WRIGHT-PATTERSON AIR FORCE BASE

HAZARDOUS WASTE MANAGEMENT PLAN

March 1999

Prepared by:

Wright-Patterson Air Force Base
88th ABW/EMC
Building 89
5490 Pearson Rd.
WPAFB, Ohio 45433-5332

February 1999

FACILITY RESPONSE PERSONNEL

Fire Department (911) The fire department is the primary responder in case of a release. In the event of a chemical spill, call **911**. The Fire Department will notify the Spill Response Team.

Environmental Management (937-257-7152) Environmental Management (EM) responds to releases that threaten the environment. The following individuals make up the EM response group:

SPILL RESPONDERS	PHONE	EXT.	PAGER
Treva Bashore	937-257-2201	233	169-0527
Libby Domingue	937-257-7152	265	169-0522
John Wolfe	937-257-2201	244	169-0519
Brian Mitchell	937-257-7152	275	169-0524
MSgt. Tim Smith	937-257-7152	269	169-0732
Rick Fultz	937-257-7152	280	
Dave Martin	937-257-2057	213	
Emergency:			
EMC Mobile Phone	937-286-2102		
HAZWOPER Mobile Phone	937-581-2725		

EMERGENCY COORDINATORS – Buildings 478/479

Brian Mitchell
Melanie A. Pershing (Alternate)

Command Post, 88 ABW/CP (937-257-6314) This organization provides any necessary communication link between Base Commander and all other base organizations.

Base Civil Engineering (937-257-6214) Base Civil Engineering (BCE) is the primary source for equipment and personnel for a large release. Organizationally, the Fire Department reports to BCE.

Bioenvironmental Engineering (937-255-6815) Bioenvironmental Engineering (Bio) responds to a release when human health or wildlife is endangered.

Base Liquid Fuels (937-257-6995) Base Liquid Fuels (BLF) is called to activate shut-off valves and to provide vacuum trucks for clean-up activities.

Security Forces (911) The Security Forces (SF) control traffic and keep unauthorized personnel out of the release site.

Emergency Response Contractors (800-537-9540) OHM Remediation Services (OHM) is currently under contract with WPAFB to provide emergency response services.

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ACRONYMS

ACCS	Accumulation Site
AFI	Air Force Instruction
AFMC	Air Force Materiel Command
BOS	Base Operating Support
CFR	Code of Federal Regulations
DM-HMMS	Depot Maintenance-Hazardous Materials Management System
DoD	Department of Defense
DOT	Department of Transportation
EC	Emergency Coordinator
EM	88th Air Base Wing Office of Environmental Management
EMC	Office of Environmental Management's Waste Management Branch
EPA	United States Environmental Protection Agency
EPC	Environmental Protection Committee
FFCA	Federal Facilities Compliance Act
HAZMAT/HM	Hazardous Material
HMMP	Hazardous Materials Management Plan
HW	Hazardous Waste
HWMP	Hazardous Waste Management Plan
HWSIT	Hazardous Waste Site Inspection Team
IAP	Initial Accumulation Point
IP	Issue Point
IPM	Issue Point Manager
MSDS	Material Safety Data Sheet
NFPA	National Fire Protection Association
OAC	Ohio Administrative Code
POV	Privately Owned Vehicle
RCRA	Resource Conservation and Recovery Act
SOP	Standard Operating Procedures
TCLP	Toxicity Characteristic Leaching Procedure
TSDF	Treatment, Storage, and Disposal Facility
UEC	Unit Environmental Coordinator
WPAFB	Wright-Patterson Air Force Base

Section 1

INTRODUCTION

1.1 Background

This document is being provided for the effective management of hazardous wastes at Wright-Patterson Air Force Base (WPAFB). A large variety and quantity of hazardous materials are used daily on base to carry out the missions of each organization. Hazardous wastes must be managed safely to minimize risk to both employees and the environment. WPAFB and the Office of Environmental Management (EM) are committed to proper management of the hazardous wastes generated on this installation.

As part of the Pollution Prevention initiatives at WPAFB, The Hazardous Materials Cell (HAZMAT Cell) was created and is managed under EM. The HAZMAT Cell has developed *a Hazardous Materials Management Plan* (HMMP), which covers the management of hazardous **materials** from procurement, receipt, labeling, storage, issue, and use. Copies of the HMMP are available from the HAZMAT Cell, and should be referenced with regard to HAZMAT at WPAFB. At the point which a hazardous material cannot be redistributed to other organizations on base (unused excess) or is no longer usable and is rendered a hazardous waste, this document shall be referenced. The primary objective of the Hazardous Waste Management Plan (HWMP) is to provide a document that gives personnel tasked with management of hazardous waste the essential tools they require.

On 19 May 1980, the U.S. Environmental Protection Agency (EPA) published the hazardous waste management system rules. Subtitle C of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1976 (RCRA) directed the EPA to promulgate these rules and regulations to protect human health and the environment from the improper management of hazardous waste. The effective date of these far-reaching regulations was 19 November 1980. RCRA was again amended in 1984. The amendments require increased management of hazardous waste. Because the State of Ohio has developed a program to implement the RCRA requirements, the United States EPA has delegated implementation of the base RCRA program to the state. The Federal Facilities Compliance Act (FFCA) of 1992 requires all DoD facilities to comply with all federal, state and local environmental regulations in the same manner as private facilities. The FFCA allows federal and state agencies to assess DoD facilities with RCRA violation fines. The procedures of this plan will be used to comply with federal and state legislation and regulations. Plan revisions shall reflect changes in either level of hazardous waste management laws and regulations. Each revision to this plan will become effective immediately upon distribution unless otherwise noted herein.

Implementation of the comprehensive hazardous waste management program mandated by RCRA requires maximum cooperation of all activities on WPAFB. It is the responsibility of the Aeronautical Systems Center (ASC) Commander with assistance from

the Environmental Protection Committee (EPC) to ensure compliance with all RCRA requirements for WPAFB and to notify, apply for permits, and report to the EPA (federal or state), as required, for all installation activities, including tenant activities. The individual base operational units (generating activities) are accountable for conducting their activities in accordance with this plan. Those base units, including supporting Defense Reutilization and Marketing Service activities and tenant activities, will provide necessary documentation to the 88th ABW Wing Commander through the EPC for permit application, provide the reports required by the U.S. EPA or Ohio EPA, and ensure compliance with RCRA regulations and permit requirements at the facility.

1.2 Scope of the Hazardous Waste Management Program

The purpose of this plan is to assist personnel involved in the management of hazardous waste in implementing the requirements of RCRA as enforced by the EPA. It also covers Ohio EPA's Hazardous Waste Management regulations, and HQ AFMC (Air Force Materiel Command) hazardous waste standardized operating procedures (SOP) as they apply to WPAFB. Federal facilities are not exempt from most of the requirements of this law. This plan covers the control and management of hazardous wastes at the point where they are generated to the point of ultimate disposal. It implements the EPA's philosophy of "cradle-to-grave" management and control of hazardous waste.

The Air Force Instruction *Solid and Hazardous Waste Compliance* (AFI 32-7042) is provided in Appendix A-1 for additional information. Specific to WPAFB, *Hazardous Waste Management* (WPAFB Instruction 32-7001) is also provided for guidance in Appendix A-2. All items included in Appendix A are specifically referenced in this document. WPAFB policies are included in Appendix B as reference material. Questions concerning this document should be directed to the Hazardous Waste Program Manager at 257-7152 x270.

Section 2

RESPONSIBILITIES

2.1 Tasked Organizations

Overview

Each organization and tenant unit at WPAFB is responsible for managing hazardous waste in compliance with federal, state and local laws and Air Force Policy. The HWMP provides guidance and establishes the framework necessary to ensure compliance with these rules.

Primary Agencies

Responsibilities for implementing this plan are distributed throughout base organizations that generate, package, store, and dispose of hazardous wastes or respond to incidents involving hazardous waste. Base compliance with federal, state, and local hazardous waste laws and regulations is the responsibility of the ASC Commander through the Environmental Protection Committee (EPC). Maintenance of the plan is the responsibility of EM's Hazardous Waste Program Manager (88 ABW/EMC) in conjunction with the Hazardous Material/Hazardous Waste Steering Committee. The organizations represented on the UEC distribution (Table 2-1) are tasked under this plan.

2.2 Process Responsibility

Overview

Organizations that generate hazardous waste and organizations who provide support in managing the disposition processes are responsible for implementing the requirements of this plan. Specific responsibilities of both areas are provided in this section.

Generating Organizations

All base organizations having hazardous waste generating activity are assigned the following responsibility:

a. Designate and empower a Unit Environmental Coordinator (UEC) to oversee all aspects of hazardous waste management for the organization. The UEC and alternate must be appointed by letter from the two-letter organization commander. These individuals will be appointed to the Hazardous Material/Hazardous Waste Steering Committee, participate in compliance inspections and help resolve compliance issues for the organization. Table 2-1 presents a list of the UECs at the base.

b. Provide safe equipment and locations for Initial Accumulation Point (IAP) and Accumulation Site (ACCS) storage areas.

c. Ensure that hazardous waste storage locations are permitted by 88 ABW/EMC.

d. Comply with installation Operating Guidelines for managing the hazardous waste and Pollution Prevention programs.

e. Identify all hazardous waste generating activities to 88 ABW/EMC.

f. Allocate funds to pay for their Hazardous Waste Disposal fees starting Fiscal Year 99.

Environmental Management

EM is responsible for establishing policy and procedures to ensure that hazardous wastes are accumulated, handled, stored, transported and disposed in a manner which protects human health and the environment. Table 2-2 presents the Organizational Structure and Points of contacts for EM.

TABLE 2-1 UEC DISTRIBUTION (MARCH 1999)

	Phone	Fax
AAFES/GM		
JOSEPH FLORES	879-5730	879-2432
AFIT/ENP		
KEVIN POPE (X4535)	53636	52921
BELINDA JOHNSON (X4573)	53636	52921
AFMC/LG-EV		
TOM LORMAN	77352	60499
FRANCES BERGER	73498	90499
ASC/AFTLA		
CHERYL M. McCORMICK	53513	67744
RAYMOND M. BRODERICK	50488	67744
88 CES/CEOE		
MSGT ALTON WILSON	73904	61430
MARTIN NICODEMUS	73904	61430
788 CES/CEZL		
JAMES HOPSON	72760	61177
SSGT STEPHANIE MOSS	77879	61177
88 CG/SCXR		
JOHN B. FULLER (X208)	54900	54585
DAVID SWEET (X201)	52947	54585
DAPSDO		
GARY BURTCH	72012	74393
DISA WED		
CURTIS WILLIAMS	73028	62319
RASIKLAL DALSANIA	73028	62319
413 FLTS/OL-HN		
HOMER V. RICE	52471	252-2685
LARRY E. CUMMINGS	52471	252-2685
LCMPS/MPPL		
BRUCE THOMSON	55014	252-3019
GEORGE WILLEMAN	57159	
445 AW/LGE		
AARON MOUSER	75996	61516
445 MS/LGMSD		
MARY BORTZ	77355	61516
88 LOG/LG		
GORDON MOTLEY	78102	61404
STEVE SHULTZ (169-0864)	76815	61404
74 MDSS/SGSL		
ERIC ANDREWS	62897	61278
DONALD TAM	78935	61157

	Phone	Fax
NAIC/MSH		
MAJ MICHAEL MARCELIS	73618	71112
NHRC/TD		
HM3 ADAM KLOSOWSKI (X243)	56058	67094
HME KEITH LEHMAN (X223)	56058	67094
AFRL/HESN		
CAPT RICHARD BERT	53607	52781
DOUG FRANCK	52423	57215
AFRL/HEST		
CAPT GARY WRIGHT (X3176)	55150	51474
MAJ WADE WEISMAN (X3174)	55150	51474
88 SPTG/CCX		
PAUL DAULTON	79026	62040
88 SPTG/SVFM		
ROBERT STEPHENS	74346	
CHARLES McCREARY	74889	
USAFM/MUC		
HARRISON E. TOMS	56905	64081
CHARLES O'HARROW	55905	64081
55 WG/OLWP		
SSGT. THOMAS THELEN (X726)	71694	61362
SrA. STEVEN KAS (X728)	71694	61362
AFRL/DS (All Correspondence)		
TERRY GARRISON	69852	
AFRL/SNDD		
RUSS SCHERER (X3469)	51874	53374
AFRL/MLPA		
ERIC TAYLOR (X3412)	52227	
AFRL/VAC		
JULIE WELTY	55394	55415
LT COL RICHARD DOCKEN	53418	55415
AFRL/ML		
COL ROBERT TIPTON	52738	64831
ROB MARSHALL	54424	54735
AFRL/PR		
STEVEN SHOOK	55101	51759
MICHAEL SCHUMACHER	56340	67176
JOHN LEONARD	54450	67004

TABLE 2-2 OFFICE OF ENVIRONMENTAL MANAGEMENT
(March 1999)

88 ABW/EM
5490 Pearson Road
WPAFB OH 45433-5332

DSN 787-XXXX
Commercial 937-257-XXXX FAX 656-1534
Fax DSN 986-1534
e-mail:*@wrigem.wpafb.af.mil**
or first.lastname@wrigem.wpafb.af.mil

Office Symbol	Function/Position	Name	e-mail	Local Extension
EM	**Environmental Management**			
	Director	Ron Lester	lesterr	5627 Ext 220
	Public Affairs Specialist	Kay Binzer	binzerk	5886 Ext 222
	Historic Preservation Program Manager	Jan Ferguson	fergusj	5535 Ext 254
	Personnel, Manpower, Training	Debbie Walton	waltond	5627 Ext 223
	Financial Management	Fayrene Tucker	tuckerf	2057 Ext 273
	A-106, Financial Assistant, Quality	Margo Reichman	reichmm	2057 Ext 272
	Secretary	Sherry Yerkey	yerkeys	5627 Ext 224
EMB	**Radiation Safety Branch**			
	Chief	Mark Mays	maysm	2010 Ext 208
	Secretary	Susan Roby	robys	2010 Ext 203
	Radioactive Materials, Recycling	Chris Anthony	anthonc	2010 Ext 205
	Radiation Dosimetry, AFNEC	Amn Tiffany Patton	pattont	2010 Ext 206
	Radiation Producing Devices, Radon	Gary Lindsey	lindseg	2010 Ext 204
	Lasers	Ben Wilmoth	wilmotb	2010 Ext 207
EMC	**Waste Management Branch**			
	Chief	Susie Linthicum	linthis	7152 Ext 282
	Secretary, Environmental Assistant	Shelly Baty	batys	7152 Ext 281
	PCB Program Manager, Infectious Waste, Used Oil	Raymond Baker	bakerr	7152 Ext 266
	ECAMP, Spill Response, A&E Contract Management	Libby Domingue	domingl	7152 Ext 265
	HazWaste Compliance Liason, Area B	Rick Fultz	fultzr	7152 Ext 280
	HazWaste Program Manager	Melanie Pershing	pershim	7152 Ext 270
	HazWaste Compliance Liason, Areas A/C	Estella Holmes	holmese	7152 Ext 276
	HazWaste Field Compliance Mgr, TSD Mgr	Brian Mitchell	mitcheb	7152 Ext 275
	Lead Paint Abatement Program Manager	Jim Richardson	richarj	7152 Ext 268
	HazWaste Compliance Liason, Area B	MSgt Tim Smith	smitht	7152 Ext 269
	Asbestos Program Manager	Margo Swensen	swensem	7152 Ext 279
	Lead Program, Asbestos Program Assistant	Kelley Robinson	robinsk	7152 Ext 278

TABLE 2-2 OFFICE OF ENVIRONMENTAL MANAGEMENT
(March 1999)
Cont'd

EMP	**Resource Protection Branch**			
	Chief	Dave Duell	duelld	5535 Ext 263
	Secretary, Support Agreements	Phyllis Kennedy	kennedp	5535 Ext 250
	Design Review, Lab Contract, Construction	Sandy Henry	henrys	5535 Ext 255
	Underground /Above Ground Storage Tank Program Manager	Ali Khan	khana	5535 Ext 258
	EIAP Program Manager	Shari Kilbourne	kilbous	5535 Ext 259
	Natural Resources Program Manager	Terri Lucas	lucast	5535 Ext 262
	Drinking Water Project Manager	Linda Rogers	rogersl	5535 Ext 253
	Air Pollution Control Program Manager	Connie Strobbe	strobbc	5535 Ext 256
	Wastewater/Stormwater Program Manager	Lilly True	truel	5535 Ext 251
	Environmental Protection	Tom Perdue	Perduet	1365 Ext 381
	Lab Contract Manager	Sharon Yeager	Yeagers	5535 Ext 252
EMR	**Restoration Branch**			
	Chief	Ed Finke	finkee	2201 Ext 227
	Secretary	Linda Rudd	ruddl	2201 Ext 245
	OU4 RI(Mercury Site)/OU6 RA; PA/SI Bldg 20059; MAP, NPDES Project Manager	Treva Bashore	bashort	2201 Ext 233
	OU3/OU4/OU11RI; OU7RI/RD/RA; BMP; OU4 RD/RA Project Manager	Kim Ehret	ehretj	2201 Ext 232
	OU8/OU9 RI/FS/RD/RA; PA/SI Burial Site 5&6; DRMO Project Manager	Sherm Siegal	siegals	2201 Ext 241
	OU1/OU3/OU5 RD/RA; GWTS Project Manager	John Wolfe	wolfej	2201 Ext 244
EMV	**Pollution Prevention Branch**			
	Chief	Tim Clendenin	clendet	2057 Ext 209
	Secretary, Environmental Assistant, EPC, VCO, Equipment	Coleen Boggs	boggsc	2057 Ext 210
	Pollution Prevention Program Manager	Gary Selby	selbyg	2057 Ext 217
	EPCRA Program Manager, P2	Karen Thompson	thompsk	2057 Ext 211
	Pollution Prevention, Computer Systems	Dave Martin	martind	2057 Ext 213
	Solid Waste Program Manager, Recycling	Bill Meinerding	meinerb	2057 Ext 218
	EOD Range Program Manager, Waste Minimization Program Mgr	Chris Tumbusch	tumbusc	2057 Ext 216
	HazMat Cell, Building 1	****@b001smtp. wpafb.af.mil**		
	HazMat Pharmacy Program Manager	John Banford	banforj	8015 Ext 301
	MSDS Coding, Zone Licensing Approval	SSgt Brad Woods	woodsb	9898 Ext 312
	Data Entry	Ray Blythe	blyther	6297 Ext 305
	Data Entry	Tammy Hemmerle	hemmert	6297 Ext 304
	System Administrator	Irvin Martin	martini	8015 Ext 309
	Acquisition - Hazardous Materials	Mike Bushaw		8015 Ext 307
	Acquisition - Hazardous Materials	Roberta Johnson	johnsor	8015 Ext 308
	Issue Point Coordinator	MSgt Tim Colyer	colyert	8015 Ext 302

Section 3

WASTE MANAGEMENT FACILITIES

3.1 Hazardous Waste Accumulation Areas

Figure 3-1 shows areas and buildings at WPAFB where hazardous wastes are initially accumulated (Initial Accumulation Points - IAPs), accumulated up to 90 days (Accumulation Sites - ACCS), and the permitted Temporary Storage and Disposal Facility (TSDF) at buildings 20478/479 in Area B. Hazardous waste management procedures for IAPs, ACCS and the TSDF are presented in Section 5 of this plan.

An **IAP** is an area where waste is initially accumulated under control of the operator of the process generating the waste. All waste stored in an IAP must be associated with the generating activity. Current IAPs are listed in Table 3-1. See Section 5 for specific requirements for managing an IAP.

An **ACCS** is an area where hazardous waste is accumulated in containers for a period of up to 90 days. There are currently three accumulation sites for hazardous waste at WPAFB. These areas are identified in Table 3-1. See Section 5 for specific requirements for managing an ACCS.

A **TSDF** is an area in which the facility has been granted a Part B permit by the Ohio EPA to store hazardous waste. WPAFB has two existing permitted hazardous waste storage units (Bldg. 478 and 479), operated by EM. The permit should be referred to for specific operating procedures and restrictions. Wastes restricted from land disposal may be stored at these units for up to one year. It is the policy of WPAFB to ship hazardous waste off-site as expeditiously as possible. See Section 5 for more details on a TSDF.

3.2 Hazardous Waste Inventory

WPAFB (EMC) maintains a database with the current hazardous waste inventory at Buildings 251, 72 and the TSDF.

WPAFB will ensure that all wastes are properly characterized as either hazardous or non-hazardous wastes in accordance with the WPAFB Waste Analysis Plan (Section 4).

Hazardous waste generating activities will identify and separately document wastes which are classified as non-hazardous due to the following:

a. Subject to solid or hazardous waste exclusions (40 CFR § 261.4);

b. Recycled, not subject to the generator waste determination requirements of 40 CFR § 262.11 (e.g., lead acid batteries that are being reclaimed, used oil that is burned for energy recovery, and scrap metal which is recycled) (40 CFR § 261.6);

c. Land disposal restricted waste that is excluded from the definition of hazardous or solid waste or exempt from Subtitle C regulations under 40 CFR 261.2-261.6 subsequent to the point of generation, to document the waste, its exclusion or exemption, and the disposition of the waste.

The hazardous waste generating activity of an area generating an excluded, exempt or recycled waste, will place a one-time notice stating such generation, the subsequent exclusion from the definition of solid or hazardous waste or exemption from Subtitle C regulation and the disposition of the waste, in the generating activities waste management file. A copy of the document will be forwarded to the Office of Environmental Management, Waste Management Branch and maintained on-site for at least five years from the date the waste was last sent to on-site or off-site treatment, storage, or disposal/recycling.

Figure 3-1. Facility Diagram

TABLE 3-1. IAP, ACCS(**), AND PART B PERMITTED(***)
HAZARDOUS ACCUMULATION AREAS
(February 1999)

BUILDING	ROOM	ORGANIZATION	PERMIT_NO
Area A			
10830	BV1	74MDSS/SGS	C014
10830	2D12	74MDSS/SGS	C015
10867	HANGER A	NAIC/MSHM	A007
Area B			
20072**	**ACCS STORAGE AREA**	88 ABW/EMC/AES	B016
20490	122	AFRL/PRSL	B001
20018	29	AFRL/PRPB	B007
20682	119	LCMPS/MPPL	B008
20004D	PAINT BOOTH	USAFM/MUR	B017
20651	162	AFRL/MLPJ	B021
20018G	42	AFRL/PRPG	B022
20640	134F	AFIT/ENP	B033
20125	1065	AFIT/ENG	B035
20770	BASEMENT	88 CEG/CEOB	B036
20654	304	AFRL/MLBP	B044
20654	333	AFRL/MLBP	B045
20654	303	AFRL/MLBP	B046
20654	302	AFRL/MLBP	B047
20654	332	AFRL/MLBP	B048
20654	301	AFRL/MLBP	B049
20654	325	AFRL/MLBP	B050
20654	326	AFRL/MLBP	B051
20654	331	AFRL/MLBP	B052
20654	323/324/350	AFRL/MLBP	B054
20651	163	AFRL/MLPJ	B058
20651	260	AFRL/MLPO	B062
20654	348A	AFRL/MLBP	B063
20654	334	AFRL/MLBP	B064
20652	135	AFRL/MLPO	B066
20651	261	AFRL/MLPO	B067
20652	127	AFRL/MLPO	B068
20433	205	NMRI/TD	B069
20065	MEZZANINE EAST	AFRL/VASE	B071
20490	235	AFRL/PRSL	B073
20490	228	AFRL/PRSL	B074
20654	149	AFRL/MLBT	B076
20654	152/124	AFRL/MLBT	B077
20654	101	AFRL/MLBT	B078
20490	206 F31	AFRL/PRSF	B080

Table 3-1 Cont'd

BUILDING	ROOM	ORGANIZATION	PERMIT_NO
20070	221	ASC/AFTLA	B082
20070	104	ASC/AFTLA	B083
20070	220	ASC/AFTLA	B085
20071A	A-BAY	AFRL/MLPJ	B087
20004D	GRIT BLASTER	USAFM/MUR	B089
20018G	30	AFRL/PRPB	B090
20652	G-17	AFRL/MLSC	B092
20652	145	AFRL/MLSA	B093
20655	83C/85C	AFRL/MLLM	B094
20655	183/185/199	AFRL/MLLN	B096
20654	249	AFRL/MLBC	B097
20652	39	AFRL/MLSA	B098
20652	50	AFRL/MLSS	B099
20651	161	AFRL/MLPJ	B100
20450	B011	AFRL/MLSA	B101
20021	119B	AFRL/PRTX	B102
20062	NE CORNER	AFRL/PROE	B105
20079	002	AFRL/HEST	B110
20079	153	AFRL/HEST	B111
20079	121	AFRL/HEST	B112
20079	179	AFRL/HEST	B113
20079	178	AFRL/HEST	B114
20079	127	AFRL/HEST	B115
20079	129	AFRL/HEST	B116
20079	146	AFRL/HEST	B118
20079	184	AFRL/HEST	B119
20079	175	AFRL/HEST	B120
20079	180	AFRL/HEST	B121
20079	170	AFRL/HEST	B123
20079	171	AFRL/HEST	B124
20655	035	AFRL/MLLN	B125
20450	B023	AFRL/PRPS	B126
20620	SE2L17	AFRL/SND	B130
20620	NE2J19	AFRL/SND	B131
20031	LOCKER 3	AFRL/VACM	B136
20651	174	AFRL/MLPO	B142
20654	132	AFRL/MLSE	B143
20450	D108	AFRL/PRPS	B146
20018G	35	AFRL/PRPE	B148
20655	57	AFRL/MLLM	B149
20652	47/48	AFRL/MLSA	B151
20654	148	AFRL/MLBT	B152
20652	G15	88 CEG/CECW	B154
20654	23	88 CEG/CECW	B155
20083B	OUTSIDE AREA	88 CEG/CECW	B157

Table 3-1 Cont'd

BUILDING	ROOM	ORGANIZATION	PERMIT_NO
20450	B027	AFRL/PRPS	B158
20450	E130	AFRL/PRSC	B159
20071	2 STAND	AFRL/MLPJ	B160
20018C	18	AFRL/PRSS	B162
20018	PAINT SHOP 1 FL	88 CEG/CECW	B163
20045	S.W. CORNER	88 CEG/CECW	B165
20261	B LAB 3	88 CEG/CECW	B166
20167	VAULT #4	88 ABW/LCMP	B168
20470	2ND FLOOR LAB	AFIT/ENP	B171
20655	045	AFRL/MLO	B178
20018B	13	AFRL/PRPE	B179
20655	64B	AFRL/MLLM	B181
20470	210A	AFIT/ENV	B183
20640	66 BASEMENT	AFIT/ENP	B184
20655	193	AFRL/MLLN	B185
20620	BASEMENT	88 CEG/CECW	B188
20254	4	AFRL/XPN	B189
21661	B129	AFRL/MLSS	B190
20654	134	AFRL/MLBT	B191
20021	104	AFRL/PRTX	B192
20020A	HI-BAY	AFRL/PRTX	B193
20071B/J	HI-BAY	AFRL/PRTX	B194
20435	219	AFRL/PRSS	B195
20252	HIBAY	AFRL/PRTX	B197
20433	105	NMRI/TD	B198
20433	120	NMRI/TD	B200
20433	207	NMRI/TD	B202
20433	208	NMRI/TD	B203
20433	209	NMRI/TD	B204
21661	B229	AFRL/MLSS	B205
20450	D05	AFRL/PRSC	B206
20045	HW Storage Area	AFRL/VACE	B207
21661	C133, C133A-E	AFRL/MLSS	B208
20083B	N/A	88 CEG/CECW	B209
2004A	Hanger	413 FLTS/HN	B210
20478/479* **	**TSDF Building**	88 ABW/EMC	Part B Facility

Table 3-1 Cont'd

BUILDING	ROOM	ORGANIZATION	PERMIT_NO
Area C			
30019**	FENCED AREA(**ACCS**)	88 CEG/CEOE	C020
30251**	**ACCS STORAGE AREA**	88 ABW/EMC/AES	CA30
30884	MERCURY RM 117	88 MXS/LGM	C007
30426	107F & 107G	445 MS/LGMA	C008
30093	NONE	88 MXS/LGMG	C009
30901	N/A	88 TRANS/LG	C010
30022	SPRAY SHOP	88 CES/CEZF	C012
30105	2	445 MS/LGMF	C028
31240	SE CORNER	88 CEG/CECW	C030
30884	CLEANING RM 118	88 MXS/LGM	C031
30013	INT STORAG SHED	445 MS/LGMH	C041
34026	INT STORAG SHOP	445 MS/LGMS	C042
34042	NORTH EAST WALL	445 MS/LGMP	C046
34020	HANGER FLOOR	445 MS/LGMA	C047
34024	101B	445 MS/LGMF	C049
11405	111	88 CS/SCMTW	C050

Section 4

WASTE ANALYSIS PLAN

4.1 Introduction

The waste analysis plan for Wright-Patterson Air Force Base (WPAFB) is required by 40 CFR § 264.13; 40 CFR § 268.7 and 40 CFR § 270.14(b)(3); OAC 3745-50-44(A)(2-3) and OAC 3745-54-13(A); and Air Force Policy. This plan applies to all hazardous waste streams that are generated and stored at WPAFB. To comply with federal and state RCRA requirements, the plan contains base procedures for identifying and evaluating hazardous waste. The waste analysis plan describes detailed procedures for obtaining physical and chemical analyses from all associated waste generating activities at WPAFB including procedures for selecting waste parameters for analysis, selecting waste sampling method, documenting samples, identifying analytical methods, and reevaluating waste streams.

4.2 Identification of Solid Waste

All waste shall be classified in accordance with 40 CFR 261.2 and 261.4(a) to determine if it meets the definition of a solid waste.

a. A solid waste is any material that is discarded by being abandoned, recycled or considered "inherently waste-like", and that is not excluded by 40 CFR 261.4(a) or by variances granted under 40 CFR Sections 260.30 and 260.31.

b. Generally all garbage, refuse, and sludge that are either solid, liquid, semi-solid, or contained gaseous materials are considered to be solid wastes. Certain substances are however, excluded; these are listed in 40 CFR 261.4(a).

c. If in doubt, generators must refer to 40 CFR 261.2 and 261.4(a) which are incorporated herein by reference, or concur with the Office of Environmental Management, 88 ABW/EM. This office is located in Building 89, Area C, Door 8 and can be reached by telephone at (937) 257-7152.

4.3 Identification of Hazardous Waste

All solid waste as defined in (1) above, shall be further classified in accordance with 40 CFR 262.11 to determine whether it is also a hazardous waste. Once this determination has been made, the generator shall also determine its EPA Hazardous Waste Number. This number shall be used in all descriptions of the waste and in all the applicable paperwork (i.e., labels, manifests, turn-in documentation, annual reports, etc.).

a. A solid waste is a hazardous waste if:

1. It is not excluded from regulation as a hazardous waste under 40 CFR 261.4(b);

2. It exhibits any of the characteristics of hazardous waste identified in 40 CFR 261 (Subpart C);

3. It is listed in Subpart D of 40 CFR, specifically by commercial chemical name or is listed from non specific sources.

b. A solid waste is a *characteristic* hazardous waste if it exhibits any of the following characteristics:

1. **Ignitability**: A solid waste is ignitable if it is a liquid, other than an aqueous solution containing less than 24 % alcohol by volume, and has a flash point less than 140 degree F; or if it is not a liquid, but is capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture or spontaneous chemical changes and, when ignited, burns so vigorously and persistently that it creases a hazard, an ignitable compressed gas as defined in 49 CFR 173.300, or an oxidizer as defined in 49 CFR 173.151. The EPA hazardous waste number is D001.

2. **Corrosivity**: A solid waste is corrosive if it is aqueous and has pH that is either (a) less than or equal to 2; or (b) greater than or equal to 12.5. Liquids that corrode steel as specified at 40 CFR 261.22 are also corrosive. The EPA hazardous waste number for corrosivity is D002.

3. **Reactivity**: A solid waste is reactive if it has any of the following properties: (a) It is normally unstable and readily undergoes violent change without detonation; (b) reacts violently or forms explosive mixtures with water; (c) generates toxic vapors when mixed with water; (d) generates toxic cyanide or sulfide vapor under mildly acidic or alkaline conditions; (e) it is readily capable of detonating or exploding if subjected to a strong initiating source or at standard temperature and pressure; (f) or if it is a forbidden explosive. The EPA hazardous waste number is D003.

4. **Toxicity**: A solid waste exhibits the characteristic of toxicity if the extract of a sample from the TCLP (40 CFR 261, Appendix II) contains any of the contaminants at or above the specified concentrations listed in Table 1 of 40 CFR 261.24. The TCLP list is included in Appendix B. The hazardous waste numbers range from D004 to D043.

C. The following are examples of the four kinds of listed hazardous waste:

1. Wastes from nonspecific sources include various kinds of spent solvent and chemical manufacturing wastes usually found in industrial operations. Their hazardous waste identification numbers have a letter "F" prefix; for example, spent

trichloroethylene degreasing solvent is designated F001 while spent trichloroethylene from other sources such as paint stripping has an EPA hazardous waste number of F002.

2. Wastes generated from specific sources which include sludges, tailings and the like from certain chemical manufacturing processes. This list is comprised of various inorganic and organic chemicals encompassing pesticides and metal production processes. The hazardous waste numbers for this group of wastes are preceded by the letter "K"; for example sludge remaining from the treatment of wood with creosote is number K001.

3. The “P” list covers commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products or manufacturing chemical intermediates that are acute hazardous wastes by reason of their toxicity and/or chemical compositions. Their hazardous waste number is preceded by the letter "P"; copper cyanide for example is numbered P029. Containers that have held acute hazardous wastes are cleaned as specified at 40 CFR 261.7(b)(3). (See ***Section 5.2 EMPTY CONTAINERS*** for WPAFB-specific instructions for empty container disposal.)

4. The “U” list includes commercial chemical products or intermediate products, whether within or beyond specifications, that are hazardous for having any of the following properties: toxicity, reactivity, ignitability or corrosivity. All of the substances in this listing are also specific chemical compositions. Their hazardous waste numbers are prefixed by the letter "U", for example, methyl ethyl ketone is number U159.

4.4 WASTE STREAM EVALUATION

All solid waste that is generated at WPAFB shall be evaluated to determine if the waste is a hazardous waste and therefore subject to the requirements of 40 CFR 261-268. This determination may be conducted by either using the waste generator's knowledge of the hazardous characteristics of waste and the materials or processes used, or by analytical testing as described in 40 CFR 261.

a. If the waste stream is determined to not be a hazardous waste and is in a solid form or state, the waste may be disposed of via the base’s solid waste contract.

b. If the generator determines that their waste stream is indeed a hazardous waste subject to regulation and is not exempt from the regulation, it must be turned in to 88 ABW/EMC, IAW Section 5.

1. All hazardous waste turned in to 88 ABW/EMC must be properly characterized, packaged, marked and labeled. Generators must assure that correct EPA

Hazardous Waste numbers are applied and that they have sufficient data to validate their waste determination.

2. The generating activity must submit with their waste, a completed Hazardous Waste Pickup Form (WPAFB Form 1438). If the waste stream is an off-specification or expired shelf-life term, the generator shall also submit the applicable Material Safety Data Sheet (MSDS).

3. Generating activities may also produce a non-RCRA liquid waste. These wastes are also turned in to 88 ABW/EMC along with a MSDS or other data to validate their waste determination.

c. After the hazardous waste pickup form has been evaluated by the 88 ABW/EMC field compliance liaison it is submitted to the DRMS hazardous waste contractor who will contact the generator to arrange pick up of the waste. Waste generated in Areas A and C are transported to Facility 20251. Waste generated in Area B is transported to 20072. These two 90 day accumulation sites are operated by the DRMS contractor.

d. The DRMS contractor will evaluate the pickup form with the waste number and type of containers, quantity (pounds and/or gallons) and physical state. If the contractor disagrees with any information provided on the pickup form, the waste will not be removed and the field compliance manager shall be notified to resolve the discrepancy.

1. The next step is to evaluate the waste analysis information provided on the submittal. Analytical data must include all of the information required to treat, store or dispose of a waste in accordance with 40 CFR Parts 265.13 and 268. The following data must be included with the accompanying documentation before the waste will be accepted by the contractor:

(a) Physical state or mixed states as applicable,

(b) Pertinent physical properties such as pH or flash point for mixed wastes that are not identified in common reference material. Equivalent notations may be used, e.g. pH<2.

(c) Noun name as catalogued in the Federal Supply System and the National Stock Number (NSN) or if not catalogued in the Federal Supply System, the chemical names of the hazardous components,

(d) Chemical names of hazardous contaminants and the noun name of non-hazardous components,

(e) Amounts of hazardous and nonhazardous ingredients based on user's knowledge or testing of the items, expressed in a range of content by percentage or part per million (ppm) or its equivalent, milligrams per liter (mg/l), as appropriate.

2. This information will allow the DRMS contractor to utilize standard references to determine the chemical characteristics for proper storage and to identify applicable land disposal restrictions in 40 CFR Part 268.

3. All shipments of waste in unopened, manufacturer's containers with their original labeling including paints, proprietary chemical compositions and reagent grade chemicals are visually inspected by the DRMS contractor. If there is some doubt concerning the composition of such waste it will remain in the custody of the generator until its composition is verified. When these wastes are turned in for disposal, a control number is required from the HAZMAT Cell to verify that all avenues were explored to redistribute the excess material.

4. Whenever a restricted waste is to be shipped off-site from the base, the DRMS contractor must notify the receiving TSD facility of the applicable treatment standards. The notification must include:

(a) The EPA Hazardous Waste Number
(b) The applicable treatment standard
(c) The Uniform Hazardous Waste Manifest number, and
(d) The waste analysis data and/or statement of knowledge.

The notification form is attached to the manifest for the shipment. If the restricted waste meets the treatment standard the following certification must also be signed and attached to the notification form: "I certify under penalty of law that I personally have examined and am familiar with the waste through analysis and testing or through knowledge of the waste to support this certification that the waste complies with the treatment standard specified in 40 CFR Part 268, Subpart D. I believe that the information I submitted is true, accurate and complete. I am aware that there are significant penalties for submitting a false certification, including the possibility of a fine and imprisonment."

e. If the generator of a solid waste or a hazardous waste is unsure of the chemical characteristics of their waste, they shall request a sample analysis to be accomplished. This analysis may be required to identify it as a hazardous waste or to further classify its hazards if there is incomplete data.

1. Analysis can be accomplished based on:

(a) Qualitative determinations from previous experience with the same waste,

(b) Knowledge of the generating process, or
(c) Analytical measurement.

2. Where the analysis is based on (1) or (2) above, intrinsic properties such as color, odor, specific gravity, flashpoint, flammability, physical and chemical sensitivities and/or other properties or characteristics if not already known, can be derived from published or documented data references such as:

(a) The Merck Index, 11th Edition, Merck and Co., Inc., Rahway, NJ

(b) Chemistry of Hazardous Materials, E. Meyer, 1977, Prentice-Hall Inc., Englewood Cliffs, NJ

(c) Pocket Guide to Chemical Hazards, DHEW (NIOSH) Publication NO. 78-210, 1981, US Government Printing Office (GP) Stock #017-03343-4

(d) Hazardous Materials Emergency Response Guidebook, DOT Publication P5800.3, 1996, US Government Printing Office

(e) Fire Protection Guide on Hazardous Materials, 7th Edition, National Fire Protection Association, Batterymarch Park, Quincy MA.

(f) Dangerous Properties of Industrial Materials, Sax, Van Nostrand Reinhold Co, NY, NY.

3. The methods and equipment used for sampling wastes for analytical measurement will vary with the form and consistency of the waste material. Representative samples shall be collected using the sampling protocols listed below for sampling wastes with properties similar to the indicated materials. Detailed guidance on the number of samples to be taken and the type of sample containers is presented in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", EPA Publication SW-846. Table 4-1 lists the test methods that will be used. Alternatively, a representative sample can be obtained by any other method capable of yielding a representative sample within the meaning of 40 CFR Part 260. The following sampling protocols are specified by the U.S. EPA:

(a) Extremely viscous liquid - ASTM Standard D140-70
(b) Crushed or powdered material - ASTM Standard D346-75
(c) Soil or rock-like material - ASTM Standard D420-69
(d) Soil-like material - ASTM Standard D1452-65
(e) Fly ash-like material - ASTM Standard D2234-76
(f) Containerized liquid wastes-"Coliwassa", described in EPA Publication SW-846
(g) Liquid waste in pits, ponds, lagoons and similar reservoirs-"Pond sampler", described in SW-846.

TABLE 4-1. WRIGHT-PATTERSON AFB'S WASTE IDENTIFICATION TESTING METHODS

Test	Test Method	Reference	Rationale
Flashpoint	Pensky-Martens Closed-Cup or Seta-flash Closed-Cup	Method 1010* or 1020*	This method analyzes ignitibility of a waste, which dictates handling procedures, storage areas, and disposal criteria.
pH	Electrometric measurement	Method 9040*	This method quantifies hydrogen in concentration of a waste, which is related to corrosivity. From this analysis proper waste containers and storage areas can be selected. Also, this analysis confirms hazardous waste determinations, determines compatibility with other wastes, and establishes disposal criteria.
Reactivity	RCRA definition	---	This method verifies hazardous waste determinations, applicability of California list land disposal restrictions, handling and storage criteria.
Specific gravity	Specific gravity	ASTM D941	This method of analysis is used to provide information that can be important during waste handling operations.
TCLP (metals)	TCLP extraction	Method 6010*/7000*	This method verifies hazardous waste determinations and establishes applicable land disposal restrictions. This method is an analysis for toxic metals as defined by 40 CFR 261.24 and OAC 3745-51-24. Toxic metals may be found in combination with each other and/or with other hazardous organic constituents.
TCLP (organics)	TCLP extraction	Method 8240*/8270*	This method verifies hazardous waste determinations based on the presence of toxic organics as defined by 40 CFR 261.24.
Volatile organics	GCMS	Method 8240*	This method verifies hazardous waste determinations based on the presence of volatile organics.
Semivolatile organics	GCMS	Method 8240	This method verifies hazardous waste determinations based on the presence of volatile organics.

(continued)

TABLE 4-1 (continued)

Test	Test Method	Reference	Rationale
Sulfide	Titration	Method 7342*	This method verifies hazardous waste determinations based on the presence of sulfide. Sulfide must be measured at the ppm level because there are possible toxic effects to be considered during handling, storage, and/or incineration.
Cyanide	Colorimetric	Method 7332*	This method verifies hazardous waste determinations based on the presence of cyanide. Cyanide must be measured at the ppm level because there are possible toxic effects to be considered during handling, storage, and/or incineration.
Organochlorine pesticides, herbicides, and dioxins	GC	Methods 8080*, 8150*	This method verifies hazardous waste determinations based on the presence of toxic pesticides. These pesticides are defined as toxic by 40 CFR 261.24 and OAC 3745-51-24.
Suspended Solids	Physical Evaluation	ASTM D311-30	This method determines type and concentration of solids which are important to determine incineration and appropriate land disposal restriction treatment technology. Significant changes in solid concentrations may reflect a change in chemical composition.
Ash content	Physical Evaluation	ASTM D482-80	This method evaluates suitability of waste for incineration and to determine potential slag formation and to assess particulate loading. Changes in ash content may reflect significant changes in the inorganic constituents of the waste.
Higher heating value	Physical Evaluation	ASTM D1086-67	This method determines the suitability of a waste for incineration, heat load for proper operation, and allows for the determination of auxiliary fuel usage requirements.

* EPA SW-846

These sampling methods are documented standards published by the American Society for Testing and Materials (ASTM) or by the U. S. EPA in "Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods", EPA Publication SW-846.

4. Analytical measurements shall proceed stepwise beginning at that point in the following progression where the specified parameter(s) is (are) unknown.

(a) Preliminary determinations include an assessment of the quantity, form and physical state of the waste. The quantity and its containment together with the physical state lead to the determination of the appropriate sampling methods and the number of samples that will be required. The physical state of the waste, whether it be a solid, liquid, gas, mixed homogeneous phases or mixed unstable phases begin to identify and isolate the directions in which the analysis should proceed. Color, odor and form lead to further partitioning of compositional possibilities.

(b) Unknown wastes are next screened to identify whether or not the substance is characteristically corrosive, ignitable or reactive. Corrosivity is determined by pH measurement of aqueous liquids or multiphase wastes where the aqueous phase comprises at least 20% of the total volume of the waste. The procedure for pH measurements is detailed in Method 9040 in EPA Publication SW-846.

(c) Ignitability may be determined by one of two methods. The Pensky-Martens Closed Cup Tester (ASTM Standard D93-79 or 93-80) is used to determine the flash point of fuel oils, lube oils, suspensions of solids, liquids that tend to form a surface film under test conditions and other liquids. The second methods for ignitability uses the Setaflash Closed Cup Tester (ASTM Standard D3278-78); this method is more commonly used for paints, enamels, lacquers, varnishes and related products that have flash points between 32 F and 230 F and a viscosity lower than l50 stokes at 77. Tests at higher or lower temperatures are possible. Solid or liquid waste might need to be examined to determine if it is potentially pyrolytic while solids alone may need to be examined for possible pyrophoric activity. Also waste substances that readily yield oxygen (i.e. oxidizers) to stimulate the combustion of organic matter fall under the heading of ignitables.

5. The characteristic of reactivity identifies wastes which are extremely unstable and have a tendency to react violently, give off toxic emissions, explode, or have the potential to explode. Reactives are more readily identifiable in one of four ways:

(a) By virtue of their generic usage such as munitions or explosives, pyrotechnics and rocket fuels.

(b) Chemical compounds specifically identified by the U.S. EPA within the table of listed wastes at 40 CFR 261.33.

(c) Cyanide or sulphur bearing wastes which when exposed to mildly acidic or basic conditions (pH in the range of 2.0 to 12.5) can generate toxic gases, vapors or fumes. Although, test methods exist for the determination of cyanides and sulfides (Methods 9010 and 9030 respectively in EPA Publication SW-846) their detection in a waste would indicate the possibility rather than the certainty of its being reactive.

(d) Substances that react with or are sensitive to water may be profoundly apparent even upon exposure to ambient air or somewhat subtle; no specific test methods are referenced, identification may be dependent upon comprehensive analyses.

6. The fourth characteristic that a waste may exhibit is toxicity, known as the Toxicity Characteristic Leaching Procedure (**TCLP**). A solid waste exhibits the characteristic of TCLP if the prescribed analytical procedure (described in 40 CFR Part 261 Appendix II) produces an extract containing any of the TCLP contaminants at or above the concentrations listed at 40 CFR 261.24. The list includes metals, organics and pesticides. The extent of the analysis at this stage will depend on information and findings available to this point. The analysis may be confined to one or the other groups of contaminants or even to certain elements or compounds if so warranted. The analytical procedures are detailed in EPA Publication SW-846 Method 1311.

7. Supplementary analyses may be needed to further establish the identity of the waste and determine its proper EPA Hazardous Waste Number. A complete list of analytical procedures, which shall be used to determine whether a waste contains a particular hazardous constituent is given in Appendix III of 40 CFR Part 261. Guidance for sampling and analysis is also provided. Cross referencing of listed wastes and their hazardous constituents is provided in two further Appendices VII and VIII in 40 CFR Part 261.

4.5 Sample Locations and Frequency

Waste analyses will be evaluated annually for all identified waste streams that are generated at WPAFB or whenever the process or constituents change unexpectedly. Waste Profile sheets are completed by the DRMS contractor. Copies are maintained in EMC.

4.6 Sample Documentation, Procedures, and Management

All samples will be accompanied by a signed "Chain of Custody", which is located on the bottom portion of the sample request form.

a. Sample labels shall be placed on containers prior to sampling and filled out at the sample location with the following information:

1. Sample number
2. Name of collector
3. Date and time of collection
4. Place of collection

b. Sample seals may be utilized to detect unauthorized tampering, which may affect the sample integrity. The seal is attached around the seal or cap of the container.

c. All information pertinent to the sample activity and field survey should be recorded in a field logbook. The following information should be recorded in the logbook:

1. Location of the sampling point
2. Name and address of the generating activity
3. Type of process producing the waste
4. Physical state of waste (i.e., sludge, liquid, solid, etc)
5. Suspected waste composition
6. Number and volume of sample taken
7. Purpose of sampling
8. Description of sampling point and sampling methodology
9. Date and time of collection
10. Collector's sample identification numbers
11. Lab which will analyze the sample and method of shipment
12. References such as maps and photographs of the sampling site
13. Field observations
14. Field measurements made such as pH or flammability
15. Signature of personnel responsible for logbook entries

d. A sample request sheet should accompany the sample to the laboratory. The field portion of the form is completed by the sample collector and should include pertinent information noted in the logbook. The laboratory portion of the form is then completed by the laboratory personnel and should include the following information:

1. Name of person receiving the sample
2. Laboratory sample number
3. Date and time of sample receipt
4. Sample allocation
5. Analysis to be performed

e. The Office of Environmental Management (88 ABW/EMC) is responsible for sampling of hazardous wastes. The following procedures shall be followed:

1. The waste generator should contact 88 ABW/EMC at X7-7152 and identify the material, the process used in, amount they intend to dispose of, location of the material, and all data known about the material.

2. The sample request is logged in the "Sample Request Log" by 88 ABW/EMC.

3. The sample request is assigned a sample request number.

4. 88 ABW/EMC will then schedule a field sampling date with the generator. A representative of the generating activity must be present during the sampling activity.

5. Once the waste sample has been prepared it shall be picked up by the EM contractor for transportation to the laboratory. When the sample analysis is received from the laboratory, the data will be logged and filed by 88 ABW/EMP. A copy is transmitted to the generating activity along with disposal instructions.

Section 5

HAZARDOUS WASTE MANAGEMENT PROCEDURES

The intent of this section is to define the requirements for HW accumulation, storage, characterization, and turn-in for disposal.

Generation of HW results from a variety of processes. The unit or group involved with the process that generates the HW is referred to as the generator or generating activity. Examples of AF generating activities include corrosion control, vehicle maintenance, auto hobby activities, non-destructive inspection, aircraft maintenance, and AF laboratories. HW generated by these activities include spent solvents, paint thinners and contaminated removers, wiping rags, battery acid, and used hazardous materials. Not all waste generated is hazardous. In order to determine whether a specific waste is hazardous, generators must report all waste streams to EM, including any changes made to processes that could change the characteristics of the wastes being generated. The HW generating site supervisor must ensure that all waste streams are reported directly to the UEC and EM. EM will work with the waste generator and take samples for analysis where necessary to determine the hazardous characteristics of the waste stream. This will enable the generator of the HW to properly segregate and handle the HW. Any changes to the waste stream should be reported to EM immediately.

HW is temporarily stored at WPAFB in areas within the following three classifications: Initial Accumulation Points (IAP), Accumulation Sites (ACCS), and the Part B permitted storage unit or TSDF (Buildings 478/479) as defined in Section 3.1 of this document. When HW is generated, it is initially accumulated at or near the point of generation. The waste is placed in containers, which are under the control of the person(s) operating the process that generated the waste. The maximum amount of waste that can be accumulated initially is 55 gallons for other than P-listed waste, and 1 qt for P-listed waste. Any non-RCRA waste being accumulated does not factor into this volume. The waste that is accumulated in excess of these limits must immediately be marked with the date the excess accumulation began. This excess waste must be moved to an ACCS within 72 hours of the time the excess accumulation began. If possible, notify EM of the intent to turn in waste for pick up, via the WPAFB Form 1438, prior to reaching the maximum quantity. When the maximum quantity has been exceeded, inform the field compliance liaison and an expedited pickup will be executed. It is then picked up by the DRMS HW contractor and transported to an ACCS, where it may be stored up to 90 days. Waste-generating facilities no longer transport waste across base themselves. In some cases, the EM-managed contractor may transport the waste to the TSDF where it may be stored up to one year. In most cases however, the waste is transported from the ACCS off base to appropriate HW permitted receiving facilities. Each type of accumulation area is discussed below and must comply with the associated requirements outlined below.

5.1 Initial Accumulation Points

An Initial Accumulation Point (IAP) is a clearly designated area at or near the point of generation that is under the control of the operator of the process generating the waste. All waste stored in the IAP must be associated with the generating activity. The operation of the IAP is regulated under RCRA rules. These rules specify that the generating activity may accumulate hazardous waste at or near the point of generation provided that the generating activity complies with the management requirements found in 40 CFR, Part 262.34 including the quantity restrictions. Hazardous wastes are always stored in either IAPs or ACCSs until they are transferred to the EPA permitted TSDF (building 478/479, Area B) or off-base.

a. Responsibilities

1. **88 ABW/EM** is responsible for compliance with RCRA. EM is also responsible for assuring the Base is in compliance with all Ohio EPA and AF environmental rules and regulations. To monitor compliance, EM developed the hazardous waste storage permit program. This program requires that generating activities obtain a permit before storing hazardous waste. (See "IAP Permit" below.) EM also conducts compliance audits and provides hazardous waste training.

2. The **Unit Environmental Coordinator** or **UEC** is the focal point for HW compliance activities within an organization and is responsible for coordinating with EM to implement Base HW policies/plans. The supervisor of the appointed UEC and alternate must modify the appointees' job descriptions and performance plans to reflect their HW management duties and responsibilities, as there is a significant amount of responsibility placed upon the UEC.

(a) All UECs are members of the installation Hazardous Waste Site Inspection Team (HWSIT) and must actively participate in inspections of HW sites (IAPs) base wide. The frequency of these inspections is usually quarterly, but may change as necessary. The UEC is also responsible for conducting monthly inspections of IAPs within their own organization. UECs serve on the Hazardous Waste Steering Group, chaired by EM and must attend the monthly Steering Group meetings held on the first Thursday of each month in the EM Conference Room, Bldg 89 Area C. The UEC is the first line of help to the IAP manager regarding environmental issues at the IAP. The UEC must track primary and alternate IAP mangers, an must ensure that EMC is notified of any changes. UECs are the first line of information to their organization regarding any environmental issue, and are ultimately responsible for the overall waste management within the organization. Therefore, they must become familiar with the waste turn-in process as discussed below.

(b) The role of the UEC in the turn-in process is to serve as a first level reviewer of the waste. UECs should make sure that labeling/marking is correct and that

the necessary paperwork is completed. The turn in paperwork and waste shall be coordinated with the UEC before it is turned-in to the ACCS or Bldg 478/479. The UEC is also responsible for ensuring that all waste streams are accurately reported to EM.

(c) All duties and responsibilities of the UEC are defined in AFI 32-7042 *Solid and Hazardous Waste Compliance*, Appendix A-1, and the AFMC SOP for HW Management. WPAFBI 32-7001, *Hazardous Waste Management* is provided in Appendix A-2. The regulatory driver for these policies and procedures are maintained in Title 40, Code of Federal Regulations (CFR), Parts 260 - 268, 49 CFR, Parts 170 - 177 and 29 CFR, Part 1910. These regulations and policies should be followed for all aspects of hazardous waste management within your organization. The procedures defined in AFMC policy should provide the central control and mechanisms needed by your organization to eliminate enforcement actions associated with hazardous waste management. The subject CFRs may be accessed over the Internet at http://www.epa.gov/epahome/rules.html or through the Government Printing Office. AFI 32-7042, AF 32-7005 and AFMC Policy can be obtained through the AF Publications Web Sites.

3. **IAP Managers:** Every organization that generates HW must assign a primary and alternate IAP HW manager for the IAP. One of the managers **MUST** be the operator of the process that generates the waste. The unit commander formally appoints the primary and alternate IAP HW managers. The supervisor of the appointees must modify the appointees' job descriptions and performance plans to reflect their HW management duties and responsibilities, as there is a lot of responsibility placed upon the IAP manager.

(a) A copy of the letter appointing IAP managers and alternates is forwarded to EM with the UEC coordination to identify those responsible for that particular IAP. The IAP manager and alternate are provided with the flexibility to communicate directly with the UEC and EM concerning the management of the IAP. The UEC shall provide guidance and assistance to the IAP managers in all aspects of managing the IAP. The UEC should provide input on the selection of the appropriate personnel selected to manage the IAP.

(b) IAP managers are designated to ensure storage of HW in their area is managed in compliance with installation requirements and environmental laws. IAP manager duties include maintaining records, overseeing compliance, performing daily and weekly inspections, and forwarding any deficiencies to the UEC. These duties, as well as paperwork requirements that the IAP manager is responsible for while maintaining the IAP are discussed below.

4. Hazardous Waste Site Inspection Team **(HWSIT):** Under AFMC Policy each installation must establish a HWSIT to conduct quarterly inspections at each IAP and ACCSs on base. The HWSIT is comprised of all UECs on base. EM will organize and

schedule the dates of the site inspections. These inspections do not remove the management and inspection responsibilities from HW managers at the IAPs and ACCSs. All inspections will be conducted using EM prepared inspection checklists available electronically. Checklists will address the most common occurrences of violations at each HW site (Appendix A-3). Each inspecting team, in coordination with the site supervisors, should follow up on each violation to be sure that appropriate on-the-spot corrective actions are taken. The inspection team leader files a completed checklist report with the site HW manager, two-letter director/unit commander, and EM. The report should indicate findings and any corrective actions taken. EM will schedule the UECs on a rotating basis to conduct the inspections. EM will develop the inspection checklists and keep the results of the inspections on file. Supervisors and HW site managers will ensure that corrective actions are taken and violations are corrected.

b. Establishing the IAP

Before preparing, citing, or construction requests, the requesting organization must demonstrate that their hazardous waste activity requires IAP storage. To start the review, a request is forwarded to EM by the UEC. The EM compliance liaison studies the requests and reviews storage alternatives with the organization to determine what type of storage will best meet their needs. This review is required to provide an opportunity for pollution prevention opportunities, basic information on the characteristics and quantity of waste generated; where and how these wastes are generated; what type of containers will be used for collection; who will be responsible for operation; and, characteristics of proposed storage location.

c. IAP Permit

Once it is determined that an IAP is needed, a WPAFB Form 1433, "Installation Hazardous Waste Storage Permit" is prepared (Appendix A-4). Should the area require upgrade, an AF Form 332, "Base Civil Engineering Work Request" must also be prepared. Completed forms are then submitted to EM for coordination and forwarded to the work order review board. These forms ensure the coordination process is completed and any problem areas identified for action. The HW generating organization is only permitted to generate the waste that is specifically listed on the permit. The UEC must inform EM whenever a new waste stream is going to be generated at an IAP. No new waste stream is allowed to be stored at the IAP until its permit is updated and approved by EM. In the event that a new IAP is required, the new IAP location must be coordinated with the organization's UEC and EM. EM must review, approve and permit the location of the new IAP. The UEC is responsible for renewing all IAP permits within his/her organization annually. Changes in the primary and/or alternate IAP manager must immediately be made on the IAP permit, and a copy of the revised permit must be provided to EM. It is the responsibility of the UEC, with cooperation from the IAP manager/alternate to ensure that all procedures and regulations required for establishing and managing an IAP are adhered to.

d. Siting of an IAP

In deciding where the IAP should be located, it must be determined if the proposed site will meet basic environmental and safety criteria without major upgrading. In some cases, it may be more practical to install portable storage instead of upgrading an existing area, although the exact requirements will depend upon the type and quantity of HW that will be stored at the IAP.

1. Secondary Containment: Secondary containment must be sufficient to contain any waste that may spill or leak at the IAP. It is up to the IAP manager to use his or her best judgement when determining what is adequate secondary containment at an IAP. Minimum secondary containment should be able to hold 100% of the volume of the largest container at the IAP or 10% of the total volume of all the containers at the IAP, whichever is greater. Secondary containment can be provided through a variety of means, including diking, self-contained portable storage buildings, portable storage cabinets, or containment pans/pallets for individual or groups of containers with chemically compatible waste.

2. Site Security: The storage area must be controlled to prevent unauthorized placement of materials into the waste container or storage area. This should include locked cabinets, rooms, and commercial Drum/Container locks. Keys to these locked locations should be limited only to those who require access on a frequent basis, and close tracking of the keys should be maintained.

3. Lighting and Ventilation: If containers will be opened to add waste while the container is in the storage area, special ventilation may be required. The area must provide adequate lighting and, in some cases, lighting fixtures/wiring must conform to National Electric Code requirements for use in flammable vapor atmospheres. The Bioenvironmental Engineering office is able to provide assistance on adequate ventilation and other occupational health concerns depending on the nature of the chemicals that are used and stored in the workplace.

4. Physical Characteristics: The storage layout must provide sufficient room for material handling and spill response equipment, performing container inspections, and separation of incompatible wastes.

e. Closing an IAP

To temporarily close an IAP, the UEC must conduct an inspection to confirm that the site is empty and forward the request to temporarily close the site to the Field Liason and the HW Program Manager. To permanently close an IAP, the Field Liason must perform a final inspection to document that the site is empty. A written (letter or e-mail) request to close the site must then be forwarded to the program manager for file documentation.

f. Restrictions

1. WPAFB has entered into formal agreements with the cities of Dayton and Fairborn to help protect their well fields or wellhead protection zones. WPAFB also has wellhead protection zones on base around base water well fields. There are some areas within the boundaries of the wellhead protection zones where new HW storage locations are not allowed under these agreements.

2. In some cases, EM may allow permit issue, pending upgrade, to meet basic requirements. If this occurs, it is the UEC's as well as the IAP manager's responsibility to ensure that the upgrade is done in a timely manner and that added precautionary measures are taken to avoid incident until the final fix is complete. (This would be done by submitting a work order to civil engineering, see Section 5.1.c.)

g. HW Accumulation

1. The IAP must remain under the control of the operator of the process generating the waste;

2. The maximum storage volume is restricted to 55-gallons of hazardous waste or 1-quart of P-listed (acutely hazardous) waste;

3. Legally, HW may be accumulated indefinitely until either of the quantities above are exceeded; however, it is strongly recommended that any volume of waste exceeding storage of six months be turned in for disposal to minimize the tracking and risks associated with HW storage, spills etc.

h. IAPs must be equipped with the following:

1. Site Specific Spill Plan: 40 CFR 265.52 requires any storage area with $\geq$ 30 gallons of HM/HW or in excess of the Reportable Quantity must have a written Site Specific Spill Plan (SSSP). 40 CFR 112.20 (1) and AFI 32-4001 require that all areas storing, using or handling hazmat/hazwaste, or petroleum products prepare a SSSP. Site-Specific Spill Plans are required to be clearly posted at every IAP, near the exit to the IAP, so that in the event of a spill, it may be taken when exiting the room and provided to the emergency responders, without having to cross through the spill to get to the Spill Plan. It must be tailored to the site location, circumstances, and activities that use HAZMAT and generate HW. The original SSSP must be approved by the unit's process owner/supervisor, UEC, and EM. The SSSP must be reviewed annually and updated when there is a change in operations or materials stored or at any time the plan has failed. It must be coordinated on by the site supervisor and approved by the UEC. (EM does not need to approve the SSSP if there are no significant changes to it after the initial approval process.) The Spill Plan details what specific actions are to be taken in the event of a chemical release at the facility and

provides information on the probable spill route and any drains that might be impacted. The required elements of a Site-Specific Spill Plan are shown in Appendix A-5. The UEC must ensure that all storage areas have EM approved site-specific spill plans posted at the storage area. The date and name of the EM coordinator should be included on updated plans.

2. Emergency Equipment: Every IAP must have appropriate spill equipment stored in a convenient location in close proximity to the IAP and where hazardous materials are being used. Like the Spill Plan, the spill equipment should be placed where, if there were to be a spill at the IAP, the responder would not have to cross through the spill to get to the spill kit. It should not be stored above the IAP, but in an easily accessible area near the exit of the IAP. The actual type/quantity of spill equipment will vary according to the quantity and characteristics of the waste stored. Equipment should include spare overpack containers, absorbent media compatible with waste stored at the IAP, collection tools, and appropriate personal protective equipment. Portable kits are recommended. If floor drains are nearby, protective mats should be kept over the floor drains to keep any potentially spilled material from entering the drain.

3. Communication: A means of notifying WPAFB emergency response personnel (i.e. telephone, alarm), using portable radio or verbal communications requires that written procedures be established to ensure that the portable equipment works or that the personnel are on hand whenever someone is working in the area. (*Note: In the event of a spill of a hazardous material or waste, contact 911. The spill response team, including representatives from EM and Bioenvironmental Engineering will be notified by the Command Post.)*

4. Fire Extinguisher: Portable extinguishers must be readily available and approved by 88 CEG/CEF. Halon extinguishers are prohibited.

5. Posted Signs/Plans: Protected copies of the following signs/plans are to be posted in a clearly visible area near the accumulation point.

(a) IAP Permit: Installation Hazardous Waste Storage Permit (WPAFB Form 1433)

(b) Site-Specific Spill Plan: Site-Specific Spill Plan or a reference sheet detailing what actions are to be taken. (See “Site-Specific Spill Plan” above.)

(c) IAP Daily Checklist (Appendix A-6): Each IAP must have a daily operational checklist containing procedures to be followed to ensure the storage area remains in compliance. The daily operational checklist must be posted at the IAP. All workers at the storage area must be instructed concerning these daily procedures. The checklist contains all the requirements necessary to ensure the IAP/ACCS is in compliance.

6. IAP Weekly Inspection Log: Weekly inspections must be performed every Wednesday (unless otherwise approved by EM) and forwarded to your UEC each week using the “IAP Inspection Checklist” developed by EM. The Inspection Checklist Guide located in Appendix A-7 must be used. See Section 5.4 “IAP Weekly Inspection Log – WPAFB Form 1437” for more details.

7. Warning Signs: Signs applicable to the hazards associated with the storage area should be clearly posted at the entrance to the storage area and other relevant locations in order to make people aware that hazardous waste is in storage. The "Caution Hazardous Waste Storage Area" sign, along with the appropriate National Fire Protection Association 704M hazard diamonds are recommended.

5.2 Container Marking and Labeling

Just prior to any HW being placed in a container, the container must be properly labeled with the information listed below. It is the responsibility of the organization generating the HW to obtain and completely fill out the required labels. The EM liaison or UEC may provide help with filling out the initial labels required on HW containers, as it may be tricky depending on the waste stream. If the waste stream does not change, it is usually safe to assume the waste description, such as the Proper DOT shipping name and EPA waste codes will remain the same for subsequent waste generated. This should help the generator in labeling future containers of HW. If the waste stream changes, the labels must be changed accordingly.

These markings must remain on the container during accumulation of the waste through the time the waste is removed from the IAP for disposal.

a. Hazardous Waste Mark (Appendix A-8)

The words "Hazardous Waste" must be on the container. The yellow and red “Hazardous Waste” label should be used for this (which contains the statement: “Hazardous Waste-- Federal Law Prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency”. The Hazardous Waste label shall be filled out with a grease pencil or china marker (a wax-based marker to assure markings will not fade or run) and contain the following information:

1. IAP-generated container tracking number (place in upper left-hand corner of label).

2. Proper DOT shipping name found in 49 CFR Section 172.101 – “Hazardous Materials Table”. If you do not have a copy of 49 CFR, sections of it are available over the internet via http://www.dot.gov. The shipping name must include the hazardous material description and its principal components, hazard class or division, UN/NA number, and

packaging group. These items are found in columns 2-5 of the Hazardous Materials Table. If the waste is a reportable quantity as defined in 49 CFR Section 172.101 – "Hazardous Substances Other Than Radionuclides", the letters "RQ" should be placed before the DOT shipping name. See "Department of Transportation (DOT) Hazard Class Label" below.

3. Generator information, including name, address, WPAFB OH, and zip code of organization generating waste.
EPA Waste Number(s) that appropriately describe the waste stream. These are found in 40 CFR Subpart B – Criteria for Identifying the Characteristics of HW and for Listing HW, (Sections 261.10 – 261.33).

4. Accumulation Start Date: A date should ONLY be placed in this block if the quantity of waste in the container makes the total in the IAP **exceed** 55 gallons or 1 quart acutely hazardous (P-listed) waste. Otherwise, leave this area blank.
Manifest Document Number: **This should be left blank at the IAP**. This block will be filled in by EM or the HW contractor when the waste is ready to be transported off base.

b. Department of Transportation (DOT) Hazard Class Label

1. DOT hazardous materials warning (Hazard Class) labels that represent the hazard of the material being shipped must be affixed to containers before being offered for transportation. The Hazardous Materials Table in 49 CFR Section 172.101, column six shows what DOT label(s) is/are required for the waste container. Samples of these labels are located in Appendix A-9. It is the responsibility of the generating activity to determine what labels are required, any multiple labeling requirements and the proper location of the labels on the package. **(NOTE: Since the HW disposal contractor bulks and consolidates a great amount of HW, WPAFB has been issued a waiver from the SOP requirement of having generators place the hazard class label on the HW container.)**

2. The following steps should be followed to determine and affix the proper DOT label for HW shipments in containers, packages, overpacks, or freight containers:

a. Locate the hazardous material description as listed in column 2 of the Hazardous Materials Table at 49 CFR 172.101. Use the description that most specifically identifies your waste stream.;

b. Locate the hazard class (or classes) for the material corresponding to the hazardous materials description in column 3 of the table. Definitions of DOT hazard classes are included in 49 CFR Parts 171-173;

c. Locate the hazard label required for each package, as listed in column 6 of the Hazardous Materials Table;

d. Place hazard labels on each container next to the proper shipping name.

3. Some hazardous material descriptions have more than one hazard class listed in the Hazardous Materials Table. A waste may exhibit more than one of these hazard classes. If the container being shipped contains waste exhibiting only one of the hazard classes listed in the table, the appropriate label should be affixed to the container. If the container contains waste meeting the definition of more than one hazard class, multiple DOT labels are required. Multiple labels must be located next to one another and adjacent to the Hazardous Waste Label, and the DOT label representing the primary hazard must have the hazard class number on the bottom corner of the label. Other subsidiary DOT labels shall not have the hazard class number in the lower corner of the label.

4. Combustible liquids (any liquid that does not meet the definition of any other hazard class specified in section 49 CFR 173.120 and has a flashpoint above 141 degrees and less than 200 degrees) in packages do not require a DOT combustible label; but may require other DOT labels depending on other hazardous characteristics that may be present.

c. Additional Labeling as Necessary

1. The blue **Non-Regulated Waste** (Appendix A-10) label must be used for waste that is not regulated as a HW by EPA, but IS regulated as a hazardous material by DOT. All information on the label shall be filled out. Please contact your UEC (or EM) for the specific disposal procedures for Non-Regulated Waste.

2. The green **Non-Hazardous Waste** (Appendix A-11) label must be used instead of the red and yellow HW label if the waste being turned in is not regulated as a HW by EPA or as a hazardous material by DOT. All information on the label shall be filled out. Please contact your UEC (or EM) for the specific disposal procedures for Non-Hazardous Waste.

3. If the container being labeled is **less than one gallon**, the organization generating the waste may generate their own HW label to adhere to the container. The label must say:

(a) “Hazardous Waste, Federal Law Prohibits Improper Disposal. If found contact the nearest Police, or Public Safety Authority, or the U.S. Environmental Protection Agency”.

(b) The contents of the container must be on the label.

4. If a container is empty as defined below, the blue and white “Empty” (Appendix A-12) label must be used.

d. Empty Containers

1. According to 40 CFR Section 261.7, a container is considered "EMPTY" when it meets one of the following:

(a) All wastes have been removed using the practices commonly employed to remove materials from that type of container, e.g., pouring, pumping, and aspirating.

(b) No more than 2.5 cm (one inch) of residue remain on bottom of container.

(c) No more than 3% by weight of total capacity remains in container if container is **less than or equal** to 110 gallons in size.

(d) No more than .3% by weight of total capacity remains in container if container is greater than 110 gallons in size.

2. Empty Containers must be returned to the Issue Point so that it may be tracked as empty in DM-HMMS/HMMS, (HAZMAT Cell Database), or IMMS for AFRL. **Empty Containers which contained a P-Listed Chemical should be turned in as hazardous waste**. Other empty containers shall be labeled "EMPTY" and recycled where possible (see below). If the container is not able to be recycled, the empty container should be disposed of in the garbage if less than 5 gallons. **It is important to coordinate with your organization's UEC or Chemical Hygiene/Safety Officer to determine the organization-specific requirements for labeling and disposing of empty hazmat containers.**

3. For information regarding proper recycling of empty containers, contact the Recycling Center at 74889 or the EM Pollution Prevention Branch at 72057.

Note: Containers greater than five gallons may not be disposed of in trash/dumpster. Contact your UEC or EM regarding specific disposal requirements for larger containers.

e. Empty Aerosol Container Disposal (see Appendix B-1)

Aerosol spray cans that still have contents in them (e.g. spray paint) should be punched with an approved aerosol can puncher, drained of their contents, and the empty container recycled. The drained contents should be turned in as hazardous waste via the normal process (if the contents meet the definition of a hazardous waste). The empty can go in the trash, but should be recycled if possible. (If your unit generates a significant amount of aerosol cans and would like to acquire a can puncturer, contact the EM Pollution Prevention Branch at 72057).

f. Unlabeled/Abandoned Containers

Any containers found that are unlabeled and/or are suspected to contain a hazardous material or HW shall be identified immediately to EM for sampling support. Real Property Building Managers (RPBM's) are responsible for reporting all unsecured containers that are located within or adjacent to their facility to EM immediately. This shall include unsecured contractor drums. All containers that are undergoing analysis to determine if their contents is HW shall be marked with the following information after being identified:

1. Label on the container stating that the contents are pending analysis
2. Date when EM was notified.
3. Date when container was sampled.
4. Organization symbol, phone number and initials of sampler.
5. Name, phone number, and organizational symbol of responsible party.

5.3 Hazardous Waste Container Storage Practices

a. HW at IAPs must be collected in containers that are compatible with the waste contents.

b. If the 55-gallon limit is exceeded at an IAP, the container holding the excess waste must be marked with the date the excess volume began accumulating in the "Accumulation Start Date" section of the HW label. Within three days, (72 hours) the waste must be transferred to either an ACCS or to the permitted HW storage unit (Buildings 478/479) by the HW contractor.

c. Containers of ignitable or reactive wastes must be at least 50 feet from the base property line.

d. Containers will not be located near the floor drains that lead to sanitary or storm water sewers, unless drains are covered or plugged.

e. Different types of waste must be accumulated in separate containers. Non-HW must not be mixed with HW. For example, waste oil, waste paints, and waste abrasive blasting media, etc. must each be accumulated in separate containers.

f. For incompatible wastes, segregated containment must be provided by using either separate containment areas or by means of separately diked areas, or sloped containment to separate sumps. Hazardous wastes must not be located near anything with which they are incompatible. For example, acids must not be located near any bases. Containers holding HW that is incompatible with any other wastes or materials present must be physically separated from the other materials by means of a dike, berm, or wall. Hazardous chemical reactions that cause heat, fire, explosion, pressure or the

evolution of toxic or flammable decomposition products due to incompatible chemical reactions must be prevented. If unsure whether a waste to be disposed of or placed in a container is compatible with the container itself, contact your Field Compliance Liaison before placing waste in the container. Incompatible wastes or materials must not be placed in the same container. In addition, HW must not be placed in an unwashed container that previously held an incompatible waste or material.

g. Containment systems must be designed and operated to prevent run-on into the container area. If there is run-on into the containment area, the system must be designed with enough excess capacity (beyond that needed for the waste) so any run-on will be contained. Spilled or leaked waste and accumulated precipitation must be removed from the system as soon as it is identified to prevent container corrosion or mixing with wastes. Accumulated precipitation must be checked prior to discharge to ensure that it does not contain HW or hazardous constituents.

h. Absorbent booms must be placed around all liquids stored during staging operations until spill pallets are in use (note: Use the proper boom for the specific chemical threat).

i. Storage lockers must be designed to NFPA guidelines for storage of hazardous materials and approved by the Fire Department (88 CEG/CEF).

j. Incompatible wastes must be separated from each other and from other materials with which they are incompatible.

k. "No Smoking" or "Danger - No Open Flame or Ignitable Source Beyond This Point" signs must be used where there is a hazard posed from ignitable or incompatible wastes.

l. At outdoor areas, containers must be protected from direct sunlight. Indoor areas must be well ventilated to ensure that concentration of vapors is below Permissible Exposure Limits (PEL).

m. Drums must be placed on pallets (maintaining a 3-foot spacing/aisle between pallets).

n. Containers must be closed at all times, except when waste is being added or removed from the container;

o. Containers holding hazardous waste shall not be opened, handled, or stored in a manner that may rupture the container or cause it to leak.

p. The following precautions must be taken at both the IAP and ACCS to prevent container ruptures and leaks:

1. Containers must not be overfilled; fill only to 90% of capacity. For example, only fill a 55-gallon drum to 50 gallons. Liquid expands in containers as the temperature increases. A steel drum painted a dark color can easily rise to temperatures above 100 degrees Fahrenheit and the pressure created by the expansion of the liquid causes the drum head to bulge, which damages the integrity of the container. Bulging containers also create a safety hazard for personnel expected to add waste to or handle the containers.

2. Containers containing waste that is subject to freezing must be protected during cold weather. Arrangements must be made to store these containers in a heated area during cold weather. Many materials go through a freeze/thaw cycle during changing weather conditions. The freeze/thaw cycle causes metal stress and can result in leaking containers.

3. Containers of ignitable HW must be grounded when adding waste. Grounding will prevent build-up of static electricity which may create a spark capable of igniting flammable vapors. When transferring flammable liquids into containers, use a bonding wire to connect the container you are pouring from to the container you are pouring to in order to prevent sparks caused by the build-up of static electricity during pouring operations. Contact the installation fire department Technical Services for grounding and bonding instructions.

4. Drums and other containers must be handled and transported with equipment designed for the task. Drum grappler attachments may be purchased for tow motors to securely grab and move containers. Secure containers to pallets before moving pallets. Use drum carts designed for the types of containers used by your organization to reduce the likelihood of dropping a container during handling. Never balance drums on the forks of a forklift or tow motor.

5. Use a funnel to fill closed head containers. This will ensure that all waste is poured into the container and does not spill on the top of the container. If using a funnel without a locking top, the funnel must be removed and the container closed after filling. If the funnel has any HW residues remaining, the residues should be rinsed into the container or the funnel placed into a suitable closed HW accumulation container.

6. Drums must not be stacked more than two high. Drums containing flammable liquids must not be stacked.

7. Containers must be stored in an area which is well away from or protected from damage due to the movement of vehicles such as trucks, fork lifts, Privately Owned Vehicles etc.

8. Maintain at least a 3-foot spacing/aisle between pallets of drums.

9. Leaking and/or damaged containers must be immediately contained to prevent release of HW into the environment. In the event of a leak, containers must be immediately overpacked in salvage drums or the waste must be transferred into a new container.

5.4 Recordkeeping

The following records are required to be maintained for as long as the IAP is in operation and copies must be forwarded to EM as noted. If the IAP closes in the future, the records must be forwarded to EM.

a. Container Tracking Log – WPAFB Form 1436 (Appendix A-13)

1. The WPAFB Form 1436 or the Container Tracking Log provides a working inventory of all containers managed at the IAP. The document shall be filled out to track every container of HW that enters or leaves the IAP. Unless Command Core is used, organizations must keep records manually. The log is kept by the IAP manager or alternate. The intent of the log is to track the volume of HW being stored at the IAP, and provide a check as to when it is time to get the HW removed from the IAP so as not to exceed the 55 gallon/1 quart limit. Adequate time should be allotted to fill out the form, await processing by EM, and await pickup of the HW by the contractor. If the IAP exceeds 55 gallons or 1 quart P-listed waste, the IAP only has 72 hours to get the waste removed or it is out of compliance.

2. Items required on the Container Tracking Log include:

(a) Organization symbol
(b) Building number of the IAP
(c) Names of the Primary and Alternate IAP Managers
(d) Phone number of the IAP manager
(e) IAP Permit Number
(f) Container Tracking Number - Each container shall be given a unique container tracking number. This number begins with the IAP permit number and is followed by a sequential number for each new container entered into the IAP. If Command Core is used to track wastes, Command Core will generate a container tracking number.
(g) Date In - The date when waste is initially added to the container shall be placed in this column.
(h) Waste Stream - A brief description of the waste, including container type, size, and quantity shall be placed in this column. A separate entry shall be made in this column for each container at the IAP.
(i) Volume in Container - This number must be updated as waste is added to the container, and should be in gallons.

(j) Accumulation Start Date - A number shall ONLY be entered in this column if the volume of the waste at the IAP exceeds 55 gallons or 1 quart of acutely hazardous (P-listed) waste.

(k) Date Transferred - This is the date the contractor picked the waste up from your facility.

(l) Location Transferred to – This is the building number where your waste is being taken to by the contractor. This should be filled in at the time the contractor is removing the waste.

3. A copy of the Container Tracking Log shall be signed and dated by the IAP manager and supervisor, and given to the UEC for coordination every time a waste container enters or leaves the IAP. The IAP manager shall maintain the original container tracking logs for at least three years.

b. IAP Weekly Inspection Log – WPAFB Form 1437 (Appendix A-7)

1. A weekly inspection will be performed at every IAP, every seven days, by the IAP manager or alternate. Unless otherwise authorized, the weekly inspection shall be performed on Wednesday of every week. The results shall be recorded on the IAP Weekly Inspection Log, (WPAFB Form 1437). The inspection will include an inspection of the following:

(a) IAP Permit is posted.

(b) IAP is secure (access is restricted to the minimum number of people required to access IAP and must be locked so that HW cannot be added to the IAP without the knowledge of those people).

(c) IAP contains less than 55 gallons of HW or 1 quart acutely hazardous waste.

(d) HW containers remain tightly closed except when adding waste.

(e) Labels and markings on HW containers and cabinets are complete and accurate.

(f) IAP has adequate secondary containment (see “Secondary Containment” under Section 5.1).

(g) Containers are free of leaks or deterioration, are closed and secure.

(h) Wastes stored at the IAP are compatible or are properly segregated to assure safety.

(i) IAP container tracking log is accurate.

(j) Adequate spill equipment is available, including any first aid materials necessary in an emergency to mitigate chemical exposure (i.e. antidotes/neutralizers for acid burns etc.) relevant to the chemicals/wastes at the IAP.

(k) Site-Specific Spill Plan and IAP Permit are posted.

(l) Training Records are available at the IAP and up to date.

(m) Weekly Inspection Log is present and up to date.

(n) Daily Inspection Checklist is posted.

(o) Any site-specific Operating Records are current.

2. Any discrepancies must be noted on the IAP Inspection Log (WPAFB Form 1437), along with the corrective action taken to resolve the problem. The Log must be signed by the IAP Manager and Site Supervisor, and coordinated on by the UEC following each inspection. The UEC must ensure that the weekly inspections are being performed at all the storage areas on the assigned day and that the checklists are accurate and complete.

3. If the IAP is permanently closed the IAP operating records must be kept for three years by the managing organization.

c. Training Records

The IAP manager shall maintain training records. The certificate of completion for the Hazardous Materials/Hazardous Waste Training sponsored by EM should be available at the IAP. Copies must be forwarded to the UEC.

d. Incident Record

Small spills which do not impact the environment and are cleaned up by the user organization must be documented by the IAP manager and kept in the IAP manager's files. These records should be used to document the nature of the spill, and help determine trends and ways to prevent future spills.

5.5 **Hazardous Waste Turn-In** (Appendix A-14)

a. When a generator is nearing 55 gallons of HW, or 1 quart P-listed (acutely hazardous) waste, or the time the waste has been stored at the IAP is nearing six months, the waste must be identified for turn-in. The generator must fill out a WPAFB Form 1438 – Hazardous Waste Pickup Form. Containers must be marked and labeled as discussed in Section 5.2.2 prior to turn-in.

b. Prior to turning in HW, each container should be inspected by the IAP manager to ensure that it is in good condition and suitable for transportation. The container should have no leaks and no accumulation of liquid on the outside of the container. Also, there should be no serious corrosion, dents, sharp creases, or bulging heads. If the container has a leak or it is not in good condition, the waste must be transferred to a container in good condition or the container must be overpacked in a salvage drum.

c. Hazardous Waste Pickup Form – WPAFB FORM 1438

1. This form is shown in Appendix A. The Hazardous Waste Pickup Form must be completed, coordinated on by the IAP manager, and given to EM to process along with the corresponding MSDS(s) for the HW being turned in. It may be faxed or e-mailed to the EM liaison. It is important to keep in mind that if the HW at the IAP is

nearing or has exceeded the allowable limit, the waste must be removed promptly and the IAP manager should make sure the EM liaison is aware that the Form 1438 has been received.

2. The following elements must be completed on the HW Pickup Form 1438:

(a) Job order number – provided by EM after the 1438 is received at EM

(b) Container tracking number – every container at the IAP should have a unique Container Tracking Number which should be placed here. (See section 5.4 Container Tracking Log).

(c) Name – this is the name of the individual that is turning in the waste and will be present to accompany the contractor when he goes to the generating facility to pick up the waste.

(d) Office Symbol

(e) Building Number

(f) Extension Number – this is the phone number the contractor will call to schedule a pickup time and location.

(g) IAP Permit Number

(h) Supply Shop Org. Code

(i) UEC Coordination, Date, and Time

(k) Waste Container Information

(l) Common (Generic) Name of Waste

(m) Constituent(s) and % of each that is making up the waste stream being turned in

(n) EPA Waste Codes – acquired from the P, U and F lists and the Characteristic or D waste table. Use as many EPA Waste Codes as apply to the waste stream.

(o) Nature of Waste

(p) Spent - used in the process for which it was intended (no longer new, usable material)

(q) Unused Excess – if checking this box, you must verify that you have made every attempt to redistribute the unused hazmat to some other organization via the Hazmat Cell. Once this is verified, the Hazmat Cell will give you a control number to place in this section. The contractor will not pick up your waste unless the control number is present here.

(r) Expired – Check this box if the shelf life of the material has expired. A control number from the Hazmat Cell is also required if this box is checked. See “Unused Excess” above. In some cases, the shelf life may be extended depending on product usage. This must be coordinated through the Hazmat Cell.

(s) Spill residue – if a hazardous material or waste is spilled, the spilled materials (absorbents, sawdust, etc.) should be containerized and carry the same EPA waste code as the hazardous material or waste that was spilled.

(t) Process Generating Waste – be as specific as possible in this block. This information is used to determine if there are any additional contaminants that may be

present in the waste stream from the process generating the waste (for example, heavy metals). Additionally, this information is used by EM to determine the proper waste disposal method.

(u) Container Type – Use the following codes:

(1)	DM	Metal Drum
(2)	DF	Fiberboard or Plastic Drum
(3)	CM	Metal Boxes, Cartons, or Cases
(4)	CW	Wooden boxes, Cartons, or Cases
(5)	CF	Fiberboard or Plastic Boxes, Cartons, or Cases
(6)	CY	Cylinders
(7)	CG	Glass Containers

(v) Container Size – Volume of Container

(w) Quantity – Number of Containers being turned in on Form 1438 (must be identical in type and waste stream. Each container will still have a unique container tracking number.

(x) Physical State of Waste

(y) pH – Liquid waste with a pH of less than or equal to 2 or greater than or equal to 12.5 is considered a corrosive waste. In these cases especially, it is important to note the pH.

(z) Flashpoint – waste with a flashpoint of less than 60 degrees Celsius (140 degrees Fahrenheit) is considered an ignitable waste. In these cases especially, it is important to note the flashpoint.

(aa) Contractor Information – information below this line will be filled in when the contractor picks up your waste. He will weigh your waste, assign a Contract Line Item Number or CLIN, and write down the ACCS location where your waste is being taken. If the waste is being consolidated with a compatible waste stream or lab packed, that will be noted. The waste generator and the contractor will both sign the bottom of the form at the time when the waste is being picked up. The contractor logs this information into the HW tracking database maintained in EM.

5.6 Accumulation Site (ACCS)

a. WPAFB currently has three ACCS's. This number may change as necessary. These sites are used to store HW up to 90 days until the HW may be taken off base for disposal. Each ACCS must comply with the requirements for siting, physical construction, operations, marking, labeling and inspections and must maintain a container tracking log or maintain a real time inventory in the hazardous waste database. In most cases, these sites are managed by EM and/or the HW disposal contractor. In some unique cases, other base organizations are permitted to have an ACCS because of the large volume of waste that they generate. If an organization believes they require their own ACCS, a request must be made through the organization's UEC to the EM HW Field Compliance Manager. A location for the ACCS shall be selected in coordination with the Field Compliance

Manager which minimizes the threat of the waste to human health or the environment in the event of a release of the HW.

b. All ACCS's must comply with the following physical requirements:

1. EPA requirements for the location and design of ACCS areas;

2. State requirements for the location and design of ACCS areas; and

3. ACCS area managers must obtain pre-approval by the Fire Protection Flight, Ground Safety, Bioenvironmental Engineering, and EM for the location of new accumulation sites. Approval must take into consideration potential environmental consequences if HW is released from the accumulation area during a spill, release, fire or explosion.

c. The construction of ACCS areas must include an impermeable base or containment system which is capable of preventing environmental contamination due to container overfilling or leaks. Concrete containment shall be treated with a sealant to prevent spills from absorbing into or passing through the concrete. Containers should not be placed on dirt, sand, gravel or grass surfaces. Containers should not be located near any floor drains that lead to sanitary or storm water sewers. The base of the containment system shall be sloped to a sump so liquids resulting from leaks, spills or precipitation are drained and removed. **See Section 5.3 for additional information regarding proper storage and handling of hazardous materials and wastes.**

d. Security must be provided by a fence or similar access control device around the ACCS to prevent unauthorized access to the site. Post signs that read "Danger Hazardous Waste Storage Area - Unauthorized Personnel Keep Out" and can be seen from any access and large enough to be read at 25 feet. "No Smoking" or "Danger - No Open Flame or Ignition Source" signs must be placed conspicuously wherever there is a hazard from ignitable or reactive waste. At outdoor ACCS areas, containers should be protected from direct sunlight and precipitation by means of a roof, tarpaulin or similar device.

e. Indoor accumulation sites shall be well ventilated. Highly volatile organics in particular can present a serious health hazard when in storage. Also, in the event of a spill or leak, effective ventilation should be installed to safely direct toxic or flammable vapors and fumes out of the work area. Care must be taken to prevent exhausted air from re-entering work areas through doors, windows, and air intakes in buildings.

f. Drums must be placed on pallets (maintaining a 3-foot aisle between pallets) to allow for ease of removal when full and to keep them away from accumulated precipitation or spills. Containers used to store HW must be kept closed at all times, except for when waste is actually being added to or removed from the container. In general, a container is closed if its original closures such as bung caps or drum heads, are secured to the container. Therefore, a closed-head 55-gallon drum should have its

original (or equivalent replacement) bung caps screwed tightly into the bung openings. During storage, an open-head 55-gallon drum should have its drum head in place with the retaining ring properly secured with the appropriate nut and bolt. Any other types of containers used to store HW should be kept closed in a similar manner.

g. See Section 5.2 “Container Marking and Labeling” for proper labeling requirements on HW containers at IAPs.

h. Additional container marking prior to removal for disposal shall consist of the following information required by EPA and DoT. All marks must be durable, in English, and printed on or affixed to the surface of a package or on a label, tag, or sign, displayed on a background of sharply contrasting color, unobscured by labels or other attachments and located away from any other marking, such as advertising, that might substantially reduce its visibility or effectiveness. Each container (also referred to as package) shall be marked with the following information:

1. The proper EPA marks and DOT labels as described in Section 5.2. “Container Marking and Labeling”.

2. Packages containing hazardous substances (see 49 CFR 171.8 for definition) must be marked with the letters "RQ" in association with the proper shipping name. If the proper shipping name does not identify the hazardous substance by name, also mark the package with one of the following:

(a) The name of the hazardous substance as shown in the Appendix to the Hazardous Materials Table in 49 CFR;

(b) The EPA hazardous waste number; or

(c) For characteristic hazardous wastes, the word "ignitability", "corrosivity", "reactivity", "toxicity" or the corresponding "D" HW number.

3. When shipping overpacks or other packages with inside packagings containing liquid hazardous material, the outside package must be marked with a specification package orientation marking (shown in 49 CFR 172.312).

4. Wastes and materials which are a poison inhalation hazard (special provision code 1-6 as indicated in column 7 of the Hazardous Materials Table.) must be marked "Poison - Inhalation Hazard".

5. The EPA hazard warning must be marked on each container of 110 gallons or less. The EPA hazard warning language is shown in Appendix A. A yellow and red “Hazardous Waste” label is sufficient for this (40 CFR 262.32).

6. Containers shall be labeled in accordance with Section 5.2 “Container Marking and Labeling” prior to transfer to DRMO or prior to shipment off-site. Prior to turning in HW, each container must be inspected by the IAP or ACCS manager, and the

environmental contractor picking up the waste to ensure that it is in good condition and suitable for transportation. The container must have no leaks and no accumulation of liquid on the top head. Also, there must be no serious corrosion, dents, sharp creases, or bulging heads. If the container has a leak or it is not in good condition, the waste must be transferred to a container in good condition or the container must be overpacked with a salvage drum.

7. Bulk storage of empty containers not previously containing HW/HM will not require each individual container to be labeled. However, areas where more than 12 containers are stored homogeneously, must be clearly sectioned off and identified that containers are empty. Examples of this would include pallets of new drums, storage shelves of empty glass bottles, areas within the warehouse where new containers are stored. All these shall have a sign affixed adjacent to the storage area to clearly identify BULK EMPTY CONTAINER STORAGE.

i. Each ACCS must have a daily operational checklist containing procedures to be followed to ensure the storage area remains in compliance. The daily operational checklist must be posted at the ACCS. All workers at the storage area must be instructed concerning these daily procedures. The checklist contains all the requirements necessary to ensure the IAP/ACCS is in compliance.

j. Each ACCS must be inspected each week. Inspections of the ACCSs are the responsibility of ACCS site manager or alternate. The weekly inspection shall be performed on Wednesday of each week (unless otherwise arranged with EM). The ACCS manager is responsible for maintaining the weekly inspection checklist and the UEC must coordinate on it. For ACCSs, a copy of the inspection log shall be forwarded to the Field Compliance Manager weekly. All ACCS storage areas must also have a Daily Checklist/Guidance posted at the site. The ACCS Inspection Checklist Guidance is shown in Appendix A. During the inspection, areas where containers are stored must be examined to look for leaking and/or deteriorating containers. (See Section 5.4 “IAP Weekly Inspection Log” for more details on site inspections.) Each inspection must be documented and will include the name of the inspector, the location of the accumulation area, date, time of the inspection, problems that the inspector should be looking for and a description of actions taken to correct the problems when they are detected. Inspection records must be maintained for at least three years from the date of each inspection. If the ACCS is permanently closed, the ACCS operating records should be kept for three years by the managing organization.

1. ITEMS TO BE CHECKED DURING ACCS INSPECTIONS (Appendix A-15)

Accumulation Site

(a) Area Secure

(b) Adequate Aisle Space (> 3 ft)

(c) Warning Signs Posted: "DANGER HAZARDOUS WASTE STORAGE AREA, UNAUTHORIZED PERSONNEL KEEP OUT"

(d) Spill Response Plan Posted

(e) Spill Response Equipment Readily Available

(f) Communication Equipment On Site (Phone / Two-Way Radio)

(g) Adequate Secondary Containment

(h) Containers In Good Condition And Compatible With the Waste Stored

(i) Container Tightly Closed

(j) Container Labeled and Dated

(k) No Container Stored For Longer Than 90-Days

(l) Daily Inspection Checklist Posted

(m) Training Records On Site And Up To Date

(n) Weekly Inspection Log is Up To Date

(o) Emergency Eye Wash

2. A representative of EM will also visit each ACCS biweekly to ensure that the containers and the accumulation site are in good condition and are in compliance with all applicable regulatory requirements, which include the following:

(a) Preparedness and prevention requirements of 40 CFR 265, Subpart C

(b) Container requirements of 40 CFR 265, Subpart I

(c) Generator pre-transportation requirements of 40 CFR 262, Subpart C.

4. To account for all drums at an ACCS, the site manager must maintain an accumulation site container tracking log or use the EM database. The following data should be recorded on the log:

(a) The column "Container Number" is used to enter the number of containers at the site.

(b) The column "Waste Stream" is used to enter a brief description of the HW in each container.

(c) The column "Start Date" represents one of the following dates: If waste is being added to a container at an ACCS, enter the date the first volume of waste was added to the container. If a 55-gallon container is filled at an IAP and subsequently moved to the ACCS, enter the date the container was filled to capacity at the IAP.

(d) "Date Full" is the date the container was filled to capacity.

(e) "Date Transferred" is a record of the date the container was transferred to DRMO or was shipped from the ACCS for treatment, storage or disposal.

(f) "Shipped To" is a log of the location to which the container was shipped.

5.7 Treatment, Storage and Disposal Facility

EM operates a treatment, storage and disposal facility (TSDF) on WPAFB in Buildings 478/479 in Area B. This unit is permitted to store HW up to one year in accordance with Permit No. 05-29-0475. The EPA issues site-specific identification numbers to all generators, transporters and TSDFs. The EPA also uses the Uniform Hazardous Waste Manifest to track the movement of hazardous waste. Using this system, EPA controls who can transport and receive hazardous waste. Large quantity generators, such as WPAFB, are required to have an identification number. A manifest is required any time hazardous waste leaves the boundaries of the base and/or crosses a public highway. The permit application should be referenced for specific operating procedures and restrictions at the TSDF.

5.8 On-Base Transportation

There should no longer be a need for HW generators to transport waste on base since all wastes are picked up from the IAP by a contractor managed by 88 ABW/EM. Questions regarding transportation of HW should be addressed to a member of the Hazardous Waste Team.

5.9 Record Retention

a. RCRA requires the maintenance of certain records on base. The type of records, along with the retention time and a reference to a description of each record, is presented in Table 5-1. The HW site manager shall maintain or know the location of the files identified in the table and shall make them available to appropriate state and federal inspectors upon request.

b. EM will maintain copies of HW profile sheets and DD Forms 1348-1. EM will also maintain an updated copy of this HW Management Plan and accompanying HW stream inventory and waste analysis plan.

5.10 Reporting

a. The Environmental Management office is required to submit to The State of Ohio, annual reports from HW generators and treatment, storage and disposal facilities by March 1 of each year covering HW activity over the previous year. The annual report must include the following:

1. Installation EPA identification number, name and address

2. The calendar year covered in the report

3. The EPA identification number, name and address of each off-area treatment, storage, and disposal company in the United States to which hazardous wastes was shipped during the reporting year

4. The name and EPA identification number of each transporter used during the reporting year

5. A description, EPA HW number, DoT hazard class, and quantity of each HW shipped off-area to a TSDF (listed by TSDF EPA identification number)

6. A description of the efforts undertaken during the year to reduce the quantity and toxicity of hazardous waste generated

7. A description of the changes in volume and toxicity of waste actually achieved during the year in comparison to previous years

8. A certification signed by the Base Commander or authorized representative.

b. In addition to the annual report, any releases of HW, hazardous substances and hazardous materials onto the land or into the waters of the state must be immediately reported to the Ohio EPA and/or the National Response Center, in accordance with the WPAFB Contingency Plan. If the Contingency Plan is implemented, an accident report must be submitted within 15 days after the incident to the Ohio EPA.

TABLE 5-1

RCRA RECORDS AND CORRESPONDING MINIMUM RETENTION PERIODS

Record or File	Retention Time	Citation
Hazardous waste determination documentation	5 years from the date the waste was last sent to a treatment, storage or disposal facility*	40 CFR 262.11 40 CFR 268.7
Annual report	3 years from the due date of the report	40 CFR 262.41
Hazardous waste manifest	5 years from the date the waste was accepted by the initial transporter*	40 CFR 262.20
Accumulation area inspection logs	3 years from the date the inspection was conducted*	40 CFR 262.34 40 CFR 265.174
Exception reports	3 years from the due date of the report*	40 CFR 262.42
Land disposal restriction notice & certification	5 years from the date the waste was last sent to a TSDF*	40 CFR 268.7
Notification of intent to export waste	3 years from the date the hazardous waste was accepted from the initial transporter*	40 CFR 262.53
EPA acknowledgment of consent (for exports)	3 years from the date the hazardous waste was accepted by the initial transporter*	40 CFR 262.51 40 CFR 262.53
Waste export confirmation of delivery	3 years from the date the hazardous waste was accepted by the initial transporter*	40 CFR 262.54
Annual report (required of primary exporters of hazardous waste)	3 years from the date the hazardous waste was accepted by the initial transporter*	40 CFR 262.56
Employee training records	Current personnel: until closure of facility: former personnel: 3 years from date the individual last worked at the facility	40 CFR 262.34 40 CFR 265.16

* The periods of retention are extended automatically during the course of any unresolved enforcement action or as requested by the EPA.

Section 6

TRAINING

6.1 Hazardous Waste Training Requirements

a. According to 40 CFR Part 264.16 and AFI 32-7042 all personnel who generate, manage, handle and/or dispose of HW and their supervisors, must receive and successfully complete hazardous waste training prior to performance of any tasks involving HW. The facility personnel must successfully complete the required level of training within six months after their date of employment or assignment to a facility. Employees must not work in unsupervised positions until they have completed the training as defined below. Additionally, facility personnel must take part in an annual review of the initial training required in 40 CFR Part 264.16. General HM/HW training is provided by EM and must be supplemented by site-specific training given by the supervisor or assigned person in the organization that is familiar with the hazards associated with working in that facility. Additionally, any time a new chemical is introduced into the workplace and/or a new waste stream is generated, site-specific training must be given to all employees to familiarize them with safe management and handling practices associated with the hazards of the new HM. Training is also required for any contractors that generate HW on WPAFB as stated in paragraph c below.

b. The HW training program ensures that, at least at an awareness level, all personnel working with HM/HW, including those at IAPs, ACCS, or the Part B permitted storage units receive training. (Additional training requirements for personnel working at Buildings 478/479 are provided in the Part B Permit). Training has been divided into three categories or "Tiers" as discussed in Section 6.2. and are consistent with the training requirements documented in the Hazardous Materials Management Plan as written and updated by the HAZMAT Cell.

c. Contractor Training--These courses are also made available to contractors to provide them with the requirements of proper HM/HW management on WPAFB. These courses are NOT intended to fulfill regulatory training requirements to be provided by a contract employee's employer. The level of training (Tiers 1, 2 and 3) for contractors will be based on the types of HM used and HW generated and the tasks being performed on the contract. Any questions regarding this training should be coordinated with the contracting officer and EM.

6.2 WPAFB Hazardous Waste Management Training Program

WPAFB has a HM/HW training program covering all personnel who deal with HM or HW. The program is divided into three tiers to target the various levels of training needed by this large, diverse group of personnel. Each tier is designed to meet or exceed

regulatory and AF training requirements and develop environmentally aware and safety-minded employees. The training program ensures that all pertinent personnel working with HM/HW receive required training. It is the responsibility of the employee's supervisor in coordination with the individual and his/her UEC to determine which of the three tiers/courses are necessary to meet training requirements in compliance with all regulations. (See section 6.3 for more detail). The three tiers of training should be taken in order, i.e., an employee who needs to take the Tier 2 class is first required to take Tier 1 training and an employee who needs one of the Tier 3 courses should take Tiers 1 and 2 first. The training requirements are as follows:

a. Tier 1--Required for all personnel associated with activities involving hazardous materials and/or wastes, but do not have direct responsibility for managing those materials and wastes. In many cases, the Tier 1 training as stated below may be sufficient for employees who do not directly manage HM and/or HW, but have, in the past, been required to take RCRA training. Tier 1 includes Environmental, Safety and Occupational Health (ESOH) awareness training and Hazcom training.

1. ESOH training has been developed in an effort to consolidate the various environmental, safety, public health and bioenvironmental requirements on WPAFB. The course provides general awareness training covering proper "cradle-to-grave" requirements for handling HM and HW and the penalties associated with non-compliance; environmental impacts from poor HM/HW management practices; HM Pharmacy concepts; First Responder Operations Level training as required by Hazardous Waste Operations and Emergency Response (HAZWOPER); Hazard Communication (Hazcom) refresher; personnel protective equipment; occupational health issues on WPAFB; safety requirements and notifications; and other ESOH topics. Representatives from Environmental Management, Safety, Bioenvironmental Engineering, and Public Health teach the ESOH course and handouts are provided on all topical areas covered. The four-hour ESOH awareness course may be scheduled through Public Health at 255-2515 and personnel are only required to take the course once.

2. Hazcom training, taught by Public Health, covers specific requirements of 29 CFR 1910.1200 and AFOSH Standard 161-21 to provide employees with effective information and training on hazardous chemicals in their work areas at the time of their initial assignment. It covers employees' rights to know about the hazards of chemicals that they work with and trains them to safely work with these chemicals. Topics included in Hazcom training are the written Hazcom plan, hazardous chemical inventory, material safety data sheets, labeling of containers and employee training. These topics are covered in depth in Hazcom training whereas the ESOH training covers these topics only briefly and serves as Hazcom refresher training. The 4-hour Hazcom Training may also be scheduled through Public Health at 255-2515.

b. Tier 2 Training (also referred to as RCRA HM/HW Training)--covers a more detailed curriculum on HM and HW management and disposal practices on WPAFB for

those with more direct responsibility. Tier 2 Training is Required for the following personnel:

1. Initial Accumulation Point (IAP) managers and their alternates
2. Accumulation Site (ACCS) managers and their alternates
3. Hazardous waste supervisors/process owners and their alternates
4. UECs and their alternates
5. Issue Point Managers (IPMs) and their alternates
6. Managers/supervisors of personnel who are directly responsible for handling/managing HM or HW

The RCRA HM/HW training provides operational knowledge of WPAFB requirements as described in both the HM and HW Management Plans and in compliance with federal, state and local laws. This includes a more detailed curriculum on HM/HW responsibilities and liability, HM acquisition, cradle to grave tracking of HM and HW, pollution prevention, marking/labeling, storage and waste characterization, turn-in procedures, record keeping, spill prevention and response, personnel safety and health, a review of common HM and HW problems found on base such as during Environmental Compliance & Assessment Management Plan (ECAMP) assessments and safe chemical storage practices. Many handouts are provided.

The RCRA HM/HW training consists of an 8-hour course with a required annual 4-hour refresher course. Both classes may be scheduled through EM at 257-7152 and are usually offered on the third Thursday of every month, with the newcomer and refresher classes given on alternating months. In addition, organizations that have a large number of people requiring the training may request specialized on-site training for their organization.

c. Tier 3--Topic-Specific training generally required for the same personnel as Tier 2 with consideration given to the specific responsibilities of each individual's job. Tier 3 training is meant to provide in-depth instruction on various environmental topics in order to train individuals who have comprehensive environmental responsibilities for their organization (UEC, IPM, IAP manager, etc.) and oversee specific aspects of HM/HW. Tier 3 training courses include: UEC training, HM Management Program training, ECAMP training, Department of Transportation (DOT) initial and refresher training, chemistry for non-chemists, and toxicology for non-toxicologists as described in the following paragraphs. These courses are offered by different sources, on various schedules and several are offered via satellite downlink. Other courses may be provided on an as-needed basis. EM provides information on course availability and dates to the UECs. Individuals interested in taking any of the following courses should contact EM at 257-7152 for course availability. Additionally, there are several environmental courses that may be scheduled directly with AFIT and may be reviewed on their home page at http://cess.afit.af.mil.

1. UEC Training (ENV220)--This course is required for UECs and their alternates and is highly recommended (although not required) for supervisors of UECs/alternates. AFIT offers a three-day UEC class approximately four times a year and EM periodically facilitates satellite downlinks of the course. Those interested in attending the satellite course should contact EM. Those interested in attending the resident course must schedule through their organization's training POC.

The objectives of this course are to train UECs to improve and maintain environmental compliance within their organization, recognize and address problems when they occur and act as the point of contact for environmental issues concerning their organization. Key topics discussed include the UEC appointment process, the structure, role and function of the base Environmental Protection Committee (EPC) and EM office, how to interact with the Environmental Protection Committee and Environmental Management and what tools are available to help UECs do their job. In addition, key functional responsibilities will be discussed. These include the management of hazardous materials and waste, solid waste, water discharge, air emissions, petroleum products, and ongoing pollution prevention. Other program management guidance will be provided which covers special concerns of pesticides, PCBs, asbestos, noise, environmental planning, and natural and cultural resources.

2. Hazardous Material Management Course (ENV222)--This three-day course taught by AFIT is recommended for IP managers or anyone interested in better understanding the objectives, principles, responsibilities and daily environmental, safety, and occupational health requirements of a Hazardous Material Pharmacy Program and what it takes to communicate these requirements to ones organization. This course emphasizes pollution prevention concepts such as source reduction and reutilization within the overall management of HM. Specific topics include the responsibilities of cross-functional team members comprising the HAZMAT Cell; various laws, regulations and forms affecting key HM workers; the authorization and distribution processes of HM (i.e. overall inventory management; obtaining, receiving, and issuing HM; etc.); and the use of automated management information systems for managing and tracking HM. The course is primarily for individuals who work in a HM Pharmacy, but is also very informative for those who manage an issue point and would like more in-depth information and copies of requirements. Those interested in attending the resident course must schedule for the course through their organization's training POC.

3. ECAMP Training (ENV020)--This course is required for anyone planning on participating on an ECAMP team and is highly recommended (although not required) for UECs and others tasked with key environmental responsibilities. This is a four-day course provided by AFIT approximately three times a year. EM facilitates a satellite downlink approximately once a year. Those interested in attending the resident course must schedule through their unit's training POC. Those interested in attending the satellite course should schedule with EM.

This course provides the detailed management philosophy behind the various aspects of an environmental assessment. Students will develop skills needed to serve as either an ECAMP team chief or team member. Students should leave the course ready to assist their installation in performing internal assessments and hosting an external team by developing an in-depth understanding of the program, a familiarity of team responsibilities and environmental compliance programming avenues. At the end of the course, the students should have the knowledge to successfully plan and execute an internal or external assessment, prepare required reports and direct the follow-up actions such as programming for environmental requirements.

4. DOT Initial and Refresher Training--This course is required in addition to the Tier 2 training for those individuals who are "HM employees" as described in 49 CFR 171.8 as a person who in the course of employment directly affects hazardous materials transportation safety. This term includes an individual employed by a HM employer whom, during the course of employment:

a) Loads, unloads or handles hazardous materials,

b) Manufactures, tests, reconditions, repairs, modifies, marks or otherwise represents containers, drums or packaging as qualified for use in the transportation of hazardous materials,

c) Prepares hazardous materials for transportation,

d) Is responsible for safety of transporting hazardous materials, or

e) Operates a vehicle used to transport hazardous materials."

The initial DOT class, lasting five days, is offered through EM on base approximately every three years or as needed. Those requiring the initial course between these on-base offerings must acquire the training through other avenues such as University of Findlay or Environmental Resource Center.

DOT refresher training is required every three years. Two-day DOT satellite refresher training, downlinked from the School of Military Packaging Technology at Aberdeen Proving Ground, MD is provided approximately three times a year through EM. Those interested in attending should contact EM. (See 49 CFR Section 172.704 for additional DOT training requirements).

5. Chemistry for Non-Chemists--This three-day course is offered on an as-needed basis and teaches the fundamentals of chemistry as they apply to identification and safe storage and segregation of HM and HW as well as what makes chemicals react. The course covers how to read and understand the periodic table, salts and oxidizers, nonsalts and hydrocarbons, corrosives, and how to read and understand chemical compounds. This course is recommended for individuals who have had little or no chemistry but have

been tasked with management of HM or HW. Those interested in attending should contact EM for the next availability.

6. Toxicology for Non-Toxicologists--This four-hour course is offered on an as-needed basis and teaches the fundamentals of toxicology as it applies to working with HM. Included is information on terminology, routes of exposure, risk assessment and the human health effects from corrosives, carcinogens and sensitizers as well as regulatory issues and current AF research being done in the field of toxicology. This course is recommended for those interested in better understanding the effects of exposure to HM and the importance of using the proper PPE and reducing the use of HM in the workplace. Those interested in attending should contact EM for the next availability.

6.3 Required Records

Training records are required to document that all personnel working with HW have successfully completed their required training. The employee's supervisor shall maintain official training records on the AF Form 55 and/or Form 971. Additionally, generic position descriptions for UECs and IAP managers are available upon request to the HW Program Manager. Supervisors shall also maintain the following records:

a. A written description of the type of both initial and refresher training that will be given to each person filling a position related to management of HW based on the descriptions of Tiers 1, 2, and 3 above. This information must be incorporated into the employee's Career Brief maintained by Civilian Personnel. The Career Brief serves as the formal documentation of all completed training as described in AFI 36-401. Training requirements must be identified and tracked on a Career Enhancement Plan or CEP.

b. Records that document that the training has been provided to and completed by base personnel. These records must be kept for current employees as long as they work at the installation and for an additional three years after the date they leave the base (or stop working at a position related to HW management). Training records may accompany personnel transferred to another installation. Both military and civilian employees must submit a copy of their training records to Public Health during outprocessing actions.

c. The job title for each position at the installation related to HW management <u>and</u> the name of the employee filling each job (Part B permitted facility only).

d. A written job description for each position related to HW management. For the purposes of RCRA training records, the job description need only describe the job as it relates to the management of HW and must include the requisite skills, education or other qualifications and the duties of facility personnel assigned to each position (Part B permitted facility only).

Section 7

RESPONSE TO EMERGENCIES

7.1 Background

a. WPAFB has extensive written emergency response procedures for dealing with a spill, release, fire or explosion from hazardous waste generating and storage activities at the Base. RCRA hazardous waste generators and storage facilities are required by regulation to maintain a written spill plan that details the response actions to be taken in the event of the release of hazardous waste to the environment. Planning documents that address spill prevention and response include:

1. RCRA Part B Permit (Section G, Contingency Plan)(88 ABW/EMC, 1999)
2. Air Force Instruction 32-4002—HAZMAT Emergency Planning and Response Program (1997)
3. The Spill Prevention, Control, and Countermeasures (SPCC) Plan (88 ABW/EMP, 1998)
4. The Storm Water Pollution Prevention Plan (88 ABW/EMP, 1998)
5. Facility Response Plan (88 ABW/EMP, 1996)
6. WPAFB OPLAN 32-1, Disaster Preparedness Operations Plan (88 CEG/CEX, 1997)

b. Additionally, WPAFB is required to develop written emergency response procedures for all hazardous waste generation and storage locations, and incorporate these spill plan requirements into the installation's HAZMAT emergency planning and response plans. Air Force Instruction 32-4002-Hazardous Material Emergency Planning and Response Program(1997) addresses the requirements for Hazmat emergency planning, training, response, and reporting. All hazardous waste storage areas must develop a site-specific spill plan, to be reviewed annually and updated anytime there is a change in operations or materials stored or at any time the plan has failed. The site-specific spill plan must be posted at the IAP/ACCS in an accessible, convenient location. The site-specific spill plan must be in conformance with the installation RCRA requirements and site-specific regulations.

c. In coordination with his/her supervisor and the UEC, the IAP/ACCS manager must develop a site-specific spill plan (for additional information see Section 5.1 (h), and Appendix A-) tailored to the site location, circumstances and activities. The manager must submit the plan to EM for review and approval and must have his/her supervisor's and UEC's endorsement. EM reviews and approves all site-specific spill plans. The UEC must ensure that all storage areas have EM approved site-specific spill plans posted at the storage area.

7.2 Emergency Response Procedures

a. In the event of an emergency that results in fire, explosion, or accidental material release, response activities will be initiated accordingly, following observation of the event. In cases where emergency response activities are necessary, the following steps will be followed:

1. Evacuate the area or facility

2. Dial 911

3. Make internal organizational notifications as deemed necessary (supervisor, UEC, etc.)

4. Initiate containment and control procedures, without undue risk to personal injury

5. Restrict all sources of ignition when flammable substances are involved without undue risk to personal injury. Account for all facility personnel/visitors by comparing a head count with a sign-in/sign-out sheet or other appropriate mechanisms

6. Coordinate first-aid activities if casualties are involved

7. Identify the character of the emergency, whether it be a fire, an explosion, a release or a combination of these

8. Determine, if possible, the exact source of the incident

9. Determine, if possible, the amount of material if a hazardous waste is released

10. Determine, if possible, the real extent of the released materials.

7.3 Implementation of the Spill Plan

In the event of a major spill, fire or explosion at buildings 478/479 the RCRA Part B spill plan may need to be implemented. The decision to implement the contingency plan (Section G of the Part B Permit) depends upon whether or not an imminent or actual incident could threaten human health or the environment. The emergency response procedures will be implemented in the following situations:

a. Fire and/or Explosion

1. A fire causes the release of toxic vapors.

2. The fire spreads and could possibly ignite materials at other locations on base or could cause heat-induced explosions.

3. The fire could possibly spread to off base areas.

4. Use of water or water and chemical fire suppressant could result in contaminated runoff.

5. An imminent danger exists that an explosion could ignite other hazardous waste at the facility.

6. An imminent danger exists that an explosion could result in the release of toxic material.

7. An explosion has occurred.

b. Spills or Material Release

1. The spill could result in the release of flammable liquids or vapors, thus causing a fire or gas explosion hazard.

2. The spill could cause the release of toxic liquid or vapors.

3. The spill can be contained on base, but the potential exists for groundwater contamination.

4. The spill cannot be contained on base, resulting in off base soil contamination and/or ground or surface water pollution.

c. Floods

The potential exists for surface water contamination.

7.4 Emergency Contact List

a. The following organizations and individuals have been designated as emergency contacts:

Organization	Office Symbol	Phone
Base Civil Engineering (BCE) and Deputy BCE	88 CEG/CC	937-257-6217
Office of Environmental Management	88 ABW/EMC	937-257-7152

Fire Protection Branch	88 CEG/CEF	937-257-3033 255-3154
Operations Branch	88 CES/CEO	937-257-6093
(After hours)	88 CES/CEOEE	937-257-6878
Security Forces	88 SFS/SF	937-257-6841
Disaster Preparedness Branch	88 CEG/CEX	937-257-6865
Consolidated Command Post	88 ABW/CP	937-257-6314
USAF Medical Center:		
Bioenvironmental Engineering	74 AMDS/SGPB	937-255-6815
Hospital (emergency services)	74 MSOS/SGOE	937-257-2274
Base Safety Officer	88 ABW/SE	937-904-3391

b. Facility (Building 20478/479) Personnel

Brian Mitchell
Office Phone: 937-257/7152 ext 275
Melanie A. Pershing
Office Phone: 937-257-7152 ext 270

c. Base Civil Engineer (BCE) and Deputy BCE (88 CEG/CC)

The senior fire official or his deputy will act as On-Scene Coordinator for the Civil Engineer Department when personnel are involved in responding to spills and fires.

d. Office of Environmental Management Waste Branch (88 ABW/EMC)

This office will assist in the environmental assessment of any release.

e. Fire Protection Branch (88 CEG/CEF)

This organization provides emergency response services such as fire control and prevention. The senior fire official will act as the On-Scene Coordinator when a fire or explosion has occurred or is likely to occur at the facility.

f. Operations Branch (88 CES/CEO)

This organization provides support for spill control, if needed, including heavy equipment operation, barrier erection, spill cleanup, and proper disposal. This department mans a 24-hour-a-day, 7-day-a-week service desk and distributes calls throughout the base in case of emergencies.

g. Security Forces (88 SFS/SF)

This organization provides security, crowd control, traffic control, and related activities in the event of an emergency that would require these services. The Security Police would provide off base notification in the event of an emergency affecting nearby communities.

h. Disaster Preparedness Branch (88 CEG/CEX)

This organization responds to all emergencies on base and at the HWMU and is a fundamental link between all the different branches that respond to emergencies. This branch also provides a communication link to the base commander to keep him apprised of emergencies requiring his attention.

i. USAF Medical Center

This organization provides both medical and environmental support the facility operations. The base hospital emergency section (74 MDOS/SGOE) has complete emergency medical capabilities, including ambulance and paramedic services for the facility. The environmental health and safety branch (Bioenvironmental Engineering [74 MED GP/SGPB]) provides support in assessing the potential health effects of a hazardous material/waste release on both humans and the environment by monitoring and offering the capability of sampling water, air, and soil, if needed. In conjunction with 88 ABW/EM, Bioenvironmental Engineering determines type of personal protective equipment for personnel in spill/emergency operations.

j. Consolidated Command Post (88 ABW/CP)

This organization provides any necessary communication link between the base commander and all other base organizations.

k. Other Base Support Organizations - Other base organizations that can provide support services are:

1. U.S. Army Explosive Ordnance Disposal Detachment (731st EOD)
2. Defense Reutilization Marketing Office (DRMO)
3. 88th Weather Squadron
4. Base Security Office (88 ABW/SE)

l. Off Base Emergency Response Organization

1. Ohio EPA, Southwest District Office
   40 South Main Street

Dayton, Ohio 45402
937-285-6357 1-800-282-9378 (Emergency Response Number)

2. Miami Valley Emergency Management Authority
   400 Lake Center Drive
   Trotwood, Ohio 45426

4. Police Department:

City of Beavercreek	937-426-1225
City of Fairborn	937-879-2225
City of Riverside	937-225-4357
Mad River Township	937-225-4357

5. Sheriff's Office

Montgomery County	937-225-4357
Greene County	937-879-5701
Clark County	937-323-6481

6. Ohio State Patrol

Montgomery County (Post 57)	937-890-1111
Greene County (Post 29)	937-372-7671

7.5 Emergency Equipment List

a. The following presents the emergency equipment that is available at Bldgs 20478/479 for emergency response situations. Equipment and supplies are re-ordered as necessary in order to maintain this minimum inventory.

	Item	Quantity	Purpose
1. Spill Control	Hazard pillows	10 pillows	For absorbing leaks or spills
	Speedie Dry	5 ea 50# bags	Absorbs oil, fuel, and some chemicals
	Laboratory Spill Kit	1	Testing caustic, acid & solvent spills
	Empty drums	5 ea 55 gallon (minimum)	For the storage of material from leaking drums
	Hand tools: shovel, bung wrench, etc.	1 each	For both routine operations and spill situations
2. Safety and Emergency Equipment	Eye wash and shower	2	To flush the eye or whole body with water in cases of inadvertent contact with chemicals
	Telephone	1	Located outside the facility near the front door, it provides communication with other base facilities
	Fire extinguishers	9	ABC grade fire extinguishers are available for the purpose of all small fires
	Fire alarm	1	Activation of alarm notifies Fire Station No. 5 in Area B of the base
	Personnel Protective Equipment	(Required Minimum Quantities)	Necessary to protect the human body exposure to hazardous chemicals
	Respirator	2	
	Surgical gloves	20 pairs	
	Face shield	1	
	Hand gloves	3 pairs	
	Goggles	2	
	Plastic apron	2	

b. Equipment for containing and cleaning up spilled hazardous waste is maintained at the base hazardous waste storage facility (Buildings 478/479). Additionally, each generating point and accumulation point maintains appropriate fire control and general spill control equipment.

c. Additional equipment is available through base organization support:

1. Civil Engineering Fire Protection Branch (88 CEG/CEF)

(a) Fire trucks with the necessary pumps, hoses and ladders to apply both water and foam sprays

(b) Fire extinguishers

(c) Personal safety equipment, including fire-resistant clothing, self-contained breathing apparatus, boots, and gloves

(d) Limited leak repair capability for drums and tanks

(e) Absorbent material and non-sparking tools for cleanup of flammable materials

(f) Communication equipment, both telephone and radio.

2. Civil Engineering Operations Branch (88 CES/CEO)

(a) Heavy equipment such as backhoes, dump trucks, forklifts, bulldozers and cranes for both the containment and removal of hazardous materials

(b) Absorbent materials, sand, shovels, brooms, and containers for containment and removal of hazardous materials on land

(c) Absorbent booms for the containment of floating hazardous materials (e.g., fuel oil) on surface waters

(d) Communication equipment, both telephone and radio

(e) Personal safety equipment, including boots, gloves, disposable paper suits and rain suits.

3. Environmental Management (88 ABW/EMC)

(a) Variety of personnel protective equipment

(b) Booms, Oil Absorbents, universal absorbents

(c) Communication Equipment

Section 8

POLLUTION PREVENTION

8.1 Pollution Prevention Program

WPAFB has a Pollution Prevention Program designed to reduce release of pollutants into the environment to as near zero as feasible. It is the goal of WPAFB to reduce both the volume and toxicity of the hazardous waste it generates. WPAFB utilizes waste minimization opportunity assessment guidance set by the United States Air Force in the Air Force's Pollution Prevention Program Action Plan (PPAP) and in the Hazardous Waste Minimization Section of the Air Force's Hazardous Waste Management Guide. The most significant tool used by WPAFB for pollution prevention/waste minimization is the recently implemented hazardous material (HAZMAT) Pharmacy Concept. This concept establishes single point control and accountability over the requisition, receipt, storage and distribution of hazardous materials. The Hazmat Cell receives, approves and processes all requests for hazardous materials basewide and suggests less hazardous or nonhazardous substitutes where appropriate.

8.2 Scope of the Pollution Prevention Program

a. Goals of the Pollution Prevention Program are:

1. Generation of hazardous substances, pollutants, or contaminants will be reduced or eliminated at the source.

2. Hazardous waste that cannot be prevented at the source will be recycled in an environmentally safe manner; hazardous waste that cannot be recycled will be treated in an environmentally safe manner.

3. Disposal will be employed only as a last resort and will be conducted in an environmentally safe manner (i.e., properly permitted disposal companies).

b. The Pollution Prevention Program will be executed in a manner that effectively utilizes personnel and resources, accomplishes desired goals and is consistent with federal, state and local regulation and policies. The approach for the Pollution Prevention Program is:

1. Identify hazardous materials/hazardous waste by waste stream/generation source.

2. Prioritize the waste streams by volume, toxicity and management costs (storage disposal).

3. Identify waste minimization plans for each waste stream (material substitution, process modification, etc.).

4. Evaluate alternatives.

5. Implement waste minimization plans.

8.3 Pollution Prevention Program Goals

Goals for WPAFB's Pollution Prevention Program include:

a. Reduced overall waste treatment costs.

b. Reduced manpower and equipment requirements for pollution control and treatment.

c. Reduced transportation and disposal costs for off-site disposal.

d. Decreased record-keeping requirements.

e. Reduced liability costs.

f. Reduced operating costs through more efficient use of materials.

g. Improved image in the community.

h. Reduced impact on public health and the environment.

8.4 Pollution Prevention Plan Hazardous Waste Minimization Effort

a. Hazardous Material (HAZMAT) Pharmacy Concept

1. WPAFB has historically had significant difficulty in achieving control over hazardous materials. It was a common practice for many base organizations to place the same requisition with two or more of these sources in the hope of getting a more timely delivery of material. This practice led to stockpiling, and consequently a large contribution to the overall volume of hazardous waste generated at WPAFB simply due to shelf-life expiration.

2. The lack of control and accountability of quantities of hazardous material entering the base precluded WPAFB from adequate compliance with Environmental Protection Agency (EPA); Occupational Safety, Health Administration (OSHA) regulations; and internal Air Force policies. The movement to initiate the Pharmacy was initiated internally by the Office of Environmental Management (EM) in February 1993, and then enforced by HQ AFMC in March 1993.

BY ORDER OF THE SECRETARY OF THE AIR FORCE

AIR FORCE INSTRUCTION 32-7042

12 MAY 1994

Civil Engineer

SOLID AND HAZARDOUS WASTE COMPLIANCE

COMPLIANCE WITH THIS PUBLICATION IS MANDATORY

NOTICE: This publication is available digitally on the SAF/AAD WWW site at: http://afpubs.hq.af.mil. If you lack access, contact your Publishing Distribution Office (PDO).

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This Air Force Instruction implements Air Force Policy Directive 32-70, *Environmental Quality*. It identifies compliance requirements for all solid and hazardous waste, except radioactive waste. In the United States and its territories, use this guidance with applicable Federal, State, and local standards for solid and hazardous waste. (See AFI 32-7006, *Environmental Program in Foreign Countries*, for solid and hazardous waste compliance requirements at installations outside the United States and its territories.)

SUMMARY OF REVISIONS

This is the initial publication of AFI 32-7042, substantially revising AFR 19-11. This AFI contains new requirements for solid and hazardous waste characterization, training, accumulation, turn in, and disposal. It also outlines new procedures for managing disposal contracts, inspections, permits and record keeping, and host-tenant support. Additionally, it eliminates all requirements pertaining to radioactive waste management.

Chapter 1

HOW TO USE THIS INSTRUCTION

1.1. Applicable Standards and Regulations. Use the procedures in this instruction to comply with applicable Federal, State, and local standards for solid waste (SW) and hazardous waste (HW) management.

1.1.1. For SW, the applicable Federal standard is Subtitle D of Title 40, *Code of Federal Regulations* (40 CFR) Parts 240 to 244, 257, and 258.

1.1.2. HW regulations are in Subtitle C, 40 CFR Parts 260 to 272.

1.1.3. Follow the more restrictive standard if State or local compliance requirements are more protective than the Federal standards.

1.1.4. Air Force activities in foreign countries must manage SW and HW to comply with the Final Governing Standards or, in their absence, the *Overseas Environmental Baseline Guidance Document*.

1.2. Concept:

1.2.1. The Air Force must safely manage SW and HW and comply with laws and regulations to protect the environment and the people living and working on and off Air Force facilities.

1.2.2. This instruction is intended to provide major commands (MAJCOM) and installations a framework for complying with environmental standards applicable to SW and HW.

1.2.3. MAJCOMs provide additional implementing guidance in their supplements to this AFI. The MAJCOM supplement must identify the specific "actors" who have implementing responsibility and include any "how-to" guidance needed to comply.

1.3. Responsibilities:

1.3.1. The Assistant Secretary of the Air Force for Manpower, Reserve Affairs, Installations, and Environment (SAF/MI) promulgates and oversees policy for SW and HW compliance.

1.3.2. The Civil Engineer (HQ USAF/CE) formulates policy, allocates resources, and oversees execution of SW and HW compliance programs throughout the Air Force.

1.3.3. MAJCOMs provide execution guidance and oversee implementation. All references to MAJCOMs include the Air National Guard Readiness Center (ANGRC) and other agencies that HQ USAF calls "MAJCOM equivalent."

Chapter 2

HAZARDOUS WASTE PROGRAM

2.1. General Requirements:

2.1.1. Installation Commanders take responsibility for complying with HW disposal laws. Disposal of HW by the DRMO or by Air Force contractors does not relieve the installation commander of this obligation.

2.1.1.1. The base Environmental Protection Committee (EPC) works with the installation commander to oversee compliance with HW laws per AFI 32-7005, *Environmental Protection Committees*.

2.1.2. Installations submit programming and budgeting needs for facilities, equipment, and manpower per AFI 32-7001, *Environmental Budgeting* and AFI 65-106, *Appropriated Fund Support of Morale, Welfare and Recreation Programs and Nonappropriated Fund Instrumentalities*.

2.1.3. Installations with RCRA permits for HW storage, treatment, or disposal must comply with those permits. The permits' restrictions supersede this instruction.

2.1.4. HW generators must have a HW management program to comply with Federal, State, and local regulations and this instruction. The HW management program must include:

- A hazardous waste management plan (HWMP).
- Training.
- Characterization.
- Turn-in and disposal.
- Inspections.
- Permits and record keeping.
- Host-tenant support.

2.2. Management Plan:

2.2.1. The HWMP must reflect current regulatory requirements and installation HW activities.

2.2.2. The EPC must update and approve the plan annually.

2.2.3. MAJCOMs specify the HWMP's format and content. It contains at least the items listed in **Attachment 2**.

2.2.3.1. If the DRMO acts as the disposal agent, the HWMP must also include the HW turn-in requirements in DoD 4160.21-M, *Defense Reutilization and Marketing Manual*.

2.3. Training:

2.3.1. All personnel who work with HW and their supervisors must receive and successfully complete HW training before working with HW. They must also successfully complete annual refresher training as the MAJCOM requires. The HW training covers at least the topics in **Figure 2.1.**

Figure 2.1. Essential Hazardous Waste Training.

TRAINING
A. Introduction to the Resource Conservation and Recovery Act
B. Identification of Hazardous Waste
C. Accumulation Point Management
D. Container Use, Marking, and Labeling, and On-base Transportation
E. Waste Turn-in Procedures
F. Manifesting and Transportation of Hazardous Waste
G. Spill Prevention and Emergency Response
H. Waste Reduction
I. Personnel Safety and Health and Fire Safety

2.3.2. MAJCOMs set minimum instructor qualifications for HW training.

2.3.3. HW generators keep training records of former employees for 3 years from the last day the person worked. Keep all other training records permanently.

2.3.3.1. Although MAJCOMs determine format and additional requirements, minimally training records include:

- Student's name.
- Job title.
- Job description.
- Previous HW training.
- Dates of training.
- Instructor's name.
- Test score (optional).
- Date of annual refresher course.

2.4. Characterization:

2.4.1. Installations must characterize all their HW streams. Characterization consists of:

- Identifying (waste analysis plan).
- Quantifying (HW stream inventory)
- Describing (HW profile sheet).

2.4.2. Waste Analysis Plan (WAP) describes procedures to identify all HW streams and those streams needing detailed HW determination. Minimally the WAP lists:

- Wastes evaluated and analyzed.
- Test methods used.

- HW sampling methods.
- Sample analysis locations and frequency.
- Description of analytical methods.
- Sample documentation.
- Sample quality assurance and quality control procedures.
- Sample request procedures.

2.4.2.1. To analyze the waste stream, ask the person who generated the waste about it and do the analytical tests that 40 CFR 261.10 describe.

2.4.2.2. Require chemical analysis for waste streams of chemical mixtures.

2.4.2.3. MAJCOM supplements to this AFI specify sampling frequencies for HW streams.

2.4.2.4. Reevaluate streams as needed to make sure waste stream characteristics have not substantially changed (for example, the manufacturer substitutes nonhazardous chemicals for hazardous chemicals). **Figure 2.2.** gives the recommended re-evaluation frequencies for chemical mixture waste streams. Describe the re-evaluation in the WAP.

2.4.2.5. As part of WAP/HW profile record-keeping, document chemical and physical analysis for each waste stream sampled.

Figure 2.2. Reevaluation Frequencies for Chemical Mixtures.

REEVALUATION FREQUENCIES
A. High volume HW streams. Sample and analyze each waste stream of more than three 55-gallon drums per year at least annually or whenever processes, materials, or materials manufacturers change.
B. Low volume HW streams. Sample and analyze each waste stream of three 55-gallon drums or less per year at least every 3 years or whenever processes, materials, or materials manufacturers change.

2.4.3. HW stream inventory describes all HW streams generated. All Air Force installations must have a waste stream inventory that lists at least:

- Generating activity's identity.
- Generating activity's location.
- Unique waste stream number.
- Estimated annual quantity disposed.
- Disposal location.
- Disposal method.
- Waste characteristics (for example, EPA waste code, state waste code, and EPA priority pollutant number).

2.4.4. HW Profile Sheet gives details of each HW stream.

2.4.4.1. Document the waste stream description on HW profile sheet, Defense Reutilization and Marketing Service (DRMS) Form 1930.

2.4.4.2. The WAP and waste stream inventory contain much of the information you need to complete DRMS Form 1930.

2.4.4.3. To use a different profile sheet MAJCOMs must obtain HQ USAF/CEV approval.

2.4.5. Handle all uncharacterized wastes as HW and manage per 40 CFR 262.34, pending determination.

2.4.5.1. For the accumulation start date, use the waste discovery date.

2.5. Accumulation:

2.5.1. Accumulate HW following Federal and State regulations.

2.5.1.1. Minimize the number of accumulation locations to facilitate compliance.

2.5.1.2. Name an individual to manage each accumulation site properly, including its condition and use.

2.5.2. Installations must not manage HW that the DoD does not own except as DoD Directive 6050.8, *Storage and Disposal of Non-DoD Owned Hazardous or Toxic Materials on DoD Installations*, authorizes. *EXCEPTIONS*: Actions to protect the public (for example, temporary storage or disposal of explosives) are permitted.

2.5.2.1. MAJCOMs forward requests for exception to HQ USAF/CE, who in turn forwards them through SAF/MI to the Deputy Undersecretary of Defense for Environmental Security (DUSD[ES]).

2.5.2.2. When the non-DoD waste meets exception criteria, the waste's owner must prepare and obtain all needed permits, meet financial requirements, and prepare required environmental documentation before using Air Force property.

2.5.2.3. The waste's owner must leave the facility in its original condition.

2.6. Turn-in and Disposal Procedures:

2.6.1. For HM:

- Installations must make maximum use of HM before sending it to DRMOs for disposal.
- Installations must make sure that HM given to the DRMO for reutilization, transfer, donation, or sale (RTDS) or disposal meets the requirements of DoD Manual 4160.21-M.
- When HW fails DRMO's RTDS program, it will be disposed of as HW.
- For proper turn in and disposal, installations must attach hazard communication standard (HSC) compliant labels and material safety data sheet (MSDS) information, or include that information in the Hazardous Material Information System (HMIS).
- HM given to DRMO without these items will be disposed of as HW and the disposal cost will be charged to the generating activity.
- Air Force installations must not issue, ship, use, or dispose of improperly labeled HM.

2.6.2. For HW:

- Installations follow DoD Manual 4160.21-M when turning HW into DRMO.
- Inform HQ USAF/CEV of any suggested improvements to DoD Manual 4160.21-M and any MAJCOM implementing procedures.
- Installations make sure all HW is weighed in the presence of an authorized DoD official.
- DRMS, through their DRMOs, act as the DoD HW disposal agent.
- Installation commanders may use other disposal agents if the commander decides it is in the best interest of the Air Force and the MAJCOM agrees.
- Consider comparative disposal cost, Government liability, and the qualified and experienced contractors available.
- MAJCOMs send HQ USAF/CEV copies of all approvals.

2.7. Disposal Contracts. After you've decided to contract for HW disposal and recycling, develop and submit documents to the operational contracting officer (OCO) per AFI 64-102, *Operational Contracting*. These documents include:

- Request for purchase.
- Performance work statement.
- Quality assurance surveillance plan.

2.7.1. Document Preparation. See AFI 64-108, *Service Contracts*, which tells how to write a performance work statement and a quality assurance plan.

2.7.1.1. The Staff Judge Advocate and the base environmental manager review and approve these documents before sending them to the OCO. Their reviews ensure that documents follow Federal, State, and local regulations and requirements.

2.7.2. Contracts and Requirements. HW disposal contracts and recycling requirements must:

- Be at least as stringent as DRMO requirements.
- Honor existing contracts written by the DRMO.
- Follow the MAJCOM's contracting practices.

2.7.2.1. The contracting office writes a solicitation and a contract, using provisions and clauses from the Federal Acquisition Regulation (FAR) and its supplements, including those of FAR part 23, *Environment, Conservation, Occupational Safety and Drug-Free Workplace*.

2.7.2.2. Contracts for HW disposal must require the contractor to make sure its employees receive appropriate training as Federal, State, and local law requires.

2.7.3. Inspections of Contractor Facilities:

2.7.3.1. If appropriate, survey and visit the proposed treatment or disposal site for all potential contractors.

2.7.3.2. Before awarding a contract, verify the permits held by the various treatment or disposal sites.

2.7.3.3. Evaluate all proposed HW transport contractors the same way.

2.7.3.4. Do on-site "no notice" followup verification audits for all contractor HW treatment and disposal facilities receiving Air Force HW. Do these inspections yearly to verify proper "cradle-to-grave" waste handling and disposal.

2.8. Inspections. The HW program consists of scheduled and unscheduled inspections of HW activities.

2.8.1. Perform internal and external environmental compliance assessments per AFI 32-7045, *Environmental Compliance Assessment and Management Program (ECAMP).*

2.8.2. Installation commanders also conduct no-notice inspections of HW generating, accumulation, and storage activities.

2.8.3. Document findings and begin corrective actions promptly.

2.8.4. As security requirements permit, support environmental compliance inspections.

2.9. Permits and Record Keeping:

2.9.1. Note that the installation commander signs environmental permits and receives regulatory agency correspondence and enforcement actions.

2.9.1.1. Have the commander or designated individual signs the manifests that track off-base HW shipment and recycling.

2.9.1.2. Send the MAJCOM and the appropriate Air Force regional compliance office a copy of each HW permit application and HW permit.

2.9.2. Track HW with the EPA HW manifest (or State equivalent) and report HW management activities per AFI 32 7002, *Environmental Information Management Systems*.

2.9.2.1. MAJCOMs whose HW tracking and reporting systems differ from AFI 32-7002 must get HQ USAF/CEV approval in order to use them.

2.10. Host-Tenant Support:

2.10.1. The Air Force supports the HW disposal needs of both Air Force and DoD tenants on Air Force installations.

2.10.1.1. For intraservice support, host Air Force installations plan and fund for their tenants' HW disposal needs per AFI 32-7001.

2.10.2. Tenants:

- Follow all laws and regulations and the installation HWMP.
- Provide input and submit reports that the HWMP requires.

2.10.2.1. When tenants do not comply with HW laws, the installation commander may take any action needed to require them (and their contractors) to comply.

2.10.2.2. Tenants responsible for HW management facilities must seek permitting through facility-wide permits. The tenant then signs as "operator" and the installation commander signs as "owner."

2.10.3. If a tenant organization generates enough HW to burden the host, the host and tenant negotiate an agreement on how much the tenant pays for HW disposal.

EXCEPTIONS: All industrially-funded Air Force tenants and Services activities. These activities pay their operation and maintenance expenses, including HW disposal costs.

2.10.3.1. AFI 65-106 gives instructions for funding HW disposal for MWR activities.

2.10.4. For interservice support of a DoD component or agency tenant, host installations may seek reimbursement for HW disposal costs for on- and off-base tenants, following the procedures in AFI 65-601, volume 1, *USAF Budget Policies and Procedures*.

2.10.4.1. If host-tenant support agreements (HTSA) or interservice support agreements (ISA) do not reflect reimbursement procedures, renegotiate. In the negotiations:

- Consider budget lead time to minimize the effect on tenants.
- Give the installation commander wide latitude to determine the most effective arrangement for negotiating cost-sharing with tenants.
- Consider that the installation commander carries both initial and primary liability for HW management when including HW disposal services in HSTAs or ISAs.

Chapter 3

SOLID WASTE PROGRAM

3.1. General Requirements:

3.1.1. Each installation must have a solid waste (SW) management program. **Attachment 2** summarizes Federal SW management requirements. The SW management program must address:

- A solid waste management plan (SWMP).
- Handling, storage, and collection.
- Disposal.
- Record-keeping and reporting.
- Pollution prevention.

3.1.1.1. AFI 32-7080, *Pollution Prevention Program*, contains the SW requirements for preventing pollution through source reduction, resource recovery, and recycling.

3.1.2. Consider these costs as utility costs, not environmental compliance costs:

- Programming and budgeting requirements for facilities, equipment, and manpower.
- Tipping fees.
- On-base landfill operations to meet SW collection and disposal requirements. (See AFI 32-7001.)

3.2. Management Plan:

3.2.1. All Air Force installations must have a complete SWMP that meets the requirements of AFR 91-8, *Solid Waste Management*, **Chapter 3**. Developed at the installation level, the SWMP contains guidance for managing SW. It supports the development and implementation of State plans RCRA Subtitle D requires. To ensure compliance with Federal and State SWMP requirements, Air Force SWMPs contain:

- Inventory and analysis of SW disposal technologies and methods.
- Inventory of SW streams and management methods.
- Analysis of SW recovery, conservation, and recycling.
- Evaluation of any on-base operating landfills.
- Plan implementation.

3.3. Handling, Storage, and Collection:

3.3.1. Installations make sure that receptacles, collection routes, collection schedules, and collection equipment (trucks) meet 40 CFR 243, DoDD 4165.60, *Solid Waste Management - Collection, Disposal, Resource Recovery and Recycling Program*, and AFR 91-8 criteria, as well as State and local requirements.

3.3.1.1. Get all permits needed for SW handling, storage, and collection (including SW transfer facilities) and perform any required maintenance inspections and notifications.

3.3.1.2. Vehicles collecting and transporting SW must meet all standards, such as:

- Motor carrier safety standards (49 CFR parts 390 through 396).
- Noise-emission standards for motor carriers in interstate commerce (40 CFR part 202).
- Federal motor vehicle safety standards (49 CFR parts 500 and 580 only for collection equipment that the Federal Government owns).

3.3.1.3. In addition to 40 CFR 243 and DoD Directive 4165.60 requirements, the collection equipment must meet the standards of the American National Standards Institute (ANSI).

3.3.2. The installation commander names military personnel, civilian personnel, or contractors as SW collection personnel.

3.3.2.1. When contractors collect waste, the contractor's SW collection plan must meet Air Force, Federal, State, and local requirements.

3.4. Disposal:

3.4.1. All solid waste disposal must meet 40 CFR 240 and 241, DoD Directive 4165.60, and AFR 91-8 criteria and State and local requirements.

3.4.1.1. These regulations and directives contain specific location, design, and operating criteria for new thermal processing and land disposal facilities. These general requirements apply to all SW disposal.

3.4.1.2. As a subset of SW, municipal SW must meet the additional, more stringent requirements of 40 CFR 258.

3.4.2. Air Force installations use municipal or regional facilities for SW disposal, when feasible. When an installation can't use such and its own facilities, their construction and operation must follow all laws, regulations, and directives.

3.4.3. Air Force installations must dispose of SW in a permitted secure landfill or other State-approved site, for example, a thermal-processing facility.

3.4.3.1. Note that the Air Force prefers ultimate disposal by recycling and composting. AFI 32-7080 addresses alternatives.

3.4.3.2. Verify permits and licenses for off-base landfills.

3.4.3.3. Remember each installation must obtain siting authorization, permits, and licenses to construct and operate an on-base SW landfill or thermal treatment facility. For specific guidelines, see:

- 40 CFR 240 for thermal processing of solid wastes.
- 40 CFR 258 for siting and design of municipal SW landfills.

3.4.4. Before closing an on-base landfill, plan adequate lead time for meeting post-closure requirements, typically 30 years for maintenance and groundwater monitoring. Post-closure procedures may require long-term operation of leachate collection and treatment systems or a system for extracting landfill gas.

3.5. Inspections. The SW program consists of scheduled and unscheduled inspections of SW collection, transfer, and disposal facilities.

3.5.1. Perform internal and external environmental compliance assessments following AFI 32-7045.

3.5.2. Document inspection findings and begin corrective actions promptly.

3.5.3. As security requirements permit, support environmental compliance inspections.

3.5.4. Ensure each installation inspects industrial shop waste receptacles to make sure they contain no HW.

3.5.4.1. Keep records for at least 2 years after the inspection date.

3.5.4.2. Inform all installation personnel and especially industrial shop personnel of prohibited materials.

3.6. Record Keeping and Reporting:

3.6.1. Maintain daily operating records following the instructions for managing service contracts for refuse collection, disposal, and recycling.

3.7. Pollution Prevention:

3.7.1. AFI 32-7080 covers source reduction, resource recovery, and recycling activities.

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The Civil Engineer

Attachment 1

GLOSSARY OF ABBREVIATIONS, ACRONYMS, AND TERMS

Abbreviations and Acronyms

AF—Air Force

AFCEE—Air Force Center for Environmental Excellence

AFCEE/CCR-—Air Force Center for Environmental Excellence Regional

A, D, S—Compliance Offices (Atlanta, Dallas, San Francisco)

AFI—Air Force Instruction

AFLSA/JACE—Air Force Legal Support Agency, Environmental Law Division

AFM—Air Force Manual

AFO—Accounting and Financing Officer

AFR—Air Force Regulation

ANSI—American National Standards Institute

ASD (P&L)—Assistant Secretary of Defense for Production and Logistics

CE—Civil Engineer

CERCLA—Comprehensive Environmental Response, Compensation, and Liability Act

COPARS—Contractor Operated Parts Store

CFR—*Code of Federal Regulations*

DLA—Defense Logistics Agency

DoD—US. Department of Defense

DOT—US Department of Transportation

DRMO—Defense Reutilization and Marketing Office

DRMS—Defense Reutilization and Marketing Service

DTID—Disposal Turn-In Document

DUSD(ES)—Deputy Undersecretary of Defense for Environmental Security

ECAMP—Environmental Compliance Assessment and Management Program

EPA—US Environmental Protection Agency

EOD—Explosive Ordnance Disposal

EPC—Environmental Protection Committee

FAR—*Federal Acquisition Regulation*

FFCA—Federal Facilities Compliance Act

FOA—Field Operating Agency

GOCO—Government-owned, Contractor-operated

HCS—Hazard Communication Standard

HMIS—Hazardous Material Information System

HM—Hazardous Material

HMTA—Hazardous Material Transportation Act

HQ NGB/CE—National Guard Bureau Civil Engineer

HQ USAF—Headquarters, US Air Force

HQ USAF/CE—Headquarters, US Air Force, Civil Engineer

HQ USAF/CEV—Headquarters, US Air Force, Civil Engineer, Directorate Environmental Quality

HQ USAF/JA—The Judge Advocate General

HQ USAF/LG—Deputy Chief of Staff, Logistics

HQ USAF/RE—Chief of Air Force Reserve

HQ USAF/SG—The Air Force Surgeon General

HSWA—Hazardous and Solid Waste Amendments

HTSA—Host-Tenant Support Agreement

HW—Hazardous Waste

HWMP—Hazardous Waste Management Plan

ISSA—Interservice Support Agreement

MAJCOM—Major Command

MSDS—Material Safety Data Sheet

MWR—Morale, Welfare and Recreation

OCO—Operational Contracting Officer

OSD—Office of The Secretary of Defense

OSHA—US Occupational Safety and Health Administration

PCB—Polychlorinated biphenyl

R&D—Research and development

RCRA—Resource Conservation and Recovery Act

RTDS—Reutilization, Transfer, Donation or Sale

SAF—Secretary of the Air Force

SAF/AQ—Assistant Secretary of the Air Force for Acquisition

SAF/MI—Assistant Secretary of the Air Force (Manpower, Reserve Affairs, Installations and Environment)

SAF/MIQ—Deputy Assistant Secretary of the Air Force (Environment, Safety and Occupational Health)

SBSS—Standard Base Supply System

SARA—Superfund Amendments and Reauthorization Act

SW—Solid Waste

SWMP—Solid Waste Management Plan

TSCA—Toxic Substances Control Act

WAP—Waste Analysis Plan

WIMS-ES—Work Information Management System—Environmental Subsystem

Terms

Accumulation Site—A provision of 40 CFR 262, subpart C, which allows storage of hazardous wastes for a period of up to 90 days without a storage permit, or without having interim status. Typically the sites are distant from the activities and subject to additional inspection and containment requirements in subparts I and J of 40 CFR 265. (See "initial accumulation point" in this glossary.)

Characteristic Waste—A waste with any characteristic listed in 40 CFR 261, subpart C (for example, toxicity, corrosiveness, ignitibility, or reactivity).

EPA Waste Code—An EPA HW number listed in 40 CFR 261, subpart C (characteristic waste) or subpart D (listed waste).

Generator—A person or a site, whose act or process produces HW or whose act first subjects HW to regulation. EPA and State environmental regulatory agencies typically consider the Air Force installation as the generator. Therefore, in this AFI "HW generator" refers to the installation commander or the commander's named designee.

Generating Activity—Each organization (including tenants), shop, or work area using an operation or process that first generates an HW stream. The installation HWMP must identify generating activities.

Hazard Communication Standard—A Federal Occupational Safety and Health Administration (OSHA) requirement, 29 CFR 1910.1200, that requires labeling and MSDSs so employees know materials are hazardous.

Hazardous Constituent—Any component or chemical in a mixture, found in 40 CFR 261, appendix VIII or 40 CFR 264, appendix IX .

Hazardous Material (HM)—Any material that presents a physical or health hazard and requires an MSDS as defined in the latest version of FED-STD 313.

Hazardous Material Generating Activity—Each installation organization (including Air Force and non-Air Force tenants) that creates HM requiring disposal.

Hazardous Waste—Any solid waste defined in 40 CFR 261.3 or State HW management rules and regulations.

Hazardous Waste Characterization—The identification, description, and quantification of an HW stream.

Hazardous Waste Management Plan (HWMP)—An installation-developed plan containing guidance for base personnel on local procedures for managing HW and incorporating pollution prevention practices

into HW management pollution. The HWMP should include all tenants, including Government-owned, contractor-operated (GOCO) facilities that generate HW.

Hazardous Waste Profile Sheet—A document (DRMS Form 1930) that describes the physical and chemical properties of HW.

Listed Waste—A specifically identified solid waste, material, or item listed in 40 CFR 261, Subpart D.

Manifest—HW shipping document required by Federal or State regulatory agencies for transportation of HW. Manifests that the installation commander or a named representative signs track HW to a permitted or interim status treatment, storage, or disposal facility. (Refer to 40 CFR 262, subpart B.)

Material Safety Data Sheet (MSDS)—A document containing the data required by, and prepared in accordance with FED STD 313, to communicate to the user of the chemical, physical, and hazardous properties of material.

Initial Accumulation Point—A collection point located at, or near, the point of waste generation where wastes are initially accumulated. The area must be under the control of the operator of the process generating the waste. The operator should be near the area often enough to detect a leak within a reasonable timeframe. A maximum of 55 gallons of HW or one quart of acutely HW may be accumulated in an initial accumulate point. If more than this amount is accumulated, the excess must be move to an accumulation site within 3 days of exceeding the limit. Unless the quantity limit is exceeded, there are no storage time limits that apply to initial accumulation points. Initial accumulation points are also known as satellite accumulation points.

Solid Waste—Any discarded material as defined in 40 CFR 261.2.

Attachment 2

HAZARDOUS WASTE MANAGEMENT PLAN ELEMENTS

1. Letter of Instruction.
2. Information and Emergency Contacts.
3. Introductory Materials.
    a. Table of contents
    b. Record of annual review.
    c. Record of changes.
    d. List of tables and figures.
4. Introduction.
5. Responsibilities.
6. Organization Chart.
7. Location Maps.
8. Hazardous Waste Inventory.
9. Waste Analysis Plan.
10. Hazardous Waste Management Procedures.
11. Reporting.
12. Training.
13. Contingency Plan Summary.
14. Preparedness and Spill Prevention Summary.
15. Pollution Prevention Summary.

Attachment 3

OVERVIEW OF SOLID AND HAZARDOUS WASTE MANAGEMENT REQUIREMENTS

A3.1. Summary of Applicable Federal Laws Regulating Hazardous and Solid Waste:

A3.1.1. Occupational Safety and Health Act. The Occupational Safety and Health Act (OSHA, 29 U.S.C. 651, *et seq*.) sets standards for safe working conditions. In addition, OSHA sets training requirements for Resource Conservation and Recovery Act (RCRA) facilities and HW sites. Title 29 of the *Code of Federal Regulations*, parts 1900 through 1910 (29 CFR 1900 through 1910), contains OSHA standards. 29 CFR 1926 contains OSHA construction standards.

A3.1.2. Hazardous Material Transportation Act. The Hazardous Material Transportation Act (HMTA, 49 U.S.C. 1801, *et seq.*) of 1974 requires the Secretary of Transportation to declare standards for commercially transporting hazardous materials. These standards protect public health and safety or property. 49 CFR 170 to 179 includes the rules.

A3.1.3. Toxic Substances Control Act. The Toxic Substances Control Act (TSCA, 15 U.S.C. 2601, *et seq*.) made law a program for evaluating the harmful effects of newly manufactured chemicals. TSCA regulates the storage, treatment, and disposal of polychlorinated biphenyls (PCBs). See 40 CFR 750 and 761.

A3.1.4. Resource Conservation and Recovery Act and Hazardous and Solid Waste Amendments. The Resource Conservation and Recovery Act (RCRA , U.S.C. 6901, *et seq*.) as amended by the Hazardous and Solid Waste Amendments (HSWA) of 1986, sets minimum standards for "cradle-to-grave" management of SW and HW. See he EPA RCRA regulations for:

- HW management (Subtitle C) in 40 CFR parts 260 to 272.
- SW (Subtitle D) in 40 CFR parts 240 to 244, 257, and 258.
- Underground storage tanks (Subtitle I) in 40 CFR 280 and 281.

A3.1.5. Comprehensive Environmental Response, Compensation, and Liability Act and Superfund Amendments and Reauthorization Act. The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA, 42 U.S.C. 9601, *et seq.*) of 1980 and the Superfund Amendments and Reauthorization Act (SARA) of 1986 authorized funds to clean up abandoned HW sites and provided that the responsible parties reimburse the Government for cleanup costs.

A3.1.6. Federal Facility Compliance Act. The Federal Facility Compliance Act (FFCA, 42 U.S.C. 962, *et seq*.) takes away the Federal Government's sovereign immunity from civil penalties for violating State, Federal, and local SW and HW laws. This legislation allows State and Federal regulatory agencies to fine Federal facilities for violating State, Federal, and local SW and HW laws.

A3.2. State and Local Solid and Hazardous Waste Management Requirements. States must adopt or enact regulations at least as stringent as Federal regulations for SW and HW. Each State has SW regulations, many of which are more stringent than Federal HW regulations. Local requirements may restrict zoning, transportation, and other activities.

A3.3. Summary of US Department of Defense (DoD) Solid and Hazardous Waste Management Requirements. The Defense Logistics Agency (DLA) provides recycling, reuse, and disposal services for each DoD installation through the DRMS and its field activities, the DRMOs. See:

- AFI 32-7080, *Pollution Prevention Programs* which addresses SW recycling.
- Chapter IX of DoD Manual 4160.21-M, *Defense Reutilization and Marketing Manual*, and DRMS-M 6050.1, *Environmental Compliance for the DRMS Hazardous Property Program*, which explain general procedures for implementing the DRMS hazardous property program .
- DoD Directive 4165.60, *Solid Waste Management - Collection, Disposal, Resource Recovery and Recycling Program*, which contains policies and procedures for managing SW per EPA SW regulations.

BY ORDER OF THE COMMANDER
WRIGHT-PATTERSON AIR FORCE BASE
(AFMC)

WPAFB INSTRUCTION 32-7001

15 JANUARY 1997

Civil Engineering

HAZARDOUS WASTE MANAGEMENT

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This Wright-Patterson Air Force Base (WPAFB) Instruction implements Air Force Policy Directive 32-70, *Environmental Quality*. This instruction does not apply to the Air National Guard or US Air Force Reserve units and members. The instruction is in addition to Air Force Instruction (AFI) 32-7042, *Solid and Hazardous Waste Compliance* and establishes hazardous waste (HW) management requirements for all WPAFB activities including host, tenants, and contractors. It implements the requirements set forth by the United States Environmental Protection Agency (USEPA) as authorized by the Resource Conservation and Recovery Act (RCRA) Title 40 Code of Federal Regulations (CFR) Parts 260-271, the U.S. Department of Transportation (DOT) Title 49 CFR Parts 171-179, the Occupational Safety and Health Administration (OSHA) regulations Title 29 CFR 1910 and Headquarters Air Force Materiel Command (HQ AFMC) AFI 32-7042/AFMC Supplement 1. WPAFB operates a RCRA Part B Permitted facility (Buildings 478/479 Area B) where very specific permit conditions govern the management of HW which may be stored for a period of up to one year. Activities that generate, manage and store HW must obtain an internal 88 ABW Office of Environmental Management permit. These laws, regulations and policies place stringent requirements on the generation, management and disposal of HW and must be adhered to at all times.

SUMMARY OF REVISIONS

This instruction revises previous edition.

1. Definitions. Selected definitions are provided here. Additional applicable definitions are provided in the RCRA regulations (40 CFR Parts 260-271), DOT Hazardous Material Transportation regulations (49 CFR Parts 171-179) and OSHA regulations (29 CFR Part 1910).

1.1. Accumulation Site (ACCS). An area where hazardous waste from Initial Accumulation Points (IAPs) is consolidated. Waste may be stored at this location in unlimited quantities for a period of up to 90-days. Management of ACCSs must be done in accordance with the procedures outlined in the WPAFB HW Management Plan (June 1995).

1.2. Characteristic Hazardous Waste. A waste exhibiting one or more of the following properties: ignitability, corrosivity, reactivity, or toxicity as defined in 40 CFR Part 261.20-24.

1.3. Compatible Wastes. Wastes that can be safely stored together and under normal conditions will not adversely react with one another.

1.4. Empty Container. Containers which are emptied by normal means and contain less than 2.5cm of residue or no more than 3 percent product by volume in a container of 110 gallons or less. Containers used to store acutely hazardous waste must be triple rinsed before being considered empty. Empty containers must be managed in accordance with the Installation Container Management and Storage Policy which is included as part of the WPAFB Hazardous Waste Management Plan.

1.5. Field Compliance Liaison. A member of the Office of Environmental Management, Waste Management Branch (88 ABW/EMC) who is responsible for hazardous waste compliance oversight of a designated area of the base.

1.6. Generator. Any person, contractor, or organization on base whose actions result in the generation of a regulated hazardous waste.

1.7. Hazardous Waste (HW). Wastes which are listed by chemical name in 40 CFR 261 Subpart D, and/or exhibit one or more of the characteristics described in 40 CFR 261 Subpart C.

1.8. Hazardous Waste Site Inspection Team (HWSIT). A team consisting of UEC's who on a periodic basis evaluates HW storage locations, records findings on a WPAFB Form 1432, **HWSIT Deficiency,** and forwards them to 88 ABW/EMC.

1.9. Initial Accumulation Point (IAP). A specified storage area at or near the site where HW is initially generated. The site must be under the control of the first line supervisor of the operator of the process generating the waste. This site must be formally established with a WPAFB Form 1433, **Installation Hazardous Waste Storage Permit,** issued by the Office of Environmental Management. A volume limitation of 55 gallons of HW or 1 quart of acutely HW is applicable at the IAP. When the volume limitation is exceeded, the site manager has 72 hours to remove waste and reduce the amount of waste stored at the IAP to less than 55 gallons. IAPs must be managed in accordance with the WPAFB HW Management Plan.

1.10. Listed HW. A waste that is specifically listed by name in 40 CFR Part 261.30-34 or is a spill residue thereof.

1.11. Site Manager. An individual who is appointed by the organizational commander to manage a HW storage location (i.e., Initial Accumulation Point (IAP) or Accumulation Site (ACCS)).

1.12. Spill. A "Spill" means the accidential spilling, leaking, pumping, pouring, emitting, or dumping of hazardous wastes or materials which, when spilled, become hazardous wastes, into or on any land or water.

1.13. Unit Environmental Coordinator (UEC). An individual appointed by the organizational commander to be the focal point for all HW issues within their respective organization. At a mini-

mum one UEC and an alternate shall be appointed for each organization that handles HM and subsequently generates HW.

1.14. Used Oil/Waste Liquid Petroleum Products (WLPP). Used oil is any oil that has been refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. WLPP are waste fuels and spent non-halogenated petroleum products with a flash point > 140 degrees Farenheit. To initiate the turn-in of used oil/WLPP, WPAFB Form 1434, **Used Oil and Waste Liquid Petroleum Products Collection Request,** must be completed and forwarded to the Waste Management Branch in accordance with the Used Oil and WLPP Management Policy.

1.15. Waste Minimization. Procedures implemented to reduce the amount of HW in volume, quantity and toxicity and to ensure that proposed methods of treatment, storage and disposal of HW are those best methods currently available which minimize present and future threat to human health and the environment. These procedures are required of all HW generators by the Hazardous and Solid Waste Amendments of 1984.

2. Responsibilities. All individuals, organizations, and contractors on base must manage their HW according to the most current installation HW Management Plan developed and maintained by 88 ABW/EM as required by AFI 32-7042. Also specific organizations and individuals have additional responsibilities for the proper management of HW as follows:

2.1. Installation Commander (ASC/CC). Responsible corporate officer for the proper management of HW on the installation.

2.2. Office of Environmental Management (88 ABW/EM). Responsible for developing and implementing the HW management program on the installation. This responsibility includes ensuring that all installation activities maintain compliance with all applicable regulations and administering the installation HW storage permit system and the installation HW training program. EM also manages the EPA permitted storage facility (478/9) and serves as the base liaison to the regulatory community.

2.3. Defense Reutilization and Marketing Office (DRMO/VBD). Responsible for the procurement and administration of the HW disposal contract.

2.4. Bioenvironmental Engineering (74 MDSS/SGB). Provides technical assistance as required and appropriate, and surveys installation work sites to monitor personnel exposure to HW.

2.5. Fire Protection Branch (88 CEG/CEF). Provides assistance and advises HW Site Managers concerning fire protection procedures and equipment, conducts inspections of all HW storage areas and coordinates on approval of ACCS and IAP storage areas. CEF also responds to fires and spills involving HM/HW.

2.6. Safety Office (ASC/SE). Conducts required inspections according to safety directives, coordinates on the siting of HW storage areas, provides technical assistance as appropriate, and provides spill response assistance as required.

2.7. Security Police Squadron (88 SPS/SP). Conducts security inspections of Building 478/9, provides assistance in locating/identifying individuals and/or organizations depositing HW in unauthorized locations, responds to fires and spills involving toxic chemicals and HW.

2.8. Air Force Office of Special Investigations (AFOSI). Conducts criminal investigations of individuals, organizations and contractors who violate environmental regulations and/or laws.

2.9. Legal Office (88 ABW/JAE). Interprets laws and regulations that govern the management of HW. Provides legal support for the prosecution of individuals who violate environmental regulations.

2.10. Generators. Organizations who generate HW have the following responsibilities:

2.10.1. Appoint a Unit Environmental Coordinator (UEC) and alternate by the organization/unit commander. The UEC will serve as an environmental coordinator to manage HW activities within their organization. Both the primary and the alternate UEC must, within 90 days of such appointment, attend the installation HW Management Training Course conducted by 88 ABW/EMC. UECs must also participate on the monthly Hazardous Waste Site Inspection Team audits of HW storage areas and attend the monthly HW Steering Group meetings.

2.10.2. Ensure that all contractors working under contract for their organization and generating HW are in compliance with this instruction.

2.10.3. Establish any necessary IAPs for the collection and temporary storage of HW. Each storage area must have a posted WPAFB Form 1433 issued by 88 ABW/EMC, *WPAFBVA 32-1, Initial Accumulation Point (IAP) Daily Checklist/Guidance* and a Site-Specific Spill Plan approved by 88 ABW/EM. Each site must also have a Continuity Binder at the site containing a WPAFB Form 1436, **IAP Container Tracking Log,** WPAFB Form 1437, **IAP Weekly Inspection Log,** and current training records. A primary and alternate site manager must be appointed by the organizational commander for each storage area in accordance with the WPAFB HW Management Plan.

2.10.4. Maintain regulations, technical orders and chemical data (e.g., Material Safety Data Sheets (MSDS), and chemical analyses) needed for HW management.

2.10.5. Identify employees who need HW training and ensure training is received at a minimum annually. All IAP managers and alternates must receive training provided by 88 ABW/EMC. All supervisors of activities which routinely generate HW in the normal conduct of their work are encouraged to attend this training.

2.10.6. Ensure that waste minimization is pursued aggressively in the conduct of existing operations and in the planning of new process activities. This includes, but is not limited to, conservation/reduction in material usage, waste recycling or reclamation (e.g., Used Oil Collection Program), conversion to non-hazardous materials and/or process substitution. All organizations must redistribute HM to the maximum extent through the HazMat Cell (88 ABW/EMV) prior to turn-in for disposal.

2.10.7. Prohibit inadvertent or intentional dumping of HW into sanitary or storm sewers, creeks or on the ground.

2.10.8. Ensure all HW generated is properly identified and segregated, analyzed (if necessary for identification), packaged, labeled, stored and turned in through 88 ABW/EMC in compliance with the AFMC Standard Operating Procedures.

2.10.9. Turn-in HW to the DRMO contractor by submitting a WPAFB Form 1438, **Hazardous Waste Pickup,** to 88 ABW/EMC.

2.10.10. Program and budget for necessary HW sampling, analysis, disposal and spill cleanups.

2.10.11. Maintain spill plan documentation, equipment and materials.

2.10.12. Small spills that are not released to the environment can be cleaned up by the individual (i.e. 1 gallon paint can spilled in a warehouse). Small volume spills that are handled by the organization must be reported to 88 ABW/EMC by dialing SPILL (77455). If any material enters a drain (sanitary or storm), is released out of doors, or threatens human health or the environment, immediately call the Fire Department by dialing 911. If there is any question, call 911.

3. Forms Prescribed. WPAFB Form 1432, HWSIT Deficiency; WPAFB Form 1433, Installation Hazardous Waste Storage Permit; WPAFB Form 1434, Used Oil and Waste Liquid Petroleum Products Collection Request; WPAFB Form 1436, IAP Container Tracking Log; WPAFB Form 1437, IAP Weekly Inspection Log; WPAFB Form 1438, Hazardous Waste Pickup.

RONALD LESTER
Deputy Director, Office of Environmental Management

HWSIT DEFICIENCY

INSTRUCTIONS

PAGE 1 *(Addressee)* TO BE GIVEN TO SITE MANAGER
PAGE 2 *(Return to originator)* TO BE GIVEN TO UEC OF ORGANIZATION BEING EVALUATED
PAGE 3 *(Retained by originator)* SEND TO: 88 ABW/EMC, Bldg 89 Area C
HW Program Mgt, 77152
UEC EVALUATORS RETAIN A COPY OF PAGE 1 FOR REFERENCE
ORGANIZATIONAL UEC SEND PAGE 1 WITH CORRECTIVE ACTION TO 88 ABW/EMC FOR CLOSE OUT AND RETAIN PHOTOCOPY FOR REFERENCE.

PLEASE CHECK THOSE THAT COMPLY AND RECORD CHECKLIST NUMBER FOR THOSE OUT OF COMPLIANCE

	INITIAL ACCUMULATION SITE NUMBER			90 DAY ACCUMULATION SITE NUMBER
1		AREA SECURE		AREA SECURE
2		SPILL RESPONSE PLAN POSTED		SPILL RESPONSE PLAN POSTED
3		SPILL RESPONSE EQUIPMENT READILY AVAILABLE		SPILL RESPONSE EQUIPMENT READILY AVAILABLE
4		CONTAINER IS IN GOOD CONDITION AND COMPATIBLE WITH WASTE STORED IN IT.		CONTAINER IS IN GOOD CONDITION AND COMPATIBLE WITH WASTE STORED IN IT.
5		CONTAINERS CLOSED AT ALL TIMES EXCEPT WHEN ADDING WASTE.		CONTAINERS CLOSED AT ALL TIMES EXCEPT WHEN ADDING WASTE.
6		CONTAINERS ONE GALLON OR MORE SHOULD BE LABELED WITH STANDARD LABEL; SMALLER CONTAINERS MUST BE APPROPRIATELY LABELED AS DETERMINED GOOD PRACTICE TO INCLUDE AT A MINIMUM "HAZARDOUS WASTE, FEDERAL LAW PROHIBITS IMPROPER DISPOSAL" AND WASTE CONSTITUENTS.		CONTAINERS ONE GALLON OR MORE SHOULD BE LABELED WITH STANDARD LABEL; SMALLER CONTAINERS MUST BE APPROPRIATELY LABELED AS DETERMINED GOOD PRACTICE.
7		TRAINING RECORDS AT OR NEAR IAP AND UP TO DATE		TRAINING RECORDS AT OR NEAR ACCS AND UP TO DATE
8		DAILY CHECKLIST POSTED		DAILY CHECKLIST POSTED
9		WEEKLY INSPECTION LOG PRESENT AND UP TO DATE		WEEKLY INSPECTION LOG PRESENT AND UP TO DATE
10		HAZARDOUS WASTE TRANSFERRED TO 90 DAY STORAGE AREA WITHIN 72 HOURS OF EXCEEDING 55 GALLON OF HW OR 1 QUART OF ACUTELY HW.		NO CONTAINER EXCEEDING 90 DAYS FROM ACCUMULATION START DATE.
11		DATE WHEN 55 GALLON OR ONE QUART ACUTE HW LIMIT WAS EXCEEDED CLEARLY MARKED ON CONTAINER.		START DATE OF 90 DAY ACCUMULATION MARKED ON LABEL
12		CONTAINER IS AT OR NEAR POINT OF GENERATION		ADEQUATE SECONDARY CONTAINMENT
13		OTHER		WARNING SIGNS POSTED: "**DANGER, HAZARDOUS WASTE STORAGE AREA, UNAUTHORIZED PERSONNEL KEEP OUT"**
14				ADEQUATE AISLE SPACE (> 3FT)
15	PHONE			COMMUNICATION EQUIPMENT ON SITE (Phone/Two way Radio)
16	SITE MANAGER			OTHER

COMMENTS

MANAGER'S ORGANIZATION	EVALUATOR'S NAME

WRITE UP ONLY ITEMS CONTAINED ON THE CHECKLIST

INSTALLATION HAZARDOUS WASTE STORAGE PERMIT

ORGANIZATION	OFFICE SYMBOL	PERMIT NUMBER	EXPIRATION DATE

	LOCATION
	AREA
	BUILDING NUMBER
	ROOM NUMBER

(√)	TYPE OF PERMIT REQUIRED (*Check One*)	
	INITIAL ACCUMULATION POINT	MAXIMUM 55 GALLONS OF HAZARDOUS WASTE (HW) OR ONE QUART OF ACUTELY HW AT ONE TIME
	ACCUMULATION SITE	NINETY DAYS STORAGE TIME LIMIT PER CONTAINER

(√)	WASTE CLASSIFICATION	ESTIMATED QUANTITY PER YEAR (*Gal or Lbs*)
	IGNITABLES	
	CORROSIVES	
	REACTIVES	
	TCLP (Toxic Characteristic Leaching Procedure)	
	(F) - LISTED WASTES	
	(K) - LISTED WASTES	
	(P) - LISTED WASTES	
	(U) - LISTED WASTES	

INDICATE ALL TYPES OF CONTAINERS TO BE USED (*Check all that apply*)

	DM = METAL DRUM BARREL, KEG		GC = GLASS CONTAINERS, BOTTLES		CY = CYLINDERS
	CF = FIBER OR PLASTIC BOX, CARTON, CASE		DF = FIBERBOARD OR PLASTIC DRUM, BARREL, KEG		OTHER

IN CASE OF EMERGENCY CALL 911

PRIMARY STORAGE MANAGER

NAME		WORK LOCATION
NORMAL HOURS	PHONE	SIGNATURE

ALTERNATE MANAGER

NAME		WORK LOCATION
NORMAL HOURS	PHONE	SIGNATURE

UNIT COMMANDER

NAME	TITLE	PHONE
SIGNATURE		DATE

ENVIRONMENTAL MANAGEMENT

NAME	TITLE	PHONE
SIGNATURE		DATE

Site Specific Spill Plan
(Sample Format)

OFFICE SYMBOL:
LOCATION:
TELEPHONE:
ACTIVITY:

Notification and Initial Response
(For site specific organizations this may be broken into categories of major, moderate, or minor spills)

1. Evacuate Area
2. Phone 911
3. Make internal organizational notifications as deemed necessary (supervisor, UEC, etc.)
4. Determine and contain source of spill when possible without undue risk of personal injury. If the nature of the spill material is unknown, evacuate area immediately
5. Restrict all sources of ignition when flammable substances are involved without undue risk to personal injury.
6. Report to acting on-scene coordinator upon spill response team arrival and provide assistance until response team is fully operational

Response Information
(When notifying fire department, the following information should be provided if known or can reasonable be determined)

1. Name of individual reporting spill
2. Location of spill
3. Number of personnel injured and the nature of injuries
4. Name of material spilled/released (may utilize MSDS)
5. Amount spilled
6. Hazard Information
7. Extent spill has traveled
8. Time incident occurred
9. Any other pertinent information (i.e. other potential hazards)

Emergency Response Equipment/Procedures
(Any equipment or procedure that minimizes the possibility or severity of leakage or spillage should be documented: routine inspections, secondary containment, preventive maintenance, monitoring, and security)

1. List of spill equipment (i.e. fire extinguisher, booms, absorbent, etc.)
2. Location of spill equipment (must be accessible in the event of a spill)
3. Hot utilized for specific spill
4. Material Safety Data Sheets
5. Warning signs posted where hazardous chemicals are stored or handled

Description of Site

1. Room location, ventilation, sprinkler system, secondary containment (a map would be helpful)
2. Material/Waste Stored (If this is a base supply activity indicate by listing that the site contains acids/flammables/corrosives/explosives etc.)

Probable Spill Route

Describe where spill may travel (floor drains, sanitary sewer, storm drain, and what final destination as in what outfall it may enter). If drain is identified as a sanitary sewer it flows into the Waste Water Treatment Facility. If the drain is identified as a storm drain you will need to contact Record Drawings at Bldg 11, Area C and retain a map of storm drains associated with your building. Information is needed on what body of water the drain eventually empties into (e.g. Outfall NPDES point 004).

Posting Requirements

1. Hazard Warning Information/Signs/Placard (hazard storage area, flammable, corrosive, etc.)
2. This site specific spill plan will be posted in a prominent location or locations within the potential spill area. This spill plan should be updated on an annual basis or anytime there is a change in operations or materials stored or at any time the plan has failed. The spill plan shall be coordinated through 88 ABW/EM.

_____ Date_____
Unit Environmental Coordinator Signature

_____ Date_____
EM Signature

BUILDING	PHONE	**IAP WEEKLY INSPECTION LOG**	PERMIT NUMBER

STORAGE AREA	SATISFACTORY	UNSATISFACTORY	DISCREPANCY	CORRECTIVE ACTION
SECURITY Locked gate, doors				
Adequate Secondary Containment				
Under 55 Gallons/1Qt				
CONTAINERS Labeled Correctly				
Closed and Secure				
Compatibility				
Tracking Log Accurate				
EQUIPMENT Emergency Response *(absorbent, extinguishers)*				
POSTED INFORMATION Spill Plan				
IAP PERMIT				
Operating Record Current				

INSPECTOR'S SIGNATURE	DATE/TIME
SUPERVISOR'S SIGNATURE	DATE/TIME

PRIMARY MANAGER	UEC COORDINATION

INSPECTIONS ARE TO BE PERFORMED EACH WEDNESDAY

HAZARDOUS WASTE PICKUP

JOB ORDER NUMBER	CONTAINER TRACKING NUMBER

GENERAL INFORMATION

NAME		OFFICE SYMBOL	
BUILDING NUMBER	EXTENSION	IAP PERMIT NUMBER	SUPPLY SHOP ORG CODE
UEC COORDINATION		DATE	TIME

WASTE CONTAINER INFORMATION

COMMON (*Generic*) NAME

CONSTITUENTS	%	CONSTITUENTS	%

EPA WASTE CODES

CHECK ONE

☐ SPENT ☐ UNUSED EXCESS ☐ EXPIRED ☐ SPILL RESIDUE

PROCESS GENERATING WASTE

CONTAINER TYPE	CONTAINER SIZE	QUANTITY

PHYSICAL STATE (*check one*)

☐ LIQUID ☐ SOLID ☐ GAS

pH	FLASHPOINT

CONTRACTOR INFORMATION

WEIGHT	DESTINATION

DISPOSAL ROUTING CODE

☐ B(*Bulk*) ☐ L(*Labpack*) ☐ D(*Disposal*)

CLIN	U/C	T/C

CERTIFICATION

SITE MANAGER SIGNATURE	WASTE CONTRACTOR REPRESENTATIVE SIGNATURE

ACCS PERMIT #: _____ **ORG. SYMBOL:** _____

ACCUMULATION SITE DAILY CHECKLIST/GUIDANCE

ACCS STORAGE AREA:

1. Storage area must be located in an area that provides adequate security against unauthorized entry (e.g., locked gate or door)

2. Storage area shall provide for three feet of aisle space between pallets

3. Storage area shall provide adequate secondary containment system

4. The following signs shall be posted at the entrance to the storage area: "**DANGER HAZARDOUS WASTE STORAGE AREA, UNAUTHORIZED PERSONNEL KEEP OUT**" and applicable DOT hazard placards

ACCS STORAGE CONTAINERS:

1. Containers must be marked with the words "**HAZARDOUS WASTE**"

2. **Containers must remain closed at all times unless adding or removing waste**

3. Containers should be in good condition and compatible with the waste stored within (i.e., corrosive liquids in plastic drums or glass bottles only)

4. Containers holding ignitable or reactive waste should be located at lease 50 feet from the facility property line

5. Incompatible waste should not be placed in the same containers

6. The accumulation start date must be clearly marked on each container

7. Each container may not exceed 90 calendar days in storage

ACCS EQUIPMENT:

1. Adequate emergency response equipment must be present and readily accessible (e.g., fire extinguishers, absorbent material, salvage containers)

2. A telephone or hand-held radio must be present and in close proximity to the storage area

3. An emergency notification system must be present (e.g., alarm system, smoke detectors)

ACCS INFORMATION:

1. Site-specific Spill Plan posted

2. ACCS permit posted

3. Weekly Inspection Log current and available

4. Operating Record current and available

ACCS MANAGER'S NAME: **PHONE:**

ACCS ALTERNATE MANAGER'S NAME: **PHONE:**

SUPERVISOR'S NAME: **PHONE:**

WRIGHT-PATTERSON AIR FORCE BASE
USED OIL AND WASTE LIQUID PETROLEUM PRODUCTS MANAGEMENT POLICY

1.0 PURPOSE

Provides base-wide procedures for the management and disposal of used oil and waste liquid petroleum products (WLPP), and used oil filters. This policy implements the management standards and Ohio EPA requirements of Ohio Administrative Code (OAC) Rule 3745-279, "Used Oil Management Standards", which became effective 20 October 1998.

2.0 SCOPE

These requirements apply to all organizations who collect, segregate, store, or dispose of any quantity of used oil or WLPP through normal operations on WPAFB. The procedures stated in this policy supersede both the 1 December 1994 policy and 19 December 1995 policy change. The procedures herein became effective 20 October 1998. They shall remain effective until further notice. There shall be an annual review of this policy unless significant changes in regulation or law mandate a more frequent update.

3.0 MANAGEMENT OF USED OIL FILTERS

Non-terne (non-lead) plated used oil filters may be disposed of as solid waste if they have been gravity hot-drained (removed from a hot engine) using one of the following methods:

1. Puncturing the filter anti-drain back valve or the filter dome end and hot-draining;
2. Hot-draining and crushing;
3. Dismantling and hot-draining; or
4. Any other equivalent hot-draining method which will remove used oil.

A filter is considered “drained” if no oil immediately drips or runs from the filter when it is picked up by hand or machinery.

4.0 MIXTURES OF USED OIL AND HAZARDOUS WASTE

The provisions of this policy DO NOT apply to halogenated hydrocarbons or hazardous wastes that are subject to the Hazardous Waste Management Standards of OAC 3745-50 through 3745-69. Personnel who suspect the mixing of these compounds with used oil should notify the Environmental Management Office at 257-7152. The following is provided to prevent the unauthorized commingling of these excluded wastes:

a. **Halogenated hydrocarbons** shall not be mixed with used oil. Halogenated hydrocarbons are petroleum-based compounds that contain one or more halogens (chlorine, fluorine, bromine, iodine). Some examples are:

1. Polychlorinated biphenyl (PCB) oils
2. FREON (Refrigerant oils or solvents)
3. Perchloroethylene (Solvent)
4. Trichloroethylene (Solvent)
5. Trichloroethane (Solvent)
6. Trichorotriflouroethane (Solvent)
7. Chloroform, Carbon tetrachloride, etc.

b. **Characteristic and Listed Hazardous Wastes**. Wastes that exhibit one or more hazardous waste characteristics (D001, D002, D003, or toxicity) identified in OAC 3745-51-20 through 3745-51-24, and wastes that are listed (F-, K-, P-, or U-listed) in OAC 3745-51-30 through 3745-51-35 **shall not** be mixed with used oil, except as listed below.

EXCEPTIONS:

1. Petroleum derived fuels such as avgas, mogas, diesel, kerosene, and jet fuel are not classified as hazardous waste when recycled and are allowed to be mixed with used oil under this policy.

2. Petroleum or mineral based solvents that exhibit **only** the characteristic of ignitability (flash point less than 140 °F) and **that are NOT soluble in water**, are allowed to be mixed with used oil. Consult the material safety data sheet to determine characteristics.

- Acceptable solvents include stoddard solvent, mineral spirits, and PD-680.

- The following is an example of solvents that are soluble in water and **shall not** be mixed with used oil: acetone, ethanol, methanol, isopropanol, and methyl ethyl ketone.

* If you have questions about solvents not listed above, please call the Used Oil Program Manager at 257-7152, prior to mixing with used oil.

5.0 MANAGEMENT GUIDANCE

5.1 SEGREGATION:

a. Used Oil: Segregation of different types of used oils is not required under this policy.

b. Fuels: Generators are responsible for the controlled collection and segregation of fuels as outlined in Technical Manual, Management of Recoverable and Waste Liquid Petroleum Products, T.O. 42B-1-23. This segregation will lead to recoverable products that may be reintroduced into base stock. The segregation of fuels shall include calibrating fluid (MIL-C-7024), purging fluid (MIL-F-382999), jet fuels, avgas, mogas, kerosene, and diesel fuel.

5.2 CATEGORIES:

For purposes of clarity, we have established four basic categories for the management of used oil and/or WLPP. A decision chart (Atch 1) is provided to further clarify categories and assist in the collection request process.

a. "Used Oil" Category 1:

Used oil is defined in OAC 3745-279-01 as "any oil that has been refined from crude oil, or any synthetic oil, that has been used, and as a result of that use, is contaminated by physical or chemical impurities."

Included in this category are used oils derived from the following sources: lubricant oils (crankcase, engine, turbine, or gear); hydraulic fluids including transmission fluid; metal-working fluids (cutting, grinding, machining, rolling, stamping, quenching, and coating oils); and non-contact heat transfer fluids (mineral oil).

b. "Waste Fuels" Category 2:

Waste fuels are fuels that because of quality degradation or excessive contamination are no longer suitable for any use on WPAFB. Included in this category are waste fuels such as calibrating fluid (MIL-C-7024), purging fluid (MIL-F-382999), jet fuels, avgas, mogas, kerosene, and diesel fuel.

c. "Spent Non-halogenated Petroleum Solvents" Category 3: Non-halogenated petroleum solvents include petroleum or mineral based solvents such as mineral spirits, stoddard solvent, and PD-680.

d. "Mixtures" Category 4: Any mixture of Categories 1, 2 and/or 3. Mixtures of used oil (Category 1) and other WLPP (Categories 2 and 3) are to be managed as "Used Oil".

NOTE: The above categories are referenced in the attached Decision Chart (Atch 1).

5.3 COLLECTION/STORAGE AREA:

a. Storage Units:

Generators shall collect and store Used Oil /WLPP in containers (portable tanks or drums) or aboveground storage tanks (AST) that are in good condition (i.e. no rusting, apparent structural defects or deterioration) and not leaking. All containers and AST's are required to employ secondary containment (40 CFR 112) to contain any spillage.

Underground storage tanks (UST) used to collect and store Used Oil /WLPP shall meet the management standards and USEPA requirements of Title 40 Code of Federal Regulation, Part 280, "Technical Standards and Corrective Action Requirements for owners and operators of Underground Storage Tanks" (40 CFR 280).

b. Labeling/Marking:

Used oil and used oil mixture containers or tanks, including fill pipes for underground tanks, shall be clearly and durably labeled or marked with the specific words **"Used Oil"**.

WLPP containers or tanks, including fill pipes for underground tanks, shall be clearly and durably labeled or marked with the specified content description. (i.e. Mogas)

c. Siting:

The selected collection/storage area must provide access for base collection personnel, deter unauthorized access, comply with National Fire Protection Association Codes and provide secondary containment (40 CFR 112) to contain any spillage. The selected area should be coordinated with the base Safety Office and Fire Department.

5.4 RESPONSIBILITY:

Generators are responsible for managing used oil or WLPP collection/storage areas and are solely responsible for all materials placed within their storage container. The generator shall control what is placed in their used oil or WLPP collection units and designate a single person who is ultimately responsible for managing the area. This designated person is ultimately responsible to ensure that

container/tanks are not filled beyond capacity resulting in a spill situation. Additional containers, such as drums, should be used if additional capacity is necessary.

Generators are responsible for ensuring that halogenated hydrocarbons and hazardous wastes are not mixed with used oil or WLPP. The Used Oil/WLPP program is not to be used for the disposition of anything other than used oil or other acceptable WLPP as defined by this policy.

5.5 RESPONSE TO RELEASE/SPILL:

A site-specific Spill Prevention Control and Countermeasures plan (SPCC) shall be developed by the generator per Title 40 Code of Federal Regulation, Parts 110 and 112. The SPCC plan shall address all actions necessary in the event of an used oil or other WLPP spill. Personnel using the collection area shall be familiar with the requirements of this plan. The generator shall maintain the SPCC plan in an easily accessible area in the immediate vicinity of the storage location.

5.6 PICK-UP/COLLECTION REQUEST COORDINATION:

When pick-up/collection service is needed, the generator will obtain a Civil Engineering work order number (7-3131) and then prepare a Used Oil and Waste Liquid Petroleum Products "Collection Request Form" (Atch 2) and forward the completed request form to 88 ABW/EMC, Attn.: Used Oil Manager. This form should be completed and received at least ten (10) working days prior to requiring service. A completed request form is provided as an example (Atch 3).

Upon receipt, 88 ABW/EMC will determine as to whether the request is acceptable for collection or not. Delays in collection may be experienced if the request form is incomplete or if sampling is required. Because of analytical times inherent with laboratory analyses, the generator may experience serious delays if the initial field screening reveals that halogenated hydrocarbons or hazardous wastes may have been mixed with the used oil. All used oils and WLPP presented for collection are, at the discretion of Environmental Management, subject to complete and random analytical characterization.

Unknown mixtures that are a result of repeated uncontrolled collection are not acceptable. When a scenario such as this is identified, it is the generator's responsibility to promptly identify contents and implement measures to control accumulation. Repeated sampling of such unknown mixtures will not be performed. In the event the Used Oil/WLPP collection system is contaminated, the responsible organization(s) will be held monetarily accountable for cleanup and/or disposal.

Should you have any questions regarding the management of used oil and/or WLPP, please contact the Office of Environmental Management, Waste Management Branch (88 ABW/EMC), at 257-7152.

Approved for Implementation; December 29, 1998

/Signed/

EDWARD C. FINKE, Chief
Waste Management Branch
Office of Environmental Management

Attachments:
1. Decision Chart
2. Collection Request Form
3. Example Collection Request Form

USED OIL AND WASTE LIQUID PETROLEUM PRODUCTS COLLECTION REQUEST

OFFICE OF ENVIRONMENTAL MANAGEMENT
WRIGHT-PATTERSON AIR FORCE BASE

SECTION I — **REQUESTER/GENERATOR INFORMATION**

REQUESTER NAME		C.E. WORK ORDER NUMBER	
ORGANIZATION		OFFICE	PHONE/EXTENSION

STORAGE LOCATION

AREA	BUILDING	SPECIFIC LOCATION W/IN BLDG

CONTAINER

TYPE	SIZE *(Gallons)*	QUANTITY	CONTENTS *(Total Gallons)*	CONTAINER CONDITION
				☐ GOOD ☐ LEAKING

CATEGORY NUMBER	SOURCE OF GENERATION

OIL/PRODUCT TYPE *(Mixtures to equal 100%)*

ADDITIONAL COMMENTS

GENERATOR CERTIFICATION

I HAVE REVIEWED AND UNDERSTAND THE REQUIREMENTS SET FORTH IN THE WPAFB, OFFICE OF ENVIRONMENTAL MANAGEMENT "USED OIL AND WASTE LIQUID PETROLEUM PRODUCTS MANAGEMENT POLICY". I CERTIFY THAT THE INFORMATION PROVIDED IS ACCURATE AND COMPLETE.

NAME *(Print)*	SIGNATURE	DATE

SECTION II — **OFFICE OF ENVIRONMENTAL MANAGEMENT REVIEW (88 ABW/EMC USE ONLY)**

ACCEPTABLE FOR COLLECTION	GENERATOR KNOWLEDGE	MSDS	EM SAMPLE NUMBER
☐ YES ☐ NO			

LABORATORY RESULTS

NAME *(Print)*	SIGNATURE	DATE

SPECIAL PROVISIONS/COMMENTS

SECTION III — **LIQUID FUELS COLLECTION INFORMATION** ***(Return completed form to 88 ABW/EMC)***

COLLECTION DATE	TIME	CONSOLIDATION TANK

COMMENTS

WRIGHT-PATTERSON AIR FORCE BASE
OFFICE OF ENVIRONMENTAL MANAGEMENT

SPENT MERCURY-CONTAINING LAMP MANAGEMENT POLICY

1.0 PURPOSE

To provide base-wide procedures for the management of spent mercury-containing lamps as a recyclable material. Mercury-containing lamps include all fluorescent, mercury vapor, metal halide, and high pressure sodium lamps (light bulbs). This policy implements management standards in accordance with Ohio and United States EPA guidance.

2.0 SCOPE

These requirements apply to all organizations who generate, collect, segregate, store or dispose of any quantity of mercury-containing lamps on WPAFB. The procedures stated in this policy became effective on 19 May 95. They shall remain effective until further notice. There will be an annual review of this policy unless significant changes in regulation or law mandate a more frequent update.

3.0 MANAGEMENT GUIDANCE

3.1 RESPONSIBILITY

Generators will be responsible for collecting, temporarily storing, and packaging spent (burned-out) mercury-containing lamps. Generally, it is the responsibility of the RPBM or CE to replace spent lamps. Organizations with contractor operations (i.e. housekeeping), who are tasked to replace spent lamps, shall be informed of this policy. The lamps are going to be recycled off base, and therefore, are treated as recyclable materials and are exempt from hazardous waste regulations.

3.2 COLLECTION

Generators shall collect the following types of mercury-containing lamps:

a. Fluorescent (lengths > 1.5 feet)
b. Fluorescent U shape and circular
c. High pressure sodium
d. Metal halide
e. Mercury vapor

3.3 PACKAGING/TEMPORARY STORAGE

When replacing spent lamps, generators shall package them in the original manufacturer's box or boxes supplied by Environmental Management. Remove the cardboard packing from the box and lay the box flat, this will allow for easier packaging of the lamps. If there is a need to distinguish new lamps from spent ones (within the box), place a line on the endcap of the spent

lamp with a marker. DO NOT tamper with the lamps, i.e. cut off the leads, tape bulbs together. When the boxes are **full**, call Environmental Management, 257-7152, ext. 266, for removal. You may store as many boxes of spent bulbs as you have space before calling EM for removal. The lamps shall be packaged in the following manner:

a. Packaged snugly in the box;
b. Count and write the quantity of lamps on either END of the box; and
c. Tape the box closed (after it is full). A full box will ensure the bulbs are packaged snugly and will prevent breakage during transportation.

In the event a lamp(s) is broken or crushed, the intact part of the bulb shall be placed in the box. The broken/crushed pieces and powder shall be placed into a separate container (i.e. plastic/paper bag, cardboard box) and placed next to the box. The container with the broken pieces will be removed when the box is removed.

Should you need empty boxes or have any questions regarding the management of mercury-containing lamps, please contact the Office of Environmental Management, Waste Management Branch, 88 ABW/EMC, at 257-7152, ext. 266.