UNITED STATES MARINE CORPS
MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION
MARINE CORPS BASE QUANTICO
3250 CATLIN AVENUE
QUANTICO VIRGINIA 22134 5001

MCINCR-MCBQO 5090.7A
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JAN 2 6 2021

MARINE CORPS INSTALLATIONS NATIONAL CAPITAL REGION-MARINE CORPS BASE QUANTICO ORDER 5090.7A

From: Commander, Marine Corps Installations National Capital Region-Marine Corps Base Quantico
To: Distribution List

Subj: MANAGING HAZARDOUS WASTE

Ref: (a) MCO P5090.2A w/CH 3
(b) MCBO 5090.2D
(c) MCINCR-MCBQ Environmental Compliance and Protection Standard Operating Procedures

Encl: (1) MCINCR-MCBQ Hazardous Waste Management Plan

1. Situation. In accordance with reference (a) Marine Corps Installations National Capital Region-Marine Corps Base Quantico (MCINCR-MCBQ) employs a proactive Hazardous Waste Management Plan (HWMP) to protect the quality of the environment through strict compliance and conformance with all applicable environmental regulations and policies. MCINCR-MCBQ strives to protect and preserve its watersheds, wetlands, natural landscapes, soils, forest, fish and wildlife, and other natural resources as vital Marine Corps assets. The HWMP at enclosure (1) provides operational guidance necessary to achieve this objective while working with hazardous wastes.

2. Cancellation. MCINCR-MCBQO 5090.7

3. Mission. This order provides operational guidance and management requirements for the Hazardous Waste Media Program within the Base Environmental Management System (EMS). This order has undergone significant revisions and should be reviewed in its entirety.

4. Execution

a. Commander's Intent. The Commander's intent is fully defined in references (b) and (c) and the Base Commander's Environmental Policy Statement, which applies to all MCINCR-MCBQ staff sections, subordinate commands, other United States Marine Corps organizations aboard MCINCR-MCBQ, as well as tenant commands of the Base (collectively referred to herein as "activities"), unless otherwise exempted in reference (b). In addition to this order, enclosure (1)

provides additional statutory, regulatory, and Marine Corps guidance for managing hazardous substances on board MCINCR-MCBQ.

b. Concept of Operations. The HWMP at enclosure (1) accomplishes the following:

(1) Establishes procedures to achieve and maintain compliance with the Resource Conservation and Recovery Act (RCRA).

(2) Establishes procedures to achieve and maintain compliance with RCRA implementing regulations found in Title 40, Code of Federal Regulation (CFR), parts 260-299 Protection of Environment.

(3) Establishes procedures to achieve and maintain regulatory compliance with Title 49 CFR, Chapter 1.

(4) Establishes procedures to achieve and maintain regulatory compliance with Virginia Administrative Code, 9 VAC 20-60-12 et seq.

(5) Publishes an operational plan that meets requirements established within the HWMP.

5. Administration and Logistics. Forward recommendations concerning the contents of this order to MCINCR-MCBQ Commanding Officer via the Natural Resources and Environmental Affairs (NREA) Branch, Hazardous Waste Program Manager.

6. Command and Signal

a. Command. This order is applicable to all MCINCR-MCBQ Activities.

b. Signal. This order is effective the date signed.

W. C. BENTLEY III

Distribution: A

HAZARDOUS WASTE MANAGEMENT PLAN
FINAL

Marine Corps Installations National Capital Region – Marine Corps Base Quantico (MCINCR-MCBQ)

Natural Resources & Environmental Affairs (NREA)
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Quantico, VA 22134-5001

Contract Number: N40080-19-D-0319
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July 2020

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Acronyms and Abbreviations

°F ***Degrees Fahrenheit***

ASD ***Accumulation Start Date***

CECOS ***Civil Engineer Corps Officers School***

CETEP ***Comprehensive Environmental Training and Education Program CFR Code of Federal Regulations***

DEA ***Drug Enforcement Administration***

DOT ***Department of Transportation***

EC ***Environmental Coordinator***

ECPSOP ***Environmental Compliance and Protection Standard Operating Procedures EEC Environmental Emergency Coordinator***

EMS ***Emergency Medical System***

EOD ***Explosive Ordnance Disposal***

EPA ***Environmental Protection Agency***

ERC ***Environmental Resources Center***

ESOP ***Environmental Standard Operating Procedures***

HM ***Hazardous Material***

HW ***Hazardous Waste***

HWMP ***Hazardous Waste Management Plan***

HDPE ***High-Density Polyethylene***

ID ***Identification***

IR ***Installation Restoration***

kg ***kilogram***

LQG ***Large Quantity Generator***

MCINCR-MCBQ ***Marine Corps Installations National Capital Region - Marine Corps Base Quantico***

MCO ***Marine Corps Order***

MCSC ***Marine Corps System Command***

MCTFER ***Military-Civilian Task Force for Emergency Response MSA Medical Storage Areas***

NFPA ***National Fire Protection Association***

NREA ***Natural Resources & Environmental Affairs***

ODCP ***Oil Discharge Contingency Plan***

OSHA ***Occupational Safety and Health Administration***

OTJ	***On-the-Job***
P2	***Pollution Prevention***
PCB	***Polychlorinated Biphenyls***
POC	***Point of Contact***
POLs	***Petroleum, Oil, or Lubricants***
PPE	***Personal Protective Equipment***
ppm	***parts per million***
RCRA	***Resource Conservation and Recovery Act***
SAA	***Satellite Accumulation Area***
SDS	***Safety Data Sheet***
SOP	***Standard Operating Procedures***
SQG	***Small Quantity Generator***
SW	***Solid Waste***
TCLP	***Toxicity Characteristic Leaching Procedure***
TSDF	***Treatment, Storage, or Disposal Facility***
US	***United States***
UW	***Universal Waste***
VAC	***Virginia Administrative Code***
VDEQ	***Virginia Department of Environmental Quality***
VSQG	***Very Small Quantity Generator***
VOC	***Volatile Organic Compound***

Record of Reviews and Revisions

[MCO 5090.2, Vol. 9, Ch. 3, Section 030501]

Every command that generates hazardous waste (HW) shall review and maintain a current updated copy of this plan. The plan shall be reviewed and updated whenever installation conditions or operations affecting HW accumulation, generation, transportation, treatment, storage, or disposal change. Changes in regulatory requirements must also be incorporated. Records of reviews and revisions to this plan will be recorded on the chart below.

Revision Number	Date	Sections Revised	Description of Revision	Name	Signature
000	Aug. 2016	All	Original Document	Natural Resources and Environmental Affairs (NREA) Branch	
001	Jan. 2020	All	Plan update due to regulatory changes and facility changes	Bluestone Environmental Group, Inc.	
001	July 2020	All	Plan update due to regulatory changes and facility changes	Bluestone Environmental Group, Inc.	
002	Jan.2021	All	Plan update due to regulatory changes and facility changes	Natural Resources and Environmental Affairs (NREA) Branch	

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Regulatory Cross References

Description	40 Code of Federal Regulations (CFR) (unless denoted)	Marine Corps Order (MCO) 5090.2, Vol. 9, Ch. 3, Section	Other Plans	Location in Hazardous Waste Management Plan (HWMP)
Definition of Hazardous Wates	261.3	n/a		Sec. 2.1.2, pg. 3
Hazardous Wastes	262	n/a		Sec. 3.6.1, pg. 15
Characteristic Hazardous Wastes	261 Subpart C	n/a		Sec. 2.1.2.2, pg. 4
Identification of Waste	261	n/a		Sec. 2.1, pg. 3 Appendix G, pg. G-i
Waste Streams	261.2	030501.L		Sec. 3.6, pg. 14 Appendix F, pg. F-1
Listed Hazardous Wastes	261 Subpart D	n/a		Sec. 2.1.2.1, pg. 3
Hazardous Waste Determinations	262.11	n/a		Sec. 3.6.1.1, pg. 15
Generator Category Determination	262.13(a)-(d), (f)	030401.C		Sec. 2.2, pg. 6
Facility	262.13(e)	030402		Sec. 3.1, pg. 7 Appendix A, pg. A-1
Consolidation of Hazardous Waste from Very Small Quantity Generators	262.14(a)(5)(viii), and 262.17(f)	n/a		Sec. 3.8, pg. 27
Satellite Accumulation Areas	262.15	030502.A		Sec. 0, pg. 7 Appendix B, pg. B-1
Turn-in Procedures	262.15(a)(6)	030502.A.4		Sec. 3.7, pg. 26 Appendix H, pg. H-1
Accumulation of Hazardous Waste in Containers	262.15(a), and 262.17(a)(1)	030502.A.1-2, and 030502.B		Sec. 3.1.4, pg. 9
Central Accumulation Areas / Less Than 90- Day Accumulation Areas	262.17	030502.B		Sec. 3.1.3, pg. 8
Inspections	262.17(a)(1)(v)	030501.G, and 030502.B.3		Sec. 3.3, pg. 12 Appendix E. pg. E-1
Accumulation of Hazardous Waste in Tanks	262.17(a)(2)	030502.B.12		Sec. 3.1.5, pg. 10
Accumulation of Hazardous Waste on Drip Pads	262.17(a)(3)	n/a		Sec. 3.1.6, pg. 10
Containment Buildings	262.17(a)(4), and 265 Subpart DD	n/a		Sec. 3.1.7, pg. 10
Labeling and Marking of Containers and Tanks	262.17(a)(5)	030502.A.1, and 030502.B.1		Sec. 3.1.8, pg. 10

Description	40 Code of Federal Regulations (CFR) (unless denoted)	Marine Corps Order (MCO) 5090.2, Vol. 9, Ch. 3, Section	Other Plans	Location in Hazardous Waste Management Plan (HWMP)
Training	262.17(a)(7), 29 CFR 1910.120(e), and 49 CFR 172 Subpart H	030501.M.4, and 030502.B.10		Sec. 3.2, pg. 11 Appendix D, pg. D-1
Closure	262.17(a)(8)	031003.K		Sec. 0, pg. 7
Environmental Protection Agency Identification Number	262.18	n/a		Sec. 1.1, pg. 1
Waste Minimization and Source Reduction	262.27(a)	030501.D		Sec. 3.9.3, pg. 29
Manifest	262 Subpart B, and EPA Form 8700-22	030604		Sec. 3.9.2, pg. 28
Pre-shipping	262 Subpart C	n/a		Sec. 3.9.1, pg. 28
Recordkeeping	262.40	031003		Sec. 3.10.3, pg. 30
Biennial Reporting	262.41(a), and EPA Form 8700-13 A/B	031001		Sec. 3.10.2, pg. 30
Exception Reporting	262.42	031002		Sec. 3.10.1, pg. 29
Preparedness, Prevention, And Emergency Procedures	262 Subpart M	030502.B.9		Sec. 4.0, pg. 33 Appendix C, pg. C-i
Required Equipment	262.250, and 262.252	n/a	MCINCR-MCBQ 5090.6, SPCC, and ODCP	Sec. 4.2, pg. 33 Appendix C, pg. C-i
Maintenance and Operation of Facility	262.251	n/a		Sec. 4.1, pg. 33 Appendix C, pg. C-i
Testing of Equipment	262.253	n/a		Sec. 4.3, pg. 34 Appendix C, pg. C-i
Access to Communications or Alarm System	262.254	n/a		Sec. 4.4, pg. 34 Appendix C, pg. C-i
Required Aisle Space	262.255	n/a		Sec. 0, pg. 35 Appendix C, pg. C-i
Arrangements with Local Authorities	262.256	n/a		Sec. 4.6, pg. 35 Appendix C, pg. C-i
Purpose of Hazardous Waste Contingency Plan	262.260	n/a		Sec. 4.8, pg. 36 Appendix C, pg. C-i
Implementation of Hazardous Waste Contingency Plan	262.260	n/a		Sec. 4.9, pg. 36 Appendix C, pg. C-i
Hazardous Waste Contingency Plan	262.261	030502.B.9		Sec. 4.7, pg. 36 Appendix C, pg. C-i
Content of Hazardous Waste Contingency Plan	262.261	n/a		Sec. 0, pg. 36 Appendix C, C-i
Evacuation Plans	262.261(f)	n/a	MCINCR-MCBQ 5090.6, SPCC, and ODCP	Sec. 0, pg. 38 Sec. 4.12, pg. 38 Appendix C, C-i

Description	40 Code of Federal Regulations (CFR) (unless denoted)	Marine Corps Order (MCO) 5090.2, Vol. 9, Ch. 3, Section	Other Plans	Location in Hazardous Waste Management Plan (HWMP)
Copies of Hazardous Waste Contingency Plan	262.262(a), and 262.256(a)	n/a	ODCP	Sec. 0, pg. 38 Appendix C, pg. C-i
Quick Reference Guide Requirements / Elements	262.262(b), (c)	n/a		Sec. 4.12, pg. 38 Appendix C, C-i
Amendment of Hazardous Waste Contingency Plan	262.263	n/a	MCINCR-MCBQ 5090.6	Sec. 4.13, pg. 38 Appendix C, pg. C-i
Emergency Coordinator	262.264	n/a		Sec. 4.10.1, pg. 36 Appendix C, pg. C-i
Emergency Procedures	262.265	n/a	MCINCR-MCBQ 5090.6, SPCC, and ODCP	Sec. 4.10.2, pg., 37 Appendix C, pg. C-i
Military Munitions	266 Subpart M	030501.K		Sec. 3.6.5, pg. 24
Hazardous Waste Pharmaceuticals	266 Subpart P	n/a		Sec. 3.6.4, pg. 20
Non-Creditable Hazardous Waste Pharmaceuticals Management]	266 Subpart P, and 266.502	n/a		Sec. 3.6.4.1, pg. 20
Potentially Creditable Hazardous Waste Pharmaceutical Management	266 Subpart P, and 266.503	n/a		Sec. 3.6.4.4, pg. 23
Sewer Prohibition	266 Subpart P, and 266.505	n/a		Sec. 3.6.4.5, pg. 23
Controlled Substances Exemption	266 Subpart P, and 266.506	n/a		Sec. 3.6.4.6, pg. 23
Universal Wastes	273	n/a		Sec. 3.6.1.1, pg. 15
Universal Wastes Batteries	273.2	n/a		Sec. 3.6.2.1, pg. 16
Universal Wastes Pesticides	273.3	n/a		Sec. 3.6.2.2, pg. 17
Universal Wastes Mercury-Containing Equipment	273.4	n/a		Sec. 3.6.2.3, pg. 17
Universal Wastes Lamps	273.5	n/a		Sec. 3.6.2.4, pg. 18
Used Oil	279	030505		Sec. 3.6.3.1, pg. 19
Record of Reviews and Revisions	n/a	030501		n/a
Installation, State, and Environmental Protection Agency Points of Contact	n/a	030501.M.3		Sec. 1.2, pg. 1
Personnel Roles and Responsibilities	n/a	030501.M		Sec. 3.5, pg. 12
Security	n/a	030501.H, and 030502A		Sec. 3.4, pg. 12

1.0 INTRODUCTION

As a generator of hazardous waste (HW), the Marine Corps Installations National Capital Region–Marine Corps Base Quantico (MCINCR-MCBQ) is required to prepare and implement a Hazardous Waste Management Plan (HWMP) in accordance with Marine Corps Order (MCO) 5090.2, Volume 9 (11 June 2018) that conforms to all requirements contained within the MCO and the United States (US) Environmental Protection Agency's (EPA) Resource Conservation and Recovery Act (RCRA), Title 40, Code of Federal Regulation (CFR) 260 through 370; Title 49 CFR 171 - Part 178 Transportation; and Virginia Administrative Code (VAC), 9VAC 20-60-12 et seq.

The Natural Resources & Environmental Affairs (NREA) prepared this HWMP for implementation at all activities at MCINCR-MCBQ that generate HW or hazardous substances with specific management requirements (i.e., universal waste [UW] and recycled materials) including Base units, tenants, civilian work centers, contractors, and training or visiting units as mandated in the MCBO 5090.7A.

Unit level Standard Operating Procedures (SOP) or HWMP must comply with the MCINCR-MCBQ HWMP and provided to NREA's Environmental Management Systems (EMS) Coordinator. MCINCR-MCBQ tenants at other installations must follow their applicable installation HWMP.

Additionally, this HWMP does not address asbestos waste; regulated medical waste (bio-hazard); nuclear, radiological, biological, or chemical weapons waste; or waste containing polychlorinated biphenyls (PCB). These wastes are addressed in the MCINCR-MCBQ Environmental Standard Operating Procedures (ECPSOP).

MCINCR-MCBQ, NREA ensures that MCINCR-MCBQ maintains compliance with all federal and state laws and regulations related to HW management, including RCRA.

1.1 EPA Identification Number [40 CFR 262.18]

MCINCR-MCBQ is considered a Large Quantity Generator (LQG), a generator that generates greater than 1,000 pounds of hazardous waste per month (see Section 2.3), and is, therefore, required to obtain an EPA HW generator identification (ID) number from the Virginia Department of Environmental Quality (VDEQ). MCINCR-MCBQ's EPA ID number is VA1170024722.

The permitted RCRA closed landfill located on Russell Road within the boundary of the Base, shares the same EPA ID number. The waste generated from the landfill leachate system is managed by MCINCR-MCBQ NERA.

Notification and reporting requirement for LQG's are discussed in Section 3.0 of this Plan.

1.2 Installation, State, and EPA Points of Contact [MCO 5090.2, Vol. 9, Ch. 3, Section 030501.M.3]

MCINCR-MCBQ NREA, Compliance Section is responsible for HW operations on the Base. Contact information is provided in Table 1-1 for NREA, state, and EPA points of contact (POCs). The information provided in Table 1-1 such as the names for the corresponding job titles are subject to change. The provided website and phone numbers shall provide as a resource for current names and email addresses.

Table 1-1: HW Points of Contact

Contact Title	Phone Number	Website for Contact Names and Email Addresses
MCINCR-MCBQ NREA, HW Program Manager	(703) 432-0530	https://www.quantico.marines.mil/ Offices-Staff/G-F-Installation-and-Environment/Natural-Resources-Environmental-Affairs/
MCINCR-MCBQ NREA, Environmental Compliance Section	(703) 784-4030	https://www.quantico.marines.mil/ Offices-Staff/G-F-Installation-and-Environment/Natural-Resources-Environmental-Affairs/
VDEQ, Central Office (CO), Land Protection & Revitalization, Hazardous Waste Permitting & Compliance Program Manager	(804) 698-4000	https://www.deq.virginia.gov/ Programs/LandProtection Revitalization/Contacts.aspx
VDEQ, Northern Regional Office (NRO), Land Protection & Revitalization, Hazardous & Solid Waste Program, Program Manager	(703) 583-3800	https://www.deq.virginia.gov/ Locations/NorthernRegionalOffice. aspx
EPA Region 3, Land, Chemicals and Redevelopment Division, Regional Program Manager	(215) 814-5000, or (800) 438-2474	https://www.epa.gov/aboutepa/organization-epas-region-3-office- philadelphia#lcrd

2.0 IDENTIFICATION

2.1 Identification of Waste [40 CFR 261]

2.1.1. Definition of Solid Waste (DSW) [40 CFR 261.2]

A solid waste (SW), as defined in 40 CFR 261.2(a), is any discarded material that is not excluded from the regulation, which is abandoned, recycled, considered inherently waste-like, used in a manner constituting disposal, or any material that cannot be used for its intended purpose. A SW may be a solid, semi-solid, liquid, or gas. Materials are not solid wastes when they are recycled or reused; however, wastes that are recycled in a manner equivalent to disposal (e.g., used in land application), burned for energy recovery, or are accumulated speculatively are still considered solid waste. After an item has been determined to be a SW, the generator must determine if it meets the definitions for listed or characteristic HW under RCRA.

In 2018, EPA revised the DSW and strongly encouraged states to adopt or modify their existing DSW regulations. Virginia adopted a 2015 version of the DSW rule that includes the exclusion currently found at 40 CFR 261.4(a)(24) and (25); therefore, the current Virginia regulation is more stringent than the EPA's 2018 DSW.

2.1.2. Definition of HW [40 CFR 261.3]

A SW meeting the definition in Section 2.1.1 and 40 CFR 261.2(a) that is not excluded under 40 CFR 261.4(b) must be evaluated to determine if it meets the definition of a HW at 40 CFR 261.3. Accurate identification of a HW is necessary to ensure disposal complies with RCRA regulations.

MCINCR-MCBQ generates various types of HW. This section describes how to identify and classify HW in accordance with EPA regulations and MCOs. Once a SW is determined to be hazardous, MCINCR-MCBQ will manage the waste in accordance with all RCRA regulations as described in this plan.

2.1.3. Listed HWs [40 CFR 261 Subpart D]

A waste is determined to be a HW if it is specifically included on one of four lists under 40 CFR 261. Listed wastes are wastes from common manufacturing and industrial processes, specific industries, and can be generated from discarded commercial products.

- Non-Specific Source Wastes (F-list) - This list identifies HWs generated during common manufacturing and industrial processes, such as spent solvents from cleaning or degreasing operations. These HWs come from various sources and industries; therefore, F-listed wastes are known as HWs from non-specific sources.
- Source-Specific Wastes (K-list) - This list includes certain HWs from specific industries, such as petroleum refining, pesticide manufacturing, or wastewater treatment operations and are known as source-specific HWs. There are no K-listed wastes at MCINCR-MCBQ.
- Discarded Commercial Chemical Products (P-list and U-list) - These lists include specific commercial chemical products in a pure, undiluted form that are discarded. Examples include certain pesticides. Products identified on the P-list are also known as acutely HW. U-listed wastes are hazardous but are not considered acutely hazardous. Empty containers that previously held an acutely HW must be managed as HW unless triple rinsed with an appropriate solvent capable of removing the HW. The rinsate must still be managed as a P-listed waste.

2.1.3.1. Characteristic HWs [40 CFR 261 Subpart C]

Characteristic wastes are wastes that exhibit any one or more of the following characteristic properties: ignitability, corrosivity, reactivity, or toxicity, as determined by applying generator knowledge of the waste, the specific safety data sheet (SDS), or by laboratory analysis. A SW exhibiting any of the characteristics listed in Table 2-1 is regulated as HW.

Table 2-1: HW Characteristics

Category	Waste Code	Characteristic Properties (SW must exhibit one to be a HW)
Ignitability	D001	Liquid, other than an aqueous solution containing less than 24% alcohol by volume, and has a flashpoint less than 140°F
		Non-liquid capable, under standard pressure and temperature, of causing fire through friction, absorption of moisture, or spontaneous chemical changes and burns so vigorously that it creates a hazard
		Ignitable compressed gas
		Oxidizer
Corrosivity	D002	Aqueous solution with pH less than or equal to 2 or greater than or equal to 12.5
		Liquid and corrodes steel at a rate greater than 6.35 mm per year at a test temperature of 130°F
Reactivity	D003	Normally unstable and readily undergoes violent change without detonating
		Reacts violently with water or forms potentially explosive mixtures with water
		When mixed with water, generates toxic gases, vapors, or fumes in a quantity sufficient to present a danger to human health or the environment
		A cyanide- or sulfide-bearing waste which, when exposed to pH conditions between 2 and 12.5, generates toxic gases
		Capable of detonation or explosive reaction
		A forbidden explosive as defined in 49 CFR 173.54, or a Division 1.1, 1.2, or 1.3 as defined in 49 CFR 173.50 and 173.53
Toxicity	D004 through D043	Contains any of the elements specified in **Table 2-2** at a concentration equal to or greater than the regulatory level as determined through a laboratory procedure called the Toxicity Characteristic Leaching Procedure (TCLP). The TCLP simulates how the waste will behave under typical landfill conditions to determine if a concentration that is harmful to human health or the environment will migrate into ground water.

Table 2-2: Maximum Concentration of Contaminants for 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

EPA Waste Code	Contaminant	Regulatory Level (mg/L)
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

3.0 GENERATOR CATEGORY DETERMINATION [40 CFR 262.13 (A)-(D), (F) AND MCO 5090.2, VOL. 9, CH. 3, SECTION 030401.C]

MCINCR-MCBQ generates both acute and non-acute HWs. By definition, LQGs generate greater than or equal to 1,000 kilograms (kg) per month of HW, or greater than 1 kg per month of acute HW, or greater than 100 kg per month of acute spill residue or soil. MCINCR-MCBQ typically generates more than 1,000 kg per month of HW and, therefore, is classified as an LQG and must comply with all RCRA regulations for LQGs as described in this plan. Should a decrease in HW generation occur at the installation, MCINCR-MCBQ will evaluate generator category status and revise this plan accordingly.

3.1 HW Management

3.1.1. Facility [40 CFR 262.13 (e) and MCO 5090.2, Vol. 9, Ch. 3, Section 030402]

MCINCR-MCBQ is an LQG with a permitted unit, meaning that the operating conditions prescribed for an LQG prohibit MCINCR-MCBQ from storing HW longer than 90 days. The Base meets these conditions and is not considered an active permitted TSDF.

MCINCR-MCBQ operates satellite accumulation areas (SAAs) and less than 90-day accumulation areas. SAAs are located at strategic locations throughout the installation at or near the point of initial HW generation and are managed by the operational unit in control of the area. The installation's less than 90-day central accumulation area is located at the NREA HW Storage Facility - Building 27401. Non-creditable HW pharmaceuticals are managed in Medical Storage Areas (MSAs), separate from SAAs. Facility diagrams are provided in Appendix A.

Three additional less than 90-day accumulation areas are designated on the installation and accumulate HW for less than 10 days prior to transport to the NREA HW Storage Facility - Building 27401. RCRA regulations allow generators to have more than one less than 90-day accumulation area, provided the HW remains onsite and is removed from within 90 days.

Table 3-1: Less than 90-Day Accumulation Areas

Location	HW Accumulation Time After Accumulation Start Date
NREA HW Storage Facility - Building 27401	Less than 90 days
Naval Medical Clinic - Building 3259	Less than 10 days
MCCS Auto Hobby Shop - Building 2080	Less than 10 days
HMX-1	Less than 10 days

Russell Road Landfill is a closed HW landfill located on MCINCR-MCBQ that is managed in accordance with the post-closure care requirements described in Attachments E and H of the MCBQ HW Management Permit (EPA ID# VA1170024722). The conditions for exemption for a large quantity generator only apply to non-permitted hazardous waste generators. The Russell Road Landfill is covered by the HW Management Permit; therefore, HW leachate generated at the site is not restricted to the less than 90-day accumulation time limit under 40 CFR 262.17. Regardless, as part of the management effort, MCINCR-MCBQ pumps out and removes the leachate every 90 days.

3.1.2. SAAs [40 CFR 262.15 and MCO 5090.2, Vol. 9, Ch. 3, Section 030502.A]

MCINCR-MCBQ accumulates HW at or near the point of generation at designated SAAs located in operational areas throughout the Base. The maximum each SAA can accumulate is no more than 55 gallons of non-acute HW and/or either 1 quart of liquid acute HW or 1 kg of solid acute HW. Acute HW are listed in 40 CFR 261.31 and 261.33(e). Multiple HW containers may be used to collect different waste streams; however, a total of 55 gallons of HW (and/or either 1 quart of liquid acute HW or 1 kg of solid acute HW) cannot be exceeded at any single SAA.

When the maximum volume of non-acute (55 gallons) or acute (either 1 quart of liquid or 1 kg of solid) HW accumulates in a SAA, the HW will be removed from the SAA and transferred to a less than 90-day accumulation area within three consecutive calendar days. The container holding the HW to be removed from the SAA is marked with the accumulation start date (ASD). During the

three consecutive calendar days, the excess HW is managed in containers with labels as previously described.

Unless the container is moved immediately, the container will be re-dated upon arrival at the less than 90-day accumulation area. This means that an LQG has a total of up to 93 days for onsite accumulation once 55 gallons of HW (and/or either 1 quart of liquid acute HW or 1 kg of solid acute HW) has been exceeded at the SAA. Managing containers at SAAs is described in Section 3.1.4, below. A list of SAA locations and applicable waste streams is provided in Appendix B.

The HW Contingency Plan (described in Section 4.0 and provided in Appendix C) applies to all SAAs. Site-specific Satellite Accumulation Area Contingency Plan Information and Quick Reference Guides, containing an evacuation map must be posted at each SAA. A template is provided in HW Contingency Plan. Additionally, the training documents and list of waste streams specific to each SAA, discussed in Section 3.2, must be posted at each SAA and be readily available during inspections.

3.1.3. Medical Storage Areas

MCBQ manages all non-creditable pharmaceutical wastes as HW. HW pharmaceuticals are managed at MCINCR-MCBQ separately from other HW in MSAs located at or near medical operations that generate waste pharmaceuticals. MSA locations are included on the Facility Diagrams in Appendix A and listed in Table 3-2.

Table 3-2: Medical Storage Areas

Unit Name	Building Number or Location
Naval Medical Clinic	3259
MCCS Gas Station and MCX	3500B
MCCS West Side Gas Station and MCX	Hot Patch Road
Vet Clinic	3310
HMX-1 Health Clinic and MCAF Dental Clinic	2134 (2nd Floor)
TBS Health Clinic and Dental Clinic	24008
OCS Medical Center and Dental A-168	5003
Schools	3307

3.1.4. Central Accumulation Areas / Less Than 90-Day Accumulation Areas [40 CFR 262.17 and MCO 5090.2, Vol. 9, Ch. 3, Section 030502.B]

MCINCR-MCBQ accumulates HW onsite for no more than 90 days and manages accumulated HW in compliance with conditions for exemption as described below.

Air emissions standards are coordinated by MCINCR-MCBQ NREA HW Manager and Air Program manager to ensure all containers and equipment comply with applicable regulations.

MCINCR-MCBQ NREA personnel are required to inspect waste accumulation sites weekly for leaking containers and deteriorating containers. If a container is found deteriorating or a leak is observed, the HW is immediately transferred to a container in good condition.

An incompatible waste is a HW that is unsuitable for placement in a particular device or facility because it may cause corrosion or decay of containment materials (e.g., container liners or tank walls) or because commingling with another waste or material under uncontrolled conditions could produce heat or pressure, fire or explosion, violent reaction, toxic dusts, mist, fumes or gases, or

flammable fumes or gases. Incompatible wastes or incompatible wastes and materials are not placed in the same container and are separated by a berm, dike, wall, or other physical barrier.

Managing containers at less than 90-day accumulation areas is described in Section 3.1.5.

3.1.5. Accumulation of HW in Containers [40 CFR 262.15 (a), 40 CFR 262.17(a)(1) and MCO 5090.2, Vol. 9, Ch. 3, Sections 030502.A.1-2 and 030502.B]

All HW is stored in containers that remain in good condition. SAAs and waste accumulation sites are required to be inspected weekly for leaking containers and deteriorating containers. If a container condition deteriorates or a leak is observed, the HW is immediately transferred to a container in good condition. Containers holding HW are lined with materials compatible and nonreactive with the HW contained within.

Incompatible wastes are not stored in the same container. HW are not stored in unwashed containers that held incompatible waste or material. If stored nearby, containerized HW and incompatible waste or material are kept separate by practical measures such as a dike, berm, wall, or on separate containment pallets.

Containers remain closed during accumulation and are opened only to add, remove, or consolidate the HW, or to temporarily vent the container for proper equipment operation or to relieve pressure. Containers are not be opened, handled, or stored in any way that could damage, rupture, or cause leakage. Containers holding HW are labeled as described in Section 3.1.8.

All containers holding ignitable or reactive waste are located at least 15 meters (50 feet) from the installation property line.

Precautions are taken to ensure that accidental ignition or reaction of a HW does not occur by separating the HW from sources of ignition or reaction and placing "NO SMOKING" signs near ignitable or relative HW hazard areas.

Specific container requirements for HW pharmaceuticals are described in Section 3.6.4.

3.1.6. Accumulation of HW in Tanks [40 CFR 262.17(a)(2) and MCO 5090.2, Vol. 9, Ch. 3, Section 030502.B.12]

MCINCR-MCBQ does not accumulate or store HW in tanks.

3.1.7. Accumulation of HW on Drip Pads [40 CFR 262.17(a)(3)]

MCINCR-MCBQ does not accumulate or store HW on drip pads.

3.1.8. Containment Buildings [40 CFR 262.17(a)(4) and 40 CFR 265 Subpart DD]

Containment buildings are engineered structures that the EPA intended to be used for storing / treating bulky solids such as contaminated debris. LQGs may use containment buildings for less than 90-day accumulation; however, containment buildings are not the same as buildings designed for the storage of HW containers. MCINCR-MCBQ does not accumulate or store HW in containment buildings.

1) Labeling and Marking of Containers and Tanks [40 CFR 262.17(a)(5) and MCO 5090.2, Vol. 9, Ch. 3, Sections 030502.A.1 and 030502.B.1]

Containers storing HW will be marked with the following:

- The words "HAZARDOUS WASTE"

- An indication of the hazards of the contents (e.g., ignitable, corrosive, reactive, toxic);
- Hazard communication consistent with the Department of Transportation (DOT) requirements;
- A hazard statement or pictogram consistent with the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard or a chemical hazard label consistent with the National Fire Protection Association (NFPA) Code 704 (commonly referred to as an "NFPA Diamond"); and
- When placed in less than 90-day accumulation area, a clearly visible ASD. MCINCR-MCBQ does not accumulate or store HW in tanks.

Specific labeling requirements for HW pharmaceuticals are described in Section 3.6.9.

3.2 Training [40 CFR 262.17(a)(7) and MCO 5090.2, Vol. 9, Ch. 3, Sections 030501.M.4 and 030502.B.10]

MCINCR-MCBQ NREA provides initial, refresher, and on-the-job (OTJ) training to personnel with duties involving HW management through its Comprehensive Environmental Training and Education Program (CETEP). The CETEP is directed by the NREA HW Program Manager, who is trained in HW management procedures, and provides instructions which teach Environmental Coordinators (ECs) and HW Handlers HW management, HW Contingency Plan implementation, and emergency response procedures relevant to the positions in which they are employed. ECs and HW Handlers must successfully complete a program of classroom instruction and/or OTJ training that teaches them to perform their duties in a way that ensures the facility's compliance with applicable federal and state regulations. The NREA ensures that the CETEP includes all the required elements.

ECs and HW Handlers must complete required training programs within six months after the effective date of their employment, assignment, or new position at a facility. The level of training is dependent upon the practices implemented. Personnel do not work unsupervised until they have completed the initial training requirements. All personnel must also take part in an annual review of the initial training.

Training specific to SAAs and universal waste (UW) sites is provided by the NREA or HW coordinators. The CETEP training document containing instructions, training log, and list of waste stream is posted at each SAA location, maintained in the Environmental Operations Records binder, and readily available during inspections. A training matrix, training course descriptions, and the CETEP training document for SAAs are provided in Appendix D.

The HW Program Manager coordinates with ECs to maintain the following personnel and training documentation:

- List of positions related to HW management including employee name and job title;
- Written job description including required skill, education, qualifications, and duties;
- Written description of types and amount of training given; and
- Records that document the training or job experience provided and completed.

Training records, including all rosters, are retained at NREA - Building 3049 for a minimum of three years. Individual units maintain training records for their ECs, HW Handlers, and other personnel who receive HW training until facility closure for current personnel, or for three years from the date the employee last worked at the facility.

3.3 Inspections [40 CFR 262.17(a)(1)(v) and MCO 5090.2, Vol. 9, Ch. 3, Sections 030501.G and 030502.B.3]

Waste accumulation sites are required to be inspected weekly for leaking and/or deteriorating containers, whether containers are closed, condition of emergency response and spill control equipment, appropriate aisle space, spill containment is provided and adequate, proper container labeling, verifying ASD is within 90-day timeframe, and to ensure all labels are facing aisles to aid inspections.

Weekly written inspections at SAAs and MSAs are not required by RCRA; however, MCINCR-MCBQ feels it is a best management practice and requires each SAA and MSA to do so through implementation of this HWMP. Monthly HW compliance inspections are performed at all SAAs, UW areas, and MSAs.

MCINCR-MCBQ's Environmental Standard Operating Procedures (ESOPs) weekly and monthly inspection checklists for waste accumulation areas are provided in Appendix E.

3.4 Security [MCO 5090.2, Vol. 9, Ch. 3, Sections 030501.H and 030502A]

Less than 90-day accumulation areas and SAAs are located in secure areas and are accessible only to those personnel trained on appropriate HW management.

3.5 Personnel Roles and Responsibilities [MCO 5090.2, Vol. 9, Ch. 3, Section 030501.M]

MCINCR-MCBQ has assigned the following roles and responsibilities for implementing HW operations.

3.5.1. Commanding Officers / Director of Marine Corps Commands / Units and Tenants at MCINCR-MCBQ

- Comply with all orders and plans that govern the management of HW. Participate in the updating of orders and plans to ensure that the needs command/units and tenants are addressed.
- Develop command/unit and tenant orders, directives, and/or Standard Operating Procedures (SOPs) to implement MCINCR-MCBQ's HWMP and ESOPs.
- Designate HW Site Managers and HW Handlers personnel in writing for each HW generation, accumulation, and storage sites who have no less than 12 months remaining on current contract or time on station under the cognizance of the Marine Corps commands/units and activities. Note: HW Practice Owners are hereafter referred to as "HW Site Managers" and HW Workers are hereafter referred to as "HW Handlers."
- Comply with all federal, state, and local requirements applicable to HW management.
- Direct HW Site Managers, HW Handlers, and ECs to respond timely to all required data calls for HW information and guidance and receive the appropriate HW training.
- Budget for and fund personnel, facilities, equipment, and other costs associated with managing command/unit hazardous material (HM) and HW programs.
- In the event of a HW spill due to command or unit activity, fund cost associated with cleanup.
- Request technical assistance on HW management requirements from MCINCR-MCBQ, NREA, as needed.

3.5.2. NREA, Environmental Compliance Section (via the HW Program Manager)

- Assist in resolving and coordinating HW management issues and concerns.

- Consider and optimize HM recycling to minimize the generation of HW that is subject to federal, state, and local laws and regulations.
- Facilitate the implementation and sustainment of this HWMP with revisions as required do to updated regulatory requirements and/or process changes.
- Monitor the storage, packaging, and transportation of HW to ensure compliance with all federal, state, and local regulations.
- Provide facility personnel with HW management procedures (including HW Contingency Plan implementation) relevant to the positions in which they are employed as required under 40 CFR Subpart D Contingency Plan and Emergency Procedures and 264.52(f) evacuation plan.

3.5.3. ECs

- Senior Non-Commissioned Officer/Officer, or civilian employee assigned in writing by the unit/command commanding officer/director for no less than a 12-month appointment.
- Serves as the command POC for all environmental issues or concerns, including management of HW and UW sites/operations, to ensure compliance with all federal, state, and local laws, this HWMP and all other environmental management programs pertaining to installation commands/unit and tenant activities.
- Facilitate the development and maintenance of command/unit and tenant orders, directives, and/or SOPs to implement MCINCR-MCBQ's HWMP and ESOPs These efforts should promote HW minimization.
- Keep command/unit/tenant HW Handlers informed of any changes in regulations affecting HW activities within the ECs cognizance, and ensure that command HW SOPs and Unit Spill Contingency Plans/SOPs are updated accordingly and readily available for review by all command/unit/tenant personnel.
- Maintain a list of all site locations that are managed by the HW Program and are located within the command/unit/tenant activity, to include: SAAs, less than 90-day sites, UW sites, MSAs, used oil and used antifreeze and other non-regulated accumulation areas. Provide a current copy to NREA of all identified sites on a quarterly basis or as soon as additional sites are discovered or developed.
- Verify on a monthly basis that HW Handlers are conducting inspections of accumulation areas. Perform and document follow-up corrective actions of all identified non-conformance and compliance issues from current weekly inspections in a timely matter.
- Accompany the NREA during their inspections (typically monthly, no less than bi-monthly) or, if unavailable, establish an alternate to accompany NREA and subsequently debrief the EC of any findings, or inform NREA when unavailable to accompany the NREA during their required inspections.
- Ensure all required weekly inspections at waste accumulation sites are conducted when HW Handlers are available and submitted to NREA as a backup copy.
- Oversee and participate in the implementation of command HW handling requirements and ensure all HW operations are carried out in compliance with the requirements of the HWMP, federal/state/local laws and regulations.
- Notify NREA for all removal/pickups of HW, UW, or non-regulated, to ensure that:
- HW does not remain in a less than 90-day accumulation area (other than the NREA HW Storage Facility - Building 27401) in excess of 10 days from the ASD on any container.
- HW does not remain at an SAA in excess of three days from the ASD on any container.
- UW does not remain at a UW Site in excess of 365 days from the ASD on any container.

- Actively promote the reduction of volume of HW/UW generated and the volume and toxicity of HM used within the ECs organization.
- Promote the proper management and segregation of petroleum, oil, or lubricants (POLs), to minimize contamination with water, and other contaminants.
- Oversee the management of the command/unit/tenant general HW awareness training programs for all personnel and maintain HW training records/rosters for all HW Site Managers and HW Handlers within their command/unit or tenant organization.
- Participate in and ensure HW Handlers attend regular HW training sessions and workshops conducted through the MCINCR-MCBQ CETEP.

3.5.4. HW Handler (also referred to as HW Practice Owners)

- Commanding Officers and Supervisors shall assign, in writing, any HW Handler within one week of assignment. Only Officers-in-Charge, Non-Commissioned Officers-in-Charge, and civilian supervisors of work sites where HW, UW, non-regulated accumulation areas are generated, handled, or stored may be assigned the title, HW Handler. Follow guidelines established in this manual for proper management of wastes.
- Complete required training within 90 days of employment or change in job function.
- Ensure HW/UW waste turn-in sheets are prepared for waste pickup.
- Report all HW leaks or spills per Appendix I of the MCINCR-MCBQ Integrated Spill Management Plan -Core Plan, or as further elaborated in a unit SOP, if maintained by the unit.
- Inform EC if unable to conduct required HW Handler duties, including maintaining accumulation areas, inspections, and reporting.

3.6 Waste Streams [40 CFR 261.2 and MCO 5090.2, Vol. 9, Ch. 3, Section 030501.L]

MCINCR-MCBQ waste streams include, HWs, UWs, non-regulated, non-creditable HW pharmaceuticals, potentially creditable HW and non-HW pharmaceuticals, and military munitions. This section provides a summary of the different types of wastes that are generated on the installation. The HW Program Managers annually review the profiles and any laboratory analysis to ensure records and accurate and current. Specific management requirements for each type of waste stream generated at MCINCR-MCBQ are described on Waste Stream Sheets provided in Appendix F.

3.6.1. HWs [40 CFR 262]

MCINCR-MCBQ generates various types of HW. This section describes the steps MCINCR-MCBQ implements to perform waste determinations and record keeping requirements.

3.6.1.1. HW Determinations [40 CFR 262.11]

MCINCR-MCBQ uses the following steps for determining if a waste is hazardous:

- A determination for each waste stream is made at the point of generation before any alteration of the waste occurs;
- The SW is reviewed to determine if it meets any of the exclusions listed in 40 CFR 261.4; and

- If the waste is not excluded under 40 CFR 261.4, MCINCR-MCBQ will use knowledge of the waste, waste origin, process, or other pertinent information to determine if the waste is listed under 40 CFR 261 Subpart D. MCINCR-MCBQ will also determine if the waste is ignitable, corrosive, reactive, and/or toxic as defined in 40 CFR 261 Subpart C through generator knowledge of the waste or by analyzing a sample of the waste.

3.6.2. Generator Knowledge

Generator knowledge used for HW determination is based on relevant and reliable information that can be sufficiently supported and documented such as SDSs; results of previous waste analyses; documents describing the process that generated the HW, the composition of the HW, and the properties of the HW; and records explaining the knowledge basis for the generators' determination. NREA documents and retains supporting records for all knowledge-based determinations for three (3) years from the date the waste was transferred offsite. HW determination records are not required for non-HW determinations; however, maintaining records of non-hazardous determinations is a recommended best management practice.

If a product is verified by SDS but is expired, the generator will determine if product can be recycled, reused, or given a HW determination according to 40 CFR 262.11. Material shall be verified by Hazardous Material Program Manager or Solid Waste/Recycling Manager, according to HWMP, prior to a HW determination.

If generator knowledge is insufficient, unreliable, or unavailable, the waste will be sampled following procedures in the HW Sampling SOP, provided in Appendix G.

In addition, HW generators must identify all applicable EPA HW codes and mark all containers with the applicable codes prior to shipping. While some codes may be based on user knowledge, additional applicable codes may only be determined through analysis. If all waste codes cannot be determined and supported through user knowledge methods, sampling analysis will be performed. All records, reports, and documents pertaining to waste analysis are maintained for no less than three years at NREA. All HWs are accumulated in a SAA or less than 90-day central accumulation area as described in Section 3.1.3.

3.6.2.1. Waste Characterization Records

All waste characterization (e.g., HW, non-HW), including test, lab analysis, results, and waste determination records are completed by the NREA and are maintained for a minimum of three (3) years.

3.6.3. UWs [40 CFR 273]

MCINCR-MCBQ handles large quantities of items managed as a UW including, but not limited to the following: batteries, pesticides, mercury-containing equipment, and lamps.

All containers accumulating or storing UW, or the UW item itself, are labeled or marked as specified below:

- UW Battery(s), Waste Batteries, or Used Batteries
- UW Pesticide(s) or Waste Pesticide(s)
- UW Mercury-Containing Equipment, Waste Mercury-Containing Equipment, or Used Mercury-Containing Equipment
- UW Mercury Thermostat(s), Waste Mercury Thermostat(s), or Used Mercury Thermostat(s)

- UW Lamp(s), Waste Lamp(s), or Used Lamp(s)

Each container will be marked with the ASD at the earliest date any universal waste was received. Regardless of the volume of UW accumulated, it must be shipped within one year from the ASD. UW will be shipped in labeled and marked DOT-approved containers to another UW Handler or permitted destination facility.

Prepare a non-HW manifest for off-site shipment of UW. NREA maintains and stores all non-HW manifests for a minimum of three years. Although UW is not manifested as HW, NREA follows procedures described in Section 3.9.2 for all manifests.

Diluting, treating, and disposing UW onsite is prohibited. Additional management requirements specific for each type of UW are described below.

3.6.3.1. UW Batteries [40 CFR 273.2]

HW batteries that may be managed as UW include the following: lead-acid, lithium, mercury, silver ion, and nickel-cadmium batteries. A used battery becomes a waste on the date it is discarded (e.g., removed from service, is no longer viable). An unused battery becomes a waste on the date the handler decides to discard it. UW batteries are managed in a way that prevents total or component release to the environment.

UW Site Managers/Handlers (i.e., HW Handlers) will place any UW battery in a DOT-approved container if the battery shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. If a DOT-approved container is not available, the damaged battery may be stored in a non-DOT-approved container onsite but will be transferred to a DOT-approved container prior to shipping. All containers used for UW batteries must be closed; structurally sound; compatible with the contents of the battery; and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

Provided the casing of each individual UW battery cell is not breached, it remains intact and closed, shows no evidence of leakage or spillage, and is properly prepared for shipment (e.g., strapped to pallets and/or containerized in hard rigid plastic containers), the following battery controls are permitted:

- Sorting UW batteries by type;
- Discharging UW batteries so as to remove the electric charge;
- Disassembling batteries or battery packs into individual batteries or cells;
- Removing batteries from consumer products; and
- Taping battery terminals to ensure arcing does not occur when turning in for disposal.

3.6.3.2. UW Pesticides [40 CFR 273.3]

UW pesticides include stocks of a suspended and canceled pesticide that are part of a voluntary or mandatory recall and stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program.

UW Site Managers/Handlers (i.e., HW Handlers) will manage UW pesticides in a way that prevents their total or component release to the environment. UW pesticides will be stored in a container that remains closed; structurally sound; compatible with the pesticide; and that lacks evidence of leakage, spillage, or damage.

3.6.3.3. UW Mercury-Containing Equipment [40 CFR 273.4]

Mercury-containing equipment includes devices, items, or articles that contain varying amounts of elemental mercury. Typical devices include thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches.

UW Site Managers/Handlers (i.e., HW Handlers) will manage mercury-containing equipment in a way that prevents total or component releases to the environment.

Mercury-containing equipment will be placed in a separate container if it shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container must be closed; structurally sound; compatible with the contents of the device; lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions; and be reasonably designed to prevent the escape of mercury into the environmental by volatilization or any other means.

If UW mercury-containing equipment does not show evidence of leakage, spillage, or damage that could reasonably cause leaks, HW Handlers may remove mercury-containing ampules from UW mercury-containing equipment, provided the handler performs the following:

- The ampules must be removed and managed in a manner designed to prevent breakage; and
- The removed ampules are subsequently placed in a container meeting the conditions above for leaking, damaged or compromised UW mercury-containing equipment, and with appropriate packing materials adequate to prevent breakage during storage, handling, and transportation.

If the non-mercury containing components of the waste do not exhibit characteristics of HW, the waste may be disposed as SW.

3.6.3.4. UW Lamps [40 CFR 273.5]

Lamps often exhibit the toxicity characteristic due to mercury or lead contained within, making them a characteristic HW when discarded. Lamps managed in accordance with UW regulations and transferred to another UW Handler or permitted destination facility, may be managed as UW. Examples of common UW lamps include, fluorescent, high-intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps.

UW lamps are managed in a way that prevents any release to the environment. Intact lamps are stored in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Containers must remain closed and lack evidence of leakage, spillage, or damage that cause leakage under reasonably foreseeable conditions.

Broken lamps will be immediately cleaned to prevent the potential release of mercury or other hazardous constituents to the environment. Broken lamps must be managed as HW. MCINCR-MCBQ prohibits crushing UW lamps.

3.6.4. Non-Hazardous and Recycled or Reclaimed Wastes

Non-HWs are those that are exempt from RCRA HW regulations, do not meet the definition of a HW and cannot be disposed of in a municipal landfill, or are recycled or reclaim and are, therefore, excluded from the definition of SW. Non-HWs are not accumulated at SAAs. Although these wastes are not subject to HW regulations, they can become a HW if they are mixed with or contaminated by a HW.

Waste Stream Sheets providing detailed management requirements for specific non-HW streams are provided in Appendix F.

3.6.5. Used Oil [40 CFR 279 and MCO 5090.2, Vol. 9, Ch. 3, Section 030505]

MCINCR-MCBQ generates used oil through vehicle and equipment maintenance activities. Used oils include any oils that have been refined from crude oil, or any synthetic oil that has been used and as a result of use is contaminated by physical or chemical impurities. Examples include motor oil, hydraulic fluid, electrical insulating oil, transmission fluid, compressed oils, cutting oils, and coolants.

To be classified and managed as used oil under 40 CFR 279, the waste must not be contaminated with solvents, glycols, or fuels. Mixtures of used oil and HW are managed under full HW regulations. Used oil containing total halogens at more than 1,000 parts per million (ppm) is presumed to be HW because it has been mixed with halogenated HW. Used oil drained or removed from materials containing or otherwise contaminated with used oil is managed in accordance with 40 CFR 279. Used oil containing PCBs at 50 ppm or greater before any dilution is regulated as PCB waste, not as a used oil. Refer to the MCINCR-MCBQ ECPSOP for guidance on PCBs. In addition, if used oil is disposed rather than recycled, then it must be managed as HW.

Used oil is stored in tanks, drums, or containers that remain closed and lack evidence of leakage, spillage, or damage that cause leakage under reasonably foreseeable conditions. The container and all collection piping are labeled or marked clearly with the words "Used Oil." Note: The term "Waste Oil" is reserved for used oils that must be managed as HW. MCINCR-MCBQ NREA requires all used oil storage tanks and containers to have an ASD at the point it is declared used oil for recycling as a best management practice.

Oil transported for recycling is shipped to a facility authorized by the federal and/or state environmental regulatory agencies for the recycling of used oil. The following activities are prohibited:

- Using used oil as a dust suppressant;
- Burning used oil in a space heater or furnace; and
- Mixing used oil and HW.

3.6.6. Additional Non-HW

Non-HW generated at MCINCR-MCBQ includes, but is not limited to, the following: used antifreeze, used absorbent, oily rags, diesel-contaminated water, latex paint, and alkaline batteries. These wastes are not regulated as HW, but still require special handling to ensure proper disposal. Waste Stream Sheets providing detailed management requirements for these non-HW streams are provided in Appendix F.

All non-HW is accumulated in containers that remain closed when not adding or removing liquid and lack evidence of leakage, spillage, or damage that cause leakage under reasonably foreseeable conditions.

Non-HW is not mixed with other wastes. Mixing with other substances such as oil or solvents prevents its ability to be recycled and/or may cause it to become HW.

Each non-HW container is labeled as to its contents. MCINCR-MCBQ requires all used antifreeze to be disposed within 1 year, therefore, ASD is also required on used antifreeze containers.

If the waste is recycled, the recycling facility must be authorized by the federal and/or state environmental regulatory agencies as applicable.

3.6.7. Pharmaceutical Waste[40 CFR 266 Subpart P]

3.6.7.1. Healthcare Facilities

Healthcare facilities are defined by EPA in 40 CFR 266.500 as any person that provides preventative, diagnostic, therapeutic, rehabilitative, maintenance or palliative care, and counseling, service, assessment or procedure with respect to the physical or mental condition, or functional status, of a human or animal or that affects the structure or function of the human or animal body; or distribute, sell, or dispense pharmaceuticals, including over-the-counter pharmaceuticals, dietary supplements, homeopathic drugs, or prescription pharmaceuticals.

This definition includes, but is not limited to, wholesale distributors, third-party logistics providers that serve as forward distributors, military medical logistics facilities, hospitals, psychiatric hospitals, ambulatory surgical centers, health clinics, physicians' offices, optical and dental providers, chiropractors, long-term care facilities, ambulance services, pharmacies, long-term care pharmacies, mail-order pharmacies, retailers of pharmaceuticals, veterinary clinics, and veterinary hospitals.

Healthcare facilities, as defined above, that generate pharmaceutical waste at MICNCR-MCBQ, include health, dental, and veterinary clinics, and onsite exchanges sell over-the-counter (OTC) pharmaceutical goods and generate pharmaceutical waste.

3.6.7.2. Pharmaceuticals

Pharmaceutical is defined by EPA in 40 CFR 266.500, as any prescription or OTC medication, homeopathic, compounded, and investigational new drug, dietary supplements, and electronic nicotine delivery systems such as electronic cigarette or vaping pen that use liquid nicotine (e-liquid in pre-filled cartridges or vials) for use by humans or animals.

Pharmaceutical waste also includes pharmaceuticals remaining in non-empty containers, personal protective equipment (PPE) contaminated with pharmaceuticals, and collected response materials from spills of pharmaceuticals.

3.6.7.3. Non-Pharmaceutical

Discarded dental amalgam, sharps, regulated medical waste, and household waste pharmaceuticals (purchased product) including those collected by an authorized Drug Enforcement Administration (DEA) event are not considered pharmaceutical waste.

3.6.7.4. HW Pharmaceuticals

A pharmaceutical that meets the definition of is a solid waste, as defined in §261.2, and exhibits one or more characteristics identified in part 261 subpart C or is listed in part 261 subpart D (as described in Section 2.1.2 of this Plan) is considered a hazardous waste pharmaceutical.

A hazardous waste pharmaceutical that is legitimately used/reused (*e.g.*, lawfully donated for its intended purpose) or reclaimed does not meet the definition of a solid waste (not discarded).

3.6.8. Sewer Prohibition [40 CFR 266.505]

The method of disposing of waste pharmaceuticals by sewering or discharge into municipal sewage/wastewater treatment systems is prohibited for all HW pharmaceuticals and non-HW pharmaceuticals, controlled and non-controlled, regardless of area.

3.6.9. Potentially Creditable HW Pharmaceuticals [40 CFR 266.503]

A potentially creditable HW pharmaceutical is a HW pharmaceutical that has a reasonable expectation to receive manufacturer credit and is in original manufacturer's packaging (except pharmaceuticals that were subject to recall), un-dispensed, and un-expired or less than one year past expiration date. Creditable HW pharmaceuticals are returned to the manufacturer through a contracted reverse distributor.

3.6.9.1. Recordkeeping for Potentially Creditable HW Pharmaceuticals

Potentially creditable hazardous waste pharmaceuticals shipped to a reverse distributor must maintain the following records (paper or electronic) for each shipment of potentially creditable hazardous waste pharmaceuticals for three (3) years from the date of shipment and available upon request by an inspector that includes the confirmation of delivery and shipping papers prepared in accordance with 49 CFR part 172 subpart C.

The contractor prepares all shipping papers for MCINCR-MCBQ, bills of lading, or other shipping documents. The reverse distributor receiving creditable pharmaceuticals from MCINCR-MCBQ returns a confirmation within 35 calendar days to MCINCR-MCBQ stating that the shipment arrived and is under the custody and control of the reverse distributor. If delivery confirmation is not received within 35 calendar days, MCINCR-MCBQ must contact the carrier and the reverse distributor to determine the status of the shipment.

3.6.9.2. Storage of Potentially Creditable HW Pharmaceuticals

Potentially creditable HW pharmaceuticals must be stored in original manufacturer packaging and are not subject to container standards, container labeling requirements, or maximum accumulation time limits. Expired potentially creditable HW Pharmaceuticals must shipped to the reverse distributor less than one year of the expiration date.

Potentially creditable HW pharmaceuticals must be store in a manner that prevents spills or releases and manage incompatibles pharmaceuticals as described in Section 3.6.10. Spill clean-up materials must be managed as non-creditable hazardous waste pharmaceuticals.

3.6.10. Non-Creditable HW Pharmaceuticals Management [40 CFR 266 Subpart P 266.502]

Non-creditable HW pharmaceutical waste is any discarded drug that cannot be returned through a reverse distribution program.

Non-creditable HW pharmaceuticals managed by MCINCR-MCBQ include pharmaceutical prescriptions not eligible for manufacture credit through reverse distribution; non-prescription pharmaceuticals that will not be used, reused, or reclaimed (e.g., investigational drugs, free samples of pharmaceuticals received by healthcare facilities), and residues of pharmaceuticals remaining in empty containers, contaminated PPE, floor sweepings, and clean-up material from pharmaceutical spills. All pharmaceutical waste at MCINCR-MCBQ that is not eligible for reverse distribution is managed as non-creditable HW pharmaceuticals, regardless of whether the waste meets the definition of HW pharmaceuticals under 40 CFR 266.500.

3.6.10.1. Container Requirements for Non-Creditable HW Pharmaceuticals

Non-creditable HW pharmaceuticals must be stored in a container is structurally sound, compatible with its contents, and that lacks evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions and closed when not adding wastes.

If a container deteriorates or a leak is observed, the HW pharmaceutical is immediately transferred to a container in good condition.

Containers are labeled "HAZARDOUS WASTE PHARMACEUTICALS" and with the ASD (i.e., the date the first waste was placed in the container).

3.6.10.2. Shipping Requirements for Non-Creditable HW Pharmaceuticals

Shipping procedures described in Section 3.8 are used to prepare non-creditable HW pharmaceuticals for shipment and disposal. Additionally, the appropriate HW pharmaceutical label is adhered to the container and "PHARMS" or "PHRM"[2] is entered in Item 13 of EPA Form 8700-22.

3.6.10.3. Inspection Requirements for Non-Creditable HW Pharmaceuticals

Weekly inspections are required for non-creditable HW Pharmaceutical accumulation areas to ensure compliance with container and labeling requirements.

3.6.10.4. Accumulation for Non-Creditable HW Pharmaceuticals

Non-creditable HW pharmaceuticals may be accumulated onsite for up to one year and facilities must be able to demonstrate the length of time the waste has been accumulating, starting from the date it first becomes a waste.

3.6.10.5. Recordkeeping Requirements for HW Pharmaceuticals

MCINCR- MCBQ retains a copy of each signed manifest for three years or until a signed copy is received from the designated facility which received the non-creditable HW pharmaceuticals.

A copy of each exception report for a period is kept for at least three years from the date of the report. Records of any test results, waste analyses, or other determinations made to support its HW determination(s) are retained at least three years from the date the waste was last sent for disposal. Records holding times are extended if requested by the EPA, state, or other regulatory entity.

MCINCR- MCBQ maintains the inspection reports for three (3) years for the accumulation area(s) for HW pharmaceuticals.

3.6.11. Incompatible of HW Pharmaceutical

For any ignitable, reactive, or combustible HW pharmaceutical (creditable and non-creditable), is managed to minimize the potential to generate extreme heat or pressure, fire, explosion, or violent reaction; produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health; produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions; damage the structural integrity of the container of HW pharmaceuticals; or otherwise threaten human health or the environment. Potentially incompatible HW pharmaceuticals are listed in Table 3-3. Incompatible HW pharmaceuticals are stored in their own containers, separate from all other pharmaceutical waste.

Table 3-3: Incompatible HW Pharmaceuticals

Pharmaceutical Material, Characteristic, or Property	Common Names and Examples	Incompatibility Notes
Aerosols	Asthma inhalers, Hurricaine Topical Anesthetic Gel	Contains flammable propellants
Botox	Myobloc	Not regulated under RCRA, but must be collected and

Pharmaceutical Material, Characteristic, or Property	Common Names and Examples	Incompatibility Notes
		transported in its own container
Collodion/Nitrocellulose	New Skin, wart removers	Ignitable and incompatible with strong oxidizers, strong acids
Ignitable	Velphoro, Zemplar	Ignitable and incompatible with strong oxidizers, strong acids
Oxidizers	Silver Nitrate sticks/applicators, Arxol Silver, Amyl Nitrate, Cyanide Antidote kits, hydrogen peroxide	Ignitable HW that yields oxygen and could stimulate combustion
Corrosive Acids	Aluminum chloride injections, Tri-Chlor, ammonia inhalants, cupric/copper/chromium chloride, hydroxyzine hydrochloride, L-Cysteine, lactic acid, Pyridoxine HCL injection, Sporanox, acetic acid, trichloroacetic acid	Can cause fire, explosion, or violent reaction when mixed with another material

3.6.12. Management of Nicotine Wastes [40 CFR 266.500]

Nicotine, present in gum, patches, and vaping liquid (e-liquid), is a listed HW. OTC nicotine replacement therapies (e.g., patches, gums, and lozenges) do not contain sufficient quantities of nicotine to meet acute HW criteria and are regulated and disposed of as SW. Prescription nicotine (e.g., nasal sprays and inhalers) and e-liquids/e-juices in e-cigarettes, cartridges, or vials in unused formulations with nicotine as the sole active ingredient are regulated as a RCRA acute HW.

Vaping liquid may or may not contain nicotine. Vaping e-liquid containing nicotine is intended to be vaporized during use and any vaping e-liquid remaining in a used or unused e-cigarette or cartridge is not considered used. A determination must be made whether vaping liquid for disposal contains nicotine. If the generator of the waste is unsure and cannot document if the e-liquid in a cartridge or e-cigarette contains nicotine, the assumption is made that it contains nicotine and is an acute HW. Unused e-liquid containing nicotine is managed as Non-creditable HW pharmaceutical.

3.6.13. Controlled Substances Exemption [40 CFR 266.506]

HW pharmaceuticals that are also listed on a schedule of controlled substances by the Drug Enforcement Administration (DEA) in 21 CFR 1308 and are conditionally exempt from RCRA HW regulations. All non-creditable HW pharmaceuticals that are also regulated under the DEA may be disposed of by a method of destruction or combustion approved by the DEA.

Controlled substances are managed at MCINCR-MCBQ in compliance with DEA regulations for controlled substances in 21 CFR 1317. Controlled substances management at the installation requires two-person teams to place the controlled substance into a DEA drop box, located in a secure area with proper signage. Customer drop boxes are available for disposal of DEA Schedule II through V medicines. Materials are retrieved from drop boxes by DEA agents or representatives.

3.6.14. Military Munitions [40 CFR 266 Subpart M and MCO 5090.2, Vol. 9, Ch. 3, Section 030501.K]

MCINCR-MCBQ generates HW military munitions. Removal or management of munitions is coordinated through the MCINCR-MCBQ explosive ordnance disposal (EOD) Authorized

Military component. MCINCR-MCBQ is not permitted to receive HW munitions from offsite sources.

Military munitions are not considered HW when used for their intended purpose, such as, training or part of research, development, testing, and evaluation activities, or during range clearance activities on active and inactive ranges. Unused munitions that are repaired, reused, recycled, reclaimed, disassembled, reconfigured, or otherwise subject to materials recovery activities are also excluded from the definition of SW.

An unused military munition is a SW when it is abandoned by being disposed, burned, detonated (except during its intended use), incinerated, or treated prior to disposal or the munition is damaged (e.g., it has lost its structural integrity through cracks or leaks). A used munition is a SW when transported off range or site for the purpose of storage, reclamation, treatment, disposal, or treatment prior to disposal or if recovered, collected, and then disposed by burial, or landfill either on or off a range.

In the event that military munitions become HW, Marine Corps System Command (MCSC) must sign the manifest for the HW military munitions. MCSC guarantees the following:

- Proper packaging of unused military munitions for shipment;
- Signature for the manifest came from an NREA-authorized personnel who acknowledges that the HW munitions were generated by MCINCR-MCBQ and are leaving the installation;
- The HW is being transported by a permitted HW transporter; and
- The HW is being transferred to a designated and permitted TSDF.

For instances where used military munitions meet the definition of SW, NREA will determine if it meets the definition of HW and will generate and sign all HW manifest. NREA maintains manifests.

Under 40 CFR 270.1(c)(3)(i)(D) and 9VAC-20-60, a person is not required to obtain a permit for treatment or containment activities performed during immediate response to the threat to human health, public safety, property, or the environment from the known or suspected presence of military munitions, other explosive material, or an explosive device as determined by an explosive or munitions emergency response specialist as defined in 40 CFR 260.10.

A summary of state guidance for emergency munitions response procedures is as follows:

- Waste Procedure No. 5, HW Emergency Permits, dated February 16, 2018 - This memorandum updates the procedures for issuing HW Emergency Permits and updates the personnel currently authorized to issue emergency permits.
- Emergency Permits – Virginia HW Management Regulations and the RCRA Regulations – Guidance Summary, dated May 13, 2010 – The purpose of this guidance is to provide a general summary guidance document regarding the regulatory requirements associated with Emergency Permits under the Virginia HW Management Regulations at 9VAC-20-60. This guidance addresses the above regulations or "exclusions" regarding the immediate response to suspected presence of military munitions, other explosive material, or an explosive device, which pose an immediate threat to human health, public safety, property, or the environment.

- VDEQ Correspondence regarding EOD Emergency Response Operations and Emergency Permits, dated March 4, 2011 - This correspondence provides regulatory guidance and clarification of emergency response operations associated with EOD emergency actions or any emergency operations conducted in the Commonwealth of Virginia by the military's EOD specialists, etc. (similar letters have been sent to other military bases with EOD staff.)
- Emergency Permit Application – Boilerplate Document, dated February 13, 2010[3] - This Permit Application Boilerplate Document is to be completed and submitted by the facility to enable the VDEQ to issue the written Emergency Permit. Use the list of 18 items in the crosscheck section of permit application for completeness before submittal to the VDEQ.

3.6.15. Compressed Gas Cylinder Management

Aerosol cans hold a substance under pressure and dispense or release it as a fine spray, usually by means of a propellant gas. A determination whether the contents within waste aerosol cans is HW or SW is made as described in Section 3.6.1.1. Empty aerosol cans are not disposed in the trash. Units will manage aerosol cans as HW and will follow determination and compatibility requirements.

Aerosol cans, regardless of contents volume, are managed as HW. Cans are stored in a 55-gallon drum or 5-gallon pail within an SAA. When placing cans into the container, each can must be capped or spray nozzle removed. Individual cans may not exceed 1-liter capacity. The drum storing cans are managed as HW as described in Section 3.1.1 and Section 3.1.3.

Compressed gas cylinders are managed as HW if rejected by the distributor or vendor where purchased or abandoned units.

3.6.15.1. Turn-in Procedures [40 CFR 262.15(a)(6) and MCO 5090.2, Vol. 9, Ch. 3, Section 030502.A.4]

When a container becomes full, or is no longer needed, the HW Handler will contact the NREA to schedule a pick-up. NREA provides a pick-up service to assist units with removing, storing, and disposing HW, Non-HW, and UW. NREA provides trained HW transporters to retrieve all HW, Non-HW, UW and transport it to one of the less than 90-day accumulation areas for proper storage until shipped for disposal. If applicable, non-base personnel will determine how the waste from the SAA will be transported to the less than 90-day accumulation area, depending on the amount of waste and the container size.

Prior to turning-in waste from an SAA, each container will be inspected by the unit to ensure that it is in good condition and suitable for transportation. If not, the waste must be transferred to a container in good condition, or the container must be over-packed in a salvage drum.

Waste being transferred from an SAA to a less than 90-day accumulation area must be tightly sealed (i.e., closed) in an appropriate waste container and properly labeled.

The specific turn-in procedure steps are as follows:

- Contact - HW Handler contacts (e-mail, call, etc.) NREA Environmental Compliance Section to schedule a waste pick-up.
    - NREA Front Desk
    - HW Program Manager
    - HW Base Inspector
    - HW Pickup Driver

- HW Warehouse Facility Manager

- Describe - HW Handler provides the following information when requesting a waste pick-up.
  - Unit/activity
  - Location/building number
  - POC/phone number
  - Detailed description of type of waste
- Quantity - HW Handler provides the quantity of each waste stream to be picked up (e.g., two 55-gallon drums, nine lead-acid batteries, four boxes of lamps, etc.)
- Preparers - HW Handler properly prepares waste containers for transport (e.g., drums wrench tight, lamp boxes taped shut, etc.)
- Labels - HW Handler ensures containers are properly labeled.
- Turn-In Sheets - HW Handlers are required to provide and ensure completion of "turn-in sheets" titled "MCINCR-MCBQ Waste Tracking Form" (provided in Appendix H).
- Inspect – Wastes, containers, and documents are inspected by the NREA HW driver before loading. If any discrepancies with the paperwork or container (e.g., quantity or type of waste incorrect, container not compatible with material, labeling is incorrect, locking mechanism is not in place, etc.) are noted, they must be corrected before loading of waste can begin.
- Load - When ALL the above steps are completed, units are required to assist NREA personnel with the loading and off-loading of all containers.

3.7 Consolidation of HW from Very Small Quantity Generators [40 CFR 262.14(a)(5)(viii) and 40 CFR 262.17(f)]

MCINCR-MCBQ has a Very Small Quantity Generator (VSQG) under its control and ownership at the Museums Restoration Operational Unit. By definition, VSQGs generate less than or equal to 100 kg per month of non-acute HW, and less than or equal to 1 kg per month of acute HW, and less than or equal to 100 kg per month of acute HW spill residue or soil. HW generation rates at Museums Restorations Operational Unit are consistent with VSQGs. EPA was notified of the consolidation through submittal of EPA Form 8700-12. Should the name or address of Museum Restorations Operational Unit change, MCINCR-MCBQ will submit an updated Site ID Form (EPA Form 8700-12) within 30 days after a change.

The Museum Restorations Operational Unit complies with all aspects of this HW management, as applicable to VSQGs. The unit has three SAAs to accumulate waste. Upon transfer by NREA for consolidation at the less than 90-day accumulation area, containers are labeled with the ASD. A manifest for transferring the waste from the VSQG to the less than 90-day accumulation area is not required. Once received, MCINCR-MCBQ labels and marks the HW in accordance with this plan. VSQG wastes are included in MCINCR-MCBQ's Biennial reports using a distinct source code.

Records of shipments are maintained for three years from when the HW was received from Museum Restorations Operational Unit. Records include the following information:

- Description of HW;
- Quantity of HW;

- Date was received; and
- Name, site address, and contact information identifying the VSQG.

Should Museum Restorations Operational Unit exceed the limits for VSQG status, the unit will apply for Small Quantity Generator (SQG) status. If SQG status is granted, the Museum Restorations Operational Unit will comply with SQG requirements, obtain its own EPA ID numbers, and be removed from MCINCR-MCBQ HW operations.

3.8 Shipping

3.8.1. Pre-shipping [40 CFR 262 Subpart C]

Prior to transport, MCINCR-MCBQ packages HW in accordance with applicable RCRA and DOT regulations using DOT acceptable containers. Each waste container is marked, labeled, and placarded in accordance with 49 CFR 172. The label includes identification of the waste, and if applicable, the hazard class, and placarded with the applicable DOT diamond. The Waste Stream Sheets in Appendix F contain pictures of labels, hazard class stickers, and DOT diamond placards for wastes typically generated by MCINCR-MCBQ.

3.8.2. Manifest [40 CFR 262 Subpart B, EPA Form 8700-22, and MCO 5090.2, Vol. 9, Ch. 3, Section 030604]

MCINCR-MCBQ uses and maintains manifests prior to and during shipment of HW to a TSDF. The shipping document, EPA Form 8700-22 (including, if necessary, EPA Form 8700-22A) also referred to as the Uniform HW Manifest, or the electronic manifest, is originated by the generator at MCINCR-MCBQ. At the time of shipment, a signatory, certified by MCINCR-MCBQ, signs the manifest by hand and obtains, on the manifest, the handwritten signature of the initial transporter and the date of acceptance. MCINCR-MCBQ retains one copy of the manifest and provides the remaining three copies to the initial transporter. The Uniform HW Manifest travels with HW from the point of generation, through transportation, to the final TSDF. Each party in the chain of shipping, including the generator, signs and keeps one of the manifest copies, creating a "cradle-to-grave" tracking of the HW.

Each hazardous and non-HW contractor prepares all shipping papers for MCINCR-MCBQ Uniform HW Manifest (EPA Form 8700-22), bills of lading, or other shipping documents, and a Land Disposal Restriction and Certification form. Manifest requirements do not apply to the transport of HWs on a public or private right-of-way within or along the border of contiguous property under the control of the same person, even if such contiguous property is divided by a public or private right-of-way.

With the exception of HW military munitions, only NREA personnel authorized by Commanding Officer of MCBQ and trained on HW shipping requirements may sign shipping papers (i.e., Uniform HW Manifest, Non-HW Manifest, Waste Shipment Records, and Bill of Lading) for transportation of HW, non-HW, UW, asbestos-containing waste material, special SW, and remediation waste.

Typically, the off-site facility that receives HW from MCINCR-MCBQ returns a signed copy of each manifest to MCINCR-MCBQ within 45 days of shipment. If MCINCR-MCBQ has not received the signed copy within 35 days, MCINCR-MCBQ will contact the TSDF to procure a copy. If MCINCR-MCBQ has not received a signed copy within 45 days, MCINCR-MCBQ must generate an exception letter to VDEQ explaining the circumstances and disposition of the pertinent copy.

A signatory authorized by MCINCR-MCBQ certifies the following statement on each uniform waste manifest:

"I am a large quantity generator. I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment."

3.9 Waste Minimization and Source Reduction [40 CFR 262.27(a) and MCO 5090.2, Vol. 9, Ch. 3, Section 030501.D]

To support this statement, waste minimization and source reduction projects, funds available for such projects, and goals to reduce the use of toxic and hazardous chemicals are managed through a combination of the HM Program, SW Program, and Sustainability Plan as described below.

HW minimization practices have been incorporated into Marine Corps Base Order 6280.4A, HM Management Program. In accordance with the Order, MCINCR-MCBQ will reduce the amount of HM procured and used, and the amount of subsequent HW generated, by up-front HM control in procurement, supply, and management. MCINCR-MCBQ will implement pollution prevention (P2) measures to eliminate/minimize environmental costs, minimize procurement of HM, and/or reduce the generation of pollution from operations. The combination of these efforts will reduce the amount of HM used, the HW generated, unnecessary risks, and the associated costs. This supports mission readiness, provides enhanced safety in the workplace, and minimizes environmental impacts.

3.9.1. Sustainability Plan

Waste Minimization and P2 goals are established in the installation's Sustainability Plan (Minimization Plan) dated June 2013. Progress is tracked in the 2016 Benchmark Sustainability Performance Report. The Sustainability Plan is located on the MCINCR-MCBQ SharePoint.

3.10 Reporting and Recordkeeping

3.10.1. Exception Reporting [40 CFR 262.42 and MCO 5090.2, Vol. 9, Ch. 3, Section 031002]

If a signed and dated 4th copy of the manifest is not received from the designated facility within 35 days from the initial shipment date, MCINCR-MCBQ must contact the certified disposal facility where the pertinent waste was shipped and inquire as to the disposition of the signed 4th copy. If a signed 4th copy of a manifest is not received in 45 days from the date on which the initial transporter accepted the waste, a "manifest exception report" will be completed by NREA and sent to the VDEQ's, RCRA Data Administrator as per 40 CFR 262.42(a)(1)(2).

All exception reports sent to VDEQ describe efforts made by MCINCR-MCBQ to locate the signed 4th copy of the HW manifest and the results of those efforts.

3.10.2. Biennial Reporting [40 CFR 262.41(a), EPA Form 8700-13 A/B, and MCO 5090.2, Vol. 9, Ch. 3, Section 031001]

The NREA HW Program staff prepares the Biennial Report required for LQGs using EPA Form 8700-13A/B. The report details HW program activities and provides the nature, quantities, and disposition of HW generated during the reporting period (i.e., every odd year). The Biennial Report is submitted to EPA by March 1 of each even-numbered year.

3.10.3. Recordkeeping [40 CFR 262.40 and MCO 5090.2, Vol. 9, Ch. 3, Section 031003]

MCINCR-MCBQ retains records as listed in Table 3-4.

Table 3-4: Recordkeeping Requirements

Record	Time Retained	Location Retained	Maintained by
Signed waste manifest and bill of lading	5 years on site and archived indefinitely	NREA - Building 3049	NREA HW Program Manager
Biennial Report	5 years on site and archived indefinitely	NREA - Building 3049	NREA HW Program Manager
Annual Headquarters Marine Corps Data Call	5 years on site and archived indefinitely	NREA - Building 3049	NREA HW Program Manager
Exception Report	5 years on site and archived indefinitely	NREA - Building 3049	NREA HW Program Manager
Waste and HW determinations including test results, documentation, and records	3 years from the date the waste was last sent, during any unresolved enforcement action, or longer if requested by the EPA, state, or other regulatory entity	NREA - Building 3049	NREA HW Program Manager
Training records and rosters	3 years	NREA - Building 3049	NREA HW Program Manager
Training records for current and former personnel	Current personnel - until facility closure Former Personnel - 3 years from the date the employee last worked at the facility	Unit-specific Environmental Operations Records binder	ECs, Practice Owners, and Supervisors
Weekly and monthly inspection records and corrective action reports of HW, UW, and MSA areas	3 years	Unit-specific Environmental Operations Records binder	NREA, ECs, Practice Owners, and Supervisors

3.11 Closure [40 CFR 262.17(a)(8) and MCO 5090.2, Vol. 9, Ch. 3, Section 031003.K]

Should MCINCR-MCBQ close one or more of its less than 90-day accumulation areas a notice of closure will be placed in the unit's operating record within 30 days after closure, specifying which unit is closing. Should MCINCR-MCBQ close the facility, EPA will be notified using form 8700-12 no later than 30 days prior to closing. Within 90 days after closing the facility, EPA will be notified, again using form 8700-12, that the performance standards in 40 CFR 262.17(8)(iii) have been met.

In order to comply, MCINCR-MCBQ close the less than 90-day accumulation area in a manner that:

- Minimizes the need for further maintenance by controlling, minimizing, or eliminating, to the extent necessary to protect human health and the environment, the post-closure escape of HW, to the ground or surface waters or to the atmosphere; and
- Removes or decontaminates all contaminated equipment, structures, and soil and any remaining HW residues from the area including containment system components, contaminated soils, and structures and equipment contaminated with waste.

Any HW generated in the closing process must be managed in accordance with all HW regulations. Units are required to notify NREA upon any SAA site closure.

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4.0 PREPAREDNESS, PREVENTION, AND EMERGENCY PROCEDURES [40 CFR 262 SUBPART M AND MCO 5090.2, VOL. 9, CH. 3, SECTION 030502.B.9]

MCINCR-MCBQ has preparedness, prevention, and emergency procedures in place, as well as a HW Contingency Plan for areas where HW is generated or accumulated. Site-specific contingency plans are located at all SAAs, near points of generation throughout the installation.

4.1 Maintenance and Operation of Facility [40 CFR 262.251]

MCINCR-MCBQ maintains and operates the installation to minimize the potential of fire, explosion, or any HW release that could threaten human health or the environment as described below.

4.2 Required Equipment [40 CFR 262.250 and 40 CFR 262.252]

MCINCR-MCBQ maintains emergency response equipment near areas where HW is generated or stored. The types of equipment appropriate for responding to emergencies is identified for areas as described in Table 4-1.

Table 4-1: Required Emergency Response Equipment

Required Equipment	SAAs	NREA HW Storage Facility - Building 27401	Naval Medical Clinic - Building 3259, MCCS Auto Hobby Shop - Building 2080, HMX-1
Internal communications or alarm system capable of providing immediate emergency instruction (voice or signal) to MCINCR-MCBQ personnel	Determined to be not required based on type and quantity of HW is stored	Fire alarm system installed with alarm boxes located at critical areas throughout building	Determined to be not required based on type, quantity, and length of time of HW is stored
A telephone (immediately available at the scene of operations) or a hand-held two-way radio, capable of summoning emergency assistance from local police departments, fire departments, or state or local emergency response teams	Personnel carry cell phones at all times when working at an SAA location	Telephone available in building	Personnel carry cell phones at all times when working at less than 90-day accumulation area
Portable fire extinguishers, fire control equipment (including special extinguishing equipment, such as that using foam, inert gas, or dry chemicals), spill control equipment, and decontamination equipment	Spill kit with equipment for cleaning types of HW accumulating located in each area	Emergency eyewash/shower stations – three outside and one inside PPE provided to employees Fire extinguishers – ABC type	Located within each area: Fire extinguishers – ABC type Shower Eye wash station Spill kits PPE
Water at adequate volume and pressure to supply water hose streams, or foam producing equipment, or automatic sprinklers, or water spray systems	Fire suppression systems, to include fire extinguishers, located in each building	Fire hydrants located around the building Fire suppression systems located in building and activated by use of pull levers at the front and rear of the building	Fire suppression systems located in each building

4.3 Testing of Equipment [40 CFR 262.253]

Emergency equipment described in Table 4-1 is tested and maintained as necessary to ensure proper operation in the event of an emergency. Units shall ensure all emergency equipment will be serviceable and ready for reuse after any emergency event. Waste accumulation sites are required to be inspected weekly, including availability and functionality of emergency equipment.

4.4 Access to Communications or Alarm System [40 CFR 262.252 and 40 CFR 262.254]

When a HW is poured, mixed, spread, or otherwise handled, all personnel involved in the effort have immediate access to an internal alarm (at the NREA HW Storage Facility - Building 27401) or emergency communication using cell phone or through visual or voice contact. If a single employee is working in a SAA or less than 90-day accumulation area, immediate access to a telephone, cell phone, or other device capable of calling emergency assistance is available.

4.5 Required Aisle Space [40 CFR 262.255]

MCINCR-MCBQ maintains adequate aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in an emergency, unless aisle space is not needed for any of these purposes. Aisle space is maintained in SAAs and less than 90-day accumulation areas. Waste accumulation sites are required to be inspected weekly, including for sufficient aisle space. SAAs are required to maintain aisle spacing of no less than 36 inches.

4.6 Arrangements with Local Authorities [40 CFR 262.256]

MCINCR-MCBQ has its own police and fire departments which have 24-hour response capabilities. The fire and police departments are fully aware of the layout of the installation and locations of HW accumulation and storage areas and are provided copies of the HW Contingency Plan and the Oil Discharge Contingency Plan (ODCP).

MCINCR-MCBQ agreed to an official charter as participants in the Military-Civilian Task Force for Emergency Response (MCTFER) and Rappahannock Emergency Medical System (EMS) Council that outlines relationships with the counties of, Fauquier, Stafford, and Prince Williams. The MCTFER charter authorizes the development and the execution of inter-operative mutual aid for emergency response. Copies of the Facility Response Plan (ODCP) have been provided to the Assistant Chief of Staff Security and Emergency Services Department. This department provides consolidated EMS, fire, HM, and police support during emergency incidents. Charters and memoranda of understanding with local authorities are maintained by the installation's G7 Section and are available on MCINCR-MCBQ's SharePoint site.

Local hospitals have been familiarized with the properties of HW handled at the facility and the types of injuries or illnesses which could result from fires, explosions, or releases at the facility. Medical facilities are used for sectors as described in Table 4-2.

Table 4-2: Medical Facilities

Base Sector	Local Medical Facility
Culpeper Sector	University of Virginia Culpeper Hospital
Fauquier Sector	Fauquier Hospital
Fredericksburg Sector	Mary Washington Hospital (Level II Trauma Center)
Spotsylvania Sector	Mary Washington Free Standing Emergency Department at Lee's Hill
	Spotsylvania Regional Medical Center

Base Sector	Local Medical Facility
Stafford Sector	Stafford Hospital
North Side of Base Sector	Sentara Northern Virginia Medical Center Woodbridge
	Inova Fairfax Hospital (Level I Trauma Center)
	Medstar Hospital in Washington, DC (Burn Center)

4.7 HW Contingency Plan [40 CFR 262.261 and MCO 5090.2, Vol. 9, Ch. 3, Section 030502.B.9]

The HW Contingency Plan is included in Appendix C. Site contingency plans will be located at the unit. The HW Contingency Plan complies with RCRA regulations for LQGs.

4.8 Purpose of HW Contingency Plan [40 CFR 262.260]

MCINCR-MCBQ's HW Contingency Plan is designed to minimize hazard to human health or the environment from fires, explosions, or any unplanned release of HW.

4.9 Implementation of HW Contingency Plan [40 CFR 262.260]

The designated Incident Commander or NREA Environmental Emergency Coordinator (EEC) has the authority to implement the HW Contingency Plan when an imminent or actual incident could threaten human health or the environment. The decision to implement the plan is based on the occurrence of one or more of the following criteria:

- Fires and/or Explosion
  - Fire causes the release of toxic fumes;
  - The fire spreads and could possibly ignite materials at other locations onsite or could cause heat-induced explosions;
  - The fire could possibly spread to offsite areas;
  - Use of water or water and chemical fire suppressant could result in contaminated runoff;
  - An imminent danger exists that an explosion could occur, causing a safety hazard because of flying fragments or shock waves;
  - An imminent danger exists that an explosion could ignite HW at the facility;
  - An imminent danger exists that an explosion could result in release of hazardous substances; or
  - An explosion has occurred.
- Spills or Material Release
  - The spill could result in release of flammable liquids or vapors, thus causing a fire or gas explosion hazard;
  - The spill could cause the release of hazardous liquids or fumes;
  - The spill can be contained onsite, but the potential exists for groundwater contamination; or
  - The spill cannot be contained onsite, resulting in atmospheric, offsite soil contamination and/or ground or surface water pollution.

- Floods
  - The potential exists for surface water contamination.

4.10 Content of HW Contingency Plan [40 CFR 262.261]

4.10.1. Emergency Coordinator [40 CFR 262.264]

An emergency coordinator from NREA is on-call or available to quickly respond to an emergency and implement the HW Contingency Plan procedures.

The emergency coordinators listed in Table 4-3 have the knowledge of all aspects of HW Contingency Plan, HW management operations and activities, locations and characteristics of HW, location of records, and layout of the facility. They also have authority to commit the resources needed to carry out the HW Contingency Plan.

Table 4-3: Emergency Coordinators

Name	Phone Number	Address
Amy Denn Primary	(571) 606-7842 (cell) (703) 432-0537 (work)	Bordelon St., Building 3049 Quantico, VA 22134
J. David Grose Alternate	(703) 447-4218 (cell) (703) 432-1335 (work)	Bordelon St., Building 3049 Quantico, VA 22134
Jon Cooper Alternate	(360) 473-3226 (cell) (703) 432-0532 (work)	Bordelon St., Building 3049 Quantico, VA 22134
David Norris Alternate	(703) 371-1783 (cell) (703) 432-0530 (work)	Bordelon St., Building 3049 Quantico, VA 22134

Notes:
NREA is located on Bordelon Street, Building 3049 Quantico, Virginia 22134.

4.10.2. Emergency Procedures [40 CFR 262.265]

The HW Contingency Plan, provided in Appendix C, contains the following procedures that will be conducted in the event an emergency that could involve HW:

- The EEC will activate internal alarms and notify facility personnel and appropriate state and local agencies;
- The EEC will identify the character, exact source, amount, and extent of any released materials through observation, review of records/manifests, or sampling;
- The EEC will concurrently assess possible hazards (direct and indirect) to human health or the environment that may result from the release, fire, or explosion;
- If a determination is made that the emergency could threaten human health or the environment outside of the facility, the EEC will notify local authorities and government on-scene coordinator designee;
- The EEC will take measures to ensure that fires, explosions, and releases do not occur, recur, or spread to other HWs;
- If operations are stopped in response to a fire, explosion, or release, the EEC will monitor equipment for leaks, pressure buildup, gas generation, and other possible faults;
- The EEC will provide a waste determination for treating, storing, or disposing of recovered waste, contaminated soil or surface water, or other material;
- The EEC will ensure that no incompatible waste and released material are comingled;
- The ECC emergency equipment is cleaned and fit for use; and

- The ECC will submit a written report to the State including the details of the incident, as they are recorded in the operating record, within 15 days.

4.11 Copies of HW Contingency Plan [40 CFR 262.262(a) and 40 CFR 256(a)]

The HW Contingency Plan is located on MCINCR-MCBQ's SharePoint site. Copies of the HW Contingency Plan, ODCP, and Marine Corps Base Order 5090.6 (Oil and Hazardous Substances Spill Management Program) have been provided to the local police, fire departments, and emergency response teams including the layout of the facility and associated hazards, places where facility personnel would normally be working, entrance to roads inside the facility, and possible evacuation routes.

4.12 Quick Reference Guide Requirements/Elements [40 CFR 262.262(b) and (c)]

The HW Contingency Plan Quick Reference Guide is contained in Attachment C-1 of the Plan. The guide contains:

- The types/names of HWs in layman's terms and the associated hazard associated with each HW present at any one time (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid);
- The estimated maximum amount of each HW that may be present at any one time;
- The identification of any HWs where exposure would require unique or special treatment by medical or hospital staff;
- A map of the facility showing where HWs are generated and accumulated and routes for accessing these areas;
- A street map of the facility in relation to surrounding businesses, schools, and residential areas to understand how best to get to the facility and also evacuate citizens and workers;
- The locations of water supply (e.g., fire hydrant and its flow rate);
- The identification of onsite notification systems (e.g., fire alarm that rings off site, smoke alarms); and
- The name of the emergency coordinator(s) and 24-hour emergency telephone number(s) or, in the case of a facility where an emergency coordinator is continuously on duty, the emergency telephone number for the emergency coordinator.

4.13 Amendment of HW Contingency Plan [40 CFR 262.263]

The HW Contingency Plan will be reviewed annually, and immediately amended, whenever any of the following occurs:

- Applicable regulations are revised;
- The plan fails in an emergency;
- There are material changes at the facility including design, construction, operation, maintenance, or other circumstances that increases the potential for fires, explosions, or releases of HM, HW, or HW constituents, or changes to emergency response procedures;
- The list of emergency environmental contacts changes; or
- The list of emergency equipment changes.

APPENDIX A

Facility Diagram

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Hazardous Waste and Waste Accumulation Areas

Map Index

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 0.5 1 2

Miles

Map Extent

Installation Boundary

Sources: USGS The National Map basemap.

Bluestone

MCBQ HWMP Facility Mapbook Index.mxd

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Hazardous Waste and Waste Accumulation Areas

Map 1 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

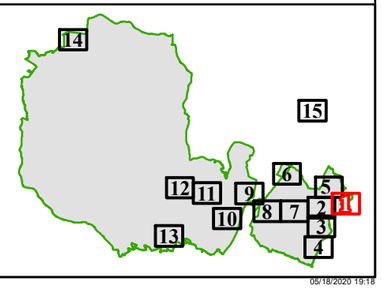
- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

- SAA Satellite Accumulation Area
- <90 Less Than 90 Day Area
- UW Universal Waste
- NR Non-Regulated Waste
- MSA Medical Storage Area

Sources: Hazardous Waste Generation Areas, Buildings, Road Centerlines, and Fire Hydrants were provided by MCBQ in December 2019. Hazardous Waste Generation Areas were revised as part of the HWMP development. USGS The National Map basemap.

Bluestone



2249
UW
SAA

2006
SAA

3141
UW
NR

3048
UW
NR

660
UW

2040
SAA

3215
SAA
NR

3228
SAA
UW

MAP 5

MAP 2

Quantico

MCBQ HWMP Facility Mapbook.mxd

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Hazardous Waste and Waste Accumulation Areas

Map 2 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000
Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
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- Map Boundary

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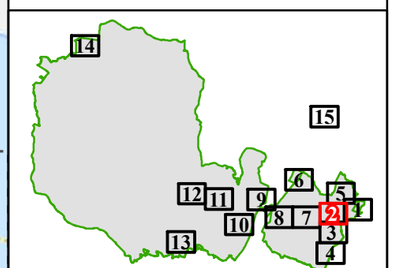

VIRGINIA

MAP 3

MAP 1

2006 SAA

660 UW 2089M

2080 UW SAA <90

2013 UW SAA

3167 UW SAA

3015 SAA NR

2033 UW SAA

2043 NR

3164 SAA

3045 SAA

3037 UW SAA

3259 SAA <90 MSA

3252 UW SAA NR

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Hazardous Waste and Waste Accumulation Areas

Map 3 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000
Feet

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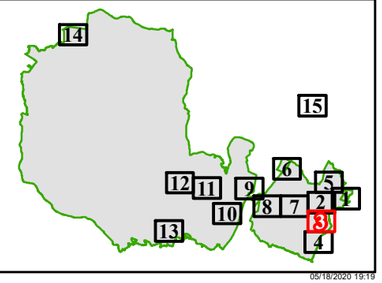

3259 SAA <90 MSA

3252 UW SAA NR

3018 UW SAA NR

3097 SAA

2104 SAA

2100 SAA

HMX1 <90

2132 (2nd Floor) MSA

2134 SAA UW

5170 SAA

MAP 2

Quantico Marine Corps Air Field
Turner Field

PRINCE WILLIAM COUNTY
STAFFORD COUNTY

Hazardous Waste and Waste Accumulation Areas

Map 4 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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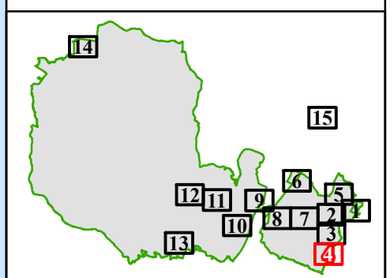

5003
SAA
MSA

2189A
UW

3185
UW
SAA
NR

3230A
UW

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Hazardous Waste and Waste Accumulation Areas

Map 5 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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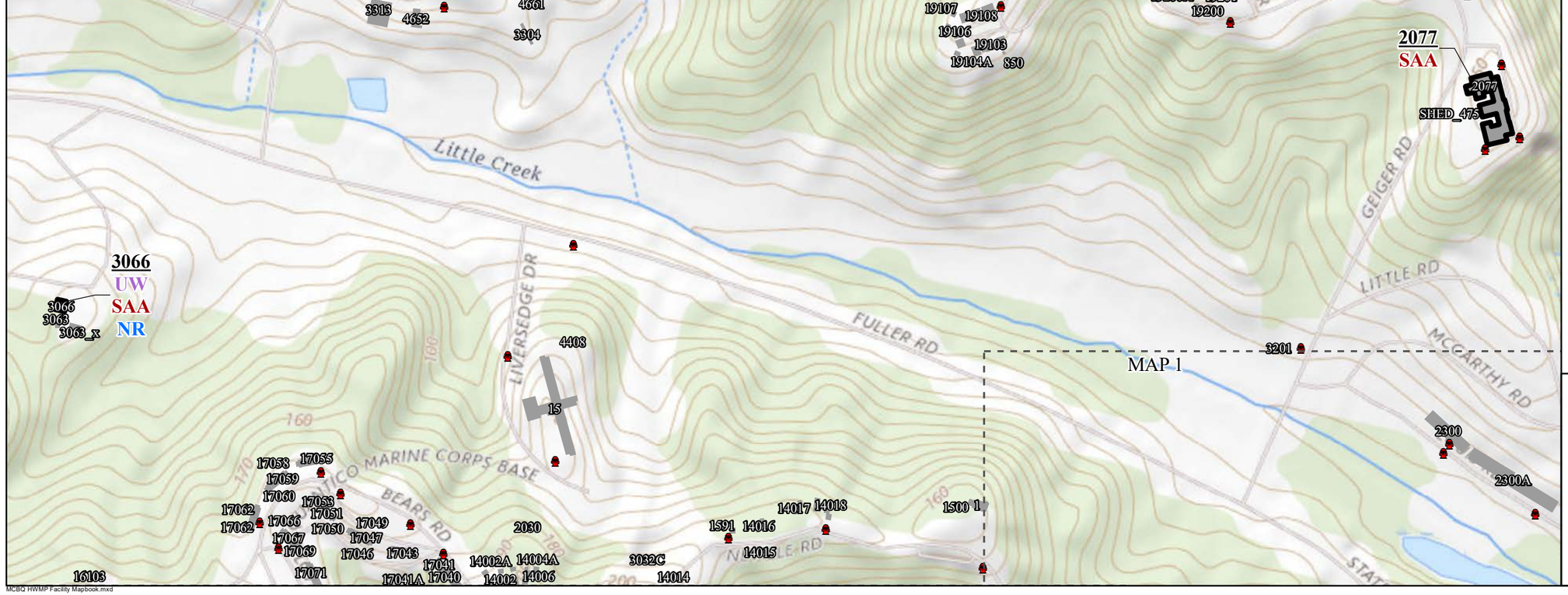

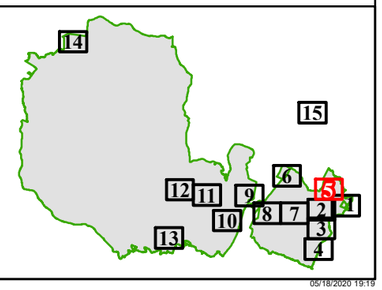

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Hazardous Waste and Waste Accumulation Areas

Map 6 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

- **SAA** Satellite Accumulation Area
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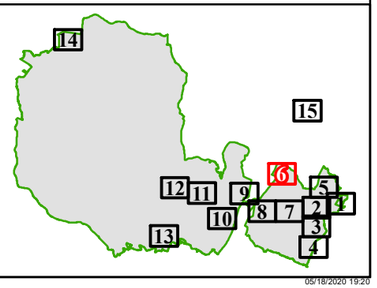
Bluestone



13914EDS
13914EDS

1716

3300
UW

3380

3280
UW
SAA

RUSSELL RD

Chopawamsic Creek

MCCARD RD

BUTTON ST

Hazardous Waste and Waste Accumulation Areas

Map 7 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000
Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

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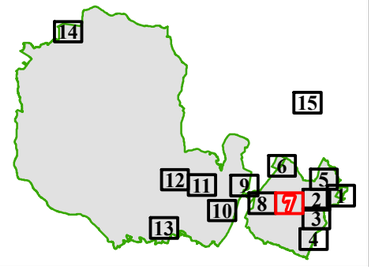
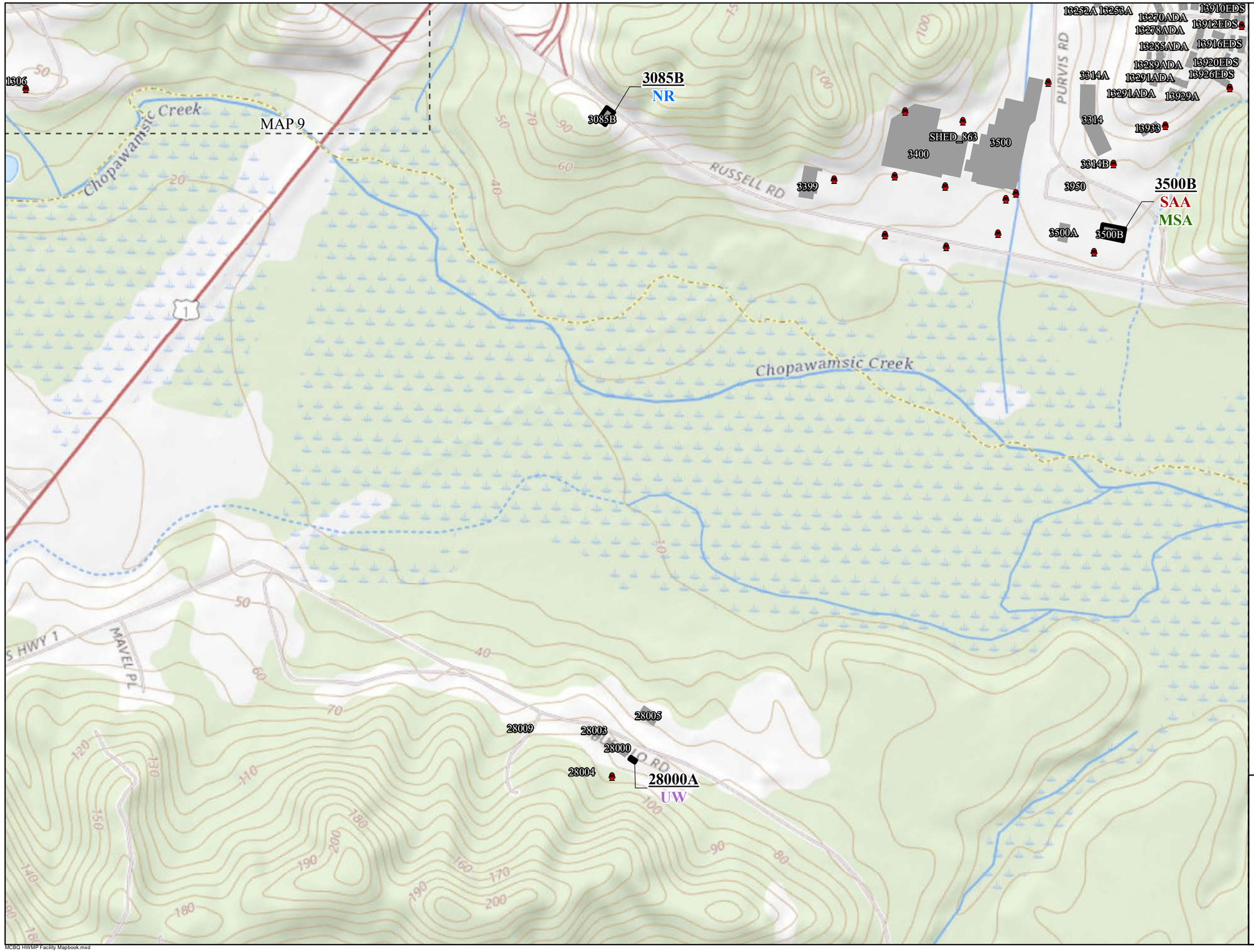


Hazardous Waste and Waste Accumulation Areas

Map 8 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico



N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

- **SAA** Satellite Accumulation Area
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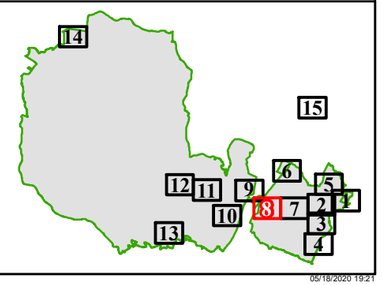

Hazardous Waste and Waste Accumulation Areas

Map 9 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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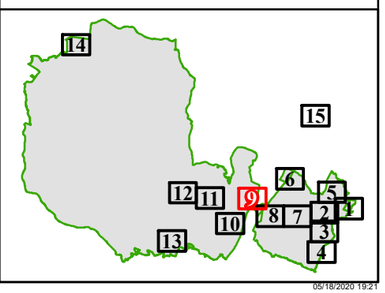

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Hazardous Waste and Waste Accumulation Areas

Map 10 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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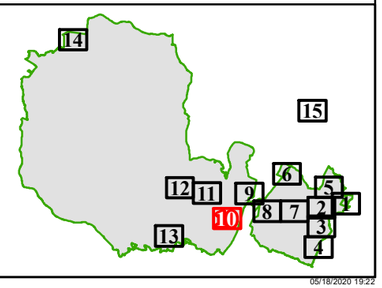
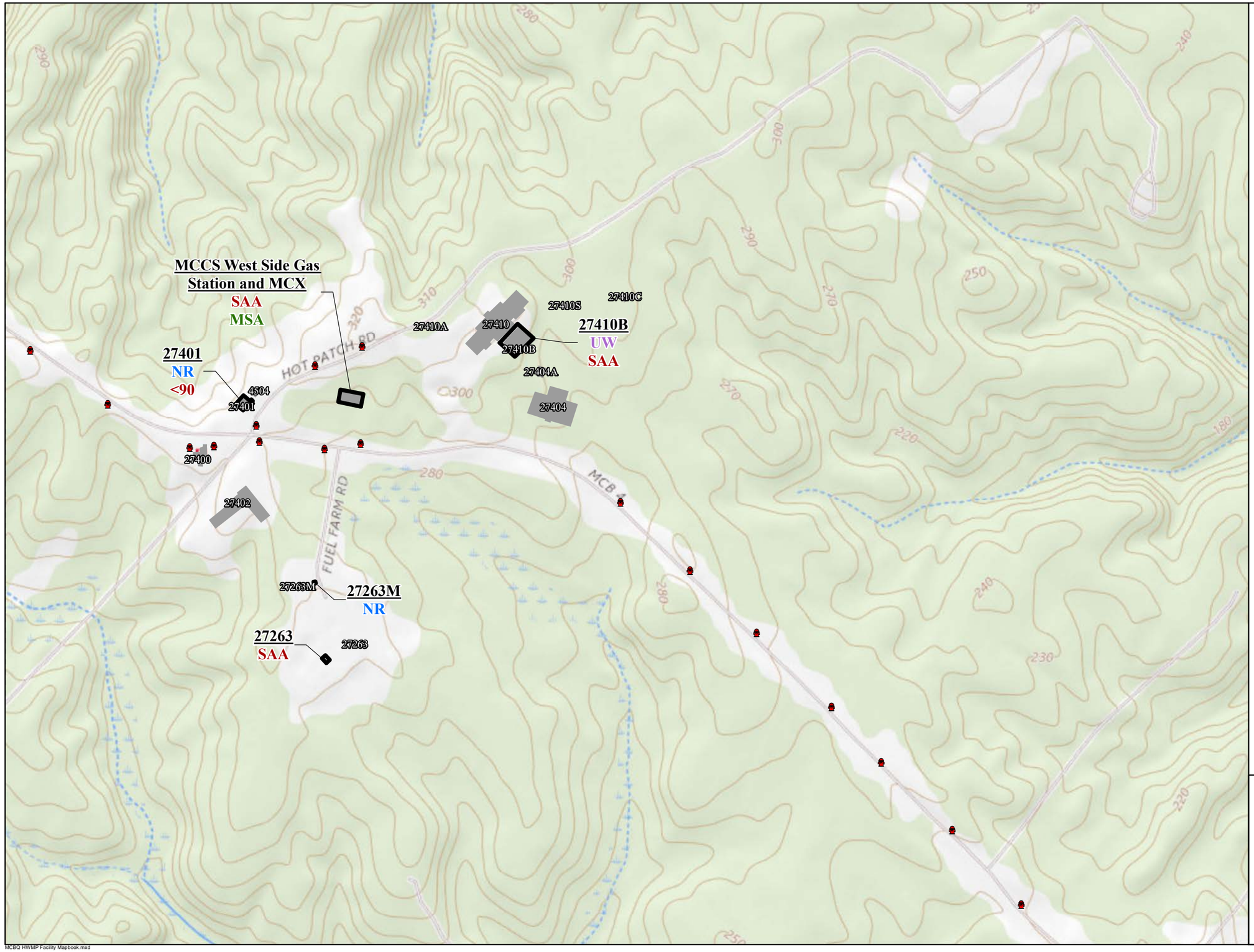


Hazardous Waste and Waste Accumulation Areas

Map 11 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico



N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

- **SAA** Satellite Accumulation Area
- **<90** Less Than 90 Day Area
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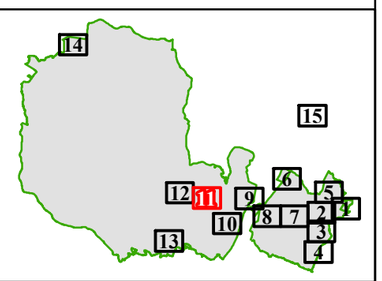

Hazardous Waste and Waste Accumulation Areas

Map 12 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

- **SAA** Satellite Accumulation Area
- **<90** Less Than 90 Day Area
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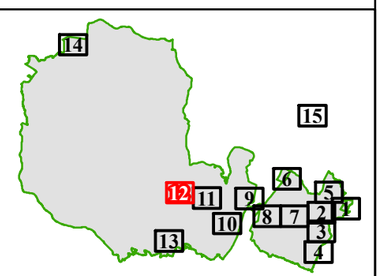

Hazardous Waste and Waste Accumulation Areas

Map 13 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000
Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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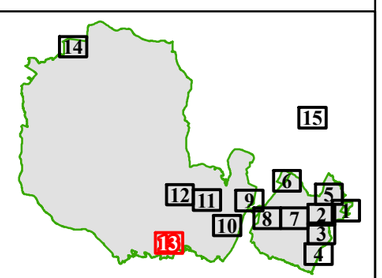
Bluestone



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Hazardous Waste and Waste Accumulation Areas

Map 14 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
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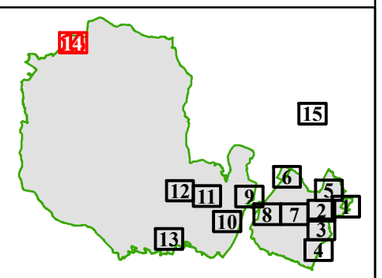

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Hazardous Waste and Waste Accumulation Areas

Map 15 of 15

Hazardous Waste Management Plan
July 2020

Marine Corps Installation
National Capital Region
Marine Corps Base Quantico

N

0 250 500 1,000

Feet

Museum Restorations
1700 Interstate Dr., Dumfries
SAA

- Hazardous Waste Generator Accumulation Location
- Fire Hydrant
- Building
- Map Boundary

Accumulation Type

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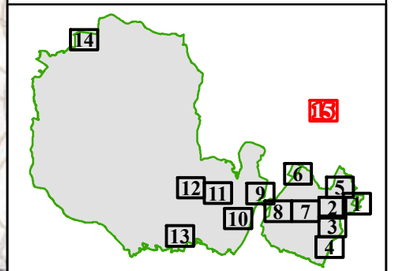

APPENDIX B

SAAs

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Table B-1: Satellite Accumulation Areas

Location	Building	Waste Streams
Motor T Maintenance East	2013	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste F-24-soaked debris and filters Gasoline filters
Motor T Maintenance West	27054	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste Gasoline filters
Facilities Maintenance	3252	Paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002)
Golf Course Maintenance	3066	Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Gasoline-soaked debris Aerosol waste
Security Battalion	3164	Water contaminated with various fuels
MCAF Refuelers	5170	F-24-soaked debris and filters
TBS Health Clinic and Dental Clinic (Ray Hall)	24008	Dental amalgam Expired alcohols
Fuel Farm	27263	F-24-soaked debris F-24 lab waste
HMX GSE	2104	Armory debris containing lead
HMX-1	2134	Flammable paints and paint-related materials Corrosive paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive sealants Flammable sealants Oxidizing sealants Contaminated F-24 fuels F-24-soaked debris Spent solvents Solvent-soaked debris Expired maintenance products (D001, D002)
HMX-1 Health Clinic and MCAF Dental Clinic	2132 (2nd floor)	Dental amalgam Expired alcohols
TBS MT Maintenance	24009B	Contaminated fuels Lead-acid battery waste Aerosol waste
TBS Armory	24018	Armory debris containing lead Weapons cleaning solvents
TBS Ops	24142	Gasoline-soaked debris Broken lamps
TBS COMM	24009B	Lithium batteries
TBS AIB	24009B	Armory debris containing lead
MCCS Auto Hobby Shop	2080	Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Gasoline-soaked debris Aerosol waste
Naval Medical Clinic	3259	Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals Aerosol waste Fluorescent bulbs Unused solvents Unused corrosives
H&S Bn Armory	2006	Armory debris containing lead Broken lamps Fluorescent bulbs Aerosol waste Contaminated gasoline
Vet Clinic	3310	Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals
Marine Security Guard	27275	Armory debris containing lead

Location	Building	Waste Streams
OCS Medical Center A- 168	5003	Aerosol waste Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals
TBS Communications	24009	Lithium batteries
M&RA Marsh Center	3280	Lithium batteries Broken lamps
Sewage Treatment Plant	660	Expired waste
TBS Heat Plant	24162	Spent Solvents
Marine Corps Systems Command	2249 / 2201A / 2200	Lithium batteries Broken lamps
Museum	1775	Paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive cleaners
MCIA	2033	Lithium batteries Broken lamps
Crossroads Inn	3018	Lithium batteries Broken lamps
Marine Corps University	2040	Broken lamps
Expeditionary Warfare School	2077	Broken lamps
Marine Embassy School	27277	Broken lamps Armory debris containing lead
Commissary	2100	Broken lamps
Joint Non-Lethal Weapons	3097	Armory debris containing lead
NCIS Ops Center	Russell Knox	Armory debris containing lead
Guad Maintenance Shop 34	27001	Paints and paint-related materials Aerosol waste Broken lamps Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002)
Schools	3307	Paints and paint-related materials Broken lamps Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002) Chemistry lab (D001-D043) Medical waste
Davis Center MCCDC	3300	Lithium batteries Lead-acid battery waste
MLB – G6	3037	Lithium batteries Broken lamps
MCCS Maintenance	3167	Lithium batteries Broken lamps Expired maintenance products (D001, D002)
MCNOSC	27410	Lithium batteries Broken lamps
MCCS Vending	3164	Expired corrosive cleaners
MCCS Gas Station and MCX	3500B	Discarded alcohols Gasoline-soaked debris Lithium batteries Broken lamps Fluorescent bulbs
TDSA	28000	Lithium batteries Lead-acid battery waste
4th LAR	26100	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste Gasoline filters
WTBn PWS	27250	Armory debris containing lead Spent bluing solutions Carbon lead swabs
Ordnance (S4)	3045	Expired weapons cleaning products (D001, D002)
Marina	3215	Expired maintenance products (D001, D002) Oily rags Used dry sweep Used oil
Raids and Recon	3230A	Lithium batteries Lead-acid battery waste

Location	Building	Waste Streams
TDSA	28000	Lithium batteries Lead-acid battery waste
Museum Restorations	17001 Interstate Dr. Dumfries	Paints and paint-related materials Aerosol waste Blast media material
ITAM	3228	Batteries - lithium, nickel-cadmium, lead-acid Aerosol waste
McMart	3048	Batteries - lithium, nickel-cadmium, lead-acid
Firestone	3141	Batteries - lithium, nickel-cadmium, lead-acid Used oil
Recycle Reuse Center	3185	All waste streams
OCS Armory	2189A	Fluorescent bulbs Batteries - lithium, nickel-cadmium, lead-acid
Security Battalion Gates	All	Water contaminated with various fuels
Motor Pool	3015	Oily debris Gasoline-soaked debris Water contaminated with various fuels
MCCS West Side Gas Station and MCX	Hot Patch Road across from 27401	Discarded alcohols Gasoline-soaked debris Lithium batteries Broken lamps Fluorescent bulbs
Hazardous Waste Storage Building	27401	All waste streams

APPENDIX C

Hazardous Waste Contingency Plan

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HAZARDOUS WASTE CONTINGENCY PLAN

Hazardous Material/Waste Consolidation Less than 90-Day Accumulation Areas and Satellite Accumulation Areas

Marine Corps Installations National Capital Region – Marine Corps Base Quantico (MCINCR-MCBQ)

Natural Resources & Environmental Affairs (NREA)
3250 Catlin Avenue, Suite 104
Quantico, VA 22134-5001

July 2020

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ACRONYMS AND ABBREVIATIONS

AC/S	Assistant Chief of Staff
CECC	Consolidated Emergency Communications Center
CFR	Code of Federal Regulations
DOT	Department of Transportation
EEC	Emergency Environmental Coordinators
EMS	Emergency Medical Services
HAZWOPER	Hazardous Waste Operations and Emergency Response Standard
HM	Hazardous Material
HW	Hazardous Waste
IC	Incident Commander
LQG	Large Quantity Generator
MCINCR-MCBQ 5090.6	Oil and Hazardous Substances Spill Management Program
MCINCR-MCBQ	Marine Corps Installations National Capital Region - Marine Corps Base Quantico
MCTFER	Military-Civilian Task Force for Emergency Response
NREA	Natural Resources and Environmental Affairs
ODCP	Oil Discharge Contingency Plan
PMO	Provost Marshal Office
PWO	Public Works Officer
QFES	Quantico Fire and Emergency Services
RCRA	Resource Conservation and Recovery Act
SAA	Satellite Accumulation Area
SPCC	Spill Prevention, Control, and Countermeasure Plan
VDEQ	Virginia Department of Environmental Quality

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1.0 INTRODUCTION [40 CFR 262.250 and 262.261]

This contingency plan was developed for the Marine Corps Installations National Capital Region – Marine Corps Base Quantico (MCINCR-MCBQ) (also referred to as the "Base") and is applicable to hazardous material (HM)/hazardous waste (HW) consolidation sites. Consolidation sites, listed in **Table 1-1**, are managed by the Natural Resources and Environmental Affairs (NREA) Branch HW Section.

Table 1-1: HM/HW Consolidation Sites

Consolidation Area	Type
NREA HW Storage Facility Building 27401	"Less than 90-day accumulation area," as described in the 40 Code of Federal Regulations (CFR) 262.17
Naval Medical Clinic Building 3259	Less than 90-day accumulation area which is used to accumulate HW for less than 10 days prior to transport to Building 27401
MCCS Auto Hobby Shop Building 2080	Less than 90-day accumulation area which is used to accumulate HW for less than 10 days prior to transport to Building 27401
HMX-1	Less than 90-day accumulation area which is used to accumulate HW for less than 10 days prior to transport to NREA HW Storage Facility - Building 27401
Satellite Accumulation Areas (SAAs)	Managed by units throughout the Base

MCINCR-MCBQ also operates the Russell Road Landfill onsite. The landfill is not considered a less than 90-day accumulation area; however, as part of the management effort, leachate is pumped out and removed every 90 days.

During normal business hours, this Resource Conservation and Recovery Act (RCRA) HW Contingency Plan is activated by dialing 911 to contact the Consolidated Emergency Communications Center (CECC). After hours, this plan is activated when the sensor for the fire suppression systems at the NREA HW Storage Facility – Building 27401 provides automatic notification to the CECC desk. The information in this document is submitted in accordance with the RCRA requirements in 40 CFR 262 Subpart M for Preparedness, Prevention, and Emergency Procedures for large quantity generators (LQGs). Specific RCRA references are noted in section headings.

This plan and attached documents comprise the HW Contingency Plan for the less than 90-day accumulation area, SAAs, and Russell Road Landfill.

2.0 GENERAL INFORMATION [40 CFR 262.251 and 262.255]

2.1 Contact Overview

The MCINCR-MCBQ HW Program Manager and other appropriate staff may be reached weekdays between 0700 and 1500 by calling 703-432-0530 / 0527. Notification of an emergency and/or request for additional emergency response support personnel may also be facilitated by calling the CECC at 911. The CECC maintains a complete recall roster of personnel available for immediate response which is also included in the Quick Reference Guides in **Attachment C-1**.

2.2 Security

Descriptions of facility security measures are provided in **Table 2-1**. In addition, the Provost Marshal Office (PMO) performs routine inspections at the NREA HW Storage Facility - Building 27401. Notification to PMO may be completed by calling 911.

Table 2-1: Security at Accumulation Areas

Location	Security Measures
HW Storage Facility - Building 27401	8-foot tall perimeter chain-link fence with locked access gates
Naval Medical Clinic - Building 3259	Unit is secure and accumulation area is maintained in locked storage shed
MCCS Auto Hobby Shop - Building 2080	Accumulation area is maintained in a locked storage area
HMX-1	Accumulation area is maintained in a covered area with locked chain-link fence around the building
Russell Road Landfill	Accumulation/sump area is locked and contains leak detection monitoring system
SAAs	Security measures applicable to the HW accumulated are implemented by the unit such as : general building security, locked room or closet, fenced area with locked gate, and locked cabinets.

Maps of the less than 90-day accumulation areas and Russel Road Landfill are provided in **Attachment C-2**.

2.3 Site Processes

The HW Program Manager receives HM and determines if the material can be used or is waste based on the following: research of safety data sheets; visual inspection of the integrity of the HM and its container; shelf-life history of like or similar expired materials; and usage history of like HM. HM that cannot be extended or otherwise utilized becomes a waste and is evaluated to determine if it must be managed as a HW. Materials awaiting waste determination are stored in their original packaging or compatible Department of Transportation (DOT)-approved containers. Secondary containment is provided by dry sumps within the building, and incompatible HM/HW is segregated by cinderblock walls within Building 27401.

HW storage tank systems are NOT utilized at less than 90-day accumulation areas or SAAs. The management and storage of regulated and non-regulated HW is facilitated by use of original packaging and the following sizes of DOT-approved containers: tri-wall boxes; 1-, 3-, and 5-gallon buckets; 10-, 16-, 30-, and 55-gallon drums; 65- and 85-gallon overpack drums; and 4- and 8-foot bulb cardboard cylinders.

2.4 Required Aisle Space

MCINCR-MCBQ maintains adequate aisle space to allow the unobstructed movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment in an emergency, unless aisle space is not needed for any of these purposes. No less than 36 inches of aisle space is maintained at all SAAs and less than 90-day accumulation areas.

2.5 Description of Managed Materials & Wastes

A general description of the materials and wastes typically managed at this facility includes, but is not limited, items listed in **Table 2-2**. A list of materials and wastes managed at SAAs is included in **Attachment C-3**.

Table 2-2: List of Frequently Managed Substances

Description	Potential Hazards	Less than 90-day Accumulation Area			
		NREA HW Storage Facility - Building 27401	Naval Medical Clinic Building 3259	MCCS Auto Hobby Shop Building 2080	HMX-1
Adhesives, Regulated and Non-regulated	Ignitable, Corrosive, Toxic	X			X
Aerosol cans	Ignitable, Reactive, Toxic	X	X	X	
Antifreeze (for recycle)	Corrosive	X		X	

Description	Potential Hazards	Less than 90-day Accumulation Area			
		NREA HW Storage Facility - Building 27401	Naval Medical Clinic Building 3259	MCCS Auto Hobby Shop Building 2080	HMX-1
Armory debris containing lead	Toxic	X			
Batteries (lithium; lead-acid, nickel-cadmium)	Corrosive, Reactive, Toxic	X	X	X	X
Blast media materials	Toxic	X			
Chemistry lab expired materials	Ignitable, Corrosive, Reactive, Toxic	X			
Compressed gas cylinders	Ignitable, Corrosive, Reactive, Toxic	X			
Corrosive wastes (acids and bases from discarded sealants, maintenance products, cleaning products)	Corrosive	X			
Fluorescent tubes (broken and intact)	Toxic	X	X		
Fuels (contaminated, excess, or otherwise unusable gasoline, diesel, or F-24)	Ignitable	X		X	X
Used oil (for recycle)	Ignitable, Toxic	X			X
Paints, Regulated and Non-regulated	Ignitable	X			X
Pesticides and insecticides and pesticide- and insecticide-contaminated debris (universal and spent)	Corrosive, Toxic	X			
Non-creditable HW Pharmaceuticals	Ignitable, Corrosive, Toxic	X	X		

Description	Potential Hazards	NREA HW Storage Facility Building 27401	Naval Medical Clinic Building 3259	MCCS Auto Hobby Shop Building 2080	HMX-1
Paints, Regulated and Non-regulated	Ignitable	X			X
Pesticides and insecticides and pesticide- and insecticide-contaminated debris (universal and spent)	Corrosive, Toxic	X			
Non-creditable HW Pharmaceuticals	Ignitable, Corrosive, Toxic	X	X		
Spent or contaminated absorbents/rags	Ignitable, Toxic	X		X	X
Solvent and methyl ethyl ketone (spent, unused, discarded, or expired)	Ignitable, Toxic	X		X	X
Spill debris contaminated with petroleum, oils, and lubricants, and other greases	Ignitable, Toxic	X			

3.0 EMERGENCY COORDINATORS AND KEY PERSONNEL [40 CFR 262.261(D) AND 262.264]

3.1 Incident Commander (IC)

In the event of an emergency, when a hazardous substance is spilled or released to the environment, the discoverer calls the CECC by dialing 911. The CECC will immediately dispatch appropriate Quantico Fire and Emergency Services (QFES) HM Response Teams, Emergency Medical Response Teams, and the PMO. The CECC dispatcher will facilitate notification to the NREA Emergency Environmental Coordinators (EEC) or other appropriate Environmental Staff. EECs are "on call" and can reach the facility in a short period of time. The ECC who arrives first will serve as the On-Scene IC. EEC contact information is provided in Table 3-1 and Attachment C-1.

Table 3-1: NREA EECs

Role	Emergency Contact Phone Number
Compliance Manager	703-432-1335 (Office)
Spill Response Manager	703-432-0523 (Office)
Hazardous Waste Program Manager	703-432-0530 (Office)
NREA After Hours Cell Number	540-379-5143

3.2 HM/HW Personnel

In the event of an emergency, onsite personnel at the HM/HW accumulation area or consolidation site will dial 911 utilizing cell phones or Base communication systems to notify QFES. They will also report to the rally point for accountability (See **Attachment C-2** or **Attachment C-3** for location) and coordinate with the spill/release IC to provide site knowledge.

3.3 NREA EECs

EECs listed in **Table 3-1** and **Attachment C-1** will be notified by personnel or CECC dispatch immediately following an incident. These personnel will notify the Base Public Works Officer (PWO) of the spill/release.

3.4 Public Works Officer

For incidents beyond Base response capabilities and for incidents that affect the surrounding communities, the PWO may contact the Navy Regional On-Scene Coordinator located in Norfolk, Virginia, at 757-636-4378. The Navy Regional On-Scene Coordinator is available 24 hours per day.

4.0 IMPLEMENTATION OF THE CONTINGENCY PLAN [40 CFR 262.260]

As an LQG, MCINCR-MCBQ is required to maintain this HW Contingency Plan for its facility. The decision to implement the HW Contingency Plan depends on whether or not an imminent or actual incident could threaten human health or the environment. The criteria supporting the On-Scene IC or NREA EEC decisions are described in the following sections.

4.1 Fires and/or Explosion

The following fires and explosion incidents could threaten human health or environment and require implementation of the HW Contingency Plan:

- Fire causing the release of toxic fumes;
- The fire spreads and could possibly ignite materials at other locations on-site or could cause heat-induced explosions;
- The fire could possibly spread to off-site areas;
- Use of water or water and chemical fire suppressant could result in contaminated runoff;
- An imminent danger exists that an explosion could occur and cause a safety hazard due to flying fragments or shock waves;
- An imminent danger exists that an explosion could ignite HW at the facility;
- An imminent danger exists that an explosion could result in release of hazardous substances; and/or
- An explosion has occurred.

4.2 Spills or Material Release

Spills or material releases could occur and threaten human health or environment. The following spill or material release incidents require implementation of the HW Contingency Plan:

- The spill could result in release of flammable liquids or vapors, causing a fire or gas explosion hazard;
- The spill could cause the release of hazardous liquids or fumes;
- The spill can be contained onsite, but the potential exists for groundwater contamination; and/or
- The spill cannot be contained onsite, resulting in atmospheric, off-site soil contamination, and/or ground or surface water pollution.

4.3 Floods

The HW Contingency Plan must be implemented when the potential exists for surface water contamination due to flooding.

5.0 EMERGENCY RESPONSE AND CONTROL PROCEDURES [40 CFR 262.265]

Potential accidents fall under three general classifications: fire and/or explosion; spills or material release; and/or floods. The effects of natural disasters, such as earthquakes or hurricanes, are assumed to fall into one of the identified classifications.

5.1 Notification

When the spill or release of hazardous substances to the environment that cannot be controlled with equipment and materials on-hand occurs, any employee can activate the emergency alarm system by dialing 911 to reach the CECC.

Upon notification, the CECC will immediately implement notification procedures and arrange additional response resources, as required, to support the emergency procedures already initiated.

Only persons properly equipped and trained will be permitted to respond, control, and/or clean-up spills or releases. **Safety is paramount in all situations!**

5.2 Identification of HW

NREA personnel will immediately identify the characteristics, exact source, amount and extent of the HM or HW release. The initial identification method will be based on visual analysis of the material and location of the release.

Containers, boxes, and drums in storage areas are marked and coded as to their contents and are in distinct separate locations. **Attachment C-2** provides a diagram of HW storage locations in Building 27401. **Attachment C-3** contains a full listing of typical waste streams stored at each SAA. A detailed HW inventory is maintained in inventory folders located in Building 3049,

Office 1 or 9. The properties of these materials are described in waste disposal profile sheets or safety data sheets. This information will be used to identify the HW released.

5.3 Assessment

The On-Scene IC, in conjunction with NREA personnel, will assess possible hazards, both direct and indirect, to human health or the environment. NREA will obtain information pertaining to the following:

- The material spilled or released;
- Location of the release or spill of HM/HW;
- An estimate of quantity released and the rate at which it is being released;
- The direction in which the spill or vapor or smoke release is traveling;
- Any injuries involved as well as the location and health condition of employees in the affected area;
- Fire and/or explosion or possibility of these events; and
- The area and materials involved and the intensity of the fire or explosion.

This information will help the On-Scene IC and NREA EEC determine the magnitude and potential seriousness of the spill or release. If the accident is found to lie within the Base's emergency response capabilities, NREA, in conjunction with the On-Scene IC, will request and deploy the necessary Base Emergency Response Personnel. If the accident is beyond the Base's capabilities, NREA will provide notification to the On-Scene IC and will request activation of the Coordination Agreements and/or external emergency response personnel and contracts. A list of agencies and phone numbers is provided in the Oil and Hazardous Substances Spill Management Program (MCINCR-MCBQ 5090.6); Spill Prevention, Control, and Countermeasure (SPCC) Plan; and Oil Discharge Contingency Plan (ODCP).

5.4 Fire and/or Explosion

Firefighting, other emergency vehicles, and equipment can easily access all storage areas on Base. Paved roads and/or parking lots allow direct access to the facilities. Fire extinguishers and fire hydrants with adequate water pressure and volume are strategically located around each storage area for firefighting activities**.**

QFES personnel will be on standby during all facility emergencies. During power failures or severe weather, all management/processing activities will be suspended. If a fire should break out, response efforts will focus on preventing the fire from spreading to nearby areas. The QFES personnel will perform firefighting efforts.

The following actions will be performed in areas impacted by fire or explosion:

- Immediately sound the alarm by pulling the fire alarm pull box or by voice alarm then activate the Base Emergency Response System by dialing 911;
- Hazardous operations in all areas will be terminated immediately;

- Any personnel not actively involved in firefighting activities will report to their designated rally area;
- All additional equipment will be shut down, as necessary and practical;
- All injured persons will be removed only if it is safe to remove them. Medical treatment will be administered by qualified Naval Hospital personnel or Emergency Response personnel; and
- NREA EECs listed in **Table 3-1** will be contacted.

Because fire is always a potential hazard in spills of flammable materials, possible sources of ignition must be eliminated as follows:

- Vehicular traffic and hazardous work in the area will cease until the spill is contained and safety is restored. If spilled materials are flammable, the QFES will respond;
- If a highly flammable material is released, all ignition sources within this area will be eliminated to the extent possible. Use of motor vehicles within the threatened area will be restricted or eliminated to avoid ignition of the vapor. If there is a high potential for explosion, the entire area within a 2,000-foot radius of the source will be evacuated. The On-Scene IC will determine if this is required once on-site;
- If a fire is involved and is concentrated at the source, people located downwind will be evacuated;
- Firefighting will not be performed if it puts persons involved at risk of injury;
- Area evacuations will be consistent with the general evacuation procedures for the Base and means of egress from respective work areas;
- The Base Fire Chief and/or his/her representative will be responsible for all firefighting efforts. Supervisors of unaffected areas will remain with their personnel and be ready to evacuate and account for the persons under their supervision; and
- Fire suppression systems are maintained and tested by the QFES and are activated by use of pull levers located in buildings.

5.5 Spills or Material Release

In the event of a major emergency involving a chemical spill, or contaminated solid waste, the following general procedures will be used for rapid and safe response and control of the situation.

If an employee discovers a chemical spill resulting in a vapor release, he or she will utilize personal emergency whistles and immediately notify the CECC by dialing 911.

The initial response to any spill or material release will be primarily to protect human health, and then to protect the environment. The identification, containment, treatment, and disposal of spilled material will be performed upon confirmation that there is no longer threats to human health or the environment. Any spill, including oil spills impacting the waters of the state, will be reported as required in MCINCR-MCBQ 5090.6.

If a chemical spill is not contained within a dike or sump area, an area of isolation will be established around the spill. The size of the isolation area will depend on the size of the spill, accessibility and geophysical restraints, and the materials involved. Factors determining the spill hazard area are provided in **Table 5-1**.

Table 5-1: Spill Hazard Area Factors

Spill Category	Measures to be Taken
Spill is large and involves a tank or a pipeline rupture	Initial isolation area of a minimum of 100 feet in all directions
Small spills or leaks from a tank or pipe	Evacuation of a minimum of 50 feet in all directions to allow clean-up, repair, and prevent exposure
Any spill occurrence	Only personnel involved in overseeing or performing emergency operations will be allowed within the designated hazard area
	If possible, rope or block off the area to prohibit access

If the spill results in the formation of a toxic vapor cloud (by reaction with surrounding materials or by outbreak of fire) and is released (due to high vapor pressures under ambient conditions), further evacuation will be enforced. Initially, an area at least 500 feet wide and 1,000 feet long will be evacuated downwind if volatile materials are spilled and are in quantities significant enough to require an evacuation. The On-Scene IC will determine if this is sufficient once on-scene.

A spill or release to the environment where the quantity of HM released is equal to or greater than the reportable quantity specified in 40 CFR 117 and 302. All releases in reportable quantities must be reported by NREA to the required authorities within the required time allotted for each instance of detection. (See MCINCR-MCBQ 5090.6 for proper reporting instructions and time limits for each instance).

5.6 Spills or Releases Involving HW Materials

The following general guidelines will be used in the event of an accidental release of HW materials.

It is important to note that most HW spills and leaks are easily contained within the dikes, sumps, and secondary containment provided. **Circumstances may dictate alterations to these procedures.** Small spills occurring in diked areas are flushed with water into sumps provided in each area. If necessary, a portable sump pump is used to pump the diluted waste material into 55-gallon drums or tankers.

If the HW spill is large and involves a tank or a pipeline rupture, an area a minimum of 100 feet in all direction will be secured.

If a leak develops or a spill occurs from a HW storage tank, pipeline pump, etc., the person discovering the discharge will leave the immediate area and contact the CECC by dialing 911. The On-Scene IC in conjunction with NREA will obtain the following information:

- Person(s) injured and seriousness of injury;
- Location of the spill or leak, material involved, and source (tank, pipeline, etc.);

- The approximate amount of HW spilled, an estimate of the liquid and/or gas discharge rate, and the direction the liquid flow or gaseous cloud is moving; and
- Whether or not a fire is involved.

5.7 On-Scene IC Responsibilities

The On-Scene IC will initiate evacuation of the hazard area. For small spills or leaks, he or she will isolate an area a minimum of 50 feet in all directions. For large spills, he or she will isolate and area a minimum of 100 feet in all directions and keep all persons upwind of spill. The On-Scene IC will determine if this sufficient once on-scene. The On-Scene IC will obtain medical attention for any injured persons. If the spill or release threatens human health or the environment or is reportable, then a NREA EEC will contact proper authorities only after coordinating with the On-Scene IC. (See MCINCR-MCBQ 5090.6 for proper reporting instructions). The On-Scene IC will ensure that all appropriate state and local authorities are notified before operations resume in the affected areas.

5.8 Cleanup Personnel Responsibilities

Cleanup personnel must have current Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) training. Personnel will ensure all unnecessary persons are removed from the hazard area. All clean up personnel will don personnel protective clothing and equipment as directed by the On-Scene IC. If flammable waste is involved, they must remove all ignition sources, and use spark and explosion proof equipment and clothing in containment and cleanup. If possible, personnel will try to stop the leak. Special materials will be kept on hand for temporary repairs. Cleanup personnel will remove all surrounding materials that could be especially reactive with materials in the waste. Personnel will also determine the major components in the waste at the time of the spill. Spill response will include use of absorbent pads, booms, earth, sandbags, sand, and other inert materials to contain, divert and clean up a spill if not contained in a dike or sump. If a spill enters a storm drain or creek, personnel will use absorbent booms and sweeps around the source to contain and minimize the extent of the spill. They will also place all recovered liquid wastes and contaminated solid waste in drums for transport to an approved disposal facility. Following cleanup, all personnel and equipment will be decontaminated as directed by the On-Scene IC.

5.9 Prevention of Recurrence or Spread of Fires, Explosions, or Releases

A “Root Cause Analysis” will be conducted by the Base to help prevent the recurrence or spread of fires, explosions, or future releases.

5.10 Storage and Treatment of Released Material

Immediately after an emergency, NREA personnel will determine if the recovered materials (e.g., fugitive waste or contaminated soils) are hazardous in accordance with 40 CFR 261, and will make arrangements for treatment, storage, or disposal of recovered waste, contaminated soil, surface water, or any other contaminated material. The following procedures will be adhered to:

- Contaminated soil will be collected and stored in drums for transportation off-site;
- HW liquids that may be spilled will be temporarily stored in drums or in a spill containment basin for transportation off-site; and
- If the spill was reportable, additional follow-up contacts with the appropriate regulatory agency (Virginia Department of Environment Quality [VDEQ], etc.) will be initiated by NREA to clarify appropriate aspects of treatment, storage, or disposal of the collected material.

5.11 Post-Emergency Equipment Maintenance

Immediately after an emergency event, all emergency equipment will be replaced or cleaned so that it is fit reuse. An inspection of all equipment will be conducted.

6.0 EMERGENCY EQUIPMENT [40 CFR 262.252, 262.253, 262.254 and 262.261(e)]

Appropriate emergency equipment is provided as described in the following sections.

6.1 Alarm Systems

The Base maintains a fire alarm system including alarm boxes at critical areas throughout each building. All applicable employees are familiar with alarm box locations. When a HW is poured, mixed, spread, or otherwise handled, all personnel involved in the effort have immediate access to an internal alarm at Building 27401 or emergency communication using cell phones or through visual or voice contact. If a single employee is working in a SAA, less than 90-day accumulation area, or Russell Road Landfill, immediate access to a telephone, cell phone, or other device capable of calling emergency assistance is available.

6.2 Fire Extinguishers

To ensure adequate volume and pressure of water, fire hydrants are located around each building and portable fire extinguishers are located throughout each building.

Available fire extinguishers are dry chemical for fire types A, B, and C. All extinguishers comply with National Fire Protection Association standards for portable fire extinguishers and are inspected monthly in accordance with the general inspection schedule. Fire extinguisher types are capable of extinguishing fires involving the following materials:

- Type A - ordinary combustible materials such as wood, cloth, paper, rubber, and many plastics
- Type B - flammable liquids, oils, greases, tars, oil-based paints, lacquers, and flammable gases
- Type C - energized electrical equipment

6.3 Dedicated Spill Response Protective Equipment

Dedicated equipment for containing and cleaning spilled or released HM/HW is stored in each building at or next to the accumulation or storage area. At a minimum, each SAA contains a spill kit with absorbent materials. Spill response material locations are included on the less than 90-day accumulation area maps in **Attachment C-2**. A complete list of available equipment and materials stored and maintained throughout the Base is listed in the MCINCR-MCBQ 5090.6 and the Base's SPCC/ODCP.

The NREA HW Storage Facility - Building 27401 is equipped with four emergency eyewash / shower stations. The Naval Medical Clinic - Building 3259, MCCS Auto Hobby Shop - Building 2080, and HMX-1 each have one emergency eyewash / shower station.

Protective clothing and equipment including hard hats, protective eyewear, and steel-toed boots or shoes are provided to protect employees during normal and emergency operations.

Protective clothing available on-site includes plastic aprons, rubber and neoprene boots, short and long rubber gloves, polyethylene and neoprene gloves, and Tyvek protective cover-all suits

Protective equipment available on site includes face shields, extra protective eyeglasses, and goggles, electric forklift, manual pallet jack, four manual drum transport, and hydraulic drum lifter/transport.

6.4 Emergency Equipment Testing

All communication systems, alarms, fire protection equipment, and spill control equipment are tested or maintained on a regular basis to ensure their proper operation.

7.0 COORDINATION AGREEMENTS [40 CFR 262.256, 262.261(c), and 262.262(a)]

Arrangements and agreements with military and local organizations have been established to assist with emergency response. MCINCR-MCBQ agreed to an official charter as participants in the Military-Civilian Task Force for Emergency Response (MCTFER) and Rappahannock Emergency Medical Services (EMS) Council that outlines relationships with the Counties of Fauquier, Stafford, and Prince Williams. The MCTFER charter authorizes the development and the execution of inter-operative mutual aid for emergency response. Copies of the Facility Response Plan (in the ODCP) have been provided to the Assistant Chief of Staff (AC/S) Security and Emergency Services Department. This department provides consolidated EMS, fire, HM response, and police support during emergency incidents.

Arrangements have been made to familiarize local hospitals with the properties of HM/HW handled at on Base and the types of injuries or illnesses which could result from fires, explosions, spills, or releases on-site. The closest medical facilities for each Base Sector are listed in **Table 7-1**.

Table 7-1: Medical Facilities for Each Base Sector

Base Sector	Local Facilities
Culpeper Sector	University of Virginia Culpeper Hospital
Fauquier Sector	Fauquier Hospital
Fredericksburg Sector	Mary Washington Hospital (Level II Trauma Center)
Spotsylvania Sector	Mary Washington Free Standing Emergency Department at Lee's Hill
	Spotsylvania Regional Medical Center
Stafford Sector	Stafford Hospital
Northside of Base Sector	Sentara Northern Virginia Medical Center Woodbridge
	Inova Fairfax Hospital (Level I Trauma Center)
	Medstar Hospital in Washington, DC (Burn Center)

Copies of this HW Continency Plan, the ODCP, and MCINCR-MCBQ 5090.6 have been provided to the local police, fire departments, and emergency response teams as well as the layout of the facility depicting associated hazards, typical personnel working locations, roadways within the facility boundary, and potential evacuation routes.

8.0 EVACUATION PLAN [40 CFR 262.261(f)]

QFES, in conjunction with NREA, Base Safety, and the Base Emergency Manager, has the responsibility to direct response teams to an environmental emergency and will initiate emergency evacuation procedures if deemed necessary or prudent to do so.

The facility employs a warning system that includes the following audible alarms: phone notification, audible voice warnings via military police units, intranet access, and internal electric roadside signs.

The Base maintains a fire alarm system including alarm boxes at critical areas throughout each building. All applicable employees are familiar with alarm box locations.

In the event of an evacuation, personnel will proceed directly to and assemble at, designated rally points. Maps are posted throughout NREA HW Storage Facility - Building 27401, Naval Medical Clinic - Building 3259, MCCS Auto Hobby Shop - Building 2080, HMX-1, Russell Road Landfill, and at each SAA indicating evacuation and alternate evacuation routes. Additional evacuation measures are provided in MCINCR-MCBQ 5090.6 and in the SPCC/ODCP.

Base-wide or area evacuations will be directed / initiated by the On-Scene IC using the MCINCR-MCBQ 5090.6 and SPCC/ODCP to determine emergency evacuation routes and procedures.

9.0 REQUIRED REPORTS [40 CFR 262.265(i)]

Any emergency event (fire, explosion, spill, release, flood, etc.) which involves HW and requires implementing this plan, MCINCR-MCBQ 5090.6, or SPCC/ODCP guidelines and procedures will be reported within 15 days to the Hazardous Waste Section, VDEQ, and Environmental Protection Agency Region 3 Administrator, as applicable. The written report will include:

- Name, address, and telephone number of the facility;
- Date, time, and type of incident;
- Name and quantity of material(s) involved;
- Injuries, if any;
- An assessment of possible hazards to human health or the environment, where applicable; and
- Estimated quantity and disposition of recovered material resulting from the event.

The time, date, and details of any incident will be noted by the EEC in the operating record.

10.0 COPIES AND AMENDMENT OF HW CONTINGENCY PLAN [40 CFR 262.262 and 262.263]

This HW Contingency Plan will be reviewed and immediately amended, if necessary, whenever applicable regulations are revised; the plan fails in an emergency; there are material changes at the facility including design, construction, operation, maintenance, or other circumstances that increases the potential for fires, explosions, or releases of HM, HW, or HW constituents, or changes to emergency response procedures; the list of emergency environmental contacts changes; or the list of emergency equipment changes.

After all large/small incidents or after annual training, a review meeting will be conducted to determine the effectiveness of this plan. All resulting changes will follow guidance as stated in MCINCR-MCBQ 5090.6.

Units are required to submit site-specific contingency plans using the Satellite Accumulation Area Contingency Plan Information and Quick Reference Guide template provided in **Attachment C-4** to the NREA Environmental Management System Coordinator, who reviews them annually. The completed Satellite Accumulation Area Contingency Plan Information and Quick Reference Guide and training documents must be posted at the applicable SAA.

The HW Contingency Plan for the overall Base is accessible from the MCINCR-MCBQ's SharePoint site.

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Attachment C-1
Quick Reference Guides
[40 CFR 262.262(b)]

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CONTINGENCY PLAN QUICK REFERENCE GUIDE
NREA HW Storage Facility – Building 27401

- **Names of hazardous wastes and associated hazards**
  - Corrosives acid/bases
  - Ignitable paints
  - Ignitable organic solvent
  - Ignitable adhesives
  - Ignitable solids
  - Ignitable and reactive aerosols
  - Ignitable solids
  - Ignitable gas cylinders
  - Ignitable spent solvent
  - Toxic pesticides and insecticides
  - Toxic solids

- **Estimated maximum amount of each hazardous waste**

Bays	Rows
5,600 pounds Acid	8,000 pounds Fuel for Recycle
5,600 pounds Oxidizer	8,000 pounds Class 9
5,600 pounds Base	8,000 pounds Class 9
5,600 pounds Ignitable	

- **Hazardous wastes requiring unique/special treatment**
  - Lithium batteries
  - Corrosives
  - Non-creditable HW pharmaceuticals

- **Identification of on-site notification systems**
  - Cell phone
  - Whistles

- **Facility maps are included in the Hazardous Waste Management Plan**
  - All HW accumulation areas
  - Base street map
  - Fire hydrant locations

- **The emergency alarm system is activated by dialing 911 (CECC)**

- **Emergency Coordinators are available 24/7**
  - Amy Denn (Cell 571-606-7842)
  - J. David Grose (Cell 703-447-4218)
  - Jon Cooper (Cell 360-473-3226)
  - David Norris (Cell 703-371-1783)

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CONTINGENCY PLAN QUICK REFERENCE GUIDE NREA HW Storage Facility – Building 27401

Names of hazardous wastes and associated hazards

- Corrosives acid/bases
- Ignitable paints
- Ignitable organic solvent
- Ignitable adhesives
- Ignitable solids
- Ignitable and reactive aerosols
- Ignitable solids
- Ignitable gas cylinders
- Ignitable spent solvent
- Toxic pesticides and insecticides
- Toxic solids

Estimated maximum amount of each hazardous waste

Bays	Rows
5,600 pounds Acid	8,000 pounds Fuel for Recycle
5,600 pounds Oxidizer	8,000 pounds Class 9
5,600 pounds Base	8,000 pounds Class 9
5,600 pounds Ignitable	

Hazardous wastes requiring unique/special treatment

- Lithium batteries
- Corrosives
- Non-creditable HW pharmaceuticals

Identification of on-site notification systems

- Cell phone
- Whistles

Facility maps are included in the Hazardous Waste Management Plan

- All HW accumulation areas
- Base street map
- Fire hydrant locations

The emergency alarm system is activated by dialing 911 (CECC)

Role	Emergency Contact Phone Number
Compliance Manager	703-432-1335 (Office)
Spill Response Manager	703-432-0523 (Office)
Hazardous Waste Program Manager	703-432-0530 (Office)
NREA After Hours Cell Number	540-379-5143

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CONTINGENCY PLAN QUICK REFERENCE GUIDE Naval Medical Clinic – Building 3259

Names of hazardous wastes and associated hazards

- Corrosives acid/bases
- Ignitable organic solvent
- Ignitable and reactive aerosols
- Ignitable spent solvent

Estimated maximum amount of each hazardous waste

- 200 pounds

Hazardous wastes requiring unique/special treatment

- Corrosives
- Non-creditable HW pharmaceuticals

Identification of on-site notification systems

- Cell phone
- Whistles

Facility maps are included in the Hazardous Waste Management Plan

- All HW accumulation areas
- Base street map
- Fire hydrant locations

The emergency alarm system is activated by dialing 911 (CECC)

Emergency Coordinators are available 24/7

Role	Emergency Contact Phone Number
Compliance Manager	703-432-1335 (Office)
Spill Response Manager	703-432-0523 (Office)
Hazardous Waste Program Manager	703-432-0530 (Office)
NREA After Hours Cell Number	540-379-5143

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CONTINGENCY PLAN QUICK REFERENCE GUIDE MCCS Auto Hobby Shop - Building 2080

Names of hazardous wastes and associated hazards

- Corrosives acid/bases
- Ignitable organic solvents
- Ignitable solids
- Ignitable and reactive aerosols
- Ignitable spent solvent
- Toxic pesticides and insecticides
- Toxic solids

Estimated maximum amount of each hazardous waste

- 4,250 pounds

Hazardous wastes requiring unique/special treatment

- Lithium batteries
- Corrosives

Identification of on-site notification systems

- Cell phone
- Whistles

Facility maps are included in the Hazardous Waste Management Plan

- All HW accumulation areas
- Base street map
- Fire hydrant locations

The emergency alarm system is activated by dialing 911 (CECC)

Emergency Coordinators are available 24/7

Role	Emergency Contact Phone Number
Compliance Manager	703-432-1335 (Office)
Spill Response Manager	703-432-0523 (Office)
Hazardous Waste Program Manager	703-432-0530 (Office)
NREA After Hours Cell Number	540-379-5143

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Attachment C-2
Less than 90-day Accumulation Area and Russel Road Landfill Maps
[40 CFR 262.261 (f)]
[40 CFR 262.262 (b)]

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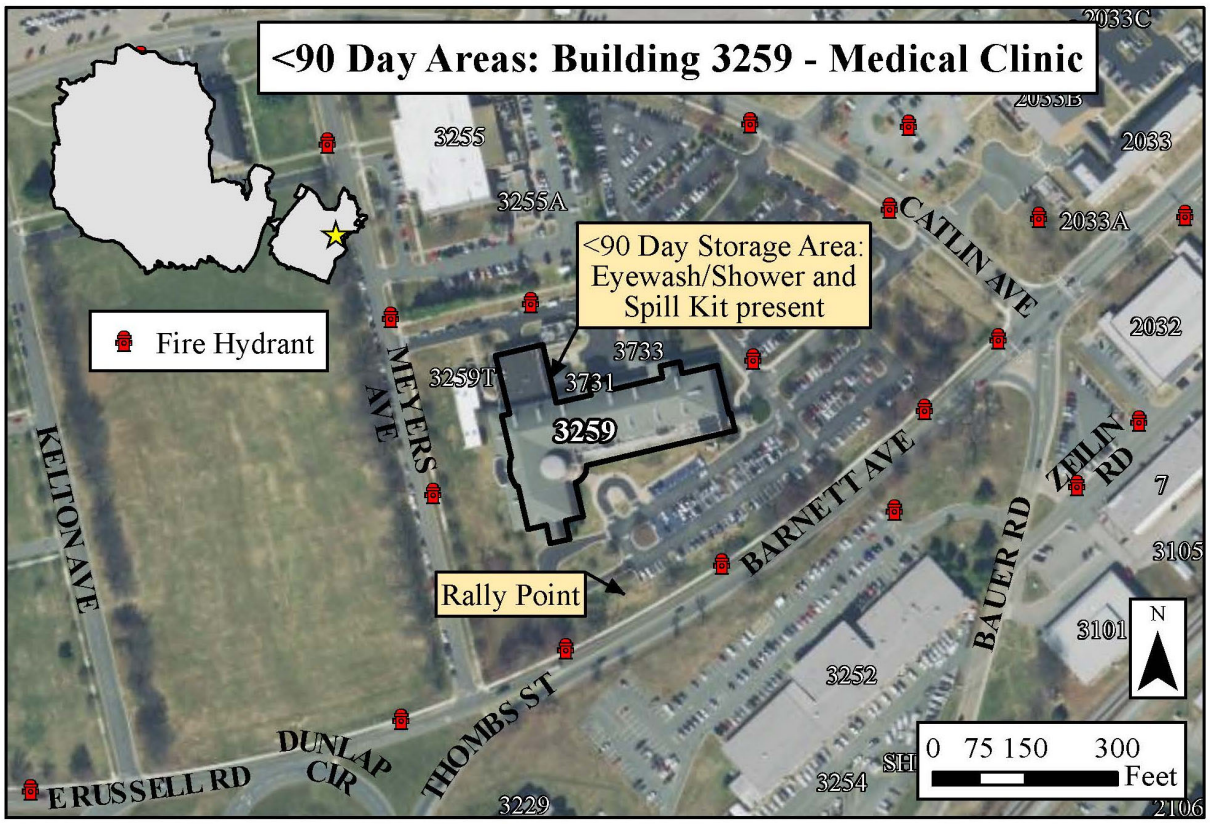
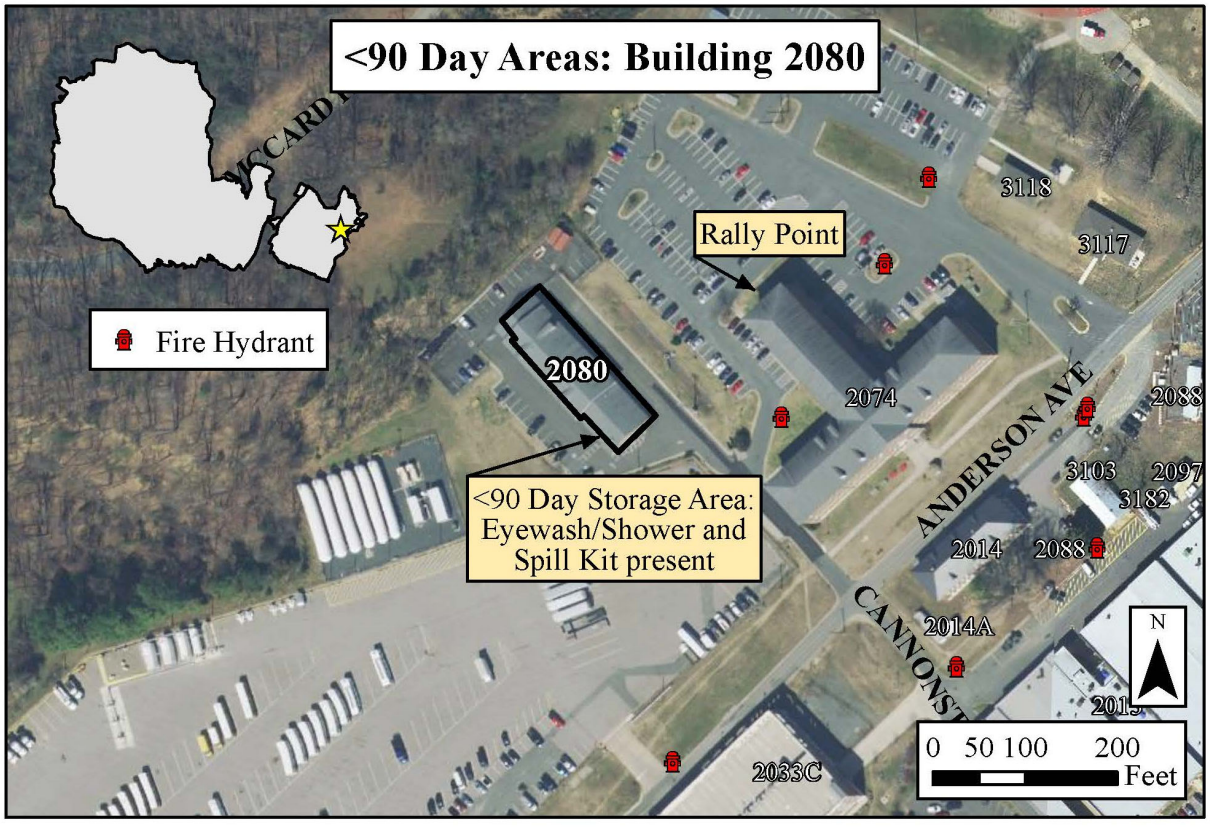
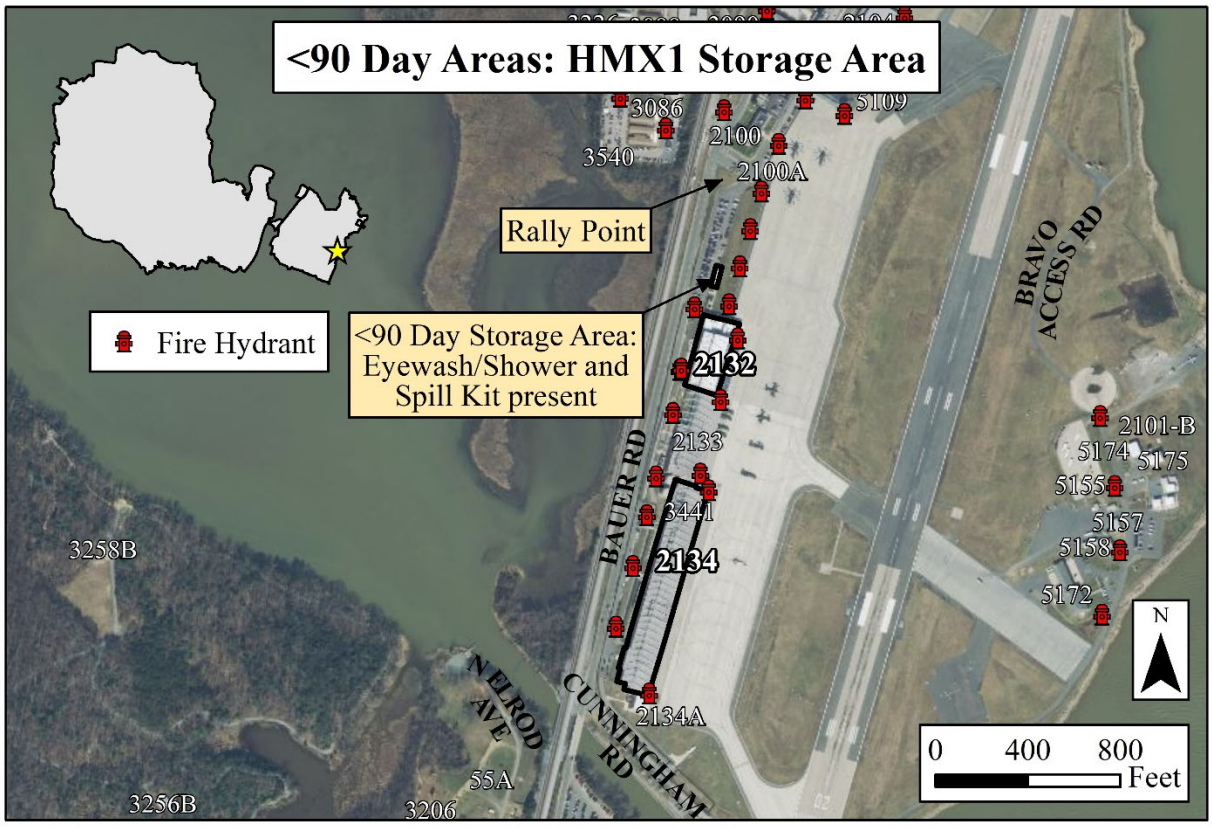
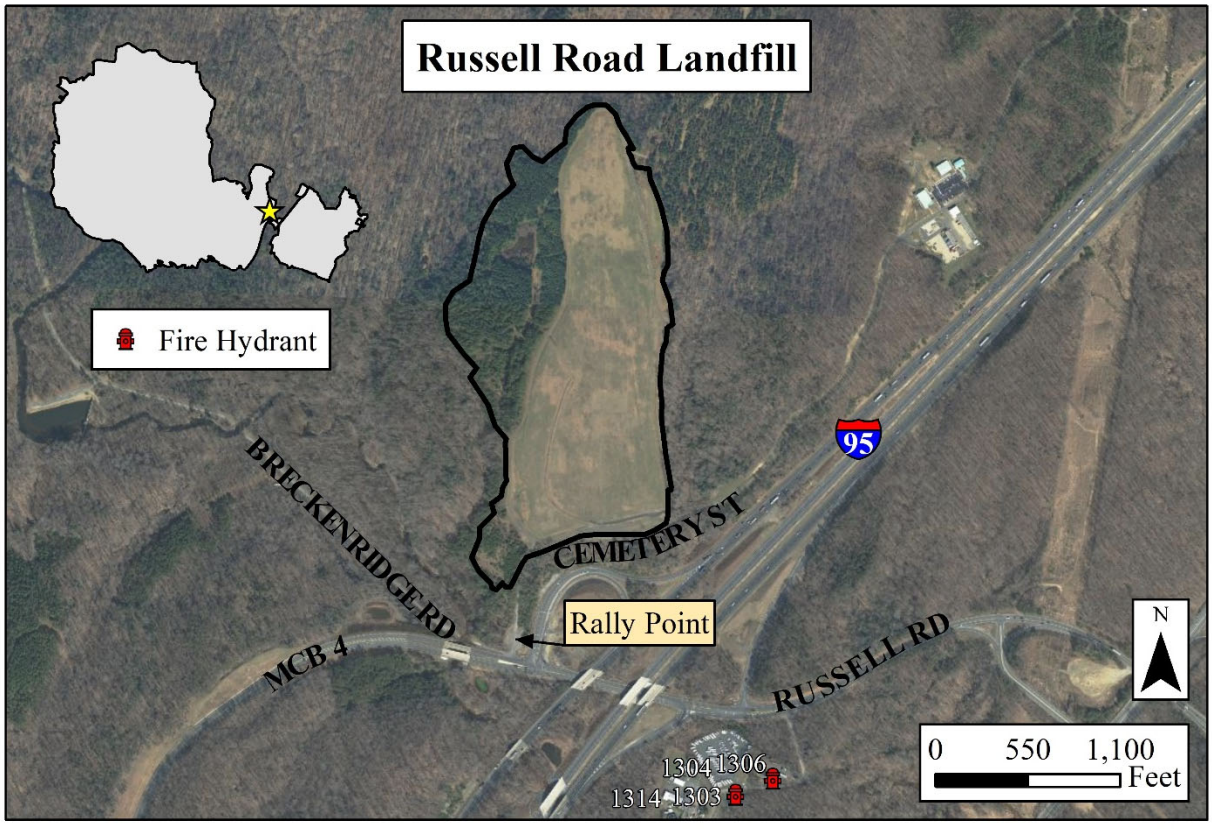
<90 Day Areas: Building 27401 - Hazardous Waste Storage Facility
Fire Hydrant
HOTPATCH RD
4504
27401
<90 Day Storage Area: Eyewash/Shower and Spill Kit present
Rally Point
MCB 4
MCB 4
Fire Station
27400
MCB 2
27402
FUEL FARM RD
N
0 37.5 75 150
Feet


Building 27401 - Hazardous Waste Storage Facility Building Diagram
D
E
F
Walkway
5 - Non-Hazardous row
4 - Non-Hazardous row
3 - Recycle Fuel row
2 - Class 9 row
1 - Class 9 row
Walkway
C
B
A
Evac. Route
Evac. Route
Evac. Route
Emergency Fire Box Button
Emergency Fire Box Button
Fire Extinguisher
Eye Wash/Shower
Spill Supplies
Forklift
Fire Hydrant
Evacuation Route
Door
Roll-Up Door
Interior/Bay Wall
Row Divider
Building 27401
Bays:
A - Acid
B - Oxidizer
E - Base
F - Flammable
N
0 12.5 25
Feet


<90 Day Areas: Building 3259 - Medical Clinic
Fire Hydrant
<90 Day Storage Area: Eyewash/Shower and Spill Kit present
Rally Point
3259
3259T
3731
3733
3255
3255A
2033C
2033B
2033
2033A
2032
3105
3101
3252
3254
3229
2106
7
CATLIN AVE
MEYERS AVE
KELTON AVE
BARNETT AVE
BAUER RD
ZEILIN RD
THOMBS ST
DUNLAP CIR
E RUSSELL RD
N
0 75 150 300
Feet


<90 Day Areas: Building 2080
Fire Hydrant
Rally Point
2080
<90 Day Storage Area: Eyewash/Shower and Spill Kit present
3118
3117
2074
2088
2097
3103
3182
2014
2014A
ANDERSON AVE
CANNON ST
2033C
N
0 50 100 200
Feet


<90 Day Areas: HMX1 Storage Area
Fire Hydrant
Rally Point
<90 Day Storage Area: Eyewash/Shower and Spill Kit present
3086
5109
2100
3540
2100A
BRAVO ACCESS RD
2132
2101-B
5174
5175
2133
BAUER RD
5155
3441
5157
5158
3258B
2134
5172
N ELROD AVE
CUNNINGHAM RD
2134A
55A
3256B
3206
N
0 400 800
Feet


Russell Road Landfill
Fire Hydrant
95
BRECKENRIDGE RD
CEMETERY ST
Rally Point
MCB 4
RUSSELL RD
1304 1306
1314 1303
N
0 550 1,100
Feet

Attachment C-3
SAAs

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SATELLITE ACCUMULATION AREAS

Location	Building	Waste Streams
Motor T Maintenance East	2013	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste F-24-soaked debris and filters Gasoline filters
Motor T Maintenance West	27054	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste Gasoline filters
Facilities Maintenance	3252	Paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002)
Golf Course Maintenance	3066	Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Gasoline-soaked debris Aerosol waste
Security Battalion	3164	Water contaminated with various fuels
MCAF Refuelers	5170	F-24-soaked debris and filters
TBS Health Clinic and Dental Clinic (Ray Hall)	24008	Dental amalgam Expired alcohols
Fuel Farm	27263	F-24-soaked debris F-24 lab waste
HMX GSE	2104	Armory debris containing lead
HMX-1	2134	Flammable paints and paint-related materials Corrosive paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive sealants Flammable sealants Oxidizing sealants Contaminated F-24 fuels F-24-soaked debris Spent solvents Solvent-soaked debris Expired maintenance products (D001, D002)

Location	Building	Waste Streams
HMX-1 Health Clinic and MCAF Dental Clinic	2132 (2nd floor)	Dental amalgam Expired alcohols
TBS MT Maintenance	24009B	Contaminated fuels Lead-acid battery waste Aerosol waste
TBS Armory	24018	Armory debris containing lead Weapons cleaning solvents
TBS Ops	24142	Gasoline-soaked debris Broken lamps
TBS COMM	24009B	Lithium batteries
TBS AIB	24009B	Armory debris containing lead
MCCS Auto Hobby Shop	2080	Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Gasoline-soaked debris Aerosol waste
Naval Medical Clinic	3259	Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals Aerosol waste Fluorescent bulbs Unused solvents Unused corrosives
H&S Bn Armory	2006	Armory debris containing lead Broken lamps Fluorescent bulbs Aerosol waste Contaminated gasoline
Vet Clinic	3310	Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals
Marine Security Guard	27275	Armory debris containing lead
OCS Medical Center A-168	5003	Aerosol waste Hazardous waste pharmaceuticals Non-hazardous pharmaceuticals
TBS Communications	24009	Lithium batteries
M&RA Marsh Center	3280	Lithium batteries Broken lamps
Sewage Treatment Plant	660	Expired waste
TBS Heat Plant	24162	Spent Solvents
Marine Corps Systems Command	2249 / 2201A / 2200	Lithium batteries Broken lamps
Museum	1775	Paints and paint-related materials Broken lamps Lead-acid battery waste Expired corrosive cleaners

Location	Building	Waste Streams
MCIA	2033	Lithium batteries Broken lamps
Crossroads Inn	3018	Lithium batteries Broken lamps
Marine Corps University	2040	Broken lamps
Expeditionary Warfare School	2077	Broken lamps
Marine Embassy School	27277	Broken lamps Armory debris containing lead
Commissary	2100	Broken lamps
Joint Non-Lethal Weapons	3097	Armory debris containing lead
NCIS Ops Center	Russell Knox	Armory debris containing lead
Guad Maintenance Shop 34	27001	Paints and paint-related materials Aerosol waste Broken lamps Lead-acid battery waste Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002)
Schools	3307	Paints and paint-related materials Broken lamps Expired corrosive cleaners Pesticide-contaminated debris Expired maintenance products (D001, D002) Chemistry lab (D001-D043) Medical waste
Davis Center MCCDC	3300	Lithium batteries Lead-acid battery waste
MLB – G6	3037	Lithium batteries Broken lamps
MCCS Maintenance	3167	Lithium batteries Broken lamps Expired maintenance products (D001, D002)
MCNOSC	27410	Lithium batteries Broken lamps
MCCS Vending	3164	Expired corrosive cleaners
MCCS Gas Station and MCX	3500B	Discarded alcohols Gasoline-soaked debris Lithium batteries Broken lamps Fluorescent bulbs
TDSA	28000	Lithium batteries Lead-acid battery waste

Location	Building	Waste Streams
4th LAR	26100	Contaminated fuels Gasoline-soaked debris Lead-acid battery waste Aerosol waste Gasoline filters
WTBn PWS	27250	Armory debris containing lead Spent bluing solutions Carbon lead swabs
Ordnance (S4)	3045	Expired weapons cleaning products (D001, D002)
Marina	3215	Expired maintenance products (D001, D002) Oily rags Used dry sweep Used oil
Raids and Recon	3230A	Lithium batteries Lead-acid battery waste
TDSA	28000	Lithium batteries Lead-acid battery waste
Museum Restorations	17001 Interstate Dr. Dumfries	Paints and paint-related materials Aerosol waste Blast media material
ITAM	3228	Batteries - lithium, nickel-cadmium, lead-acid Aerosol waste
McMart	3048	Batteries - lithium, nickel-cadmium, lead-acid
Firestone	3141	Batteries - lithium, nickel-cadmium, lead-acid Used oil
Recycle Reuse Center	3185	All waste streams
OCS Armory	2189A	Fluorescent bulbs Batteries - lithium, nickel-cadmium, lead-acid
Security Battalion Gates	All	Water contaminated with various fuels
Motor Pool	3015	Oily debris Gasoline-soaked debris Water contaminated with various fuels
MCCS West Side Gas Station and MCX	Hot Patch Road across from 27401	Discarded alcohols Gasoline-soaked debris Lithium batteries Broken lamps Fluorescent bulbs
Hazardous Waste Storage Building	27401	All waste streams

Attachment C-4
SAA Contingency Plan Template

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Contingency Plan Quick Reference Guide

Marine Corps Base Quantico (Base) is considered a Large Quantity Generator (LQG) of hazardous waste, therefore each accumulation area shall comply with the standards in 40 CFR 262 subpart M, Preparedness, Prevention and Emergency Procedures for LQGs (40 CFR §§262.15(a)(8) and 262.17(a)(6)). The Quick Reference Guide (QRG) is a brief summary of the information included in a contingency plan designed to provide emergency responders with information that will allow them to respond to emergencies safely and effectively (40 CFR 262.262(b)(1)-(8)).

1.0 Elements of a Quick Reference Guide

A Quick Reference Guide (QRG) must include the following elements as required in 40 CFR 262.262(b)(1)-(8):

a. The types/names of hazardous wastes at your facility in layman's terms and the associated hazard associated with each (e.g., toxic paint wastes, spent ignitable solvent, corrosive acid) and estimated maximum amount of each hazardous waste that may be present at any one time, and identification of any hazardous wastes where exposure would require unique or special treatment by medical or hospital staff;

b. A map of the facility showing where hazardous wastes are generated, accumulated and routes for accessing these wastes, the locations of water supply (e.g., fire hydrant and its flow rate), fire extinguishers, and spill control material, on-site notification systems (e.g., a fire alarm that rings off site, smoke alarms); and

c. The name of the emergency coordinator(s) and the 7/24-hour emergency telephone number(s).

1.1 Application and Implementation

Each accumulation area including hazardous waste (HW) and hazardous waste pharmaceutical (HW Pharms) satellite accumulation area (SAA) and less than 90 day, central accumulation area (CAA), universal waste (UW) and other non-regulated (NR) by RCRA exclusion accumulation areas shall create a Quick Reference Guide (QRG) that will be posted at each accumulation location. The provisions of this plan shall be carried out immediately whenever there is a fire, explosion, or release of hazardous waste or hazardous waste constituents that could threaten human health or the environment.

1.2 Amendment Requirements

The QRG must be reviewed, and immediately amended whenever (40 CFR 262.263);

a. Applicable regulations are revised;

b. The contingency plan fails in an emergency;

c. The generator changes in its design, construction, operation (the practice), maintenance, or other circumstances in a way that materially increases the potential for fires, explosions, or releases of hazardous waste or hazardous waste constituents, or changes the response necessary in an emergency;

d. The list of emergency coordinators or unit command practice owner changes; or

e. The list of equipment changes.

1.3 Required Documents

NREA shall provide QRG template to each unit command on Base to complete in compliance with the regulatory requirements pursuant to 40 CFR 262.17(a)(6)-(7). Each completed QRG will be submitted to NREA's HW compliance staff and will be included in the MCBQ Hazardous Waste Contingency Plan (contingency plan). The emergency responders identified in the MCBQ Hazardous Waste Management Plan will receive copy(s) of the contingency plan; including all QRGs, and all revisions as required in 40 CFR 262.262(a).

Quick Reference Guide

MCB Quantico, EPA ID. VA1170024722, Quantico, Virginia

1.0 General Information

Provide the unit/command's location information in **Table 1**, including the number of SAA's and indicated whether or not there is a <90 day, CAA within the same building (number), and the ID number of the SAA (i.e. SAA-1). If there are more than one accumulation area within a building, the SAAs shall be numbered and each location requires its own Quick Reference Guide (QRG). This template allows additional rows to be added to the tables as needed and **Table 1** can be inserted at the top of each Attachment, as applicable.

Table 1: Location Information *(* example)*

Building Name	Building Number	Unit/Command	Number SAAs and/or CAAs	SAA ID
**Hazardous Waste Storage Building*	**27401*	**NREA*	**(1) SAA and (1) CAA*	**SAA-1*

1.1 Types of Generated Hazardous Waste

Provide the list in **Table 2** of the possible hazardous or non-regulated wastes that will be present in the identified SAA in **Table1**. Please note that each SAA may not exceed 55 gallons of non-acute HW and/or either one (1) quart of liquid or 1 kg (2.2 lbs.) of solid acute hazardous waste. Table 2 can be inserted at the top of each Attachment, as applicable.

Table 2: Possible Non-Regulated and Hazardous Waste(s) Present *(*example)*

Type/Common Name	Associated Hazard	Maximum Quantity
**spent solvent*	**ignitable*	**(1) 55-gallon drum*

1.1.1 Hazardous Wastes Requiring Special Medical Treatment

Provide a list in **Table 3** of any possible hazardous wastes that may be present in the identified SAA in **Table 2** that may require unique or special treatment by medical staff if exposed. If not applicable indicate with "**NA**". **Table 3** can be inserted at the top of each Attachment as applicable.

Table 3: Hazardous Wastes with Special Treatment Requirements

Hazardous Waste	Treatment

1.2 Emergency Response Coordinators, Practice Owners, and/or Duty Officers

At all times, there must be at least one employee either on-site or on-call to respond to an emergency by coordinating all emergency response measures. The duties and responsibilities of the emergency response are described in the MCBQ Hazardous Waste Management Plan (HWMP). Provide the unit command practice owner or duty officer per location contact information whom is identified as the as spill response as their Practice Aspect in **Table 4**.

Table 5 includes the NREA emergency coordinators' contact information; which are available 24 hours, seven (7) days a week as stated in the HWMP. The procedures and notification requirements for a response to an emergency are detailed in the HWMP. Please note that Alternates are not a requirement at the unit command level but are suggested as a best management practice. **Table(s) 4 and 5** can be inserted at the top of each Attachment, as applicable.

Table 4: Practice Owners or Duty Officers Contact Information

Position	Name	Contact Phone Number
Primary		
Alternate 1		
Alternate 2		
Alternate 3		

Table 5: NREA Emergency Environmental Coordinators' Contact Information

Role	Emergency Contact Phone Number
Compliance Manager	703-432-1335 (Office)
Spill Response Manager	703-432-0523 (Office)
Hazardous Waste Program Manager	703-432-0530 (Office)
NREA After Hours Cell Number	540-379-5143

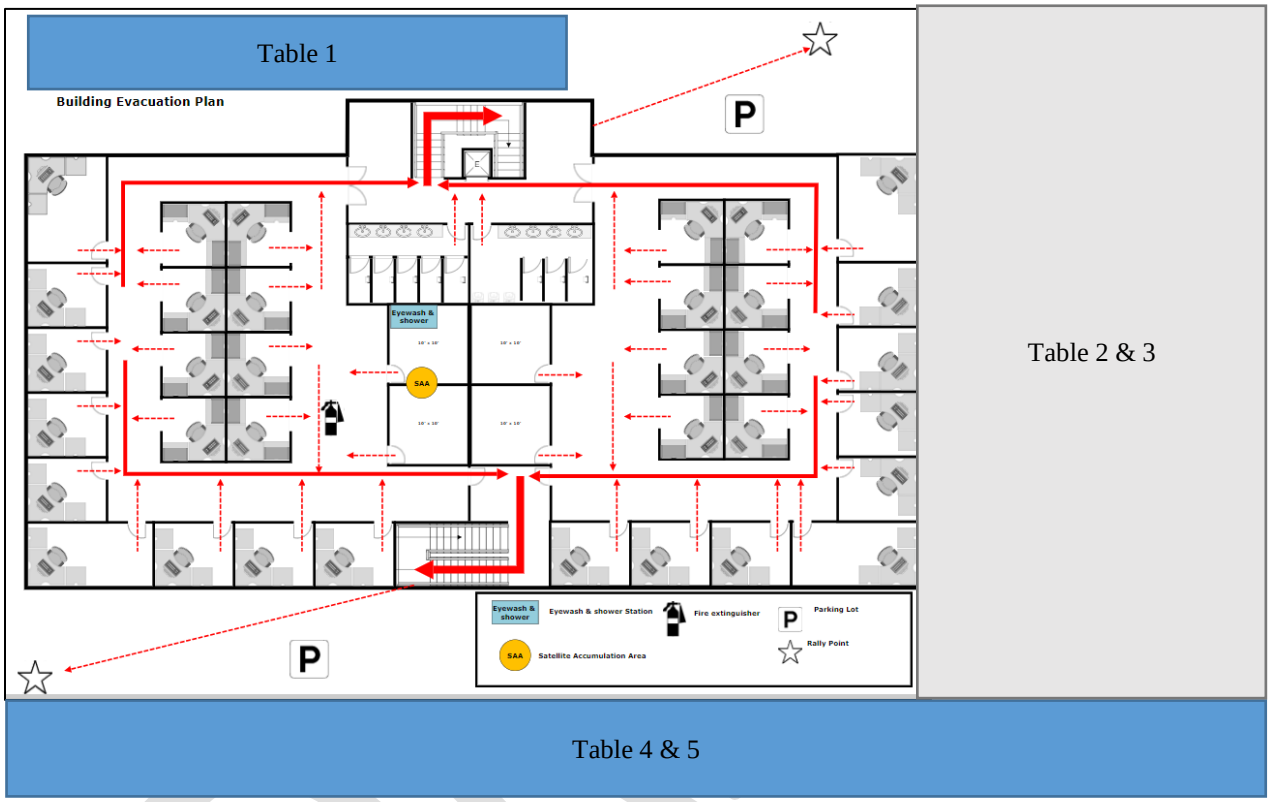
1.3 Attachments

Provide the following attachments. The attachments that are required to also be posted at the accumulation areas will be indicated in the narrative.

Attachment A: Location Map

A map showing areas where hazardous waste is generated, accumulated, treated or otherwise managed and routes for accessing these areas, onsite notification systems (e.g., fire alarm that rings onsite and offsite, smoke alarms), locations of fire extinguishers, eyewash and shower and spill control material. Additionally, the previous tables may be included in the design of the map.

**Example*



Attachment B: Waste Streams and Disposal

Provide the waste streams and disposal of waste generated in the location's operations in the table below *(*example).*

Table B: Waste Streams

Waste Stream	Disposal
**Used Oil*	**Used oil sent for recycling as Non-Regulated Waste*

Attachment C: Inventory of Spill Response and Safety Equipment

Provide a list of spill response and safety equipment that will be maintained at this SAA in the table below *(*example)*. Please note that the column titled, "Quantity", is a suggested best management practice but not required.

Table C: Inventory of Spill Response and Safety Equipment *(*example)*

Quantity	Name of Item	Application Description
*1 bag	*Absorbent	*Apply to oil or fuel spills

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APPENDIX D

Training Documents

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The HW Coordinator is responsible to ensure that THIS UNIT/COMMAND is in compliance with the following regulations.

SAA Regulations

MCINCR-MCBQ is classified as an LQG of HW and must comply with all RCRA regulations for LQGs.

Accumulation [40 CFR 262.15] - This site is may accumulate up to 55 gallons of non-acute HW and/or either 1 quart of liquid acute HW or 1 kg of solid acute HW. Multiple HW containers may be used to collect various waste streams; however, a total of 55 gallons of HW (and/or either 1 quart of liquid acute HW or 1 kg of solid acute HW) cannot be exceeded and must remain at or near the point of generation and under the control of the operator or the process generating the waste.

Labeling [40 CFR 262.17(a)(5)]- The container must be marked with the words "HAZARDOUS WASTE" and an indication of the hazards of the contents (e.g., ignitable, corrosive, reactive, toxic), or other words that identify the contents of the containers. Labels must be consistent with the DOT requirements, OSHA Hazard Communication Standard, and/or NFPA Code 704 (commonly referred to as an "NFPA Diamond").

Containers [40 CFR 262.17(a)(1)(ii), (iii), and (iv)] - The container must be DOT-approved and in good condition. A container that leaks, has a large dent larger than a dollar bill, or shows excessive rust is not acceptable for storage of HW. The container must be compatible with the waste stored within. The container must remain closed and opened only to add, remove, or consolidate the HW, or to temporarily vent the container for proper equipment operation or relieve pressure. Containers are not be opened, handled, or stored in any way that could damage, rupture, or cause leakage. MCINCR-MCBQ requires that container storage areas be inspected at least weekly for signs of deterioration, corrosion, or leaks.

Transportation - Transportation should be scheduled just prior to the container reaching maximum capacity. Once the container is full, record the date on the label and call for HW pickup or transfer to a less than 90-day accumulation area. A DATED CONTAINER NOT TRANSPORTED WITHIN 3 DAYS TO A LESS THAN 90-DAY ACCUMULATION AREA IS SUBJECT TO RCRA VIOLATIONS.

HW pickup must be coordinated with the NREA Compliance Section. Phone numbers are provided below. **Only qualified NREA Environmental Compliance personnel may transport HW on MCINCR-MCBQ.**

Please allow 24 hours' notice for waste pickup Call NREA at (703) 784-4030	
(703) 432-0531	HW Operations Manager
(703) 432-0520	HW Non-Commissioned Officer (NCO)
(703) 432-0522	HW Inspector
(703) 432-0530	HW Program Manager

UW Regulations

MCINCR-MCBQ is a large quantity handler (LQH) of UW and must comply with Standards for UW Management listed at 40 CFR 273.

UW Batteries - Batteries that may be managed as UW include the following: lead-acid, lithium, mercury, silver-ion, and nickel-cadmium types. UW Site Managers/Handlers (i.e., HW Handlers) must place any UW battery in a DOT-approved container if the battery shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. If a DOT-approved container is not available, the damaged battery may be stored in a non-DOT-approved container onsite but will be transferred to a DOT-approved container prior to shipping. All containers used for UW batteries must be closed; structurally sound; compatible with the contents of the battery; and lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions.

If the casing of each individual UW battery cell is not breached, remains intact and closed, shows no evidence of leakage or spillage, and is properly prepared for shipment (e.g., strapped to pallets and/or containerized in hard rigid plastic containers), the following controls are permitted:

- Sorting UW batteries by type;
- Discharging UW batteries to remove the electric charge;
- Disassembling batteries or battery packs into individual batteries or cells;
- Removing batteries from consumer products; and
- Taping battery terminals to ensure arcing does not occur when turning in for off-site transfer.

UW Pesticides - UW pesticides include stocks of a suspended or canceled pesticide that are part of a voluntary or mandatory recall and stocks of other unused pesticide products that are collected and managed as part of a waste pesticide collection program. HW handlers manage UW pesticides to prevent release to the environment. UW Pesticides must be stored in a container that is closed; structurally sound; compatible with the pesticide; and lacks evidence of leakage, spillage, or damage.

UW Mercury-Containing Equipment - Mercury-containing equipment includes devices, items, or articles that contain varying amounts of elemental mercury. Typical devices include thermostats, barometers, manometers, temperature and pressure gauges, and mercury switches. HW Handlers manage mercury-containing equipment to prevent releases to the environment. Mercury-containing equipment must be placed in a separate container if it shows evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions. The container must be closed; structurally sound; compatible with the contents; lack evidence of leakage, spillage, or damage that could cause leakage under reasonably foreseeable conditions, and be reasonably designed to prevent the escape of mercury into the environmental by volatilization or any other means.

If UW mercury-containing equipment does not show evidence of leakage, spillage, or damage that could reasonably cause leaks, HW Handlers may remove mercury-containing ampules from UW mercury-containing equipment, provided the handler performs the following:

- The ampules must be removed and managed in a manner designed to prevent breakage; and

- The removed ampules are subsequently placed in a container meeting the conditions above for leaking, damaged or compromised UW mercury-containing equipment, and with appropriate packing materials adequate to prevent breakage during storage, handling, and transportation.

If the non-mercury containing components of the waste do not exhibit characteristics of HW, the waste may be disposed as SW.

UW Lamps - Lamps often exhibit the toxicity characteristic due to mercury or lead contained within, making them a HW when discarded. Lamps managed in accordance with UW regulations and transferred to another UW Handler or permitted destination facility, may be managed as UW. Examples of common UW lamps include, fluorescent, high-intensity discharge, neon, mercury vapor, high pressure sodium, and metal halide lamps. UW lamps must be managed to prevent any release to the environment. Intact lamps must be stored in containers or packages that are structurally sound, adequate to prevent breakage, and compatible with the contents of the lamps. Containers must remain closed and lack evidence of leakage, spillage, or damage that cause leakage under reasonably foreseeable conditions. Broken lamps will be immediately cleaned to prevent the potential release of mercury or other hazardous constituents to the environment. Broken lamps or lams not managed in accordance with UW regulations must be managed as HW. MCINCR-MCBQ prohibits crushing UW lamps.

UW Labeling/Marking - Adhere the standard, purple "UNIVERSAL WASTE" label UW to the container. Immediately write the ASD. Write UW type and details under Contents. Within 3 inches to either side of the label, place the DOT Class 9 diamond. The UW will be shipped in labeled and marked DOT-approved containers to another UW Handler or permitted destination facility.

UW Accumulation Time Limits - Mark each container with the ASD at the earliest date any UW was received. Regardless of the volume of UW accumulated, it must be shipped within one year from the ASD.

UW Employee Training - All employees must be thoroughly familiar with proper waste handling and emergency procedures, relative to their responsibilities during normal operations and emergencies.

UW Responses to Releases - Immediately contain all releases. Determine whether any material resulting from the release is a HW, and if so, manage the HW in compliance with all applicable requirements.

Aerosol Cans - Aerosol cans of any type are managed as HW.

Non-Regulated or Non-HWs

Non-Regulated or Non-HWs are not accumulated at SAAs and are exempt from HW RCRA regulations; however, can become a HW if they are mixed with or contaminated by a HW. Non-HW may include used oil, used antifreeze, used absorbent, oily rags, diesel-contaminated water, latex paint, and alkaline batteries. These wastes are not regulated as HW but require special handling to ensure proper disposal.

Containers - All non-HW is accumulated in containers that remain closed when not adding or removing material and lack evidence of leakage, spillage, or damage that cause leakage under reasonably foreseeable conditions. Non-HW must not be mixed with other wastes. Mixing non-HW with other substances such as oil or solvents prevents its ability to be recycled and/or may cause it to become HW.

Labeling/Marking - Each non-HW container must be labeled as to its contents. Adhere the standard, blue "NON-REGULATED WASTE" label. Write the Non-HW type under Constituents.

Used Antifreeze Labeling/Marking - MCINCR-MCBQ requires all used antifreeze to be disposed within 1 year; therefore, an ASD is required on used antifreeze containers.

Used Oil Labeling/Marking [40 CFR 279] - Used oils that are NOT contaminated with solvents, glycols, or fuels are exempt from HW regulations under RCRA if they will be recycled or reprocessed. Used oils are typically generated through vehicle and equipment maintenance and include motor oil, hydraulic fluid, electrical insulating oil, transmission fluid, compressed oils, cutting oils, and coolants. Mixtures of used oil and HW are managed under HW RCRA regulations. Stencil "USED OILS FOR RECYCLE" on the container. (Note: Labeling the contents "WASTE OIL" indicates the material is not suitable for recycling and will be managed as HW). Add the ASD to the container at the date it is declared used oil for recycling.

Recycling - If the waste is recycled, the recycling facility must be authorized by the federal and/or state environmental regulatory agencies, as applicable.

IF YOU HAVE ANY QUESTIONS CONCERNING THE MANAGEMENT OR INTERPRETATION OF THE REGULATIONS CONCERNING HW, NON-HW, OR UW, PLEASE CONTACT NREA AT (703) 784-4030.

The HW Coordinator is responsible for properly managing the waste(s) at SAAs and UW sites within the Command/Unit and must be familiar with MCINCR-MCBQ's HWMP.

Satellite Accumulation Training/UW Training [40 CFR 262.17(a)(7)]

Training is provided to all personnel that manage or handle HW and/or UW. Qualified personnel from the Environmental Affairs branch of NREA or HW Coordinators at less than 90-day accumulation areas may provide the required training. Training is documented by NREA and copies of training records must be posted at each site. Training includes the following topics:

Identification and Labeling of Waste

- Recognizing and identifying waste (HW, Non-HW, UW)
- Container markings
- Compliance
- SDSs

Management of Containers

- Selecting and purchasing containers for HW, Non-HW, and UW
- Checking for damage or leaks
- Empty container management
- Proper head space
- Safety
- Compatibility

Accumulation

- When to record the ASD (SAA vs. UW storage)
- Maximum quantity of HW, Non-HW, or UW that may be accumulated
- Storage time limits for HW, Non-HW, and UW

Handling and Transportation of Waste

- Proper protective equipment (PPE)
- How to report spills
- Use of open Government vehicles for transportation

Miscellaneous

- Specific training concerning applicable waste streams
- HW, Non-HW, and UW packaging
- SW storage requirements
- Types of UWs: Batteries (lead-acid, lithium, magnesium, nickel-cadmium), lamps, pesticides, mercury- containing equipment, and mercury containing thermostats.

Command/Unit:	Site/Location:	Building Number:

HW OTJ Trainer:	Contact Phone #:

List specific waste streams at this site:

1.

2.

3.

4.

5.

6.

I HAVE RECEIVED SATELLITE ACCUMULATION TRAINING, UW TRAINING, AND DETAILED TRAINING CONCERNING THE WASTE STREAMS GENERATED BY MY ACTIVITY.

Printed Name and Rank _____ Signature/Date _____

Printed Name and Rank _____ Signature/Date _____

Printed Name and Rank _____ Signature/Date _____

Printed Name and Rank _____ Signature/Date _____

Printed Name and Rank _____ Signature/Date _____

Printed Name and Rank _____ Signature/Date _____

Table D-1: HW Training Matrix

COURSE DESCRIPTION REFERENCES: • RCRA: 40 CFR 262.17(a)(7) • OSHA: 29 CFR 1910.120(e) • DOT: 49 CFR 172 Subpart H • MCO 5090.2, Vol. 9, Ch. 3, Section 030501.M.4 • OPNAVINST 5090.1C (series), Chapter 29 (paragraph 5.6)	HW COORDINATORS			NREA BRANCH PERSONNEL					
	Less Than 90-Day Accumulation Area	SAA/MSA	UW Site	HM/HW Program Personnel	Solid Waste Program Personnel	Air Program Personnel	Tank Program Personnel	Water Program Personnel	Remediation Program Personnel
INITIAL TRAINING (1)									
1. RCRA HW TRAINING (24-HR)	X			X	X	X	X	X	X
2. OSHA HM/HW GENERAL SITE WORKER COURSE (24-HR)				X	X	X	X	X	X
3. SAA TRAINING		X	X						
4. UW SITE TRAINING		X	X						
5. DOT HM/HW TRAINING				X	X				X
6. MCINCR-MCBQ INSTALLATION RESTORATION (IR) TRAINING				X	X		X		X
7. LANDFILL TRAINING				X	X				X
8. ENVIRONMENTAL QUALITY SAMPLING				X	X			X	X
REFRESHER TRAINING (1)									
9. RCRA HW REFRESHER	X			X	X	X	X	X	X
10. OSHA HM/HW GENERAL SITE WORKER REFRESHER (8-HR)				X	X	X	X	X	X
11. SAA REFRESHER		X	X						
12. UW SITE REFRESHER		X	X						
13. DOT HM/HW REFRESHER (every 3 years)				X	X				X
14. MCINCR-MCBQ IR PERMIT REVIEW				X	X		X		X

COURSE DESCRIPTION REFERENCES: • RCRA: 40 CFR 262.17(a)(7) • OSHA: 29 CFR 1910.120(e) • DOT: 49 CFR 172 Subpart H • MCO 5090.2, Vol. 9, Ch. 3, Section 030501.M.4 • OPNAVINST 5090.1C (series), Chapter 29 (paragraph 5.6)	HW COORDINATORS			NREA BRANCH PERSONNEL					
	Less Than 90-Day Accumulation Area	SAA/MSA	UW Site	HM/HW Program Personnel	Solid Waste Program Personnel	Air Program Personnel	Tank Program Personnel	Water Program Personnel	Remediation Program Personnel
15. LANDFILL REFRESHER TRAINING				X	X				X
16. RCRA HW GENERATOR (online when timeframes cannot be met due to scheduling conflicts with CECOS/NREA)	X			X	X		X	X	X
17. OTJ TRAINING [(2)]									
Must be approved and documented by HW Coordinator's Supervisor, HW Program Manager, and Environmental Training Coordinator.	X	X	X	X	X		X	X	X

[(1)] Training may be classroom or online
[(2)] May be substituted for any refresher training

Table D-2: Course Descriptions

INITIAL TRAINING
1. RCRA HW TRAINING **Course Length:** 24 hours **Taught By:** Naval Civil Engineer Corps Officers School (CECOS)/NREA **Description:** This RCRA course trains personnel that work with, store, and dispose of HM/HW to perform their duties safely and in compliance with legal requirements as well as help meet the annual refresher training requirement. Topics include: • HM/HW laws and regulations • HM/HW management policies • HW identification and classification • HW labeling, packaging, handling, and transportation requirements • Health/environmental effects and personal safety • Emergency response procedures **Who Should Attend:** Personnel who generate, package, handle, store, transport, or manage HM/HW in the performance of their normal duties
2. OSHA GENERAL SITE WORKER COURSE **Course Length:** 24 hours **Taught By:** NREA/CECOS **Description:** This course provides personnel who work at HW sites with the initial health and safety information they need to perform their duties safely and in compliance with 29 CFR 1910.120(e). The course also focuses on how to comply with RCRA HW generator requirements. This course covers the following concepts: • Safety • Hazard recognition • Toxicology • Air monitoring instruments • PPE • Physical hazards • Drum handling • Decontamination • Laws and regulations **Who Should Attend:** Individuals who package, handle, store, transport, and manage HM/HW, and who require initial safety training

INITIAL TRAINING
3. SAA TRAINING **Course Length:** Varies. Dependent on waste stream(s) and questions from personnel, generally less than 30 minutes **Taught By:** NREA staff and/or HW Site Managers and/or Environmental Coordinators **Description:** Addresses appropriate accumulation, container selection (ensuring the container is compatible with the waste to be containerized), handling and transportation procedures at SAAs and MSAs. See CETEP Training Document 9.1.5. **Who Should Attend:** All personnel in charge of satellite accumulation and personnel who handle HW in SAAs and MSAs
4. UW SITE TRAINING **Course Length:** Varies. Dependent on waste stream(s) and questions from personnel, generally less than 30 minutes **Taught By:** NREA staff and/or HW Site Managers and/or Environmental Coordinators **Description:** Addresses appropriate accumulation of UW, container selection, handling and transportation procedures at UW accumulation sites. See CETEP Training Document 9.1.5. **Who Should Attend:** All personnel that accumulate UW
5. DOT HM/HW TRAINING **Course Length:** 24 hours **Taught By:** Commercial providers, such as Environmental Resources Center (ERC) **Description:** This RCRA course provides training on DOT HM/HW transportation and manifests in compliance with 49 CFR 172 Subpart H. The course includes: • Regulatory changes that have occurred recently • Shipping goods • Classifying materials • Packaging, marking, labeling, and shipping • Manifests **Who Should Attend:** Environmental Protection Specialists (e.g., NREA Staff) and anyone who has duties/ is responsible for the shipment of HM/HW and/or the signing of HW manifests

INITIAL TRAINING
6. MCINCR-MCBQ IR TRAINING **Course Length:** 4 hours **Taught By:** NREA Remediation Program Manager **Description:** This course provides training on all permits managed by the MCINCR-MCBQ Remediation Program including Russell Road Landfill. Topics include: • Permits • General facility conditions • Post-closure care • Detection and assessment monitoring • Inspection schedule • Compliance issues **Who Should Attend:** Environmental engineers or anyone who manages permitted landfills
7. LANDFILL TRAINING **Course Length:** 8 hours **Taught By:** NREA Compliance Section **Description:** This course provides compliance with legal requirements training for personnel who work at the Russell Road Landfill. Topics include: • Landfill laws and regulations • Groundwater monitoring • Gas management program • Landfill inspection and maintenance requirements • Health/environmental effects and personal safety • Emergency response procedures **Who Should Attend:** NREA HW staff, Facility Maintenance Shop personnel who maintain landfill, Rhea contractors

INITIAL TRAINING

8. ENVIRONMENTAL QUALITY SAMPLING

Course Length: 24-Hour RCRA Course

Taught By: CECOS

Description: This course is designed to satisfy the training requirements for Navy environmental samplers specified in Chapter 29 (paragraph 5.6) of OPNAVINST 5090.1C (series) by providing training on basic sampling techniques (grab / composite / multi-increment sampling, avoidance of cross-contamination, use of preservatives, etc.) and specific sampling techniques for soil, potable water, waste water (including stormwater), groundwater and HW. Topics include:

- Completion of environmental sampling paperwork (e.g., sample container labeling, field log books, chain of custody documentation)
- Health and safety considerations
- Field testing techniques (i.e., use of pH meter, conductivity / total dissolved solids meter, temperature indicator, and dissolved oxygen meter)
- Use of a flow-through cell for micro purging of monitoring wells.

Who Should Attend: This course is required for environmental samplers as specified in Chapter 29 (paragraph 5.6) of OPNAVINST 5090.1C (series) in the performance of their duties

REFRESHER TRAINING

9. RCRA HW REFRESHER

Course Length: 8 hours

Taught By: CECOS/MCINCR-MCBQ CETEP Coordinator

Description: This course provides personnel with updated regulatory and technical information needed to perform their duties safely and in compliance with all legal policies and requirements. The course reviews:

- HM/HW laws and regulations (40 CFR, 29 CFR, 49 CFR)
- HM/HW management policies
- Compliance
- HW identification and classification
- HW labeling, packaging, handling, and transportation requirements

Who Should Attend: Personnel who have taken the initial the 3-day (24-hr) course and require annual updated training

INITIAL TRAINING
10. OSHA HM/HW GENERAL SITE WORKER REFRESHER **Course Length:** 8 hours **Taught By:** NREA **Description:** This course provides personnel who work at HW generation sites with the refresher health and safety information they need to perform their duties safely and in compliance with 29 CFR 1910.120(e). The course also focuses on how to comply with RCRA HW generator requirements. This course covers the following concepts: • Safety • Hazard recognition • Toxicology • Air monitoring instruments • PPE • Physical hazards • Drum handling • Decontamination • Laws and regulations **Who Should Attend:** Individuals who have taken the initial training and package, handle, store, transport, and manage HM/HW, and who require annual refresher safety training
11. SAA REFRESHER **Course Length:** Varies. Dependent on waste stream(s) and questions from personnel, generally less than 30 minutes **Taught By:** NREA and/or HW Coordinators **Description:** Addresses accumulation, container selection, handling, and transportation procedures. See CETEP Training Document 9.1.5. **Who Should Attend:** All personnel who have received the initial training, require annual refresher training, and are responsible for satellite accumulation or any person who handles HW in those areas

INITIAL TRAINING
12. UW SITE REFRESHER **Course Length:** Varies. Dependent on waste stream(s) and questions from personnel, generally less than 30 minutes **Taught By:** NREA and/or HW Coordinators **Description:** Addresses accumulation of UW, container selection, handling, and transportation procedures. See CETEP Training Document 9.1.5. **Who Should Attend:** All personnel that accumulate UW and require annual refresher training
13. DOT HM/HW REFRESHER TRAINING **Course Length:** 8 hours **Taught By:** Commercial providers, such as ERC **Description:** This course provides training for DOT HM/HW transportation in compliance with 49 CFR 172 Subpart H. The course includes: • Regulatory changes that have occurred recently • Shipping goods • Classifying materials • Packaging, marking, labeling, and shipping • Manifests **Who Should Attend:** All personnel that transport HM/HW and require refresher training at least once every three years

INITIAL TRAINING
14. MCINCR-MCBQ IR PERMIT REVIEW **Course Length:** 8 hours **Taught By:** NREA Remediation Program Manager **Description:** This course provides a refresher and review on all permits managed by the Remediation program of NREA including Russell Road Landfill. Topics include: • Permits • General facility conditions • Post-closure care • Detection and assessment monitoring • Inspection schedule • Compliance issues **Who Should Attend:** Environmental engineers or anyone who manage permitted landfills.
15. LANDFILL REFRESHER TRAINING **Course Length:** 3 hours **Taught By:** NREA Compliance Section **Description:** This course provides compliance with legal requirements training for personnel who work at the Russell Road Landfill. Topics include: • Landfill laws and regulations • Groundwater monitoring • Gas management program • Landfill Inspection and maintenance requirements • Health/environmental effects and personal safety • Emergency response procedures **Who Should Attend:** NREA HW staff, Facility Maintenance Shop personnel who maintain landfill, Rhea contractors

INITIAL TRAINING

16. RCRA HW GENERATOR (Online When Time Frames Cannot Be Met Due to Scheduling Conflicts with CECOS/NREA)

Course Length: 3 hours

Taught By: National Environmental Training

Description: This course is intended for individuals who deal with or manage HW. Topics include:

- Definition of a HW
- Labeling requirements
- Storage areas
- Disposal facilities
- HW determination

Who Should Attend: Personnel who generate, package, handle, store, transport, or manage HM/HW in the performance of their duties

OTJ TRAINING

17. OTJ TRAINING

Description: OTJ Training for newly hired employees who will be handling and storing HM/HW can replace required refresher courses if the OTJ training teaches them to perform their duties in a way that will ensure the facilities compliance with the requirements as per 40 CFR 262.17(a)(7). The employee must receive an official certification from NREA stating that he/she has been involved in the HM/HW handling activities listed below, sufficient to waive his/her attendance to an annual refresher course and still maintain his/her certification for "HM/HW Handling." Topics include:

- Training others in HM/HW handling
- Researching and testing HM/HW for their toxic characteristics
- Developing waste profiles
- Studying HW characteristics and compatibilities
- Preparation for EPA and VDEQ annual HW (RCRA) inspections
- Participation in EPA and VDEQ annual HW (RCRA) inspections
- Preparation of HW manifests
- Overseeing MCINCR-MCBQ's NREA HW Storage Facility - Building 27401 and accepting, labeling, identifying, testing, and/or preparing waste for shipment to a disposal or recycling facility
- Emergency responses and spill training/exercises

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Appendix E

ESOPs - Inspection Checklists

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	MCINCR-MCBQ **NREA** **Monthly HW Compliance Inspection Checklist**	References: • MCO 5020.2 Vol. 9, Chapter 3 • RCRA: 40 CFR • OSHA: 29 CFR • DOT: 49 CFR

Unit:	Inspected by:
Unit POC:	Date:
Phone No.:	Site Rep:
☐ COMPLIANT ☐ NONCOMPLIANT	

SAA Requirements [40 CFR 262.15]:

1. ☐ Waste is stored at or near any point of generation and under the control of the operator of the process.
2. ☐ Site is property labeled "SATELLITE ACCUMULATION AREA" with site contact name and number.
3. ☐ Waste is stored in quantities not to exceed 55 gallons (1 quart for acutely HW).
4. ☐ Excess waste moved to less than 90-day accumulation area within 3 days of ASD.
5. ☐ All containers labeled with "HAZARDOUS WASTE," an indication of the hazards of the contents, (or "WASTE PENDING ANALYSIS"), and DOT label. Labels are legible and facing forward.
6. ☐ Waste is stored in containers in good condition; free of leaks, dents, and deterioration; and compatible with the waste stored.
7. ☐ Waste containers remain closed, except when adding or removing waste. All drum bungs/caps, rings, bucket tops properly secured/tightened.
8. ☐ No signs of spills on the container(s) or in the surrounding area.
9. ☐ Adequate aisle space present between containers.
10. ☐ Clearly visible "NO SMOKING" signs and fire extinguisher(s).
11. ☐ Contingency plan including evacuation map, quick reference guide, and points of contact posted and visible.

UW Requirements [40 CFR 273.33 and 273.34]:

1. ☐ UW container is properly labeled with purple label, UW type, ASD, and DOT label. Labels are legible and facing forward.
2. ☐ Site is properly labeled as "UNIVERSAL WASTE AREA."
3. ☐ UW is properly packaged and no evidence of leakage.
4. ☐ UW accumulates less than one year from date generated/ASD.
5. ☐ Batteries (lead-acid, lithium, mercury, silver-ion, and nickel-cadmium): All cases intact; terminals taped; marked "UNIVERSAL WASTE – [TYPE OF BATTERY] BATTERIES," ASD.
6. ☐ Pesticides: Waste is in NREA-approved containers, properly labeled, closed, and compatible.
7. ☐ Lamps: Stored in approved container, properly labeled, closed, and secured.
8. ☐ Mercury-containing equipment: Stored in approved container, properly labeled, closed, and secured.

	MCINCR-MCBQ **NREA** **Monthly HW Compliance Inspection Checklist**	References: • MCO 5020.2 Vol. 9, Chapter 3 • RCRA: 40 CFR • OSHA: 29 CFR • DOT: 49 CFR

Miscellaneous:

Aerosol Cans

1. ☐ Punctured and drained utilizing an authorized aerosol can puncture unit.
2. ☐ Manage aerosol cans as HW.

Used Oil [40 CFR 279]

1. ☐ Is used oil container properly label with white recycling label, marked "USED OIL" under contents, and ASD.
2. ☐ Containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.

Used Oil Filters

1. ☐ Punctured and "Hot Drained." Once filters are drained place in the used oil filter container. label container "USED OIL FILTERS," ASD.
2. ☐ Containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.

Used Antifreeze

1. ☐ Label "GLYCOL-BASED ANTIFREEZE," ASD.
2. ☐ Containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.

Uncontaminated Gasoline, MOGAS, Diesel, and F-24 Fuel (do not mix with any other fuel)

1. ☐ Label "[FUEL TYPE] FUEL FOR RECYCLE," ASD, adhere DOT Class 3 diamond.
2. ☐ Containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.

Non-HW

1. ☐ Adhere "NON-HAZARDOUS WASTE" label, write the type of waste under contents, ASD.
2. ☐ Containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.

Segregation of HM/HW

1. ☐ HW and HM are clearly segregated.

	MCINCR-MCBQ **NREA** **Monthly HW Compliance Inspection Checklist**	References: • MCO 5020.2 Vol. 9, Chapter 3 • RCRA: 40 CFR • OSHA: 29 CFR • DOT: 49 CFR

Central Accumulation Area (Less Than 90-Day) Requirements [262.17, 262.250-265]:

1. ☐ Weekly site inspections are conducted.
2. ☐ Site is property labeled as a "Less Than 90-Day Accumulation Area."
3. ☐ Waste from Unit-level Central Accumulation Area (Less Than 90-Day Accumulation Area) is moved within 10 days of the ASD to the NREA HW Storage Facility – Building 27401).
4. ☐ All labels marked with ASD.
5. ☐ All containers labeled with "HAZARDOUS WASTE," an indication of the hazards of the contents, and DOT label. Labels are legible and facing forward.
6. ☐ Drums/containers are shipped within the LQG 90-day timeframe.
7. ☐ Containers are NREA-approved, in good condition, and compatible with waste being stored.
8. ☐ Incompatible wastes or incompatible wastes and materials are not placed in the same container.
9. ☐ Waste containers kept closed. All drum bungs/caps, rings, bucket tops properly secured/tightened.
10. ☐ Containers managed in a manner to prevent rupture or leakage.
11. ☐ No signs of spills in the surrounding area.
12. ☐ Secondary containment is clean, free of cracks or other failures, and empty of free-standing liquid.
13. ☐ Unit HW Contingency Plan is on file with NREA HW Program Manager and Environmental Management System Coordinator.
14. ☐ Maps are posted of all emergency equipment locations, including fire control, spill equipment, decontamination equipment, evacuation routes, and site locations.
15. ☐ All inspection results are kept on file for three years.
16. ☐ Training records for current HW personnel kept on file until facility closure for former HW personnel for 3 years.
17. ☐ All personnel completed required training within 6 months of joining the activity. Untrained personnel perform HW management tasks only with trained supervision.
18. ☐ Fire control, spill control, eyewash / shower station is available, adequate and working properly.
19. ☐ Clearly visible "NO SMOKING" signs and fire extinguishers in place.
20. ☐ Adequate aisle spacing allowing for unobstructed movement of personnel, emergency equipment, spill control equipment and decontamination equipment.
21. ☐ Facility communications available or access to communications or alarm system (voice, signal, or cell phone).

	MCINCR-MCBQ **NREA** **Monthly HW Compliance Inspection Checklist**	References: • MCO 5020.2 Vol. 9, Chapter 3 • RCRA: 40 CFR • OSHA: 29 CFR • DOT: 49 CFR

Hazardous Waste Pharmaceuticals (Medical Storage Areas) Requirements [40 CFR 266 Subpart P]:

1. ☐ Site is property labeled "MEDICAL STORAGE AREA" with site contact name and number.
2. ☐ Waste is stored in containers in good condition; free of leaks, dents, and deterioration; and compatible with the waste stored.
3. ☐ Ignitable or reactive wastes managed safely.
4. ☐ Incompatible wastes or incompatible wastes and materials are not placed in the same container.
5. ☐ Waste containers remain closed and secured to prevent unauthorized access to contents.
6. ☐ All containers labeled with HW label, "HAZARDOUS WASTE PHARMACEUTICALS," and DOT label provided by NREA. Labels are legible and facing forward.
7. ☐ All labels marked with ASD.
8. ☐ Inventory system maintained.
9. ☐ Waste moved to less than 90-day accumulation area within 9 months of ASD.
10. ☐ No signs of spills on the container(s) or in the surrounding area.
11. ☐ Clearly visible "NO SMOKING" signs and fire extinguisher(s).

Environmental Management System (All Sites):

1. ☐ Was the person(s) interviewed able to define the acronym "EMS" correctly?
2. ☐ Was the person interviewed able to define the term Environmental Significant Aspect as it would apply to the processes performed at this command?
3. ☐ Was the person interviewed able to identify what adverse effect to the environment could take place if the identified significant aspect(s) at this command were not managed correctly?
4. ☐ Did the person interviewed know where the Commanding Officer's Environmental Policy was posted and what it states?
5. ☐ Did the person interviewed know who to call in the event of a spill and how to fill out a spill report?
6. ☐ Was all required training for the person(s) interviewed up to date and properly filed?

   ☐ All personnel have had Environmental Management System awareness training?

Comments/Names of Person(s) Interviewed:

MCINCR- MCBQ Satellite Accumulation Area and Medical Storage Area
Weekly Inspection Checklist

1. **File this inspection in your Environmental Operations or Records Binder and retain for 3 years.**
2. **Call NREA HW Program for pick-up when containers are almost full at (703) 432-0527.**

Month /Year**:**	Unit:
Inspector's Name**:**	Signature**:**

Inspection Items:	**Week Inspected**				
Answer all questions with Yes, No, or N/A	**1**	**2**	**3**	**4**	**5**
Inspection Date:					
1. Waste stored at or near the point of generation?					
2. All spills or leaks on drums or around the area quickly and thoroughly addressed?					
3. Does the SAA contain **LESS than** 55 gallons of HW or 1 quart of acutely HW?					
4. Liquid HW containers stored on clean, dry secondary containment with proper capacity?					
5. Containers in good condition and free from severe rusting, bulging, or structural defects?					
6. Containers compatible with waste being stored?					
7. Incompatible wastes not stored in the same container or containment?					
8. All drum bungs and self-closing lids serviceable?					
9. Containers securely closed except when adding or removing contents?					
10. Containers grounded when transferring flammable liquids?					
11. Containers marked as appropriate: "HAZARDOUS WASTE," "HAZARDOUS WASTE PHARMACEUTICALS," "NON-REGULATED WASTE," "UNIVERSAL WASTE," or "USED OIL"?					
12. HW labels visible, include Hazard Class labels (DOT), and facing forward?					
13. Is the following label information filled-out and legible? a. Generator name and address					
b. Accumulation state date (if Non-Regulated / UW / HW ready for pick-up)					
c. Contents, physical state, hazardous properties, UN Number (HW)					
14. Expired HM treated as a waste or shelf-life extended?					

Inspection Items:	**Week Inspected**				
Answer all questions with Yes, No, or N/A	**1**	**2**	**3**	**4**	**5**
Inspection Date:					
15. HM clearly separated from waste?					
16. Adequate aisle space between containers?					
17. Waste fluids stored only in authorized used oil tank or waste container?					
18. All battery terminals taped?					
19. Contingency plan including evacuation map, quick reference guide, and points of contact posted and visible (SAA only)					
20. All deficiencies identified during previous inspections corrected?					
REMARKS (continue on back of more space is needed):					

MCINCR-MCBQ Central Accumulation Area - Weekly Inspection Checklist

1. **File this inspection in your Environmental Operations or Records Binder; retain for 3 years.**
2. **Email a copy of your completed CAA Weekly Inspection Checklist to NREA by COB each Friday.**

Month /Year**:**	Unit:
Inspector's Name**:**	Signature**:**

Inspection Items:	**Week Inspected**				
Answer all questions with Yes, No, or N/A	**1**	**2**	**3**	**4**	**5**
Inspection Date:					
1. Containers properly labeled as "HAZARDOUS WASTE" and the date upon which each period of accumulation begins?					
2. Drums/containers **within** the LQG 90-day time limit?					
3. Containers in good condition; free from severe rusting, bulging, or structural defects; NREA-approved; and stored in a manner to prevent rupture and leaks?					
4. Containers compatible with waste being stored?					
5. Incompatible wastes stored in separate containers, containments, or bays?					
6. Containers kept closed? All drum bungs/caps and bucket tops properly secured and tightened? (NREA CAA: Are rings secured at proper torque?)					
7. HW labels visible and completed properly to include Hazard Class labels (DOT)?					
8. All battery terminals taped?					
9. "NO SMOKING" signs and fire extinguishers in place and clearly visible?					
10. Fire control, spill control, and eyewash equipment working properly and inspected?					
11. No signs of spills or leaks on the containers or in the surrounding areas? (Note: If **No**, must be addressed immediately.)					
12. Adequate aisle spacing allowing for unobstructed movement of personnel, emergency equipment, spill control equipment, and decontamination equipment?					
13. Secondary containment clean, serviceable, and empty of free-standing liquid?					
14. Maps posted of all emergency equipment locations including fire control, spill equipment, decontamination equipment, evacuation routes, and site locations?					

Inspection Items:	**Week Inspected**				
Answer all questions with Yes, No, or N/A	**1**	**2**	**3**	**4**	**5**
Inspection Date:					
15. Operating record up to date with items within storage? (NREA CAA: Updated daily on Sharedrive)					
16. All deficiencies identified during previous weekly inspection corrected?					
REMARKS (continue on back of more space is needed):					

APPENDIX F

Waste Stream Sheets

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HAZARDOUS WASTE STREAMS

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F-24 Contaminated Rags (Non-Metals Only)*

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

F-24 residual fuels

Characterization

This waste stream consists of any rags or wipes that came into contact with F-24 from spills, cleanup, or maintenance. These items must be managed as HW. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or high-density polyethylene [HDPE]) from NREA for accumulation of solid F-24 debris waste. Immediately after material is placed into the drum, perform the following:
   1. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   2. Circle or check the hazard "IGNITABLE."
   3. Write "D001" under Waste Codes.
   4. Write "UN3175, WASTE SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S 4.1, PG II (F-24-CONTAMINATED RAGS AND DEBRIS)" under Chemical Constituents.
   5. DO NOT add the date until the drum is full or ready to be turned in.
   6. Within 3 inches to either side of the label, place the DOT Class 4.1 diamond.

2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

***Refer to current HW profile. See waste sheet for F-24 Contaminated Rags (metals) for rags contaminated with metals.**

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F-24 Contaminated Rags (Metals)†

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

F-24 residual fuels, heavy metals

Characterization

This waste stream consists of any rags, wipes, or solid debris that came into contact with F-24 from spills, cleanup, or maintenance and are contaminated with heavy metals of any type. These items must be managed as HW. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or high-density polyethylene [HDPE]) from NREA for accumulation of solid F-24 debris waste. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "IGNITABLE." (Note: "TOXIC" may also be needed based on waste characterization).
   c. Write "D001" and the applicable heavy metal waste code(s) under Waste Codes. See Table F-1.
   d. Write "UN3175, WASTE SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S 4.1, PG II (F-24- CONTAMINATED RAGS AND DEBRIS)" and heavy metal type(s) under Chemical Constituents.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 4.1 diamond and applicable heavy metal DOT Class diamond listed in Table F-1.

2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

† Refer to current HW profile. Rags may be classified as Combustible Waste depending on the profile.

Table F-1: Heavy Metal HW Labeling Requirements

Metal	Waste Code	DOT Hazard Classification	DOT Diamond
Arsenic	D004	6.1	
Barium	D005	4.3	
Cadmium	D006	6.1	
Chromium	D007	4.1	
Lead	D008	N/A	N/A
Mercury	D009	8	
Selenium	D010	6.1	
Silver	D011	N/A	N/A

HW Paint-Contaminated Rags and Debris (Solid Only)

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Various paints, solvents, and possible heavy metal contaminants from the painting process or original paint product.

Characterization

This waste stream consists of rags, wipes, barrier paper, tarps, masking tape, booth filters, gloves, stir sticks, mixing implements, sandpaper, and paint chips or dust that has come in contact with a flammable paint or solvents during painting activities. These items may be flammable based on usage. MCINCR-MCBQ manages all HW paint-contaminated rags and debris as HW. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or HDPE) from NREA for accumulation of solid paint-contaminated rags and debris waste. Immediately after material is placed into the drum, perform the following: perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "IGNITABLE."
   c. Write "D001" under Waste Codes.
   d. Write "UN3175, WASTE SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S 4.1, PG II (SOLID PAINT- CONTAMINATED RAGS AND DEBRIS WASTE)" under Chemical Constituents.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 4.1 diamond.
2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Solvent-Contaminated Wipes (Rags)

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Various solvents, and possible heavy metal contaminants from the cleaning processes from Crystal Clean Solvent

Characterization

This waste stream consists of rags, wipes, gloves, items coming in contact with solvents during cleaning activities. These items may be flammable based on usage. MCINCR-MCBQ manages all solvent-contaminated rags and debris as HW. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or HDPE) from NREA for accumulation of solid paint-contaminated rags and debris waste. Immediately after material is placed into the drum, perform the following: perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "IGNITABLE."
   c. Write "D001", "D010", "F001" under Waste Codes.
   d. Write "UN3175, WASTE SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S 4.1, PG II (SOLID PAINT- CONTAMINATED RAGS AND DEBRIS WASTE)" under Chemical Constituents.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 4.1 diamond.
2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Aerosol Cans (Expired or Empty)

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Aerosol cans that CAN NOT be punctured include such items as foam filler, adhesive spray, cleaning agents which contain corrosive constituents, and pesticides. It is the generator's responsibility to read the SDS and be familiar with the contents of the aerosol.

Characterization

This waste stream consists of any non-punctured aerosol cans, regardless of content volume. Aerosol cans with material in them that cannot be punctured must be managed as HW.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or HDPE) or a 5-gallon open-top plastic pail from NREA for accumulation or aerosol cans. When placing non-punctured cans into the container, ensure that the can is capped, or the spray nozzle is removed. Ensure that no can exceeds 1- liter capacity. Immediately after material is placed into the drum or pail, perform the following:
    a. Adhere a standard "HAZARDOUS WASTE" label to the outside of the drum or pail.
    b. Circle or check the hazard "IGNITABLE."
    c. Write "D001, D035" under Waste Codes
    d. Write "UN1950 WASTE, AEROSOLS, 2.1" under Chemical Constituents and write two or more of the ignitable propellants listed in SDS. Examples include butane, methyl ethyl ketone, ethylbenzene, propane, acetone, toluene, xylene, or oil-based paints.
    e. DO NOT add the date until the drum is full or ready to be turned in.
    f. Within 3 inches to either side of the label, place the DOT Class 2.1 diamond.

2) For pesticide aerosols, note the chemical constituents on the label.
3) For corrosive aerosols, note the chemical constituents on the label, add the "D002" waste code, circle the "CORROSIVE" hazard, and adhere the DOT Class 8 diamond as well.
4) Confirm the drum or pail is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum or pail, ensure that the lid and bungs are closed and secured tightly.
5) When the drum or pail becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Flammable Paint

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Paint may be solvent-based and include organic solvents such as toluene, xylene, propane, methyl ethyl ketone, ethyl and methyl benzene, isobutyl isobutyrate, acetone, and alcohols. Refer to SDS for specific hazards.

Characterization

This waste stream consists of any liquid solvent-based material and oil-based paints. These liquid paints and solvents must be managed as HW.

Container Marking and Labeling

1) Obtain closed-top UN/NA-rated drum (metal), perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum
   b. Circle or check the hazard "ignitable."
   c. Write "D001, D035, possible "F001-3" under Waste Codes.
   d. Write "UN1263 WASTE PAINT, 3, II" under Chemical Constituents and write two or more of the ignitable propellants listed in SDS. Examples include butane, methyl ethyl ketone, ethylbenzene, propane, acetone, toluene, xylene, or oil-based paints.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 3 diamond.
2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. If a respirator is required per the SDS, only personnel enrolled in an approved respiratory protection program may perform the task. Immediately upon completion of adding waste material to the drum, ensure that the lid of the is closed and locked, if applicable.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Armory Debris Waste

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

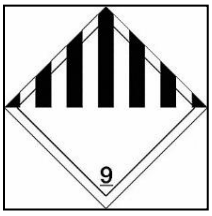
Lead, carbon dust, contaminants of possible concern (CPC) dry residue

Characterization

This waste stream consists of armory debris waste and includes wipes, rags, cotton swaps, or other materials used to clean weaponry that would have come into contact with CPC, carbon, and residue from standard weapon cleaning processes. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or HDPE) from NREA for accumulation of armory debris. Immediately after material is placed into the drum, perform the following: perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "TOXIC."
   c. Write "D008" under Waste Codes
   d. Write "UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, 9, III (LEAD-CONTAMINATED DEBRIS)" under Chemical Constituents.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 9 diamond.



2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream as well as PPE listed in the weaponry cleaning SOP. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.

3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Broken Mercury Bulb Waste

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

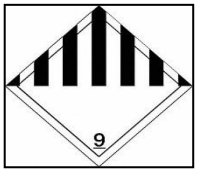
Mercury

Characterization

This waste stream consists of all materials associated with the cleanup of broken fluorescent bulbs containing mercury including broken glass, dust, dirt, cardboard, and debris.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated HDPE pail from NREA for accumulation of broken mercury bulb waste. Immediately after material is placed into the container, perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the container.
   b. Circle or check the hazard "TOXIC."
   c. Write "D009" under Waste Codes.
   d. Write "UN3077, WASTE ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S, 9, III (MERCURY)-CONTAMINATED DEBRIS" under Chemical Constituents.
   e. Within 3 inches to either side of the label, place the DOT Class 9 diamond.



2) Confirm the container is in the SAA. When adding waste to the container, wear proper PPE listed in the broken fluorescent bulb SOP. Immediately upon completion of adding waste material to the container, ensure that the lid is closed and secured tightly.
3) When the container becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Gasoline and/or Diesel-Contaminated Rags (Solid Only)

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Gasoline, MOGAS, or diesel residual fuels.

Characterization

This waste stream consists of any rags, wipes, or solid debris that came into contact with gasoline or diesel from spills, cleanup, or maintenance. These items must be managed as HW. No free liquids may be in containers.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal) from NREA for accumulation of gasoline or diesel solid debris waste. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "IGNITABLE."
   c. Write "D001, D018" under Waste Codes.
   d. Write "UN3175, WASTE SOLIDS CONTAINING FLAMMABLE LIQUIDS, N.O.S 4.1, PG II (GASOLINE AND DIESEL DEBRIS)" under Chemical Constituents.
   e. DO NOT complete the date until the drum is full, or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 4.1 diamond.

2) Confirm the drum is in the SAA. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

Hazardous Waste Pharmaceuticals‡

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

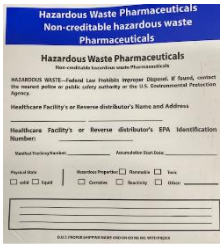
Possible Contaminants of Concern

"Dropped" or otherwise unusable pills and medications from pharmacies that are not potentially credible under the pharmaceutical return program are managed as HW pharmaceuticals. These are referred to as "non-creditable HW pharmaceuticals."

Characterization

This waste stream consists of pills and medications that meet characteristic hazardous waste definitions or are listed as HW under RCRA regulations must be managed as HW. MCINCR-MCB manages all non-creditable pharmaceuticals as HW, regardless of whether the waste meets the definition of a HW pharmaceutical under RCRA. Common examples include Epinephrine (excluding salts), Warfarin >.03%, Nitroglycerin (in unfinished dosages), Physostigmine salicylate, arsenic trioxide, physostigmine, Dichlorodifluoromethane, Hexachlorophene, Lindane, Paraldehyde (CIV), Reserpine, Resorcinol, and Saccharin. This also includes common chemotherapy agents such as Melphalan, Daunomycin, Cyclophosphamide, Chlorambucil, Mitomycin C, and Streptozotocin. Note: Nicotine and Epinephrine salts are NOT considered HW pharmaceuticals.

Container Marking and Labeling



1) Obtain an open-top UN/NA-rated pail or other approved container from NREA for accumulation of HW pharmaceuticals. Immediately after the first waste is placed into the container, perform the following:
   a. Contact NREA for "Hazardous Waste Pharmaceuticals" label.
   b. Write the accumulation start date
   c. Check the applicable boxes.
   d. Keep an inventory of waste added.
   e. Contact NREA for appropriate DOT diamond and place within 3 inches to either side of the label.
2) Confirm the container is in the MSA. When adding waste to the container, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the container, ensure that the lid is closed and secured tightly.
3) Every 9 months, when the container becomes full, or the total accumulation exceeds volume/weight requirements (whichever occurs first) call NREA at (703) 432-0527.

An additional best management practice is to post quick reference HW pharmaceuticals, including lists of common HW pharmaceuticals, color coding, or other displays to alert personnel to the difference between pails for incompatible materials and other HWs.

‡ Does not apply to controlled substances, regulated medical waste, or used dental amalgam.

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Incompatible Pharmaceutical Waste[§]

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

"Dropped" or otherwise unusable pills and medications from pharmacies with properties that make them incompatible for storing with other materials for disposal (Table F-2) that are and not potentially credible under the pharmaceutical return program, must be managed as HW pharmaceuticals and stored separately from other HW pharmaceuticals.

Characterization

This waste stream consists of pills and medications that are incompatible with other wastes. See Table F-2 for examples of common incompatible pharmaceutical wastes.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated pail or other approved container from NREA for accumulation of HW pharmaceuticals. Immediately after the first waste is placed into the container, perform the following:
   a. Contact NREA for "Hazardous Waste Pharmaceuticals" label.
   b. Write the accumulation start date.
   c. Check the applicable boxes.
   d. Keep an inventory of waste added.
   e. Contact NREA for appropriate DOT diamond and place within 3 inches to either side of the label.
2) Confirm the container is in the MSA. When adding waste to the container, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the container, ensure that the lid is closed and secured tightly.
3) Every 9 months, when the container becomes full, or the total accumulation exceeds volume/weight requirements (whichever occurs first) call NREA at (703) 432-0527.

An additional best management practice is to post quick reference HW pharmaceuticals, including lists of common HW pharmaceuticals, color coding, or other displays to alert personnel to the difference between pails for incompatible materials and other HWs.

[§] Does not apply to controlled substances, regulated medical waste, or used dental amalgam.

Table F-2: Incompatible HW Pharmaceutical and Non-HW Pharmaceutical Materials

Pharmaceutical Material, Characteristic, or Property	Common Names and Examples	Incompatibility Notes
Aerosols	Asthma inhalers, Hurricaine topical anesthetic gel	Contains flammable propellants
Botox	Myobloc	Not regulated under RCRA, but must be collected and transported in its own container
Collodion/Nitrocellulose	New Skin, wart removers	Ignitable and incompatible with strong oxidizers, strong acids
Ignitable	Velphoro, Zemplar	Ignitable and incompatible with strong oxidizers, strong acids
Oxidizers	Silver Nitrate sticks/applicators, Arxol Silver, Amyl Nitrate, Cyanide Antidote kits, hydrogen peroxide	Ignitable HW that yields oxygen and could stimulate combustion
Corrosive Acids	Aluminum chloride injections, Tri-Chlor, ammonia inhalants, cupric/copper/chromium chloride, hydroxyzine hydrochloride, L-Cysteine, lactic acid, Pyridoxine HCL injection, Sporanox, acetic acid, trichloroacetic acid	Can cause fire, explosion, or violent reaction when mixed with another material

Contaminated Fuels

***Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.*

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Unleaded gasoline (MOGAS) and F-24 are toxic and flammable. MOGAS contains volatile organic compounds (VOCs) such as benzene, xylene, toluene, and ethylbenzene. F-24 may contain VOCs such as benzene, toluene, trimethylbenzene, and xylene. Refer to the SDS for specific hazards.

Characterization

If any of the above materials have been contaminated with antifreeze (glycols), solvents, oils, or other mixed fuels or various chemicals, the material is no longer recyclable and must be managed as HW. All fuel types can be mixed into one drum if they are contaminated.

Container Marking and Labeling

1) Obtain a closed top UN/NA-rated drum (metal) from NREA for collection of contaminated fuels. Confirm the drum is grounded prior to adding fuel. Immediately after material is added to the drum, perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the drum.
   b. Circle or check the hazard "IGNITABLE" (Note: "TOXIC" may also be needed based on waste characterization).
   c. Write "D001" (Note: Other U, D, or F codes may be necessary based on the mixture.)
   d. Write "UN1993 WASTE FLAMMABLE LIQUIDS, N.O.S. 3, II CONTAMINATED FUELS, [FUEL TYPE(S)], AND [CONTAMINANTS]" under Chemical Constituents.
   e. DO NOT add the date until the drum is full or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 3 diamond.

2) Confirm the drum is in the SAA. When contaminated fuels are added to the drum, wear proper PPE listed on the SDS of the material. **Ensure a 4-inch headspace is left to allow for possible expansion.** Immediately upon completion of adding material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Amalgam Waste (Dental)

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

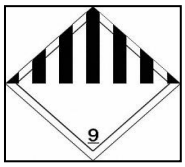
Amalgam waste is collected from the dental clinics and may contain traces of mercury and/or silver which are HW based on the toxicity characteristic.

Characterization

If either mercury or silver are above TCLP detectable limits, then this material must be managed as a HW.

Container Marking and Labeling

1) Obtain an open top UN/NA-rated pail from NREA for accumulation of amalgam waste. Immediately after material is placed into the pail, perform the following:
   a. Adhere the standard, yellow "HAZARDOUS WASTE" label to the outside of the container, based on analytical results.
   b. Circle or check the hazard "TOXIC."
   c. Write "D009, D011" under Waste Code (dependent on waste determination).
   d. Write "NA3077, HAZARDOUS WASTE, SOLID, N.O.S 9, III (RQ: MERCURY, SILVER)" under Chemical Constituents.
   e. DO NOT add the date until the container is full, or ready to be turned in.
   f. Within 3 inches to either side of the label, place the DOT Class 9 diamond.



2) Ensure the pail is in the SAA. When adding waste to the pail, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the pail, ensure that the lid and bungs are closed and secured tightly.
3) When the container becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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NON-RCRA / NON-DOT REGULATED (NON-HW)

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Used Absorbent

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Absorbent material (dry sweep, booms, etc.) contaminated with petroleum, oil, or lubricants (POLs) or other materials

Characterization

This waste stream consists of absorbent material used to clean POLs and is considered non-HW and is not regulated under RCRA or by DOT. Free liquids or absorbent material used to cleanup solvent spills or other possibly hazardous materials are not to be collected in this drum.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal) from NREA for accumulation of POL absorbent waste. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard blue "NON-REGULATED WASTE" label.
   b. Write "USED ABSORBENTS" under Constituents.
2) Confirm the drum is in the proper accumulation area. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Oily Rags

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Oil remnants

Characterization

This waste stream consists rags, wipes, and/or paper towels used to clean oil or wipe oily surfaces and is considered non-HW and is not regulated under RCRA or by DOT. Free liquids or absorbent material used to cleanup solvent spills or other possibly hazardous materials are not to be collected in this drum.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal) from NREA for accumulation of oily rag waste. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "OILY RAGS" under Constituents.
2) Confirm the drum is in the proper accumulation area. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Used Antifreeze (Glycol)

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Ethylene glycol

Characterization

This waste stream consists of used or expired glycol-based antifreeze. If the antifreeze has been mixed with, or in some other way came into contact with, HM (i.e., solvents, gasoline, or heavy metals), analysis will be performed to properly characterize the waste. Otherwise, this material is considered non-HW and is not regulated under RCRA or by DOT.

Container Marking and Labeling

1) Obtain a closed top UN/NA-rated drum or bucket (metal or HDPE) from NREA for accumulation of used antifreeze waste. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "GLYCOL-BASED ANTIFREEZE" under Constituents.
   c. Write an accumulation start date on the label.
2) Confirm the drum is in the proper accumulation area. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. **Ensure a 4-inch headspace is left to allow for possible expansion.** Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) As a best management practice, MCINCR-MCBQ requires all used antifreeze to be disposed within 1 year of the accumulation start date.
4) Every 9 months, when the drum becomes full, or the process generating the waste is complete (whichever occurs first) and call NREA at (703) 432-0527.

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Diesel and Water

Note: This sheet is provided as guidance only based on typical operations. A complete laboratory analytical must be performed to determine all hazardous constituents of the waste to ensure proper management.

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Low percentage of diesel contamination

Characterization

This waste stream consists of water contaminated with diesel fuel. If the water has been mixed with, or in some other way came into contact with, HM (i.e., gasoline, paints, solvents, etc.), a waste determination will be performed. Otherwise, this material is considered non-HW and is not regulated under RCRA or by DOT.

Container Marking and Labeling

1) Obtain a closed top UN/NA-rated drum or bucket (metal) from NREA for accumulation of used diesel- contaminated water. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "WATER CONTAMINATED WITH DIESEL" under Constituents.
2) Confirm the drum is in the proper accumulation area. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. **Ensure a 4-inch headspace is left to allow for possible expansion.** Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) When the drum becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432- 0527.

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Latex Paint in Cans

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Expired or excess latex paint. Latex paints are also referred to as vinyl, acrylic, or water-based paint. Latex paints manufactured before 1992 may contain traces of mercury or lead and require management as HW. Refer to SDS for specific hazards.

Characterization

This waste stream consists of latex paint in closed cans. Empty or completely solid latex paint is solid waste and can be disposed in the dumpster; however, allowing paint to dry in cans for the purpose of disposal is prohibited. Liquid latex paints are considered non-HW provided they were manufactured after 1992. If there is uncertainty, contact NREA. Wastewater from latex paint cleaning may be discharged to the sanitary sewer. Discharge to the stormwater system is prohibited.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum (metal or HDPE) from NREA for accumulation of latex paint cans. Immediately after material is placed into the drum, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "LATEX PAINT" under Contents.
2) Confirm the drum is in the proper accumulation area. When adding waste to the drum, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the drum, ensure that the lid and bungs are closed and secured tightly. Only closed containers are to be accumulated in this drum.
3) Units must first contact the base recycling center (Building 3185) in an effort to redistribute any unopened or salvageable latex paint before classifying it as waste. When the drum becomes full, the excess paint cannot be redistributed, or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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Alkaline Batteries

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Primary, non-rechargeable alkaline batteries

Characterization

This waste stream consists of alkaline batteries which are non-rechargeable and not considered HW or UW under RCRA or by DOT.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated container or bucket (metal) from NREA for accumulation of alkaline batteries. Immediately after the first battery is placed into the container, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "ALKALINE BATTERIES" under Contents.
2) Confirm the container is in the proper accumulation area. When adding waste to the container, wear proper PPE listed on the SDS of the material originally used to create the associated waste stream. Immediately upon completion of adding waste material to the container, ensure that the lid is closed and secured tightly.
3) When the container becomes full or the process generating the waste is complete (whichever occurs first), mark the accumulation start date and call NREA at (703) 432-0527.

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UNIVERSAL WASTES

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UW Lamps (Intact Only)

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

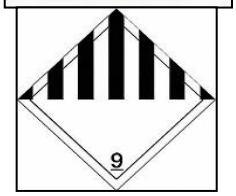
Possible Contaminants of Concern

Small quantities of mercury and potentially other hazardous metals are used to manufacture fluorescent lamps

Characterization

This waste stream includes all spent intact (non-broken) lamps which are managed as UW.

Container Marking and Labeling



1) Lamps should be collected in their original packaging (e.g., boxes) or in other packaging that will minimize breakage during normal handling conditions.
2) Containers must be closed at all times unless adding material.
3) Separate fluorescent lamps and high-intensity discharge lamps.
4) Contact NREA to order containers designed specifically for waste collection and transportation, if needed.
5) Immediately after the first bulb is placed in the container, perform the following:
   a. Adhere the standard, purple "UNIVERSAL WASTE" label.
   b. Write in the accumulation start date.
   c. Write "USED LAMPS" under Contents.
   d. Within 3 inches to either side of the label, place the DOT Class 9 diamond.
6) Confirm the box or container is in a designated UW collection area, separate from SAAs. When placing the bulbs into containers, handle carefully to avoid breakage. Ensure the box or container is closed and secure box with tape.
7) Every 9 months, when the container becomes full, or when the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527.

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Used Lithium/Magnesium Batteries

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

These devices consist of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell consists of an anode, cathode, and electrolyte. A device is also considered a battery if it is intact, unbroken, and all of the electrolyte has been removed.

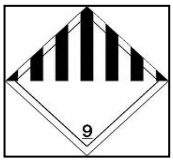
Characterization

This waste stream includes all used lithium or manganese batteries considered UW. Batteries must be separated by type into individual containers including lithium sulfur dioxide batteries, lithium-manganese batteries, lithium thionyl chloride batteries, lithium ion batteries, and magnesium batteries.

Container Marking and Labeling

1) Obtain an open-top UN/NA rated pail from NREA. Immediately after the first battery is placed in the container, perform the following:
   a. Adhere the standard, purple "UNIVERSAL WASTE" label.
   b. Immediately write the accumulation start date.
   c. Write "USED BATTERIES" and specify the type under Contents.
   d. Within 3 inches to either side of the label, place the DOT Class 9 diamond.

2) Wear proper PPE as noted on the SDS. Before adding batteries to the container, they must be either placed in individual plastic sealable bags or have all terminals fully sealed by electrical tape to prevent the terminals from touching.



3) Confirm the container is in a designated UW collection area, separate from SAAs. Ensure the lid is closed and secured after adding material. Store the container out of the elements to ensure no water gets into the container.
4) Units are required to keep an accurate count of batteries and mark the final count on the outside of the container prior to turn-in.
5) Every 9 months, when the container becomes full, or when the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527.

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Used Dry-Cell Batteries

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

These devices consist of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell consists of an anode, cathode, and electrolyte. A device is also considered a battery if it is intact, unbroken, and all of the electrolyte has been removed.

Characterization

This waste stream includes all used dry-cell batteries that must be managed as UW. Batteries are to be separated by type into individual containers including nickel-cadmium, nickel-metal hydride, mercury, zinc oxide/zinc air, and silver oxide batteries.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated container or pail from NREA. Immediately after the first battery is placed in the container, perform the following:
   a. Adhere the standard, purple "UNIVERSAL WASTE" label
   b. Immediately write the accumulation start date.
   c. Write "USED BATTERIES" and specify type under Contents.
   d. Within 3 inches to either side of the label, place the DOT Class 8 diamond.
2) Wear proper PPE as noted on the SDS. Before adding batteries to the container, they must be either placed in individual plastic sealable bags, or have all terminals fully sealed by electrical tape to prevent the terminals from touching.
3) Confirm the container is in a designated UW collection area, separate from SAAs. Ensure the lid is closed and secured after adding material. Store the container out of the elements to ensure no water gets into the container.
4) Units are required to keep an accurate count of batteries and mark the final count on the outside of the container prior to turn-in.
5) Every 9 months, when the container becomes full, or when the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527.

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Used Lead-Acid Batteries

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

These devices consist of one or more electrically connected electrochemical cells which is designed to receive, store, and deliver electric energy. An electrochemical cell consists of an anode, cathode, and electrolyte. A device is also considered a battery if it is intact, unbroken, and all of the electrolyte has been removed. Lead-acid batteries can be gel-filled or contain an acidic electrolyte solution of sulfuric acid.

Characterization

This waste stream includes all used lead-acid batteries, gel or non-gel.

Container Marking and Labeling

1) Obtain an open-top UN/NA-rated drum from NREA. Immediately after the first battery is placed in the container, perform the following:
   a. Adhere the standard, purple "UNIVERSAL WASTE" label
   b. Immediately write an accumulation start date.
   c. Write "USED LEAD-ACID BATTERIES" under Contents.
   d. Within 3 inches to either side of the label, place the DOT Class 8 diamond.

2) Wear proper PPE as noted on the SDS. Use extra caution with non-gel batteries to ensure materials do not spill. Before adding batteries to the container, all terminals must be fully sealed by electrical tape to prevent the terminals fromtouching. Avoid overloading container to prevent batteries from getting crushed.
3) Confirm the container is in a designated UW collection area, separate from SAAs. Ensure the lid is closed and secured after adding material. Store the container out of the elements to ensure no water gets into the container.
4) Units are required to keep an accurate count of batteries and mark the final count on the outside of the container prior to turn-in.
5) Every 9 months, when the container becomes full, or when the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527 or take to the Quantico Recycling Center (Building 3185).

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RECYCLABLE MATERIAL (NON-WASTE ITEMS)

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Used Oil

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Used oils that are NOT contaminated with solvents, glycols, or fuels are not regulated as HW under RCRA if they will be recycled or reprocessed. Used oils include any oils that have been refined from crude oil, or any synthetic oil that has been used and as a result of use is contaminated by physical or chemical impurities. Examples include motor oil, hydraulic fluid, electrical insulating oil, transmission fluid, compressed oils, cutting oils, and coolants.

Uncontaminated used oils are managed as recyclable material. If an oil has been contaminated

Characterization

with gas, diesel, or solvent, it will be managed as HW and is not to be included in this drum.

Container Marking and Labeling

1) Obtain a closed-top UN/NA-rated drum (metal) from NREA for collection of used oils. Immediately after material is added to the drum, perform the following:
   a. Stencil "USED OIL FOR RECYCLE" on the side of the drum. (Note: Labeling the contents "WASTE OIL" indicates the that material is not suitable for recycling and will be managed as HW).
2) Confirm the drum is in the proper accumulation area. When adding used oil to the drum, wear proper PPE listed on the SDS of the original material. **Ensure a 4-inch headspace is left to allow for possible expansion**. Immediately upon completion of adding material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) Do NOT mix glycols, solvents, or fuels in this drum.
4) When the drum becomes full or the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527.

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Uncontaminated Fuels (Gasoline, MOGAS, Diesel, and F-24)

Contact NREA HW Program Manager at (703) 432-0527 with any questions.

Possible Contaminants of Concern

Unleaded gasoline (MOGAS) and F-24 are toxic and flammable. MOGAS contains VOCs such as benzene, xylene, toluene, and ethylbenzene. F-24 may contain VOCs such as benzene, toluene, trimethylbenzene, and xylene. Refer to the SDS for specific hazards.

Characterization

Uncontaminated fuels are managed as recyclable material.

Container Marking and Labeling

1) Obtain a closed top UN/NA-rated drum (metal) from NREA for collection of uncontaminated fuels. Confirm the drum is grounded prior to adding fuel. Immediately after material is added to the drum, perform the following:
   a. Adhere the standard, blue "NON-REGULATED WASTE" label.
   b. Write "[FUEL TYPE] FUEL FOR RECYCLE" under Contents
   c. Within 3 inches to either side of the label, place the DOT Class 3 diamond.

2) Confirm the drum is in the proper accumulation area. When adding recyclable fuel to the drum wear proper PPE listed on the SDS of the material. **Ensure a 4-inch headspace is left to allow for possible expansion**. Immediately upon completion of adding material to the drum, ensure that the lid and bungs are closed and secured tightly.
3) DO NOT mix different fuel types in the same drum.

4) When the drum becomes full or the process generating the waste is complete (whichever occurs first) call NREA at (703) 432-0527.

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Appendix G

Quantico Marine Corps Base HW Sample Collection SOP

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HAZARDOUS WASTE SAMPLING
STANDARD OPERATING PROCEDURE

Marine Corps Installations National Capital Region –
Marine Corps Base Quantico (MCINCR-MCBQ)

Natural Resources & Environmental Affairs (NREA)
3250 Catlin Avenue, Suite 104
Quantico, VA 22134-5001

July 2020

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ACRONYMS AND ABBREVIATIONS

ASD	Accumulation Start Date
COC	Chain of Custody
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
HM	Hazardous Material
HMMS	Hazardous Materials Management System
HW	Hazardous Waste
HWMP	Hazardous Waste Management Plan
MCINCR-MCBQ	Marine Corps Installations National Capital Region - Marine Corps Base Quantico
PPE	Personal Protective Equipment
PVC	Polyvinyl Chloride
SDS	Safety Date Sheet
SOP	Standard Operating Procedure

1.0 INTRODUCTION

1.1 Purpose

This Hazardous Waste (HW) Sampling Standard Operating Procedure (SOP) presents sample collection procedures needed to implement the Marine Corps Installations National Capital Region – Marine Corps Base Quantico (MCINCR-MCBQ) Hazardous Waste Management Plan (HWMP).

The validity and accuracy of laboratory analytical data is contingent on the manner in which samples are acquired and handled. A representative sample should contain all components of the sampled waste in proportions that are consistent with the contents of the entire waste stream. Accurate analytical information is obtained from representative samples. If the sample does not fairly represent the total composition of the waste stream, then neither will the data that is produced from the analysis of this sample.

This SOP defines sampling and visualization procedures used at MCINCR-MCBQ. Representative samples may be obtained from various types of containers using the methods outlined herein.

1.2 Samples and Sampling

Waste samples are collected from a containers, waste piles, or surface impoundments, described in **Section 7.2**. A sampling device must be selected depending on the size and type of the container and the specific material involved. Access to a container may affect sampling device selection and number of samples taken. In addition, the type of container or material may dictate alternate sampling locations.

2.0 SCOPE AND APPLICATION

This procedure describes the process by which representative samples of waste streams are collected for the purposes of generating analytical data to support waste management decisions at MCINCR-MCBQ. It also describes visual inspection procedures.

3.0 ROLES AND RESPONSIBILITIES

3.1 HW Program Manager

The HW Program Manager is responsible for:

- Ensuring that HW Team Members use this procedure;
- Reviewing and approving this procedure;
- Acting as liaison with Unit Environmental Coordinators when issues are identified; and
- Reviewing sample results and complete profile sheets.

3.2 Hazardous Materials (HM) Program Manager

HM Program Manager is responsible for:

- Communicating when procedures change in the work area;
- Providing safety data sheets (SDSs) to technicians upon the technician's request;
- Assisting HW Team Members with sample collection; and
- Assisting in the review of sample results and completing HW profile sheets.

3.3 HW Team Members

This SOP applies to all employees performing HW and HM operations at MCINCR-MCBQ and those who are obligated and responsible for operational support activities and compliance.

HW Team Members are responsible for:

- Following safety procedures in all circumstances;
- Using job-specific safety procedures to maintain a safe work environment;
- Ensuring comprehension of what is expected of them as they complete tasks; and
- Complying with this procedure.

4.0 PERSONAL PROTECTIVE EQUIPMENT (PPE), SAFETY, AND WASTE HANDLING

The use of PPE is a control measure to limit the exposure to the identified potential hazards. PPE must be worn to minimize personnel exposure to contaminants. At a minimum, personnel performing sampling will wear modified Level D protection, including work boots, eye wear, and nitrile gloves for sampling. Chemicals that pose specific toxicity or safety concerns should be addressed as appropriate. At the discretion of the HW Program Manager, MCINCR-MCBQ Industrial Hygiene Specialist, Installation Safety Office, and unit supervisor, arrangements for sampling using Level B PPE may be required.

Sampling should be conducted in a well-ventilated location, preferably outside. PPE must be worn during all sampling activities. Persons performing sampling must be cognizant of all health and safety requirements during each sampling event.

5.0 SUMMARY OF METHODS

5.1 Sampling Methods

This SOP is supplemented with supporting information contained in the following:

- *Test Methods for the Evaluation of Solid Waste, Physical Chemical Methods* (SW846, Environmental Protection Agency [EPA]);
- 40 Code of Federal Regulations (CFR) 261, Appendix I - Representative Sampling Methods;

- *Samplers and Sampling Procedures for Hazardous Waste Streams* (EPA-600/2-80-018);
- Installation Waste Analysis Plan;
- *Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste: A Guidance Manual*, Final (April 2015, EPA 530-R-12-001); and
- MCINCR-MCBQ HWMP.

5.2 Sampling Equipment

There are various sampling devices that can be used to obtain a representative waste sample. This SOP explains the construction, operation, and applicability of each sampling device as it relates to the type of waste being sampled. Similarly constructed equipment may be used following approval and training from an Operations Supervisor, or designee. The appropriate sampling device is determined by items including, but not limited to, the consistency of the material being sampled, type of container, access to the container, and the sampling location.

6.0 SAMPLING EQUIPMENT DESCRIPTIONS

6.1 Composite Liquid Waste Sampler (Coliwasa)

The Coliwasa is used to collect composite samples of liquid waste. The Coliwasa is specifically designed to collect liquid samples containing multiple phases. The Coliwasa is typically constructed from a translucent plastic such as polyvinyl chloride (PVC). The closure mechanism consists of a "T"-handle attached a stopper rod which runs inside of the tube. The bottom of the stopper rod is attached to a neoprene stopper. To operate, open the Coliwasa by pushing the rod down until the "T"-handle contacts the top of the tube. Slowly lower it into the waste until it reaches the bottom of the container. The liquid sample will enter the tube. Push the tube downward against the stopper to seal the sample inside of the tube. Slowly withdrawn the Coliwasa with one hand and wiped clean with a cloth using the other hand. Place the end of the sample tube in a sample container and open it by slowly releasing the T-handle. Place the lid on the sample container.

6.2 Cylindrical Tube

The cylindrical tube is used to collect composite samples of liquid or sludge waste. The cylindrical tube is usually composed of glass, but any substance which does not react with the waste may be used. It is typically 4 feet in length with an internal diameter of approximately 3/8 inch. Both ends of the tube must be unobstructed for proper operation. To operate, slowly lower the tube into the waste until it reaches the bottom of the container and allow it to fill with the liquid sample. Place a thumb over the top end of the tube, ensuring full coverage to create suction, and withdraw the tube from the tank. Place the bottom end of the tube in the sample container and remove the thumb to allow the liquid to flow out. Place the lid on the sample container.

6.3 Thief (Grain Sampler)

The thief is used for sampling powder or granular waste. This tool consists of two slotted telescoping tubes. The outer tube has a conical, pointed tip on one end that permits the thief to penetrate the waste material. The thief is opened and closed by rotating the inner tube. To operate, insert the thief into the waste with the inner tube closed. Rotate the inner tube of the sampler to the open position. Jostle the thief to allow material to enter the open slots. Close the sampler by rotating the inner tube back to its original position. Withdraw the sampler from the waste, remove the inner tube, and empty the contents into a sample container. Place the lid on the sample container.

6.4 Trier

The trier is used for sampling powdered or granular material that is moist or sticky. The trier is a long tube with a slot that extends almost the entire length of the tube. The tip and edges of the tube slot are sharp. To operate, insert the trier vertically into the waste and rotate it to cut a core of the waste. Slowly withdraw the device with the slot facing upward. Remove the sample from the trier and place it in a sample container. Place the lid on the sample container.

6.5 Scoop/Shovel

The scoop/shovel is used for sampling dried solid or sludge. The blade is curved with a sharp tip and with a closed upper end to contain scooped material. To operate, collect small, equal portions from the sub-surface portion of the waste by pushing the scoop into the material. Remove the sample from the scoop and place it material in a sample container. Place the lid on the sample container.

6.6 Ladle (Dipper)

The ladle is used to collect liquid waste samples from a surface impoundment, a lagoon, or open top tanks. The ladle is composed of a sampling cup affixed to the end of a long handle. To operate, dip and submerge the cup into the liquid and allowed it to fill. Remove the sample from the container and pour it into a sample container. Place the lid on the sample container.

7.0 SAMPLING PROCEDURES

MCINCR-MCBQ manages wastes in containers approved for the waste. Each type of waste accumulation container requires specific sampling procedures. The types of containers and procedures used at MCINCR-MCBQ are described in this section and **Table 7-1** lists sampling equipment recommended by EPA for various waste types.

For recurring waste, the sampler should review Marine Corps Hazardous Materials Management System (HMMS) records, the Hazardous Waste Sampling and Analysis Work Document, other pertinent shipping documents, and/or profile information in order to become familiar with the specific waste type and the known potential hazards associated with the waste stream before attempting to collect a sample. After reviewing these documents, the person performing the sampling must determine the appropriate level of PPE, sampling equipment and methods, and required analysis.

7.1 Vacuum Trucks

Vacuum trucks will typically contain liquids or slurries. Collect samples with a Coliwasa or a cylindrical tube.

First locate the vacuum truck vent and clear the area to ensure any vented exhaust will not contact bystanders. Open ventilation valves to relieve the tanker of any residual pressure. To collect the sample, assume a stable stance and place a Coliwasa or a cylindrical tube through the dome lid following procedures listed in **Section 6.1 or Section 6.2**. When sample collection is completed, close the dome lid and tighten toggle bolts. Close, or request the drive closes, the ventilation valves.

7.2 Dump Trucks

Waste streams hauled in a dump truck are usually solids with various consistencies. First, request the driver to unlatch any straps used to secure the tarp and roll the tarp to one side of the container. Use a platform or ladder to visually inspect the waste. Select an appropriate sampling tool based on the consistency of the waste. Collect a total of two samples are following procedures listed in **Section 6.0** as follows: collect one sample from the front of the truck bed and one from the rear of the truck bed. Samples must be collected at a depth of at least 1-foot below the surface or at the full depth if the depth of the waste is less than 1-foot. Combine the two samples and collect a subsequent final sample from the composite. Return any excess sample to the load container.

7.3 Drums

Segregate drums into groups by individual waste streams. Determine what type of waste the drum(s) contains. Position the drum(s) so the bung or lid is upright and allow the contents to settle. Slowly open the drum(s). Pressure can build in the drum and is released while unscrewing the lid (typical for volatile wastes). Visually inspect the contents of the drum(s). Select an appropriate sampling device and collect samples following procedures listed in **Section 6.0**, ensuring horizontal and vertical displacement to obtain a representative sample. Return any excess sample

material to the drum. Samples of like physical appearance within a single waste stream may be composited into one sample. Close and secure the drum(s) and latch the bung.

7.4 Barrels, Fiber Drums, Cans, Bags, Boxes, and Sacks

Segregate these containers into groups by individual waste streams. Open containers to be sampled in a manner that will not damage the container. Personnel must carefully avoid puncturing the container. Visually inspect the contents of the container. Select an appropriate sampling device and collect samples following procedures listed in **Section 6.0**, ensuring horizontal and vertical displacement to obtain a representative sample. Return any excess sample material to the container and close the container.

Samples of like physical appearance within a single waste stream may be composited into one sample.

7.5 Surface Impoundments

Inspect the area to determine if the waste in the impoundment is a homogeneous mixture. Choose the appropriate sampling device. Collect three samples following procedures listed in **Section 6.0** as follows: one from near the bottom of the impoundment and two from the sides of the impoundment. Composite the samples unless stratification is observed. If stratification is observed, collect grab samples from each stratified layer.

7.6 Bottom Sludge

Sludge can accumulate at the bottom of any container. For a container with minimal sludge buildup, collect four grab samples using appropriate sampling device and following procedures listed in **Section 6.0**. The four samples must be composited into a single sample for laboratory analysis.

When sampling from a container with 3 inches of buildup or more, collect four samples from the thickest layers of sludge at random locations, using appropriate sampling device and following procedures listed in **Section 6.0**. These four samples must NOT be composited into a single sample and must be provided to the laboratory as separate samples.

7.7 Frozen Waste

Waste streams which are frozen must be warmed sufficiently, prior to sampling, to allow representative sampling, and for an inspection for free liquids.

7.8 Pressurized Containers

Perform a visual examination of all containers prior to inspecting or sampling. A container that is bulging or has a curved side may have a buildup of excess pressure. The degree of the convex curve relative to the horizontal plane is a good indication of the amount of pressure.

Notify the HW Program Manager of any and all drums that are bulging. If the technician inspecting the drum determines that it is safe to open, slowly decompress the vapors by gradually turning the bung counterclockwise until the vapors are heard escaping the drum. Keep the bung in place until the pressure reaches equilibrium and no vapors are heard escaping. When the sound of vapors stops, turn the bung again until vapors are heard. Again, leave the bung in place until the pressure reaches equilibrium. Repeat this process until the bung is removed. This process should not be rushed or expedited as a rapid decompression of the vapors could lead to adverse results that could affect health and environment. A buddy-system must be utilized during this process of opening a pressurized container. Overpack the container for and transfer onsite and transport offsite.

7.9 Lab Packs

Lab packs must be visually inspected to ensure that adequate absorbent is present, and the drum or pail is 90% full. Lab Packs are not sampled.

Table 7-1: Applicability of Sampling Equipment to Waste Streams

Waste Type	Waste Location or Container								
	Drum	Sacks and Bags	Open Bed Truck	Closed Bed	Storage Tanks or Bins	Waste Piles	Ponds, Lagoons, Pits	Conveyor Belt	Pipe
Free flowing liquids and slurries	Coliwasa	N/A	N/A	Coliwasa	Weighted Bottle (a)	N/A	Dipper	N/A	Dipper
Sludges	Trier	N/A	Trier	Trier	Trier	(b)	(b)	(b)	(b)
Moist powders or granules	Trier	Trier	Trier	Trier	Trier	Trier	Trier	Shovel	Dipper
Dry powders or granules	Thief	Thief	Thief	Thief	(b)	Trier	Thief	Shovel	Dipper
Packed sand or powders and granules	Auger	Auger	Auger	Auger	Thief	Thief	(b)	Dipper	Dipper
Large-grained solids	Large Trier	Large Trier	Large Trier	Large Trier	Large Trier	Large Trier	Large Trier	Trier	Dipper

(a) When the tank is adequately agitated or a recirculation line is accessible, samples can be collected through a side tap.
(b) This type of sampling situation can present significant logistical sampling problems, and sampling equipment must be specifically selected or designed based on site and waste conditions. No general statement about appropriate sampling equipment can be made.

Source: *Waste Analysis at Facilities that Generate, Treat, Store, and Dispose of Hazardous Waste: A Guidance Manual, Final* (April 2015, EPA 530-R-12-001)

8.0 SAMPLE LABELING

The appropriate label with the following information must be placed on the sample container before submittal to the laboratory along with the proper chain-of-custody (See **Section 10.0**).

- Sample identification
- Place of collection
- Date of collection
- Person sampling

Samples not delivered to the lab on the day collect must be kept refrigerated.

9.0 SAMPLING RECORD

Information must be recorded in the sampling record sufficiently to allow others to reconstruct the following information, at a minimum:

- Location of sampling point
- Volume of samples taken
- Date of collection
- Sample identification number
- Person sampling
- Comments or observations
- Sampling methodology (composite or grab)

Each unit or sampling area (laboratory, waste site, etc.) may develop documentation systems appropriate to their area to record this information.

10.0 CHAIN-OF-CUSTODY (COC)

The COC form, provided by the laboratory, must be completed for all samples collected for laboratory analysis. The COC form provides documentation and verifies possession of all samples that are collected, transported, submitted to a laboratory to ensure they are traceable from the time of collection through analysis. The information for each sample provided on the COC must match the information on the sample label.

All samples must be accompanied by a COC record. When transferring the possession of samples, the individuals relinquishing and receiving will sign, date, and note the time on the record. The COC record documents sample custody transfer from the sampler, through another person, to the analyst at the laboratory. The samples are typically transferred to the sample receiving custodian at the laboratory.

11.0 CLEANING AND MAINTENANCE OF SAMPLING EQUIPMENT

Sampling tools must be kept clean of materials that could interfere with future analyses or cause cross-contamination. All non-disposable HW sampling equipment must be cleaned before using. Tools may be wiped clean or washed with a detergent solution, rinsed with tap water, and dried. This does not apply to sterilized sampling equipment provided by a laboratory. Disposable sampling equipment may be used once (one load, one drum, etc.) without cleaning.

If the sampling tool is contaminated with petroleum or oil residues, the first rinse should be performed with an appropriate solvent such as acetone or petroleum ether. All tools should be washed with detergent and rinsed with tap water to remove any residual solvent prior to the use of the tool to obtain samples.

Sampling equipment must be stored in clean and protected areas.

APPENDIX H

Waste Tracking Form

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MCINCR-MCBQ Waste Tracking Form	**Q**					**-**			

REMARKS: Each command site shall fill out all information in RED and sign Gen. Signature. If SDSs are available, write the serial number or NIIN number. All information provided by site must be legible or form will be rejected.

UNIT:	LOCATION:	BUILDING No.:	ASD:	QTY:	SDS/NIIN No:

CONTAINER SIZE (circle one):	CONTAINER TYPE (circle one):
55gal 30gal 16gal 10gal 5gal 3gal 1gal 8' 6' 4' 2' 40 CY 30 CY 20 CY 100 / 200 / 300 / 500 / 1000 / 1500 / 3000 / 5000 / 6000	Metal Poly Box Cylinder Bag Roll-Off Tanker Truck Tank

Ph. No.: Gen. Signature:	**NON-PROFILED WASTE INFORMATION**
	BASIC DESCRIPTION:
	PHYSICAL STATE:
27401 LOCATION:	COLOR PH ACID? BASE?
CUSTODY:	PSN
WPN:	CLASS UN/NA PG
LBS:	N.O.S. CONSTITUENT
SSD:	WASTE CODES
LINK TO:	CLIN ERG RQ
	PROJECT NO. PROCESS CODE
	SOURCE CODE FORM CODE ORIGIN CODE
	FSC/NII RCRA? Y N
	CHARACTERIZATION METHOD: ANALYTICAL SDS NON-WASTE
	UNKNOWN MANIFEST # LINE
	Delivery Order No.: Delivery Order Line No.:
EDIT OR UPDATE	PREVIOUS UNKNOWN? REASON FIELDS CHANGED?
NREA HW Inspector: (703) 432-0522	HW Program Manager: Mr. David Norris (703) 432-0530, david.norris1@usmc.mil
HW Operations Manager: (703) 432-0531	HW NCO: (703) 432-0523/0520

RECEIVED BY:	INPUT BY:	CHECKED BY:
DOCUMENTED BY:	VERIFIED BY:	HW PM INITIALS: