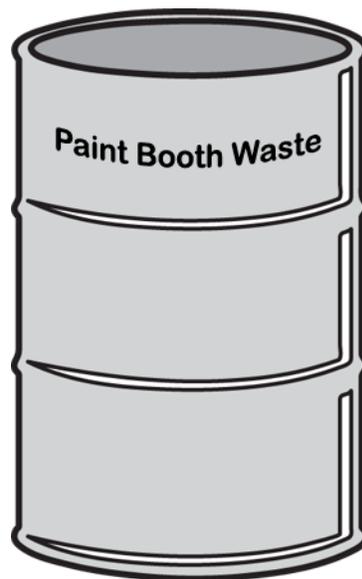
CHARACTERIZATION

Paint booth waste described in this WPS generated from painting operations do not qualify as a listed hazardous waste since the solvents found in the waste are considered ingredients in the paint. The wastes may qualify, however, as characteristic **hazardous waste** and must be tested.

Notify the EQD immediately if you change paint type, solvent type, etc.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain an open-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the drum with words "Paint Booth Waste" before adding any waste.
- Step 3** Make sure container is in the proper SAP within secondary containment.
- Step 4** Put waste in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Waste paper, adhesives, paint booth filters, and all **non-liquid** wastes such as gloves, stir sticks, mixing implements, and sandpaper may be accumulated in the same container. If the waste passes the tests for characteristics of ignitability, corrosivity, reactivity, and toxicity, and does not contain free liquids, it may be taken to the landfill. Contact the EQD for guidance.

PAINT RELATED MATERIALS

Thinner, Primer, Stains, Varnish, Stripper, Remover, or Polyurethane

POSSIBLE CONTAMINANTS OF CONCERN

Paint thinner, stripper, or remover can be organic solvents such as mineral spirits, alcohols, acetates, and aliphatic solvents. They are regulated due to their flammability and the presence of listed solvents. Some are also corrosive and should be kept separated from the flammables. Refer to the SDS for specific hazards.

CHARACTERIZATION

Paint thinners, strippers, or removers, also called paint-related waste, are **hazardous waste**. Unless previously approved by the EQD, do not mix different types together, as violent reactions may occur.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Turn in individual containers of paint waste, unless you generate a large volume (e.g., DPW). For large volumes of paint waste, obtain a closed-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the container or drum with words "Paint Related Waste" before adding any waste.
- Step 3** Make sure container is in the proper SAP within secondary containment.
- Step 4** Put waste in the container or drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4. For small containers, turn them in as soon as possible.



GENERAL INFORMATION

Never dispose of paint-related waste by pouring it on the ground or into a drain. Do not dry out containers of paint thinners, stripper, or remover, or spread out on cardboard to dry, etc. Never let paint-related waste containers sit open to evaporate; the fumes are toxic.

If the manufacturer's label is missing or illegible, label the container with a description of its contents.

Store containers of paint thinner in a well-ventilated area.

Do not accumulate flammable paint-related waste near oxidizers, corrosives, or heat sources. Corrosive paint-related materials must be separated from flammables.

PESTICIDES

POSSIBLE CONTAMINANTS OF CONCERN

Pesticides include insecticides, herbicides, rodenticides, and fungicides. All pesticides are toxic. Contaminants of concern vary from one pesticide to another.

CHARACTERIZATION

The Pest Management Shop manages pesticides and pesticide containers IAW the Fort Sill Pest Management Plan. Units/activities generating pesticide containers (full, partially full or empty) must manage them as a **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Units/activities must ensure pesticide containers are labeled or marked with their contents.
- Step 2** Turn in to EQD any pesticide in the boxes or containers they came in as soon as they are declared a waste at the unit. Do not accumulate on site. Ensure that boxes/containers are marked or labeled with the contents.

GENERAL INFORMATION

For significant quantities of pesticides, contact the EQD for specific handling procedures. Only the Pest Management Shop is authorized to spray on Fort Sill.

PROTECTIVE MASK FILTERS/CANISTERS

POSSIBLE CONTAMINANTS OF CONCERN

The mask filters contain ASC Whetlerite charcoal and heavy metal chemical compounds (Chromium 6).

CHARACTERIZATION

Separate all masks by their NSN and manage as a **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain an open-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the drum with words “Used Protective Mask Filters” before adding any waste.
- Step 3** Make sure container is in the proper SAP.
- Step 4** Put waste in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** Mark the date on the container and turn in the filters to EQD within 72 hours. Follow the procedures listed in Chapter 4.



GENERAL INFORMATION

These procedures do not cover any item that has been contaminated with agents.

RAGS AND SHOP TOWELS—LAUNDERED

POSSIBLE CONTAMINANTS OF CONCERN

Rags and shop towels may be contaminated with any number of chemicals used in the shop.

CHARACTERIZATION

Contaminated cloth rags used in performing maintenance activities are a **non-hazardous industrial waste**. If rags are used to clean up solvents, paints, adhesives, and sealants call EQD for further assistance. Some maintenance shops on Fort Sill have arranged for a laundered rag contract and will use this Protocol Sheet. All other shops must manage their used rags according to the Rags and Shop Towels—Not Laundered WPS, page A-33.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Keep non-hazardous industrial rags in a closed container, marked “Used Rags-Laundry Contract.”
- Step 2** Make sure container is in the proper accumulation point.
- Step 3** When the non-hazardous industrial rag container becomes full, call the contractor to have soiled rags picked up.

GENERAL INFORMATION

Used rags 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.

RAGS AND SHOP TOWELS—NOT LAUNDERED

POSSIBLE CONTAMINANTS OF CONCERN

Rags and shop towels may be contaminated with any number of chemicals used in the shop. Each year an analysis is performed to determine toxicity and flammability.

CHARACTERIZATION

Contaminated cloth rags used in performing maintenance activities are currently a **non-hazardous industrial waste**. If rags are used to clean up solvents, paints, adhesives, and sealants call EQD for further instructions.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Keep non-hazardous industrial rags in a closed container, marked “Used Rags.”
- Step 2** Make sure container is in the proper accumulation point.
- Step 3** When the non-hazardous industrial rag container becomes full, double bag the rags, tape the bag closed and turn it in to EQD IAW the procedures listed in Chapter 4.

GENERAL INFORMATION

Used rags 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 OIL—UNCONTAMINATED

Motor Oil, Differential Fluid, Transmission Oil, Hydraulic Oil,
Gear Oil, Lubricating Oil, and Brake Fluid

POSSIBLE CONTAMINANTS OF CONCERN

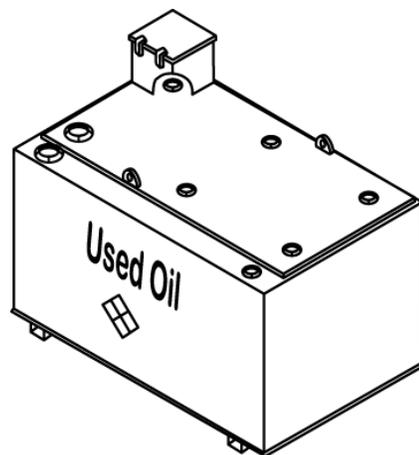
Used oil potentially contains traces of metals such as chromium, cadmium, and lead. Chromium, cadmium, and lead are hazardous metals. Refer to the SDS for specific hazards.

CHARACTERIZATION

Used petroleum-based and synthetic oils (but not vegetable- or animal-based oils) are **non-hazardous industrial waste** and can be recycled if not contaminated.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Place uncontaminated used oil in Lube Cubes® or in closed-top, UN/NA-rated, 55-gallon drum, if your unit does not have a Lube Cube.
- Step 2** Ensure containers are marked with the words “Used Oil” before adding any waste.
- Step 3** Put waste in the container. Wear proper PPE listed on the SDS. Ensure lid is closed and secured on the lube cube.
- Step 4** Call Safety Kleen at 1-405-747-2025 to have the Lube Cube serviced. Safety Kleen will also service never opened oil drums placed by the Lube Cube. Used oil in drums will **NOT** be serviced by Safety Kleen and must be poured into the lube cube. If the unit does not have a lube cube and the container becomes full, **ensuring a 4” headspace**, turn it in to EQD IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Lube Cubes are not to be used for the storage or placement of rainwater collected in oil collection pans (drip pans). Do not put this material in the Lube Cubes. Contact the EQD for information concerning proper disposal of this waste.

No solvents or other hazardous waste can be mixed with used oil. If listed hazardous waste has been mixed with oil, the mixture must be managed as hazardous waste.

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), sorbents, floor sweepings, and swarf that come in contact with chlorinated fluids must—like the fluids—be managed as hazardous waste.

PAG (polyalkylene glycol) oil is a lubricant waste with R134a refrigerants, mostly in automobiles. It may be a hazardous waste due to toxicity and corrosivity. Contact the EQD if disposing of PAG oil.

USED OIL—CONTAMINATED

Motor Oil, Differential Fluid, Transmission Oil, Hydraulic Oil,
Gear Oil, Lubricating Oil, and Brake Fluid

POSSIBLE CONTAMINANTS OF CONCERN

Used oil potentially contains traces of metals such as chromium, cadmium, and lead. Chromium, cadmium, and lead are hazardous metals. Refer to the SDS for specific hazards.

CHARACTERIZATION

Used oil contaminated with solvents, fuels, antifreeze, or other chemicals may be hazardous and must be managed as a hazardous waste. Depending on the chemical and the amount of chemical mixed with the oil will determine how to classify the waste. Call EQD if you have concerns about your oil.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain a closed-top, UN/NA-rated, 55-gallon metal drum IAW Chapter 3. Containers must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Ensure containers are marked with the words “Used Oil” before adding any waste.
- Step 3** Make sure container is in the proper accumulation point within secondary containment.
- Step 4** Put waste in the container. Wear proper PPE listed on the SDS. Ensure bung cap is placed back on the container.
- Step 5** When the container becomes full, **ensuring a 4” headspace**, mark the date on the container and turn it in to EQD within 72 hours IAW procedures listed in Chapter 4.



GENERAL INFORMATION

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), sorbents, floor sweepings, and swarf that come in contact with chlorinated fluids must—like the fluids—be managed as hazardous waste.

PAG (polyalkylene glycol) oil is a lubricant waste with R134a refrigerants, mostly in automobiles. It may be a hazardous waste due to toxicity and corrosivity. Contact the EQD if disposing of PAG oil.

WEAPONS CLEANING PATCHES AND RAGS

POSSIBLE CONTAMINANTS OF CONCERN

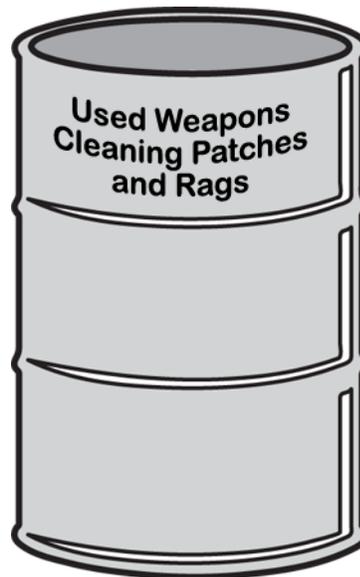
Weapons cleaning patches, rags, Q-tips, pipe cleaners, etc. may be contaminated with lead residue after cleaning weapons. Lead is a characteristic toxic metal. If Pre-1994 Breakfree® was used, the rags will contain chlorinated solvents.

CHARACTERIZATION

Weapons cleaning patches and rags are **hazardous waste**.

CONTAINER MARKING AND HANDLING PROCEDURES

- Step 1** Obtain an open-top, UN/NA-rated drum from EQD IAW Chapter 3. Drum must be clean and free from dents, bulges, excessive corrosion, and any previous markings or labels.
- Step 2** Mark the drum with words “Used Weapons Cleaning Patches and Rags” before adding any waste.
- Step 3** Make sure container is in the proper SAP within secondary containment.
- Step 4** Put waste in the drum. Wear proper PPE listed on the SDS. Ensure lid is placed back on the container.
- Step 5** When the container becomes full, mark the date on it and turn it in to EQD within 72 hours IAW the procedures listed in Chapter 4.



GENERAL INFORMATION

Do not use Breakfree manufactured before 1994. It contains chlorinated solvents that are F-Listed when used for cleaning weapons. Turn in all pre-1994 Breakfree to EQD immediately.

Appendix B. Memorandums

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IT-48WC Weapons Cleaning System	B-7
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IMSI-PWE

8 September 2014

MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Impulse II Aqueous Parts Washer Operational Guidelines

1. Prior to operation clean filter basket located in the cleaning chamber daily and put debris in contaminated dry sweep.
2. Prior to daily operation check water level of machine. Level should be approximately 2 inches above the bottom of the filter basket.
3. Turn on heating element (requires 1-1/2 hours to reach wash temperature).
4. Turn on skimmer for 1 hour during warm-up period. **DO NOT** operate skimmer when washing. Skimmed oil **will be** placed in unit's lube cube **daily**.
5. Turntable grease fitting should be greased every two weeks.
6. Eight (8) ounces of Nat-50ms detergent may need to be added to machines weekly, dependent upon use. The RPN-225 rust inhibitor needs only to be added when the water is changed out.
7. When machine stops cleaning parts and the water needs changing obtain a closed-top, 55-gallon drum to pump water from the Impulse II aqueous parts washer cleaning system. Mark the drum with "**used Impulse II aqueous parts washer fluid**" before adding the waste. Pump waste in drum ensuring a 4" headspace. Once complete contact your unit/organization Environmental Officer or the Environmental Quality Division (EQD) at 442-3266 for further guidance and turn-in procedures. .
8. Debris and filters from the Impulse II aqueous parts washer system should be air dried then placed in a 5 gallon plastic bucket with a lid and mark "**used Impulse II aqueous parts washer filters.**" Once container is full, contact your unit/organization Environmental Officer or the Environmental Quality Division (EQD) at 442-3266 for further guidance and turn-in procedures.
9. The cleaning of weapons (i.e., 9 mm, M 16. 30 cal, 50 cal) in an Impulse II aqueous parts washer is **strictly forbidden**.
10. **DO NOT** put solvents (i.e., Safety Kleen, PD-680, Breakfree, CLP, TCE or paint thinners) or solvent wet parts in the Impulse aqueous parts washer. This will result in foaming and damage to the machine and result in the solution being disposed of as a waste.
11. **DO NOT** clean drip pans or empty POL containers in the Impulse II aqueous parts washer.
12. **DO NOT** clean paint brushes in the Impulse II aqueous parts washer.

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SUBJECT: Impulse II Aqueous Parts Washer Operational Guidelines

13. Nat-50ms detergent or RPN-225 rust inhibitor can be ordered from Better Engineering at 800-229-3380, using a Government credit card.

14. Questions regarding this procedure may be found in the instructions and operational manual, the Fort Sill Hazardous Material and Waste Management Plan, by contacting the unit/organization Environmental Officer or by contacting the Environmental Compliance Branch, EQD at 442-3266.



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Chief, Environmental Quality Division

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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Management of Lithium Sulfur Dioxide Batteries

1. References.

- a. Letter, Environmental Protection Agency (EPA), Washington, D.C., 8 June 2006.
- b. Technical Bulletin (TB) 43-0134, Battery Disposition and Disposal, 1 October 1996.
- c. 40 Code of Federal Regulations, Protection of Environmental, Parts 268.9, 1 October 2005.
- d. 49 Code of Federal Regulations, Transportation, Part 172.101, 1 October 2006.

2. Based on the above references Lithium Sulfur Dioxide Batteries are considered a hazardous waste at the time of removal from service. This guidance supersedes TB 43-0134 and all units are to dispose of lithium sulfur dioxide batteries as a waste. DO NOT discharge the batteries prior to turn in procedures.

3. Waste lithium batteries will be turned in to the Environmental Quality Division (EQD) at building 2515. Personnel/units/organizations generating waste lithium batteries on Fort Sill will contact the Environmental Quality Division (EQD) in writing to provide location of the lithium battery accumulation point in the unit/organization. If the unit/organization has an identified Environmental Officer then this individual will contact the EQD at 442-3266 to identify the accumulation point.

4. Waste lithium batteries are reactive and must stay dry at all times. Waste lithium batteries must be accumulated in a steel drum prior to turn in. The accumulation container must be marked with the words "Used Lithium Batteries" and stored in a dry accumulation point. When one drum is filled the unit has 72 hours to turn it into EQD for disposal. Hazardous waste generator training is required for staff assigned responsibility for managing lithium batteries.

5. Questions regarding this procedure may be found in the Fort Sill Hazardous Material and Waste Management Plan, by contacting the unit/organization Environmental Officer, or by contacting the Environmental Compliance Branch, EQD at 442-3266.



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SUBJECT: IT-48WC Weapons Cleaning System

1. For operational and equipment specification refer to the owner's manual.
2. Weapons Cleaning System is authorized for **weapons cleaning** only. No automotive parts, paint brushes, etc. are allowed to be cleaned in the system.
3. Debris collected from pre-filter screen, baskets and used Edge Tek Filters should be air dried then placed in a 5 gallon plastic bucket with a lid and mark "**used weapons system filters.**" Once container is full, contact your unit/organization Environmental Officer or Environmental Quality Division (EQD) for further guidance and turn-in procedures.
4. If solvent needs to be changed, obtain a closed-top, 55-gallon drum to pump solvent from the weapons cleaning system. Mark the drum with "**used weapons system solvent**" before adding the waste. Pump waste in drum ensuring a 4" headspace. Once complete contact your unit/organization Environmental Officer or EQD for further guidance and turn-in procedures. Solvent information: Skysol 100 Solvent (NSN 6850-01-381-4401) may be ordered by calling Inland Technology at 1-800-552-3100.
5. Recommend weapons cleaning units be locked to prevent unauthorized uses.
6. Questions regarding the operation, filter storage, and disposal, may be found in the Fort Sill Hazardous Material and Waste Management Plan, by contacting your unit/organization Environmental Officer or by contacting the Environmental Compliance Branch, EQD at 442-3266.



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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: IT-32 and IT-48 Parts Cleaning System

1. For operational and equipment specification refer to the owner's manual.
2. Gross contamination should be removed from parts prior to using the Inland System to prolong the solvent life.
3. Parts cleaning system is authorized for **parts cleaning** only. No weapons, paint brushes, empty POL containers, drip pans, etc. are allowed to be cleaned in the system
4. Debris collected from pre-filter screen, baskets and used Edge Tek Filters should be air dried then placed in a 5 gallon plastic bucket with a lid and labeled "**used Parts System Filters.**" Once the container is full, contact the unit/organization Environmental Officer or Environmental Quality Division (EQD) at 442-3266 for further guidance and turn-in procedures.
5. If solvent needs to be changed, obtain a closed-top, 55-gallon drum to pump solvent from the parts cleaning system. Mark the drum with "**used Parts System Solvent**" before adding the used solvent. Pump used solvent in the drum ensuring a 4" headspace. Once complete contact your unit/organization Environmental Officer or EQD at 442-3266 for further guidance and turn-in procedures. Solvent information: Skysol 100 Solvent (NSN 6850-01-381-4401) and Edge Tek filters may be ordered by calling Inland Technology at 1-800-552-3100.
6. Recommend parts cleaning units be locked to prevent unauthorized uses.
7. For questions regarding the operation, filter storage, and disposal procedures refer to Fort Sill Hazardous Material and Waste Management Plan, contact your unit/organization Environmental Officer or contact the Environmental Compliance Branch, EQD at 442-3266.



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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Management of Used Fluorescent and High Intensity Discharge (HID) Lamps

1. Used fluorescent and/or HID lamps are regulated by EPA's "Standards for Universal Waste Management" found in 40 CFR 273. This regulation makes it necessary for anyone generating this waste to determine if the lamp exhibits a hazardous characteristic as described in 40 CFR 261.20 through 40 CFR 261.24 and to manage the lamp accordingly.
2. **All fluorescent and HID lamps generated on Fort Sill will be managed as a universal hazardous waste unless specifically excluded from classification as a hazardous waste by a manufacturer's certification or exempted as a "household waste" in 40 CFR 261.4(b)(1).** Household wastes are defined as any lamp changed by the occupant of an army family housing unit in their quarters.
3. All personnel/units/organizations that generate used (burned out) fluorescent or HID lamps on Fort Sill will turn the used lamps in to the EQD at building 2515. High intensity discharge (HID) lamps include various types of electrical lights: mercury vapor, metal halide, high pressure sodium, low pressure sodium, and less common, xenon short-arc lamps
4. Used lamps may be accumulated prior to turn in for a period of 6 months. If lamps are to be accumulated they must be stored in a closed container, which will protect them from breakage. The accumulation container must be marked with the words "Used Lamps" and the date the accumulation started. Also required on the container are the name, phone number and unit/organization of the person responsible for the accumulation area. Care must be taken to insure accumulated lamps are not broken and residue from broken lamps must be cleaned up immediately. Hazardous waste generator training is required for staff assigned responsibility for managing lamp accumulation points.
5. The EQD must be notified in writing of any lamp accumulation points that are established. Accumulation points for fluorescent bulbs and HID lamps in units/organizations will be identified as the waste is generated and provided to EQD either by the unit/organization Environmental Officer or directly if there is no Environmental Officer identified. Units and organizations are encouraged to establish a minimum number of centralized lamp accumulation points.
6. Questions regarding this procedure may be found in the Fort Sill Hazardous Material and Waste Management Plan, by contacting the unit/organization Environmental Officer, or by contacting the Environmental Compliance Branch, EQD at 442-3266.



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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Disposal of Appliances with Freon

1. Section 608 of the Clean Air Act prohibits individuals from knowingly venting ozone depleting compounds, such as chlorofluorocarbons (CFC's) which are used as refrigerants, into the atmosphere while maintaining, servicing, repairing, or disposing of air-conditioning or refrigeration equipment (appliances, refrigerators, water coolers, etc.). This applies to any appliance owned by Fort Sill tenants, units or activities. These items cannot be disposed of unless the refrigerant has been recovered in accordance with EPA requirements.
2. The Directorate of Public Works (DPW) has the responsibility, through its contractor, of managing all ozone depleting compounds on Fort Sill.
3. For All non-useable appliances that are to be disposed of on Fort Sill, a service order must be called into DPW, 442-3251, requesting refrigerant evacuation. As part of this process, time and date that the requestor can meet with the removal technician will be established. Once the CFC is removed, DRMS Form 2016 will be completed by the technician and given to the requestor.
4. Once the CFCs have been removed, the item along with the DRMS Form 2016, may be taken to the landfill, recycle center or turned into the Defense Logistics Agency Disposition Service (DLADS)..
5. During special events such as fall and spring cleanup, the DPW contractor will set up collection points for appliances that are destined for disposal. They can be dropped off and all refrigerants will be evacuated and the appliance properly disposed of.
6. Items that are in working order and are being sold for continued use do not have to conform to this requirement.
7. Contact Environmental Compliance Branch (EQD) at (580)442-3266 with any questions regarding this procedure.



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Fort Sill Hazardous Material and Waste Management Plan

IMPORTANT NUMBERS

Hazardous Waste and Material	442-3266
Motor Pool Inspection-EQD	442-4870 / 3266
LRC Battery Shop	442-2912
Fire Department	442-4905 / 5911
Shelf Life- LRC	442-1905
Unit Movement	442-3661
Range Control	442-1490
Asbestos-EQD	442-2792
Landfill	442-5241
DLADS	442-3415
Post Safety	442-4215
Safety Kleen	405-745-2025
Central Wash Facility West	442-6731
LRC Welding Shop-Sniff Test	442-3451
Freight Movement-Fuel Sample	442-6702
DPW-Oil/Water Separator Service	442-3898
Environmental Health—Field Sanitation	442-5403
Preventive Medicine-Water Buffalo Inspection	442-3175 / 254-466-0882

