F I N A L

HAZARDOUS WASTE MANAGEMENT AND MINIMIZATION PLAN

U.S. ARMY GARRISON

FORT BELVOIR, VIRGINIA

Prepared for:

Fort Belvoir Directorate of Public Works, Environmental and Natural Resources Division

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ACRONYMS

90-Day HWAS	90-Day Hazardous Waste Accumulation Site
ACM	Asbestos Containing Material
ADF	Aerospace Data Facility
AR	Army Regulation
ASP	Ammunition Supply Point
CARC	Chemical Agent Resistant Coating
CFR	Code of Federal Regulations
CPAC	Civilian Personnel Advisory Center
CRT	Cathode Ray Tube
DA	Department of the Army
DA PAM	Department of the Army Pamphlet
DOD	Department of Defense
DOLI	Department of Labor and Industry
DOT	Department of Transportation
DOT/UN	Department of Transportation/United Nations
DPW	Directorate of Public Works
DPW-ENRD	Directorate of Public Works, Environmental & Natural Resources Division
DLADS	Defense Logistics Agency Disposition Service
DS2	Decontamination Solution Number 2
ECO	Environmental Compliance Officer
EMS	Environmental Management System
EMSMR	Environmental Management System Management Representative
EPA	Environmental Protection Agency
EQCC	Environmental Quality Control Committee
ESOP	Environmental Standard Operating Procedure
FBCH	Fort Belvoir Community Hospital
FESD	Fire and Emergency Services Division
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FRH	Flameless Ration Heaters
GAA	Grease, Automotive and Aviation
HID	High Intensity Discharge
HM/HW	Hazardous Material/Hazardous Waste
HMMP	Hazardous Material Management Program
HSWA	Hazardous and Solid Waste Amendment
HWMMP	Hazardous Waste Management and Minimization Plan
ID	Identification

IMPAC	International Merchant Purchase Authorization Card
LBP	Lead-Based Paint
LDR	Land Disposal Restrictions
$LiSO_2$	Lithium Sulfur Dioxide
LRC	Logistics Readiness Center
MEK	Methyl Ethyl Ketone
MOGAS	Motor Gasoline
MRIP	Munitions Rule Implementation Policy
MRE	Meals Ready-to-Eat
MSP	Master Spill Plan
NBC	Nuclear, Biological, and Chemical
NEC	Network Enterprise Center
NiCd	Nickel-Cadmium
NiMH	Nickel Metal Hydride
NOV	Notice of Violation
NRC	National Response Center
NVESD	Night Vision and Electronic Sensors Directorate
OACSIM	Office of the Assistant Chief of Staff for Installation Management
OASA(I&E)	Office of the Assistant Secretary for Installations and Environment
PAO	Public Affairs Office
PCB	Polychlorinated Biphenyl
POL	Petroleum, Oil, and Lubricant
PPE	Personal Protective Equipment
QRP	Qualified Recycling Program
RACM	Regulated Asbestos Containing Material
RCRA	Resource Conservation and Recovery Act
RMW	Regulated Medical Waste
RTDE	Research, Test, Development and Evaluation
SAA	Satellite Accumulation Area
SDS	Safety Data Sheets
SJA	Staff Judge Advocate
SOP	Standard Operating Procedure
SPCC	Spill Prevention, Control, and Countermeasures
SSSP	Site Specific Spill Plan
STB	Supertropical Bleach
TCLP	Toxicity Characteristic Leaching Procedure
TM	Technical Manual

TSCA	Toxic Substances Control Act
TSD	Treatment, Storage and Disposal
UCMJ	Uniform Code of Military Justice
VAC	Virginia Administrative Code
VADEQ	Virginia Department of Environmental Quality
WMM	Waste Military Munitions

HAZARDOUS WASTE PROGRAM – BLDG 1490 AND 1495	
Hazardous Waste Program Manager	703-806-2119
RCRA HW Compliance and Training Coordinator	703-806-0839
RCRA HW/HM Compliance Inspection Coordinator	703-806-4537
Hazardous Waste Accumulation Site Manager	703-806-4537
EMERGENCY NUMBERS	
Garrison Consolidated Emergency Dispatch Desk	703-781-1800
Fort Belvoir Fire Department - HAZMAT Support Station 463	703-806-4676
Note: All emergency calls to 911 will be rerouted back to on-post responders as appropriate	
ENVIRONMENTAL AND NATURAL RESOURCES DIVISION	
Chief, Environmental and Natural Resources Division	703-806-3193
Environmental Compliance Branch Chief	703-298-8045
Natural Resources Branch Chief	703-806-0049
Solid Waste Program, Recycling Program Manager	703-806-3766
Toxics, Asbestos, Lead, and Mold Program Manager	703-806-0061
Pesticides and Pest Management Program Manager	703-806-0684
Petroleum Management, Spill Response Program Manager	703-806-3694
Restoration, Clean-up, and Landfills Program Manager	703-805-0048
Restoration, Clean-up, and Ranges Program Manager	703-806-0627
Storm Water, MS4 Permit Manager	703-806-3406
FORT BELVOIR FACILITY NUMBERS	
NEC (Electronic Waste)	703-805-2425
Department of Preventative Medicine	703-805-0059
Fort Belvoir Safety Office (Radioactive Waste)	703-704-0649
Baseops contractor (Used Oil Recycling)	703-806-3109

1.1 PURPOSE AND OBJECTIVE

The United States Army is committed to proper handling of the hazardous wastes that are generated on its installations. The primary objective of this document is to provide a plan that gives personnel working with hazardous waste the essential tools for effective management while implementing waste minimization principles. The purpose of this plan is to identify and establish the requirements for the accumulation, storage, handling, and disposal of hazardous waste on Fort Belvoir from the point of generation to the point of disposal.

This plan was developed in accordance with Fort Belvoir Permit VA7213720082, Army Regulation (AR) 200-1, *Environmental Protection and Enhancement*; the Virginia Administrative Code (VAC); and the Resource Conservation and Recovery Act (RCRA), as amended. In the event that any of the provisions contained in this plan are superseded or otherwise modified by changes to the Code of Federal Regulations (CFR) or the Virginia Administrative Code, the CFR and VAC will take precedence over this plan. Details about specific regulatory requirements are included in Section 2.2 of this plan.

This document implements the requirements of AR 200-1, Chapter 10-1 and permit VA7213720082 and provides installation personnel with specific procedures and responsibilities to manage and minimize hazardous wastes consistent with federal, state and local laws and regulations. The Hazardous Waste Management and Minimization Plan (HWMMP) serves as documentation for regulatory authorities that such a program is in place.

The HWMMP documents personnel and procedures required to ensure each step in the "cradle-to-grave" management of hazardous wastes is carried out in a consistent manner and in accordance with regulatory requirements. Procedures are either referenced or included in this HWMMP, as necessary, to provide documented hazardous waste management instructions, from the time of waste generation until it is transported offsite for reuse or disposal.

1.2 APPLICABILITY

The HWMMP is intended to be comprehensive, covering all operations involving hazardous waste, including all activities and tenants that generate or otherwise manage hazardous waste, including activities assigned to Fort Belvoir that are located at facilities outside the contiguous boundary of the main cantonment area. These facilities include the Mark Center, Humphreys Engineering Center, National Geospatial Agency, ADF East, and Rivanna

Station. The requirements of this document are applicable to all military, civilian and contract personnel at Fort Belvoir, including commanders and directors.

1.3 IMPLEMENTATION

Implementation of a comprehensive hazardous waste management program mandated by RCRA requires maximum cooperation of all activities on Fort Belvoir. It is the responsibility of the Garrison Commander to ensure compliance with all RCRA requirements for Fort Belvoir and to notify and report to Environmental Protection Agency (EPA) or VADEQ, as required, for all installation activities, including tenant activities. The individual installation organizations (generating activities) are accountable for conducting their activities in accordance with this plan. Each generating organization will ensure compliance with RCRA regulations at the facility.

1.4 PLAN REVIEW AND REVISION

1.4.1 Plan Review

This plan will be reviewed at least annually and when a process change occurs. The review will be documented in the following table.

Date Review Completed	Person Performing Review	Comments

1.4.2 Revision Log

Revisions made to the plan, including the date of the revision, the section of the plan being revised, a description of the change, and the name and title of the person making the change will be documented in the following table.

Date of Change	Page Numbers/Section	Person Entering Change	Description of Change

2.1 GENERAL

Fort Belvoir is an 8,656-acre installation located in Fairfax County, Virginia, adjacent to the Potomac River. It is situated 11 miles southwest of the City of Alexandria and 18 miles southwest of Washington, D.C. The major highway access to Fort Belvoir is U.S. Route 1, which bisects the main installation into North and South Posts. The main entrance to Fort Belvoir is on U.S. Route 1 at Belvoir Road. Fort Belvoir is bordered on the northeast by Dogue Creek, on the east by the Potomac River, on the south by Gunston Cove and Pohick Bay, and to the west and northwest by Telegraph Road with commercial and residential properties scattered throughout.

The mission of the U.S. Army Fort Belvoir is to command, control, and operate Fort Belvoir and its assigned attached units. Fort Belvoir is a U.S. Department of the Army Administrative Center in the National Capital Region. Hazardous wastes are generated primarily as the result of testing of commercial products to determine whether they meet government specifications; maintenance of Army equipment and property; medical facility operations; various research, test, development, and evaluation (RTDE) activities; and from expired or off-specification hazardous materials. These wastes are generated at numerous locations across Fort Belvoir.

2.2 REGULATORY AUTHORITY

2.2.1 Federal Regulations

RCRA is the principal Federal legislation governing the management of solid and hazardous waste. The EPA has established regulations under RCRA which govern hazardous waste generation, storage, transportation, and disposal under Title 40 of the CFR Parts 260 through 299.

- Part 260 provides general guidance for the use of the regulations and sets forth provisions, which are applicable to all parts.

- Part 261 identifies and lists various wastes considered by EPA to be hazardous. This part establishes the criteria by which wastes are characterized as hazardous.

- Part 262 establishes standards applicable to generators of hazardous waste, including requirements for reporting and manifesting of hazardous waste

shipments.

- Part 263 establishes standards for transporters of hazardous wastes including manifesting and recordkeeping.

- Part 264 establishes standards for owners and operators of hazardous waste treatment, storage, and disposal (TSD) facilities.

- Part 265 establishes interim status standards for owners and operators of hazardous waste TSD facilities. These are the standards with which existing facilities must comply if they are to remain in operation until EPA takes final action on their permit applications.

- Part 268 provides land disposal restrictions (LDR).

- Part 273 provides standards for Universal Waste Management.

- Part 279 provides standards for the management of used oil.

2.2.2 State Regulations

On December 18, 1984, the hazardous waste management program in the Commonwealth of Virginia received final authorization from the US EPA for the base hazardous waste program functions. On September 29, 2000, the Commonwealth of Virginia was granted final authorization from the EPA to operate its own hazardous waste management program. On June 20, 2003, the Commonwealth received approval of Program Revision II. The Commonwealth submitted an application for revised authorization for the Virginia hazardous waste management program on May 2, 2005.

Generators, transporters, and owners/operators of hazardous waste TSD facilities in Virginia are now subject to the Virginia Hazardous Waste Management Rules in lieu of the federal regulations adopted by the EPA. VADEQ has been designated the lead agency in developing and administering the hazardous waste management program in Virginia.

The Virginia Hazardous Waste Management Rules are contained in Title 9 of the Virginia Administrative Code, Agency 20, Chapter 60 (9 VAC 20-60). The Commonwealth of Virginia has essentially adopted the federal hazardous waste regulations. Some of Virginia's requirements are more stringent than the federal requirements. Any management

requirements that are stricter than federal requirements are specified in the appropriate section of this plan.

In accordance with 9VAC20-60-325, *Prohibition*, all generators (including small quantity generators who are partially exempt under RCRA) are required to obtain approval before transporting, treating, or disposing hazardous waste subject to Chapter 60 of the Virginia Administrative Code. The following parts are included in Chapter 60 of the Virginia Administrative Code:

- Part I - *Definitions*
- Part III - *Incorporation of Federal Regulations by Reference*
- Part IV - *Notification of Hazardous Waste Management Activity Regulations*
- Part VII - *Regulations Applicable to Transporters of Hazardous Waste*
- Part XII - *Permit Application And Annual Fees*

2.2.3 Army Regulations

The Army is committed to environmental stewardship in all actions as an integral part of the Army mission. Department of Defense (DOD) installations and personnel are required to comply with all federal, state, and local laws, as well as Army requirements, designed to protect human health and the environment. Pursuant to this requirement, the Department of the Army (DA) has developed AR 200-1, *Environmental Protection and Enhancement*, which prescribes responsibilities, policies, and procedures to preserve, protect, and restore the quality of the environment. This regulation is to be implemented in a number of areas, including hazardous waste management. The procedures in Chapter 10 of AR 200-1 incorporate all applicable regulatory requirements for hazardous waste management, and specify implementation of local procedures and responsibilities for execution of the hazardous waste management program. Chapter 10, *Waste Management*, further defines the policy for managing hazardous and solid wastes. Related policy guidance on solid waste may be found in AR 420-1, *Army Facilities Management*. Specifically, Fort Belvoir should ensure that waste accumulation, storage, or transfer facilities are designed and constructed to prevent releases to the environment.

This document includes the elements of a Hazardous Waste Management Plan required by AR 200-1:

> Chapter 10-1.d.(3) *Develop and implement a hazardous waste management plan (HWMP) or other comparable document appropriate to the size and complexity of the operation. The HWMP (or other comparable document) should include, at a minimum, written procedures for all aspects of hazardous waste management, to include the identification, storage, and transporting of HW; training of personnel; tracking manifests; and maintaining required records.*

2.2.4 Fort Belvoir Policies

Regulatory Compliance

It is an installation policy that any command, activity, tenant, organization, or contractor at Fort Belvoir that generates or otherwise manages hazardous waste, is subject to and shall comply with all applicable federal, state, local, Army and installation requirements. The Directorate of Public Works, Environmental and Natural Resources Division (DPW-ENRD) is responsible for administering the Fort Belvoir HWMMP. Any person found to be violating the provisions of any of these requirements is subject to appropriate disciplinary measures. In the absence of appropriate regulatory guidelines, hazardous waste shall be managed in a manner that minimizes adverse effects to human health and the environment.

Environmental Standard Operating Procedures

Environmental standard operating procedures (ESOPs) for hazardous waste referenced in this document shall be implemented by all activities on the installation that generate hazardous waste. Current ESOPs applicable to organizations that generate hazardous waste at Fort Belvoir are included in Appendix A of this plan.

Waste Minimization

Potential hazardous wastes will be recycled and reused to the maximum extent practicable at Fort Belvoir. Hazardous wastes, which are not economically recoverable, shall be disposed in a way that will prevent or minimize pollution of the environment and in compliance with federal, state, and local hazardous waste regulations. Emphasis will be placed on source reduction and materials substitution methods. Waste minimization initiatives currently in place are described in Section 10 of this plan.

Army military, civil works activities, and tenants are required to establish procedures and responsibilities for the execution of the waste management program which emphasizes pollution prevention, chain of command, and individual responsibility to achieve compliance and minimize waste generation, treatment, and disposal through pollution prevention actions.

2.3 PERMITTED STORAGE SITE

Fort Belvoir is currently permitted to store hazardous waste up to one year in Building 1490 located on Sharon Lane Rd. under RCRA Part B permit number VA7213720082. The permit was issued on 23 September 2004 and expires 24 September 2014. Fort Belvoir submitted a permit renewal application in April 2014. VADEQ has not reissued the permit at this time. Until VADEQ issues a new permit, operations may continue under the existing, expired permit.

Fort Belvoir anticipates closing the existing permitted storage facility (Bldg. 1490) in the next several years. The facility will be closed in accordance with the approved closure plan. Upon closure of the permitted storage facility (Bldg. 1490), all hazardous waste will be disposed from the installation within 90 days of generation, as indicated by the accumulation start date.

2.4 PERMIT FOR TRANSPORTATION OF HAZARDOUS WASTE

Fort Belvoir was granted permission to operate as a hazardous waste transporter in accordance with the provisions of Chapter 14, Section 10.1-1426 of the 1950 Code of Virginia, as amended, and 9 VAC 20-60-450 of the Virginia Hazardous Waste Management Regulations (VHWMR) as codified in Title 9 of the Virginia Administrative Code. The permit was issued on October 3, 2012 and is valid until October 3, 2022. The Hazardous Waste Transport ID Number is VA7213720082, and the Virginia Hazardous Waste Transporter Permit Number is VA72137200821.

Fort Belvoir has not transported any hazardous waste under the conditions of this permit in the past several years. The installation maintains this permit for use only in the event of waste being generated at a non-contiguous area of the installation that must be transported over public roads prior to being consolidated on main post for disposal.

On June 10, 2014, Fort Belvoir received a letter from VADEQ stating that this hazardous waste transporter permit will no longer be required effective July 1, 2014. As a result, the hazardous waste transporter permit issued to the above referenced transporter is only in effect

until June 30, 2014 after which no permit is required. A copy of the letter is located in Appendix B.

The legal requirement to obtain a permit for the transportation of hazardous waste was removed from the Virginia Waste Management Act during the 2014 Legislative Session. The VADEQ is in the process of amending the Virginia Hazardous Waste Management Regulations to remove the associated requirements related to permitting of transporters. In addition, effective July 4, 2013, transporters are no longer required to submit a transporter annual report by April 1 of each year. All other applicable regulatory requirements under the Virginia Hazardous Waste Management Regulations as well as other applicable state and Federal laws and regulations will continue to apply to hazardous waste transporters.

2.5 RCRA GENERATOR STATUS

Waste is generated as a result of many types of installation activities, including vehicle and aircraft maintenance; military training activities; fuel and hazardous material spills; medical operations; battery shops; and construction projects. Waste is generated by military, civilian, and contractor personnel working on Fort Belvoir. Appendix C contains waste generation data for waste streams at Fort Belvoir.

Fort Belvoir is a large quantity generator, generating 20 tons of hazardous waste in CY13. Figure 2-1 shows the quantities of waste generated from CY03 through CY13. The large fluctuation in waste generation in CY10-CY13 was a result in a change in program managers. Hazardous waste was accumulated under the permit rather than being transferred off post every 90 days. The quantity of waste disposed in CY13 is more representative of normal generation rates.

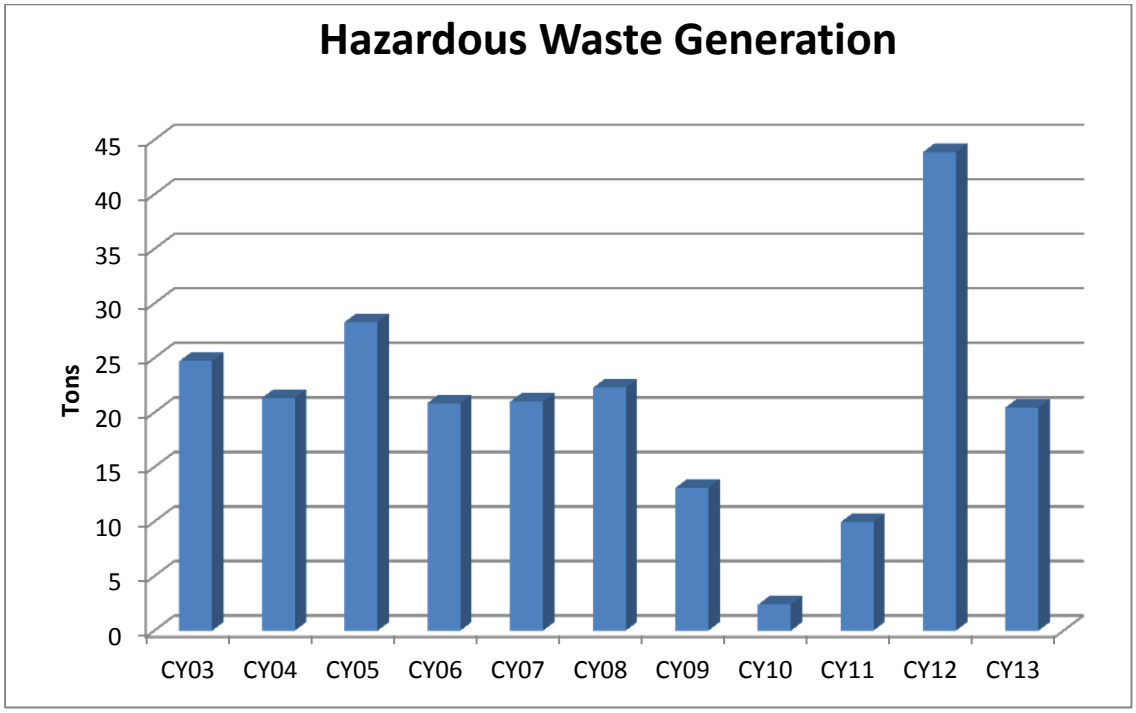

Figure 2-1
Hazardous Waste Disposed Per Year

2.6 EPA IDENTIFICATION (ID) NUMBER

Fort Belvoir is a large quantity generator (e.g. greater than 1000 kg per month) of hazardous waste. The Fort Belvoir EPA/State identification (ID) number for generating hazardous waste is VA7213720082. Fort Belvoir does not currently have any other EPA ID numbers in use. However, the Fort Belvoir Residential Communities, LLC has an EPA ID number (VAR000512715) that is not being used for waste disposal at this time.

2.7 90-DAY HAZARDOUS WASTE ACCUMULATION SITES (HWAS)

Fort Belvoir has several 90-day Hazardous Waste Accumulation Sites (90-Day HWAS) (see Appendix C for the updated list). The main 90-day HWAS (Bldg. 1495) operated by DPW-ENRD is located at Building 1495 off Sharon Lane Road on main post. If operational conditions require closure of one of the 90-Day HWAS, it will be closed in accordance with 40 CFR 262.34. This section provides an exemption from the closure requirements of 40 CFR 265 subparts G and H, except for the provisions of 40 CFR 265.111, *Closure Performance Standard,* and 40 CFR 265.114, *Disposal or Decontamination of Equipment, Structures, and Soils.*

2.8 GENERAL HAZARDOUS WASTE TRAINING REQUIREMENTS

This section provides general information related to the level of training required by all personnel who manage or supervise hazardous waste activities or handle hazardous waste in the course of their employment duties. The training shall be implemented by all Fort Belvoir installation and tenant activities.

Federal and state regulations require that all personnel managing or handling hazardous waste must be trained, either through classroom instruction or on-the-job-training, to respond to emergencies, protect the environment, and properly handle and dispose hazardous wastes.

Fort Belvoir is required to maintain compliance with the Commonwealth of Virginia's Hazardous Waste Management Regulation (Virginia Administrative Code 9 VAC 20-60 as authorized by the EPA pursuant to RCRA section 3006). The Virginia personnel training requirements are defined in 9 VAC 20-60-264 and 265. These requirements are equivalent to those of RCRA 40 CFR Sections 264 and 265. The facility's permit requires personnel training as specified in 40 CFR 264.16. The training program shall follow the ESOP Hazardous Waste Training located in Appendix A. Fort Belvoir will maintain training documents and records as required by 40 CFR 264.16(d) and Permit Conditions II.H.2.a.xi and II.H.2.c.iii.

Facility personnel whose duties have a direct effect on hazardous waste management and/or hazardous waste accumulation, whether by direct contact with the hazardous waste or through hazardous waste management activities, must receive training. Each person managing or handling hazardous waste must receive introductory and annual update hazardous waste training corresponding with his/her responsibilities.

The introductory training must be completed within six months of the date on which the employee begins work in a position requiring such training. Employees must be immediately and continuously supervised when performing hazardous waste duties until such training is completed.

At a minimum, all supervisors and managers of hazardous waste activities will be trained in installation-sponsored courses that meet the established training requirements of this plan. It is their responsibility to ensure that personnel working for them are trained either in formal courses or in-house using on-the-job-training and "shop level" training classes to meet the regulatory requirements.

Personnel responsible for shipping hazardous waste and signing hazardous waste manifests must be trained in accordance with Department of Transportation (DOT) 49 CFR 172, Subpart H, which requires initial and recurrent training. Only personnel within DPW-ENRD designated by the Garrison Commander are authorized to sign manifests.

Each organization will develop a program to train its hazardous waste handlers, using an appropriate combination of the following:

- Permit-required hazardous waste training courses provided by Fort Belvoir
- Organization level training such as shop talks, lectures, and guest lectures
- Reading and discussing installation and organization level hazardous waste management plans, SOPs, and spill contingency plans
- On-the-job instruction in hazardous waste management procedures from a person trained in those procedures
- Performance of hazardous waste management procedures under the direct supervision of a person trained in those procedures

All instances of training must be documented using the Waste Management Job Description and Training Record (see Appendix D), and each training record must include:

- Name of Employee
- Job Title
- Job Description
- A written description of the type and amount of both introductory and continued training that will be given to each person filling a position.
- Records that document that the training required has been given to, and completed by, facility personnel.

A training record must be maintained on-site for every person in the organization requiring hazardous waste training. Individual records of training are required by state and federal

regulations to be maintained for three years after an employee leaves employment at the organization. Training records may be transferred with an employee if the employee is transferred to another job at the facility. Each organization is responsible for maintaining training records for employees working within their facilities.

3.1 GENERAL

Environmental compliance is both a command and an individual responsibility. Commanders and heads of activities at all levels on and around Fort Belvoir are responsible for compliance with this HWMMP. Responsibilities for implementing this plan are distributed throughout installation organizations that generate, accumulate, transport, turn-in, monitor, or respond to incidents involving hazardous waste. Overall compliance with federal, state, and local hazardous waste laws and Army regulations is the responsibility of the Garrison Commander through the Environmental Quality Control Committee (EQCC). This section specifies the responsibilities of all installation activities and personnel (military, civilian, and contractors) in generating and accumulating hazardous waste.

3.2 GARRISON COMMANDER

a. Ensures that Fort Belvoir is compliant with all applicable environmental laws and regulations.

b. Programs and budgets for the necessary funds and personnel in order to execute a hazardous waste program and comply with applicable state, federal, and Army regulations.

c. Serves as the chairman of the EQCC which meets quarterly to discuss and oversee pertinent environmental issues.

d. Signs RCRA permit applications, compliance agreements, consent orders, and responses to Notices of Violation (NOV) with the state and federal regulatory officials, following review by the installation Staff Judge Advocate (SJA) and the Directorate of Public Works (DPW).

e. Establishes an organizational structure to plan, execute and monitor hazardous waste programs and waste minimization initiatives.

f. Delegates the preparation and signature of all shipping manifests required by federal and state law for wastes to appropriately trained personnel within DPW.

3.3 ENVIRONMENTAL QUALITY CONTROL COMMITTEE (EQCC)

a. Provides the Garrison Commander with a regularly scheduled status report on environmental issues and actions, including those involving hazardous wastes and materials.

b. Provides a forum for dissemination of information and a forum for the principal parties responsible for environmental and occupational health to introduce and resolve environmental issues.

c. Increases the awareness and active participation at all organizational levels in meeting all the laws and regulatory requirements.

d. Ensures that management of hazardous waste on the installation complies with applicable portions of VAC Agency 20, Chapter 60 and 40 CFR Parts 260-279.

e. Ensures all enforcement actions are resolved quickly.

3.4 COMMANDERS, DIRECTORS, AND SUPERVISORS (MILITARY, CIVILIAN, AND CONTRACTORS)

The commander/director of each major subordinate command, brigade, battalion, directorate, tenant organization, and civilian contractor that handles hazardous materials/waste will:

a. Appoint military personnel, civilian or contractor supervisors as Environmental Compliance Officers (ECO) at appropriate organizational levels to ensure compliance actions take place.

b. Appoint in writing military personnel, civilian or contactor supervisors as 90-Day HWAS and/or SAA managers (whichever is appropriate), for all activities within their area of responsibility that generate, manage, accumulate, store, and/or transport hazardous waste. A copy of the form to use to appoint these personnel is located in Appendix E.

c. Identify all hazardous waste, universal waste, and non-regulated waste handlers within areas of responsibility. Identify all waste generated within their organization and submit an application to operate an accumulation area

annually (within 30 days of establishment). Provide written notification to the DPW-ENRD Hazardous Waste Program Manager within 30 days if any changes to waste streams or accumulation areas occur. Any proposed change, including adding or removing accumulation areas or waste streams, must be coordinated with DPW-ENRD prior to implementation. See Appendix F for an example of the authorization letter and application form.

d. Set organization-level hazardous waste management policy and establish an active hazardous waste management program in compliance with all pertinent laws and regulations and the Fort Belvoir HWMMP.

e. Ensure waste profile information changes (e.g. change in chemicals used, change in safety data sheets [SDS], etc.) are communicated to DPW-ENRD prior to waste accumulation.

f. Ensure that all hazardous waste managers and handlers are trained in accordance with this HWMMP.

g. Ensure that all personnel who may be exposed to hazardous waste in the course of their work are made aware of the hazards to which they are exposed as well as the precautions required to protect both the environment and themselves in operational areas.

h. Ensure that materials and supplies, including the necessary and proper fitting of personal protective equipment (PPE) and emergency response supplies, are provided for the proper management and handling of hazardous waste.

i. Ensure notices from state or federal environmental agencies, including enforcement actions and NOVs, noncompliance or administrative orders or compliance requests, are forwarded within 24-hours to the Garrison Commander with a notification copy to their command. Ensure that appropriate action is taken to address negligent and willful violations of federal and state hazardous waste laws and regulations, to correct operational deficiencies, and to prevent reoccurrence of violations.

j. Prepare a Site-Specific Spill Plan, as described in Section 13.3.2, for the storage and management of hazardous waste for each SAA. Maintain appropriate spill supplies for the type and volume of waste present.

k. Ensure that all hazardous waste handlers obtain the initial mandatory training program described in Section 5.9 and 6.9 within 60 days, and complete the initial training program within six months of the date of their employment in or assignment to the waste handling position. Ensure that newly assigned personnel do not work in unsupervised positions until they have completed the initial training program. Further, ensure that all hazardous waste handlers complete the required review of the initial training on an annual basis

l. Ensure that the training records are maintained and kept at or near the 90-Day HWAS or SAA. The records shall document that the hazardous waste handlers have completed the training. Training records on employees must be maintained during the course of their employment and retained for at least three years past the date the employees last worked within the organization.

m. Become familiar with the installation hazardous waste minimization goals in accordance with Section 10 of this plan and implement as appropriate or as required.

n. Units, tenants, and activities generating hazardous waste are responsible for estimating annual hazardous waste disposal costs and including in budget forecast.

3.5 HAZARDOUS WASTE HANDLERS

a. Contain and clean-up spills of known materials immediately when practical, and follow the procedures in the Site Specific Spill Plan for the work site.

b. Report hazardous waste spills to supervisor or commander. See the Master Spill Plan (MSP) for additional information.

c. Place hazardous waste in designated containers that are properly labeled for the waste.

d. Never place hazardous waste in a trash container or dumpster. Also, never pour waste down a sanitary or storm drain or on the ground. Properly manage all hazardous waste in accordance with this HWMMP.

e. Wear the appropriate protective clothing when handling hazardous wastes.

f. Seek the appropriate training from their supervisors to perform specific jobs.

g. Immediately contact DPW-ENRD upon discovery of any unknown waste for additional guidance regarding proper handling.

3.6 SATELLITE ACCUMULATION AREA MANAGERS

a. Serve as points of contact regarding the implementation of their waste management program responsibilities within the installation or tenant organization.

b. Ensure an up-to-date appointment letter from their supervisor/commander is readily available and that the letter has been submitted to DPW-ENRD prior to performing waste management duties. Each site will, at a minimum, have a satellite accumulation area manager and alternate manager formally appointed, and each manager will have received initial and annual refresher training in accordance with applicable federal and state regulations. A copy of a form to use to make this appointment is located in Appendix E.

c. Ensure that all hazardous waste, universal waste, and non-regulated waste are placed in a DPW-ENRD approved accumulation area.

d. Ensure that the authorization letter is posted at the accumulation area with current points of contact and waste identification information.

e. Ensure the appropriate information and warning signs are posted at each SAA and are in accordance with Army Internal Signs Requirements, TM 5-807-10. Hazardous waste SAA signs shall state: Hazardous Waste Satellite Accumulation Area.

f. Ensure that appropriate EPA markings are on the hazardous waste label or container, and represent the waste within, as specified in accumulation area authorization letter, including:

- The words "HAZARDOUS WASTE"
- Description of the contents
- Accumulation Start Date if the container is full

- Authorization ID number marked on the container

g. Advise the Hazardous Waste Program Manager of any changes in chemicals or processes that may impact the appropriate EPA markings on the waste container.

h. Ensure that appropriate EPA markings are on universal waste labels or containers as specified in accumulation area authorization letter, including:

- The words "UNIVERSAL WASTE"
- The words “Used Lamps”, “Used Mercury Thermostats”, “Used Batteries”, or “Waste Pesticides” (as appropriate)
- The accumulation start date, which is the date the first item is placed in the container
- Authorization ID number marked on the container

i. Ensure that appropriate markings are on non-regulated waste labels or containers as specified in accumulation area authorization letter, including:

- The words "NON-REGULATED WASTE"
- Words describing the contents of the container
- Authorization ID number marked on the container

j. Ensure that accurate descriptions including the weights (in pounds) and volumes of containers are recorded on the Generator’s Hazardous Material and Waste Turn-In Request for all hazardous waste, universal waste, and non-regulated waste containers being turned in to the 90-Day HWAS. If scales are not available at the accumulation area, the weight may be added to the form at the 90-Day HWAS. A copy of the request form is located in Appendix G.

k. Ensure appropriate and authorized containers are used that are capable of being labeled, handled, loaded, and transported following management procedures in the areas where hazardous and universal wastes are being generated in their activities.

l. Ensure hazardous waste at the SAA is removed within three calendar days of reaching the accumulation volume limit of 55 gallons of hazardous waste or one quart of acutely hazardous waste and are turned in to the 90-Day HWAS.

m. Ensure that universal waste containers are moved to a 90-Day HWAS within six months of the accumulation start date. All full containers of universal waste must be transferred to the main 90-day HWAS (Bldg. 1495) at the next weekly turn-in appointment.

n. Ensure that all full non-regulated waste containers are transferred to the main 90-day HWAS (Bldg. 1495) at the next weekly turn-in appointment.

o. Maintain waste containers in proper condition, e.g., no pitting, no sharp edge creases or dents, no material defects, no bulging heads, and no excessive rust.

p. Ensure that containers are kept closed except when they are being filled.

q. Ensure proper segregation into containers to prevent co-mingling with other hazardous or non-hazardous materials.

r. Maintain Site-Specific Spill Plans for each of their activities as described in Section 13.3.

s. Ensure that personnel (including themselves) who handle waste in their areas of responsibility are trained as appropriate to the duties that they perform.

t. Ensure that an approved fire extinguisher is readily available if flammable hazardous waste is handled at the SAA.

u. Ensure that a spill kit is accessible in areas where liquid wastes are generated. Ensure adequate secondary containment for all liquid wastes is available that holds 110 percent of the capacity of largest container.

v. Perform weekly inspections of the SAA as described in Section 5.8. Personnel shall use the SAA Inspection Checklist included in Appendix H for weekly (every 7 days) inspections.

3.7 90-DAY HWAS MANAGERS

The 90-Day HWAS Managers are the supervisors directly responsible for the hazardous waste being stored at the 90-Day HWAS.

a. Ensure that they have an up-to-date appointment letter from their supervisor or commander and that the letter has been submitted to the DPW-ENRD prior to performing the required tasks. Each site will, at a minimum, have an accumulation site manager and alternate manager formally appointed, and each manager will have received initial and annual refresher training in accordance with applicable federal and state regulations.

b. Attend training specified by DPW-ENRD, including initial and annual refresher training.

c. Coordinate with the Hazardous Waste Program Manager if relocation of a 90-Day HWAS is necessary.

d. Act as initial spill coordinators until the installation on-scene coordinator arrives in the event of a hazardous waste spill in their areas of responsibility. Any person discovering a spill or release of a hazardous substance or waste must immediately report the incident to his/her supervisor.

e. Ensure accountability of all hazardous waste by maintaining an inventory of wastes at each site using the 90-Day HWAS Inventory Form located in Appendix I. The inventory must include the date the container was received, waste codes, container size and type, weight, handling code/profile, accumulation start date, storage location in warehouse, delivery order / line, manifest / line, dated shipped from the facility, and sample number (if applicable).

f. Ensure that appropriate EPA Markings are on the hazardous waste label or container to include the words "HAZARDOUS WASTE", description of contents, and Accumulation Start Date.

g. Ensure that hazardous waste is managed in accordance with the Fort Belvoir HWMMP and appropriate federal, state, local, and Army regulations.

h. Ensure that containers are properly segregated and compatible with the waste.

i. Advise the Hazardous Waste Program Manager of any changes in chemicals or processes that may impact the appropriate EPA markings on the waste container.

j. Inspect 90-Day HWAS weekly (every 7 days) using the 90-Day Hazardous Waste Accumulation Site Inspection Checklist located in Appendix H as described in Section 6.8.

k. Ensure the appropriate warning signs are posted at all approaches to the 90-Day HWAS and are in accordance with Army External Signs Requirements, TM 5-807-10: Accumulation Site (e.g. 90-Day Sites). Signs are to include the words "Hazardous Waste Storage Area – Unauthorized Persons Keep Out," "No Smoking," and "In Case of Emergency Call (telephone number)".

l. Ensure that a communication device, an alarm device, a spill kit, and the Site Specific Spill Plan are available at (or near) the 90-Day HWAS.

m. Ensure that an approved fire extinguisher is readily available if flammable hazardous waste is handled at the 90-Day HWAS.

n. Ensure that water at an adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems, is available at the 90-Day HWAS.

o. Maintain on file all hazardous waste management records and documents for the specific accumulation site, in accordance with procedures outlined in Section 6 of this HWMMP.

p. Ensure the Generator Hazardous Material and Hazardous Waste Turn-In Request (Appendix G) is completed when receiving a waste container at the main 90-day HWAS (Bldg. 1495).

q. Ensure all containers from the ADF East and Fort Belvoir Community Hospital 90-Day HWAS are transferred to the main 90-day HWAS (Bldg. 1495) within 35 days of the Accumulation Start Date.

r. Report containers in the main 90-day HWAS (Bldg. 1495) over 60 days to the Hazardous Waste Program Manager.

3.8 PERMITTED STORAGE FACILITY (BLDG. 1490) PERSONNEL

a. Ensures that hazardous waste and hazardous materials from off-post, non-DoD activities are not accepted.

b. Stores hazardous waste generated by Fort Belvoir activities in the permitted storage facility (Bldg. 1490) when directed by the Hazardous Waste Program Manager.

c. Attend training specified by DPW-ENRD, including initial and annual refresher training, as described in Section 7.7 of this plan.

d. Ensures shipment of hazardous wastes prior to 365 days of the waste's accumulation start date.

e. Ensures that the permitted storage facility (Bldg. 1490) is in compliance with and managed in accordance with the RCRA Part B permit for the facility; applicable federal, state, and Army regulations; and the requirements of this plan.

f. Inspect the permitted facility at least weekly (every 7 days) using the Permitted Facility Site Inspection Checklist located in Appendix H as described in Section 7.6.

3.9 ENVIRONMENTAL COMPLIANCE OFFICER (ECO)

a. Attend any required training classes upon initial assignment as well as any annual refresher training as required by specific organizational activities.

b. Serve as the organization's primary environmental contact.

c. Ensure implementation and compliance with this plan for their organization.

d. Manage the organization's environmental training records.

e. Identify all organizational positions that require mandated training, such as hazardous waste management.

f. Conduct on-the-job training for shop-level personnel.

g. Conduct monthly inspections of all SAA and 90-day HWAS using the required checklists (see Appendix H).

3.10 DIRECTOR OF PUBLIC WORKS

a. Oversees the administration of the hazardous waste management program.

b. Ensures proper submittal of all permits, manifests, audits, checklists, reports, plans, and payments of fees or fines, as required by DOD, Army, federal, and state regulatory agencies.

c. Ensures DPW-ENRD has all resources necessary to implement the hazardous waste requirements described in this plan.

d. Coordinates all inspections of Fort Belvoir by federal and state regulatory agencies.

3.11 DPW-ENRD HAZARDOUS WASTE PROGRAM MANAGER

a. Manages the installation hazardous waste management program and develops overall management policies for hazardous waste, including but not limited to hazardous waste accumulation and storage policies, on-site auditing/inspection procedures, and turn-in procedures. Any of the responsibilities in this section may be delegated to other personnel as appropriate.

b. Develops, implements, updates, maintains, and distributes an overall Hazardous Waste Management and Minimization Plan for the installation, which includes guidance to all activities for the proper handling and minimization of hazardous waste.

c. Signs hazardous waste manifests, as delegated by the Garrison Commander, and prepares hazardous waste reports and compliance documentation as required by federal, state, local, and Army regulations.

d. Ensures appropriate hazardous waste manifests are prepared for hazardous waste in accordance with DOT, VADEQ, and EPA requirements for transportation and disposal, respectively. Manages manifest requirements, including signing for the commander, tracking manifest from cradle-to-grave, publishing exception reports, and maintaining other associated documentation, as required, for all waste not shipped through the Defense Logistics Agency Disposition Service (DLADS).

e. Serves as the Emergency Coordinator for the permitted facility as specified in Permit Condition II.G.4 and permitted facility contingency plan. Serves as the Emergency Coordinator for the main 90-day HWAS (Bldg. 1495) as specified in the facility's contingency plan.

f. Perform and maintain records of hazardous waste compliance inspections conducted using the Satellite Accumulation Area DPW-ENRD Inspection Checklist. A copy of the form is included in Appendix H.

g. Prepares permit applications as required.

h. Assists organizations by providing guidance with hazardous waste characterization, accumulation, storage, marking and labeling, waste minimization, waste recycling, and waste turn-in and disposal.

i. Profiles waste streams generated by the installation activities based on information provided by the installation, tenant, and contract organization managers; SDSs; or laboratory analysis.

j. Coordinates and submits required regulatory reports and documents relating to the installation's hazardous waste management program except as otherwise directed by the Garrison Commander.

k. Maintains files of reports, documents, and records required by pertinent environmental laws and regulations, including the operating record required by the facility's RCRA Part B permit.

l. Coordinates the establishment and/or relocation of SAA and 90-Day HWAS in support of the performance of organization's missions. Ensures that the establishing of these storage areas is in accordance with the requirements of Sections 5 and 6 of this HWMMP.

m. Serves as the technical director and advisor for mandatory hazardous waste training programs that provide required training for all organization ECOs and hazardous waste handlers.

n. Maintains an inventory of hazardous waste generators and SAA on the installation through the use of SAA authorization letters and hazardous waste turn-in documentation submitted by generating activities.

o. Conducts periodic inspections of generator accumulation areas to ensure that hazardous waste is being handled, stored, and turned in according to the policies and procedures set forth in this HWMMP.

p. Provides ongoing guidance to generating activities for the proper handling and disposal of hazardous waste, universal waste, and non-regulated waste.

q. Monitors the progress of all activities in achieving hazardous waste minimization goals.

3.12 DEFENSE LOGISITICS AGENCY DISPOSITION SERVICE (DLADS)

a. Coordinate timely disposition of hazardous waste to off-site permitted TSD facilities by providing contracting support for procurement of hazardous waste transportation and disposal services as well as hazardous property reutilizations.

b. Travel to Fort Belvoir each time there is a hazardous waste pick-up by the hazardous waste disposal contractor and serve as the Contracting Officer's Representative.

c. Ensure that the transporter is properly certified by the EPA, the Commonwealth of Virginia, and other states to transport hazardous waste and that the transporter provides both a vehicle and a driver licensed to load and haul hazardous waste.

d. Ensure that the contracted disposal services comply with federal and state hazardous waste regulations.

e. Verify accuracy of hazardous waste weight measurements prior to waste acceptance.

3.13 PUBLIC AFFAIRS OFFICE (PAO)

a. Acts as the focal point for inquiries from the news media and concerned citizens regarding hazardous waste and in the event of a hazardous waste incident or accident.

b. Assists the on-scene coordinator during hazardous waste incidents by keeping interested news media and the public aware of events and curtailing rumors through the dissemination of coordinated, accurate information. Responds to the accident/incident site, to the command post, and to the Public Affairs duty section where an information center may be established.

c. The presence of hazardous waste in a contained area will probably not constitute reasonable cause to forcibly deny access to the area by accredited news media representatives. Applicable security and safety provisions will apply, however. Under no circumstances will Public Affairs Office (PAO) personnel escort news media representatives into a hazardous or potentially dangerous area without permission from the on-scene coordinator.

3.14 CIVILIAN PERSONNEL ADVISORY CENTER (CPAC)

a. Validates training and ensures job descriptions are amended for all civilian employees involved with hazardous waste management/training.

4.1 GENERAL

Solid waste is any garbage, refuse, sludge, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural activity. A material is a solid waste after it has been used for its intended purpose, when it is discarded by being abandoned, and sometimes when it is recycled. After an item has been determined to be a solid waste, a hazardous waste determination must be made. The flowcharts in Appendix J detail the hazardous waste identification and classification process. All hazardous wastes must meet the following criteria:

- Not specifically excluded or exempted by RCRA; and
- Is a RCRA "Listed" waste, or
- Exhibits a characteristic of hazardous waste.

4.2 EXEMPTIONS FROM HAZARDOUS WASTE DEFINITION

40 CFR 261.4 (adopted by reference in 9VAC20-60-261) defines materials that are exempt from definition as a hazardous waste. Exemptions from the definition of RCRA hazardous waste that may be encountered at Fort Belvoir include:

- Household waste (40 CFR 261.4(b)(1)).

- Solid waste consisting of discarded arsenical-treated wood (pressure treated lumber) or wood products which fails the test for the Toxicity Characteristic (waste codes D004 to D017) and is not a hazardous waste for any other reason if the waste is generated by persons who use the arsenical-treated wood and wood products (40 CFR 261.4(b)(9)).

- Petroleum-contaminated media and debris that fail the test for the Toxicity Characteristic of 40 CFR 261.24 (Waste Code D018 through D043) and are subject to the corrective action regulation under 40 CFR 280 (40 CFR 261.4(b)(10)).

- Used chlorofluorocarbon refrigerants from totally enclosed heat transfer equipment, including mobile air conditioning systems, mobile refrigeration, and commercial and industrial air conditioning and refrigeration systems that use chlorofluorocarbons as the heat transfer fluid in a refrigeration cycle, provided the refrigerant is reclaimed for further use (40 CFR 261.4(b)(12)).

- Used oil filters that are not terne plated, provided that they are drained of oil using one of the regulatory-specified methods (40 CFR 261.4(b)(13)).

- Domestic sewage and any mixture of domestic sewage and other wastes that passes through a sewer system to a publicly-owned treatment works for treatment (40 CFR 261.4(a)(1).

- Scrap metal being recycled (40 CFR 261.4(a)(13)).

- Used cathode ray tubes (CRTs) and CRT glass being recycled (40 CFR 261.4(a)(22))

- Solvent-contaminated wipes include wipes that, after use or after cleaning up a spill, either: contain one or more of the F001 through F005 solvents listed in 40 CFR 261.31 or the corresponding P or U-listed solvents found in 40 CFR 261.33; exhibit a hazardous characteristic found in 40 CFR part 261 subpart C when that characteristic results from a solvent listed in 40 CFR part 261; and/or exhibit only the hazardous waste characteristic of ignitability found in 40 CFR 261.21 due to the presence of one or more solvents that are not listed in 40 CFR part 261. (40 CFR 261.4(a)(26))

4.3 LISTED WASTES

Hazardous waste identification and classification is conducted according to the guidance of 40 CFR 261 (adopted by reference in 9VAC20-60-261). Listed wastes are wastes that have been deemed harmful to human health and the environment. State and federal regulations define four categories of listed wastes:

- F - List: Non-specific sources (40 CFR 261.31).

- K - List: Specific sources (40 CFR 261.32).

- P - List: Pure or commercial grade formulations of certain specific unused chemicals that are acutely hazardous (40 CFR 261.33). This list also includes the listed items when they are residues remaining in the containers, contaminated solid, water or other debris resulting from the cleanup of a spill with the P-listed waste as the major ingredient.

- U - List: Pure or commercial grade formulations of certain specific unused chemicals (40 CFR 261.33). This list also includes the listed items when they are residues remaining in the containers, contaminated solid, water or other debris resulting from the cleanup of a spill with the U-listed waste as the major ingredient.

4.4 CHARACTERISTIC WASTES

A characteristic waste is a waste that is not excluded that exhibits one of the four characteristics defined in 40 CFR Part 261 Subpart C (adopted by reference in 9VAC20-60-261) - ignitability (D001), corrosivity (D002), reactivity (D003), and toxicity (D004 - D043). The characteristic waste codes may be applicable to wastes that are listed as described in Section 4.3 above as well as to wastes that are not listed.

The characteristic of ignitability (Waste Code D001) is defined in 40 CFR 261.21. According to this regulation, a liquid waste is considered ignitable when it has a flash point less than 140 degrees Fahrenheit. Some examples commonly generated by Fort Belvoir activities are paints, paint thinners, and solvents. A non-liquid waste is considered ignitable when, under standard temperature and pressure, it is capable of spontaneous and sustained combustion, such as solvent rags or paint rags. A waste also exhibits the characteristic of ignitability if it is an ignitable compressed gas as determined by ASTM Test D-323or if it is an oxidizer as defined by 49 CFR 173.151.

The characteristic of corrosivity (Waste Code D002) is defined in 40 CFR 261.22. A waste is corrosive when it is an aqueous solution with a pH of less than or equal to 2 or greater than or equal to 12.5. A liquid waste is a corrosive waste when it corrodes steel at a rate greater than 1/4 inch per year at a test temperature of 130 degrees Fahrenheit. Some examples of corrosive wastes are nitric acid, phosphoric acid, battery acids, rust removers, etching fluids, alkaline degreasers, lime and water mixtures, decontamination solution number 2 (DS2), and sodium hydroxide.

The characteristic of reactivity (Waste Code D003) is defined in 40 CFR 261.23. A waste is considered reactive when it meets any of the following conditions:

- Normally unstable and readily undergoes violent change without detonating.

- Reacts violently with water.

- Forms potentially explosive mixtures with water.
- Generates toxic gases, vapors, or fumes when mixed with water.
- Is capable of detonation or explosive reaction if it is subjected to a strong initiating source or if heated under confinement.
- Is readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure.
- Forbidden explosive as defined in 49 CFR 173.54, or a Class/Division 1.1, 1.2, or 1.3 explosive as defined in 49 CFR 173.50 and 173.53. Examples are nitroglycerin, super tropical bleach (STB), and sodium metal.

Examples of reactive wastes are calcium hypochlorite, flameless ration heaters (FRH) from meals-ready-to-eat (MRE), and unexpended military munitions.

The characteristic of toxicity (Waste Codes D004-D043, shown in Table 4-1) is defined in 40 CFR 261.24. A solid waste exhibits the characteristics of toxicity if an extract from a representative sample of the waste contains any of the contaminants listed in the following table at a concentration equal to or greater than the respective value given in the table. Some examples commonly found are insecticides, mercury batteries, cadmium, lindane, terne plated (alloy of tin and lead) oil filters, weapons cleaning items, and lead-based paint (LBP) chips.

4.5 FORT BELVOIR WASTE IDENTIFICATION REQUIREMENTS

Under RCRA regulations, it is the responsibility of the organization that generates or owns a hazardous waste to properly and accurately identify the contents of all containers holding hazardous waste. The generating organization is responsible for profiling each waste stream generated at by their activities. Hazardous waste will be identified by common name and waste codes during its accumulation at the point of generation (e.g. the SAA). This classification is generally based upon product SDS and user knowledge of the process producing the waste, since most generators have well-established procedures and processes that produce known waste streams. The waste profile may also use laboratory analysis of the waste stream. Each generator is required to provide information on changes in waste streams as a result of a process or chemical change to DPW-ENRD prior to implementation.

Any containers of unknown waste must be immediately reported to DPW-ENRD for guidance regarding proper management. Any container with unknown contents must be marked "PENDING ANALYSIS" and the date DPW-ENRD obtained a sample. In most cases, these drums will be managed as hazardous waste in accordance with the requirements for a SAA specified in Section 5. All containers must be labeled "HAZARDOUS WASTE," kept closed, under the control of the operator, and at or near the point of generation. The accumulation start date will be the date the waste was first generated or the date the container in the SAA exceed the accumulation threshold (55-gallons or 1-quart for acutely hazardous waste), as required by the EPA interpretive memo (see Appendix B). When the analytical results are received, a waste profile will be completed, and the container will be labeled appropriately. Records of any test results, waste analyses, and waste determinations will be maintained for three years. When the Hazardous Waste Program Manager completes the waste characterization and profiling process, these drums will be managed in accordance with the waste profile.

Table 4-1
Maximum Concentration of Contaminants for the Toxicity Characteristic

EPA WASTE CODE	CONTAMINANT	REGULATORY LEVEL(mg/L)
D004	ARSENIC	5.0
D005	BARIUM	100.0
D018	BENZENE	0.5
D006	CADMIUM	1.0
D019	CARBON TETRACHLORIDE	0.5
D020	CHLORDANE	0.03
D021	CHLOROBENZENE	100.0
D022	CHLOROFORM	6.0
D007	CHROMIUM	5.0
D023	o-CRESOL	200.0
D024	m-CRESOL	200.0
D025	p-CRESOL	200.0
D026	CRESOL	200.0
D016	2,4-D	10.0
D027	1,4-DICHLOROBENZENE	7.5
D028	1,2-DICHLOROETHANE	0.5
D029	1,1-DICHLOROETHYLENE	0.7
D030	2,4-DINITROTOLUENE	0.13
D012	ENDRIN	0.02
D031	HEPTACHLOR (and its epoxide)	0.008
D032	HEXACHLOROBENZENE	0.13
D033	HEXACHLOROBUTADIENE	0.5
D034	HEXACHLOROETHANE	3.0
D008	LEAD	5.0
D013	LINDANE	0.4
D009	MERCURY	0.2
D014	METHOXYCHLOR	10.0
D035	METHYL ETHYL KETONE	200.0
D036	NITROBENZENE	2.0
D037	PENTACHLOROPHENOL	100.0
D038	PYRIDINE	5.0
D010	SELENIUM	1.0
D011	SILVER	5.0
D039	TETRACHLOROETHYLENE	0.7
D015	TOXAPHENE	0.5
D040	TRICHLOROETHYLENE	0.5
D041	2,4,5-TRICHLOROPHENOL	400.0
D042	2,4,6-TRICHLOROPHENOL	2.0
D017	2,4,5-TP (Silvex)	1.0
D043	VINYL CHLORIDE	0.2

5.1 GENERAL

A Hazardous Waste SAA is a point of generation at which a maximum of 55-gallons of hazardous waste or one quart of acutely hazardous waste is accumulated over an indefinite period of time and is controlled by the operator generating the waste. The 55-gallon limit applies to the total of all the non-acutely hazardous waste accumulated at a SAA. SAA management is regulated under 40 CFR 262.34(c) and 40 CFR 265.171, 172, and 173(a).

Fort Belvoir also manages universal wastes and certain non-regulated wastes in SAAs. The amount of waste allowed to be stored in each SAA is determined by DPW-ENRD when the area is established. The amount allowed to be stored is based on the type of waste and the quantity typically generated.

Generators in a shop, laboratory, or other work area where small amounts of waste are produced generally use this type of accumulation area. Each SAA must be located at or near the area where the waste is generated and must be under the direct control of the organization generating the waste. The flowchart located in Appendix K shows the process for SAA management.

Fort Belvoir has approximately 90 SAAs located throughout the installation. Based on organization missions, SAAs may change due to deployments or other factors. DPW-ENRD tracks the establishment and closure of SAAs. The Hazardous Waste Program Manager maintains a current list of the SAAs.

5.2 SAA MANAGERS

A SAA manager and an alternate manager shall be formally assigned/appointed to maintain the area in accordance with the requirements of this section. Supervisors shall use the Waste Management Job Appointment located in Appendix E to assign these responsibilities. These SAA Managers must receive documented training for familiarization of this plan, the chemicals they will be working with, and applicable RCRA regulations.

See Section 3.6 for responsibilities of the SAA managers.

5.3 SAA LETTER

The SAA manager must submit an application to operate a SAA within 30 days of establishing the SAA. A renewal application must be submitted with 30 days of any change

in process, waste streams, or points of contact. The application must include the requested details about the type and quantities of waste generated, the location of the SAA, and contact information for the SAA manager and alternate. DPW-ENRD will review the applications and issue authorization letters for each SAA. The SAA letter allows operation of the SAA under conditions specified within the letter for one year. If any changes to the waste generation process occur, the SAA manager must submit a new application and updated waste profile and/or certified analytical sample results to DPW-ENRD. The SAA letter must be posted at each SAA. A copy of the application and an example SAA letter are located in Appendix F.

5.4 HAZARDOUS WASTE ACCUMULATION QUANTITIES

A generator may accumulate up to 55-gallons of hazardous waste or one quart of acutely hazardous waste in a SAA at or near any point of generation where wastes initially accumulate and must be under the control of the operator generating the waste.

Neither the regulations nor the preamble to the regulations expressly defines the terms “at or near the point of generation” or “under the control of the operator” with reference to the distance from the point of generation or the level of control required. Therefore, DPW-ENRD can evaluate each situation on a case-by-case basis in order to determine if a storage area qualifies as a SAA. Such evaluation would take into consideration the proximity of the container to the point of generation, within the normal work area of the operator of the process generating the waste and operator accountability for the container. The SAA Authorization Letter contains specific guidance for each SAA for the allowed accumulation quantities and location specifications.

VADEQ guidance on SAA management specifies that the regulations do not allow for a "satellite to satellite" transfer (ref: "where waste initially accumulates"). Therefore, hazardous waste (i.e., any spent material or solid waste qualifying as a hazardous waste) first accumulated in a container under satellite conditions constitutes a SAA; subsequent transfer to another container would cause that container to be subject to less than 90-day accumulation standards. A satellite accumulation container may not be moved to another satellite accumulation "area"; once moved, it is no longer 'at or near' the point of generation, and becomes subject to less than 90-day requirements.

VADEQ allows waste from multiple pieces of equipment or processes to be managed in a SAA as long as the different pieces of equipment or processes contributing waste are at or near each other and under the control of the operator of the process generating the waste and

the operator ensures compatibility of all wastes managed in the container as well as other container management standards (container condition, closed, spills/releases prevented, correct labeling, etc.). In accordance with this guidance, Fort Belvoir allows interim containers to be used to collect waste during daily operations. These interim containers are located at individual work stations, and they must remain closed unless adding or removing waste and be labeled with the contents of the container or the words "HAZARDOUS WASTE." These interim containers shall be emptied at least at the end of every shift into the designated SAA for the waste generating process.

The regulations specify 55 gallons as a maximum at any satellite location, and VADEQ asserts that it appears implicit that multiple container management (i.e., several smaller containers for multiple waste streams) shall not exceed a total of 55 gallons for "one" SAA. When a generator accumulates more than 55-gallons of hazardous waste or one-quart of acutely hazardous waste, personnel shall mark the container with the date on which the threshold is exceeded and remove the container within three consecutive days to the 90-Day HWAS as required by 40 CFR 262.34(c)(2). Appendix B contains federal and VADEQ guidance relating to SAA management.

5.5 CONTAINER MANAGEMENT REQUIREMENTS

5.5.1 Compatibility

DOT/UN-approved containers used to accumulate wastes in a SAA unless an exception is granted by the Hazardous Waste Program Manager. In accordance with 40 CFR 265.172, wastes are only stored in containers compatible with waste materials. Incompatible wastes must not be consolidated and collected in the same container. Only compatible wastes will be stored together as indicated in the hazardous materials/waste compatibility chart found in Appendix L. In summary, these compatibility guidelines are followed:

- Segregate reactive wastes from ignitable wastes.
- Segregate acids from caustics.
- Segregate corrosives from flammables.
- Segregate oxidizers from all other wastes.

5.5.2 General Requirements

The following general requirements shall be implemented in all SAAs:

1. All containers must be maintained in good condition with no dents, corrosion, leaks, noticeable spills, or bulging. If a container leaks, waste shall be transferred to another container or overpacked.

2. Containers must be stored in a manner such as to avoid direct contact with the foundation or flooring by the use of pallets or other suitable device to facilitate inspections.

3. Containers of highly flammable wastes must be properly grounded.

4. If the accumulation area is enclosed, adequate ventilation and lighting must be provided.

5. If the accumulation area is not enclosed, it must be protected from direct sunlight and inclement weather.

6. Waste containers must be closed at all times, except when it is necessary to add or remove waste from the container. If a container with a funnel or funnel device (securely attached and consistently used) is to be considered a "closed container," the funnel must have a lid equipped with a seal (ball valve) and latching/locking mechanism to secure it when waste is not being poured or added to the container.

7. Sufficient aisle space must be maintained in accumulation areas to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment.

5.5.3 Liquid Waste Container Requirements

A means of secondary containment (for the entire volume of the container plus 10 percent freeboard) must be used for liquids such as placement of containers in appropriately sized containment pallets, drip pans, or impermeable berms. Liquid wastes shall be containerized in closed top drums equipped with a bung rather than an open top drum to minimize the potential for accidental spills and releases.

5.5.4 Labels and Signs

Hazardous waste containers must be marked clearly with the words "HAZARDOUS WASTE" and a description of the contents. This applies to all containers, including small containers such as plastic bottles of lead solder waste.

Universal waste containers must be marked clearly with the words “UNIVERSAL WASTE,” a description of the contents, and the accumulation start date. Non-regulated waste containers must be marked clearly with the words “NON-REGULATED WASTE” and a description of the contents. The description of the contents required for both universal waste and non-regulated waste will be specified on the authorization letter.

The SAA authorization letter and a sign with the words "HAZARDOUS WASTE SATELLITE ACCUMULATION AREA," “UNIVERSAL WASTE ACCUMULATION AREA,” or “NON-REGULATED WASTE ACCUMULATION AREA” (depending on the type of waste accumulated) will be posted at each SAA. It is required that the SAA Manager’s and Alternate SAA Manager’s name and contact telephone number/extension on the SAA authorization letter must be current.

5.6 SECURITY

SAAs usually consist of one container stored within operational areas in compliance with the requirement to be at or near the point of generation. These operational areas are located within secure facilities, such as motor pools, hangars, or buildings, which have provisions for security to prevent entry by unauthorized personnel. All entrances will be locked when facilities are not occupied. Labels will also be posted with the wording described in Section 6.5.4 on all containers. Also, Fort Belvoir is considered a secure installation, which prevents unauthorized access to these facilities.

5.7 SPILL PREVENTION AND RESPONSE

Each SAA storing a liquid waste is required to have an impervious spill containment system with sufficient capacity for containers (ability to contain 10 percent of the total volume of all containers or 110 percent of the volume of the largest container, whichever is greater). Lined or unlined sandbag dikes and asphalt pavements are not acceptable unless a berm is constructed in a manner which would prevent migration of a spill or leak.

SAAs will not be located near storm drains, sewer drains, or washracks. Washracks with oil/water separators do not serve as secondary containment and shall not be used in this manner. Oil/water separators are designed to capture oil residue but not spills.

SAAs will be located in areas protected from the elements and in facilities that do not allow rainwater to collect. If rainwater has collected, organizations will visually inspect the water for signs of contamination. If the rainwater is contaminated, organizations will contact DPW-ENRD for guidance about handling and disposing of this water. Otherwise, organizations will discharge the water in accordance with established procedures.

Each SAA will have a Site-Specific Spill Plan (SSSP). If requested, a copy of the SSSP will also be submitted to the Fire Department. The SSSP must contain the following information at a minimum:

- List of points of contact, and phone numbers of personnel authorized to take part in any response actions.

- Arrangements with local authorities. For SSSP purposes contacting the Fire and Emergency Services Division (FESD) at 703-781-1800 satisfies this requirement at the organizational level.

- Immediate actions that trained personnel will take upon finding any type of hazardous substance/oil spill, or fire hazard. This will include actions to give the alarm by either voice command or mechanical device. These actions will be strictly defensive in nature and commensurate with the personal protective equipment available at the time of the incident. Cleanup actions will be conducted only at the direction and under the supervision of the Fire Department or DPW-ENRD.

- Equipment required to conduct defensive actions for the materials stored. This information is found in the personal protection information section of the chemical specific safety data sheet.

- The plan must also specifically address provisions for any hazardous material storage, SAA, 90-Day HWAS, and oil containers 55-gallons or larger.

- Evacuation and Staging Routes. Evacuation routes may be the same used in the fire escape plan as long as access is not impinged by the release. A staging area is defined as a pre-designated area out of the potential area of danger where personnel will

assemble in the event of an emergency. The SSSP must state a primary and alternate staging area in the event of an emergency.

Basic fire, spill and safety equipment will be provided for each SAA as appropriate. Equipment will include, at a minimum, spill cleanup material such as absorbent rolls or pads. For flammable wastes, a fire extinguisher appropriate for the waste being accumulated is also required. This equipment shall be located in the immediate area and be readily accessible to personnel in case of a spill or fire. All personnel involved with the SAAs shall be trained in the proper use of fire equipment and spill material as well as the hazards associated with the waste.

SAA managers will ensure that all containers are closed, not leaking, and all spills or releases are properly cleaned up and reported. Adequate spill control and containment material must be on hand (within 50 feet of the SAA) to contain and clean up minor spills. Upon discovery of a spill, personnel will attempt to stop the source of the spill, if safe to do so, and notify the immediate supervisor or the Garrison Consolidated Emergency Dispatch Desk (Fire Department) 703-781-1800 if the supervisor is not available. All spills or releases must be cleaned up immediately, with consideration for safety. The immediate area of the spill will be evacuated to facilitate clean-up activities. Personnel will always use appropriate PPE.

The Fort Belvoir Fire Department is the Installation On-Scene Commander at spill sites until the emergency situation is secured and the situation is deemed safe for non-emergency personnel to enter the spill control zone. DPW-ENRD then assumes control of the spill site and coordinates spill cleanup. If contract help is required, DPW-ENRD starts the contract mechanism process and requires reimbursement from the organization involved. All organizations – including military, contractors, and civilians – and their supervisors are financially and legally responsible for the cleanup of spills within their areas.

5.8 INSPECTIONS

The SAA must be inspected weekly (every 7 days) using the SAA Inspection Checklist located in Appendix H. If inspections reveal any noncompliance, immediate action will be taken to correct the deficiencies. Copies of all inspections will be kept for a minimum of three years.

If the SAA managers turn in waste weekly to the main 90-day HWAS (Bldg. 1495), no weekly inspection is required of the SAA. The SAA manager shall indicate on the turn-in log the date of each turn-in to document following these requirements.

DPW-ENRD conducts environmental compliance inspections of representative active waste generation sites quarterly using the SAA DPW-ENRD Inspection Checklist located in Appendix H. Findings from these inspections are distributed to the inspection organization via memorandum. Additional assistance visits are performed on an as-needed or requested basis. DPW-ENRD provides guidance to the organization for correcting deficiencies and conducts follow-up inspections to ensure that deficiencies have been corrected. DPW-ENRD reports the inspection results through the chain of command and assists installation organizations with specific guidance required to obtain necessary training.

Because these inspections are not required under federal and state regulations, producing copies of these inspections to EPA and VADEQ inspectors is at the discretion of the Hazardous Waste Program Manager.

5.9 TRAINING

Training is required for personnel who handle hazardous waste and for managers and supervisors of personnel, who handle hazardous waste, including those who maintain and operate the SAAs in their shops and work areas (SAA Managers). All training will be conducted in accordance with the ESOP for Hazardous Waste Training, which is located in Appendix A.

Initial personnel training shall begin within 60 days and be completed within six months of the individual being assigned to hazardous waste handling duties. Training may consist of formal classroom instruction, informal training (e.g., meetings, seminars, etc.), and/or on-the-job training. Personnel trained in hazardous waste management procedures must provide the training. At a minimum, the training program shall meet EPA and VADEQ regulatory requirements.

Training will focus on how to safely manage and operate a SAA. It must enable employees involved with hazardous waste operations to perform their duties without endangering themselves or other employees. Emphasis shall be given to the emergency response, use of protective equipment and clothing, recognition of hazardous waste, hazards of waste encountered, and an overview of RCRA regulations as they relate to employees.

All training will be documented and kept on file for three years from the date the employee last worked at any organization located on Fort Belvoir. Organizations must document training related to hazardous waste specific activities for their job responsibilities using the Waste Management Job Description and Training Form (Appendix D). Copies of the Waste

Management Job Description and Training Form as well as annual Fort Belvoir training certificates will be kept at each site that operates a SAA.

5.10 RECORDKEEPING

Individual activities and tenants will maintain all records and documents in a manner that is:

- Legible, identifiable and traceable;
- Readily retrievable and protected against damage, deterioration, or loss; and
- In accordance with established retention times.

Each waste generating facility shall utilize the ESOP Waste Management Binder to develop a recordkeeping system (see Appendix A). The following records and documents are required to be accessible in the waste management facility:

a. SAA Letter

b. Site-Specific Spill Plan, including a site map with the location of the SAA

c. Fort Belvoir HWMMP (this document)

d. SAA inspection records

e. Hazardous waste training records (maintain for a minimum of three years from when the employee last worked at the facility)

f. Fort Belvoir MSP and SPCC Plan

g. ESOPs relating to organization's activities

h. Appointment Letters

i. POC List

6.1 90-DAY HAZARDOUS WASTE ACCUMULATION SITES

Each 90-Day HWAS is a temporary, non-permitted collection area where hazardous waste is stored for less than 90-days pending transfer to a permitted facility in accordance with 40 CFR 262.34(a). The list of Fort Belvoir 90-day HWAS is included in Appendix C. This type of accumulation area may be used to store any amount of hazardous waste from one or more SAAs, or it may serve a location where an amount of hazardous waste over 55 gallons (or one quart acute hazardous waste) is generated on a regular basis. The date of waste generation (accumulation start date) will be the date that any amount of hazardous waste is first accumulated at the 90-Day HWAS and shall be clearly marked and visible for inspection on each container. Appendix M contains a flowchart with general 90-Day HWAS management requirements.

The following criteria are followed when managing a 90-Day HWAS.

6.2 WASTE ACCUMULATION

Hazardous waste may accumulate at a 90-Day HWAS for no more than 90 days from the accumulation start date. Once a container from a SAA has been transferred to a 90-Day HWAS, the site manager has up to 90 days from the accumulation start date to arrange transfer to a permitted storage site. The main 90-day HWAS (Bldg. 1495) is open Monday through Friday for turn in appointments. Appointments may be scheduled by contacting the Hazardous Waste Program Office as specified within the Waste Authorization Letter.

Waste accumulated at the ADF-East and Fort Belvoir Community Hospital 90-Day HWAS must be turned in to the main 90-day HWAS (Bldg. 1495) at least once every 35 days in order to facilitate disposal within the 90-day time frame.

Organizations must turn in a completed Generator's Hazardous Material and Hazardous Waste Turn In Request (Appendix G) with each waste turn in to the main 90-day HWAS (Bldg. 1495). Copies of the turn in documentation will be kept for a minimum of three years.

6.3 SIGNAGE

Signs identifying the area as a 90-Day HWAS, the hazards, and emergency contact information must be conspicuously posted. Signs will be posted in container accumulation sites that say: "HAZARDOUS WASTE ACCUMULATION POINT – AUTHORIZED

PERSONNEL ONLY" and "NO SMOKING WITHIN 50 FEET." Signs must be visible from all sides of the accumulation site and must be legible from a distance of at least 25 feet.

6.4 FACILITY SPECIFICATIONS

Each 90-Day HWAS is designed, constructed, maintained, and operated to minimize the possibility of fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water that could threaten human health or the environment. Container storage areas at each 90-Day HWAS are protected from the elements, either in a covered area, inside the working area, or in a separate building. If the 90-Day HWAS is located indoors, it will have adequate ventilation provided. All 90-Day HWAS have adequate lighting. All 90-Day HWAS are located in facilities that minimize the potential for rainwater to collect. However, if rainwater is collected, the 90-Day HWAS Manager should assess the collected water to determine if it is contaminated. If no contamination is present, the 90-Day HWAS Manager will discharge the collected water. If the collected water appear contaminated, the 90-Day HWAS Manager should contact the Hazardous Waste Program Manager to evaluate the collected water in order to determine the proper method of disposal.

Container storage areas shall have a containment system that is capable of collecting and holding spills, leaks, and precipitation. Run-on of precipitation into the containment system shall be prevented. Spilled or leaked waste and accumulated precipitation shall be removed from the sump or collection area in as timely a manner as is necessary to prevent overflow of the collection system. Acceptable containment systems include, as applicable:

a. A sufficiently impervious underlying base for the containers, free of cracks or gaps, to contain leaks, spills, and accumulated rainfall until the collected material is detected and removed;

b. Efficient drainage design, so that standing liquid does not remain on the base longer than one hour after a leakage or precipitation event, unless the containers are elevated, or are in some other manner protected from contact with accumulated liquids; and

c. Capacity sufficient to contain 10 percent of the total volume of all the containers or 110 percent of the volume of the largest container, whichever is greater.

Storage areas that store containers holding only non-liquid wastes need not have a containment system provided that the storage area is sloped or otherwise designed and operated to drain and remove liquid resulting from precipitation; or the containers are elevated or are otherwise protected from contact with accumulated liquid.

Each 90-Day HWAS is provided with necessary communication equipment, including a hand-held two-way radio or accessible telephone, and an alarm that can be used during emergencies. Fire control equipment appropriate for the waste being accumulated must be located within 50 feet of the accumulation site. Water at sufficient volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems, will also be available based on the activities performed at the 90-Day HWAS. Sufficient aisle space will be maintained in accumulation areas to allow for the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment. Equipment will not be stored or parked in a manner that would prohibit access to containers.

6.5 CONTAINER MANAGEMENT REQUIREMENTS

All wastes must be stored in accordance with 40 CFR 265 Subpart I – Use and Management of Containers (adopted by reference in 9VAC20-60-265). The following specific management procedures are followed at each 90-Day HWAS.

6.5.1 Container Specifications

In general, only Department of Transportation/United Nations (DOT/UN) containers will be used to accumulate hazardous wastes. All containers will be maintained in good condition with no dents, corrosion, leaks, noticeable spills, or bulging. Containers must be stored so as to avoid direct contact with the foundation or flooring by the use of pallets or other suitable device to facilitate inspections.

Containers of ignitable or reactive waste will be located at least 50 feet from the installation property line. Only non-sparking tools will be used when personnel are working with containers that hold an ignitable waste. When transferring ignitable wastes between containers, personnel will ensure that both containers are bonded to one another and that both containers are properly grounded.

Containers must not be overfilled. In accordance with DOT requirements, liquid wastes shall only be stored in bung-type drums or cans. In order to allow for expansion of liquid wastes

resulting from temperature fluctuations and to prevent overflowing, the following headspace guidelines are recommended:

- 55-gallon drum should have 3 to 4 in. of headspace
- 5-gallon cans should have 1.5 to 2 in. of headspace
- 1-gallon cans should have 1 in. of headspace

Containers must be closed at all times, except when it is necessary to add or remove waste from the container.

6.5.2 Waste and Container Compatibility

Wastes must only be stored in containers compatible with waste materials. Hazardous wastes shall be stored in containers that are chemically compatible with the waste. This means that the containers used shall be made of or lined with materials that are non-reactive with the hazardous waste to be stored, so that the integrity of the containers to contain the waste is not compromised. For example, corrosive acids must not be placed into a steel drum. Hazardous waste may not be placed in an unwashed container that previously held an incompatible waste or material.

Incompatible wastes will not be consolidated and collected in the same container. Only compatible materials will be stored together as indicated in the hazardous materials/waste compatibility chart found in Appendix L. Incompatible wastes shall be physically separated with different containment structures and as far apart as practical. A storage container holding a hazardous waste that is incompatible with any waste or other materials stored nearby in other containers shall be separated from the other materials or protected from them by means of a dike, berm, wall, or other device. In summary, these compatibility guidelines will be followed:

- Segregate reactive wastes from ignitable wastes
- Segregate acids from caustics
- Segregate corrosives from flammables
- Segregate oxidizers from all other wastes

6.5.3 Damaged Containers

Hazardous waste containers that are found to be leaking, corroded, or otherwise deteriorated must be either transferred to a different container or over packed in DOT-approved

containers at any time during storage and prior to being turned in for disposal. The over-pack container must be durable, non-leaking, compatible, and constructed to safely contain the material being placed in it.

When using over-pack containers, ensure that an appropriate container is used in order to prevent accident, personal injury, or costly cleanup of spills. Over-pack containers must be marked and labeled the same way as any other container of hazardous waste.

6.5.4 Container Labeling

In accordance with 40 CFR 262.34(a)(2) and (3) (adopted by reference in 9VAC20-60-262), containers must be marked with the accumulation start date and with the words "HAZARDOUS WASTE." The label must also include a description of the contents. Labels or markings must be easily visible for inspection.

In addition to the above requirements, the following information shall be included on the hazardous waste label that is affixed prior to transportation for disposal, in accordance with 49 CFR 172.304 requirements for marking containers:

- "HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency."
- Generator's Name and Address
- Generator's EPA ID number
- Manifest Tracking Number

Each container will also be labeled in accordance with the requirements found in 49 CFR 172.400. Appendix N contains an excerpt of this regulation with the necessary table for identifying required labels for each hazard class. The hazardous materials table in 49 CFR 172.101 lists the required labels for each hazardous substance that may be transported.

The accumulation start date will be marked on each container. If the waste comes from a SAA, the date on the container is the date that the container was filled at the SAA prior to transfer to the 90-Day HWAS. If waste is added to a new container at the 90-Day HWAS, the accumulation start date is the date the first amount of waste was added to the container. If

waste from separate containers is combined, the accumulation state date will be the date for the oldest waste that was combined.

Any containers of unknown waste must be immediately reported to DPW-ENRD for guidance regarding proper management. Any containers with unknown contents must be marked "PENDING ANALYSIS" and the date DPW-ENRD obtained a sample. The container shall also be marked "HAZARDOUS WASTE." When the analytical results are received, a waste profile will be completed, and the container will be labeled appropriately. The accumulation start date will be the date the waste was first generated, as required by the EPA interpretive memo (see Appendix B). Records of any test results, waste analyses, and waste determinations will be maintained for three years.

6.5.5 Container Inventory

All containers that enter and leave the 90-Day HWAS must be logged on the facility inventory. Appendix I contains a copy of the form used for the inventory. The inventory must be updated with each turn-in and must accurately reflect turn-ins and all information on the Hazardous Materials / Waste Turn-In Document.

6.6 SECURITY

Each 90-Day HWAS is located within a secure area. All entrances will be locked when the facilities are closed. Signs are posted with the wording "DANGER – UNAUTHORIZED PERSONNEL KEEP OUT" at the entrance to each area. Signs are also posted with the wording "HAZARDOUS WASTE AREA" and "NO SMOKING" where the hazardous waste is actually stored. All signs should be legible from 25 feet away.

6.7 SPILL PREVENTION AND RESPONSE

The container accumulation areas at the 90-Day HWAS must have impervious containment systems with sufficient capacity to contain 10 percent of the total volume of all containers or 110 percent of the volume of the largest container, whichever is greater.

Each 90-Day HWAS is required to have a Contingency Plan. A copy of the plan will be maintained at each 90-Day HWAS.

Adequate spill control and containment materials appropriate for the type and volume of waste will be stored within 50 feet of accumulation sites to contain and clean up spills. The

quantity of spill supplies stored must at least be adequate to respond to a spill of the largest container in the facility. All spills or releases will be cleaned up immediately or as soon as it is safe to clean up the spill. All spill cleanup materials will be disposed properly.

6.8 INSPECTIONS

Each 90-Day HWAS and its containers must be inspected weekly (every 7 days) (see Appendix H for a copy of the inspection form). The site manager or other individual performing the inspection will look for spills and leaks and for deterioration of containers and the containment system. The inspector shall also check the accumulation date on each container to ensure that no container holding hazardous waste is nearing the 90-day limit. The Hazardous Waste Program Manager must be notified immediately if any container in the 90-day site exceeds 60 days from the accumulation start date on the label. The inspection record shall show the date of inspection, inspector's name, deficiencies noted, and corrective actions implemented. The record containing this information will be maintained as indicated in the recordkeeping section.

6.9 TRAINING

Training is required for personnel who handle hazardous waste and for managers and supervisors of personnel who handle hazardous waste, including those who maintain and operate the 90-Day HWAS. All training will be conducted in accordance with the ESOP for Hazardous Waste Training, which is located in Appendix A.

Initial training will be completed within six months of designation. All employees must be directly supervised until training is completed. Training consists of formal classroom instruction, informal training (e.g., meetings, seminars, workshops, etc.), and on-the-job training. An annual review of the training is required each year after completing the initial training session. Training records must be maintained on-site until closure of the facility for current personnel. Training records for former employees must be kept for a minimum of three years from the date the employee last worked at the facility.

Personnel trained in hazardous waste management procedures must provide the training. At a minimum, the training program shall meet EPA and VADEQ regulatory requirements. Training will focus on how to safely manage and operate a RCRA hazardous waste accumulation area. It must enable employees involved with hazardous waste operations to perform their duties without endangering themselves or other employees. Emphasis shall be given to emergency response, use of protective equipment and clothing, recognition of

hazardous waste, hazards of the waste, and an overview of RCRA regulations as they relate to employees.

Personnel responsible for shipping hazardous waste and signing hazardous waste manifests must be trained in accordance with Department of Transportation (DOT) 49 CFR 172, Subpart H, which requires initial and refresher training. Only personnel within DPW-ENRD designated by the Garrison Commander are authorized to sign manifests.

All training will be documented and kept on file for three years from the date the employee last worked at the organization/facility using the Waste Management Job Description and Training Record (see Appendix D). Copies of the Hazardous Waste Job Description and Training Record and annual Fort Belvoir training certificates will be kept at each 90-Day HWAS.

6.10 RECORDKEEPING

Individual activities and tenants will maintain the following records and documents and maintain in a manner that is:

- Legible, identifiable and traceable;
- Readily retrievable and protected against damage, deterioration, or loss; and
- In accordance with established retention times.

Each waste generating facility shall utilize the ESOP Waste Management Binder to develop a recordkeeping system (see Appendix A).

All 90-day HWAS facilities are required to keep the following documents:

a. Contingency Plan

b. Hazardous waste training records (maintain for a minimum of three years from when the employee last worked at the facility)

c. 90-Day HWAS inspection records

d. Fort Belvoir HWMMP (this document)

e. Fort Belvoir MSP and SPCC Plan

f. Generator's Hazardous Material and Waste Turn-In Requests

g. Hazardous waste profile list and associated sampling information

In addition to the above records, the main 90-day HWAS (Bldg. 1495) must also maintain the following documents:

a. DD Form 1348-1A turn-in documents (main 90-Day HWAS only)

b. Manifests and Land Disposal Restrictions

c. DLADS Delivery Orders

7.1 PERMITTED STORAGE FACILITY (BLDG 1490)

The permitted storage site located in Building 1490 on main post must be managed in accordance with 40 CFR 264, *Standards for Owners and Operators of Hazardous Waste Treatment, Storage, and Disposal Facilities*; 40 CFR 270, *EPA Administered Programs*, The Hazardous Waste Permit Program; and RCRA Part B Permit Number VA7213720082. The following sections describe the procedures that are followed at the RCRA Part B permitted hazardous waste storage site.

7.2 WASTE ACCUMULATION

In general, the permitted storage site is used infrequently. Wastes will be transferred from the main 90-day HWAS (Bldg. 1495) to the permitted site as necessary. A completed DD Form 1348-1A, *Issue Release/Receipt Document* (Appendix O), for each waste must accompany the turn-in upon transfer of the waste. Copies of the turn-in documentation will be kept for a minimum of three years.

The permitted storage site does not accept hazardous waste shipments from any off-post activities at this time.

Any quantity of hazardous waste may accumulate no more than 365 days (one year). Once a container from a 90-day HWAS has been transferred to the permitted site, the site manager has up to one year from the accumulation start date to arrange for disposal. When the RCRA Part B permitted hazardous waste storage site is used, most wastes will leave the facility when they are no more than 90 days old.

All wastes that are taken to the permitted hazardous waste storage site will be placed on a delivery order for disposal through the DLADS hazardous waste contractor. After acceptance of the delivery order, the hazardous waste contractor will prepare hazardous waste manifests for each shipment based on the waste profiles maintained for each waste stream.

7.3 TYPES OF WASTES STORED

Only hazardous wastes with the waste descriptions and waste codes specified in the permit (Table III-1) will be accumulated in the permitted storage facility. Waste codes not specified in the permit (Table III-1) may be accumulated in Building 1490 for up to 90-days only and must be shipped off-site for disposal within the 90-day accumulation period pursuant to 40 CFR 262.34.

Wastes generated from the following activities may be stored in the facility:

- Wastes generated during the testing of commercial products (e.g., paint and fuel samples) to determine whether they meet government specifications.

- Wastes, including degreasing agents and other solvents, generated during equipment, motor pool, and aircraft maintenance.

- Off-specification commercial and military-issue chemical products and unused military stock items generated at Fort Belvoir. These products and items are stored in the permitted storage facility (Bldg. 1490) if the products or items are kept at Fort Belvoir for more than 90 days after being discarded.

- Other infrequently generated wastes. Examples of these wastes are discarded laboratory equipment containing mercury, chromium from lab processes, cadmium from sealed cadmium batteries, mercury from mercury batteries and laboratory chemicals that have exceeded their shelf lives.

7.4 CONTAINER MANAGEMENT REQUIREMENTS

Drums of hazardous waste are unloaded by lowering the drums on pallets from truck level using a truck tail-lift or a forklift. The drums are then moved into the storage building using dollies.

All containers will be stored on pallets, regardless of size. In Building 1490, a minimum of 30 inches of aisle space is provided for container storage. The storage arrangement provides efficiency in container storage; provides adequate access for firefighting; and allows easy personnel access, which is needed for inspections and emergency operation. Fire extinguishers are available at each exit for putting out small fires. This aisle space allows for the unobstructed movement of personnel, fire protection equipment, spill control equipment and decontamination equipment.

7.4.1 Secondary Containment

The permitted storage facility (Bldg. 1490) was previously used for the storage of pesticide products and pesticide wastes. A curbed multi-bay area in the northernmost part of Building 1490 currently segregates and stores containers of hazardous waste. The concrete floor and

curbs are coated with an impervious chemical resistant epoxy resin coating that is sufficiently impervious to contain leaks, and spills, until the collected material is detected and removed.

Containers of hazardous wastes are also stored in a bay in the southernmost part of the building. Each containment cell is constructed with a 4 foot cinderblock wall/curb separating it from the next containment cell. Each containment cell will contain a minimum of 10 percent of the maximum capacity of the bay or the equivalent of 110 percent of the largest container, whichever is greater. The largest container in this storage unit has a 55-gallon capacity. Additionally, 85 gallon overpacks are available for larger containers in poor condition. The total storage capacity for this building is 10,120 gallons. The north bay area has a secondary containment system providing containment for over 3,000 gallons of liquid between all seven cells. Secondary containment for the south bay area can hold over 5,000 gallons of liquid. The cells are permitted for the following maximum volume of waste:

- Cell 1: 6600 gal;
- Cells 2, 3: 660 gal; and
- Cells 4, 5, 6, 7, 8: 440 gal.

7.4.2 Container Specifications

Only DOT/UN compliant containers will be used to store hazardous wastes. All containers must be in good condition. No leaking or damaged containers will be accepted for storage. If a container begins to rust or leak during storage at the facility, the waste must be transferred to another compatible container or overpacked. Waste containers will be closed at all times, except when necessary to sample or consolidate waste, transfer waste into a DOT/UN container for shipment, or transfer waste from a container in poor condition. Containers will not be opened, handled, or stored in a manner that would cause a rupture or other damage.

Hazardous wastes received at the hazardous waste storage site must be appropriately packaged, labeled, marked, and sealed at the point of generation, including the accumulation start date. Personnel at the site will inspect all waste shipments to ensure proper identification and marking by the generator. Upon receipt at the permitted storage facility (Bldg. 1490) load/unload area, the containers and packaged wastes will be offloaded and inspected for damage. Drums will be offloaded by forklift and/or drum handler. Prior to transit to designated storage locations, containers must be placed on pallets of the appropriate size. Drums will be banded together for ease of handling and to prevent toppling and accidental

spillage. Incompatible wastes must be transferred separately in all storage and handling operations.

To ensure compliance with Subpart CC Container Level 1 standards, only DOT/UN-approved containers will be used for storing hazardous waste. Any wastes that meet the definition of "in-light service" (e.g., methyl ethyl ketone or toluene) must meet Container Level 2 standards, which include use of DOT-approved containers and an initial visual inspection of container condition.

7.4.3 Fire Protection

The location of the permitted storage facility (Bldg. 1490) exceeds the required distance from a property line specified in the National Fire Code Standards. Ignitable and reactive wastes must be protected from sources of ignition and reaction, such as open flames, smoking, cutting and welding, hot surfaces, frictional heat, and sparks (static, electrical, or mechanical). Containers of highly flammable wastes will be electrically grounded. Signs must be prominently displayed and clearly marked with the works "NO SMOKING" in areas used to store these wastes. Non-sparking tools will be used on all containers storing ignitable wastes.

Portable fire extinguishers are available at the permitted storage facility (Bldg. 1490). Fire hydrants are located near Building 1490. A private contractor tested tests the available water volume and pressure at a fire hydrant near Building 1490 annually, every April 1. Water pressure at Fort Belvoir is maintained at or above 50 pounds per square inch (psi). To develop conservative estimates, the water volume is calculated at a lower water pressure. At a pressure of 20 psi, the water volume through the hydrant is 1,286 gallons per minute (gpm).

7.5 SECURITY

Access to Fort Belvoir is currently limited to military and authorized personnel and visitors with official business. Visitors are required to pass through a check-in process that requires showing photo identification. Certain secured areas have strict access control measures in place. Access to Building 1490 is limited to authorized personnel, and entrances to the unit are locked.

The permitted storage facility (Bldg. 1490) at Fort Belvoir is equipped with barriers and means to control entry 24 hours per day. The permitted storage facility (Bldg. 1490) is not in a secured area. During business hours and when occupied, the operating manager monitors

the personnel entering and leaving the building. After business hours, and when unoccupied, the building is locked. The keys to the building are held by the DPW-ENRD, the Facility Planning Office in the DPW, and the operating manager assigned to the building.

Warning signs are posted that state "DANGER – UNAUTHORIZED PERSONNEL KEEP OUT" at the entrances and sides of the hazardous waste storage facility. The signs are visible from 25-feet away.

7.6 SPILL PREVENTION AND RESPONSE

The facility maintains an adequate inventory of emergency equipment. Portable fire extinguishers are available at the permitted facility. A detailed list of all emergency equipment and personnel protective gear is located in the permitted storage facility (Bldg. 1490) contingency plan. The Fort Belvoir Fire and Emergency Services Division serves as the Phase Initial Incident Response Team and responds to hazardous waste spills on Post. Equipment utilized during response actions is either disposed of along with waste generated during spill response/abatement or properly cleaned and prepared for reuse according to the Fire and Emergency Services Division's standard operating procedures. The Fire and Emergency Services Division uses standard DA Form 5379 for vehicle inspections. Equipment inspections are conducted using an in-house computer program that records all calibration tests.

The floors in the Building 1490 north and south bay areas are sealed with an impervious chemical resistant epoxy resin floor coating. Silicone will be used, as necessary, to seal cracks. Curbs are also present in the north and south bays to provide secondary containment and prevent the release of wastes to the environment, thereby protecting nearby water supplies from possible contamination. Run-on into Building 1490 is prevented by the roof, concrete curbs around each containment cell and the building itself. Spilled or leaked waste is removed from the containment system using sorbent materials or pumps depending on the volume released. Used sorbent, protective clothing and other disposable materials used in spill cleanup are drummed, and debris from acid spills is stored in drums with polyethylene liners. Spilled or leaked waste is removed within 24 hours of detecting the release. Cleanup materials and waste will be considered hazardous and will be disposed as hazardous waste.

The decision to implement the Contingency Plan depends upon whether or not an imminent or actual incident could threaten human health or the environment. The criteria to be applied in making this decision are:

- A fire causes the release of toxic fumes.
- The fire spreads and could possibly ignite materials at other locations on-site or could cause heat-induced explosions.
- An imminent danger exists that an explosion could ignite other hazardous waste stored at the facility.
- An imminent danger exists that an explosion could result in release of hazardous substances.
- An explosion has occurred.
- A hazardous waste spill could result in release of flammable liquids or vapors, thus causing a fire or gas explosion hazard.
- A hazardous waste spill could cause the release of hazardous liquids or fumes.
- The potential exists for surface water contamination.

Emergency procedures begin when an emergency situation involving hazardous waste occurs at the permitted storage facility (Bldg. 1490). In the event of a spill or release of hazardous waste within one or more of the containment bays or center aisle area, spill response actions will begin by identifying the waste being released. The emergency coordinator will assess if the facility response equipment available for use by facility personnel is sufficient to control the release; response actions by facility personnel will then begin. Response actions by facility personnel will ensure all measures are taken to prevent fires, explosion or the spread of the released waste to other hazardous wastes stored in the facility.

If the facility emergency coordinator decides assistance is needed to contain the release, or in case of fire or explosion, the facility emergency coordinator or designate facility personnel will call the Fort Belvoir Garrison Consolidated Emergency Dispatch Desk (Fire Department) 703-781-1800 to begin implementation of the Fort Belvoir Army Garrison Emergency Integrated Master Spill Plan. The Garrison Emergency Consolidated Desk will immediately implement notification procedures and additional response resources, as required, to support the emergency procedures already initiated.

The Garrison Fire Department/Hazardous Material Response Teams, Military Police and, if needed, Emergency Medical response teams will be dispatched to the permitted storage facility (Bldg. 1490). Only persons properly equipped and trained will be permitted to respond, control and/or clean up spills or releases. Once on scene, the duty Garrison Fire Department Chief will assume the duties of the On-Site Emergency Coordinator until the emergency response has ended.

The Fire Dispatch will facilitate notification to the DPW-ENRD Coordinator or other appropriate Environmental Staff. Environmental Staff are available by being on call, and can reach the facility in a short period of time. The On-Site Garrison Fire Department Emergency Coordinator or representative and the DPW-ENRD Staff have complete authority to commit resources necessary to implement the Master Spill Plan (MSP)/ Spill Prevention Control and Countermeasures (SPCC) plan in the event of an emergency involving the spill or release of hazardous materials to the environment that is exceed Fort Belvoir's capabilities to contain.

7.7 INSPECTIONS

The permitted storage facility (Bldg. 1490) is inspected according to a prescribed inspection schedule in order to detect equipment deterioration and prevent possible equipment malfunction that could cause the release of hazardous waste to the environment or pose a threat to human health. The inspection schedule and logbook are located in the unit.

Inspections are performed weekly (every 7 days) and are based on the rate of possible deterioration of equipment and on the probability of an environmental or human health incident, because deterioration, malfunction, or operator error could go undetected between inspections.

Building 1490 is inspected for open and leaking containers, corrosion, other deterioration, structural defects, or trends that could indicate container failure. In addition, the secondary containment system is inspected for cracks, gaps, or pools of liquid. The general area inspection requirements are also detailed in the Permitted Storage Facility Inspection Checklist provided in Appendix H.

Emergency equipment, such as fire extinguishers, is inspected on a regular basis by the Fort Belvoir Fire Inspector as required by AR 420-90. Other emergency equipment such as communications equipment and spill cleanup equipment is inspected as required using DA Form 5379 provided in Appendix H.

7.8 TRAINING

Training is required for personnel who handle hazardous waste and for managers and supervisors of personnel who handle hazardous waste, including those who maintain and operate the permitted storage facility. The training plan is included in the ESOP Hazardous Waste Training (see Appendix A).

Initial training will be completed within six months of designation. All employees must be directly supervised until training is completed. Training consists of formal classroom instruction, informal training (e.g., meetings, seminars, workshops, etc.), and on-the-job training. At a minimum, on-the-job training will consist of the topics listed on the Permitted Facility Orientation Checklist (see Appendix D). Refresher training is required each year after completing the initial training session. Training records must be maintained on-site until closure of the facility. Training records for employees who no longer work at the facility must be maintained for a minimum of three years.

Personnel trained in hazardous waste management procedures must provide the training. At a minimum, the training program shall meet EPA and VADEQ regulatory requirements, including compliance with 40 CFR 264.16 as specified in the facility storage permit (Permit conditions II.D, II.H.2.a.xi and II.H.2.c.iii). Training will focus on how to safely manage and operate a RCRA hazardous waste storage area. It must enable employees involved with hazardous waste operations to perform their duties without endangering themselves or other employees. Emphasis should be given to emergency response, use of protective equipment and clothing, recognition of hazardous waste, hazards of the waste, and an overview of RCRA regulations as they relate to employees.

Personnel responsible for shipping hazardous waste and signing hazardous waste manifests must be trained in accordance with Department of Transportation (DOT) 49 CFR 172, Subpart H, which requires initial and recurrent training. Only personnel within DPW-ENRD designated by the Garrison Commander are authorized to sign manifests.

All training will be documented and kept on file until closure of the facility for current workers and for three years from the date the employee last worked at the organization/facility. Copies of annual Fort Belvoir training certificates, individual job descriptions, and training forms will be kept at the permitted storage facility. Organizations must document training related to hazardous waste specific for their job responsibilities. Appendix D contains the Waste Management Job Description and Training Record, which is

used to document hazardous waste management duties and associated training at Fort Belvoir.

7.9 RECORDKEEPING

DPW-ENRD will maintain a facility operating record and maintain it in a manner that is:

- Legible, identifiable and traceable;
- Readily retrievable and protected against damage, deterioration, or loss; and
- In accordance with established retention times.

As specified in the permit, the operating record will include the following items:

a. A current map showing the location of hazardous waste management units and non-regulated units within the facility;

b. A map showing all locations of past hazardous waste management units if different from present locations;

c. Pursuant to 40 CFR 264.73, a description and the quantity of each hazardous waste received, and the method(s) and date(s) of its treatment, storage, or disposal at the facility;

d. The time, date, and details of any incident that requires implementation of the Contingency Plan, including copies of all reports prepared pursuant to 40 CFR 264.56 and Permit Condition I.D.ll.c or II.H.2.iv;

e. Records of spills and releases;

f. Written reports and records of verbal notification to the Director and the Administrator to address releases, fires, and explosions;

g. All reports of noncompliance pursuant to Permit Condition I.D.12;

h. All submittals prepared pursuant to Permit Condition I.D.l3;

i. Records and results of waste analyses required by 40 CFR 264.73(b)(3), which shall include at a minimum

1. The date(s), exact place, and times of sampling or measurements;

2. The name of the individual(s) who performed the sampling or measurements;

3. The date(s) analyses were performed, demonstrating that EPA SW-846 holding times were satisfied;

4. The name(s) of the individual(s) who performed the analyses;

5. The analytical techniques or method used;

6. The analytical results;

7. The QA/QC summary; and

8. The type(s) and model number(s) of the equipment used for analysis.

j. All waste determinations, waste profiles, and waste feed composition determinations made pursuant to the Waste Analysis Plan, Attachment II.BB.

k. Training records of current facility personnel;

l. Certifications pursuant to 40 CFR 264.73 (Waste Minimization Plan);

m. The notice and certification required by a generator under 40 CFR 264.73 and 268.7 (Land Disposal Restrictions); and

n. Records of facility constructions pursuant to Permit Condition I.D.10.

8.1 GENERAL

DLADS is the primary method of disposal for hazardous waste generated by organizations and activities on Fort Belvoir. Alternate means of disposal may be used at the discretion of the Hazardous Waste Program Manager. All hazardous waste disposed through DLADS must be accomplished as quickly as possible to minimize liability for environmental violations or spills.

Contractors that are not part of the normal operations of Fort Belvoir, such as Corps of Engineers construction contractors, should coordinate with DPW-ENRD prior to starting work to ensure that procedures for hazardous waste disposal are established. In general, these contractors will arrange for hazardous waste disposal separately from existing installation hazardous waste contracts. Shipments of hazardous waste off-site must be under the Fort Belvoir EPA ID number, and all manifests will be signed by an authorized representative in DPW-ENRD regardless of the waste transporter used.

8.2 HAZARDOUS MATERIAL REUSE EVALUATION

Much of the hazardous waste that is disposed each year is composed of unused/expired hazardous materials. In an effort to minimize the waste that is generated from unused items, Fort Belvoir has implemented a hazardous material reuse program.

When an organization wishes to discard excess hazardous materials which are unopened and/or are in good condition, the organization shall bring the items to the main 90-day HWAS (Bldg. 1495) for evaluation. If possible, items will be added to the free issue inventory, and hazardous waste costs and liability will be avoided. Items with expired shelf life will be researched by 90-Day HWAS personnel and extended when possible. Any installation organization may obtain the materials in the free issue inventory for reuse on Fort Belvoir.

8.3 PREPARATION FOR DISPOSAL AND PACKAGING

40 CFR 262.30 (adopted by reference in 9VAC20-60-262) states that before transporting hazardous waste or offering hazardous waste for transportation off-site, a generator must package the waste in accordance with the applicable U.S. DOT regulations on packaging under 49 CFR Parts 173, 178, and 179. In addition to the requirements in 40 CFR Part 262, 9VAC20-60-262.B.5 specifies that generators are required to comply with the 9VAC20-110, *Regulations Governing the Transportation of Hazardous Materials*, including packaging and

labeling for transport. For this reason, DPW-ENRD recommends storing waste at all accumulation and storage sites on Fort Belvoir in DOT-approved containers.

8.4 HAZARDOUS WASTE TURN IN PROCEDURES

Activities that generate hazardous waste and maintain SAAs will establish procedures to ensure that all hazardous waste is turned in to a 90-Day HWAS within three days of the date that the 55-gallon limit (or 1-quart of acutely hazardous waste limit) is reached. Both the label and the turn-in document must accurately represent the contents of the container.

The ESOP for waste management, including the turn-in process, is in Appendix A. It specifies that activities must complete a Generator's Hazardous Material and Waste Turn-In Request (see Appendix G) and have an active and approved Hazardous Waste Profile on file with DPW-ENRD for each hazardous waste item to be turned in.

Personnel at the 90-Day HWAS will receive the waste, ensure that it is correctly labeled and identified, complete the DD Form 1348-1A (see Appendix O), and store it until it is picked-up by waste transport contractors. Waste that is not properly labeled and identified or that is not properly packaged and safe to handle will not be accepted at the accumulation area. Arrangements will have to be made by the generating organization to immediately correct any situation that results in non-acceptance of the hazardous waste at the 90-Day HWAS.

8.5 WASTE PROFILES

All wastes that are disposed through DLADS must have a waste profile completed to characterize the waste. DPW-ENRD will prepare Hazardous Waste Profiles (Appendix P) using information gathered from SDS, analyses, or user process knowledge. Required information includes generator name; USEPA ID and State ID; facility address; technical contact's name, title and telephone number; name of waste; waste code(s) (when necessary); material characterization information (optional); RCRA characteristic information; chemical composition information; material composition; shipping information; generator certification; toxicity characteristic information; hazardous waste or non-RCRA identification; and DLADS verification information. Profiles will be created and stored electronically in the DLADS system.

When a new unprofiled waste is to be disposed, the SDS, any user knowledge, and any additional information about the waste will be forwarded to DPW-ENRD. If waste ingredients or chemical properties are unknown, items will be characterized prior to disposal

by DPW-ENRD. See Section 9 for information about Hazardous Waste Analysis and Characterization. At the time hazardous waste is placed in the 90-Day HWAS, the organization will coordinate with DPW-ENRD to ensure waste containers are properly labeled and meet any other packaging requirements. If an established waste stream changes, DPW-ENRD will notify DLADS before shipping to ensure that the disposal facility has the most updated information on the waste stream.

8.6 HAZARDOUS WASTE MARKING AND LABELING REQUIREMENTS

8.6.1 General Requirements

State and federal regulations have established specific labeling and marking requirements for hazardous waste containers, which cross-reference the DOT regulations contained in 49 CFR 172. The marking and labeling requirements of RCRA and DOT regulations shall be accomplished as described in the following paragraphs.

- All labels shall be filled out using permanent ink that is not water-soluble and will not readily fade. This helps to ensure that the information will not be inadvertently smudged or otherwise rendered illegible resulting in personal injury or costly analyses to re-identify the waste.

- A DOT Hazard Class Label such as "flammable", "corrosive," or "oxidizer," must be applied to the container prior to shipment; however, these labels are not required for containers maintained in a SAA or 90-Day HWAS.

- Old labels and markings shall be removed or painted over to ensure that there is no confusion about the contents. New labels shall not be placed over old ones.

8.6.2 Marking

40 CFR 262.32 indicates that hazardous waste containers shall be marked in accordance with information in the DOT Hazardous Materials Transportation regulations of 49 CFR 172 including the DOT Hazardous Materials Table 49 CFR 172.101. This table sets out the proper shipping name, hazard class, ID number, packing group, and other information that must be contained on DOT shipping papers for all hazardous wastes. Steps outlined below give information necessary in order to comply with DOT and additional 9VAC20-110

requirements. Regulations require that a generator must mark each container of 119 gal or less specifically in accordance with the following requirements before waste is transported. The hazardous waste disposal contractor combines like wastes and marks containers in accordance with DOT regulations before waste is shipped off the installation per requirements below.

a. The marking must be durable, in English, and printed on or affixed to the surface of a package or on a label, tag, or sign.

b. The marking must be displayed on a background of sharply contrasting color.

c. The marking must be unobscured by other labels or attachments and must be located away from other marking that could substantially reduce its effectiveness.

d. In addition, RCRA regulations require that marking include the following statement:

i. HAZARDOUS WASTE - Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. EPA.

ii. Generators Name and Address _____

iii. Manifest Document Number _____

e. The information required by the preceding paragraphs is generally affixed to containers storing hazardous waste by means of a label, which may have some of the information required by item d above preprinted. This type of form label should not be confused with, and is in addition to, the labeling requirements of Subsection 8.6.3 below. Appendix Q provides several examples of container labels for common Fort Belvoir wastes. Activities generating hazardous waste may obtain these labels through the procurement system; however, in emergencies, a limited number of labels may be obtained by contacting DPW-ENRD.

8.6.3 Labeling

Prior to shipment, each container must be labeled with a Hazard Class Label (i.e., flammable, corrosive, oxidizer) in accordance with the applicable RCRA and cross-referenced DOT (49 CFR 172.400) regulations on hazardous materials.

Hazard class labels are intended to provide identification of particular hazardous properties of the material through pictorial representation. Labels are required by RCRA on hazardous waste containers that will be shipped off-site. However, the DLADS contractor will apply all necessary labels prior to shipment, and the DOT labels are not required on wastes that are being accumulated in a SAA or 90-Day HWAS.

8.7 TURN-IN DOCUMENTATION

Organizations are required to complete Generator's Hazardous Material and Waste Turn-In Request for each waste stream prior to transport to the main 90-day HWAS (Bldg. 1495). Personnel shall bring two copies of the turn-in document to the facility. DPW-ENRD will ensure that documentation (DD Form 1348-1A, *Issue Release/Receipt Document*) required for disposal of hazardous waste through DLADS is completed. Information on each container will be entered in the DLADS database to electronically generate the DD Form 1348-1A, *Issue Release/Receipt Document* (Appendix O), for turn-in to DLADS and for tracking purposes.

8.8 TRANSPORTATION OF HAZARDOUS WASTE

Off-post transportation of hazardous waste by any installation organization is strictly forbidden. On-post transportation of hazardous wastes by generating activities shall be accomplished in strict accordance with applicable regulations, including vehicles used to transport hazardous waste meeting the motor vehicle requirements of Army Regulation 385-10, Chapter 11-3, *Motor Vehicle Safety Standards*.

Hazardous wastes generated at Fort Belvoir may be transported on-post by the generating organization from the generation point to a 90-Day HWAS. Generating activities will establish control regarding personnel permitted to transport hazardous waste. These controls should, at a minimum, require that all personnel involved with hazardous waste transportation be trained in accordance with the requirements of Section 2.8 of this document. Hazardous waste should not be transported from the generation point to a 90-Day HWAS by forklift unless another transportation method is not feasible.

The following procedures shall be followed for transferring containers from SAA to 90-Day HWAS:

a. Generating activities are responsible for arranging the loading and transportation of hazardous waste using in-house support elements. If the organization does not have the capability of transporting waste to a 90-Day HWAS from the SAA, DPW-ENRD will provide limited pick-up assistance on a case-by-case basis.

b. Only government-owned vehicles may be used for transporting hazardous waste; no personally-owned vehicles are allowed to be used for transporting hazardous waste.

c. Passengers must be in a separate compartment from the waste while traveling in the vehicle.

d. The waste must be protected from the elements during transportation.

e. Hazardous waste containers shall be secured during transportation in order to avoid spills.

f. 55-gallon drums will be transported no more than one layer of three to a pallet to ensure a stable load and avoid tipping over.

g. Cans of one gallon or more, stacked on pallets, will be stacked no more than two deep in order to ensure a stable load and avoid tipping over. All other containers will be transported in a way which ensures stable and safe transportation.

h. All containers shall be transported in an upright position.

i. Containers on pallets shall be banded, strapped, or positioned on the vehicle to prevent tipping over. Caution must be exercised while banding, to avoid denting or otherwise damaging containers.

j. Incompatible wastes shall not be transported on the same vehicle.

k. Unknown wastes are prohibited from transport except for a sample that is shipped for testing and analyzing to determine its substance.

l. All vehicles used to transport waste must be equipped with a spill kit appropriate for the type of waste being transported.

Hazardous wastes shall not be transported on any public road that is not adjacent to the Fort Belvoir property line except by an approved transporter using a Hazardous Waste Manifest.

Designated personnel within DPW-ENRD are allowed to sign Hazardous Waste Manifests. They are the only ones who have been granted signatory authority by the Garrison Commander. All other off-post activities, which do not have prior authorization, must make arrangements with an organization which is authorized to transport waste and sign the manifest, or make other arrangements to provide for these requirements with appropriate coordination and notification with DPW-ENRD.

Before any hazardous waste can be transported off-post, including waste generated by contractors, it must be manifested in accordance with the requirements of Section 8.9, with the contractor and Fort Belvoir listed as the generator. Generators that manifest waste on an irregular or infrequent basis should consult with DPW-ENRD about appropriate profiling and manifesting procedures.

8.9 MANIFESTS

All generators who transport or contract for the transportation of hazardous waste for off-site treatment, storage, or disposal must prepare a manifest. The manifest is a standard EPA or state form, which lists the following:

- Generator's EPA ID number
- Generator's name and mailing address
- Generator's telephone number
- All transporter's names and EPA ID numbers
- Company name, site address, and EPA ID number for the facility designated to receive the waste
- Number and type of containers holding the waste

- Total quantity of waste
- Weight or volume of the waste
- DOT description (including proper shipping name, hazard class, ID number, and packing group)
- Special handling instructions and other information
- Emergency Response Guidebook reference number
- Generator's written certification that the statements made is true.

The hazardous waste service contractor, through the DLADS, has the responsibility for preparing the manifests for waste being transported from Fort Belvoir. The organization-level generators must supply supporting information and data for the manifest preparation in the form of container labeling information and turn-in documents.

Once the DLADS contractor has completed the manifest form, the handwritten signature must be obtained from the initial transporter, DLADS personnel, and DPW-ENRD personnel, along with the date of acceptance of the manifest. The contractor must reproduce enough copies of the manifest to provide the generator (Fort Belvoir), each transporter, and DLADS. When shipment is made, the generator retains the generator copy of the manifest and gives the initial transporter the remaining copies. Manifest copies will be kept for a minimum of three years.

DPW-ENRD maintains information on EPA-approved RCRA TSD facilities and transporters. All hazardous waste produced on Fort Belvoir must be disposed through DPW-ENRD. Only personnel in DLADS and DPW-ENRD have been delegated authority by the Garrison Commander to sign hazardous waste manifests.

8.10 EXCEPTION REPORTING

If the installation does not receive a copy of the hazardous waste manifest with the signature of the owner, operator, or authorized representative of the designated TSD Facility within 35 days of the date the waste was shipped from Fort Belvoir, the status of the waste must be determined. The transporter and the TSD facility must be contacted to confirm that the waste

shipment was in fact delivered and accepted, and to obtain a copy of the manifest. If the waste was not delivered or accepted, the location of the waste must be determined.

If the installation does not receive a copy of the TSDF manifest within 45 days of the date the waste was accepted by the initial transporter, an exception report must be submitted to VADEQ. The exception report must include a legible copy of the manifest for which the confirmation of delivery is missing and a cover letter describing efforts taken to locate the hazardous waste and the results of those efforts.

If DPW-ENRD does not receive a return copy of the manifest, the Hazardous Waste Program Manager will contact DLADS. DLADS will contact the TSDF to determine the location of the manifest and waste. If required based on the information obtained from the TSDF, DPW-ENRD will complete the exception reporting process.

8.11 RECORDKEEPING

Fort Belvoir DPW-ENRD is responsible for preparing, submitting (where required) and maintaining the following records:

a. The EPA Biennial Report (EPA Form 8700-12) for the entire installation in accordance with 40 CFR 262.41 (adopted by reference in 9VAC20-60-262).

b. Records consisting of copies of manifests, profiles, exception reports, LDR notifications, and incident reports. Maintain training records for DPW-ENRD personnel as well as all 90-day accumulation site managers.

Individual activities and tenants will maintain copies the following records and documents:

a. Fort Belvoir HWMMP (this document)

b. RCRA Part B Permitted Facility, 90-Day HWAS and SAA inspection records

c. Hazardous waste training records (maintain for a minimum of three years)

d. Fort Belvoir MSP and SPCC Plan

e. Site Specific Spill Plan / Contingency Plan

f. Generator’s Hazardous Material and Waste Turn-In Request

8.12 HAZARDOUS WASTE REPORTING

A biennial hazardous waste report will be submitted to the VADEQ by DPW-ENRD based on hazardous waste disposal records for each reporting year by 1 March. These reports will be based on calendar year data. These reports will be forwarded by the VADEQ to the US EPA Region III in accordance with federal hazardous waste regulations. If filing online, Fort Belvoir must still submit a signed paper copy of the completed RCRA Subtitle C Site Identification Form (EPA Form 8700 - 13A/B, Revised 12/2011) to the VADEQ.

9.1 GENERAL

Wastes must be characterized prior to disposal. Chemical and physical characteristics of a waste must be determined in order to develop a waste disposal profile and decide disposal options. Information will be obtained by user or process knowledge, SDS or other manufacturer information, or through laboratory analytical methods or other test methods. If a laboratory analysis is required, the Hazardous Waste Program Manager will coordinate sample collection and shipment to an appropriate analytical laboratory. After receiving/reviewing the analytical results, the Hazardous Waste Program Manager will advise the organization of disposal procedures and will complete a hazardous waste profile sheet. The Hazardous Waste Program Manager will determine the extent of testing. Waste characterizations will be forwarded to DLADS for recordkeeping and forwarding to waste disposal facilities.

Any new process that will generate a potential hazardous waste must be reviewed by the Hazardous Waste Program Manager prior to implementation. If analysis is required for waste characterization, the Hazardous Waste Program Manager will coordinate with the generating activity to obtain a sample and complete a waste profile. The waste must be accumulated in a SAA and managed in accordance with the procedures in Section 5 of this plan. When the accumulation threshold is reached, the generating organization will date the container and will transfer it to the main 90-day HWAS (Bldg. 1495) within three days for disposal processing.

When analysis of a waste stream is required, additional time must be allowed for processing the waste prior to disposal. At least 30 days will be allowed for the analysis and profiling to occur prior to required removal from a 90-Day HWAS. Results for routine laboratory analysis for hazardous waste determination purposes will usually be returned to the installation within two weeks of submitting the waste sample. After receiving results, the Hazardous Waste Program Manager must determine the waste codes associated with the waste and complete waste profile documentation.

Fort Belvoir will follow the procedures described in the Waste Analysis Plan contained in Attachment II.BB of the facility's permit. At a minimum, waste analysis will include the maintenance of proper functioning instruments, use of approved sampling and analytical methods, verification of the validity of sampling and analytical procedures, and correct calculations. All samples will be submitted to a laboratory to perform required analysis that operates under the waste analysis conditions placed on Fort Belvoir in the permit.

9.2 ANALYSIS COST

Waste analysis samples submitted through DPW-ENRD are part of the management contract for the hazardous waste facility. An account is established with a certified lab for any wastes that need to be analyzed. Organizations are typically not charged for the cost of the analysis; however, a situation may arise (i.e., gross negligence) where the organization may be required to pay for the lab analysis. The Chief, DPW-ENRD is responsible for determining organization charges, as appropriate.

9.3 CHAIN-OF-CUSTODY FORMS

Chain-of-Custody forms are used for all samples collected. The environmental laboratory receives all samples using these forms and assigns a unique sample number to each sample. When laboratory results are available, the Hazardous Waste Program Manager is contacted by email, with final lab results.

9.4 RESULTS

The Hazardous Waste Program Manager will review all laboratory results to determine proper waste characterization. The Hazardous Waste Program Manager will update existing waste profiles or create new waste profiles as appropriate based on the results.

The analytical lab must certify its use of the required EPA test methods and must be able to provide documentation of quality control and quality assurance procedures. Acceptable documentation may include compliance with the quality control section of each EPA SW-846 procedure.

9.5 CHARACTERIZATION FREQUENCY

In general, testing will not be performed on unused hazardous materials that have been turned in unopened and in their original packaging. Waste characterization of these items is performed using the item's physical and chemical characteristics contained in the SDS as well as standard references to supplement label information.

Waste streams that are generated on a recurring basis are characterized annually or when changes occur in the process. These characterizations and their results will be reviewed by the Hazardous Waste Program Manager. Hazardous waste profile sheets for these wastes will be maintained at DPW-ENRD and updated as required. Any non-recurring waste streams

will be analyzed if required and profiled as they are generated. Hazardous waste profile sheets will be updated as required. Generators will provide waste classification prior to turn in at the permitted storage facility. Fort Belvoir will notify off-site TSDFs of changes in waste composition.

9.6 UNKNOWN WASTES

Unknown wastes are discovered on the installation from time to time. When this occurs, the contents of these containers or "mystery drums" will be analyzed to determine if they are a hazardous waste. Any containers of unknown waste must be immediately reported to DPW-ENRD for guidance regarding proper management. All waste suspected to be hazardous will be managed as hazardous waste upon discovery or generation. Based on analytical and physical characteristic results, DPW-ENRD will make the determination for safely moving these containers to a 90-Day HWAS if it is determined to be a hazardous waste. The Fort Belvoir Fire Department Hazardous Material Response Team will respond to a "mystery drum or container" in emergencies or when potential risk is suspected.

9.7 LAND DISPOSAL RESTRICTIONS

In accordance with the LDR regulations in 40 CFR 268 (adopted by reference in 9VAC20-60-268), wastes shipped offsite may need to be analyzed to determine whether the waste meets the applicable LDR treatment standards. These standards indicate if a waste must be treated prior to be disposed on the land (e.g. in a landfill). If it is known that the wastes do not meet applicable LDR treatment standards based on process knowledge, no testing will be performed and the wastes will automatically be sent for appropriate treatment. Each waste for which a treatment standard has been set will be evaluated for the applicable parameters in 40 CFR 268.41-43. All analytical results completed in support of LDR requirements will be retained at DLADS.

Wastes resulting from facility operations that exceed applicable LDR treatment standards will be sent offsite to a RCRA-permitted or interim status treatment facility. Applicable LDR notifications will be supplied with the shipment of waste with the information required under 40 CFR 268.7(a)(1). In addition to the LDR notification, any additional data for the waste stream (e.g., waste profile sheet, analytical data) will be available, upon request.

DPW-ENRD personnel will verify the restricted/prohibited status of each waste stream prior to shipment, since this status is subject to change. The notification and/or certification forms to be used may be provided by the treatment facility that receives the waste. Copies of all

notices, certification, demonstration, waste analysis data, and other documentation produced for LDR recordkeeping purposes will be retained at Fort Belvoir by the Hazardous Waste Program Manager for at least three years from the date the waste was last sent offsite for treatment, storage, or disposal. The record retention period may be extended during unresolved enforcement action or at the request of the EPA Regional Administrator.

10.1 WASTE MINIMIZATION DEFINITION

Hazardous waste minimization is the reduction, to the extent feasible, of hazardous waste that is generated prior to treatment, storage, or disposal of the waste. It is any source reduction or recycling activity which results in reduction in volume and/or toxicity of waste consistent with the general goal of minimizing present and future threats to human health and the environment. Examples include:

- Chemical substitution - replacement of hazardous chemicals with non-hazardous or less hazardous chemicals.

- Process or methodology change - development of alternative processes or methods that use smaller quantities or eliminate the use of hazardous chemicals, which results in the generation of less waste.

- Segregation of wastes - ensuring that non-hazardous wastes are not contaminated with hazardous wastes, which increases the total volume of hazardous waste, and ensuring that otherwise recyclable hazardous wastes remain recyclable because they are not contaminated by non-hazardous or other hazardous wastes.

- On-site recycle - such as distilling solvents on-site for on-site reutilization.

- Off-site recycle - when possible and economically practical, manifesting hazardous wastes to off-site recycling companies rather than to disposal or treatment for disposal.

10.2 WASTE MINIMIZATION CERTIFICATION

RCRA Section 3002(b) and 42 United States Code 6922 require generators to develop and implement economically feasible minimization practices. The waste minimization certification statement can be found in Appendix R of this document. Signature of this statement certifies the following:

1. Fort Belvoir has a program in place to reduce the volume and toxicity of hazardous waste to the degree determined by Fort Belvoir to be economically practicable; and

2. The proposed method of treatment, storage or disposal is the most practicable method available to Fort Belvoir which minimizes the present and future threat to human health and the environment.

3. Fort Belvoir shall also maintain copies of certification in the permitted storage facility (Bldg. 1490) operating record as required by 40 CFR 264.73(b)(9) as adopted by reference in 9VAC20-60-264.

Commanders and directors will take measures to reduce and minimize the volume and/or toxicity of hazardous waste generated within their activities whenever practical. These measures shall include implementation of the measures listed in Section 10.1 as appropriate and applicable.

10.3 WASTE MINIMIZATION GOALS

AR 200-1, para 10-1.c establishes the following goal for hazardous waste:

> *Continually reduce the volume of HW generated by Army installations, and maintain compliance with pertinent HW regulations.*

Fort Belvoir will actively implement waste minimization initiatives to meet this goal of continual reduction in waste generation.

10.4 WASTE MINIMIZATION INITIATIVES

In addition to implementation of general minimization techniques, Fort Belvoir has initiated several pollution prevention and waste minimization projects/efforts for specific waste streams. Waste minimization initiatives that are currently being implemented are described in Section 12 as applicable for each waste stream generated by the installation. Additional opportunity assessments may be completed for waste streams based on priorities of the Hazardous Waste Program Manager. As these opportunity assessments are completed, process changes will be implemented as funding and manpower allow.

10.5 HAZARDOUS MATERIALS MANAGEMENT PROGRAM

A Hazardous Materials Management Program (HMMP) is one of the most effective methods for reducing hazardous waste generation. Army policy requires the reduction in the acquisition and use of hazardous materials and the subsequent generation of solid or

hazardous wastes through centralized inventory control, best management practices, pollution prevention actions, improved procurement practices, material re-use, recycling, and enhanced shelf-life management. In accordance with AR 200-1, all hazardous materials shall be procured through the standard Army supply system. Use of government International Merchant Purchase Authorization Card (IMPAC) credit cards to purchase hazardous materials is generally prohibited and may only be allowed on a case-by-case basis with approval by the Garrison Commander or their designated representative.

Fort Belvoir is in the process of developing a HMMP that will be designed to reduce risk to public health and the environment by employing management controls and pollution prevention initiatives to comply with regulations and executive orders and to support sustainability. The HMMP will follow the outline provided in the Department of the Army Pamphlet (DA PAM) 710-7 and will include the following documents at a minimum:

- Garrison HMMP Committee Charter
- Garrison Policy Statement and Guidance
- Hazardous Material Management Internal Standard Operating Procedures
- External Hazardous Material Control Point Standard Operating Procedure

Appendix S contains templates based on the requirements in DA PAM 710-7 that may be used to develop the HMMP. The HMMP will also incorporate the following requirements contained in AR 200-1:

1. Follow approved standardized hazardous material management business practices as specified by the Deputy Chief of Staff, G–4 (DCS, G–4) and the Office of the Assistant Chief of Staff for Installation Management (OACSIM) to implement the HMMP.

2. Review and approve hazardous material usage and track usage to using processes and work centers.

3. Manage and dispose of pesticides, residues, and their containers in an environmentally safe manner.

4. Do not allow the transport, storage, or disposal of non-DOD hazardous materials on Army installations unless approved by the Office of the Assistant Secretary of the Army for Installations and Environment (OASA (I&E)), his or her designee, or higher authority.

5. Follow Army logistics policy for identifying, storing, and transporting hazardous materials as specified by the DCS, G–4. Related policy guidance can be found in safety, medical, acquisition and logistics regulations. Installation supplements involving any hazardous material management should be coordinated with the installation environmental coordinator, safety coordinator, and installation medical officer.

6. Record, review, and analyze hazardous material and hazardous waste operational data as a source of information to measure HMMP effectiveness.

11.1 GENERAL

Hazardous waste, non-regulated waste, and universal waste are handled regularly at Fort Belvoir. This section is a general summary of the different types of wastes that are generated by organizations operating on the installation. Section 12 contains more details regarding the handling and specific management practices for the most commonly generated waste streams. The Hazardous Waste Program Manager reviews the profiles and any laboratory analysis prior to signing any waste manifests to ensure proper waste characterization, management, and disposal. Copies of all profiles are maintained at DPW-ENRD.

The following major activities generate hazardous waste, non-regulated waste with special handling requirements, and/or universal waste:

- Aviation Maintenance
- Building Maintenance
- Construction Activities
- Fuel/Oil Transfer and Storage
- Ground Vehicle and Equipment Maintenance
- Laboratory Operations
- Medical and Related Research Activities
- Military Training Activities
- Painting Activities
- Photo and X-Ray Activities
- Supply Excess

11.2 HAZARDOUS WASTE

Hazardous wastes shall be accumulated in a SAA or 90-day HWAS in accordance with the procedures found in Sections 5 and 6. Containers of hazardous wastes shall be labeled with the words "HAZARDOUS WASTE" and the type of waste. The date is only added to the container in the SAA when it exceeds the accumulation threshold (generally 55-gallons or 1-quart for acutely hazardous waste). Containers accumulating waste in 90-day areas shall have an accumulation start date added when waste is first added to the container. Common hazardous waste streams generated at Fort Belvoir are:

- Flammable Paints.
- Flammable Liquid organic solvent.

- Flammable/Toxic Methyl Ethyl Ketone (MEK) solvent.
- Flammable adhesives.
- Aerosol cans.
- Corrosives (acid and bases.
- Decontamination solutions.
- Pharmaceuticals
- Universal Waste Fluorescent tubes.
- Universal Waste lithium, nickel cadmium, and mercury batteries.

11.3 NON-REGULATED WASTES

These wastes are not regulated as RCRA hazardous waste, but still require special handling and disposal actions to ensure that other regulations are not violated. Non-regulated wastes may be accumulated and stored in a SAA. Containers of non-regulated wastes shall be labeled with the words "NON-REGULATED WASTE," the type of waste, and the date waste was first added to the container. Although these wastes are usually not subject to RCRA hazardous waste regulations, they can become a hazardous waste if they are mixed with or contaminated by a hazardous waste. Common non-regulated wastes on Fort Belvoir include:

- Asbestos
- Grease
- Latex paint
- Nonflammable adhesives
- Oil, fuel, and grease contaminated rags and debris
- Oil and fuel filters
- Petroleum, Oil, and Lubricant (POL)-contaminated soils and used dry sweep (except for gasoline)
- Used antifreeze
- Used oil

11.4 UNIVERSAL WASTE

Universal wastes regularly managed at Fort Belvoir include unbroken/undamaged batteries, fluorescent lamps , mercury containing equipment (thermostats, thermometers), and certain pesticides. Because of their widespread use in industry and the government, universal waste

can be stored for a longer period of time than hazardous waste, and does not require shipment under a hazardous waste manifest. Containers of universal waste shall be labeled with the words "UNIVERSAL WASTE," the specific waste stored, and the date waste was first added to the container.

11.5 PROHIBITED ITEMS

Prohibited items are items that must be kept from regular garbage and dumpsters. ECOs should frequently inspect dumpsters in organizational areas and facilitate the proper disposal of any inappropriate items found in dumpsters. The following items are not permitted in regular garbage and dumpsters:

- Hazardous waste
- Antifreeze
- POL products
- Used oil and fuel filters
- Contaminated soil
- Paint
- Fluorescent bulbs
- Used dry sweep and absorbents
- Bulk MRE heaters
- Pesticides
- Non-alkaline batteries
- Aerosol cans
- Tires
- Blast media
- Nuclear, biological, and chemical (NBC) items
- Solvent and filters
- Hazardous materials
- Ammunition-related items (anything issued by the ammunition supply point [ASP])
- Used/dirty rags

11.6 POLYCHLORINATED BIPHENYLS

Polychlorinated biphenyls (PCBs) are synthetic compounds used widely as a dielectric fluid in transformers and capacitors, in light ballasts, and for other insulating uses prior to 1978.

PCBs are regulated by the Toxic Substances Control Act (TSCA) and under 40 CFR 761. TSCA requires that all items manufactured after 1978 be labeled as to whether the item is PCB or non-PCB containing. When no identifying label is present, assume that it contains PCBs and contact the PCB program managed within DPW-ENRD. Fort Belvoir has no known remaining PCB items in service or storage on the installation. However, some items, such as ballasts, may be discovered during maintenance of older facilities. Organizations should contact DPW-ENRD for further guidance if any potential PCB containing items are identified. Copies of the PCB logs are maintained in DPW-ENRD.

11.7 REGULATED MEDICAL WASTE (RMW)

Regulated medical waste (RMW) is waste that is potentially capable of causing disease in humans and may pose a health risk to individuals, the community or both, if not handled or treated properly. RMW is not regulated under the hazardous waste regulations but rather the medical waste regulations found at 9VAC 20-120. Information is included here about medical waste since it is considered a waste stream generated at Fort Belvoir. All medical waste is managed through the Fort Belvoir Community Hospital. RMW includes the following:

- All sharps, used and unused
- Free flowing blood or blood products including blood specimens, vials and blood in bags
- Any item saturated or dripping with blood or body fluids
- Pathological specimens
- Microbiological waste such as cultures, stocks, and vaccines

The following sections describe specific management procedures for hazardous wastes, universal wastes, and non-hazardous wastes that are commonly encountered during daily operations at Fort Belvoir.

All wastes described in this section must be approved for accumulation by DPW-ENRD. Each organization generating a waste listed in this section must submit an application to operate an accumulation area no later than 30 days after establishment. The application must include the requested details about the type and quantities of waste generated, the location of the accumulation area, and contact information for the area manager and alternate. DPW-ENRD will review all applications and issue authorization letters for each accumulation area. The letter allows operation of the accumulation area under conditions specified within the letter until a process, waste stream, or POC changes. If any changes to the waste generation process occur or a new process is planned, the site manager must submit a new application and updated waste profile and/or certified analytical sample results to DPW-ENRD. Organizations should coordinate with the Hazardous Waste Program Manager prior to implementing the process change. The authorization letter must be posted at each accumulation area. A copy of the application and an example letter are located in Appendix F.

In general, wastes will be accumulated in a SAA that is located at or near the point of generation. The wastes will be managed in accordance with the procedures in Section 5 of this plan. Some waste generating processes, such as non-routine or intermittent activities, may not require establishment of a SAA, and the waste may be turned in directly to a 90-day HWAS. The organization generating this waste must coordinate with the Hazardous Waste Program Manager regarding specific procedures for this turn in. Waste that will be turned in directly to the main 90-day HWAS (Bldg. 1495) must be labeled with the contents of the container, the type of waste, and the date the container was filled. The containers must be maintained at or near the point of generation and kept closed unless adding or removing the waste. Direct turn in containers must be transferred to the main 90-day HWAS (Bldg. 1495) within three days of the accumulation start date.

12.1 ABSORBENT MATERIALS

12.1.1 Reusable Absorbents Contaminated with Oil and Fuel

Oil and fuel (except motor gasoline [MOGAS]) contaminated absorbents are not hazardous waste if no other product has contaminated them. However, these used absorbents should be collected separately in a container labeled “ABSORBENTS CONTAMINATED WITH

OIL." When the rags are not fully saturated, they may be laundered as part of an absorbent reuse program.

Typical absorbent reuse programs consist of used absorbent materials are sent to a vendor for cleaning and then returned to the generating facility for reuse. Without the absorbent reuse program, maintenance personnel would use disposable absorbent items in daily maintenance activities. The absorbent reuse program is primarily for rags used for wiping oil from surfaces during maintenance activities.

After the items have been used, personnel place them into designated containers located in the operational area. These containers are then shipped to the absorbents vendor for laundering. After laundering, the vendor returns the material to Fort Belvoir for reuse.

Rags that have been used for materials that would make them hazardous (i.e., MOGAS, non-excluded solvents, heavy metals, etc.) must be managed as hazardous waste and cannot be included in the laundering program. Rags contaminated with hazardous wastes shall be collected and managed in a SAA in accordance with the procedures in Section 5.

12.1.2 Disposable Absorbents

Absorbents, including paper or cloth wipes, rags, filters, spill pads, and booms that are not part of the reuse program and that are contaminated with hazardous materials, including paints and other materials, must be collected and managed as a hazardous waste in a SAA in accordance with Section 5 unless sampling has been completed to document otherwise. Solvent contaminated wipes that are not sent for cleaning as described in Section 12.1.3 must also be managed as a hazardous waste in a SAA.

12.1.3 Absorbents Contaminated with Solvents

EPA and VADEQ have conditionally excluded from the definition of solid waste solvent-contaminated wipes that are cleaned and reused and have excluded from the definition of hazardous waste solvent-contaminated wipes that are disposed (as long as the wipes are not contaminated with trichloroethylene). DPW-ENRD does not currently have a program for managing wipes excluded in a manner to meet the conditional exclusion requirements. Installation organizations may accumulate and ship wastes under this exclusion only after coordination with DPW-ENRD to ensure proper management. These used absorbents must be collected separately in a container labeled "EXCLUDED SOLVENT-CONTAMINATED

WIPES." The solvent-contaminated wipes must have the solvent as the only contaminant; if the wipes have metals contamination, the exclusion does not apply.

The date wipes were first put in the container shall be marked on the container. The solvent-contaminated wipes may be accumulated by the generator for up to 180 days from the start date of accumulation for each container prior to being sent for cleaning. The wipes must be transferred to the main 90-day HWAS (Bldg. 1495) within 90 days of the accumulation start date to ensure disposal prior to the 180 day time limit. These wipes may not be turned in to DPW-ENRD without coordination prior to implementation of the program.

All containers must be non-leaking, closed containers that are able to contain free liquids. The container must be kept closed unless adding or removing waste. During accumulation, the container is considered closed when there is complete contact between the fitted lid and the rim. When the container is full, or when the solvent-contaminated wipes are no longer being accumulated, or when the container is being transported, the container must be sealed with all lids properly and securely affixed to the container and all openings tightly bound or closed sufficiently to prevent leaks and emissions.

At the point of being sent for cleaning on-site or at the point of being transported off-site for cleaning, the solvent-contaminated wipes must contain no free liquids as defined in 40 CFR 260.10. Free liquids removed from the solvent-contaminated wipes or from the container holding the wipes must be managed as a hazardous waste in accordance with the provisions in Section 5. The solvent-contaminated wipes will be sent to a laundry or dry cleaner whose discharge, if any, is regulated under sections 301 and 402 or section 307 of the Clean Water Act.

The organization generating the waste will maintain the following documentation:

- Name and address of the laundry or dry cleaner that is receiving the solvent-contaminated wipes;

- Documentation that the 180-day accumulation time limit in 40 CFR 261.4(a)(26)(ii) is being met; and

- Description of the process the generator is using to ensure the solvent contaminated wipes contain no free liquids at the point of being laundered or dry cleaned on-site or at the point of being transported off-site for laundering or dry cleaning.

12.1.4 Sweeping Compound

Sweeping compound, including oil-dry, sand, or vermiculite, saturated or contaminated with a hazardous substance, must be managed as a hazardous waste in a SAA in accordance with Section 5. Sweeping compound contaminated with MOGAS shall be managed as a hazardous waste in a SAA in accordance with the procedures in Section 5. Sweeping compound, saturated or contaminated with oil or fuel (except MOGAS), shall be managed as a non-regulated waste. If any sweeping compound is used in a 90-day HWAS, the waste shall be accumulated in a drum and managed in accordance with the requirements in Section 6.

POL-contaminated dry sweep and soil must never be thrown in a dumpster, trash can, or landfill. Dry sweep shall be collected in a container and labeled as "USED DRY SWEEP." The container must have a lid and be kept closed at all times. Contaminated dry sweep and soil shall be accumulated as non-regulated waste and turned in to the main 90-day HWAS (Bldg. 1495) when the quantity reaches the threshold specified in the authorization letter. All soil and dry sweep must be free of debris (i.e., plastic bags, buckets, cans). This material is then disposed through a DLADS contract.

12.2 ADHESIVES

Adhesives are used during maintenance activities for aircraft and ground vehicles and equipment. All expired and partially full containers of adhesives shall be turned in to the main 90-day HWAS (Bldg. 1495) for evaluation to determine if it is a hazardous waste. Adhesives that are two-part mixtures that are chemically cured or air cured prior to use are hazardous wastes due to their flashpoint. Trace amounts of unused adhesive, stir sticks, and mixing cups with adhesive residue (RCRA empty) may be thrown into the trash after drying. Empty containers may be disposed in the trash if they are dry and have no liquid remaining.

12.3 AEROSOL CONTAINERS

All aerosol containers, including empty and malfunctioning containers, must be turned in to the main 90-day HWAS (Bldg. 1495) for proper management and/or disposal on a weekly basis. Generators shall collect aerosol cans that are no longer being used in the operational area in a closed container marked "HAZARDOUS WASTE" and the contents of the container. All aerosol cans must have the tips and caps on the containers when collecting prior to turn in to prevent accidental discharge. The personnel at the main 90-day HWAS (Bldg. 1495) will make the determination of aerosol serviceability. Containers with product

may be put into the Free Issue Program. Aerosols that are not functioning or empty will be managed as hazardous waste in accordance with the requirements in Section 6.

12.4 ANTIFREEZE

Antifreeze (ethylene glycol, or the less toxic propylene glycol) shall be collected in an approved DOT/UN rated container that is labeled "USED ANTIFREEZE" and that is kept closed when not adding or removing used material. The container should have secondary containment to prevent potential spills from contaminating stormwater. Organizations should ensure that used oil is not mixed with the antifreeze in order to ensure the antifreeze can be recycled.

The used antifreeze container should be turned in to the main 90-day HWAS (bldg. 1495) for recycling when the threshold specified in the authorization letter is reached. Although antifreeze is not classified as hazardous waste, it should be handled with the same care as hazardous wastes, since spills of these substances require response under the Fort Belvoir MSP.

Antifreeze shall never be poured into a storm drain or in an oil-water separator.

12.5 ASBESTOS

Although not regulated under the hazardous waste regulations, asbestos containing material is a waste stream that may be generated as part of renovation and demolition projects being conducted on the installation. Samples of any suspected asbestos containing material (ACM) are sent to a lab for verification. If ACM is generated for disposal, the material shall be collected in accordance with VADEQ regulations.

Virginia Solid Waste Regulations (9VAC20-81-620) and 40 CFR Part 61 Subpart M contain standards for managing ACM generated by asbestos mills, by manufacturing, fabricating, and spraying operations, and Regulated Asbestos Containing Material (RACM) generated in the course of demolition and renovation of installations, structures or buildings. In order for ACM to be accepted at a disposal site, transportation and packaging requirements must be met. Generators must contact the disposal facility operator in advance to confirm site-specific acceptance and handling procedures.

Under Virginia regulations, the Department of Labor and Industry (DOLI) must be notified of any asbestos abatement project greater than ten linear or square feet, and for essentially all

demolition projects. Additional details about asbestos management are found in the Fort Belvoir Asbestos Management Plan.

12.6 BATTERIES

12.6.1 General Requirements

Fort Belvoir generates batteries from military-specific applications, such as radios, vehicles (both military and civilian), and aviation equipment, and from general operations such as computers and cell phones. New batteries must be stored in their original packaging in a cool, dry location. Batteries that have been removed from their original packaging must be must be clearly segregated from new batteries, including batteries considered used and in use.

Batteries of any type can be dangerous, especially if swollen, broken, leaking, or improperly vented. While accumulating for turn-in, they must be placed in a container. Batteries shall not be stored directly on the ground or the floor. All batteries must be stored with consideration for potential compatibility issues. Water reactive batteries shall be stored a minimum of six inches above the floor or ground.

Organizations and activities must not accumulate more batteries than are manageable. The organization and activities should consider such factors as storage space, usage rates, packaging costs, man-hours, and safety when accumulating batteries.

Containers and/or areas used for storing universal waste batteries must be labeled with the words “UNIVERSAL WASTE BATTERIES” and the date that the first battery was stored (accumulation start date). Any quantity of batteries may be stored at one time, but Fort Belvoir organizations are required to transfer the batteries to the main 90-day HWAS (Bldg. 1495) when the accumulation reaches the quantity specified in the authorization letter. Organizations must transfer batteries to the main 90-day HWAS (Bldg. 1495) within six months of the accumulation start date to ensure sufficient time remains to allow for processing for disposal.

Organizations shall not discharge lithium sulfur dioxide ($LiSO_2$) batteries on Fort Belvoir.

Nickel-cadmium (NiCd), mercury, and magnesium batteries identified as unusable shall have their connectors taped and the batteries shall be placed in an approved container. Like

batteries are containerized together. These containers must be stored as universal waste and turned in to the main 90-day HWAS (Bldg. 1495) for recycling.

Alkaline batteries may be accumulated as non-hazardous waste.

12.6.2 Small Rechargeable Batteries

Fort Belvoir uses Call2Recycle for recycling small rechargeable batteries, such as NiCd, lithium ion, and nickel metal hydride (NiMH) batteries. This nonprofit organization offers consumers and retailers in the United States and Canada simple ways to recycle old phones and rechargeable batteries. Call2Recycle drop-boxes are located in the main 90-day HWAS (Bldg. 1495).

Organizations may turn in cell phones and rechargeable batteries for recycling at the main 90-day HWAS (Bldg. 1495). All batteries must be removed from cell phones. Personnel must tape the terminals for all batteries or bag them individually. The taping/packaging must not obscure the name of the type of battery that is being recycled. These cell phones and batteries will be accumulated in pre-labeled boxes provided by the vendor. Facilities located outside of the main cantonment area of Fort Belvoir may request boxes to be shipped directly to their location. All facilities located within the main cantonment area can obtain boxes from DPW-ENRD.

12.6.3 Lead Acid Batteries

Fort Belvoir participates in a battery program that is a one-for-one exchange of new and unserviceable batteries for lead-acid batteries. A contractor supplies new batteries to organizations and exchanges any used batteries that have been collected. The unserviceable batteries are handled and transported to a battery recycler for recycling. The contractor takes the entire battery (including the electrolyte solution). If an organization is not currently linked with an exchange contractor, the organization may turn in their used lead-acid batteries to the main 90-day HWAS (Bldg. 1495) for recycling.

Any batteries with a cracked case cannot be returned to the vendor as part of this program. These batteries shall be placed in a non-leaking container and turned in to the main 90-day HWAS (Bldg. 1495) for disposal as hazardous waste.

Draining batteries before collection is not necessary. Both new and used batteries shall be stored in covered areas on pallets or in a covered spill containment pallet. These batteries do not need to be labeled as universal waste.

Lead acid batteries are managed in accordance with the requirements in 40 CFR 266.80 (adopted by reference in 9VAC20-60-266). Although the batteries are not managed as universal waste, the organization shall not accumulate the batteries for longer than six months. Organizations shall implement a method to demonstrate how long the batteries have been stored between shipments.

12.7 BATTERY FLUID

Historically, battery shops have been used for maintaining wet cell batteries. Battery shops are no longer major sources of hazardous waste generation. The operations in these areas have been scaled down significantly due to an Army-wide implementation of a battery recycling program. Wastes that are generated from these processes, such as electrolyte solutions, are usually corrosive and must be disposed as hazardous waste. Personnel shall collect these wastes in an approved DOT/UN rated container in a SAA in accordance with the procedures described in Section 5. Any personnel generating these types of wastes shall coordinate with DPW-ENRD to ensure that these wastes are properly containerized due to the corrosive nature of the waste. Any cracked batteries must also be collected in a SAA in accordance with the procedures in Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.8 BLAST MEDIA

Blast media is used prior to painting as well as to ensure complete cleaning of parts during specialized maintenance activities. Blast media is used in a blasting booth that reuses the media until it is no longer useful for blasting purposes due to having particles that are too fine to be effective. Organizations shall coordinate with the DPW/ENRD Air Emission Program Manager to ensure their equipment is in compliance with all Title V and state regulations for air quality control.

Personnel at blast facility shall use appropriate engineering controls (blast enclosures, vacuum blasters, drapes, water curtains, etc.) in order to prevent dispersion of blast media and fine particulates. Personnel at the blast facility should check the quality of the blast media that is removed by the filtration system to determine whether it can be reused. All

unusable blast media and associated debris (wipes, rags, and filters) shall be placed into the SAA collection container and managed in accordance with Section 5 of the plan. If the blast media is able to be used again, it should be added to the blast media that is supplied to the booth.

Blast media is usually contaminated with metal and paint particles, which may cause it to be hazardous waste. Filters used during blasting operations may also be hazardous due to filtration of the same metal and paint particles contained in the blast media from the air. Prior to establishing an SAA for their blast media booths an organization shall follow procedures listed in Section 4.5 in regards to waste identification requirements. The initial sample shall be taken from the first 5 gallons of debris produced during blasting and should be managed as a hazardous waste in accordance with the requirements of Section 5 of this plan. The analytical results shall be used to make the waste determination.

Organizations shall then sample their blast media at least once a year and/or when there are known changes to the process to ensure the classification hasn't changed. These analytical results along with associated profiles shall be submitted to DPW-ENRD for approval. Prior to disposal of these items, organizations shall contact DPW-ENRD to verify the waste classification. The waste is then turned in to the main 90-day HWAS (Bldg. 1495) when the container is full.

12.9 BOILER TREATMENT

Use of boiler treatment chemicals is periodically required to ensure proper operation of equipment and to remove and prevent mineral buildup. Various types of corrosive chemicals are used to remove buildup of scale during routine maintenance of these systems. The heat plant operators should coordinate with DPW-ENRD when generation of a waste results from these operations. In general, the materials are used completely during the cleaning process. However, when a waste is generated, the waste shall be collected in an approved container designed for corrosive materials and accumulated in a SAA in accordance with the procedures described in Section 5. If these wastes are not routinely generated, the containers may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.10 CORROSION PREVENTION AND REMOVAL

Corrosion is a large maintenance concern for Army vehicles and equipment. In order to minimize the costs associated with removing corrosion and replacing corroded equipment,

the Army has implemented aggressive corrosion control programs. Part of these programs involves the application of various compounds designed to prevent and remove corrosion on all types of military equipment. Waste that is generated as a result of these activities includes various corrosion preventative and preservative coatings used to prevent rust on materials and equipment as well as corrosion removing compounds. These wastes are often classified as hazardous waste and should be accumulated in an approved container at a SAA in accordance with Section 5.

12.11 CYLINDERS

Types of cylinders disposed in the past include ammonia, oxygen, nitrogen, acetylene, butane, propane, engine starting fluid (ether), and fire extinguishers. When disposing cylinders, the organization shall coordinate with DPW-ENRD regarding the types, quantities, and locations of the cylinders, preparing the necessary disposal documentation, and coordinating with DLADS for their disposal. When possible, these cylinders should be returned to the vendor for reuse or recycling rather than being disposed through DLADS.

Quick Start ether cylinders should be returned to the vendor rather than disposed as hazardous waste. Organizations are required to use this program for these cylinders because of the high cost for disposal through DLADS.

When refrigerant cylinders (non-refillable) are empty, personnel should punch a hole in each cylinder. The cylinders should be crushed and turned in for scrap metal recycling to the Recycling Center, located in Building 1089 (6010 Pohick Rd).

All cylinders containing ozone depleting substances must be turned in to the DLA Reserve in Richmond, VA in accordance with DOD turn in guidance. All containers of excess (new and used) CFCs 11, 12, 114, 500, 502; Halons 1202, 1211, 1301, 2402; and HCFC-22 must be tagged/labeled as follows for turn-in to the DLA Reserve:

1. The shipper's DoDAAC

2. The shipping activity's "in-the-clear" address with POC and phone number

3. The NSN of the cylinders containing the recovered ODS

4. Type of ODS (i.e., Halon 1301 or CFC-12)

5. The quantity of containers on the pallet or within the shipping crate

6. Packaged and labeled in compliance with DOT regulations.

12.12 ELECTRONIC WASTE

Most electronic waste can be recycled and does not require special handling while being accumulated for recycling. Non-government owned electronic waste should be turned in to the Recycling Center located at Building 1089 (6010 Pohick Rd). The Recycling Center can be contacted at 703-806-3766. All government-owned electronic waste requires demilitarization and turn in through approved government processing channels. Specific turn-in guidance will be provided based on the type of electronic waste being disposed by calling NEC at 703-805-2425.

12.13 EMPTY CONTAINERS

In general, containers are considered empty when there is less than one inch of residue on the bottom or less than three percent by weight remaining in the container. Empty containers must be kept closed at all times.

Empty containers that are to be turned in for disposal through DLADS must be properly marked with the word "EMPTY" and DOT shipping name and UN/NA ID number of previous contents. Empty containers which previously held hazardous materials bearing a DOT hazardous warning label, such as flammable liquid, corrosive, etc., must continue to bear this label unless cleaned and purged of all vapors. Containers must be completely free of holes and have all caps, lids, plugs, etc., affixed.

Empty containers that are going to be reused by the organization must be marked “EMPTY” and with the previous contents. Containers must be in good condition for reuse.

Empty containers which have contained hazardous materials or hazardous waste, other than acutely hazardous waste listed in 40 CFR 261.33(e), and which are over five gallons, will be drained to less than one inch of residue; marked “EMPTY” and with the chemical name of the original contents; and may be turned in to the main 90-day HWAS (Bldg. 1495). All containers must be closed and non-leaking. Some containers, such as small alcohol or oil containers, may be drained and disposed in a dumpster in the organizational area. All approved, RCRA-empty containers shall be bagged prior to disposal to prevent leaks of

residual material in the containers. The Hazardous Waste Program Manager will provide guidance for specific containers upon request.

12.14 FUEL

12.14.1 Motor Gasoline (MOGAS)

MOGAS is highly ignitable and must not be mixed with any other type of fuel. Contaminated MOGAS shall be stored as a hazardous waste and managed in accordance with the procedures described in Section 5 for SAAs. MOGAS must always be stored in a grounded, approved DOT/UN rated container with adequate secondary containment. If uncontaminated and reusable, the MOGAS shall be labeled as "Reusable MOGAS" and can be turned-in to DPW-ENRD for energy recovery or recycling.

12.14.2 Reusable (Unmixed) Fuel

Fuel should be reused when possible. JP-8, diesel and kerosene removed from equipment (i.e., aviation fuel samples) or contaminated with water must be collected in an approved DOT/UN rated container or aboveground storage tank. The drum or tank shall be labeled as "reusable" JP-8, diesel, or kerosene, as appropriate. Previously this was referred to as "used" or "off-spec" fuel. Fuel containers of 55 gallons or more shall also have secondary containment adequate for the size of the container. When fuel containers are approximately 75 percent full organizations should schedule a turn-in of the fuel to DPW-ENRD for energy recovery or recycling.

12.14.3 Waste (Mixed) Fuel

Fuels shall not be mixed with each other or MOGAS, oil, antifreeze, or solvents. Mixing other materials with the fuel may create a hazardous waste that cannot be recycled or reused. If the fuel becomes contaminated with a material other than water, contact the Hazardous Waste Program Manager for additional guidance on proper characterization and handling of the waste.

12.15 FUEL FILTERS

12.15.1 JP8 and Diesel Filters

Once used fuel filters are removed from a vehicle, the residual fuel shall be drained into an approved DOT/UN rated container designated for collection of contaminated fuel. The filters are not required to be drained for any set length of time, but should be drained long enough to remove the excess fuel until no free flowing liquid or seepage is present. Organization personnel must not leave the fuel filters unattended while draining. After draining, filters must be stored as non-regulated waste in an approved DOT/UN rated container and turned in to the main 90-day HWAS (Bldg. 1495) for disposal / recycling. If not reused, the container used to collect the drained fuel is managed according to the procedures described in Section 12.13.

12.15.2 MOGAS Filters

Once used MOGAS filters are removed from a vehicle, the residual MOGAS shall be drained into an approved DOT/UN rated container designated for collection of contaminated MOGAS. The filters are not required to be drained for any set length of time, but should be drained long enough to remove the excess fuel until no free flowing liquid or seepage. Organization personnel must not leave the fuel filters unattended while draining. After draining, filters must be stored as hazardous waste in an approved DOT/UN rated container in a SAA and managed in accordance with the procedures in Section 5. If not reused, the container used to collect the drained MOGAS is managed according to the procedures described in Section 12.13.

12.15.3 Terne-Plated Filters

Different handling and disposal requirements may apply to filters from buses, semi-tractors, heavy equipment, or construction equipment. Generators of filters from these equipment types must contact DPW-ENRD to obtain specific guidance in order to confirm if filters are terne-plated. Terne (a lead-tin alloy) serves as a plating on some larger filters which may require handling as hazardous waste in accordance with Section 5. Light-duty automobiles and trucks typically use non-terne-plated filters.

12.16 GREASE AND RELATED ITEMS

Grease, Automotive and Aviation (GAA) is used in many applications for vehicle and aircraft maintenance throughout Fort Belvoir. Every effort shall be made to completely use all product in containers before opening a new container or disposing open containers. Any waste GAA or other grease is stored in an approved, labeled container as specified in the authorization letter and turned in to the main 90-day HWAS (Bldg. 1495) for disposal. This waste is generally not a hazardous waste, but it is managed through DPW-ENRD due to restrictions on disposal of this material in landfills.

12.17 IMAGE INTENSIFIER TUBES

Image intensifier tubes that are part of the night vision devices must be demilitarized before they can be disposed. Fort Belvoir organizations may demilitarize the intensifier tubes at the installation in accordance with published Army guidance. Both demilitarized and cracked or damaged image intensifiers shall be collected in a SAA and disposed as hazardous waste in accordance with the procedures in Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.18 INSECT REPELLANT

Permethrin insect repellant is used in military applications and comes in either an aerosol can or an application kit consisting of a vial of permethrin with a plastic bag. Prior to collecting for disposal, organizations should coordinate with other installation organizations to ensure that they do not have a need for these items. The insect repellant is used during most training exercises and during deployments. When these items must be disposed, both the aerosol and vial forms of the insect repellant shall be managed as hazardous waste. They shall be accumulated separately in approved containers in a SAA in accordance with the procedures contained in Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.19 MEDICAL ACTIVITIES

Waste generated as a result of medical activities requires implementation of additional handling procedures. The ESOP Waste from Medical Activities (see Appendix A) contains detailed information about the required management for each of the wastes described below.

12.19.1 Regulated Medical Waste

All RMW must be managed through Fort Belvoir Community Hospital (FBCH). All RMW is incinerated by a contractor at an off-site facility. RMW generated on Fort Belvoir should be managed in accordance with local requirements.

Sharps containers are provided for collection of sharps separately from other regulated medical waste. Sharps containers shall be used for all needles and empty ampoules. Vials shall not be placed in the sharps containers.

Organizations should contact the Department of Preventative Medicine at 703-805-0059 for additional information and guidance. Information regarding quantities generated and disposed must be reported to DPW-ENRD on a monthly basis.

12.19.2 Laboratory Wastes

The medical labs generate several waste streams associated with medical testing and analysis. Some of the waste from these samples must be managed as hazardous waste. Personnel should consult with DPW-ENRD to determine specific management practices for these waste streams.

The most common hazardous waste generated from these analyses is ThinPrep® waste. The ThinPrep® Pap Test is a method for the automated preparation of microscope slides for cervical cell samples. MEDCOM has replaced the conventional Pap smear for cervical cancer screening with this liquid-based technology. Two waste streams generated with the ThinPrep process: excess solution in the sample vials and the waste that comes out of the ThinPrep processor. Both waste streams need to be collected and managed as a D001 ignitable hazardous waste in a SAA in accordance with Section 5.

12.19.3 Pharmaceutical Waste

Some waste pharmaceuticals must be managed as hazardous waste. FBCH has a contract for disposal of all waste pharmaceuticals, including the ones that must be managed as hazardous waste. The contract assessed the formulary and provided a list of regulated items that should be segregated. General hazardous waste items are marked on the formulary with the waste management codes of BKC and SP (SPC-Acids, SPC-Bases, SPLP, SP). BKC wastes must be placed in designated SAA black bins in the clinic using these pharmaceuticals and managed in accordance with the requirements in Section 5, with the exception that the waste

must be transferred to the FBCH 90-day HWAS and shipped through the FBCH contractor rather than going through the main 90-day HWAS (Bldg. 1495) when the accumulation threshold is reached. SP wastes are immediately sent to the pharmacy for accumulation and management. Appendix K contains a flowchart with procedures for SAA management of pharmaceutical wastes.

12.19.3.1 P-Listed Pharmaceuticals

Waste pharmaceuticals that have a P-list waste code are considered to be acutely hazardous. These wastes are indicated on the formulary by the waste management code PBKC. The accumulation threshold for acutely hazardous wastes is 1-quart in a SAA. The containers that held the acutely hazardous waste as well as any waste pharmaceuticals must both be managed as hazardous waste.

The EPA has issued guidance stating that the residue in the containers is what is regulated and not the empty containers themselves. When determining generator status (and presumably the quantity of waste in a SAA), the EPA guidance allows generators to determine the quantity of residue remaining in the container in order to calculate meeting the 1 kg/month large quantity generator threshold instead of counting the entire container weight. Appendix B contains a copy of the EPA guidance memo. However, at this point VADEQ has not incorporated this guidance into their hazardous waste management program. The 1-quart threshold applies to the entire container and not the amount of residue remaining in the containers generated by the P-listed waste.

12.19.3.2 Controlled Substances

FBCH utilizes cactus sinks for disposal of medications containing controlled substances. These items are marked on the formulary with the waste management code DEA. A cactus sink will be installed in each medication room that has a Pyxis med-station or anesthesia cart containing narcotics. Each cartridge (liquid or solid) will be marked with its location, the installation date, and the removal date. The cartridges are disposed through the hospital contractor. Prior to shipment, the cactus sink cartridge is properly sealed, placed in the provided plastic bag, placed in a box, and turned in to the hospital mail room for shipment. Every time a medication is wasted in a cactus sink, it will be documented in the Pyxis system.

12.19.4 Chemotherapy Wastes

Chemotherapy wastes are collected separately from other wastes in designated containers. Yellow containers are used for wastes with only trace amounts of chemo present, including containers less than three percent full, empty containers, and gowns or gloves with small amounts of contamination. Black containers are used for bulk chemo waste, including containers greater than three percent full, cut tablets, pills, and gowns or gloves drenched with chemo.

12.19.5 IV Bags and Vials

IV bags and vials containing medication (full or partially full) with one of the waste management codes in the sections above shall be managed in accordance with the requirements listed above. Medicated IV bags should be placed in a one-gallon, zip-top bag prior to placing in the proper bin.

Plain, non-medicated IV bag fluids may be emptied in the drain, and the bag may be placed in a regular trash container. Empty vials and non-medicated vials (i.e., KCl, water) should be placed in regular trash.

12.20 MERCURY-CONTAINING LAMPS

Fluorescent and high intensity discharge (HID) lamps (bulbs) contain low levels of mercury, which fail the toxicity characteristic leaching procedure (TCLP) analysis for an item to be disposed in the municipal landfill. Used lamps are to be collected in a box, marked "UNIVERSAL WASTE – LAMPS", and marked with the date the first lamp was placed in the box. The box must be kept closed at all times except when adding or removing bulbs. All fluorescent and HID lamps, including mercury vapor, metal halide, and high-pressure sodium lamps, must be managed as universal waste. Organizations must transfer collected lamps to the main 90-day HWAS (Bldg. 1495) when the threshold specified in the authorization letter is reached or within six months of the accumulation start date to ensure sufficient time remains to allow for processing for disposal.

All Broken Fluorescent and high intensity discharge (HID) lamps (bulbs) must be doubled-bagged in plastic bags, put into an UN/DOT rated container, marked "HAZARDOUS WASTE – BROKEN LAMPS" and managed as hazardous waste in accordance with Section 5. The collected waste shall be turned in to the main 90-day HWAS (Bldg. 1495) for proper management and disposal. Vacuums/HEPA vacuums shall not be used to clean bulb spill

residue because the mercury vapor may be released when heated during subsequent uses of the equipment.

DPW-ENRD is implementing a bulb crushing program that is operated in accordance with VADEQ guidance (see Appendix B). The equipment has emissions control devices integral to operation that prevents exposure of processing employees to mercury. The crushed bulbs will be placed in a UN/DOT rated container and be appropriately labeled depending on classification. The container shall be marked with the date the first lamp was crushed and placed in the container and the date when container was filled. The container shall be kept closed at all times except when adding or removing bulbs. The crushed bulbs will then be sent for recycling and/or proper disposal. An ESOP covering these operations is located in Appendix A.

12.21 MERCURY-CONTAINING EQUIPMENT

Mercury-containing equipment means a device or part of a device (including thermostats, but excluding batteries and lamps) that contains elemental mercury integral to its function. Thermostats and thermometers that contain mercury are the most common types of this equipment found on Fort Belvoir.

Organizations manage these items as a universal waste when they are no longer usable. The items are stored in a closed container that is labeled "UNIVERSAL WASTE - MERCURY CONTAINING EQUIPMENT." The date that the items were first placed in the container is also indicated. Because the thermostats and thermometers can be easily broken, care must be taken when packaging this waste. Organizations shall obtain vermiculite to package these items in a manner to prevent accidental breakage. When the container is full, the organization shall turn in the waste to the main 90-day HWAS (Bldg. 1495) for disposal through the DLADS contractor. Organizations must transfer the equipment to the main 90-day HWAS (Bldg. 1495) within six months of the accumulation start date to ensure sufficient time remains to allow for processing for disposal.

12.22 MILITARY MUNITIONS

Fort Belvoir does not have any currently operating ranges other than a shooting trailer in the 300 area. The trailer is equipped with rubber blocks at the back of the range that accumulates expended ammunition. Periodically, a contractor will remove the blocks as part of the facility maintenance requirements. When the blocks are removed, they will be cut into pieces and accumulated in drums. The drums shall be labeled with the words Hazardous Waste, a

description of the contents, and the accumulation start date. The drums must be transferred to either the main 90-day HWAS (Bldg. 1495) or transported off the installation within three days of the accumulation start date. If removed directly from the generating location, DPW-ENRD must sign all manifests for these wastes prior to shipment off the installation.

All other training activities involving military munitions are conducted at other military installations, primarily Fort A.P. Hill. Military munitions must be handled and stored responsibly to minimize the potential for harm to human health and the environment. All military munitions shall be stored in accordance with DOD 6055.9-STD, which establishes explosives safety standards.

Waste military munitions (WMM) must be managed in accordance with the Munitions Rule (40 CFR 266 Subpart M / adopted by reference in 9VAC20-60-266), the Munitions Rule Implementation Policy (MRIP), and any applicable federal, state, or local regulations. In the event such regulations conflict with DOD 6055.9-STD, Fort Belvoir will follow DOD 6055.9-STD for purposes of explosive safety until the conflict is resolved.

Military munitions and related items must be certified as inert prior to disposal. This certification must be performed by qualified personnel as described in the MRIP. The organization generating waste is responsible for ensuring that the items are certified inert prior to being turned in. These items should not be accumulated in organization areas; all military munitions should be turned in to the issuing ASP for proper management.

12.23 NUCLEAR, BIOLOGICAL, CHEMICAL (NBC) ITEMS

Some NBC items require disposal as a hazardous waste when they can no longer be used for their intended purpose. The waste determination should be made by DPW-ENRD personnel prior to accumulation in the organization area. Items that are generally classified as hazardous waste include protective mask filters, M72A2 chemical agent ID kits, M256A1 chemical agent detector kits, M229 chemical agent alarm refill kit, M258A1 decontamination kit, DS2 decon solution, and STB. Because NBC kits have both hazardous and non-hazardous pieces, organizations shall coordinate with DPW-ENRD to determine specific guidelines for segregation of the pieces. Any NBC items that are not hazardous waste shall be disposed in accordance with technical specifications. If items classified as hazardous waste are commonly generated, the organization shall establish a SAA in the organization's NBC room and manage the waste in accordance with Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.24 PAINT RELATED ITEMS

12.24.1 Latex Paint

Latex paint that has expired or is not needed is stored in an approved, labeled container and turned in to the main 90-day HWAS (Bldg. 1495) for reissue or disposal through DLADS. Latex paint is generally not a hazardous waste. Paint cans from latex paint may be recycled or placed in a regular dumpster if not recyclable after all of the paint has been used and the inside of the container is dry.

12.24.2 Hazardous Waste Paint and Thinner

Unusable enamel, Chemical Agent Resistant Coating (CARC) paint, and leftover paint thinner should be assessed for potential shelf life extension in accordance with DLA guidance. Any material that cannot have its shelf life extended must be managed as a hazardous waste in a SAA in accordance with the procedures described in Section 5. CARC paints are particularly hazardous and may degrade while in the can and become unusable. For example, CARC Component "B" should be clear to pale yellow. If it thickens and appears crystalline in consistency, organizational personnel should reseal it and manage it in as hazardous waste in a SAA or turn in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.24.3 Paint Containers

In general, all containers of unusable or outdated paint and partially used cans of paint must be turned in to the main 90-day HWAS (Bldg. 1495). Technicians will determine if the paint can be added to the free issue inventory or if it needs to be disposed as hazardous waste.

Paint cans shall be managed in a manner to meet the RCRA definition of empty as specified in 40 CFR 261.7(b)(1) (adopted by reference in 9VAC20-60-261). Any paint in cans shall be removed using practices commonly employed for emptying the containers, primarily pouring. Also, the cans should have less than three percent by weight of the container capacity of paint remaining.

12.24.4 Paint Solids

Paint solids are generated at most paint booths. These solids include filters generated at paint booths, plastic sheeting that catches overspray in the paint booths, dried paint scraped from

surfaces, and any other items that contain dried paint. Any solids determined to be hazardous waste shall be managed in a SAA in accordance with the guidelines in Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

Paint solids that may contain lead-based paint (LBP) may also be generated during renovation and demolition projects. These wastes shall be collected in a drum and managed in accordance with the requirements in Section 5. If the contract requires the renovation/demolition contractor to dispose the waste paint solids, the manifests for all shipments of waste must be signed by DPW-ENRD.

12.25 PARTS WASHER SOLVENT AND FILTERS

Parts washers are used in maintenance operations for ground vehicles, aircraft, and ground and aviation equipment on the installation. Solvent wastes have been reduced due to implementation of multiple waste minimization initiatives. DPW-ENRD has recently established an installation-wide contract for leased parts washers. Maintenance of all parts washers is performed as part of the lease contract. Personnel must prevent contamination of parts washer solvent by prohibited materials, such as paints and other solvents (i.e., aerosol spray cleaners). Contamination of the solvent in parts washers will reduce the solvent life and generate greater quantities of hazardous waste. All solvent removed from parts washers is distilled by the vendor and reused for parts washing. The parts washer lease also contains a provision for aqueous machines that generate a non-hazardous waste solvent and used filters. These parts washers are used in all areas where allowed by technical manuals for the specific equipment being maintained.

The parts washer contractor is responsible for changing all solvent and is responsible for ensuring its proper management after removal from the machines. Organizations with parts washers do not generally have a SAA established for used parts washer solvent. Any waste filters and solvent are shipped on a disposal manifest as part of the service contract.

12.26 PESTICIDES, HERBICIDES, AND RODENTICIDES

Pesticide use is regulated under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). Because the use and application of pesticides is strongly regulated, Fort Belvoir has a contract that covers most pesticide applications. Contact the pest management office at 703-806-4051 for additional information or for obtaining pest management services. Organizations are not permitted to have large quantities of pesticides, herbicides,

insecticides, and rodenticides stored in their areas. Any waste generated by contractors shall be properly containerized and manifested when it leaves the installation. A DPW-ENRD representative must sign all manifests of contractor-generated waste prior to the waste being shipped off-site.

Some pesticides may be hazardous due to their toxicity. DPW-ENRD provides additional guidance on proper management of these items as they are generated on a case-by-case basis. Aerosol pesticides, herbicides, and rodenticides shall be managed as described in the aerosol section above.

Pesticides that meet the definition of hazardous waste may be managed as universal waste if they are recalled pesticides or stocks of unused pesticides collected as part of a waste pesticide collection program, as described in 40 CFR 273.3 (adopted by reference in 9VAC20-60-273). DPW-ENRD will make a determination of the management method on a case-by-case basis. Any waste that is generated by organizations shall be collected in an approved container in a SAA managed in accordance with Section 5 unless otherwise directed by DPW-ENRD. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.27 PHOTO PROCESSING CHEMICALS

Fort Belvoir operations involving photographs have transitioned to digital photography. Using digital imagery has significantly decreased the generation and disposal of this waste stream. However, some activities may generate these chemicals to meet mission-specific requirements.

Some photographic waste solutions are hazardous due to corrosivity. Other photographic waste solutions are not classified as hazardous waste due to the precious metal exemption. In the event that hazardous waste photographic solutions are generated, these wastes will be stored in approved plastic containers in a SAA managed in accordance with the procedures described in Section 5. Recyclable materials from which precious metals (i.e., silver) are recovered are exempt from full hazardous waste regulation; however these materials are subject to administrative requirements such as using manifests and complying with LDR notification requirements. DPW-ENRD will provide further guidance for organizations that generated this type of waste.

12.28 POLYCHLORINATED BIPHENYLS

Fort Belvoir is not aware of any PCB items still in use on the installation. Although all known PCB items have been disposed, the potential exists for additional items to be discovered due to the large area covered by the installation. If any items containing PCBs are discovered, the items will be managed in accordance with TSCA and the guidelines of this section.

PCB-contaminated (more than 50 ppm) oils, solid waste, soils, and rags contaminated with fluids require disposal as TSCA regulated waste. All materials commonly manufactured with PCBs in the past are still considered to contain PCBs unless testing is feasible, or unless the equipment or item is marked by the manufacturer to indicate "no PCBs" or "non-PCB." The main source of PCBs is electrical transformers. When transformers are taken out of service, or when other suspected PCB-containing items are encountered, a screening test is performed to determine if the items are contaminated with more than 50 ppm PCBs. Organizations should contact DPW-ENRD to arrange for the testing.

PCB-contaminated wastes shall be turned into the main 90-day HWAS (Bldg. 1495) for storage and disposal. Items that are known to contain above 50 ppm PCB are manifested and removed from Fort Belvoir by a DLADS service contractor. PCBs are regulated under TSCA, and many PCB management requirements differ from hazardous waste management requirements. TSCA (40 CFR 700-789) should be consulted to ensure compliance with management requirements.

A DLADS contractor accepts suspected or known transformers for disposal as either PCB contaminated (contains 50 to 500 ppm PCBs) or PCB transformers (contains 500 ppm or greater PCBs). Light ballasts or capacitors manufactured prior to 1978 are also generally suspected to be PCB-contaminated, and must be disposed through DLADS. Because it is neither practical nor cost effective to perform testing on these items, all items not permanently stamped or marked as "non-PCB" shall also be disposed of as PCB-contaminated through DLADS as a best management practice.

All PCB transformers or other PCB wastes will be stored in a secure area, with adequate secondary containment, and with proper markings (a PCB label is used when required). Documentation is maintained on all PCB items in storage. PCB wastes must be in DOT or UN containers. Transformers, which are generally too large for overpacks, must be sealed with no leaks. PCB labels must be placed on all PCB containers as well as the applicable DOT shipping label (Class 9 Miscellaneous, as required by 49 CFR 170-189). All PCB

wastes will be disposed through DLADS using a standard DD Form 1348-1A, *Issue Release/Receipt Document* (Appendix O).

12.29 RADIOACTIVE WASTE

Accumulation and disposal of any radioactive items must be coordinated through the Fort Belvoir Safety Office at 703-704-0649. The Safety Office coordinates with Rock Island Arsenal for pick up and disposal.

12.30 RATION HEATERS

Organizations should use/activate flameless ration heaters (FRH) with food during training in the field. The used FRH can then be placed with regular trash. Unactivated FRH can also be placed in regular trash containers as long as they are placed individually into the trash receptacles. This practice is allowed under the household hazardous waste exemption as specified in the EPA guidance memo located in Appendix B. Consolidating and discarding multiple FRH is not allowed in regular waste containers; these must be managed as hazardous waste in a SAA in accordance with the procedures described in Section 5.

Solid fuel used for cooking food, boiling water, or heating meals ready-to-eat (MREs), such as trioxane fuel bars, are lit and burn for several minutes to heat items in the field. These fuel bars are not as commonly used as the flameless heaters due to safety concerns. Organizations should completely use the fuel bars for their intended purpose to help prevent generation of this waste stream. Any solid fuel sources such as this shall be accumulated in a SAA in an approved container as described in Section 5. If these wastes are not regularly generated, they may be turned in directly to the main 90-day HWAS (Bldg. 1495) after coordination with the Hazardous Waste Program Manager.

12.31 RESEARCH LABORATORY WASTE

Fort Belvoir has several tenants that conduct research, test, development, and evaluation (RTDE) activities for equipment for military-specific applications. These activities generate a wide variety of waste streams, some of which must be managed as hazardous waste. Personnel generating these laboratory wastes shall segregate the wastes based on type prior to turn in to the main 90-day HWAS (Bldg. 1495). Prior to turn in, personnel must ensure that no in-vessel reactions are present and neutralize wastes as appropriate. All waste shall be accumulated in a SAA in accordance with the procedures in Section 5. After turn in, the

hazardous waste technicians at the main 90-day HWAS (Bldg. 1495) will lab pack the containers prior to disposal through the DLADS contractor.

12.32 SCRAP ITEMS

12.32.1 Scrap Metal

All scrap metal should be accumulated in designated areas within the organization's operational areas. Any type of scrap metal should be turned in to the Recycling Center (Building 1089, 6010 Pohick Rd). Lead weights may also be recycled as a scrap metal. Scrap metal should be segregated by type according to guidelines provided by the Qualified Recycling Program (QRP) Manager. Organizations should call the Recycling Center for turn in of any collected scrap metal at 703-806-3766.

12.32.2 Items Requiring Special Handling

The following items cannot be processed as scrap and must be turned in on a separate DD Form 1348-1 A as hazardous or regulated waste since they may contain or be contaminated with lead deposits, PCBs, or asbestos:

- Fuel tanks
- Asbestos brake shoes, gaskets and clutch plates
- Undrained hydraulic rams, gas cylinders, and shock absorbers

12.33 SOLDER

Lead and silver solder are used in electronics and avionics shops on the installation to properly maintain and repair this equipment. Waste solder is collected at each location and turned in for disposal through DLADS. The containers used for collecting this material shall be managed in accordance with the requirements in Section 5 for SAA management. Open cups are not allowed for waste accumulation; all containers must remain closed unless actively adding or removing waste. Personnel should segregate all wiring and other components from the solder at the point of generation to minimize the quantity of waste disposed.

12.34 TONER

Toner is generated during printing operations across the installation. Many of the toner cartridges that are used in office-type printers are able to be recycled. When possible, the toner cartridges should be placed in the original boxes. Any used toner cartridges may be turned in to the Recycling Center (6010 Pohick Rd, Building 1089).

12.35 USED OIL

Organizations collect used oil (motor oil, hydraulic fluid, brake fluid, and transmission fluid) for recycling through a contract administered by the baseops contractor. Contact the contractor at 703-806-3109 for a work request to remove used oil for recycling. The used oil will be pumped and transferred to the UST located at Bldg. 1124. The disposal contractor (Safety-Kleen) will pick up all bulk used oil UST/AST locations. Containers of used oil must be marked "USED OIL" and a sign posted stating "Used Oil Only."

All containers must be closed in order to meet VADEQ used oil requirements. Any container equipped with a funnel must have a method to keep the funnel closed that would prevent a release in the event that the container falls over.

All used oil containers that are 55-gallons or larger are subject to inspection requirements contained in the SPCC Plan. A copy of the inspection checklist is included in Appendix H.

Used cooking oil is accumulated separately from used petroleum oil. Used cooking oil accumulated in containers 55-gallons or larger is subject to the requirements of the SPCC Plan. The containers must be compatible with the material stored, in good condition, and clearly labeled with the contents of the containers. The containers must be kept closed unless actively adding or removing used cooking oil and equipped with a method of secondary containment that is able to hold the entire contents of the largest container. Contact the Recycling Center to coordinate for pick-up of accumulated cooking oil.

12.36 USED OIL FILTERS

Organizations that have a filter crusher shall drain, crush and turn-in for recycling any metal filters that are generated. Organizations shall remove free-flowing oil through gravity and hot-drain into proper used oil container managed in accordance with Section 12.35. The organization shall then crush filters in a suitable machine so that the scrap metal can be

recycled through the Recycling Center, and the used oil captured and transferred into the used oil accumulation container or tank (labeled “used oil”).

Prior to turn-in to the Recycling Center as scrap metal, personnel shall check the bottom of the collection container for free liquid and pump out or absorb any oil that has accumulated to avoid a leak or spill. If possible, organizations shall line collection containers with absorbent pads to absorb residual oil from filters once crushed and awaiting turn-in to the Recycling Center.

Any containers of used filters that have not been crushed must be marked with the words “Used Oil Filters.” All containers must be closed except when adding or removing filters. Turn in any filters that will not be crushed to the main 90-day HWAS (Bldg. 1495) for disposal.

Non-metal oil filters must be drained of free flowing liquid. Individual non-metal oil filters may be disposed in regular trash after all oil is removed. Oil drained must be collected in appropriate containers that are managed in accordance with procedures listed in Section 12.35.

12.37 WASHRACK SAND/SOIL

In the event that an organization suspects that washrack soil or sand residue contains hazardous materials, the organization should contact DPW-ENRD and request an inspection of the soil. DPW-ENRD will provide guidance for the disposal on a case-by-case basis. Organizations should never allow more than one foot of soil/residue to accumulate in the traps. This precaution will prevent large volumes of the soil/residue from possibly becoming contaminated.

12.38 WEAPONS CLEANING MATERIALS

Used weapons cleaning materials include bore patches, Q-tips, and pipe cleaners used to clean weapons. Personnel shall only use a PRF-680 Type II solvent to clean weapons. This solvent is used in the leased parts washers. Used cleaning materials shall be collected by the organization armorer and stored as hazardous waste in an approved container in a SAA managed in accordance with the procedures described in Section 5.

12.39 X-RAY RINSE WATER

All x-ray operations at the Belvoir Community Hospital and Logan Dental Clinic are digital. X-ray rinse water is no longer a regularly generated waste. In the event that a mission-specific operation uses an x-ray, any water that is generated as a result of the x-ray developing process will be collected for disposal as hazardous waste due to silver contamination. This waste shall be managed in a SAA in accordance with the procedures in Section 5.

13.1 GENERAL

A spill is the accidental spilling, leaking, pumping, emitting, discharging, emptying or dumping of hazardous wastes or materials into or on any land or water. All spills are serious incidents as even a small spill can contaminate millions of gallons of drinking water. Every soldier, civilian, and contractor is responsible for proper handling of hazardous materials and wastes, and cleaning any minor spills. The pouring of any hazardous material on the ground or in a storm drain is illegal and punishable under civilian laws and the Uniform Code of Military Justice (UCMJ).

13.2 SPILL RESPONSE AND EMERGENCY PROCEDURES

Any person discovering a spill or release of oil or hazardous substances must assess the situation to determine if it meets one of the following reporting criteria:

1. 5 gallons or more of fuel or oil

2. Spill covering an area of 10 square feet or more

3. Spill of any size that enters waterways, storm drains, sewer system or surface waters

4. Spill of any substance which may pose a threat to public health or welfare

If any of the above reporting criteria are met, personnel must immediately contact the Fort Belvoir Fire Department at 703-781-1800. After notification to the Fire Department, personnel should notify DPW-ENRD (Environmental Branch Chief at 703-806-0020 or Hazardous Waste Program Manager at 703-806-2119). The Fire Department has a call out roster with all DPW-ENRD contact information for assistance after hours.

Personnel shall follow these steps for spill response:

1. DO NOT wash or dilute the pollutant with water

2. CONTAIN the spill while waiting for assistance - *only if you feel confident doing this, and you have had training*

    a. Prevent pollutant from entering waterways or sewer systems

b. Apply absorbents (soil, sawdust, sweeping compound, etc.)

c. Construct dams, berms, dikes

3. IF the spill is contained, and less than 5 gallons or smaller than 10 square feet, you do not need to report the spill. YOU MUST:

a. Clean up the spill with rags or absorbent materials

b. Place materials used to clean in a garbage bag

c. Seal the bag

d. Turn in used materials to the Fort Belvoir Hazardous Waste Program at Building 1495 by calling 703-806-4537 or 703-806-2119.

The employee or supervisor reporting a spill should provide the following information to the fullest extent known:

1. Location, time, and type of incident (spill, fire, injury, etc.)

2. Name and quantity of spilled material, and the rate of release (an estimate is acceptable if not known)

3. Provide a SDS for spilled material if readily available; can be faxed to the Fire and Emergency Services Division (if it can be done quickly) or provided at the time of their arrival to the scene

4. Direction of the spill, vapor, or smoke release

5. Fire and/or explosion possibility

6. Coverage area of spill, and intensity of any fire or explosion (if applicable)

7. The extent of injuries (if any)

When the Fire and Emergency Services Division has determined that there is no longer a threat to life or property, DPW-ENRD will serve as the on-scene coordinator and will determine if the spill is reportable to others as required by the MSP. Cleanup assistance and

remediation of the site (if necessary) will be provided by the installation maintenance support contractor for spills up to 250 gallons. DPW-ENRD will notify an external response contractor for spills larger than 250 gallons. The organization responsible for the spill will be billed later for any cleanup or remediation expenses.

The organization responsible for the spill or release must complete a written spill report and turn it in to DPW-ENRD within five days of the incident.

13.3 SPILL CONTINGENCY PLANS

13.3.1 Installation Plans

All personnel who manage or supervise hazardous waste activities and all organization emergency response coordinators should be familiar with the Fort Belvoir SPCC Plan and MSP. These plans contain detailed information about how to prevent and respond to spills for multiple types of materials and wastes. These plans are maintained by DPW-ENRD and are available for review by all installation personnel.

13.3.2 Site Specific Spill Plan

Each organization generating or storing hazardous waste shall prepare and possess a hard copy of the organization's Site Specific Spill Plan (SSSP) for waste handling and storage areas. The plan shall be designed to minimize hazards to human health and the environment from fires, explosions, and any unplanned releases of hazardous constituents to the air, soil, or surface water. The provisions of the plan shall be carried out whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. The plan must contain the following information:

- List of points of contact, and phone numbers of personnel authorized to take part in any response actions.

- Arrangements with local authorities. For SSSP purposes, contacting the Fire Department at 703-781-1800 satisfies this requirement at the organizational level.

- Immediate actions that trained personnel will take upon finding any type of hazardous substance/oil spill, or fire hazard. This will include actions to give the alarm by either voice command or mechanical device. These actions will be strictly defensive in nature and commensurate with the personal protective equipment available at the time

of the incident. Cleanup actions will be conducted only at the direction and under the supervision of the Fire Department or DPW-ENRD.

- Equipment required to conduct defensive actions for the materials stored. This information is found in the personal protection information section of the chemical specific SDS.

- The plan must also specifically address provisions for any hazardous material storage, SAA, 90-Day HWAS, and oil containers 55-gallons or larger.

- Evacuation and Staging Routes. Evacuation routes may be the same used in the fire escape plan as long as access is not impinged by the release. A staging area is defined as a pre-designated area out of the potential area of danger where personnel will assemble in the event of an emergency. The SSSP must state a primary and alternate staging area in the event of an emergency.

All organization personnel who manage or handle hazardous wastes shall read and understand all procedures contained in the SSSP, and shall receive initial training and annual update training in executing the procedures as they pertain to their positions. This training shall be documented and the training records retained by the organization.

A copy of the SSSP will be maintained at all organization waste generation, management, and storage areas. The plan will be reviewed annually and amended whenever:

a. The plan fails in an emergency.

b. The facility changes design, construction, operation, location, procedures, or other circumstances that require changes in established emergency response procedures.

c. The organization emergency coordinator and/or emergency equipment changes.

13.3.3 Main 90-Day HWAS Contingency Plan

The main 90-day HWAS (Bldg. 1495) Contingency Plan covers activities in Building 1495.

13.3.4 Permitted Storage Facility (Bldg. 1490) Contingency Plan

The Contingency Plan covers activities in Building1490 as required by 40 CFR 264.51 and the RCRA Storage Permit issued by the Commonwealth of Virginia. The contingency plan and the MSP provide full response actions for any unplanned, sudden or non-sudden release of hazardous waste and/or a fire or explosion that may occur at Building1490. Both the Building1490 Contingency Plan and the MSP are designed to minimize the hazards to human health or the environment from such an incident. The Hazardous Waste Program Manager maintains a copy of these plans.

13.4 SPILL CONTINGENCY TRAINING

At least once per year, all organizations (including contractors) must provide initial or update training for all employees who handle or use hazardous materials, hazardous waste, and/or oil/fuel of any type in quantities equal to or greater than one quart at a time (this requirement does not include refueling a ground vehicle at a fuel pump). New employees must not be allowed to perform any operations involving hazardous materials, hazardous waste, or oil/fuel without direct supervision until they receive training.

13.5 SPILL CONTINGENCY SUPPLIES

All organizations must maintain adequate stocks of spill control supplies and equipment to handle spills. Spill contingency supplies are available through the supply system and from commercial catalogs. These supplies include dry sweep and absorbent pads and booms at a minimum. Additional details about requirements for spill contingency supplies are included in the MSP.

13.6 SPILL REPORTING

In addition to the reporting that is required for implementation of the contingency plan, spills of hazardous waste that exceed the reportable quantity must be reported to appropriate agencies, including the National Response Center (NRC), EPA, and VADEQ. The MSP and the SPCC Plan discuss the details of the required notifications when a release occurs. DPW-ENRD is responsible for reporting to the State and the NRC in the event of a spill. Any reports to these agencies must be completed by DPW-ENRD.

APPENDIX A

Environmental Standard Operating Procedures

APPENDIX B

US Environmental Protection Agency and Virginia Department of Environmental Quality Letters and Guidance

APPENDIX C

Waste Generation Locations and Data

APPENDIX D

Training Documentation

APPENDIX E

Waste Management Job Appointment

APPENDIX F

Accumulation Area Authorization Letter

APPENDIX G

Generator's Hazardous Material and Waste Turn-In Request

APPENDIX H

Inspection Forms

APPENDIX I

Inventory Forms

APPENDIX J

Hazardous Waste Identification and Classification Flowcharts

APPENDIX K

Satellite Accumulation Area Management Flowcharts

APPENDIX L

Hazardous Material / Waste Compatibility Chart

APPENDIX M

90-Day Hazardous Waste Accumulation Site Management Flowchart

APPENDIX N

49 CFR 172.400 Excerpt

APPENDIX O

DD Form 1348-1A, *Issue Release/Receipt Document*

APPENDIX P

Hazardous Waste Profile

APPENDIX Q

Container Labels

APPENDIX R

Waste Minimization Certification Statement

APPENDIX S

Hazardous Material Management Program Templates