Fort Eustis and Fort Story

Environmental Management Handbook

August 2003

DIRECTORATE OF PUBLIC WORKS (DPW)
ENVIRONMENTAL & NATURAL RESOURCES DIVISION
(ENRD)

http://dpw-web.eustis.army.mil/ENRD/ENRDHome/index.htm
Phone: 878-4123 Fax: 878-4589

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Solid Waste, Recycling, Pollution Prevention Center (SWRPPC)
Household Chemical Exchange Program (HCEP)
Fort Eustis - Building 1209, M-F, 0700 – 1530, 878-4232
Fort Story - Building 1053, M-F, 0900 – 1600, 422-7634
Hazardous Waste Accumulation Facility (HWAF)
Fort Eustis - Building 1208
Phone: 878-3915
Fax: 878-3384
Fort Story HWAF - Building 1011
(all coordination must be done through the Fort Eustis HWAF)
By Appointment for AECs or HWCs Only
Household Chemical Exchange Program (HCEP) FS 422-7634
Used Oil: 878-3915

MISSION

The mission of this handbook is to introduce Fort Eustis and Fort Story personnel to the Installations' Environmental Management (EM) program. It should be used as a guide for what needs to be done, rather than a detailed "how-to" manual. The details of Environmental Management can be found in the Fort Eustis/Fort Story Environmental Protection and Enhancement Regulation (TCFE Reg 200-6) and other laws and regulations (See appendix B), as well as in unit level SOPs.

The handbook is not designed to make you an expert on Environmental Management. Often, you will be directed to a point of contact or referred to TCFE 200-6. Sometimes the best thing to know in dealing with environmental issues is when to ask a question and who to ask! You will find points of contact listed on the inside of the front and back covers. Emergency numbers and Activity POCs are listed on the back cover as well.

Commanders, Directors, Unit Level Leaders, and Managers should use this handbook as a guide to ensure they are meeting their Environmental Management responsibilities. This handbook is a companion to TCFE 200-6 and should be used by Activity Environmental Coordinators (AECs) and Hazardous Waste Coordinators (HWCs) when training their Activity's personnel on Basic (BEM) and Intermediate (IEM) Environmental Management responsibilities.

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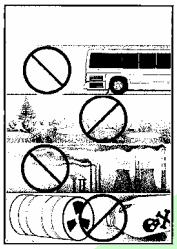
Chapter 1
Intro to Environmental Management

What is Environmental Management? Ask a hundred different people and you are likely to get as many answers! Start a discussion on the topic and it may turn into a debate as heated as talking about religion and politics. But look closely at the responses and listen carefully to the debate and some common elements start to appear.....protecting the water we drink and the air we breathe; providing a safe place to live and work; conserving our natural resources, which we use for recreation, like camping, hunting, fishing, hiking, sightseeing, boating, swimming, etc.



Pollution Prevention

P2 Hierarchy

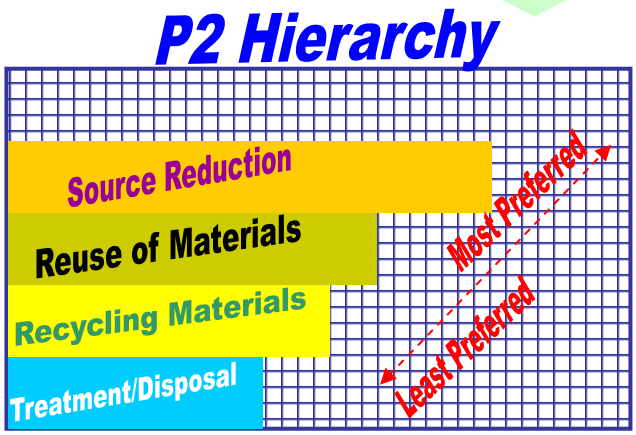
Strategies to Protect the Environment

What causes adverse impacts on air, water, and natural resources? Pollution! Pollution has many different meanings depending to whom you are talking. However, most of us would agree that vehicle exhausts, spills, dumping of chemicals, roadside litter, runoff from parking lots, smoke stacks and emissions from manufacturing plants are examples of pollution. Simply put, pollution is anything which has an

undesirable effect on the environment and human health.

POLLUTION PREVENTION (P2) HIERACHY

There may be many reasons for responsible Environmental Management, but preventing pollution is a vital key to this goal! So where do we start? What is Pollution Prevention? Pollution prevention involves the reduction or elimination of our waste – and if that is not possible, we must learn to manage our waste in a way that prevents pollution to our environment and ourselves! Since we can't entirely stop all of our daily processes that have the potential to create pollution, the concept of a Pollution Prevention (P2) Hierarchy can be followed:



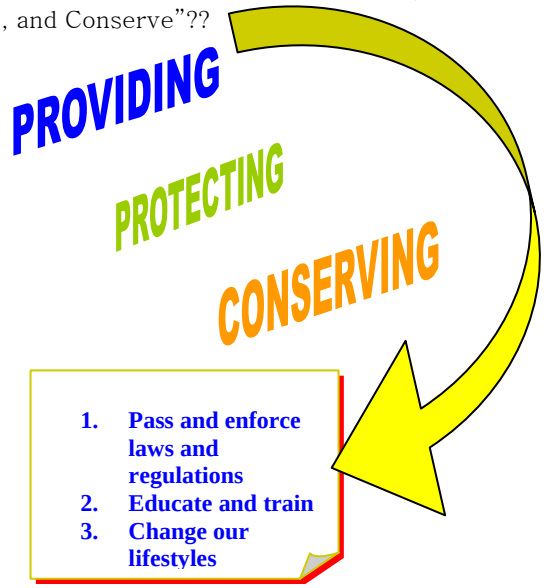
Source reduction is diminishing the generation of waste! This is the most desirable and effective way to prevent pollution. We can also take steps to reuse materials until they can no longer be used and then recycle the materials. Examples: We may reuse materials such as plastic bags, or purchase copier paper which contains recycled content. We can also purchase

materials that are made from recycled content. This process is known as "Closing the loop" and is another effective way of preventing pollution, but only if it is put into practice!

Obviously, in some circumstances proper treatment and disposal of our waste is necessary. This option is the most expensive and least preferred! Treatment means creating a less toxic waste for disposal.

Many of our civilian and military facilities have become Superfund sites – requiring restoration in order to be safe and productive environments! We can keep this from occurring in the future by providing safe and productive environments to live and work in and by protecting and conserving our natural resources. How do we "Provide", "Protect", and Conserve"??

STRATEGIES TO PROTECT THE ENVIRONMENT



LAWS

Congress, the States, the Department of Defense, and the Department of the Army have done their part in passing laws and regulations. The three primary Federal agencies which govern health, safety, and the environment are:

- Occupational Safety and Health Administration (OSHA) develop regulations for work place safety,
- Department of Transportation (DOT) for the safe transportation of Hazardous Materials (HM),
- Environmental Protection Agency (EPA) for the protection of human health and the environment.

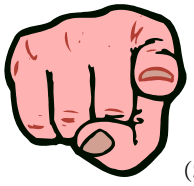
The EPA has many environmental laws and regulations. Only the ones which have the most direct impact on Fort Eustis and Fort Story daily operations will be mentioned here:

- Clean Air Acts (CAAs) regulates air emissions & ozone depleting chemicals;
- Clean Water Acts (CWAs) regulates storm water, waste water, & drinking water;
- Resource Conservation and Recovery Act (RCRA) regulates solid waste, hazardous wastes, & affirmative procurement;
- Emergency Planning & Community Right-to-Know Act (EPCRA) regulates HM inventories and reporting;
- Toxic Substance Control Act (TSCA) regulates polychlorinated biphenyls, asbestos, lead abatement;

The National Environmental Policy Act (NEPA) requires that all projects and operations, both small and large be evaluated for their environmental impacts in accordance with the above regulations before being started. This can be a show stopper if you don't plan ahead!

The Federal Facilities Compliance Act authorizes states to regulate federal facilities, e.g., the Virginia Department of Environmental Quality (VDEQ).

Violations of environmental laws carry severe civil and criminal fines and penalties! The Army is not exempt from these laws – and neither are you as an Individual, Manager, Commander or Director! Well, enough on regulations for now! (See Appendix C for more on the Legal Impacts of EM).



TRAINING

What about at the installation level? What is and can be done? The Army believes "train the way you will fight, because you will fight the way you train." You train at a task until it becomes second nature so you don't have to think about it when it comes time to do it! You just do it! Why not do the same for the environment? Fort Eustis and Fort Story has a three step approach to Environmental Management (EM) training:

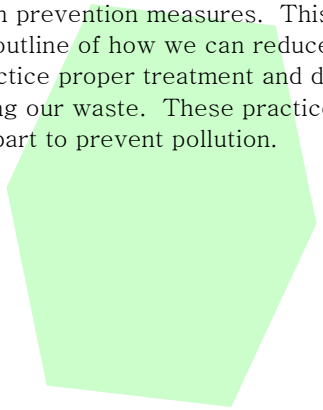
Basic and then Intermediate EM training taught at the Unit level, part of which you are doing now by reading this Hand Book; and Advanced EM training for Unit level Coordinators taught by the Installation staff.

CHANGE OUR LIFESTYLES

Changes in our lifestyle may include taking the extra step to reduce how much you use, reuse, recycle, and purchase recycled products. It may require more dedication too. You may see yourself as not having any major impact on the environment, but collectively we all can make the environment healthy or unhealthy!

Which kind of environment do you want to live and work in?

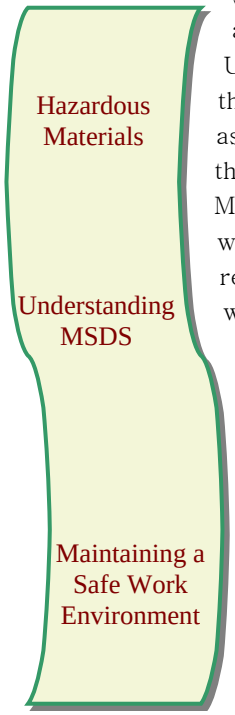
Fort Eustis and Fort Story have developed many programs and guidelines for personnel to implement the pollution prevention measures. This handbook will give a brief outline of how we can reduce, reuse, recycle, and practice proper treatment and disposal through managing our waste. These practices will allow us to do our part to prevent pollution.



Chapter 2 Environmental Management and Safety

Where do you start?? Maybe starting with the most hazardous and working your way down makes good sense.

The most important reason is your safety, and the safety of those around you. Understanding the hazards associated with the Hazardous Materials (HMs) and wastes you work with, and thus the safety precautions required, will result in a safer workplace and protect the environment while fulfilling legal requirements.



So taking a look at the products and materials that we use, identifying, and evaluating their hazardous properties, e.g., ignitable, corrosive, reactive, toxic, etc. makes for a good jumping off point!!

Even though the terms “hazardous chemicals”, “HazMat”, “hazardous material”, and “hazardous waste” may seem like they mean the same thing, it is important to understand that there is a difference. There are legal definitions for each, but let’s focus on the practical definitions that will help you remember the difference.

The Occupational Safety and Health Administration (OSHA) define any material due to its hazardous physical or chemical properties as a hazardous chemical. These materials are regulated in the work place, require Material Safety Data Sheets, and are usually considered to be serviceable products.

The Department of Transportation (DOT) defines a hazardous material as any material which poses an unreasonable risk to health, safety, or property during transportation. Again, these materials are usually considered to be serviceable products.

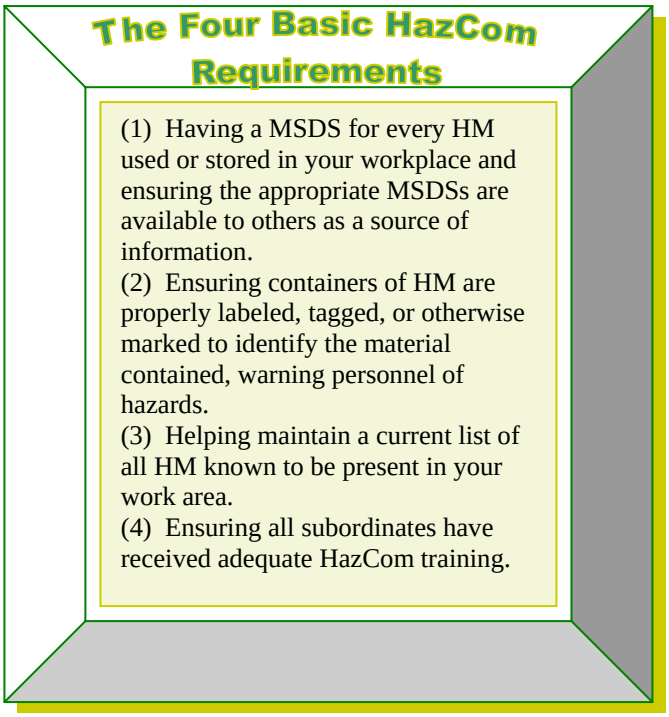
So, what's the bottom line? In the workplace, HazMat is short for Hazardous Material (HM). There are several ways you can find out if something is hazardous. As you might expect, one of the best ways is to read the label.

HAZARDOUS MATERIALS (HMS)

Hazardous Materials (HMs) should arrive at your unit correctly labeled. In the event the original label has been removed or is unreadable, you are responsible for labeling the container. The manufacturer's name, address, and phone number should be included on the label in case there is a need to contact them for more information on the material. The label must contain all appropriate warnings of hazards ("DANGEROUS", "WARNING", "CAUTION", "flammable", "avoid skin contact", etc.).

See Appendix G for information concerning some common hazard warning labeling systems. If you have any questions concerning labeling, you should contact Post Safety.

Look at the Material Safety Data Sheet (MSDS). When a material is issued to you, an MSDS should accompany it. The format and length of MSDSs may vary. However, all should contain eight basic categories of information. There are tables later in this chapter that summarize the common information you will find in each section of the MSDS. One way the Army keeps you informed about hazardous materials in the workplace is through the Hazard Communication (HazCom) program. HazCom guidelines will help you: determine what HMs are present in your unit; learn ways to protect yourself and coworkers from the hazards HMs can present; and properly store and use HMs.



MSDSs are the cornerstone of the HazCom program and the starting point for chemical safety. Manufacturers and suppliers of hazardous materials are required to provide an MSDS with their products. An MSDS identifies the hazards of a chemical and ways to control those hazards, including how to properly handle and dispose of the particular product.

There is an organization called HazMart that is a one-stop shop for hazardous materials. Use the HazMart to purchase all hazardous materials. When a HM is issued to you, HazMart personnel should provide you with a copy of the appropriate MSDS, but you must request the MSDS when you order the product from HazMart. If you are missing a MSDS for a HM that you have on-hand, contact the manufacturer on the label of the

product. You can also visit the ENRD website to find out more information on obtaining MSDSs at: http://dpw-web.eustis.army.mil/ENRD/ENRDHome/msds.htm.

Below are the eight sections of an MSDS:

Sec. I - General

Data	Questions Answered	Explanation
Name of chemical manufacturer	What is the chemical identity	Chemical name must be same as used on label and inventory
Name		
Address		
Phone number		
Date Prepared		

Sec II-Haz Ingred./Identity Data 1

Data	Questions Answered	Explanation
Exposure Limits	Is it a health hazard?	YES if a limit is given.
	Is breathing it harmful?	YES if a limit is given.

CAS Number: The Chemical Abstract Service Number is a unique number assigned to each element and chemical compound, generally not mixtures. The identification of chemicals is often confusing because the chemical name can be long with cumbersome numbers as part of the name and the many synonyms associated with the chemical. Think of the CAS Number as a social security number for a chemical.

Sec. III - Physical/Chem. Characteristics

Data	Questions Answered	Explanation
Boiling Point (BP)	Is the chemical a gas at room temp.?	Chemical is a gas if boiling point is below room temp.
Vapor Pressure	How much force does the vapor exert inside a closed container?	Materials w/vapor pressures higher than 100mm mercury (Hg)

	Does the chemical present a hazard when inside a sealed container?	hazardous. The higher the mm of Hg, the greater the hazard.
Vapor Density	Does the vapor tend to sink or rise in air?	If vapor density is greater than 1, then vapor is heavier than air & will sink; less than 1, vapor is lighter than air & will rise.
Solubility in Water	Will it stay separate when combined with water?	No if soluble Yes if insoluble.
Appearance & Odor	What color is it? Does it have a smell?	Self-explanatory. Never breathe in vapor or gases directly.
Specific Gravity	Is it lighter or heavier than water?	Less than 1 means lighter than water; greater than 1 means heavier. If density is used instead of specific gravity, water weighs 8.3 pounds per gallon.
Melting Point	At what temperature does product melt?	Self-explanatory
Evaporation Rate	How fast does the liquid evaporate compared to water?	Less than 1, slower than water; greater than one, faster than water.

Sec. IV - Fire & Explosion Hazard Data

Data	Questions Answered	Explanation
Flash Point (the temperature at which liquid gives off enough vapor to burst into flame when exposed to ignition source)	Is it a fire hazard? Is it flammable? Is it combustible?	YES if below 200º F YES if below 100º F YES if 100º - 200º F. Lower is more hazardous
Lower Explosive Limit (LEL) (See note 1 below) and Upper Explosive Limit (UEL)	Can it explode in air?	YES if limits given. Low LEL or wide explosive range between the LEL and UEL is most

Extinguishing media (note 2)	What material should be used to put out a fire?	hazardous. Contact the Safety Office for more information. Use protective equipment and special procedures given.
Special fire Fighting Procedures	How should firefighters put out a fire?	Use protective equipment and special procedures given.
Unusual Fire and Explosion Hazards	Is it a fire hazard? Can it explode?	YES if any information is given in either category.

Note 1: LEL is the minimum amount of vapor that will support combustion. UEL is the maximum quantity that allows combustion to occur.

Note 2: Fire Extinguishers
Class A – Ordinary combustibles i.e. wood, paper, textiles, etc
Class B – Flammable liquids, i.e. oil, grease, paint, etc.
Class C – Fires involving electrical wiring and equipment where safety requires the use of electrically non-conductive extinguishing media.
Class D – Combustible metals such as magnesium, sodium, zinc, powdered aluminum.

Sec. V - Reactivity Data

Data	Questions Answered	Explanation
Stability	Is it unstable? What conditions should be avoided?	YES if "Unstable" checked. May have dangerous reactions due to exposure to air, water, heat, or mechanical shock. Conditions to avoid are listed.
Incompatibility	Is it reactive? What materials should be avoided?	YES if information given. Materials to avoid are listed.
Hazardous	Does it produce or	YES if any products are

Decomposition Products	release a hazard when it decomposes?	listed.
Hazardous Polymerization	Can it react to form a new product that releases a tremendous amount of heat and/or a hazardous chemical? What conditions should be avoided?	YES if “May Occur” checked. Conditions to avoid are listed.

Sec. VI - Health Hazard Data

Data	Questions Answered	Explanation
Exposure Hazards	How can I be exposed? What can it do to me?	If any are known, MSDSs must give both immediate and delayed health effects for each exposure route.
First-Aid Procedures	What first-aid procedure should I use?	Follow the recommended procedure given for the person’s exposure route and current condition.

Sec. VII - Precautions for Safe Handling

Data	Questions Answered	Explanation
Steps To Be Taken If Material Is Spilled Or Released	How do I clean up a spill or leak?	Follow specific steps and procedures given. Contact the fire Department or for emergencies dial “911”.
Waste Disposal Methods	What is the proper waste disposal method?	Always ask your HWC or AEC for assistance.

Sec. VIII - Control Measures

Data	Question Answered	Explanation
Respiratory Protection	Do I need Personal Protective Equipment (PPE)? What type do I need?	May be required if acceptable exposure levels could be exceeded. Work with your AEC and Safety Office to ensure you are using correct PPE.
Ventilation	Is ventilation required? Is local exhaust needed? Is general area ventilation needed? Is a special type needed?	May be required depending on amount of material used; how used and where used.
Protective gloves & Eye Protection	Do I need gloves and/or eye protection? What type do I need?	Contact your AEC and Safety Office to determine the specific type you should use.
Other Protective Equipment	What other protective equipment is required?	Any listed. See explanation above.

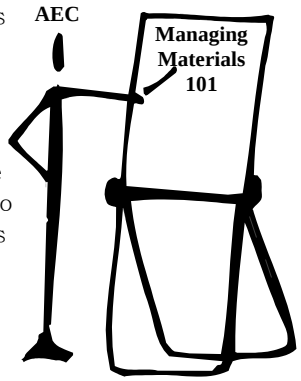
Contact the Post Safety Office if you have questions concerning MSDSs or a particular chemical.

OSHA requires training on the proper selection and use of personal protective equipment (PPE). Contact the Safety Office for assistance. An easy way to remind workers of PPE they must wear when using HM is through the use of signs. Post signs depicting the PPE required in the area where the material is used. For example, post pictures of goggles, gloves, boots, respirators, etc. near equipment such as solvent tanks.

Chapter 3
Hazardous Material Management

Proper hazardous material management requires the appointment of additional duty personnel, use of the services and assistance offered by the installation and the cooperation of all activity personnel.

All activities using, storing, or managing Hazardous Materials (HMs) and hazardous wastes must appoint and train appropriate personnel to ensure HMs will be properly managed. The most important person is your Activity Environmental Coordinator (AEC).



The AEC is the central point of contact for all activity environmental matters. All commands, down to battalion or separate company/detachment level, and directorates, down to division level, will appoint one primary and one alternate AEC. AECs must be in the grade of Warrant Officer (WO1) or above for military units, GS-11, or above for government civilian organizations or equivalent and the appropriate management level for contractor personnel.

As the overall HM manager for their organization, AECs will ensure an inventory of their activity's hazardous materials is maintained and HM information is collected and reported. This includes submitting the required information for the Emergency Planning and Community Right-to-Know Act (EPCRA) report.

Your activity's Hazardous Waste Coordinator (HWC) is another key person for proper HM management. The HWC is responsible for supporting the AEC by maintaining your activity's hazardous materials inventory and collecting and reporting HM information. This includes submitting the required information for the EPCRA report.

An excellent resource at Forts Eustis and Story is the HazMart, your one-stop shop for hazardous materials. Use the HazMart to purchase hazardous materials. Requisitioning your hazardous materials through the supply system, purchasing them through GSA, using the GSA Call-in program, using a credit card, or any other means besides the HazMart is unauthorized. All installation tenants, activities, and military organizations are required to obtain hazardous materials from the HazMart IAW TCFE Reg 200-6. There are a few exceptions to this rule. Consult the HazMart Information Handbook for the specifics. A copy of this handbook can be found on the ENRD website by accessing the Environmental Documents page. The HazMart provides many services to you that

make hazardous material management easier than ever before.

Your unit should have designated HazMart POCs and an Authorized Use List (AUL), which is a shopping list for the HMs used. The AUL also serves as a HM inventory for your unit. The Safety Office requires each activity to maintain an inventory of HMs and your AUL will help meet this requirement. You can order up to a seven-day supply of any HM on your AUL and the HazMart will deliver within 2 hours. You may pick up your order if you wish; however, the HazMart will not issue HMs to anyone driving a POV. HMs can be added to your AUL by contacting the ENRD HM manager. See inside the front cover for contact information.

Using the HazMart results in simpler HM management.

The HazMart relieves your unit of the requirement to store large quantities of HM. The Environmental Office (DPW-ENRD) must report HM usage and storage to various federal, state, and local agencies. Your activity's information is provided directly to ENRD by the HazMart, except for HM not procured through the HazMart. This makes HM reporting much easier. Activities not using the HazMart must supply this information to ENRD quarterly with a MSDS for every HM not purchased through the HazMart.

A few management responsibilities remain for your activity. When you receive HM, it should be in a **properly labeled container**. If the HM is transferred to another container, the labeling requirements explained earlier apply to the transfer container. If you need assistance, the Safety Office can provide guidance. In addition, you must be sure to use a compatible container. A compatible container is one that, when HM is added, will not result in any fires, explosions, toxic vapors, heat, corrosion, or other problems. For instance, a container made of the wrong type of plastic may melt if exposed to a certain HM, or a metal container used to store acid could corrode and leak.

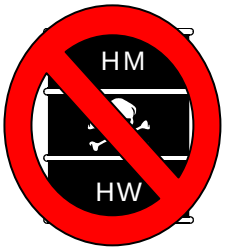
Handle empty containers properly. What looks like an empty container to most people may not meet the DOT/OSHA definition when it comes to HM. A container, which held HM is DOT/OSHA **empty** only if it has been sufficiently cleaned of residues and purged of vapors to remove any potential hazards. Labels must remain on containers until they are empty. When the containers are empty, labels must be removed, defaced, or painted over and then the containers may be reused for other purposes. It is important to properly handle the waste generated when cleaning containers, it may be classified as a hazardous waste. Ask your AEC or HWC for assistance.

Do not mix HM from different containers. If two or more incompatible materials are mixed you could create a more hazardous material, a hazardous waste, or a dangerous situation resulting from violent chemical reactions. Even if you mix HM with something that is non-hazardous, but incompatible, you can create a very hazardous brew.

Good housekeeping is one way to maintain a safe work area. You can easily prevent spills and releases by keeping containers securely closed when not in use and

by placing them on stable surfaces. Keep containers of HM away from outlets, like open doorways, ditches, storm drains, and sinks or drains, which could allow spilled HM to spread into the environment. Keep your work area clear of debris, such as discarded paper or cardboard, rags, scrap wood, and building materials, which could easily ignite if it were to come in contact with oxidizers, corrosives, or reactive materials.

Keeping spills and leaks contained is critical to proper HM storage. Containment requirements can be met by a variety of different methods, but usually involve having a non-porous basin under a container or group of compatible containers. The containment can be as simple as a metal or plastic tray, or a bermed area similar to a shallow bathtub. This makes it much easier to recover or clean up any spilled material. Never **store HM with hazardous waste.** After that requirement, the most important thing to remember about HM storage is to ensure compatible storage — store HM in a way that prevents fires, toxic fumes, intense heat, explosions, and other generally undesirable conditions from occurring. The best way to ensure you have only compatible materials stored together is to work with your HWC or AEC and review the MSDS. Here is a rule of thumb for HM compatibility.



Never store the following together:

- Flammables with corrosives (Acids or Bases)
- Flammables with Oxidizers
- Poisons with Corrosives
- Caustics (Bases) with Acids

Examples of **flammables** include alcohols, fuels, POL products, acetone, ether, xylene, oil base paints;

acids include battery (sulfuric) acid, nitric acid, hydrochloric (muratic) acid, phosphoric acid; **caustic chemicals** include bleach, oven and toilet cleaners, sodium hydroxide; **oxidizers** include oxygen or oxygen breathing apparatus (OBA), peroxides (hardeners in 2 part products), Super Tropical Bleach (STB), High Test Hypochlorite (HTH), nitrates. Each storage area should have a copy of the "Incompatibility Chart" posted.

Each HM storage area should be clearly marked. All hazards, appropriate safety precautions, and the name and phone number of the person to contact in case of an emergency must be listed. HM storage areas must be protected from the weather.
Rain, snow, or direct sunlight can cause materials and/or their containers to deteriorate.

- ✓ **Quantities of HMs do not exceed the 7 day limit.**
- ✓ **Containers are in good condition and are properly labeled.**
- ✓ **Appropriate safety equipment is available and working.**
- ✓ **HMs no longer needed are returned to the HazMart or turned in for waste management. Contact your AEC or HWC for assistance.**

Inspect HM storage areas.
Your AEC or HWC should inspect all HM storage areas monthly. The following items as a minimum should be inspected:

For **on-post transportation**, you probably will be transporting small quantities. The most important things to remember are safety requirements. In some instances, signs and placards may be required so that other people in the area will be aware of possible hazards. Develop a list of all HM to be transported, then work with your AEC to determine if signs or placards are required. Never transport incompatible classes of hazardous materials in the same vehicle.

Operate the vehicle in a safe manner at all times. No smoking is allowed near hazardous materials at any

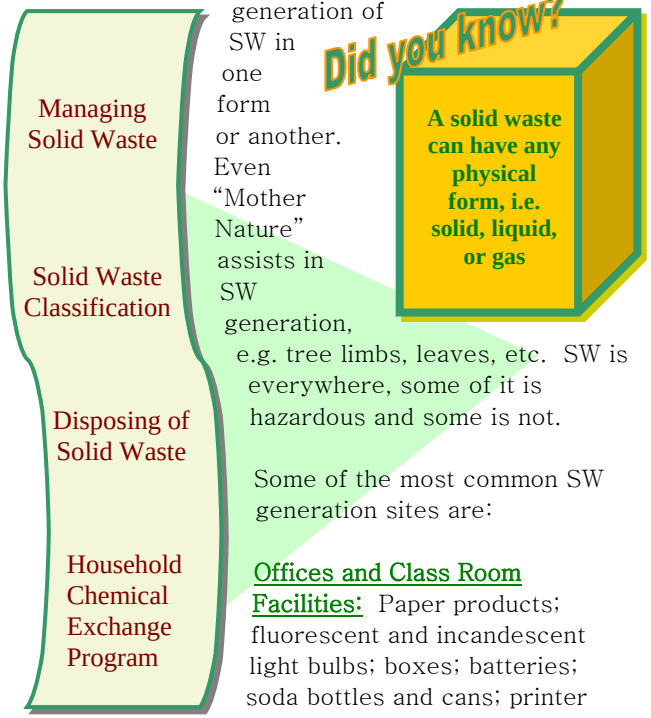
time. Ensure that all containers are tightly closed, in good condition, and not leaking. Secure the load to prevent it from tipping over and protect containers from being punctured by equipment. Know what to do in case of an accident that causes a spill and have the necessary spill equipment available. Know who to call in the event there is problem and carry the phone number with you (See the back cover). Never leave a load of HM unattended, unless it can be secured against theft or vandalism.

Off-post transportation requirements can vary from state to state. Additionally, the type and quantity of HM will affect which requirements apply. If it is necessary to transport HM off-post, prepare a list of the HM and quantity you intend to transport and where you will be going. Contact the Safety Office and the Directorate of Logistics Transportation Branch for assistance in making your transportation plans. These plans will include knowing who to contact at your destination, who to call in case of a spill, and who to call for turn-in of any waste you generate.

Chapter 4
Solid Waste Management

The EPA defines wastes as any discarded material to include materials which are abandoned, recycled, or reclaimed. The EPA term for these materials is solid wastes (SW) which is sometimes misleading.

Every activity and all personnel on the installation, either directly or indirectly will cause the generation of SW in one form or another. Even "Mother Nature" assists in SW generation, e.g. tree limbs, leaves, etc. SW is everywhere, some of it is hazardous and some is not.



Some of the most common SW generation sites are:

Offices and Class Room Facilities: Paper products; fluorescent and incandescent light bulbs; boxes; batteries; soda bottles and cans; printer and copier products; paints and aerosol cans; cleaners; food stuffs; other trash.

Motor Pools and Training Area Facilities: Paper products; fluorescent and incandescent light bulbs; boxes; pallets; batteries; soda bottles and cans; printer

and copier products; paints and aerosol cans; cleaners; food stuffs; rags; petroleum products and fuels; antifreeze; lawn and garden products; other trash.

Private Homes, Barracks, and Temporary Quarters: Paper products; fluorescent and incandescent light bulbs; boxes; batteries; soda bottles and cans; personal computer products; paints and aerosol cans; cleaners; food stuffs; clothing and rags; petroleum products and fuels; antifreeze; lawn and garden products; other trash.

Post Exchange and Commissary Facility: Paper products; fluorescent and incandescent light bulbs; boxes and containers; pallets; batteries; soda bottles and cans; personal computer products; printer and copier products; paints and aerosol cans; cleaners; food stuffs; clothing and rags; petroleum products and fuels; antifreeze; lawn and garden products; other trash.

Construction, Remodeling, and Self Help Projects: Wood products; concrete; metal; asbestos; paints and aerosol cans; rags; fluorescent and incandescent light fixtures and bulbs; soil and debris; other trash.

SW Classification & Disposal

SWs are divided into 2 major subdivisions, hazardous and non-hazardous. Each of these major subdivisions are broken down into more subdivisions. Your AEC, HWC, and Recycling Coordinator (RC) can help you with the proper disposition of these wastes. Your AEC, HWC, or RC can use Appendix D as a quick guide to help them determine where certain SWs can be taken on Post for turn-in, however, there may be training and specialized procedures to use these procedures. TCFE 200-6 should be used to determine all requirements! There are warning signs on post dumpsters to remind

personnel to dispose of wastes properly.

Hazardous Wastes (HWs): HWs will be discussed in more detail in the next chapter.

Non-Hazardous Solid Wastes (NHWs) are broken into less well-defined subdivisions:

Special Solid Wastes (SSWs) are not allowed to be disposed of in dumpsters designated for trash. Contact your HWC or AEC for disposal. The following list is not all inclusive, but are the most common: Asbestos, rubber tires, compressed gas cylinders, aerosol cans, steel drums, containers of liquids, used oil, appliances, dead animals, fluorescent light fixtures, Universal Wastes (fluorescent light bulbs, batteries, liquid mercury containing devices), Non-Hazardous Wastes (NHWs), filters: Oil and fuel.

Universal Wastes (UWs) are SSWs, which would normally be classified as HWs and have to be managed IAW the UW procedures in Appendix E or they revert to being HWs. You should contact your AEC, HWC, UWH for specific handling and disposal procedures. These SWs are not allowed to be disposed of in dumpsters designated for trash.

Industrial and yard wastes: These SWs are not allowed to be disposed in dumpsters designated for trash. Contact your RC, HWC or AEC for disposal. The following list is not all inclusive, but are the most common: Biomass, concrete, construction debris, large limbs, and wood products, i.e., pallets, boxes etc.

Recyclable materials: Selected materials from all solid waste categories may be recycled. However, traditional recyclable materials are not allowed to be disposed of in dumpsters designated for trash. Contact your RC, HWC, or AEC for recycling instructions. These traditional materials include glass, metal, paper, plastics, etc. See Appendix D for a complete list of recyclables.

Garbage, rubbish, trash, etc: These materials should be disposed in dumpsters designated for trash.

Household Chemical (HC) Exchange Program: HCs are excluded from hazardous waste regulation; however the improper disposal of these wastes can cause environmental harm. The installation has a Household Chemical Exchange Program (HCEP) to keep HCs from being thrown away with the trash! This program allows all on Post residents to turn-in HCs and pick-up HCs as needed, free of charge. See Appendix F.

Chapter 5 Hazardous Waste Management

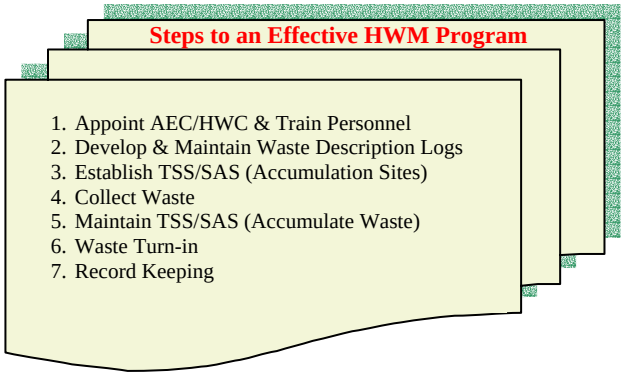
The Resource Conservation and Recovery Act (RCRA), defines, regulates, and establishes a management system for hazardous wastes, solid wastes, and used oil. RCRA also authorizes states to administer their own programs in these areas. The Virginia Department of Environmental Quality (VDEQ) administers its hazardous waste management program through its Virginia Hazardous Waste Management Regulations (VHWMR).

What is a hazardous waste? As with hazardous materials, we'll start with a practical definition and get into the legal definition later in this chapter. Hazardous wastes are strictly regulated. Some of the commonly generated hazardous wastes at Forts Eustis and Story include: many oil-based and two part paints; flammable solvents; gasoline contaminated materials; some photo finishing solutions; strong acid or base products; and some strong cleaners.

Special Solid Wastes (SSW) are wastes that are difficult to handle and/or require special precautions because of hazardous properties, or the nature of the waste creates waste management problems in normal operations. The term non-hazardous waste, (subset of SSW) does not mean the waste cannot harm either you or the environment. It just means the waste does not meet the requirements of a hazardous waste. Commonly produced non-hazardous wastes at Forts Eustis and Story are latex paints, and petroleum contaminated drysweep and absorbents. Hazardous and non-hazardous wastes are generally produced from the use or misuse of hazardous materials. The regulations controlling hazardous waste handling, storage, and disposal are very strict and complex and penalties for violations are severe. This chapter will give you a brief overview of actions required by you and your activity to satisfy the regulations.

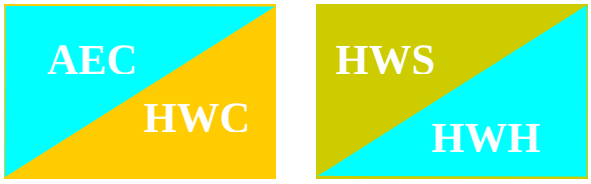
Detailed procedures for managing hazardous wastes are contained in TCFE Reg 200-6. The federal regulations developed to implement the Resource Conservation and Recovery Act (RCRA) and the Virginia Hazardous Waste Management Regulations (VHWMR) established a management system of generators, transporters, and disposal facilities. Forts Eustis and Story are large quantity generators (the most regulated) and hold no permits for storing, treating, transporting or disposal.

If you have any questions, do not hesitate to contact your Activity Environmental Coordinator (AEC) or Hazardous Waste Coordinator (HWC). AECs and HWCs have been specifically trained in the areas of HW management. If your activity does not have an AEC and HWC, contact the staff at the Environmental and Natural Resources Division (ENRD) of the Directorate of Public Works (DPW).



Appoint AEC/HWC & Train Personnel

Commanders and Directors are responsible for ensuring personnel managing HWs are appointed and trained. At the Activity level, the four key positions are:



The requirement for having an AEC was discussed in Chapter 3. HWCs are responsible for managing the Activity's hazardous waste sites and training personnel. HWHs are personnel assigned hazardous waste management (HWM) duties. HWSs are their first line supervisors. Chapter 9 describes the training requirements for these positions.

Once your unit has appointed an AEC and HWC and trained all personnel, the next step

Develop & Maintain Waste Description Logs

is to develop and maintain a Waste Description Log (WDL). The WDL is a detailed description of every hazardous waste (HW) and non-hazardous waste (NHW) your unit creates or "generates."
Now you need to know the legal definition of hazardous waste. A HW must be a solid waste as defined in Chapter 4.

The Environmental Protection Agency (EPA) defines a HW as waste which has ignitable, corrosive, reactive, or toxic properties and causes harm to human health or the environment.

There are two major groups: Listed and Characteristic.

The first group, as the name implies, is a list of chemicals.

There are four lists. Each list is assigned a waste code starting with the letters P, U, F, or K.

- The P and U lists are unused pure chemicals listed by specific chemical names.
  - The P list is more hazardous than the U list.
  - An example of a U-listed waste is discarded acetone and has a waste code of U002.
- The F and K lists are usually a group of chemicals, which were used (spent) or from a certain process.
  - For example, spent acetone is F-listed with a waste code of F003.

The second group is not listed by chemical name, but exhibits one of the four hazardous properties.

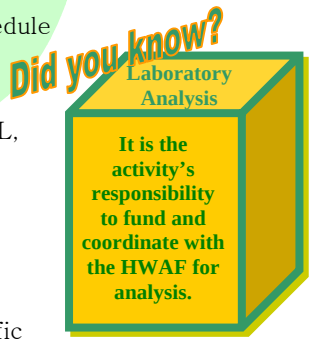
- For example: Ignitable, a liquid with a flashpoint <140 degrees F, acetone-alcohol mixture, D001.
- Corrosive, pH 2 or 12.5, battery acid or solutions of sodium hydroxide, D002.
- Reactive, explosives, explodes on contact with water, MRE heaters, D003.

- Toxic, usually mixtures having one or more of 40 different toxic chemicals (Codes D004 to D043), i.e. heavy metals, solvents, pesticides, etc..
  - Lead containing compounds D008
  - Benzene, D018
  - Methyl ethyl ketone, D035
  - Tetrachloroethylene, D039
  - Trichloroethylene, D040

Your HWC or AEC is responsible for preparing and updating the WDLs, however, they need everyone's help to do this. Each WDL is known as a waste stream. The Authorized Use List (AUL) and the Material Safety Data Sheets (MSDS) your unit maintains are great starting points for identifying wastes. Do you use all of a specific product on your AUL or is there some waste generated? What wastes have been turned in to the Hazardous Waste Accumulation Facility (HWAF) in the past? The WDL includes a written description of the HMs and non-hazardous materials used when generating the waste, and a description of the process that generated the waste.

Collecting this information and answering the previous questions is a waste identification method known as generator knowledge. Another waste identification method that may be required to properly identify a waste stream is laboratory analysis.

Your AEC or HWC must schedule an appointment with the HWAF and bring all required documentation (WDL, MSDSs, etc) in order to properly identify the waste.



Hazardous Waste and Non-Hazardous Waste must be accumulated, in a very specific area. There are two types of accumulation areas

authorized for Forts Eustis and Story

– Temporary Storage Sites (TSSs) and Satellite Accumulation Sites (SASs). Most often, the TSS is a permanent waste accumulation site that supports ongoing operations. TSSs are usually located away from the generation point.

Temporary Storage Sites (TSSs)
A permanent waste site that supports ongoing operations.

Satellite Accumulation (SASs)
Intended for sites that generate small amounts of waste over a long time.

Occasionally, construction projects or other short-term projects may require establishment of a TSS. A TSS can hold any quantity of HW up to 14 days from the Accumulation Start Date (ASD), and then the HWs must be transferred to the HWAF. The ASD is applied to the container when HW is first added.

Establish TSS/SAS

The SAS is intended to accumulate very limited quantities of HW near the generation point. SASs can be permanent sites or very short term, i.e. days or weeks. Contractors performing short-term work that produces small amounts of Hazardous Waste would most likely use an SAS. Only 55 gallons of a HW or 1 quart of acutely HWs (P-listed) may be kept in a SAS. The ASD is applied to the container when the quantity limit is reached, then the container must be turned in to the HWAF within 3 days.

These sites, TSSs and SASs, are highly regulated. A great deal of planning must take place prior to the establishment or relocation of a site. Whether establishing a new site, relocating an existing site, or closing a site, your AEC and HWC must request approval from DPW-ENRD. The Fire Department and

Safety Office must grant approval before ENRD will give a final approval.

Collect Waste

Collection of HW is the step that involves the largest number of people in your unit or activity. For that reason, it requires a great deal of monitoring by the HWC and cooperation from all personnel involved for it to be performed correctly.

It is wise to plan ahead and have a container for the collection of waste before the waste is generated. All HW and NHW must be placed in Department of Transportation (DOT) approved containers that are in good condition and compatible with the waste. These containers must be properly labeled as per DOT and hazardous waste regulations.

For a major benefit of preparing an accurate and complete WDL, contact the HWAF and they will provide you with pre-labeled containers for any waste for which you have a WDL. This frees you from determining which container complies with the DOT specifications and gets you pretty far down the road to meeting the labeling requirements and in preparing an initial Container Contents Log (CCL), TCFE Form 645. Your HWC will be the person to complete the information on the label and sign a HWAF Reimbursable Log for each container issued. The HWAF uses this log to arrange for reimbursement for the containers. Activities which do not use the HWAF container issue service will be required to purchase containers from other sources. This will trigger increased regulatory requirements in the areas of training and record keeping. A CCL must be kept for each container of HW and NHW. The CCL is used for several purposes:

- To keep an inventory of wastes as they accumulate.
- To record each addition of waste to the container.

- Certification by the AEC and HWC that the information on the CCL accurately reflects the container contents.

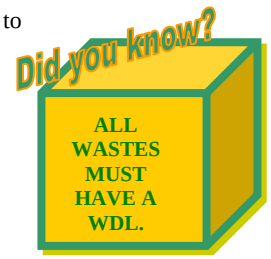
Always read the label on the container and check the CCL before adding any waste to it!!! This is very important for several reasons. First, you don't want to mix wastes for there is the potential for dangerous results, i.e. fire, toxic fumes, etc. Second, when you mix wastes, laboratory analysis may be required for identification (costs money) and disposal is often more expensive (an even bigger bite out of your unit's funds). It is extremely important to document each addition to the container as it actually happens! Sometimes, mistakes are made and the wrong wastes end up in the wrong container. If the CCL reflects what happened, the HWC with assistance from the HWAF can reclassify the container of waste and keep the installation out of trouble! Avoid spills when adding waste to a container. Spills and material used to clean up the spills often must be handled as HW. Keep all containers closed except when adding wastes, not just finger tight, use the wrench! Use the proper personal protective equipment when handling HW.

Maintain TSS/SAS

Your HWC is responsible for maintaining the TSS or SAS. If the HWC in not present for duty, a HWS may have to conduct required weekly inspections and ensure personnel authorized to add waste to containers do so correctly. An excellent way to determine if your TSS or SAS is being maintained properly is to use the Weekly HW Accumulation Site Inspection worksheet, TCFE Form 6036, to conduct a check (See TCFE Reg 200-6). This checklist will help you ensure the original requirements for the establishment of the site and the requirements for operating the site are met. The HWM program may be inspected at anytime by EPA, Virginia Department of

Environmental Quality (VDEQ), or ENRD. It is important to be ready at all times. Here are some common items required of the site:

- All HW and NHW must be stored in the TSS or SAS. Do not store any serviceable material in the site.
- Do not store containers of used oil in TSSs or SAS.
- All containers must be properly labeled. See Appendix H.
- Store containers in a way that allows you to read labels without moving a container.
- Provide adequate aisle space to permit the unobstructed movement of emergency equipment and personnel.



All unknown or abandoned containers should be handled with caution! When you find an unknown or abandoned container, try to identify the contents from the label, markings, etc. Contact your HWC or AEC immediately! That said, never assume the label accurately reflects the contents. Try to identify the owner of the container. If ownership can be determined, ensure the container is properly managed. If ownership cannot be determined, your HWC or AEC will notify the Military Police.

Waste Turn-In

When it is time to turn in your HW, gather the required documentation. Correctly completed CCLs and DD Form 1348-1As must be available. Detailed instructions for completing these forms are in TCFE Reg 200-6. Your HWC or AEC will contact the HWAF to schedule an appointment for inspection and pick up.

That's right; the HWAF will even pick up the HW for you – what service! The AEC or HWC must be present during the scheduled inspection and pick up. Activities not using the HWAF will need to make other arrangements for disposal in accordance with TCFE Reg 200-6.

The HWAF staff will inspect all containers and conduct a site evaluation for compliance. Containers will be opened during the inspection. Activity personnel will assist and must have the appropriate personal protective equipment. If problems are found, some on-the-spot corrections for administrative requirements may be made. However, if a container fails to meet turn-in requirements, it will be rejected. All activities that have containers rejected for any reason may receive a letter of rejection from the DPW-ENRD. This letter is sent to the battalion level commander or director.

Absolutely No Privately Owned Vehicles!

If the HWAF vehicle cannot get reasonably close to the TSS or SAS for container loading, then the activity will be required to move the containers to the HWAF pick up vehicle. Your activity may transport HW to the HWAF. The HWC or AEC will supervise all movements of HW. Only properly trained HWHs will be allowed to assist the HWC during these operations. Use only government vehicles to transport HW! Secure the containers to prevent movement or spills. If the HW containers have liquids, carry a spill kit. Ensure

you have a fire extinguisher appropriate for the type of waste you are transporting. A correctly completed DD Form 1348-1A and Container Contents Log must accompany the load.

Do not store HW on vehicles overnight. Do not transport HW off the installation. Do not transport HW between Fort Eustis and Fort Story. If your unit plans to deploy for training at another location and will generate HW, you must plan ahead to turn in all HW at that site. Do not bring HW onto either installation. Ask your AEC or HWC to make the necessary arrangements prior to your departure to the training site.

Record Keeping

All records (training, turn-in documents, inspections, CCLs, DD Form 1348-1As, etc.) concerning hazardous waste management must be kept for at least 3 years.

Chapter 6
Spills, Contingency Plans, and Emergency Responses

There are several hazardous material or waste incidents – spills, fires, explosions, to name a few – that can trigger the implementation of contingency plans and emergency responses. Before an emergency situation occurs, it is critical you understand how to evaluate these incidents and take the proper action.

Implementing a Contingency Plan

Emergency and Non-Emergency Spills

Required Training

Emergency Situations & Spills

- Fires or explosions involving Hazardous Material (HM), Hazardous.
- Waste (HW), Universal Waste (UW), or Non-Hazardous Waste (NHW).
- The accidental or intentional spill of a HM, HW, UW, or NHW that reaches the ground or goes down the drain or flows into a body of water.
- Releases to the air of highly volatile HM or HW which could threaten human health or the environment.

Contact Fire & Emergency Services immediately by dialing 911!!!

(See back cover for other telephone numbers)

Non-Emergency Spills

Incidental spills of HM, HW, UW, or NHW where the spill can be absorbed or otherwise controlled by activity personnel in the immediate area or by maintenance personnel, and:

- The spill is contained within the building, hardstand, or structure. In other words, none of the spilled substance went into the ground or down the drain or into a body of water. If the spilled substance was a volatile HM or HW, none of it went into the air.
- A small spill completely contained within the containment device of a Temporary Storage Site (TSS)/Satellite Accumulation Site (SAS), which can be cleaned up by trained and equipped activity personnel, is not considered an emergency spill.

Non-emergency Response Planning and Notification

First, you should do some planning to avoid spills. Is the storage location arranged in a way to prevent spills – i.e. adequate aisle space, containers stacked safely? Ensure unit members are using good housekeeping procedures. Spills are less likely in a neat work area. **Remember these spills must also be reported to Fire & Emergency Services at 878-1008 (Fort Eustis) or 422-7141 (Fort Story)!**

But, spills happen. To ensure effective spill response, you must have a good plan and practice the plan. Plans outline the actions required for an orderly response to emergency situations. Your activity should have a Spill Contingency Plan for all HM storage locations and a Contingency Plan for all TSSs and SASs. The Activity Environmental Coordinator (AEC) should be the point of contact (POC) for all spills and the Hazardous Waste Coordinator (HWC) for HW spills. Develop site-

specific plans. Evaluate where you have HM and HW stored. Spill response is usually performed unexpectedly and the response must be automatic.

Remember! – That site specific contingency plans must conform to the US Army Transportation Center Integrated Contingency Plan (ICP). The ICP is available from the Fort Eustis web site.

Remember! – That ALL spills regardless of quantity must be reported immediately to Fire & Emergency Services.

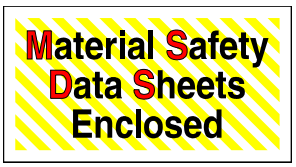
You need to anticipate what could be spilled, in what quantities, and exactly where. Plan for both a worst case and a small spill. Who will be responsible for coordinating the spill response? Who will be responsible for actually cleaning up the spill? What training is required before cleaning up spills? Make a list of personal protective equipment (PPE), absorbent materials, and other supplies you will need. Where should these be stored? Locate all drains, ditches, streams, ponds, etc. in the area and plan how you will prevent a spill from reaching them. Make a list of names and phone numbers of people/organizations that may need to be contacted and post this list by the phone.

Request the spill response supplies and equipment you determined were needed for your area. Design spill carts to hold these supplies and place in areas where spills are most likely to occur.

Once you have developed your plan, PRACTICE THE PLAN. There is an Army saying, "train the way you will fight, because you will fight the way you train." Train for spills with realistic exercises. If a problem is identified during an exercise, you can update the plan accordingly or practice until there is no longer a

problem. Spill response will be successful only if you are prepared and trained.

There are four basic steps to follow during non-emergency spill response:



1) **Protect yourself.** Use the PPE specified in the Material Safety Data Sheet (MSDS) for the material spilled. If the spill occurs in a work area, you should already be wearing the necessary equipment or it should be available on the spill cart.

2) **Stop the flow.** This may be as simple as placing the container upright or closing a valve.

3) **Contain the spill.** Place absorbent material or sandbags around the edge of the spill or place an empty container under the leak. Protect drains and ditches.

4) **Report the spill.** Notify your supervisor and the appropriate POC depending upon whether the spill was HM or HW. Notify Fire & Emergency Services immediately (see back cover for telephone numbers).

After these four steps are completed, you may be instructed to clean up the spill. Be sure you choose clean up equipment carefully. Use non-sparking tools if the material is flammable or explosive. For corrosive materials, choose tools that won't deteriorate (e.g. non-metallic tools). Ask what you should do with the spilled material and absorbent. It may have to be

turned in as HW or NHW. Contact your HWC or Activity Environmental Coordinator (AEC).

Accidents When Transporting HM or HW on Post

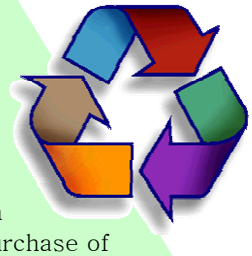
When an accident or breakdown occurs when transporting HM or HW on post:

- If the incident results in a spill of HM or HW, notify Fire & Emergency Services immediately.
- If there is no spill as a result of the accident or breakdown, but the accident poses a traffic hazard, then notify the Military Police to help secure the area until the situation has been resolved.

Chapter 7 Affirmative Procurement

We have mentioned that in order to create a successful recycling program, we need to "close the loop" by purchasing products made from recycled or recovered materials content. The EPA has implemented regulations and guidelines in RCRA Section V, Miscellaneous Provisions, various Executive Orders and guidelines that mandate and assist us in implementing a successful purchasing program. The concept of purchasing such products is called "Affirmative Procurement". Affirmative procurement can occur in any type of application, from office products to vehicle maintenance. It is our responsibility to educate ourselves on the products available and take that step to integrate these products into our daily activities.

- What is Affirmative Procurement?
- Help Close the Loop
- Comprehensive Procurement Guidelines
- Green Products



Our Federal Government is the largest consumer of many products and recognized it could have an effect on the purchase of these recycled content products – creating a market and "closing the loop". As a result, as a federal organization, we are required by law to buy recycled products to help make the system work. We must do our part! The EPA has developed a list of products, called the Comprehensive Procurement Guidelines (CPG). The CPG program promotes the use of materials recovered from solid waste through buying remanufactured

recycled-content products. The latest update to the CPG in January of 2000 includes 54 designated items in categories ranging from construction to vehicular products. EPA also issues guidance on buying recycled-content products in Recovered Materials Advisory Notices (RMANs). The RMANs recommend recycled-content ranges for the CPG products based on current information on commercially available recycled-content products. All federal facilities that purchase $10,000 or more of these products a year must purchase recovered or recycled products on the CPG list. The following exceptions apply: the price of a listed item is unreasonably high; there are not enough sources of supply; there are unusual or unreasonable delays in product delivery; or the product does not meet reasonable performance standards.

All products on the CPG list have been extensively researched and tested by the EPA in order to ensure product quality and usability in comparison to their non-recovered, non-recycled or "virgin" counterparts. Unless purchase of the products is not reasonable due to the above exceptions, we are required to purchase these products. Some examples of the types of products on the CPG are listed below:

CONSTRUCTION PRODUCTS
building insulation products
carpet
carpet cushions
cement and concrete containing coal fly ash and/or ground granulated blast furnace slag
consolidated and reprocessed latex paint
floor tiles
laminated paperboard
patio blocks
shower and restroom dividers/partitions
structural fiberboard

flowable fill
railroad grade crossing surfaces
LANDSCAPING PRODUCTS
garden and soaker hoses
hydraulic mulch
lawn and garden edging
yard trimmings and food waste compact
landscaping timbers and posts (plastic lumber)
NON-PAPER PRODUCTS
binders (paper, plastic covered)
office recycling containers
office waste receptacles
plastic desktop accessories
plastic envelopes
plastic trash bags
printer ribbons
toner cartridges
plastic binders (solid)
plastic clip portfolios
plastic file folders
plastic presentation folders
PARK AND RECREATION PRODUCTS
plastic fencing playground surfaces
playground equipment
running tracks
PAPER AND PAPER PRODUCTS
commercial/industrial sanitary tissue products
miscellaneous papers
newsprint
paperboard and packaging products
printing and writing papers
TRANSPORTATION PRODUCTS
channelizers
delineators
flexible delineators

parking stops
traffic barricades
traffic cones
VEHICULAR PRODUCTS
engine coolants
re-refined lubricating oils
retread tires
MISCELLANEOUS PRODUCTS
pallets
awards and plaques
industrial drums
manual-grade strapping
mats
signage
sorbents

With the multitude of responsibilities on our installation – you may wonder how on Earth can we find the time to look for these products and make them part of our purchases? There are several resources available to us that make it very easy. Take some time to check these out and as always, if you have any questions just contact the ENRD staff for assistance.

- http://www.epa.gov/epaoswer/non-hw/procure/products.htm - EPA's CPG list and additional informative links
- http://www.gsa.gov/Portal/home.jsp - The U.S. - General Services Administration has an affirmative procurement program designed for purchases outline in the CPG
- http://www.dscr.dla.mil/environmental.htm - The Defense Supply Center in Richmond, Virginia, also has an Environmental Products program that assists with purchasing CPG items

- http://dpw-web.eustis.army.mil/ENRD/green-purchasing/MAIN.htm and http://dpw-web.eustis.army.mil/ENRD/green-purchasing/affirmative_procurement_training.htm - ENRD offers information on "green purchasing" and an on-line training course on Affirmative procurement

In some circumstances, federal regulations and positions will govern whether or not we procure the designated products.

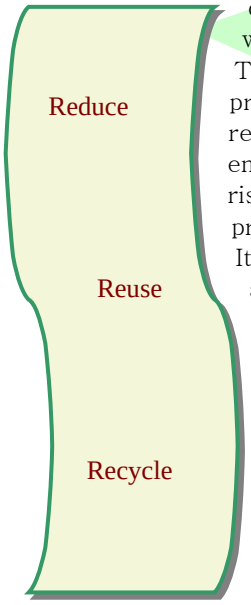
Vehicular products, for example, have been targeted in *EO 13101 – Greening the government through waste prevention, recycling, and federal acquisition* – as products that will be included in federal facility inspections. State or federal regulators will determine if facilities responsible for vehicular maintenance have adequate programs for the procurement and use of re-refined oils, re-tread tires and reclaimed engine coolants. Currently, Fort Eustis and Fort Story are working on implementing programs to promote and track the use of these products on our installations.

Beyond the items listed in the CPG, there are Environmentally Preferred Products (EPP) on the market that work as effectively as their non-EPP counterparts. An EPP is defined as a product that has less negative impact on human health and the environment, such as low VOC paints.

There are many products on the market that claim to be an EPP, but it is our responsibility to research and purchase the products that actually are! If you have any questions about a product that claims to be "environmentally friendly" or "green", contact ENRD and we will assist you with obtaining the proper information about the product.

Chapter 8
Pollution Prevention

Background: All of the techniques described in previous chapters are directed at the prevention of waste or reduction at the source. This is also known as pollution prevention. Pollution prevention results in direct benefits to the environment because it lessens the risk of contamination, but it also promotes worker health and safety. It is also the most cost effective approach because it reduces the cost associated with clean-up of contaminants. We have used and are developing several tools to minimize waste, conserve water, and to reduce energy use. These are discussed below.



TOOLS

Raw Material Substitution – This technique reduces the volume or toxicity of the raw materials and waste streams.

Example: New Solvent Sinks, such as Inland Technology, which use a less hazardous solvent to degrease parts. These new sinks do not require as frequent solvent change out and minimize hazardous components in the solvent.

Environmentally Preferable Purchasing (EPP) – Environmentally Preferable products are

those which have less harmful effects on the environment and human health than when compared to products that have the same purpose. Such products may include those which contain recycled content, minimize waste, conserve energy or water, and reduce the amount of harmful chemicals disposed or consumed. Some examples include use of latex paints rather than oil based paints. Others may include cleaning products which do not contain harmful chemicals such as benzene, carbon tetrachloride, mercury, and xylenes. EPP is part of affirmative procurement which was discussed in Chapter 7.

Procedural Modifications – Many operational practices ranging from purchasing and receiving through production to product storage and delivery can be altered to reduce wastes and costs. For example, the Army now promotes centralized hazardous material management, which results in more control over the types and quantities of hazardous materials purchased. Because of automated tracking of purchases, soldiers know how much of a particular product they have ordered in the past and can better plan for future needs. The environmental staff can better monitor the chemicals in these products and advise units which products should be eliminated from use. Another benefit is a decrease in the amount of hazardous materials purchased. Fewer purchases minimize the risk of spills, and decrease the cost of disposal of excess materials. Both Fort Eustis and Fort Story activities must purchase their hazardous materials through the Fort Eustis HazMart and/or the Little Creek Hazardous Materials Minimization Center, which services Fort Story.

Training – The environmental staff provide a variety of training to improve the awareness of soldiers, civilian workers, and family housing residents about

environmental management. The staff provides an overview of environmental management training, spill prevention, asbestos and lead-based paint awareness,

affirmative procurement, and training in the application of National Environmental Policy Act (NEPA). Other types of training may be requested.

Environment Management System (EMS) – This provides a systematic way for an organization to evaluate the environmental requirements and the impacts of its operations. If the impacts are considered significant by the organization, goals are set and staff establishes action plans to meet these goals. Staff monitor progress toward the goals and take corrective action if it is necessary. With an EMS, every member of the organization, not only the environmental staff, have a stake in preventing or minimizing harm to the environment. Some examples of significant operations for an installation are: painting, vehicle maintenance, landscaping, and building construction. Each of these operations can affect air, water, and land.

Sustainability or Sustainable Development –

Sustainability refers to maintaining the environment in such a way that it will be able to support the activities of future generations. Pollution prevention and the above components are steps to conserving and protecting our air, water, and land. It is a more global vision for our planet. It emphasizes

use of renewable sources of energy and renewable natural resources, minimizing waste generation, and more environmentally sound purchasing.

At Fort Eustis and Fort Story, we are "greening" the construction process which supports the goal of sustainability. Contractors will recycle more of their construction waste; use recycled content materials where applicable; design landscaping to minimize water requirements; and use geothermal systems to heat with less fossil fuels.

Chapter 9 Training

Everyone who works with Hazardous Materials (HM), Universal Waste (UW), and/or Hazardous Waste (HW) is required to have training. Anyone who wears a respirator must be trained. In addition, anyone who may discover or respond to a spill of HM or HW needs training.

The Who What When and Where on Training

Types of Training

TYPES OF TRAINING

The Occupational Safety and Health Administration (OSHA) require the following:

- **Hazard Communication (HazCom)** Initial and when new HMs are introduced to the work place. Instruction on how to safely work with and handle HMs.
- **Hazardous Waste Operations & Emergency Response (HazWOPER) First Responder - Awareness Level** Initial and annual refresher. Instruction on how to recognized and safely respond to a spill or incident involving HMs and HWs.
- **HazWOPER First Responder** Operations Level - Initial and annual refresher. Instruction on how to safely clean up spills involving HMs and HWs. Activity personnel assigned duties to respond to and possibly clean up spills require First Responder - Operations Level training.

The EPA and VDEQ require Hazardous Waste Management (HWM) training. FE/FS accomplish this by the following:

- Basic Environmental Management (BEM) training. Initial and annual refresher. An introduction to Environmental Management (EM).
- Intermediate Environmental Management (IEM). Initial and annual refresher. A more in depth discussion of EM.
- Advanced Environmental Management (AEM). - Initial and annual refresher. Detailed EM for FE/FS Coordinators.

The Department of Transportation (DOT) requires training for personnel that purchase, label, and ship containers of HMs and HWs or sign shipping papers. This is generally not required for most AECs or HWCs.

- DOT HazMat Employee training requires initial training and bi-annual refresher training.

POST SAFETY:

The Safety Office is responsible for providing or monitoring OSHA training. HazCom training will be provided by the Safety Office or by the activity trainer who has been approved by the Safety Office. The Activity trainer will also provide first Responder–Awareness Level training. In many cases this trainer is the AEC or HWC.

DPW-ENRD:

The Directorate of Public Works (DPW) Environmental and Natural Resources Division (ENRD) is responsible for providing a "Train the Trainer" Advanced Environmental Management (AEM) training for Activity Environmental Coordinators (AECs) and Hazardous Waste Coordinators (HWCs) and standardized Basic (BEM) and Intermediate (IEM) Environmental Management programs for use by AECs and HWCs.

AECs and HWCs:

AECs and HWCs are responsible for ensuring and providing training to Activity personnel (HWSs, HWHs, UWHs, and HMHs.

- HazCom training: Either provide or arrange with Post Safety.
- First Responder – Awareness: Provide Initial and Annual Refresher training using the training program provided by Training Aids Support Center (TASC).
- First Responder - Awareness and Operations Level training. Initial and Annual Refresher training required, but limited to the needs of the Activity. The above TASC program will be used when required.
- Basic Environmental Management (BEM) training. Provide Initial and Annual Refresher using the standardized program provided by ENRD.
- Intermediate Environmental Management (IEM) training. Provide Initial and Annual Refresher using the standardized program provided by ENRD.

AECs and HWCs must be appointed and trained before assuming Coordinator duties. HWSs and HWHs must successfully complete training within six months of being assigned HW duties. Until training is completed, HWSs and HWHs must work under the direct supervision of a trained HWS, HWC, or AEC.

DOT HazMat Employee training is not available on post and must be provided by a government agency or contractor IAW TCFE Reg 200-6

[1]Training Summary Chart

Training Type	AEC	HWC	HWS	HWH	UWH	HMH	RC
HazCom, By Post Safety	R	R	R	R	R	R	R
First Responder-Awareness Level, By Activity	A	A	A	A	A	A	A
BEM, By Activity	A	A	A	A	A	A	A
IEM, By Activity	A	A	A	O	O	O	O
AEM Provided By DPW-ENRD	A	A	O	O	O	O	O
[2]First Responder-Operations Level, By Activity	A	A	A	A	O	O	O
[3]DOT HazMat Employee	B	B	O	O	O	O	O

R – Required Initially and then when new HMs are introduced to the work place.
A – Initial and Annual Refreshers.
B – Bi-annual or Tri-annual depending on job functions.
O – Not required
1- All training records must be kept for at least 3 years.
2 – Only required when Activity has a designated Response Team, AECs and HWCs required, and may include other personnel such as HWSs and or HWHs.
3 – 8 hour Tri-annual training required for activities not turning in wastes to or securing containers from the Hazardous Waste Accumulation Facility (HWAF). Bi-annual 40 or 80 hour training required for personnel having signature authority for manifests or shipping papers IAW TCFE Reg 200-6.

Chapter 10 Wastewater & Storm Water Mgt.

Wastewater and Storm water are regulated under the Federal Water Pollution Control Act, commonly known as the Clean Water Act (CWA). The CWA objective is to restore and maintain the chemical, physical and biological integrity of the nation's waters. This objective is achieved through pollution prevention initiatives, water quality monitoring, inspection and education.

Oil & Water Separators

Storm Water Pollution Prevention Plan (SWPPP)

WASTEWATER

Have you ever wondered what happens after flushing the toilet or pouring cooking grease down the kitchen sink drain? Frequently, these acts are performed and little or no thought is given to them.

Wastewater is defined as "the used water and solids from a community that flow to a treatment plant." Wastewater is generally characterized as domestic – the discharge from our homes and offices or industrial – the discharge from process operations and maintenance activities. These discharges are collected in the sanitary sewer collection system and eventually make their way to a wastewater treatment facility. At the treatment facility, the discharge is treated using chemical and/or biological technology through a series of processes. These processes include such functions as solids removal, pH adjustment and disinfection. All wastewater generated on the installation is

regulated under a permit issued by Hampton Roads Sanitation District (HRSD). This permit defines what can be discharged and in what quantities. HRSD owns and operates the treatment facility that receives our wastewater. Failure to comply with our permit could result in problems at the treatment facility. When this occurs and or when there is the potential for this, HRSD can impose enforcement actions. These enforcement actions include Notice of Violations (NOV), fines or other penalties.

To ensure compliance is maintained with this permit, everyone can play a role. At industrial sites (i.e. motorpools, washracks, airfield, port operations, hospital and clinics, and process operations) good housekeeping practices are extremely beneficial. Sinks located in work areas should only be used for hygiene purposes. Do not pour excess materials such as oil, cleaning products, or chemicals into the sinks. Procedures exist for the proper disposal of material and it is very important that they are followed. Drains located inside buildings, discharge into the sanitary sewer. Some drains enter an oil/water separator (OWS) prior to discharging into the sewer. All practical measures should be taken when storing materials to ensure a spill does not reach the sewer. What this means is material stored inside should have some type of secondary containment.

Oil/Water Separators

Oil/water separators are designed to treat small quantities of oil water from bilge water, wash operations and motorpool activities. Generally, separators are able to accommodate 95% water and 5% oil. They are not to be used as a method for disposal of used oil, antifreeze, or paint waste. Oil and water naturally separate, as a result, the oil is skimmed off and collected in a holding tank and the water is discharged into the sewer. Overloading the separator

with oil will cause the oil to overflow into the sewer which can cause regulatory problems. It is the responsibility of the user to ensure that materials other than oil and water are not introduced into the separator. Further, it is the responsibility of the users to inspect the separator weekly, to ensure that it is functioning properly and to determine when the collection tank needs to be pumped.

STORMWATER

Storm water discharges are regulated by the Virginia Department of Environmental Quality (DEQ) through a Virginia Pollutant Discharge Elimination System (VPDES) Permit. This permit requires periodic water quality monitoring after a rain event. Samples are collected and analyzed by a contract laboratory. The result of this monitoring is submitted to the DEQ on a quarterly basis and depicts the level of contamination from these sites.

The storm drainage system is a collection of piping that conveys storm water from the installation to a receiving body of water such as a creek, ditch, lake, stream or river. Keep in mind that we live and work in the Chesapeake Bay Watershed and all storm water ultimately makes its way to the Bay. Pollutants that enter these water bodies disrupt delicate ecosystems. In addition, who wants to fish and swim in polluted waters?

Storm Water Pollution Prevention Plan (SWPPP)

As a requirement of the VPDES Permit, a Storm Water Pollution Prevention Plan is required for each industrial activity. This plan is designed to reduce or eliminate the potential for contaminated storm water runoff. This is accomplished through good housekeeping and Best Management Practices.

The SWPPP commits the installation to:

- Properly storing and handling materials to prevent spills and the contamination of storm water. If material is approved to be stored outside, it must be properly labeled and appropriately sized secondary containment must be used.
- Spill kits should be available and properly maintained.
- Material Safety Data Sheets must be on file and readily available for all material stored on site.
- Using drip pans under industrial vehicles to prevent leaks from getting on the ground.
- Inspection of industrial sites to ensure compliance with the regulation. If deficiencies are noted during the inspection, corrective action should be taken.
- Vehicle washing may only occur at an approved washing facility.
- Protection of storm drains. Care should be taken to ensure that activities are not conducted in close proximity to a storm drain without some method of protecting the drain from accidental spills.
- Storm drains are not a place to dispose of debris or unwanted materials. Clogging up the drain can cause localized flooding and can create hazards. The installation is prohibited by regulation from disposing of any thing other that storm water run off into the drainage system. If in question – Don't!
- Education. Education. Education. It is imperative that employees be familiar with their work sites and stay informed as changes occur. An informed staff in a properly maintained site significantly reduces the opportunity for problems.

Properly maintaining and utilizing industrial sites ensure continued compliance with storm water requirements.

Chapter 11
Natural & Cultural Resources and Pesticide Mgt.

NATURAL RESOURCES

Managing Natural Resources on Fort Eustis and Fort Story

The Fort Eustis/Fort Story Conservation Branch of the Environmental and Natural Resource Division is responsible for the management of natural resources at the two installations. Natural resources include forestry, agronomy, fisheries, wildlife (to include their habitat and federal & state endangered and threatened species as well as rare or species of special concern), wetlands (tidal and non-tidal), vernal pools, entomology, pesticide management and horticulture. Special management programs exist for these resources and these programs are articulated in the Integrated Natural Resources Management Plan (INRMP).

Pesticide Management

Bald eagles (three active nests) which reside at Fort Eustis and the State endangered big eared bat which is found at Fort Story represent only a few of the rare and special concern plants and animals that make Fort Eustis and Fort Story their home. Several species of federally endangered sea turtles that reside in the Chesapeake Bay may sometimes be found at Fort Story beaches. If these animals are found at Fort Story (whether dead or alive) it must be reported to the Conservation Branch immediately. The rare, threatened, endangered and

species of special concern are protected by State and Federal laws; Endangered Species Act, Migratory Bird Treaty Act and others which carry large fines to harm, harass (to include destruction of nests or habitat) in any manner these protected animals. Even possession of dead endangered or threatened species is a violation of federal or state law.

Wetlands and vernal pools represent critical wildlife habitat that exist at both installations. These sites also represent excellent natural means of flood control. It is illegal to destroy, impact, excavate, fill or otherwise alter these sites without an appropriate permit. Additionally, Fort Story contains primary sand dunes that represent another ecologically important habitat and natural means of mitigating the effects of storms. No vehicles or personnel are authorized on primary sand dunes.

Residents, soldiers and employees of Fort Eustis and Fort Story should be aware of the importance of the wildlife and plants (and habitat), and report any suspected violation to the Military Police. For any information needed on the above or tree and shrub care, use of pesticides on Federal property, please call the DPW Environmental and Natural Resources Division.

CULTURAL RESOURCES

Fort Eustis is located in an area with a long history of human occupation, including prehistoric Indian settlements, colonial home sites, Civil War fortifications, and early twentieth-century farming and industrial communities. In 1989 an archeological inventory was completed which documented over 200 archeological sites, many of which are eligible for the National Register of Historic Places. Two sites, the Matthew Jones House

and Fort Crawford, are formally listed on the National Register. Most of these sites are protected by one or more Federal laws and regulations, as well as Army Regulation 200-4. The Archaeological Resources Protection Act prohibits disturbance of archeological sites except by properly qualified and authorized personnel. The National Historic Preservation Act requires that a consultation process be followed for any project or activity that may affect a site or building listed in or eligible for the National Register. AR 200-4 lists additional requirements and restrictions, including the prohibition of the use of metal detectors to locate artifacts.

Residents, soldiers, and employees of Fort Eustis should be aware of the importance of not disturbing archeological sites and reporting any suspected undocumented sites or artifacts to the DPW Environmental and Natural Resources Division (ENRD). Additionally, no digging or disturbing of soil in training areas should occur without prior clearance from ENRD.

There are no known archeological sites at Fort Story; however, there are over 70 buildings and structures that contribute to a historic district. These include buildings from the early history of Cape Henry, such as the lighthouses and several cottages; numerous bunkers, gun emplacements and buildings from the World War I and II eras; and Nike missile facilities from the Cold War. The same laws and regulations regarding cultural resources at Fort Eustis apply to Fort Story. However, Fort Story has special requirements. Fort Story comprises a Historic District which is eligible for the National Register of Historic Places. Subsequently, any proposal to alter or remove existing structures or artifacts, or construct new facilities must be coordinated with ENRD prior to any work taking place. A unique occurrence at Fort Story is the occasional washing up of shipwreck items onto the beach during storms. Any such items discovered should be reported to the Fort Story DPW Coordinator.

PESTICIDES

Use of pesticides and herbicides is strictly controlled on Fort Eustis and Fort Story as per Department of Defense policy. Only licensed applicators can use these materials. No pesticides or herbicides (to include household-type products such as Roundup) can be purchased through the HazMart. Installation personnel are not authorized to purchase commercial pesticides/herbicides via government credit cards or other means. Request pesticide/herbicide support through the DPW work order desk.

Chapter 12 Environmental Planning, Impact Analysis & Documentation

What do we mean by "environmental planning, impact analysis and documentation"? It means that Fort Eustis and Fort Story must plan ahead and evaluate (and then document) the impacts of projects, actions, training and missions on the environment. We accomplish this by complying with the provisions of the National Environmental Policy Act (NEPA), its subsequent federal regulations and the Army's policy on complying with NEPA.

National Environmental Policy Act (NEPA)

What is NEPA anyway? NEPA was enacted by Congress in 1969. It requires that all federal actions (to include military actions) be evaluated to determine if those pose impacts to the environment *before* a given action was implemented. This means that we must plan ahead and identify the environmental issues in advance, document these issues and design means of mitigating the impacts if possible. This allows us to protect and save valuable natural resources while balancing this with our national security obligations.

What is an EA?

So what's involved? Complying with NEPA requires us to evaluate the impacts of an action or project. This can be an involved process that may take a substantial amount of time so don't wait! The process must be completed ...and approved ...before the project can begin. Take the following actions. Contact ENRD to

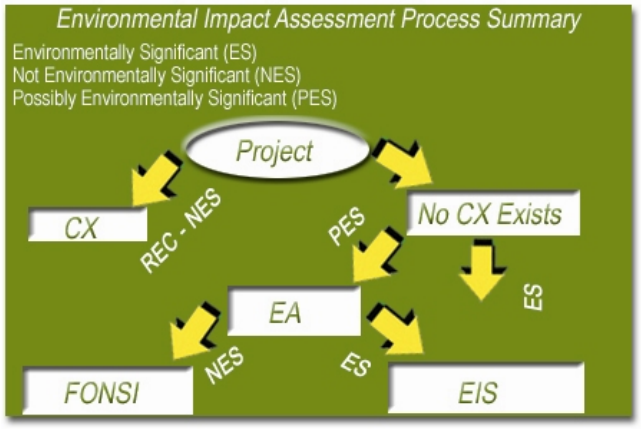
obtain assistance. You will need to provide details on the "who, what, where, when, how and the how much" about the project. From that point ENRD can advise you as to what type of environmental impact analysis is needed.

What are these types of environmental impact analysis? There are three types of analyses – Environmental Impact Statement (EIS), Environmental Assessment (EA) and Categorical Exclusion (CX). A CX usually requires the preparation of a Record of Environmental Consideration (REC).

If a project meets the criteria for a CX, it indicates that the project will not pose any significant impact to the environment. Ask ENRD what CXs exist. We document this finding with a REC. The format and content for a REC is found in Appendix D of TCFE Regulation 200-6. RECs are prepared by the proponent for the action/project, reviewed by ENRD and approved by the Director of Public Works.

An EA is a study conducted when a CX cannot be justified or when it's uncertain whether environmental impact will occur. EAs are more involved than RECs and usually take about 6-8 months to complete. The proponent for the action is overall responsible for the preparation of the EA but will typically require assistance from ENRD. Once completed the EA is staffed with ENRD and ultimately approved by the Garrison Commander. However, an EA will result in one of two findings. If the EA determines that no significant impact exists then a Finding of No Significant Impact (FONSI) is also prepared and

approved by the Garrison Commander. If the EA results in a finding that significant impact will occur, then a Notice of Intent (NOI) to prepare an EIS is needed. EAs must be provided to federal and state regulatory agencies for review and must also be available for the public to comment.



If a project is deemed to pose significant impact on the environment, then an EIS must be prepared. An EIS is a very detailed, scientific study that evaluates the impacts and identifies ways of mitigating them or describing the resources that will be damaged or lost. Typically, an EIS may take two to three years to complete and requires Department of the Army approval.

What are "projects" and "actions" that must be evaluated? Essentially, any "action" or "project" must be assessed. These terms can be used interchangeably. Examples of actions and projects include (but not limited to) training, exercises (such as actual deployment of personnel/equipment to the field as well as CPXs), construction of facilities, renovation of facilities, activation/deactivation of units, certain administrative actions, mission changes for a unit or tenant activity, changes in land use, and any action/project that would (or could potentially) directly

(or indirectly) effect wetlands, vernal pools, sub-aqueous land, primary sand dunes, or threatened/endangered wildlife. Never assume a project/action doesn't need to be reviewed for compliance with NEPA- contact ENRD for assistance.

"Projects/actions can impact a number of different resources areas. These include air quality, water quality, natural resources (land, wildlife, vegetation), historical and archeological resources, wetlands, and vernal pools. Projects/actions could lead to impacts or violations if not properly assessed. They could involve illegal discharges to water or air that would otherwise violate related permits. Certain construction or renovation projects might expose people to asbestos or lead-based paint. High noise levels generated by a project could be disruptive to other operations or affect the local community outside the installation boundary.

Projects that require hazardous materials may lead to new waste streams or toxic chemical reporting requirements. In some cases special plans or other permits may be needed such as general construction storm water permits and Sedimentation and Erosion Control Plans. Excavation of intertidal or other sub-aqueous lands require a permit. Several areas on both Fort Eustis and Fort Story are designated as Installation Restoration Program sites that are undergoing remediation. Intrusion on these areas could be detrimental."

Appendix A
Glossary

Section 1 Abbreviations and Acronyms

AEC	Activity Environmental Coordinator
AEM	Advanced Environmental Management
ASD	Accumulation Start Date
AST	Above Ground Storage Tank
AUL	Authorized Use List
BEM	Basic Environmental Management
BP	Boiling Point
CAA	Clean Air Acts
CAS	Chemical Abstract Service
CCL	Container Contents Log
CFR	Code of Federal Regulations
CTL	Container Turn-in Log
CWA	Clean Water Acts
CX	Categorical Exclusion
DOT	Department of Transportation
DOL	Directorate of Logistics
DPW	Directorate of Public Works
EA	Environmental Assessment
EIS	Environmental Impact Statement
ENRD	Environmental and Natural Resources Division
EM	Environmental Management
EMHB	Environmental Management Hand Book
EPA	Environmental Protection Agency

EPCRA	Emergency Planning & Community Right to Know Act
EPP	Environmentally Preferred Product
FE/FS	Fort Eustis – Fort Story
FM	Field Manual
GSA	General Services Administration
HazCom	Hazard Communication
HazMart	Centralized facility for requisitioning
HazMat	Hazardous Material
HazWOPER	Hazardous Waste Operations and Emergency Response
HC	Household Chemicals
HCEP	Household Chemical Exchange Program
Hg	Mercury
HM	Hazardous Material
HMH	Hazardous Material Handler
HMIS	Hazardous Materials Identification System
HW	Hazardous Waste
HWM	Hazardous Waste Management
HWAF	Hazardous Waste Accumulation Facility
HWC	Hazardous Waste Coordinator
HWH	Hazardous Waste Handler
HWS	Hazardous Waste Supervisor
IAW	In Accordance With
ID	Identification

IEM	Intermediate Environmental Management
LEL	Lower Explosive Limit
MRE	Meal Ready to Eat
MSDS	Material Safety Data Sheet
NEPA	National Environmental Policy Act
NFPA	National Fire Protection Association
NHW	Non-hazardous waste
NOV	Notice of Violation
OSHA	Occupational Safety and Health Administration
ODC	Ozone Depleting Chemicals
P2	Pollution Prevention
PCB	Polychlorinated Biphenyls
pH	Scale for Acids and Bases (0-14)
POC	Point of Contact
POL	Petroleum, Oil & Lubricants
PPE	Personal Protective Equipment
RC	Recycling Coordinator
REC	Record of Environmental Consideration
RCRA	Resource Conservation and Recovery Act
SAS	Satellite Accumulation Site
SOP	Standing Operating Procedures
SW	Solid Waste
SSW	Special Solid Waste
TASC	Training Aids Support Center
TCFE	Transportation Center, Fort Eustis
TM	Technical Manual

TSCA	Toxic Substances Control Act
TSS	Temporary Storage Site
UEL	Upper Explosive Limit
UST	Underground Storage Tank
UW	Universal Waste
UWH	Universal Waste Handler
VDEQ	Virginia Department of Environmental Quality
VHWMR	Virginia Hazardous Waste Management Regulations
VOL	Volatile Organic Compound
WDL	Waste Description Log

Section II – Special Terms and Definitions

Accumulation Start Date (ASD): The ASD is a key compliance date for Hazardous Waste Management (HWM) and Universal Waste Management (UWM). The ASD sets in motion when other actions must occur. The ASD must be assigned to a container of Hazardous Waste when HWs are first added to the container at a TSS or when the quantity limitation is reached at a SAS. The ASD must be assigned to a container of Universal Waste when UWs are first added to the container or the container is issued by the HWAF. Once the ASD is placed on a container, it cannot be changed. The "shell game" of moving a container from one accumulation area to another or re-containerizing the hazardous or universal waste does not restart the ASD. **Do not falsify the ASD.**

Activity Environmental Coordinator (AEC): The AEC is the single point of contact for all activity environmental matters. AECs must be in the grade of Warrant Officer (WO1) or above for military units, GS-11, NF-4 or above for government civilian organizations, and the appropriate management level for contractor personnel.

Acutely hazardous waste: Wastes that EPA has determined to be so dangerous in small amounts that they are regulated the same way as are large amounts of other hazardous wastes. Any hazardous waste with an EPA Hazardous Waste Code beginning with the letter "P". These wastes are subject to stringent quantity standards for accumulation and generation.

Authorized Use List: List of hazardous materials, which an activity is authorized to requisition from the HazMart.

Characteristic Waste: A waste classified as hazardous because it is ignitable, corrosive, reactive, or toxic as determined by the toxicity characteristic leaching procedure. It has an EPA Hazardous Waste Code in the range D001 to D043.

Container: Any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled and includes transport vehicles that are containers themselves (e.g., tank- trucks, tanker-trailers, and rail cars), and containers placed on or in a transport vehicle.

Contingency Plan: A document setting out an organized, planned and coordinated course of action to be followed in the event of a fire, explosion, or release of hazardous waste or hazardous waste constituents, which could threaten human health or the environment.

Discharge: The accidental or intentional spilling, leaking, pumping, pouring, emitting, emptying, or dumping of any quantity of hazardous materials, hazardous wastes, or non-hazardous wastes, petroleum product or non-petroleum oil into or on any drains, land, or waters. Discharge is synonymous with the terms "spill" and "release". Discharges may involve materials or wastes in liquid, solid or gaseous form.

Disposal: The discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters.

Generating Activity: Each Activity that manages hazardous chemicals, hazardous materials, hazardous substances, solid wastes, universal wastes, non-hazardous wastes, and hazardous wastes.

Hazard Communication Standard: Safety standard defined by OSHA, 29 CFR 1910.1200.

Hazardous Materials (HMs) or HazMat: U. S. Department of Transportation (DOT) term for a substance or material which has been determined by the Secretary of Transportation to be capable of posing an unreasonable risk to health, safety, and property when transported in commerce, and which has been so designated. For DOT transportation purposes, this term includes hazardous substances and hazardous wastes in addition to serviceable materials. **Unless otherwise stated in this SOP the terms "Hazardous Materials" or "HazMat" will be used to mean serviceable hazardous materials (HMs) or hazardous chemicals (HCs) only.**

Hazardous waste (HW): EPA term for a solid waste that poses a potential hazard to human health or the environment when not properly managed due to its ignitable, corrosive, reactive, or toxic properties.

Hazardous Waste Coordinator (HWC): HWCs manage the activity's hazardous waste accumulation sites: Temporary Storage Sites (TSSs) or Satellite Accumulation Sites (SASs). HWCs are the Recycling

Coordinators at this level. A HWC must be in the grade of E-5 or above for military units, GS-5, WG-6 or above for government civilians or equivalent, and appropriate supervisory level for contractor personnel.

Hazardous Waste Handler (HWH): An individual having assigned duties that involve handling hazardous wastes.

Hazardous Waste Supervisor (HWS): A first line supervisor of Hazardous Waste Handlers (HWHs).

Listed Wastes: These wastes are listed because they have at least one of the following properties; ignitability, corrosivity, reactivity, toxicity, or acutely hazardous. Container residues or spill residues from listed wastes will also be listed. They bear EPA Hazardous Waste Codes beginning with the letters F, P, U, or K.

Material Safety Data Sheet (MSDS): A document prepared by the importer or manufacturer listing a product's hazardous chemicals, physical properties, chemical properties, health effects, and appropriate safety precautions for utilizing the product.

Non-Hazardous Waste (NHW): A term for a special solid waste not meeting the definition of a hazardous waste and originating from hazardous chemicals or hazardous materials. Examples: oily rags, oil and grease contaminated dry sweep, latex paints, etc.

Recycling Coordinator (RC): The RC is the generating activity's point of contact for recycling.

Satellite Accumulation Site (SAS): Accumulation site where the volume of hazardous wastes must not exceed 55 gallons of HW or 1 quart of acutely HW at or near point of generation, under the control of the operator generating the waste. HWs must be turned in

within 3 days to a TSS or HWAF.

Solid Waste (SW): EPA term for any discarded material including materials which are abandoned, recycled, reclaimed, or accumulated speculatively.

Special Solid Waste (SSW): A term for solid wastes (excluding hazardous wastes) that are difficult to handle and/or require special precautions because of hazardous properties or the nature of the waste creates waste management problems in normal operations. These items cannot be discarded in dumpsters. SSWs include: Universal Wastes (UW), Non-Hazardous Wastes (NHW), asbestos, rubber tires, appliances, steel drums, compressed gas cylinders, aerosol cans, containers of liquids, filters, Used Oil, etc.

Spill: Any accidental or intentional spilling, leaking, pumping, pouring, emptying, dumping or emitting of any hazardous material or waste in any amount into or onto any media. The term "spill" is synonymous with the terms "discharge" and "release".

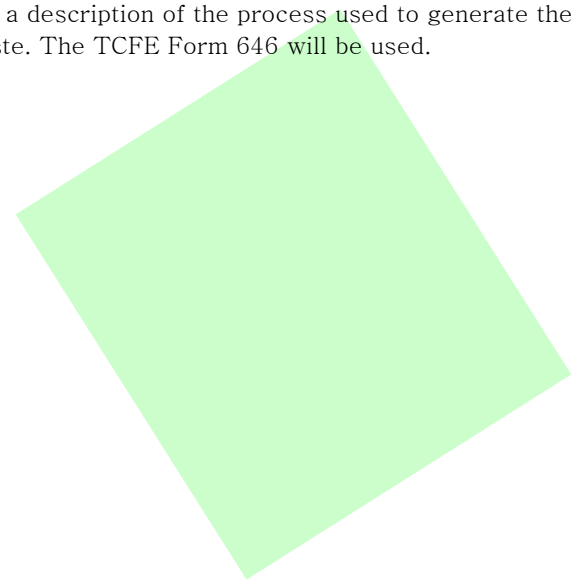
Temporary Storage Site (TSS): Accumulation site, which may hold any volume of hazardous wastes from any source. Waste may only be accumulated for 14 days before turning-in to the HWAF.

Universal Waste (UWs): A limited number of wastes that would otherwise have to be managed as Hazardous Wastes (HWs), e.g., batteries, lamps, pesticides, and mercury containing thermostats.

Universal Waste Handler (UWH): An individual having assigned duties that involve handling universal wastes.

Waste Description Logs (WDL): A written description prepared by the generating Activity of the waste which

includes: names, quantities, and National Stock Numbers (NSNs) of HMs used (See the activity's AUL); names and quantities of non hazardous materials used; and a description of the process used to generate the waste. The TCFE Form 646 will be used.



Appendix B
References

TCFE Reg 200-6, Fort Eustis and Fort Story Environmental Management

TCFE Reg 385-10, Fort Eustis and Fort Story HazCom Standard

TCFE Reg 700-1, Hazardous Material Management Program

AR 200-1, Environmental Protection and Enhancement

AR 200-2, Environmental Effects of Army Actions

TM 38 - 410, Storage and Handling of Hazardous Material

Standard Operating Procedures (SOP) for Recycling on Fort Eustis and Fort Story

Fort Eustis/Fort Story "Pollution Prevention Opportunity Assessment Handbook"

Fort Eustis "USATC HazMart Informational Handbook"

Fort Story "USATC HazMart Informational Handbook"

Appendix C
Legal Impacts of Environmental Management

Purpose: This Appendix provides a general overview of the legal aspects of environmental compliance to help Fort Eustis and Fort Story personnel better understand their responsibilities and legal liabilities.

General:

a. The legal aspects of environmental compliance are complex. This is also a relatively new area of law, since the first environmental statute did not exist prior to 1972 and the first Earth Day. Violations of the laws or environmental regulations can have a major adverse impact on the environments of Fort Eustis and Fort Story and on daily activities. Individual service members and employees who commit violations can be impacted as well, from with administrative procedures like letters of reprimand, to paying civil penalties, to criminal prosecution.

b. In an ideal world, everyone would be a good steward of the environment by conserving and protecting the air, water, and natural resources. Unfortunately, past practices lead to the point where when environmental regulations were finally written, they were written punitively in order to force compliance.

c. The rules and regulations are complicated which make compliance difficult to understand. Occasionally there will be more than one regulation which governs a situation, such as a federal and a state regulation. Also, the requirements will not always fit neatly into the normal “common sense” approach to how environmental requirement works. The bottom line is that the laws and implementing regulations are written to protect human health and the environment, thus non-compliance is usually strict and overwhelming.

Key Laws:

a. Clean Air Acts (CAAs) regulates air emissions & Ozone Depleting Chemicals.
b. Clean Water Acts (CWAs) regulates storm water, waste water, and drinking water.
c. The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) requires federal agencies to plan for emergencies and develop procedures for addressing petroleum product discharges and releases of hazardous substances, pollutants or contaminants. CERCLA provides a list of hazardous substances and their release quantity subject to reporting. CERCLA also governs the remediation of past contamination.
d. Resource Conservation and Recovery Act (RCRA) regulates current daily solid waste, hazardous wastes, universal waste, used oil and affirmative procurement.
e. Emergency Planning & Community Right-to-Know Act (EPCRA) regulates HM inventories and reporting.
f. Toxic Substance Control Act (TSCA) regulates polychlorinated biphenyls, asbestos, lead abatement.
g. National Environmental Policy Act (NEPA) requires that all federal action, such as projects and operations both small and large be evaluated for their environmental impacts before commencement. Even if a non-federal player is the main proponent, federal involvement requires NEPA analysis. Advanced planning is the key!
h. Federal Facilities Compliance Act waives sovereign immunity which essentially authorizes the Commonwealth to levy punitive fines against federal facilities under RCRA.
i. For each of the federal statutes, there is an implementing regulation found in the 40 Code of Federal Register series written by the Environmental Protection Agency (EPA). These CFR paragraphs document the minutia of implementation. Virginia, through its own statutes and regulations, also has an established system for regulating the environment. The state has been given authority to implement some programs, such as air permits, but both the state and EPA may show up on post for inspections.

Key Terminology and Definitions:

a. **Strict liability** – being held responsible without proof of negligence.
b. **Negligence** – an action or inaction outside your duty which a reasonable person would not have done, resulting in a negative impact on something else.
c. **Joint and several liability** – the concept of each activity being held wholly responsible even those there may have been several activities involved.
d. **"Knowing"**- mere knowledge of the facts, but does not have to know that it was illegal or a regulated activity. For example, if a worker knows he is ordering high sulfur content fuel for a boiler, but does not know that this violates the air permit, the act of ordering is a "knowing" act that puts the individual and installation in violation. Documented training and supervision become key.
e. **"Should have known"** – by position of leadership or supervision in the organization, the person is responsible for the actions or inactions of his/her subordinates. For example, if you have an employee on extended TDY and do not assign someone to cover the weekly inspections, you would be responsible for not having the inspections performed. Documented training and supervision become key.
f. **Supplemental Environmental Projects (SEP)** – these are projects or programs which can be paid for by the government in exchange for all or part of an environmental fine, e.g. public education programs, pollution prevention projects.
g. **Responsible corporate officer doctrine** – means that anyone in the chain of command, including commanders and directors, can be held accountable for the actions of his/her subordinates regardless of whether he had direct supervision or knowledge of the subordinate's actions as long as the duty to supervise existed. This concept is applied when there is a systemic failure that has been allowed to continue over time.
h. **Sovereign Immunity** – the concept that only Congress can establish when the federal agencies pay punitive fines to the states with public money.
i. **Significant Non-compliance (SNC)** – A repeat of a violation which can result in more aggressive enforcement and higher penalties. It does not matter that

the original and subsequent offenders are in different organizations, or that the offenses are years apart, as long as the offenses occurred on the same installation.

Type of Enforcement Actions: Fines and penalties can double and triple for repeat offenses.

a. Notice of Violation (NOV) – A letter following an inspection or incident with specified time frames (usually 30 days) within which the deficiencies are to be corrected.
b. Civil Penalties – Fines are usually assessed against an organization and can run up to **$31,500 per day per incident for RCRA violations**. Some air and water violations can be up to $250,000 per day per incident. If a NOV has been issued in the past, a repeat violation following the Significant Non Compliance rule could increase the enforcement action to a civil fine. Most fines will be assessed against the installation, and have to be paid out of installation operating dollars.

RCRA FINES ASSESSED AGAINST ARMY INSTALLATIONS	
storage of hazardous waste for more than 90 days	$615,450
no hazardous waste determination of containers	$202,500
incomplete emergency contingency plan	$172,075
improper labeling of hazardous waste containers	$118,039
discharge of spent photo fixer into sanitary system by a contractor	$103,410
no weekly inspections of hazardous waste storage site	$72,500
failure to keep containers tightly closed	$67,812
not all hazardous waste handlers had training	$51,250
no accumulation start date (ASD) on containers	$49,500
exceeded 55 gallons of hazardous waste in a SAS by autocraft shop	$49,140
improper aisle spacing	$35,000
failure to move waste from SAS within 3 days	$23,600
three pounds of rags not analyzed	$22,000
job titles & names	$19,250
shower/eyewash not working	$16,000
leaking paint cans & unknowns	$13,000
SAS too far from point of generation	$11,000
un-marked containers of used oil	$6,500
no fire extinguishers & spill kits	$4,000
absence of communication/decon equip	$1,260

c. Administrative Orders – A more aggressive action than a NOV to perform certain actions, cease operations, respond, cleanup, perform Supplemental Environmental Projects (SEP), etc. which can be backed up by civil and or criminal actions for failure to comply. These would usually come into play when a long term or multi-phased resolution is needed.

d. Criminal – Usually felonies against individuals for fraud, knowing, or negligent infractions of the regulations. Can include both imprisonment of up to **15 years per incident and fines up to $50,000 per day per incident**. Most criminal prosecutions would be against the individual who would typically be outside the scope of his/her employment. This means the worker/soldier is not eligible for representation by a Department of Justice attorney.

Criminal Enforcement Criteria: The CAA, CWA, and RCRA are the three laws that most Fort Eustis and Fort Story personnel will run into on a daily basis. Both installations have CAA and CWA permits, and the RCRA rules apply although neither installation has a RCRA permit and can only hold HW for 90 days.

- **Clean Air Acts – Felonies**
  - Knowingly make false statement or representation in any document filed, maintained, or used for compliance
  - Knowingly violate permit provisions

- **Clean Water Acts – Felonies**
  - Knowingly make false statement or representation in any document filed, maintained, or used for compliance to include omission of information
  - Knowingly discharge, cause, or permit oil and hazardous substances in to waters, e.g. surface, ground, sanitary, storm, etc.

- **RCRA (Resource Conservation and Recovery Act) – Felonies**
  - Knowingly make false statement or representation in any document filed, maintained, or used for Hazardous Waste compliance, e.g. **training records, inspection forms, waste identification**, etc.

- Knowingly transport HW to an unpermitted facility. This includes bringing onto or between Fort Eustis and Fort Story
- Transport, treat, store (more than 90 days from the Accumulations Start Date), or dispose of HW without a permit

Summary: The reason to comply with the myriad environmental laws is that both installations want to be good stewards of the environment. However, the negative reason to comply is that it is expensive and time consuming to be found out of compliance. On an individual level, the criminal charges can reach down to the personnel involved which can be career ending. Criminal charges can also migrate up, to the supervisors, directors and commanders under the responsible corporate officer concept and that is a career ender as well. Always ensure your personnel are properly trained and supervised; training is documented; and always ask ENRD if you are unsure of any actions before you take them.

Appendix D
Solid Waste Disposal & Recyclables

Solid Waste, Recycling, Pollution Prevention Center (SWRPPC)
Fort Eustis - Building 1209, M-F, 0700 – 1530, 878-4232
Fort Story - Building 1053, M-F, 0900 – 1600, 422-7634

Hazardous Waste Accumulation Facility (HWAF)
Fort Eustis - Building 1208, 878-3915
Fort Story - Building 1011, (Mon & Thurs)
By Appointment for AECs or HWCs Only

(For a complete list please refer to TCFE 200-6 "Appendix R, Solid Waste")

Solid Waste

Waste Item Name	It Should Go To The
aerosol cans	SWRPPC
appliances, metal (all freon or refrigerants must be recovered prior to recycling. Personnel must bring documentation of proper recovery by certified technician.)	SWRPPC
batteries (government-owned automotive wet-cell)	RDOL Reparable Item Exchange Activity (RIXA) – building 1411 (FE) 878-4907 building 931 (FS) 422-7818 (must coordinate in advance)
batteries dry cell (nickel cadmium, lead acid, alkaline, lithium)-universal waste	HWAF
batteries (non-government-owned automotive wet-cell)	SWRPPC (must coordinate in advance), M-F
burnable, non-recyclable items under 3' x 3'	appropriate dumpster (FE & FS)
biomass (includes yard clippings, leaves, twigs, pet wastes)	SWRPPC
WASTE ITEM NAME	IT SHOULD GO TO THE
compressed gas cylinders, non-	SWRPPC

refillable (OSHA) empty (value removed, 2nd hole drilled in lower end of cylinder)	FS - must be coordinated in advance *HazMart will accept empty cylinders if cylinder was issued by them. FE - 878-2781 FS - 462-4053
concrete/cinderblocks (metal must be removed)	SWRPPC
concertina wire (must be cut into 3" lengths and placed in a 5 GL bucket)	SWRPPC FS - must be coordinated in advance
construction debris	SWRPPC
dead animals (wild)	FE - ENRD, DPW, 878-2375 FS - Provost Marshall, 422-7141
drums, OSHA empty steel	SWRPPC FS - must coordinate in advance
filters (oil and fuel)	FE – SWRPPC FS - HWAF
fire extinguishers (non-halon)	FE – SWRPPC FS - HWAF
fluorescent light bulbs (universal waste)	FE – SWRPPC FS - HWAF
fluorescent light fixture ballasts	FE – SWRPPC FS - HWAF
hazardous & non-hazardous wastes	HWAF
household hazardous waste (generated within the housing area – no wastes from off-post will be accepted)	SWRPPC
large items over 3' x 3', wood, pallets, and furniture (no metal FE)	0900-1600hrs, M-F,
large limbs and bushes (over 3' long X ½" diameter)	SWRPPC
containers of liquids (any)	HWAF

mattresses	SWRPPC
medical waste (any)	MEDDAC Incinerator (call before delivery of wastes) 878-4531
metal items, large (wood or other material must be removed)	SWRPPC
used oil	FE - Contractor Pickup 878-3915 FS - Contractor Pickup 422-7344
paint	HWAF
petroleum, oil and lubricants	HWAF
pallets (serviceable, but no longer needed)	SWRPPC
pallets (one or more boards broken)	SWRPPC
recyclable items	SWRPPC
solid waste from home	County or City of Origin – not on Fort Eustis or Fort Story 878-4232
tires	SWRPPC make appointment for large volume.
utility poles, cut to 8' length	SWRPPC

Recyclables	FE Bldg 1209	FS Bldg 1060
white ledger paper	yes	yes
paper board (cereal boxes)	yes	no
corrugated cardboard	yes	yes
plastics (#1 &2)	yes	yes
pallets	yes	no
aluminum foil	yes	no
colored ledger paper	yes	yes
newspapers	yes	yes
aluminum cans	yes	yes
tin cans	yes	no
metal (all types)	yes	yes
magazines	yes	no
car batteries (excluding military	yes	no
computer paper	yes	yes
manuals (FMs & TMs, ets.)	yes	yes
junk mail	yes	no

Recyclables

Appendix E
Universal Waste (UW)

Universal Waste (UWs): A limited number of wastes that would otherwise have to be managed as Hazardous wastes (HWs), e.g., batteries, lamps, pesticides, and mercury containing thermostats.

Universal Waste Handler (UWH): An individual having assigned duties that involve handling universal wastes.

Universal Waste (UW) Lamps: includes but not limited to fluorescent, high intensity discharge, neon, mercury vapor, high pressure sodium, metal halide bulbs and tubes, etc. This applies to used lamps when removed from the fixture and unused lamps when discarded.

Universal Waste (UW) Batteries: essentially includes all batteries excluding vehicle lead acid batteries already managed as recyclables and alkaline batteries.

UW Site Management

- UW sites need to be sited where a spill or leak would not constitute a discharge to surface waters, storm drains, or the sanitary sewage system
- UW sites, excluding UW Lamps must have containment in sufficient capacity to hold the largest volume of an undetected liquid leak. UWs that have liquids must have containment and the appropriate spill kits (acid, base, mercury, etc)

- Emergency Response Information: “Points of Contact” and “Telephone Numbers” will be posted at each site
- Universal Waste storage sites do not require site approval or sign
- Universal Wastes will be stored in existing SASs or TSSs where practical
- Universal Wastes sites will be inspected at least monthly using the TCFE Form 192

UW Container Management

- All containers of UWs must have a label indicating the type of UW, e.g., UW Lamps, UW Batteries, UW Pesticides, UW Thermostats
- All containers of UW must have the Accumulation Start Date marked on the label
- All UWs excluding UW Lamps must be in DOT approved containers
- All UWs excluding UW Lamps will have a CCL
- Turn-ins of all UWs excluding UW Lamps will be recorded on the CTL
- Containers of UW Lamps will be closed in such a manner so that potentially broken lamp debris cannot be released from the container
- UW Lamps cannot be stored in the same container with serviceable lamps
- Broken lamps must be handled as UWs

UW Turn-Ins

- Turn-in procedures in Appendix H TCFE Reg 200-6 for HWs will be used for UWs excluding UW Lamps.
- UWs, excluding UW Lamps must be turned-in at the Hazardous Waste Accumulation Facility (HWAF) within 270 days of the ASD.
- UW lamps must be turned-in at the Fort Eustis Solid Waste, Recycling, Pollution Prevention Center (SWRPPC), Bldg 1209 or the Fort Story Recycling Center, Bldg 1053 within 60 days of the ASD. Full containers must be turned-in within 10 working days and may not exceed the 60-day limit.

Appendix F
Household Chemical Exchange Program

HCEP

The Fort Eustis Household Chemical Exchange Program (HCEP) is limited to military personnel and their family members residing on Fort Eustis. The purpose of this program is to keep household chemicals from being discarded in the trash and to maximize their reuse. Household chemicals from off-post are prohibited. Most communities surrounding Fort Eustis and Fort Story have their own local programs.

The ENRD of the Directorate of Public Works (DPW) operates the Household Chemical Exchange Program through SWRPPC, which is located in Building 1209 on Fort Eustis.

Turn-ins of Household Chemicals: The SWRPPC, will accept household chemicals that are identifiable and in the original container and labeled. Items will be accepted during the hours of 0900 – 1500, Monday through Friday. Personnel will have to verify their on post residency (ID, residence number) in order to drop off items.

Issue of Household Chemicals: Household chemicals in their original containers and free from any leaks, rust, corrosion, or significant dents will be available for issue Monday through Friday from 1300 to 1500 hours. Personnel will have to verify their on post residency and sign a waiver of liability in order to pick up items. Serviceable items will be issued for reuse at no charge.

Acceptable Items

Household Maintenance Products	Automotive Products
rust preventatives	brake fluid
wood strippers & preservatives	transmission fluid
paint thinners	radiator cleaners
degreasers	engine and radiator flushes
creosote	car waxes
paint/paint products including aerosols	gasoline or its mixtures
serviceable non vehicular batteries (ie. clocks, radios, flashlights, games, toys)	kerosene
Household Cleaning Products	**Miscellaneous Products**
drain cleaners	photo chemicals
metal polishers	mothballs
dry-cleaning fluids	art and craft supplies
bleaches	aerosols (non-paint) (i.e. room fresheners, cleaners, disinfectants, spray starches)
ammonia	old chemistry sets
oven and floor cleaners and waxes	fire extinguishers (household use)
dish washing and laundry detergents	propane gas cylinders (household use)
glass cleaners	
furniture polishes	
Lawn and Garden Products	
fertilizers	
herbicides/pesticides	
insect sprays	
rodenticides	
pool chemicals	

Unacceptable Items

radioactive containing items (i.e. smoke detectors, etc)
explosives, gun powder, flares, ammunition
medical items and substances regulated by the Drug Enforcement Agency
unknown materials
asbestos, refrigerant from old appliances

Appendix G
Examples of Labeling

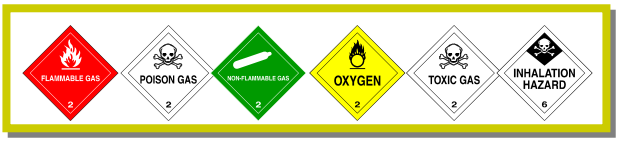
Department of Transportation (DOT)

Colors and numbers on diamond-shaped labels are used to designate 9 basic hazard classes:

Class 1 – Explosives – **Orange**

Division 1.1	Explosives with a mass explosion hazard
Division 1.2	Explosives with a projection hazard
Division 1.3	Explosives with a predominantly fire hazard
Division 1.4	Explosives with a no significant blast hazard
Division 1.5	Very insensitive explosives; blasting agents
Division 1.6	Extremely insensitive detonating articles

Class 2 – Gases



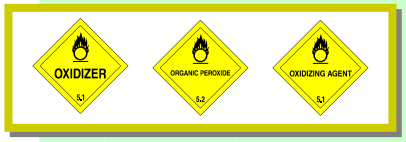
Flammable Gases – **Red**
Non-Flammable, Non toxic compressed Gases – **Green**
Oxygen – **Yellow**
Gases toxic (Poison) by inhalation – **White with Skull**

Class 3 – Flammable or Combustible Liquids –**Red**

Class 4 – Solids

Flammable Solid – **Red & White Vertical Striped**
Spontaneously Combustible – **Half Red & Half White**
Dangerous When Wet – **Blue**

Class 5 – Oxidizers – **Yellow**



Division 5.1 – Oxidizers
Division 5.2 – Organic Peroxides

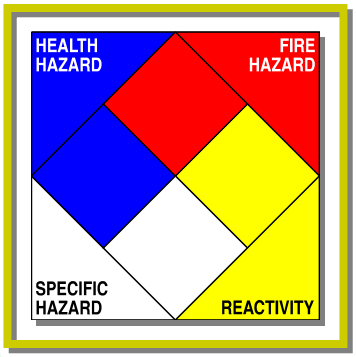
Class 6 – Poisons, Harmful, Infectious – White with Skull & Cross Bones or Bio-Hazard Icon

Class 7 – Radioactive – Half Black & Half White or Half Yellow & Half Black Diamond with Radioactive Icon

Class 8 – Corrosive – Half White & Half Black Diamond with Corroding Plate or Hand

Class 9 – Miscellaneous – White Diamond with Upper Black & White stripes

National Fire Protection Association (NFPA)
704M Signal



Health Hazard – Blue Diamond

0 – No unusual hazard
1 – Caution – may cause irritation
2 – Warning – may be harmful if inhaled or absorbed

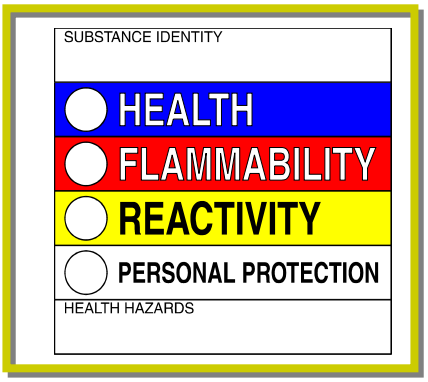
3 – Warning – Corrosive or toxic. Avoid skin contact or inhalation
4 – Danger – May be fatal on short exposure. Special protective equipment required

Fire Hazard – **Red Diamond**
0 – Not combustible
1 – Combustible if heated
2 – Caution – Combustible liquid, Flash point of 100°F to 200°F
3 – Warning – Combustible liquid, Flash point below 100°F
4 – Danger – Flammable gas or extremely flammable liquid

Reactivity Hazard – **Yellow Diamond**
0 – Stable. Not reactive when mixed with water.
1 – Caution – May react if heated or mixed with water
2 – Warning – Unstable, or may react when mixed with water
3 – Danger – May be explosive if shocked, heated under confinement, or mixed with water.
4 – Danger – Explosive material at room temperature

Special precautions – **White Diamond**
"Dangerous When Wet", "Radioactive", etc.

National Paints and Coatings Association's Hazardous Materials Identification System (HMIS)



Health Hazard – **Blue Rectangle**

0 – Minimal – All chemicals have some degree of toxicity
1 – Slight – Slightly toxic, may cause slight irritation
2 – Moderate – Moderately Toxic, may be harmful if inhaled or absorbed
3 – Serious – Toxic. Avoid skin contact or inhalation
4 – Extreme – Highly Toxic, may be fatal on short-term exposure. Special protective equipment required

Fire Hazard – **Red Rectangle**

0 – Minimal – will not burn under normal conditions
1 – Slight – Slightly combustible, requires strong heating to ignite
2 – Moderate – Combustible requires moderate heating to ignite. Flash point of 100^{O}F to 200^{O}F
3 – Serious – Flammable, Flash point 73^{O}F to 100^{O}F
4 – Extreme – Flammable gas or liquid, Flash point below 73^{O}F

Reactivity Hazard – **Yellow Rectangle**

0 – Minimal – Normally stable, does not react with water.
1 – Slight – May react if heated or mixed with water
2 – Moderate – Unstable, or may react with water
3 – Serious – May explode if shocked, heated under confinement, or mixed with water.
4 – Extreme – Explosive at room temperature

White Rectangle – series of icons representing required protective equipment.

FORT EUSTIS AND FORT STORY NON-HAZARDOUS WASTE LABELS

Fort Eustis

Fort Story

FORT EUSTIS AND FORT STORY HAZARDOUS WASTE LABELS

Fort Eustis

Fort Story

Numbers to Know!

Directorate of Logistics (DOL)

HazMart	**878-2781**
Transportation Branch	**878-3425**
RIXA (Lead Acid Batteries)	**878-4907**

Installation Safety Office

Safety Training (OSHA)	**878-3995**

Medical Department Activity (MEDDAC)

Industrial Hygiene	**878-5660**

Directorate of Public Works (DPW) Help Disk

OWS	**878-4357**

EMERGENCY SPILL REPORTING

Fort Eustis and Fort Story Emergency Services 911

Non-Emergency Spill Reporting:
Fort Eustis 878-1008
Fort Story 422-7141

ACTIVITY POINTS OF CONTACT:

ACTIVITY ENVIRONMENTAL COORDINATOR:

_____ _____

HAZARDOUS WASTE COORDINATOR:

_____ _____

RECYCLING COORDINATOR:

_____ _____

UNIVERSAL WASTE COORDINATOR:

_____ _____