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Company Level Environmental Awareness Training

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Legal and Other Requirements

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- OPORD 10-18: USAG Baumholder Environmental Officer Appointment
- AER 200-1, Army in Europe Environmental Quality Program
- AER 710-2, Supply Policy Below the Wholesale Level
- AER 710-7, Army in Europe Hazardous Material Management Program
- AR 700-141, Hazardous Materials Information Resource System
- German Final Governing Standards (GFGS), Chapter 5, 6, and 18
- USAG Hazardous Waste Management Plan
- USAG Spill Prevention Cleanup and Countermeasure Plan

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Definitions

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“Hazardous Material”

Raw materials, commodities, or other manufactured products that exhibit at least one hazardous characteristic. Information is available from a Material Safety Data Sheet.

“Hazardous Wastes”

Wastes listed in the USEUCOM Waste List and denoted by an asterisk (*) added to the six-digit waste code (see <https://www.us.army.mil/suite/files/20917769>)

“Hazardous Waste Profile Sheet”

A document that identifies and characterizes the waste by providing user’s knowledge of the waste, and/or lab analysis, and details the physical, chemical, and other descriptive properties or processes that created the HW

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Definitions

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“Generating Activity”

The actual organization, unit, or shop within a DOD installation that produces the waste. The generating activity is typically the activity responsible for properly managing the waste and preparing internal HW documentation.

“Hazardous Waste Accumulation Point (HWAP)”

A shop, site, or other work center where HW is accumulated until removed to a hazardous waste storage area (HWSA) or shipped for treatment or disposal. A HWAP may be used to accumulate ≤ 208 liters (55 gallons) of HW, or 1 liter (1 quart) of acute HW, from each waste stream. The HWAP must be at or near the point of generation and under the control of the operator, the HWAP manager.

“Hazardous Waste Storage Area (HWSA)”

One or more locations on a DOD installation where HW is collected before shipment for treatment or disposal. An HWSA may store > 208 liters (55 gallons) of an HW stream, and > 1 liter (1 quart) of an acute HW stream.

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Hazardous Materials

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Inventory Maintenance

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- HM users maintain an inventory of HM in the storage locations
- Inventory must be updated annually at a minimum

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Identification, Classification and Characteristics



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- Supplier mandated to provide MSDS to customer
- MSDS's are required by OSHA through the HAZCOM program – “Right to know”
 - Requires manufacturers to assess the physical and health hazards
 - Requires employers to provide information on the chemicals
- Must be accessible to personnel
- DoD uses HMIRS as a standard format for MSDS's

MSDS Safety Information			
FSC: 9130	NIIN: 00-256-8613	MSDS Date: 03/01/1991	MSDS Num: BPMQX
Submitter: D DG		Tech Review: 12/17/1992	Status CD: C
Product JET FUEL ID:			MFN: 01
Article: N			Kit N Part:
Responsible Party		Cage: 4L196	
Name: HUNT REFINING CO			
Address: 1855 FAIRLAWN RD			Box: 1850
City: TUSCALOOSA		State: AL	Zip: 35403
Country: US			
Info Phone Number: 205-391-3300/FAX 345-8769			
Emergency Phone 205-758-6675/800-424-9300(CHEMTREC) Number:			
Radioactive Ind: N			
Preparer's Name: N/P			
Proprietary Ind: N		Review Ind: Y	
Published: Y		Special Project CD: N	
Contractor Summary			
Cage: 4L196	Name: HUNT REFINING CO.		Box: 1850
Address: 1855 FAIRLAWN ROAD	State: AL	Zip: 35403	
City: TUSCALOOSA	Phone: 205-391-3300, CHEMTREC 800-424-9300		
Country: US			
Item Description Information			
Item Manager:			
Item Name: TURBINE FUEL, AVIATION			
Specification Number: NK	Type/Grade/Class: NK		
Unit of Issue: GL	Quantitative Expression:		
UI Container Qty: X	Type of Container: N/K		
Ingredients			
Cas: 109-86-4	Code: M	RTECS #: KL5775000 Code: M	
Name: 2-METHOXYETHANOL (EGME) (SARA III)/ETHYLENE GLYCOL METHYL ETHER			
% Text: 0.15	Environmental Wt:		
Other REC Limits: NONE RECOMMENDED			
OSHA PEL: S, 25 PPM	Code: M	OSHA STEL:	Code:
ACGIH TLV: S, 5 PPM; 9293	Code: M	ACGIH N/P STEL:	Code:
EPA Rpt Qty:		DOT Rpt	

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Types of Hazardous Materials and their Properties

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Below are some examples of HM used in the USAG

Hazardous Material	Hazardous Properties
Antifreeze	Irritant, Toxic
Batteries, Alkaline (Drycell)	Health Hazard
Batteries, Lithium	Flammable, Irritant, Toxic
Batteries, NICAD (rechargeable)	Corrosive, Combustible
Batteries, Mercury	Toxic
Batteries, Lead Acid	Corrosive
Calcium Hypochlorite	Corrosive, Oxidizer
Chlorine Gas	Toxic, Oxidizer, Compressed Gas
DS2 Decon Agent (EASY Decon)	Corrosive, Flammable
Gases compressed, Acetylene, Propane, Hydrogen, Diesel Engine Starters	Flammable
Gases compressed, Argon, Helium, Halon Fire Ext.	Non-Flammable, Health Hazard
Gases compressed, Oxygen	Oxidizer
JP8	Flammable, Carcinogenic
Spray Cans (Paint, Lubricants, Pesticides)	Flammable, Compressed Gas, Toxic

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Types of Hazardous Materials and their Properties

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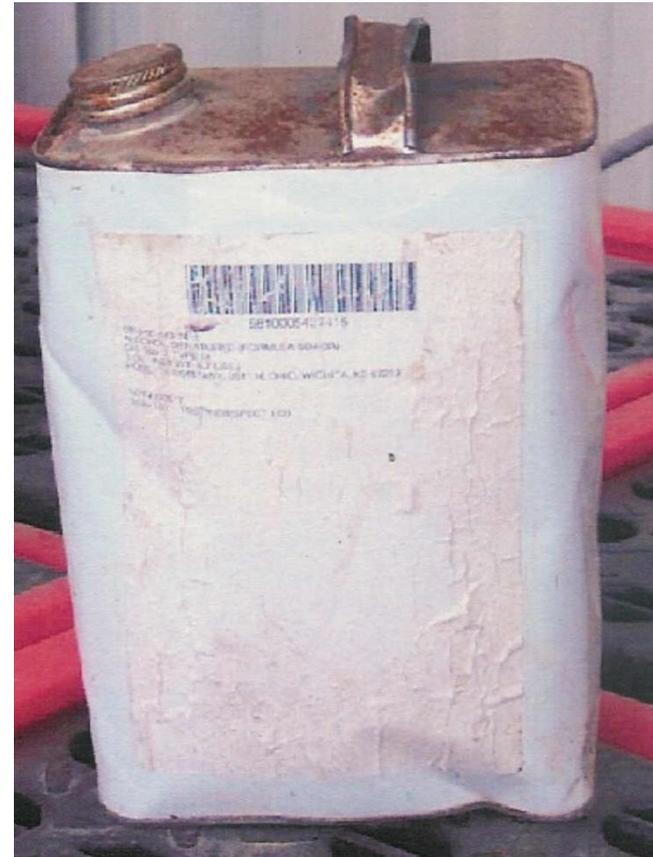


Hazardous Materials	Hazardous Properties
Drysweep	Health Hazard
Asbestos containing materials (brake liners)	Carcinogen (Health Hazard)
Engine/motor oil, hydraulic, and brake fluids	Flammable, Toxic
Automotive grease	Environmental Hazard
Latex and Oil Based Paints	Flammable, health and environmental hazard
Glues and adhesives	Flammable, Toxic
Detergents, Cleaners, Car and Floor Waxes	Flammable, Corrosive, Irritant
DS2 Decon Agent (EASY Decon)	Corrosive, Flammable
Household type medicines and beauty products	Toxic, flammable, Health hazards,
Toner and printing products	Health and Environmental Hazard
Fluorescent and Energy Saving bulbs	Carcinogenic, Environmental Hazard

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- Sealed except during transfer of contents filling or emptying
- Stacking height restrictions
- Protected from inclement weather or temperatures
- Use prior to expiration of shelf life. Rotate stock “First In, First Out”.
- Ensure labeling is legible
- HN products are labeled with Danger Symbols
- US products are labeled with DD Form 2521 or 22



Labeling Requirements for HM

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HAZARDOUS CHEMICAL WARNING LABEL				
1. CHEMICAL/COMMON NAME				
2. HAZARD CODE		3. NSN/LSN		
4. PART NUMBER				
5. ITEM NAME				
6. HAZARDS (X all that apply)	(1) Acute (Immediate)			(2) Chronic (Delayed)
	NONE	SLIGHT	MODERATE	SEVERE
a. HEALTH				
b. CONTACT				
c. FIRE				
d. REACTIVITY				
7. SPECIFIC HAZARDS AND PRECAUTIONS (Including Target Organ Effects)				
<i>(See MSDS for further information)</i>				
8. PROTECT (X all that apply)	a. EYES	b. SKIN	c. RESPIRATORY	
9. CONTACT: a. COMPANY NAME				
b. ADDRESS (Street, P.O. Box, City, State, Zip Code and Country)				
c. EMERGENCY TELEPHONE NUMBER (Include Area Code)				
10. PROCUREMENT YEAR FOR HAZARDOUS CHEMICAL				

DD Form 2522, DEC 88

DD Form 2521 or 22
PER DoDI 6050.5-H



Highly Flammable
Leichtentzündlich



Extremely Flammable



Corrosive



Irritant



Explosive



Very Toxic



Toxic



Harmful to Health



Oxidizer



Environmental Hazard



Chemical Storage and Segregation

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	Flammable	Corrosive	Irritant	Toxic	Oxidizer
Flammable	✓	✗	☹	✗	✗
Corrosive	✗	Avoid	✓	✗	✗
Irritant	☹	✓	✓	☹	☹
Toxic	✗	✗	☹	✓	✗
Oxidizer	✗	✗	☹	✗	✓

✓	Co storage is allowed
☹	Allowable, but not recommended
Avoid	Allowed by law, but incompatibility might occur
✗	Not allowed

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Hazardous Waste

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Types of Hazardous Wastes and their Properties

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Below are HW generated in the USAG which must be disposed IAW German Law

Hazardous Wastes	Hazardous Properties
Spent Antifreeze	Irritant, Toxic
Used Batteries, Alkaline (Drycell)	Health Hazard
Used Batteries, Lithium	Flammable, Irritant, Toxic
Used Batteries, NICAD (rechargeable)	Corrosive, Combustible
Used Batteries, Mercury	Toxic
Used Batteries, Lead Acid	Corrosive
Expired or damaged containers w/Calcium Hypochlorite	Corrosive, Oxidizer
DS2 Decon Agent (EASY Decon)	Corrosive, Flammable
Empty or partially full Gases compressed, Acetylene, Propane, Hydrogen, Diesel Engine Starters	Flammable
Empty or partially full Gases compressed, Argon, Helium, Halon Fire Ext.	Non-Flammable, Health Hazard
Empty or partially full Gases compressed, Oxygen	Oxidizer
Contaminated JP8	Flammable, Carcinogenic
Empty or non-functional Spray Cans (Paint, Lubricants, Pesticides)	Flammable, Compressed Gas, Toxic

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Types of Hazardous Wastes and their Properties

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Hazardous Wastes	Hazardous Properties
Empty Metal or Plastic Cans, previously contained HM or residues	Irritant, Toxic, Flammable, Corrosive
Spent/used contaminated drysweep and rags	Flammable
Asbestos containing materials (brake liners)	Carcinogen (Health Hazard)
Spent/used engine/motor oil, hydraulic, and brake fluids	Flammable, Toxic
Automotive grease	Environmental Hazard
Expired and partially solidified paints (latex and oil based)	Flammable, health and environmental hazard
Glues and adhesives	Flammable, Toxic
Detergents, Cleaners, Car and Floor Waxes	Flammable, Corrosive, Irritant
DS2 Decon Agent (EASY Decon)	Corrosive, Flammable
Spent/used oil and fuel filters	Flammable
Household type medicines and beauty products	Toxic, flammable, Health hazards,
Toner and printing products	Health and Environmental Hazard
Fluorescent and Energy Saving bulbs	Carcinogenic, Environmental Hazard
Expired fire extinguishing powder	Health, Environmental Hazard

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HWAP Standards

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- Shall be at or close to point of generation
- Arrange timely coordination for removal/disposal of full containers to ensure storage does not exceed 5 working days
- Availability of Serviceable compatible fire extinguisher
- Ensure availability of eye wash station
- Availability of personnel protective equipment
- Secured from access of unauthorized personnel
- Inspected weekly by HWAP Manager or Alternate
 - Must be conducted using Form IMEU-200-1
 - File completed inspection records for at least 3 yrs.
 - Will be inspected by DPW Environmental Division for compliance.
- Post Alarm Plan by Telephone part of Spill Prevention and Response Plan
- Ensure availability of operating instructions

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HW Profile Sheet & Turn-In

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- Generating activities must complete HWPS for each waste stream
- Provide certified HWPS to USAG HWSA or DRMO prior to turning in HW
 - HWPS information comes from MSDS, user knowledge, or lab analysis
 - Identifies and characterizes the hazardous waste
 - Identifies processes that generate hazardous waste
 - HWPS valid for 1 year, provided process doesn't change
 - HWPS must be updated annually
- For units/directorates turning in through the USAG HWSA call 485-6858 to make arrangement for turn-in or pickup
- For generators who utilize other sources for disposal
 - Complete DD Form 1348-1a or respective funding documentation
 - Contact the DRMO or contractor respectively
- Ensure turn-in logs or manifests are signed

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HWSA Receiving HW

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- Verify that, prior to accepting the waste, the HWSA manager:
 - inspects the waste to ensure it matches the description provided
 - ensures that no waste is accepted for storage unless a HWPS is provided, or available and properly referenced
 - requests a new HWPS from the generating activity if there is reason to believe that the process generating the waste has changed
 - analyzes waste shipments of unknown waste type to provide a correct waste description on the accompanying documents
 - rejects shipments that do not match the internal accompanying waste descriptions unless the generating activity provides an accurate description.

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GFGS Hazard Signs (Warnzeichen)



Vorsicht!
Ätzenden Stoffe
Warning!
Corrosive Substances



Vorsicht!
Feuergefährlichen Stoffen
Warning!
Flammable Substances



Vorsicht!
Giftige Stoffe
Warning!
Toxic Substances



Vorsicht!
Gasflaschen
Warning!
Compressed Gas Cylinders



Vorsicht!
Batterien
Danger!
Batteries



Vorsicht!
Brandfördernde Stoffe
Warning!
Combustible Substances



Vorsicht!
Gesundheitsschädliche Stoffe
Warning!
Harmful to Health or Irritant
Substances



Vorsicht!
Explosionsgefahr
Warning!
Explosive Substances



Vorsicht!
Explosionsgefährliche
Atmosphäre
Warning!
Explosive Atmosphere

Mandatory Signs (Gebotszeichen)



Schutzbrille tragen
Wear goggles



Schutzanzug tragen
Wear protective clothing



Schutzhelm tragen
Wear helmet



Schutzschuhe tragen
Wear safety shoes



Gehörschutz tragen
Wear hearing protection



Atemschutz tragen
Wear breathing apparatus



Schutzhandschuhe tragen
Wear protective gloves

Danger Signs (Gefahrzeichen)



Rauchen verboten!
Smoking prohibited!



Offenes Feuer Verboten!
Open Flames prohibited!



Unbefugter Zutritt verboten!
Unauthorized Entry prohibited!



Nicht mit Wasser löschen!
Do not extinguish with water!



Container Handling

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- Selection and UN/DOT requirements
 - Containers, including overpack containers, are compatible with the materials stored
 - Only containers which meet UN specifications can be used for the accumulation and subsequent transportation of hazardous wastes
- Condition
 - Free of rust, dents, corrosion, and structural weakness (bulging)
- Labeling
 - At a minimum hazardous waste marking for intended waste and hazard symbol
- Handling
 - Containers are not opened, handled, or stored in a manner which may rupture the container or cause them to leak
 - Containers are always closed during storage, except when it is necessary to add or remove waste
 - containers of flammable liquids must be grounded when transferring flammable liquids from one container to the other

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Container Storage

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- Storage holding liquids must have secondary containment
 - Secondary Containment for free flowing liquids (10% of vol of all containers or 110%vol of largest container)
 - containment system that is sufficiently impervious to
 - contain leaks, spills, and accumulated precipitation until the collected material is detected and removed.
- Contaminated water from HWAP secondary containment must be treated as hazardous waste until determined otherwise.

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HW Transportation

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- HW transportation comes under Host Nation regulations *‘Carriage of Dangerous Goods by Road’* & *‘Hazardous Waste’*
- Special documentation & driver certification is required
- Refer to
 - Army in Europe Regulation 55-50, dated 2 February 2010, Transportation and Travel Command Dangerous Goods Program
 - Army in Europe Regulation 55-4*, USAFE Instruction 24-203*, dated 1 May 2003, Transportation and Travel Safe Movement of Hazardous Goods by Surface Modes

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Spill Prevention and Response

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Site Specific Spill Plan

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- Spill Prevention and Response Plan
- Emergency contact
- Types of hazardous substances
- Probable spill route/evacuation plan
- Discovery and notification procedures
- Containment procedures
- Cleanup and disposal procedures

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Stock spill kit according to the hazards stored



Stock spill kit according to the hazards stored



Spill Response Procedures

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- Assess the situation
- Call 117 for the Fire Dept
- Notify your Environmental Officer
- Protect yourself and others
- Contain the spill/stop the spill source
- Clean-up or if necessary assist Fire Department
- Report all spills of HM or HW that reaches un-paved ground (e.g. grass, gravel, soil) to the Environmental Division regardless of quantity

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Assessing the Situation

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- Recognize the danger
- Identify the substance (Fire Department needs to know)
- Be aware of precautionary measures:
 - Flash points
 - Exposure Limits
 - Unusual fire and explosive hazards
 - Requirements for protective clothing and equipment
- React according to your level of training

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- Check MSDS for appropriate level of PPE
- Assume the worst
- Use only assigned PPE
- Inspect and maintain PPE
- Replace degraded equipment, reorder and restock respectively





Containment

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- Assess the situation before approaching
- Stop the source if safe to do so
- Cover drains
- Use dikes, booms and pillows for containment
- Make sure spill cleanup supplies are compatible

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Clean-up

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- For small spills the following supplies and equipment should be maintained:
 - Absorbent booms, pads, rolls, or pillows
 - Overpack drums
 - Brooms and shovels
 - Protective equipment (safety glasses, face shields, aprons, gloves etc)
- Clean-up IAW procedures in site specific spill plan & base spill plan

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Pollution Prevention

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Pollution Prevention

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- Reuse dry sweep until completely saturated and not suitable to absorb liquids anymore.
- Recycling has priority over disposal, ensure HW are segregated by waste stream and not comingled
- Pour waste oil only into designated waste oil sumps/sinks. DO NOT drain liquids into pits or grates
- Use HM to their full extent, so not to waste valuable materials before starting another can, bottle, etc.
- Do not expose opened cans, bottles, etc. to inclement weather resulting in contamination of valuable materials thus creating a larger quantity of hazardous waste
- Rotate HM stock using First In First Out method, ensuring that shelf life of materials does not expire

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Training Requirements

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- Personnel and their supervisors that are assigned duties involving actual or potential exposure to HW have successfully completed an appropriate training program prior to assuming those duties.
- All personnel performing HW duties successfully complete annual refresher hazardous waste training.
- The HW training program:
 - includes sufficient information to enable personnel to perform their assigned duties and fully comply with pertinent HW requirements;
 - is conducted by qualified trainers who have completed an instructor training program in the subject, have comparable academic credentials, or experience; and
 - is designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems.

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Training Requirements

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- HW training also addresses the following areas in particular for personnel whose duties include HW handling and management:
 - emergency procedures (response to fire/explosion/ spills; use of communications/alarm systems; body and equipment clean up);
 - drum/container handling/storage;
 - safe use of HW equipment;
 - proper sampling procedures;
 - employee protection such as: Personal Protective Equipment (PPE), safety and health hazards, hazard communication, worker exposure; and
 - recordkeeping, security, inspections, contingency plans, storage requirements, and transportation requirements.
- Document all HW training for each individual assigned duties involving actual or potential exposure to HW.
- Updated training records on personnel assigned duties involving actual or potential exposure to HW are kept by the Unit/Directorate Environmental Officer.
- Verify that the training records are retained for at least 3 years after termination of duty of these personnel.

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Documents & Records

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Record	HM	HW	Location	Retention Time
MSDS	X		HMSA	As long as HM is utilized
On-site Inventory	X		HMSA	3 yrs
HWPS (review annually/update)		X	HWAP & HWSA	1 yr
HW analysis		X	HWAP & HWSA	3 yrs
Turn-In Log or DD Form 1348-1		X	HWAP & HWSA	3 yrs
Manifests		X	HWAP & HWSA	3 yrs
Disposal permits		X	HW Generator shipping HW off site	Yrs Valid & 3 yrs retention
Relevant Regulations and Pubs (Management Plans)	X	X	HMSA, HWAP, & HWSA	As long as HM is utilized or HW generated
Weekly Inspection Results, Form IMEU-200-1	X	X	HMSA, HWAP, & HWSA	3 yrs
External Inspection Records	X	X	HMSA, HWAP, & HWSA	Until next equivalent inspection
Master Listing of HM & HW storage locations	X	X	DOL & DPW	
Alarm Plans	X	X	HMSA, HWAP, & HWSA	As long as HM is utilized or HW generated
Operating Instructions	X	X	HMSA, HWAP, & HWSA	As long as HM is utilized or HW generated
Training records	X	X	HMSA, HWAP, & HWSA	3 yrs after employee has separated from duty
Spill reports	X	X	HMSA, HWAP, & HWSA, FIRE DEP	5 years

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Questions?

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