U. S. AIR FORCE HAZARDOUS WASTE MANAGEMENT PLAN

Tinker Air Force Base

4/2/2017

Reviewed on 3/8/2018

About This Plan

This installation-specific Environmental Management Plan (EMP) is based on the U.S. Air Force's (AF) standardized Hazardous Waste Management Plan (HWMP) template. This plan is not an exhaustive inventory of all hazardous waste (HW) requirements and practices. Where applicable, external resources, including Air Force Instructions (AFIs); AF Playbooks; federal, state, local and Final Governing Standards (FGS); and permit requirements, as applicable, are referenced.

Each section of this HWMP plan begins with standardized, AF-wide "common text" language that addresses AF and Department of Defense (DoD) policy and federal requirements. This common text language is restricted from editing to ensure that it remains standard throughout all plans. The common text language is maintained and updated by the designated Office of Primary Responsibility (OPR) with assistance from the Office of Collateral Responsibility (OCR), as appropriate. Immediately following the AF-wide common text sections, are Installation sections. The Installation sections contain installation-specific content to address state, local and installation-specific requirements. Installation sections are unrestricted and are maintained and updated by AF environmental Installation Support Teams (ISTs) and/or installation personnel.

This document is optimized to be accessed and viewed electronically. The eDASH website at https://cs1.eis.af.mil/sites/edash/ is the primary communication tool for AF EMPs.

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DOCUMENT CONTROL

Record of Updates – The HWMP is updated as changes to waste generation and management practices occur, including those driven by changes in applicable regulations.

Record of Updates

Change No.	Nature of Change	Date of Change	Approved By:
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Record of Annual Review – In accordance with (IAW) AFI 32-7042, *Waste Management*, this plan is reviewed annually, updated as appropriate, and approved by the Environmental Safety and Occupational Health Council (ESOHC). Formatting and administrative changes do not require ESOHC review.

Record of ESOHC Annual Review

Review Date	Review Participants	Notes/Remarks	Result in Plan Update? (Yes or No)
3/8/2018	Kyle Barton	No changes were made.	No
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1.0 OVERVIEW AND SCOPE

This HWMP contains procedures for management of HW. In lieu of federal, state or FGS requirements, AFI 32-7042, *Waste Management*, acts as the main driver for the HWMP. The HW Playbook serves as supplemental guidance to this plan.

Installation Supplement – Overview and Scope

This instruction applies to all generators of hazardous and non-hazardous industrial wastes on Tinker AFB, including wastes generated by both government and contractors. Non-hazardous industrial wastes will be managed in the same manner as hazardous wastes.

2.0 INSTALLATION PROFILE

Installation Profile

Scope of Plan	Tinker AFB's Hazardous Waste Management Plan (HWMP) covers all organizations that generate hazardous and non-hazardous industrial wastes, establishes waste management procedures, and outlines organizational responsibilities. Tinker AFB is home to eight major DoD, Air Force and Navy tenants with critical national defense missions, including: • The Oklahoma City Air Logistics Complex (OC-ALC) is the largest organization on Tinker AFB with more than 9,400 military and civilian employees. It is the largest of three depot repair complexes in the Air Force Materiel Command. It provides depot maintenance on the C/KC-135, B-1B, B-52 and E-3 aircraft, expanded phase maintenance on the Navy E-6 aircraft, and maintenance, repair and overhaul of F100, F101, F108, F110, F118, F119 and TF33 engines for the Air Force, Air Force Reserve, Air National Guard, Navy and foreign military sales. • The 552d Air Control Wing, which is part of the AF's Air Combat Command mobile strike force, is responsible for operations, maintenance, logistics, training, and combat support of E-3 airborne warning and control system (AWACS) aircraft, whose radar and other sensors provide deep-look surveillance, warning, interception control and airborne battle management. • The Navy's Strategic Communications Wing ONE provides a communications link to the submerged fleet of ballistic missile submarines. OC-ALC airframe artisans perform depot work on the Navy's E-6 Mercury airplanes and sailors perform field level work. • The 507th Air Refueling Wing, an Air Force Reserve flying unit, has the primary mission of supporting U.S. Military and NATO aircraft with aerial refueling missions worldwide. • The 38th Cyberspace Engineering Installation Group, which has responsibility for engineering and installation of all communications and electronic facilities for the Air Force worldwide. • The Defense Logistics Agency (DLA) Distribution Oklahoma City, provides the receipt, storage, issue, inspection, and shipment of material, including material quality control, preservation and packaging, inventory, transportation functions, and pickup and

	delivery services in support of the OC-ALC and other Tinker-based organizations. • The Defense Enterprise Computing Center Oklahoma City, which is the local branch of the Defense Information Systems Agency (DISA) that operates computer systems for the base and serves over 100 other bases worldwide. • The Missile Sustainment Division reports to the AF Nuclear Weapons Center (AFNWC). The division manages the program for the long range stand-off cruise missiles and the bomber weapons integration equipment. 72 ABW provides critical base functions and support services to headquarters, AF Sustainment Center, the OC-ALC, and all other associated units. Organizations assigned to 72 ABW include: • 72d Medical Group (72 MDG) • 72d Mission Support Group (72 MSG) • 72d Operations Support Squadron (72 OSS) • 72d Civil Engineer Directorate (72 ABW/CE) • 72d Logistics Readiness Squadron (72 LRS) • 72d Force Support Squadron (72 FSS) • 72d Communications Directorate (72 ABW/SC) • 72d ABW Plans and Programs Office (72 ABW/XP) • 72d ABW Equal Opportunity/Alternate Dispute Resolution (72 ABW/EO/ADR) • 72d ABW Public Affairs (72 ABW/PA) • 72d ABW Comptroller Squadron (72 CPTS) • 72d ABW Staff Judge Advocate (72 ABW/JA) • 72d ABW Safety Office (72 ABW/SE) • Chapel Division (72 ABW/HC)

Office of Primary Responsibility (OPR)	72 ABW/CEIEC has overall responsibility for implementing the HW management program and is the lead organization for monitoring compliance with applicable federal, state and local regulations
HW Program Manager	Mr. Kyle Barton
Alternate HW Program Manager	Mr. Kim Kline
Emergency contacts	Refer to Appendix B to this HWMP
Waste registration numbers	OK1571724391
HW generator status	Large Quantity Generator
Universal waste handler status	Large Quantity Handler of Universal Waste
Permitted HW operations	One Permitted Storage Facility – Up to 1-year
Federal or FGS regulatory references	40 CFR 260 through 279
State and local regulatory agencies	Oklahoma Department of Environmental Quality (ODEQ)
State and local regulatory references	Title 252, Oklahoma Administrative Code, Chapter 205: "Hazardous Waste Management."
Approved HW disposal contractors	Contract through Defense Logistics Agency Disposition Services (DLA-DS).
HW accumulation sites	Refer to EESOH-MIS for Complete List.
HW accumulation time limits	90 Calendar Days
HW generator reporting frequency	Monthly, Quarterly, and Biennial

3.0 ENVIRONMENTAL MANAGEMENT SYSTEM

The AF environmental program adheres to the Environmental Management System (EMS) framework and its Plan, Do, Check, Act cycle for ensuring mission success. Executive Order (EO) 13693, *Planning for Federal Sustainability in the Next Decade*, U.S. Department of Defense Instruction (DoDI) 4715.17, *Environmental Management Systems*, AFI 32-7001, *Environmental Management*, and international standard, ISO 14001:2004, provide guidance on how environmental programs should be established, implemented, and maintained to operate under the EMS framework.

The HW management program employs EMS-based processes to achieve compliance with all legal obligations and current policy drivers, effectively managing associated risks, and installing a culture of continuous improvement. The HWMP serves as an administrative operational control that defines compliance-related activities and processes.

4.0 GENERAL ROLES AND RESPONSIBILITIES

The major roles/organizations involved in supporting the HW program include:

- Wing/Installation Commander
- ESOHC
- HW Manager/Alternate
- Shop/HW Generator Personnel
- Initial Accumulation Point (IAP) and Hazardous Waste Accumulation Site (HWAS) Supervisors/Managers
- Unit Commanders
- Unit Environmental Coordinators (UECs), see AFI 32-7001 for role description
- Contracting Officer
- Defense Logistics Agency Disposition Services
- Tenant Organizations
- AFCEC

Detailed information about typical responsibilities for these and other roles is available in the HW Playbook. Additional HW management-related roles and responsibilities are described throughout this plan and in referenced documents.

Installation Supplement – General Roles and Responsibilities

Organizational Responsibilities:

Although the 72 ABW/CEIEC is responsible for overall management of the hazardous waste program at Tinker, all base personnel are responsible for compliance. The 72 ABW Commander is ultimately responsible for ensuring compliance with laws governing HW management and proper disposal from all activities on base. Management and disposal of HW by DLA-DS or by contractors does not relieve the installation commander of this responsibility, including proper final disposal and accuracy of the HW manifest. Each generating organization is responsible for conducting proper management and pre-disposal practices when managing its hazardous waste. In addition to that basic responsibility, the following responsibilities are designed to ensure a smooth flow in the hazardous waste management system at Tinker AFB. In the event of regulatory modifications and/or amendments, each generating organization, as advised by 72 ABW/CEIEC, will be responsible for ensuring their actions complies with Federal, State and Air Force requirements. Training requirements, as mandated by AFI 32-7042, *Waste Management*, 7 November 2014, states, "All personnel, whose work involves HW and their immediate supervisors, must receive and successfully complete HW training appropriate to their job

responsibilities."

Installation Commander will:

- Ensure that a HW Management Plan (HWMP) is current, available, and followed by installation personnel. Ensure that appropriate HW management practices are emphasized to all installation personnel through education and training, to include shop level training, as needed.

- Sign all installation HW permit applications or other regulatory binding agreements as required; this authority cannot be delegated.

- Sign, or delegate in writing the authority to sign, HW manifests. Installation Commanders shall ensure signature delegation remains with a qualified (trained) DoD employees (civilian, military, guard, reserve, or host nation), or appropriately assigned State employees in the case of the ANG. The person delegated to sign manifests must be physically present during transfer or shipment of waste off-site. For installations where the HW management function is outsourced or there is not a qualified DoD employee, the Installation Commander will send a waiver request to AFCEC/CZ. IAW Sec 2.4.2, NGB/A4 and AFRC/A4 will approve for ANG and AFRC bases respectively in concert with AFEC/CZ.

- Ensure the proper disposal of all wastes from the installation.

- Ensure that employees handling HW have HW responsibilities reflected in their job descriptions.

- Ensure appropriate use of the standardized Air Force HW system, Enterprise, Environmental Safety and Occupational Health – Management Information System (EESOH-MIS), to include tracking of waste generation from shop processes, transfer to central accumulation storage, cost, and turn-in for disposal.

Environmental Safety and Occupational Health Committee (ESOHC) will:

- Review and approve SW and HW policies and guidance, review installation industrial sold waste (ISW) and HW management plans and programs, monitor progress, and advise leadership (refer to AFI 90-801, *Environment, Safety, and Occupational Health Councils* for further guidance).

Civil Engineering Directorate, Environmental Compliance Section (72 ABW/CEIEC) will:

- Serve as the central base coordinator for the hazardous waste program and for questions regarding compliance with Federal, State, DoD and Air Force requirements.
- Set forth policies on all issues related to hazardous waste compliance regulations.
- Chair the Hazardous Waste Working Group (HWWG) and provide space for meetings.
- Maintain an EESOH-MIS to include the following: type, quantity, location, process of generation, disposal cost, disposal method and disposal location.
- Represent the base during compliance inspections by Federal, State and local regulatory officials, and respond to inspection related questions.
- Coordinate with the Staff Judge Advocate's Office and respond to inquiries regarding policy or management decisions and interpretation of regulations.

- Advise UECs and 72 FSS/FSDT on changes to hazardous waste regulations, manuals and other directives as appropriate.
- Review requests from UECs for new, or modifications to current, hazardous waste management sites and ensure appropriate changes are made in the hazardous waste tracking system (HWTS).
- Conduct periodic compliance monitoring visits to determine status of accumulation methods and management procedures.
- Develop, review and update as necessary, base instructions, manuals, contingency plans and other documents dealing with hazardous waste management. This will be performed annually or as significant laws or regulations are passed.
- Monitor and modify as necessary the Resource Conservation and Recovery Act (RCRA) operating permits for Tinker AFB.
- Coordinate with DLA-DS and 72 ABW/JA concerning modifications to permits.
- Ensure proper closure of hazardous waste management sites.
- Coordinate with ODEQ to update and maintain a current Oklahoma State Disposal Plan for Tinker AFB.
- Prepare and transmit reports concerning the generation, shipment and disposal of hazardous wastes. These include the Biennial Report (40 CFR 262.41), Exception Reports (40 CFR 262.42) and monthly and quarterly reports to ODEQ.
- Participate in the 3-year Course Review of the Hazardous Waste Training Course provided by 72 FSS/FSDT and provide information to ensure its accuracy.
- Oversee operation of the Permitted Storage Facility (PSF), Hazardous Waste Management Facility (HWMF) and the Empty Container Processing Facility (ECPF).
- Provide guidance to those not using the HWMF on pre-disposal processing of hazardous waste property.
- Coordinate with DLA-DS and its disposal contractor to ensure smooth flow of hazardous waste from PSF to ultimate disposal or recycling facilities.
- Assist DLA-DS on disposal contract modifications, claims or disputes.
- Assist Air Force Civil Engineering Center (AFCEC) in developing and modifying the installation hazardous waste management contract, and help resolve any claims or disputes.
- Coordinate with on-base contractors for all shipments of hazardous waste leaving the installation.
- Perform an annual review of waste profiles generated at Tinker AFB.
- Develop and maintain a current file of hazardous waste profile sheets in conjunction with DLA-DS.
- Ensure hazardous waste manifests, for generators not required to use DLA-DS, are properly completed and signed by authorized persons.
- Update “Signature Authority for Uniform Hazardous Waste Manifests” letter authorizing persons to prepare and sign TAFB Manifests and Land Disposal Restriction (LDR) forms.
- Maintain files of manifests and LDR forms from all Tinker AFB generators.

- Ensure a copy of each manifest, with the handwritten signature of the disposal facility owner or operator, is received within 45 days of shipment.
- Maintain files of Certificates of Disposal permanently and the disposal contractor's delivery orders for at least three years.
- Maintain a record of waste disposal cost information within the HWTS.
- Review the 19-2, *Oil and Hazardous Substances Integrated Contingency Plan*, and revise as necessary.
- Attend formal instruction to meet RCRA and DOT requirements IAW AFI 32-7042.
- Coordinate any changes to funding requirements for disposal of hazardous and non-hazardous industrial wastes with AFCEC.

72 ABW/CEIEA- Environmental Laboratory will:

- Maintain a credible chemical laboratory capable of producing accurate chemical analysis by methods specified in 40 CFR 261.
- Prepare appropriate reports for analyses requested by 72 ABW/CEIEC.
- Contact 72 ABW/CEIEC with any discrepancies found between samples and sample description.
- Review the Waste Analysis Plan (WAP) annually and update as necessary.
- Obtain, renew, update and maintain HW permits.
- Develop and maintain HWMP.
- Develop and submit Planning, Programing, Budget and Execution requirements.
- Work with the Contracting Officer Representative (COR) to ensure requirements are met.

Air Force Civil Engineering Center (AFCEC) will:

- Manage corrective action and remediation projects at Solid Waste Management Units (SWMUs) and National Priorities List (NPL) sites at Tinker AFB.
- Ensure that manifests for shipment of hazardous waste from SWMUs and NPL sites are coordinated through 72 ABW/CEIEC.
- Ensure adequate funding for disposal of hazardous and non-hazardous industrial wastes are programmed.

Units that Generate Any Hazardous Waste will:

- Designate a primary and alternate Hazardous Waste POC for each waste site. The organizations may either designate the POCs in writing, or designate them within EESOH-MIS. This designation shall be made within 5 working days of appointment.
- Ensure that the designated monitors of hazardous waste and their supervisors receive annual RCRA training as required by 40 CFR, such as the initial and annual hazardous waste training courses provided by 72 FSS/FSDET.
- Supervisors will examine employee training to ensure that adequate site- and task specific familiarization is accomplished, and supplement with on-the-job training, as needed.
- Supervisors will contact the organization's training manager to request training. The training manager will then contact 72 FSS/FSDET to schedule personnel for training.
- Ensure that supervisors maintain training records for personnel involved in hazardous waste management. The records may be kept in hard copy or electronic format.
- Ensure no accumulation of hazardous waste occurs except at appropriately established management sites.
- For proper characterization of waste streams, provide essential information to the organization's UEC when processes or chemicals change, or if new waste streams are identified.
- Package, mark and label all containers of hazardous waste as instructed herein during accumulation and prior to turn-in to DLA-DS if containers are not processed through the HWMF.
- Take active measures to reduce the volume of hazardous waste generated.
- Coordinate with the Hazardous Materials Management Program (HMMP) to ensure surplus hazardous materials are made available to all potential users.
- Operate and maintain hazardous waste management sites as instructed herein.
- Coordinate with the HWMF for receipt of bar-coded hazardous waste containers and for their return when full.
- Perform Initial Response actions outlined in Section 7.10 of this HWMP upon spilling a hazardous substance or waste. Organization shall clean up all spills that are within the organization's internal capabilities. All others spills shall require activation of the TAFB Plan 19-2, *Oil and Hazardous Substances Integrated Contingency Plan*. emergency response procedures.
- Ensure that statements of work (SOW) for projects that involve generation of hazardous waste are routed to their organization's UEC, who will coordinate with 72 ABW/CEIEC as necessary and to set up Initial Accumulation Points (IAPs). SOWs must include training requirements for all involved personnel. Contracting Officer Representatives (CORs) shall insure that requirements of this instruction are included in the contract and brought to the contractor's attention. CORs may be appointed as IAP managers for their contractors. MILCON projects will provide funding for the disposal of industrial and hazardous wastes and may require contractors to provide those services. If the SOW requires 72 FSS/FSDET training, a copy of the SOW must be provided to 72 FSS/FSDET for review prior to entering into the contract.
- Supervisors at hazardous waste management sites shall sign inspection forms and inventory logs, keep a copy of these forms and logs for a period of one year and send the originals to their UEC. Digital copies are sufficient to meet this requirement.

- When a site is no longer needed, ensure that all hazardous waste management sites comply with the guidelines in this instruction for hazardous waste facility closure.
- Maintain list of hazardous waste streams currently generated within the unit. The listing generated in EESOH-MIS is adequate for this requirement and should be used.
- For IAP Manager Inspection responsibilities, see section 7.8 of this plan.
- Conduct self-assessments (as a part of Stage One audit assessment requirements), maintain self-assessment records, and comply with 40 Code of Federal Regulations (CFR 262 Subpart C), Generator Requirements.
- Implement corrective actions.
- Ensure funding is available for HW container/IAP supplies and equipment.

Unit Environmental Coordinators (UECs) will:

- Serve as the coordinator in their organization for disseminating information and providing guidance on proper accumulation and management of hazardous wastes.
- Provide current information to the organization commander, and unit supervisors about hazardous waste issues.
- Coordinate with 72 ABW/CEIEC on meeting needs of the organization's hazardous waste management program and on correcting any deficiencies that may be discovered.
- Represent their organization at all HWWG meetings.
- Ensure that Site Specific Contingency Plans (SSCPs) are current and posted in proper locations and that equipment is maintained in usable condition.
- Maintain a current list of waste sites within their organization and coordinate with 72 ABW/CEIEC for approval to establish new sites or change existing waste sites. EESOH-MIS shall be used to maintain this listing.
- Ensure that primary and alternate waste site POCs are current in EESOH-MIS for all waste sites in their organization.
- Coordinate with organizational training manager about number of personnel needing annual Hazardous Waste Training from 72 FSS/FSDET.
- Ensure copies of inspection forms and waste inventory logs for initial accumulation points and accumulation sites are maintained at the generation site for at least one year. The originals should be received each month by the UEC.
- The UEC will review the original forms for problem trends and maintain them in an orderly manner for three years for inspection purposes. Electronic versions of these forms are acceptable.
- Conduct an inspection of all hazardous waste management sites within their organization every month, documenting and reporting findings to 72 ABW/CEIEC. For larger organizations, this may be delegated to a Hazardous Waste Monitor within the organization. The required weekly inspections documented on TINKER AFB Form 487, *Initial Accumulation Point Management*

Aid, may be used by the Hazardous Waste Monitor as documentation for monthly inspections. If delegated, the UEC will still inspect each site at least semi-annually.

- Serve as the organization's point of contact for all environmental inspections.
- Conduct periodic (annually at a minimum) review of their organization's waste stream inventory. Submit information to 72 ABW/CEIEC upon discovery of new or modified waste streams.
- Oversee coordination with HMMP if unauthorized chemicals appear in waste streams.
- Review their organization's SOWs for projects that involve generation of hazardous waste. Coordinate with 72 ABW/CEIEC for any hazardous waste requirements.
- Attend formal instruction that acquaints the student with the details of RCRA regulations in 40 CFR 260 through 279; applicable State Laws and regulations; DoD, Air Force and local requirements; and in annual refresher classes, updates the student on changes to those rules. This training can be obtained through credible training institutions or companies approved by CEIEC or through AF Training Organizations.

Fire Protection Division (72 ABW/CEF) will:

- Provide technical assistance and advice concerning necessary fire protection for hazardous waste management sites.
- Provide a subject matter expert when requested for initial and annual hazardous waste training.
- Inspect hazardous waste management sites on a periodic basis to ensure compliance with USAF and National Fire Protection Association standards.
- Coordinate on establishment of hazardous waste management sites.

Safety Offices (72 ABW/SE, OC-ALC/SE, and 552 ACW/SE) will:

- Provide technical assistance and advice concerning proper handling and storage procedures at hazardous waste management sites.
- Provide a subject matter expert when requested to discuss safety issues at initial and annual hazardous waste training.
- Inspect hazardous waste management sites on a periodic basis to ensure compliance with USAF and OSHA directives.
- Coordinate on establishment of hazardous waste management sites.
- Provide a representative to HWWG.

Staff Judge Advocate (72 ABW/JA) will:

- Advise CEIEC of proper legal interpretation of hazardous waste laws and regulations and any changes in applicable legal requirements.
- Coordinate on reports, permits, permit fees and inquiries submitted to the ODEQ or EPA concerning hazardous waste management issues.

- Review all proposed contracts relating to hazardous waste management, particularly statements of work and specifications, in the earliest stages of procurement possible.
- Provide representative to HWWG.
- Review modifications to this instruction and other documents pertaining to hazardous waste management.
- Provide legal guidance on all enforcement actions arising out of hazardous waste management activities, including responses to notices of violations, negotiation with regulatory authorities on compliance agreements and defense of Tinker AFB in litigation. Coordinate with higher headquarters and the Department of Justice (DOJ) as required.

Classification Section (72 FSS/FSMCED) will:

- Upon request from supervisors of areas that produce hazardous waste, advise them of conditions that could make it necessary to describe hazardous waste managers' and operators' duties in their job descriptions.
- If applicable, ensure supervisors properly describe duties in job descriptions and that necessary administrative actions are taken to properly update job descriptions.

Bioenvironmental Engineering Services (72 AMDS/SGPB) will:

- Provide technical assistance and advice concerning personnel protective equipment and safe handling procedures at hazardous waste management sites.
- Provide a subject matter expert when requested to discuss chemical hazard issues at initial and annual hazardous waste training.
- Provide advice on industrial hygiene to all work areas for employee health.
- Coordinate on establishment of hazardous waste management sites.
- Provide representative to the HWWG.
- Provide assistance in disposal of mixed waste.

Occupational Medicine (72 MDG/SGPO) will:

- Ensure employees involved in the handling of hazardous waste receive appropriate occupational health physical examinations.

Industrial Training Branch (72 FSS/FSDT) will:

- Provide initial and annual training classes for all personnel involved in hazardous waste management and their direct supervisors, enabling them to perform their duties in a manner that meets Federal, State, DoD, Air Force, local statutes, regulations and requirements. EPA requirements are outlined in 40 CFR 264.16 for permitted management sites and 40 CFR 265.16 for non-permitted management sites. Hazardous waste generators are included by reference at 40 CFR 262.34(a)(4). The following elements of training are required:
    - Introduction to the RCRA.
    - Identification of hazardous waste.

- Accumulation point management.
- Container use, marking and labeling and on-base transportation.
- Waste turn-in procedures.
- Manifesting and off-base transportation of hazardous waste.
- Spill prevention and emergency response.
- Waste reduction.
- Personnel safety and health and fire safety.

- Provide instructors who have attended formal instruction that in the initial phase acquaints the student with the details of the RCRA regulations in 40 CFR 260 through 279; applicable State Laws and regulations; DoD, Air Force and local requirements and in annual refresher classes, updates the student on changes to those rules. Instructor's training must give priority to using HAF-approved HW education/ training sources such as AFIT Civil Engineer School HW Course WENV 521 and WESS 010 HW Accumulation Satellite seminar, and the Air Force HW web-based training available from AFCEC.
- Review SOW involving FSDT training of contractors.

Defense Logistics Agency Services (DLA-DS) will:

- Advise 72 ABW/CEIEC about how and when segregation of waste streams would increase the probability of recycling the waste.
- Advise 72 ABW/CEIEC when a market is available for reutilizing hazardous materials and wastes that are being generated.
- Verify the suitability of Permitted Treatment, Storage and Disposal Facilities (TSDFs) for all waste shipped through DLA-DS.
- Advise 72 ABW/CEIEC of any changes in defense turn-in document procedures or in packing, marking and labeling requirements.
- Provide a subject matter expert, when requested, for initial and annual hazardous waste training to explain role of DLA-DS and turn-in requirements.
- Complete EPA Form 8700-22, Uniform Hazardous Waste Manifest for all shipments of Tinker AFB hazardous wastes that are shipped off-site through the DLA-DS disposal contract and transmit a copy to 72 ABW/CEIEC within two hours after acceptance by the transporter. If transporter acceptance takes place after duty hours the manifest will be delivered to the Fire Department, if possible, or held until the next duty day and delivered to 72 ABW/CEIEC.
- Request delegation of authority from 72 ABW/CE for personnel who will prepare and sign Hazardous Waste Manifests and Land Disposal Restriction forms. Proof of training will be required to receive that delegation.
- Package, mark, label and offer placards (if these actions have not already been taken) for shipments of hazardous waste from Tinker AFB through the DLA-DS disposal contract according to applicable DOT hazardous materials regulations and DLA-DS requirements.
- Ensure input from Tinker AFB operations by coordinating with 72 ABW/CEIEC and 72 ABW/JA during negotiations for hazardous waste disposal contracts.
- Ensure that Certificates of Disposal are deliverable items in disposal contracts.
- Confirm that each hazardous waste shipment reached the disposal site safely and the disposal site received the shipment described on the manifest.

- Activate the site-specific contingency plan upon spilling a hazardous substance or during any other applicable emergencies.
- Attend initial and annual HW training, or equivalent, which enables them to perform their duties in a manner that meets Federal, State, DoD, Air Force and local laws, regulations and requirements. EPA requirements are outlined in 40 CFR 264.16 for permitted management sites.
- Appoint a Primary and Alternate UEC.
- Maintain a current copy of the RCRA Part B Operating Permit for Tinker AFB, a copy of Tinker AFB Plan 19-2, *Oil and Hazardous Substance Integrated Contingency Plan* and a copy of this instruction.

5.0 TRAINING

HW awareness training is provided to satisfy regulatory requirements and needs. All personnel whose work involves HW, and their immediate supervisors, must successfully complete HW training appropriate to their job responsibilities. Until the employee has received the appropriate HW training, the employee may only handle HW under the supervision of a trained individual. HW training is provided by authorized personnel. Training records are maintained IAW the Recordkeeping and Reporting section of this plan.

Installation Supplement – Training

Personnel involved in hazardous waste management must complete a program of instruction that enables them to perform their duties in a manner that meets Federal, State, DoD, Air Force and local laws, regulations and requirements. EPA requirements are outlined in 40 CFR 264.16 for permitted management sites and 40 CFR 265.16 for non-permitted management sites. Hazardous waste generators are included by reference at 40 CFR 262.34(a)(4).

All personnel, whose work involves HW and their immediate supervisors, must receive and successfully complete HW training appropriate to their job responsibilities. Training will occur within three months of an employee's arrival or assignment to HW-related duties. Until the employee has received the appropriate HW training, the employee may only handle HW under the supervision of a HW trained individual. Supervisors and personnel must also successfully complete annual refresher training. Those working at TSDFs and cleanup sites also need to adhere to Occupational Safety and Health Administration (OSHA) Hazardous Waste Operations and Emergency Response (HAZWOPER) requirements.

The following elements of training are considered essential:

- Introduction to the RCRA.
- Identification of hazardous waste.
- Accumulation point management.
- Container use, marking, labeling and on-base transportation.
- Waste turn-in procedures.
- Manifesting and off-base transportation of hazardous waste.
- Spill prevention and emergency response.
- Waste reduction.
- Personnel safety and health and fire safety.

Installations must give priority to using HAF-approved HW education/ training sources such as AFIT Civil Engineer School HW Course WENV 521 and WESS 010 HW Accumulation Satellite seminar, and the Air Force HW web-based training available from AFCEC. Personnel may contact 72 ABW/CEIEC for other potential sources for the necessary training.

6.0 RECORDKEEPING AND REPORTING

Recordkeeping

The installation complies with the following U.S. Federal HW recordkeeping requirements.

Summary of HW Recordkeeping Requirements

Record*	Retention Time**	Citation
HW determination documentation	3 years from the date that the waste was last sent to a TSDF	40 CFR 262.40
HW Biennial/Annual Report	3 years from the due date of the report	40 CFR 262.41
HW manifest	3 years from the day the waste was accepted by the initial transporter	40 CFR 262.40
HWAS inspection logs	3 years from the date the inspection was conducted	40 CFR 262.34 40 CFR 265.15 (d) 40 CFR 265.174
Exception reports	3 years from the due date of the report	40 CFR 262.42
Land restricted waste determination	3 years from date the determination was required to be conducted. If not required, 3 years from the date the waste was last sent to a TSDF	40 CFR 268.7
Land restriction notice and certification	3 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 HW was accepted by the initial transporter	40 CFR 262.53
EPA acknowledgement of consent (for exports)	3 years from the date the HW 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 HW was accepted by the initial transporter	40 CFR 262.54
Annual report (required of primary exporters of HW)	3 years from the date the HW was accepted by the initial transporter	40 CFR 262.56
Employee training records (including appointment letters for key HW personnel)	Current personnel: until closure of the site; Former personnel: 3 years from date the individual last worked there	40 CFR 262.34 40 CFR 264.16 40 CFR 265.16

*Permitted Treatment, Storage and Disposal Facilities (TSDF) comply with recordkeeping requirements established in their HW permit.

**Retention Time may be extended during the course of any unresolved enforcement action or as requested by the U.S. Environmental Protection Agency (EPA). The AF, through the Air Force Records Information Management System (AFRIMS), requires that HW-related reports, documents, studies, HW manifests, and disposal records (including contracts) are destroyed 50 years from the date of the record.

Reporting

The HW Manager, and other designated personnel, generate needed reports from EESOH-MIS.

Enforcement actions, spills and inspections are reported via the Enforcement Actions, Spills, and Inspections (EASI) database.

Installation Supplement – Recordkeeping and Reporting

Record Keeping for Waste Sites (Tinker Form 487):

- During the first week of each month, the appropriate inspection form(s) from the previous month shall be sent to the UEC.
- The supervisor of the generating unit shall review and sign the forms before they are sent to the UEC.
- Copies of the forms shall be maintained by the generating unit for at least one year and be readily available for inspection.
- The UEC will review the forms for problem trends, maintain them in an orderly manner for three years and keep them on hand for inspection.

Personnel Records:

- Supervisors shall maintain job descriptions and training records for their employees. The supervisors shall maintain a tracking list of personnel who need training for their organization. The supervisor shall coordinate with their UEC on training.
- Records should at a minimum include student's name, job title, job description, previous HW training, dates of training, training provider and date of annual refresher course.
- Training records must be maintained as long as the individual is associated with, or for three years after the individual is no longer working with, hazardous waste. The records may be kept in hard copy or electronic format.

7.0 PROCEDURES

This section contains procedures for managing HW from identification, accumulation, offsite transportation and disposal. The HW Manager ensures that appropriate procedures are properly communicated and followed by all necessary personnel.

7.1 Waste Inventory

A current waste inventory can be generated within EESOH-MIS using the Ad-Hoc Reporting Tool or by completing the following steps:

- Log into EESOH-MIS; Select the "Reporting" option; Select "Hazardous Waste" to generate the Waste Site Waste Stream Summary Report

Installation Supplement – Waste Inventory

No additional requirements.

7.2 Waste Identification

The HW Manager determines the nature of waste based on a detailed qualitative analysis of the regulated waste generating process, associated Safety Data Sheet (SDS) information, and coordination with

generating activity personnel involved in the use of hazardous materials. If uncertainties about a waste stream exist, the HW Manager pursues waste stream sampling and analysis IAW the Waste Analysis Plan (WAP).

The WAP details the wastes that have been evaluated and analyzed, a description of the testing and analytical methods used, the HW sampling methods used, the location of samples taken for analysis and frequency, sample documentation, sample quality assurance and quality control procedures, and sample request procedures.

Generator knowledge and the results of the WAP are used to minimize waste re-characterizations to those instances where a process change has occurred or the waste stream is highly variable.

Installation Supplement – Waste Identification

WAP

The installation WAP is included in Appendix A to this HWMP.

Profile Sheets

For each waste stream identified that is disposed of through DLA-DS, an AF Form 1930, or equivalent format, will be completed and a copy given to DLA-DS. The AF Form 1930 may also be used for waste streams disposed of through contractors or a contractor prepared profile. A copy of all profile sheets will be reviewed for currency at least annually and updated as necessary. Update of profile sheets will be accomplished by 72 ABW/CEIEC with input from UECs as required.

7.3 Container Management

Container management procedures are as follows:

- Containers storing HW must be in good condition and meet permit, transportation and other applicable requirements. "Good condition" means there should be no severe rusting, no sharp-edged creases or dents, no bulging heads and no severe structural defects.
- Ensure that the waste material will not react with the container itself.
- Use plastic or plastic-lined steel drums to safely store corrosive wastes.
- Immediately transfer the contents of a leaking container to another container or over pack into a salvage drum.
- Containers with free liquid or drum contents on top must be cleaned or over packed in the case of a leak.
- Containers must remain closed at all times except when adding or removing waste. Adequate headspace must be maintained at all times when filling a container to account for content expansion.

Installation Supplement – Container Management

Container Management

- Whenever possible use serialized containers 55 gallons or less in capacity from the HWMF with HWTS generated labels.

- Container (or liner) must be compatible with the waste being contained.
- Container will be under control of the waste manager of the generating organization.
- Each container will be designated for waste generated by a specific process. No other wastes or materials will be placed in a designated container. Contents of container must agree with Profile Waste Stream for which the container was issued.
- Container must not be handled or moved from place-to-place in a manner that may cause them to rupture or leak.
- Never fill container holding liquids to more than 90 percent capacity (four inches from top for a 55-gallon drum).
- Never fill containers beyond manufactured weight capacity.
    - Container capacities vary by size, material, and manufacturer. Contact HWMF at 734-3285 for maximum weight, if maximum weight is a concern.
- A funnel may be left in a container bung if it is attached as an integral part of the container (such as with screw threads) and it has a lid that can be closed and latched.
- Container holding hazardous waste must be placed vertically and be separated from the floor by pallets, enviropacs, wheeled dollies or other means.
- All sealing mechanisms (locking rings, bung caps, bolts and nuts) will be installed and tightened prior to turn-in to the HWMF.
- Once the container is filled, the IAP manager must ensure that the Filled Date is marked on the container's label with an indelible marker.
- The IAP Manager must ensure that the filled container is returned to the HWMF within three (3) calendar days of the filled date. Plan ahead for three-day weekends!
- Containers will be bonded when flammable liquids are transferred from one metal container to another metal container.
- If solids containing flammable liquids are to be placed in plastic bags or directly into plastic containers, then the plastic bags or plastic containers must be anti-static.
- Containers are still considered to be in "Good" condition as long as there are no major dents or creases, severe rusting, or damaged seals that threaten the structural integrity of the container. Minor dents, scratches, surface rust, and touch-up paint may be present.
- At no time may containers be moved from one IAP to a separate IAP.

7.4. Labeling and Marking

Containers used for the accumulation and transportation of HW are properly labeled IAW applicable laws and regulations.

- Each container is properly marked and labeled from initial accumulation area to HWAS to disposal/turn-in. The waste-generating activity ensures that the label on each waste container is clearly visible for inspection. During accumulation at an IAP, HW containers are marked with the following:
    - The words "Hazardous Waste"

- A description of the contents of the container
- The hazards associated with the waste

Once an IAP accumulates more than 55 gallons of HW (or 1 quart of acute HW), the IAP site manager marks the container with the date on which 55 gallons (or 1 quart of acute HW) is exceeded, and removes the excess of 55 gallons (or 1 quart of acute HW) within three days.

HW containers 110 gallons or less that are shipped offsite are marked with the following:

- "Hazardous Waste – Federal Law prohibits Improper Disposal. If found, contact the nearest police or public safety authority or the U.S. Environmental Protection Agency"
- Generator's name and address
- Generator's EPA Identification Number
- Manifest tracking

These markings are:

- Durable
- In English, and/or appropriate host nation language
- 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
- Located away from any other markings that might substantially reduce visibility or effectiveness

UW, or a container in which a UW is contained, is labeled and marked clearly with the date the material became a waste and the name of the waste, as described below:

- UW batteries must be labeled with any one of the following phrases: "Universal Waste-Battery(ies)," or "Waste Battery(ies)," or "Used Battery(ies)
- UW thermostats must be labeled with any of the following phrases: "Universal Waste-Mercury Thermostat(s)," "Waste Mercury Thermostat(s)," or "Used Mercury Thermostat(s)
- UW pesticides must be labeled with any of the following phrases: "Universal Waste-Pesticide(s)" or "Waste-Pesticide(s)
- UW lamps must be labeled with one of the following phrases: "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)

Installation Supplement – Labeling and Marking

Ensure all containers obtained from the HWMF are correctly labeled. It is the responsibility of the using organization to ensure the container is correctly labeled. If a container is issued under one container but is needed for another waste stream, the using organization shall contact the HWMF for a new label. The using organization is responsible for coming to the HWMF to obtain the new label. If there are container compatibility issues between the waste streams, a new container will be issued.

7.5 Accumulation Area Management

Accumulation area management procedures are as follows:

1. IAPs are used to accumulate up to 55 gallons of HW or 1 quart of acute HW.

2. If HW or acute HW are accumulated in excess of these amounts, the generator marks the container with the date the amount was exceeded and transfers the container to a HWAS or TSDF within 3 days.
3. HW is accumulated in a HWAS for up to 90 days for a LQG, or 180 days (270 days if waste has to be shipped over 200 miles) for a SQG.
4. HWASs comply with all applicable federal, state, local and FGS accumulation requirements, including proper waste segregation.

Installation Supplement – Accumulation Area Management

Approval to Accumulate Hazardous Waste and Receive Containers

RCRA, Tinker AFB's RCRA Permit and Air Force instructions require hazardous waste to be tracked from the point of generation to ultimate disposal, or cradle-to-grave. Because improper management of hazardous waste could result in serious consequences to Tinker AFB, and to the individuals involved, any accumulation must be approved through the following procedures:

Requesting Approval to Accumulate Waste or Modify Existing Waste Streams

- The generating shop will contact their organization's UEC and identify the requirement for creation or modification of a waste site. UEC will contact the Hazardous Waste Program Manager (HWPM) to see if a new IAP must be established or if any waste can be incorporated into an existing waste stream. For creation of a new IAP, UEC will provide the following items to HWPM:
    - Name and symbol of generating organization
    - Hazardous Materials Shop Code for generating shop
    - Building and post location of potential IAP
    - Primary and Alternate Waste Site Managers names and phone numbers.
    - Description of waste that will be generated including volume and frequency
    - Listing of hazardous materials approved for use by the generating activity
    - Description of the process generating the waste
- HWPM will review all provided information, request additional information as deemed necessary. HWPM will then enter all information into HWTS, assign appropriate profiles and container types, and will respond to UEC with approval/disapproval to accumulate waste. All approved waste accumulation sites will be listed in Tinker AFB's HWTS.

Collection Point (CP) Operating Requirements

Some organizations at Tinker AFB manage a particular process at several different locations, each of which generates only small amounts of the same hazardous waste. This management method provides for small containers, 10-gallons or less in size, to collect those wastes at each location and then be emptied into a centrally located IAP, controlled by that organization, at the end of each work shift or when full, whichever comes first. Basic IAP rules apply to CPs such as: a sound closed container, labeled with contents, isolated if incompatible and operator controlled.

- CPs are to be used only where small amounts of waste are being generated continuously and it would be unduly burdensome to interrupt the work to transport that waste to the IAP.
- Small closeable containers of 10-gallons or less are to be used.

- A conveniently accessible IAP must be designated as the receiving site for the collection point.
- The contents of containers must be transferred to the designated IAP at the end of each work shift, workday or when full, whichever comes first.
- The contents of the container or the words "Hazardous Waste", as appropriate, will be identified on the container with easily readable letters.

IAP Operating Requirements:

This management method is based on the EPA Regulations at 40 CFR 262.34(c)(1) and (2). Each container being used to accumulate hazardous waste is considered an IAP, unless it is a CP. Most of the hazardous waste generated by normal, daily operation is initially collected and managed in a serialized 55-gallon, DOT approved drum. Management procedures for IAPs include the following:

- IAPs must be under the direct control of the generator and at or near the point of generation.
- All IAPs must be at least 50 feet inside Tinker AFB boundaries.
- If IAPs have latching container lids and are not under direct control of the generator, securing devices (such as locks) must be used.
- An Emergency Response Plan and Operational Checklist must be prominently posted at the IAP location.
    - An Emergency Response Plan will contain spill procedures that must be activated in the event of a spill. See Appendix C for an example Emergency Response Plan.
    - An Operational Checklist must list all items that will be visually examined by IAP Manager daily. The Operational Checklist may also be used as a guide for weekly inspections. See Appendix C for an example Operational Checklist.
- Weekly inspections shall be performed and documented on Tinker Form 487 per section 7.8 of this plan. See Appendix C for example Tinker Form 487.
- Secondary containment may be required if inspections reveal a need for more control. See TAFBI 32-7006, Secondary Containment Requirements.
- When the drum has been filled, operators must seal the drum, write filled date on label and have the container moved to the HWMF within three days. See Section 7.7 for filled container turn-in procedures.
- At no time may 2 containers of the same waste stream be actively accumulating.

Waste Site Operating Requirements

Multiple IAPs are collocated in a single storage area. The generator must ensure that each drum is dedicated to a distinctly different waste stream. All approved waste sites will be given a unique Waste Site number by the HWPM and will be listed in the HWTS. All IAP Operating Requirements apply in addition to the requirements below:

- No more than four 55-gallon drums will be placed on a single pallet.
- Incompatible wastes are separated from contact by a dike, berm, wall or other device.

<u>Closure of Waste Site:</u>

- When operations cease at a Waste Site, all contaminated equipment, structures and soil will be properly disposed of or decontaminated.
- 72 ABW/CEIEC will be notified in writing at least one month prior to closure of a container operation and be supplied with a closure plan at least three months prior to closure of a tank operation.

Immediate Removal Location (IRL) Operating Requirements:

Several operations take place at Tinker AFB where large amounts of hazardous waste are generated in a very short span of time. Examples include: cleaning out of a process tank where the operable solutions have become unusable or sludge has precipitated from the solutions, cleaning of paint application or stripping facilities where sludge has collected, bulk filter changeouts, and remediation sites where contaminated soil and debris have been displaced from their normal situation. The solutions, sludge, soil or debris may be loaded directly into a tank truck or gondola and transported to an off-site facility. Alternatively, the waste may be placed in containers and moved to the HWMF.

- IRLs must follow IAP Operating Requirements above.
    - Only exception is IRLs do not have Weekly Inspection requirements due to never being on-site longer than three calendar days.
- All bulk and non-bulk containers must be removed from the IRL within three calendar days after having waste placed into the containers.
- When enclosed trailer is used for transport of bulk filter changeouts, all filters must be contained within closed cubic yard box liners, then placed within the trailer with the doors securely closed, and transported to HWMF for consolidation within 24 hours of removal.
    - Cubic yard box liners will be provided by the HWMF.

Hazardous Waste Accumulation Site (HWAS) Operating Requirements:

This management method is based on the regulations at 40 CFR 262.34(a), and as a large quantity generator of hazardous waste, Tinker AFB's HWAS are less than 90-day storage locations. The most active HWAS at Tinker AFB is the HWMF. Its purpose is to control the distribution of containers, serve as a central assembly location for containers from IAPs, analyze contents of containers to ensure proper labeling and prepare documents for turn-in of waste containers to the PSF. Other HWASs at Tinker AFB include tanks in the Chemical Cleaning and Plating Shops and bulk storage containers for IWTP, wet-blast, and remediation wastes that that cannot be removed immediately.

<u>HWAS for Drums (HWMF):</u>

<u>Safety and Preparedness:</u>

- A waste that is incompatible with any other waste or material that is placed such that contact between them might occur during a mutual spill must be separated or protected from contact by a dike, berm, wall or other device.
- Spill control and decontamination equipment in good working order, including protective clothing, will be available for immediate use, as well as water at sufficient volume and pressure to supply required equipment.

- All required emergency equipment must be tested and maintained to ensure its reliability during an incident.
- Each HWAS will prepare a Site Specific Contingency Plan (SSCP) that must be included in the Installation's Spill Prevention Control and Countermeasures Plan. The individual SSCPs must include the following items:
    - Names and phone numbers of HWAS Manager and UEC.
    - Map with preferred evacuation route in case of fire, explosion, or hazardous waste emergency.
        - Included on the map will be locations of communications equipment, fire or emergency alarms, fire and spill control equipment, and decontamination supplies.
    - List of all equipment, alarms, and supplies shown on the map along with a description of each items' capabilities.
- A copy of the SSCP will be posted at or near emergency communication devices.
- Emergency Response Plans will be posted in prominent locations in the working area (See Appendix C for Example).
- A freeze-proof emergency eye wash and deluge shower will be located within the immediate work area so that they can be reached in the event of a harmful exposure at the site.
- Outdoor areas where flammables are managed will be clearly marked and signs indicating "No Smoking within 50 Feet" will be prominently posted.
- Sufficient aisle space will be provided and maintained to allow unobstructed movement of personnel and spill or fire control equipment to any part of the site. The following rules are based on AFI 91-501, *Air Force Consolidated Occupational Safety Standard, Chap 22* to AFI 91-203, *Air Force consolidated Occupational Safety Instruction, Chap 22*.
- Outdoor storage container piles will be separated by at least five feet. Also, within 200 feet of each container, there will be a 12-foot wide access way to permit approach of fire control apparatus.
- Indoor storage main aisles will be at least eight feet wide and side aisles at least four feet wide. No container will be more than 12 feet from an aisle. All container piles will be separated by at least four feet.
- The allowable height of container piles is a function of the flammability of the material being stored.

<u>HWAS Manager Responsibilities:</u>

- Maintain an inventory for containers that may be generated in HWTS for HWAS. Inventory must be visually verified once per workweek.
- Perform both daily and weekly inspections and properly document. See section 7.8 for requirements.

- Ensure no HW remains on-site longer than 90 days. Containers will be transferred to PSF within 90-days.
- Ensure that communications equipment, showers, eyewashes, PPE, spill clean-up tools, internal alarm, fire suppression equipment and decontamination equipment are operational at all times and that SSCP is posted and current.
- Activate Spill Plan as necessary if spills or leaks occur.
- Immediately notify HWPM if compliance issues arise.
- Ensure that immediately upon arrival at the HWAS, the Accumulation Start Date is annotated on the container with an indelible pen.
- Insure that proper personal protective equipment (PPE) is worn when opening sealed containers for testing or transfer of contents between containers.

Procedures for Tanks:

- Each tank will be marked with the following information in easily readable letters on an easy to view part of the above ground area of the tank, or for an underground tank, on an aluminum or plastic sign placed above the tank:
    - Contents (include percentages if mixture).
    - Functional address symbol.
    - HW Manager's name and telephone number.
    - The words "HAZARDOUS WASTE."
    - The "Accumulation Start Date."
- Each tank cap must be closed except when being filled, drained or inspected by authorized personnel.
- HW will not be placed in a tank if it is incompatible with the waste previously held unless the tank has been completely rinsed between uses. The rinsing must be recorded on Tinker AFB Form 485, Accumulation Site Inspection Checklist (Tanks) and TINKER AFB Form 132, Tank Inventory Log for Accumulation Sites. See Appendix C for example forms.
- The appropriate controls and practices must be used to prevent spills and overflows from tank or secondary containment systems. These include at a minimum:
    - Spill prevention controls (check valves, dry disconnect couplings).
    - Overfill prevention controls (level sensing devices, high-level alarms, automatic feed cutoff or bypass to a standby tank that exceeds the volume of the top two feet).
    - Maintenance of sufficient freeboard in uncovered tanks to prevent overtopping by wave or wind action or by precipitation.
- An ignitable or reactive waste can be placed in a tank only if:
    - It is managed in a way that it cannot ignite or react.
    - The tank is used solely for emergencies.
- Existing tank systems that do not have a secondary containment system must have a written assessment completed and certified by a professional engineer attesting to the tank system's

integrity. This assessment must determine that the tank system is adequately designed and has sufficient structural strength and compatibility with the wastes to be stored to ensure that it will not collapse, rupture or fail. At a minimum, secondary containment systems for tanks require the following:

- Constructed of or lined with materials that are compatible with the wastes to be placed in the tank system.
- Sufficient strength and thickness to prevent failure due to pressure gradient, physical contact with the waste to which they are exposed, climatic conditions, the stress of installation and the stress of daily operation.
- Placed on a foundation or base capable of providing support to the secondary containment system and resistance to pressure gradients above and below the system and capable of preventing failure due to settlement, compression or uplift.
- A leak detection system that is designed and operated to detect the failure of either the primary and secondary containment structure or system or any release of hazardous waste or accumulated liquid in the secondary containment system within 24 hours.
- Sloped or otherwise designed or operated to drain and remove liquids resulting from leaks, spills or precipitation. Such liquids must be removed within 24 hours.
- Sufficient capacity to contain 100 percent of the volume of the largest tank within its boundary.
- One or more of the following devices:
  - A liner (external to the tank).
  - A vault.
  - A double-walled tank.
  - An equivalent device approved by CEIEC.

- Waste tanks must be drained and transported off-base to a disposal facility within 90 days of the Accumulation Start Date. See Section 7.7 for turn-in procedures.

<u>Procedures for a New Tank System and Components:</u>

- For installation requirements for new tank systems and their components, the generator will contact their UEC and provide all available tank information prior to use as a waste tank.
- The UEC will provide all information to the HWPM requesting determination of all requirements.
- The HWPM will ensure that all requirements of 40 CFR 267 Subpart J are met.

<u>Closure of a Hazardous Waste Accumulation Site</u>

- When operations cease at an HWAS, all contaminated equipment, structures and soil will be properly disposed of or decontaminated.
- If tank systems are involved, a closure plan will be submitted to 72 ABW/CEIEC describing how the tanks, containment systems, associated equipment and surrounding soil will be disposed of or decontaminated.

Permitted Storage Facility (PSF) Operating Requirements:

At Tinker AFB, 72 ABW/CEIEC operates the PSF for long-term storage of hazardous waste. The need for long-term storage is based on the large volume and variety of hazardous wastes generated at the base. Over 1200 tons of hazardous waste are generated each year, about one-half of which is cycled through DLA-DS. Analysis, labeling and contracting for disposal of that volume of hazardous waste would be very difficult within the 90 days allowed at an HWAS. The PSF allows storage of large enough quantities of specific waste streams to award efficient, cost effective contracts for disposal, or to find recyclers willing to purchase the large quantity of raw material at premium prices.

Operating Permit

- The "Part B" RCRA Operating Permit that is jointly issued by EPA and ODEQ controls operation of PSFs. Because the facility is located entirely on Tinker AFB property, it operates under the same EPA ID number as Tinker AFB: OK1571724391. DLA-DS is the operator of the PSF. Modifications to the "Part B" permit will be coordinated through 72 ABW/CEIEC.
- The "Part B" Permit describes in detail the location and construction of the permitted facilities. Containers are the only holding devices allowed by the permit.
- Refer to the "Part B" Permit for hazardous waste management and handling requirements at the permitted storage facility.

7.6 Transportation

The HW Manager has overall responsibility for the transportation of HW from an IAP to an HWAS, and from an HWAS to the disposal facility. The HW Manager ensures:

- All transportation over public highways is conducted IAW applicable DOT requirements.
- Containers are DOT approved.
- Transporters have the appropriate training.
- Uniform Hazardous Waste Manifest are prepared for offsite transportation.
- All necessary documentation has been completed and records are maintained IAW all applicable federal, state, local and FGS requirements and the AF Records Disposition Schedule.

Installation Supplement – Transportation

Off-Site Tracking of Hazardous Waste Shipments

This section is concerned with the preparation of containers for off-site shipment of hazardous waste and the tracking procedures to be used after shipment to a designated facility. It completes the trail of records that previous parts have followed .

Container Selection

All containers shipped off-site must meet DOT specifications for the waste contained. See 49 CFR 173.

Container Preparation

Before containers are transported off-site, they will be marked in accordance with 49 CFR 172 Subpart D, 40 CFR 262.32(b), and labeled in accordance with 49 CFR 172 Subpart E.

Shipment Documentation (Hazardous Waste Manifest)

A manifest must accompany a shipment of hazardous waste being transported on a public highway. A manifest is the shipping paper for hazardous waste. All generators are required to use the Uniform Hazardous Waste Manifest. Some states have additional requirements beyond the Uniform Hazardous Waste Manifest. Any additional state requirements must also be met.

Responsibility for Originating the Manifest

Federal and State regulations assign responsibility for originating or signing manifests on the generator. At Tinker AFB, the 72 ABW/CEI Division has been delegated to act as generator for all base activities. The 72 ABW/CEI Division has further delegated authority to originate manifests as follows:

- DLA-DS originates manifests for all shipments through the DLA-DS disposal contract.
- All other organizations and their contractors needing to ship hazardous waste off base shall coordinate with 72 ABW/CEIEC, 734-3278.
- DLA-DS will request delegation from Installation Management Division for their personnel who originate manifests.
- All personnel who receive delegation of authority to sign Hazardous Waste Manifests and LDR forms must maintain currency with hazardous waste training requirements. They must also maintain currency with DOT training requirements outlined in 49 CFR 172 subpart H which requires refresher training at least once every three years.

Tracking the Manifest:

- The generator's copy of the manifest will be delivered to 72 ABW/CEIEC within two hours after the initial transporter accepts shipment. For after duty hours the manifest will be delivered to the Fire Department, if possible, or held until the next duty day and delivered to 72 ABW/CEIEC.
- 72 ABW/CEIEC will monitor return of manifest signed by designated facility.
- When copy of manifest signed by designated facility is received, place with generator's copy in files and maintain IAW Section 6.0 of this plan.

Exception Report:

- If a copy of the manifest signed by the designated facility is not received within 35 calendar days after acceptance by the initial transporter, the transporters, the designated facility and/or others will be contacted to verify the status of the waste.
- Submit Exception Report (40 CFR 262.42) will be sent to ODEQ if manifest copy signed by designated facility is not received within 45 calendar days after initial transporter accepts the waste shipment.
- Exception Reports will be kept on file IAW Section 6.0 of this plan.

Shipment Documentation (LDR Notification and Certification):

- If the waste being shipped does not meet applicable treatment standards set forth in Subpart D of 40 CFR 268 or if it exceeds prohibition levels in 40 CFR 268.32 or RCRA 3004(d), the receiving facility must be notified in writing of the appropriate treatment standards and other information set forth in 40 CFR 268.7(a)(1).
- If the waste being shipped is subject to restrictions but can be land disposed without further treatment, the receiving facility must be notified as above and also be provided with a written certification stating that the waste meets applicable treatment standards as outlined in 40 CFR 268.7(a)(2).
- The same person who prepares the manifest shall prepare the above described notification and certification documents. The documents shall accompany the manifest to the designated facility. A copy will be filed with the manifest signed by the designated facility for record keeping purposes.

Certificate of Disposal (COD)

- This document certifies that the waste was treated, or disposed of in a proper manner, where, when and by what method. It has become unfeasible to require all hazardous waste disposal contracts to require CODs be delivered to 72 ABW/CEI.

7.7 Turn In/Disposal

The turn in procedures contained in DoD 4160.12-M. DLA Disposition Services are followed. In the event an alternate route for disposal is needed, a waiver will be obtained with proper justification and approval.

Containers are inspected, prior to turn-in, to ensure that container management procedures have been followed and that containers are properly labeled and in good condition. If the container is not in good condition, contents are transferred to a container that is in good condition.

Installation Supplement – Turn In/Disposal

Procedures for Turn-In of Hazardous Waste by Generators

Container Turn-in through the HWMF

Turn-in of Waste in 55-gallon or Less Drums Obtained from the HWMF

- When a container becomes full, the generator shall mark the Filled Date on the container label, using an indelible pen, and on TINKER AFB Form 487, *Initial Accumulation Point Management Aid*, Part II. Sealing mechanisms shall be properly installed and tightened.
- If the HWMF drum pick-up service is used, the generator must input the pick-up request using the HWTS and specify which of their serialized containers are full and awaiting pickups. As long as the pick-up request is entered prior to 1230 hours the HWMF will pick the container up same day. Requests after this time will be performed same day if time permits or will be first on the list for the following business day.

- The container must be moved to the HWMF within three calendar days after the Filled Date between the hours of 0700 and 1500 on weekdays. Properly trained personnel, using safe handling practices and proper equipment, will accomplish movement of containers.
- If a replacement drum is needed, the generator will request delivery of a new container using the hazardous waste tracking system.
- Prior to turning in a container that has been used during an emergency clean-up operation, notify the UEC, 72 ABW/CEIEC and the HWMF that the container is not labeled correctly and/or is not serialized. Provide all information regarding the contents that is available to the HWMF.

Turn-in of Wastes not in Drums Obtained from the HWMF

NOTE: *The intention of this paragraph is for unusual circumstances such as spills or other unexpected generation of waste.*

- Generating shops will provide all available information to their UEC.
- UEC will provide all information to the HW Program Manager for waste characterization and turn-in procedures.
- Once instructions are provided by HW Program Manager, UEC will provide the instructions to the generating shops and will provide assistance as needed to ensure proper turn in.

Bulk Removal of Hazardous Waste

For removal of large quantities of waste in tank trucks, gondolas, large containers or other such devices, the generator should:

- Work with their UEC to ensure that all information needed to properly dispose of the waste is provided to the HWPM.
- The HWPM will work through available disposal avenues to ensure that bulk waste is removed in a timely manner.

Hazardous Materials Disposal Procedures

Maximum use of hazardous material must be made before sending it to DLA-DS for disposal. Excess hazardous materials that are in original, unopened packages in good condition must be handled as follows:

Transfer through Tinker AFB Channels:

- Contact Hazardous Material Management Program (HMMP) to determine if authorized users at Tinker AFB or other DoD facilities could use the material.
- If another user is available, follow HMMP guidance for transfer of material. If an alternate user is not available, proceed with Hazardous Materials Inventory Disposition procedures listed below.

Request Disposition of Excess/Expired Materials through HWTS:

- Obtain Hazardous Material Container ID #'s from the HWTS issued container labels. Using the HWTS submit a request for disposition of the materials.
- Once turn-in instructions are provided by HWPM, the generators will proceed with turn-in instructions in a timely manner. Generators may be required to present a copy of turn-in instructions at time of disposition at HWMF.
- HWPM will determine if there are potential sales opportunities through DLA-DS's Reutilization, Transfer, Donation, and Sales (RTDS) Program.
- If materials meet requirements of RTDS program, the HWPM will give first priority to the materials entering this program to divert as many materials as possible from Tinker AFB's waste generation.
- If materials do not meet requirements, the materials will be handled as wastes.

Disposal of Special Category Wastes:

Used Batteries. Nickel-Cadmium, Mercury, Lithium-Ion, Magnesium, Lead-Acid, Silver and other batteries may be managed as Universal Wastes according to 40 CFR 273.

- Battery Recycling. Nickel-Cadmium, Lithium-Ion, Lead-Acid and Nickel Metal Hydride batteries may be turned in to the HWMF at B808. To do so each organization must segregate batteries by type, cover the terminals such that they may not come into contact with any conductive surfaces (tape, plastic cap, plastic bag, etc.), and bring them to Bldg. 808 (HWMF) between 8am and 2pm on normal business days to be accumulated for recycling.
- Small Alkaline Batteries. Small, non-rechargeable, alkaline batteries (AA, AAA, C, D, etc.) are not regulated as hazardous waste according to the EPA. They are only considered solid waste and may be disposed of in a solid waste dumpster. Do not collect these batteries separately. Discard as generated.
- Other Batteries. All other battery types not listed above must be turned in using the Hazardous Materials Disposal Procedures listed above.

Medical and Pharmaceutical Waste. Coordinate with Medical Group (72 MDG) and Bioenvironmental (SGPB) for disposal instructions.

Abandoned Waste. The discovery of an unlabeled or otherwise unidentified container or other accumulation of waste will be handled as follows:

- Report discovery to UEC responsible for that industrial area who will attempt to find the owner within that organization.
- If unable to find the owner of the waste, the UEC will report the discovery to 72 ABW/CEIEC who will conduct a wider search and/or determine available disposal avenues. Once a disposal avenue is obtained, 72 ABW/CEIEC will provide instructions to the UEC for containerization and disposal.

Mixed Waste. This waste must be managed in accordance with both EPA regulations, AFI 40-201 Radioactive materials Management, and the Air Force Radioactive and Recycling Disposal (AFRRAD) Office.

- Control the waste while on site using the appropriate management method.
- Coordinate disposal with the Base Civil Engineer and the Installation Radiation Safety Officer (IRSO) at Bioenvironmental Engineering, who will in turn, coordinate with the AFRRAD office.
- Ensure that the shipping manifest, LDR forms, AFRRAD forms and other tracking procedures are properly completed.

Polychlorinated Biphenyl (PCB) Waste. This waste must be managed in accordance with the Toxic Substances Control Act (TSCA) and EPA regulations at 40 CFR 761. Items removed for disposal must be turned in to the HWMF within 6 months of accumulation start date.

- Control PCBs and PCB items in DOT approved containers. Place a PCB label on container and mark the date of first accumulation on the label. Ensure all items and quantities contained are listed on the label.
- Light ballasts that are not marked "PCB Free" will be considered as containing PCBs.
- Contact 72 ABW/CEIEC at 734-3278 to coordinate proper handling of PCB waste.
- Contact HWMF at 734-3285 to schedule a turn in time and deliver the PCB container to Bldg. 810.

Paint Booth Contract Services. Contractor will obtain DOT boxes from HWMF at Bldg. 808 prior to servicing a paint booth. Contractors will place paint filters and paper removed from paint booth in the boxes and notify HWMF where to pick up the boxes and which organization was serviced.

7.8 Inspection

Inspection processes fulfill the "Check" function of the EMS "Plan, Do, Check, Act" cycle. HWASs are inspected at least weekly to ensure proper accumulation and container management. RCRA Part B permitted storage facilities are inspected according to the inspection schedule established in the permit. All other inspections occur IAW AFI 90-201, *The Air Force Inspection System* and the Commander's Self Inspection Program. Inspection records are maintained IAW the Recordkeeping and Reporting section of this plan.

Installation Supplement – Inspection

Collection Points (CP):

- The generating unit supervisor will include CPs in a daily operational checklist.
- Supervisors will ensure that containers are all emptied when full or at end of each shift, whichever comes first.

Initial Accumulation Point Inspections:

IAP Manager will:

- Perform written weekly inspections using TINKER AFB Form 487, *Initial Accumulation Point Management Aid*. Part I of TINKER AFB Form 487 may be used to document inspection of the management site but an inventory of each container must be maintained in Part II. Should Form 487 Part II become full, the IAP manager may generate a continuation form and will keep the continuation form attached to the original Form 487. Weekly denotes once per working week.
- Use IAP operational checklist that is required to be posted at each IAP as the guide to perform inspection of IAP containers. See Appendix C for example operational checklist.
- Inspection records will be managed IAW section 6.0 of this plan.

HWAS:

HWAS Manager will:

- Perform daily inspections to ensure HWAS and all containers are in good condition. An operational checklist shall be posted to assist in main inspection criteria.
- Conduct written weekly inspections for containers on TINKER AFB Form 486, *Accumulation Site Inspection Checklist (Containers)*, or TINKER AFB Form 485, *Accumulation Site Checklist (Tanks)* as appropriate.
- Inspection records will be stored on-site IAW section 6.0 of this plan.

PSF:

PSF Manager will:

- Conduct written weekly inspection for containers and the facility in accordance with Tinker AFB RCRA Part B Permit.
- Inspection log will be maintained on-site IAW section 6.0 of this plan.

7.9 Waste Minimization

HW manifests include certification that a waste minimization program is in place. Below are key activities and processes that are performed as part of waste minimization and pollution prevention efforts:

- Hazardous material process authorization and hazardous materials management processes –Each process involving use of hazardous materials and generation of waste streams is evaluated and authorized. Process authorization is performed through EESOH-MIS. The HW Manager, HMMP Team and the generating activity make a final determination whether or not the results of the process authorization effort are sufficient to reduce waste toxicity and volume
- Procurement and use of minimal quantities – When a material with environmental risk must be used, minimal quantities are procured to minimize surplus quantities and shelf life exceedances
- Recycling – When the use of hazardous materials is unavoidable, excess or waste material is evaluated for reuse or recycling
- Environmental action planning – Environmental action plans (EAPs) are developed and maintained as part of the overall EMS. EAPs are management plans that translate environmental objectives and targets into actionable plans. Waste minimization efforts are considered during development of EAPs

Installation Supplement – Waste Minimization

No additional requirements.

7.10 Preparedness and Prevention

Preparedness and prevention practices are described in emergency prevention and response plans available through the references section of this plan.

Installation Supplement – Preparedness and Prevention

Spill Discovery and Initial Response Procedures

Any person recognizing an oil, hazardous substance, hazardous material or hazardous waste spill shall immediately:

- Contain the spill, if it can be done safely.
- If spill cannot be contained, activate TAFB Plan 19-2, *Oil and Hazardous Substances Integrated Contingency Plan*.
- Activate emergency alarm system, if any.
- Evacuate the area, if warranted by the type of spill.
- Make sure that all employees shut down their operation and secure their equipment.
- Call the fire department at 911, and give the type, location and size of spill and the name of the individual reporting.
- Inform the Supervisor, Section Foreman or Chief.
- Contain the spill, if it can be done safely.
- Perform cleanup operations within the unit's capabilities and assist the fire department upon its arrival.
- The supervisor will conduct a roll call of employees and report status to fire department "Incident Commander."

7.11 Waste Specific Procedures

Waste-specific procedures are included in the installation supplement below or maintained as separate operational controls outside of this plan.

Installation Supplement – Waste Specific Procedures

Empty Container Handling Procedures

Most containers that previously held materials used in various operations at Tinker AFB can be disposed of as non-hazardous waste if they meet the definition of "empty" in 40 CFR 261.7. In view of base-wide efforts toward waste minimization and to reduce disposal costs, the procedures outlined below will be followed. While the containers meet the EPA definition of "empty" they must still be given special handling consideration because large numbers of them are frequently accumulated in one place. This increases the threat of fire and release of a toxic substance. The Empty Container Processing Facility (ECPF) in Building 3125 has been established to facilitate these procedures.

For a container to meet the EPA definition of "empty", chemicals must not be able to be drained from a container via a normal means (pumped, poured, sprayed, etc.). If chemicals cannot leave the containers through normal means then the residual must not be greater than 1 inch in depth or 3% of the container's

total volume, whichever is less. If the containers fail to meet the definition of "empty" then they must be handled as hazardous waste.

Empty Container Processing:

- All empty 5 to 55 gallon metal and plastic containers will be labeled with a six inch by six inch vinyl "EMPTY" label by generating organization. The correct stock number and chemical name of the material previously held if not legible on the containers, generating functional address symbol and telephone number will be written on the label with an indelible ink marker. The drums shall be placed on pallets, four drums per pallet, and taped together to prevent falling. Generator will call 734-3285 to arrange for container pick up by the HWMF contractor.
- Empty containers less than five gallons in size shall be double-bagged by the organization and placed at the normal waste collection point. The organization shall then contact the HWMF for pick-up. Generator shall ensure that these containers are bagged in such a manner to prevent any drips or leaks.
- Empty aerosol cans shall be accumulated separately in devices labeled "Empty Aerosol Cans" then delivered into a designated container at the HWMF. Personnel at the HWMF shall puncture the aerosol cans in a manner such that the contents are expelled into a 55-gallon hazardous waste accumulation device. The cans will then be air-dried and placed into a 55-gallon drum which will be crushed and sent out to be recycled.
- Empty hand-held compressed gas cylinders will be accumulated separately in accumulation devices labeled "Empty Hand-Held Compressed Gas Cylinders." These shall be delivered into a designated container at the HWMF. These shall be depressurized and sent out to be recycled.
    - Partially full aerosol cans and gas cylinders are handled as excess material. See section 7.7 of this plan for turn-in of excess/expired materials.

Universal Waste Lamp Management Procedures

Universal Waste Lamps are defined as the bulb or tube portion of an electric lighting device designed to produce radiant energy, most often in the ultraviolet, visible and infrared regions of the electromagnetic spectrum. Examples include fluorescent, high intensity, neon, mercury vapor, high-pressure sodium and metal halide lamps. Refer to 40 CFR 273.5 and 273.9 for additional information.

Accumulation Procedures for Waste Lamp Accumulation Sites (WLAS)

For each directorate or other major organization at Tinker AFB that generates UW Lamps, the commander of that organization and its UEC shall choose one or more convenient WLAS and appoint a Waste Lamp Manager for the site. These sites shall be coordinated with the HWPM. All personnel in that organization shall be notified about the purpose and location of these sites.

- All approved WLAS will be listed in HWTS with the appropriate Waste Lamp Manager.
- All types of UW lamps generated by an organization shall be brought to the WLAS and placed in an appropriate container.
- A "Universal Waste Lamp Tracking Log" (template available from 72 ABW/CEIEC) shall be kept in the vicinity of each WLAS.

    - An "Accumulation Start Date" shall be posted on the tracking log reflecting the date the first lamp is placed in the WLAS. The "Clean-Out Date" shall reflect the date lamps and debris are cleaned out and moved to the Waste Lamp Consolidation Site (WLCS) at Building 808.
    - The Waste Lamp Manager will maintain completed "Universal Waste Lamp Tracking Logs" in an onsite file for at least three years.
- The Waste Lamp Manager may use the HWTS to request pickup of full containers and drop off of new empty containers.
    - The Waste Lamp Manager may use manufacturer's containers if used lamps are kept segregated from new lamps and the container is managed in the same manner as containers provided by the HWMF.
- Containers for accumulating UW Lamps shall provide protection from breakage and be appropriate to the type of lamp being accumulated.
- All containers (even manufacturer's containers) holding UW lamps must be labeled with one of the following phrases: "Universal Waste—Lamp(s)," or "Waste Lamp(s)," or "Used Lamp(s)
- Once a lamp is placed in a container, the date must be written on the label with an indelible pen.
- The Waste Lamp Manager is responsible for ensuring that the container is turned in to the WLCS within six months of the accumulation start date or when the container is full whichever comes first. The container may be transported by the generator to building 808 between the hours of 8:00am and 2:30pm Monday through Friday (excluding holidays), or it may be scheduled for pick up through the HWTS.

<u>Waste Lamp Consolidation Site Functions</u>

The WLCS is located in the Hazardous Waste Management Facility, Bldg. 808. The WLCS shall:

- Serve as the central consolidation, packaging, and disposal point for all UW Lamps accumulated on Tinker AFB.
- Consolidates UW Lamps into DOT approved shipping containers once received from WLASs. The smaller containers from the WLASs are then re-issued with new labels until containers are no longer reusable.
    - If two (2) or more containers are consolidated into a single container, the consolidation container will receive the accumulation start date of the oldest bulbs placed in the container.
- Provide adequate temporary storage of UW Lamps to prevent breakage or damage to containers while accumulating sufficient amounts to dispose of in the most cost effective manner.
- Ensure that disposal of all waste lamps at the WLCS occurs within 6 months of the bulbs reaching the WLCS. These 6 months along with the WLAS's initial 6 months ensures that UW Lamps do not exceed their 1-year regulatory time limit on the installation.

<u>Off-Site Shipments</u>

UW lamps received by the WLCS shall be shipped off-site to an acceptable facility within the regulatory time limit. Shipments shall be coordinated through the DLA-DS following proper DOT shipping guidelines for Universal Waste.

- Prior to shipment, all UW Lamps shall be packaged in DOT approved containers appropriate to the type of lamp.
- Records of UW Lamp shipments shall be maintained in accordance with section 6.0 of this plan.

Spill Response

All spills, leakage or releases from UW lamps, such as from accidental breakage, shall be immediately contained then cleaned up and placed in a bag for accumulation at the WLCS.

8.0 REFERENCES

8.1 Standard References *(Applicable to all AF Installations)*

- ADLS – Advanced Distributed Learning Service
- AFI 32-7001, *Environmental Management*
- AFI 32-7042, *Waste Management*
- AFI 32-7086, *Hazardous Materials Management*
- AFI 90-201, *The Air Force Inspection System*
- AFLOA HW Legal and Other Requirements – The Air Force Legal Operations Authority (AFLOA) legal registry lists and provides access to federal (e.g., CFR, U.S. Code), DoD, AF and other legal requirements
- ARCNet – Training resource for Air Force Reserve Command
- DoD 4160.21-M, Defense Reutilization and Marketing Manual
- EASI Database (includes SIRIS)
- eDASH Environmental Action Plan (EAP)
- eDASH Hazardous Waste Home Page
- eDASH Hazardous Waste Training Matrix
- EESOH-MIS Software Module
- Environmental, Safety & Occupational Health Training Network (ESOH-TN)
- Hazardous Waste Playbook

8.2 Installation References

- TAFBI 32-7006, *Secondary Containment Requirements*.
- TINKER AFB Form 485, *Accumulator Site Inspection Checklist (Tanks)*
- TINKER AFB Form 486, *Accumulator Site Inspection Checklist (Containers)*
- TINKER AFB Form 487, *Initial Accumulation Point Management Aid*
- TINKER AFB Form 132, *Tank Inventory Log for Accumulation Sites*
- TAFB Plan 19-2, *Oil and Hazardous Substance Integrated Response Plan*

9.0 ACRONYMS

9.1 Standard Acronyms *(Applicable to all AF Installations)*

- eDASH Acronym Library
- Hazardous Waste Playbook – Acronym Section

- U.S. EPA Terms & Acronyms

9.2 Installation Acronyms

- 72 ABW/CEIEC — Civil Engineering Directorate, Installation Management Division, Environmental Compliance Branch
- AWACS — Airborne Warning and Control System
- CP — Collection Point
- ECPF — Empty Container Processing Facility
- HWMF — Hazardous Waste Management Facility
- HWPM — Hazardous Waste Program Manager
- HWTS — Hazardous Waste Tracking System
- HWWG — Hazardous Waste Working Group
- IRL — Immediate Removal Location
- OC-ALC — Oklahoma City Air Logistics Complex
- ODEQ — Oklahoma Department of Environmental Quality
- SSCP — Site Specific Contingency Plan
- WLAS — Waste Lamp Accumulation Site
- WLCS — Waste Lamp Consolidation Site
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10.0 DEFINITIONS

10.1 Standard Definitions *(Applicable to all AF Installations)*

- Hazardous Waste Playbook – Definitions Section

10.2 Installation Definitions

- No additional definitions.

11.0 INSTALLATION-SPECIFIC CONTENT

Hazardous Waste Working Group (HWWG):

- Purpose. The HWWG provides a forum for coordination, dissemination of information and serves as a steering group to guide the overall conduct of the hazardous waste management program.
- Role. The role of the HWWG is to review hazardous waste management policy and make recommendations based upon operational experience. 72 ABW/CEIEC uses this forum to present policy, disseminate information and monitor program effectiveness. Other organizations use this forum to stay current with base policy, call attention to areas of the program that are no longer effective and make recommendations.
- Membership. The chairperson for the HWWG is the Hazardous Waste Program Manager (HWPM) from 72 ABW/CEIEC. Members of the HWWG include UECs, representatives from Contracting Offices, Legal, DLA-DS, Bioenvironmental, the Fire Department and Safety who are appointed by their respective organizational directors. These persons must be knowledgeable of hazardous waste management requirements in their organization. Others involved in hazardous waste management are welcome to attend.

- Responsibilities. The Chairperson ensures that CE policies are represented at HWWG meetings. Other members ensure that responsibilities outlined in this instruction are carried out in their organizations.
- Operating Procedure. Meeting minutes will be recorded, and a copy of those minutes will be distributed to members no later than the next meeting. An agenda will be distributed before the start of the meeting at least every quarter.

Coordination with Regulatory Agencies:

- 72 ABW/CEIEC will serve as the point-of-contact for hazardous waste issues raised by regulatory agencies such as EPA, ODEQ and Air Force IG teams.
- 72 ABW/CEIEC will also produce and submit all reports to regulatory agencies, such as the Biennial Report to EPA, monthly and quarterly reports to ODEQ.

APPENDICES

Appendix A – Waste Analysis Plan (WAP)

Appendix B - Emergency Contacts Tinker AFB

Appendix C – Example Forms and Signage

Appendix A – Waste Analysis Plan

Purpose

The purpose of this Waste Analysis Plan (WAP) is to establish procedures for the analysis of hazardous wastes required before treatment, storage or disposal by RCRA (40 CFR Parts 264.13, 265.13, and 268.7) and Title 252, Oklahoma Administrative Code, Chapter 200-3-2.

Responsibilities

72 ABW/CEIEC is responsible for ensuring that proper analysis of hazardous wastes is accomplished before treatment, storage or disposal. The Tinker Environmental Laboratory will conduct most analysis needed to support hazardous waste management at Tinker AFB. It is capable of performing all normal operational waste stream analysis requirements including the Toxicity Characteristic Leaching Procedure (TCLP). 72 ABW/CEI will maintain a contract with an outside laboratory to provide analysis in case of work overload, an analytical confirmation is needed or when a special procedure is required.

Requests for Analysis

For purposes of quality control, the customer will be asked to complete a Sample Chain of Custody. This form may be submitted to the Laboratory by email, faxed or hand delivered. The following information shall be provided on the Chain of Custody for all samples requested for analysis by the Tinker Environmental Laboratory

- Organization requesting analysis
- Name of person performing sampling and person relinquishing samples to the laboratory
- Date that sample was taken
- Sample ID# or Container # where sample came from
- General Description of waste
- Number of samples
- Grab or Composite Sample
- Types of Analyses being requested

Procedures for Analysis:

All hazardous wastes generated at Tinker AFB will be analyzed as often as waste streams or processes change to ensure characterization is accurate and up-to-date. At the very least, 72 ABW/CEIEC will review the current set of hazardous waste analysis annually. The analytical procedures discussed herein are to be used by the Tinker Environmental Laboratory as well as by laboratories that perform hazardous waste analysis for Tinker AFB. Acronyms are listed in Section 9.0 of the Tinker AFB HWMP, and all periodic elements are identified by standard chemical symbols.

- Representative samples will be collected from required drums, tanks and vats using the sampling procedures outlined in EPA Office of Solid Waste Bulletin No. SW-846, *Test Methods for the Evaluation of Solid Waste, Physical/Chemical Methods*. Samples will be submitted to the Tinker Environmental Laboratory or to contract laboratories for analysis as required. Contract laboratories must participate in the EPA Contract Laboratory Program.

- Waste analysis will be accomplished as required by 40 CFR Parts 264.13 and 268.7 using methods outlined in EPA Office of Solid Waste Bulletin SW-846. Quality assurance/quality control procedures will meet or exceed all requirements for waste analysis.

- In addition to information for a complete Material Profile Sheet per waste stream sample, all hazardous waste analysis will provide information required by the ODEQ Form 858. The parameters analyzed are: primary chemical and physical form, characteristics, chemical element, composition, percent solids, specific weight, pH, flash point, organic and inorganic components

and heavy metals.

- From these analyses, the HWPM will supply the correct DOT shipping name, DOT hazard class, DOT identification number, EPA hazardous waste number, waste land disposal acceptability and a reason the waste is a "hazardous waste" in Oklahoma.
- Profile Sheets for each waste stream generated will be filed by the HWPM.

Rationale for Analysis

In the Specific Types of Wastes section below, discussed are 16 different types of wastes and the analytical procedures needed for each. The procedures are designed for the efficient analysis of the various categories of wastes. Although not all encompassing, the procedures cover the majority of the waste streams that the base generates. Therefore, additional analytical procedures will need to be added on a case-by-case basis.

- The rationale for selecting the analytical procedures listed in this waste analysis instruction are based on our knowledge of the chemicals used, processes performed and contaminants generated during these processes.
- Except for plating solution rinse water and oils with traces of PCBs, the majority of the hazardous waste streams will contain constituents in the part per million range. Analytical methods will reflect this policy.
- The methods discussed require that the waste being analyzed has been isolated, containerized and not commingled. The problems created by commingling are: risk of mixing incompatible materials, increased difficulty in obtaining a representative sample, increased time and costs of analysis, reduction of resale value of the wastes and additional treatment difficulty and cost increase of disposal.
- EPA methods are cited for various analytical procedures and are designed primarily for trace determinations and may not always be best suited for a given sample. If a method other than the EPA method is used to analyze a sample, the analytical report will be annotated to indicate the method used. Non-EPA methods will be documented and kept on file by the Tinker Environmental Laboratory.

Testing for LDRs

In accordance with 40 CFR Part 268.7, all waste streams must be analyzed to determine if they are restricted from land disposal. The general extraction procedure to be used for this purpose is outlined in Appendix II of 40 CFR Part 261 and is known as the Toxicity Characteristic Leaching Procedure or TCLP. After an extract has been obtained, additional analysis as outlined below are required to test for particular constituents.

Metals Analysis:

- Metals will generally be analyzed by ICP (Inductive Coupled Plasma) or AA (Atomic Absorption). Direct flame aspiration, graphite or atomic emission spectroscopy are all acceptable. EPA 6000 series methods for Sb, As, Ba, Be, Cd, Cu, Pb, Ni, Os, Se, Ag, Tl, V and Zn as listed in SW-846 are recommended.
- Plating solutions may have severe matrix interferences; these are best overcome by the method of standard additions. Ion chromatography is also an acceptable method for determining inorganic cations and anions.
- Plating wastes will routinely be analyzed for Ag, Cd, Cr, Cu, Ni, Pb and Zn. Analysis can be performed for Co, Mo, Au, Rh, Sn, etc. by special request.

- Sludge will be measured on a wet weight basis. The sludge shall be digested in concentrated nitric acid for total metal content analysis and the results reported in parts per million (ppm). If no metal concentration is more than its Total Threshold Limit Concentration (TTLC) and any metal concentration is greater than its Soluble Threshold Limit Concentration (STLC), then the citric acid extraction (W.E.T.) procedure for soluble metals shall also be done.
- Paint, paint remover and degreasers containing paint chips will be analyzed for Ba, Pb, Cr, Cd, Cu and Zn.
- Cleaners and degreasers will be analyzed for Ba and Mo.
- Hydraulic fluid contaminated wastes will be analyzed for Ba.
- Chromium analysis will be for hexavalent chromium when colorimetric (EPA 7196) or chromatographic methods are used. When AA and ICP methods are used, the concentration for chromium will be total chrome. Cr(VI) specific sample separation methods EPA 7195 or 7197 are also suitable.

Solvents can be analyzed by GC (Gas Chromatograph) in either liquid or vapor phase. IR (Infrared Spectroscopy) also can analyze solvents.

Hydraulic Oil

Since hydraulic oil may contain phosphate (TCP) or barium naphtenate additives, whenever hydraulic oil is found or suspected in a waste, these additives must be checked. TCP can be analyzed by GC/MS. Barium can be analyzed by dissolving the sample in MIBK and measuring by AA or ICP. An alternative analysis for Ba would use liquid-liquid extraction into dilute aqueous nitric acid followed by AA or ICP measurement.

Specific Waste Type Analysis

Absorbents:

- **Visual Parameters**
    - Solid, dry or absorbed liquid.
    - Color of material.
    - Free liquid.
    - Odor.
- **Physical Parameters**
    - Flash point (Free liquid).
    - Toxicity: solvents, oils, metals, additives, etc.
- **Chemical Parameters**
    - Percent extractable organics, identify by GC or IR.
        - Hydraulic fluid, tricresyl phosphate by GC and Ba by ICP.
        - Transformer oils, PCBs by GC.
        - Fuels/Motor oils, Pb by ICP.
    - Solid, for total Pb, Zn and Ba.

Acids/Plating Shop:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.

- **Physical Parameters**
    - pH.
    - Specific Gravity.
    - Reactivity.
        - All acids are incompatible with cyanide and sulfide containing waste.
        - Nitric acid solutions/metals produce nitrogen oxide gases.
        - Strong nitric acid solutions are oxidizers.
        - Concentrated sulfuric acid/water releases heat.
        - Toxicity: heavy metals and fluoride.

- **Chemical Parameters**
    - Analysis of liquid phase.
        - Total Ag, Cd, Cr, Cu, Ni, Pb and Zn; by AA, ICP.
        - Percent Acid by titration or specific gravity.
        - Free fluoride by specific ion electrode.
        - Chromium (IV) by colorimetry or ion chromatography.
    - Analysis of sludge phase.
        - Identify by IR, X-ray Fluorescence, etc.
        - Total Ag, Cd, Cr, Cu, Ni, Pb and Zn; by AA, ICP.

Caustics and Alkaline Cleaners:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.

- **Physical Parameters**
    - pH.
    - Specific Gravity.
    - Reactivity.
        - Strong Caustic Solutions/aluminum and zinc produce hydrogen gas.
        - Concentrated caustics/water releases heat.
    - Toxicity: cyanides, sulfides and heavy metals.

- **Chemical Parameters**
    - Analysis of liquid phase.
        - Total Cd, Cr, Cu, Ni, Pb and Zn; by AA and ICP.
        - Water content by evaporation.
        - Alkali content by titration.
        - Total Cyanide by distillation and colorimetry or titrametric.
        - Total Phosphate by ion chromatograph, colorimetry.
    - Analysis of sludge phase.
        - Identify by IR, XRF, XRD, etc.
        - Total Cd, Cr, Cu, Ni, Pb and Zn; by AA or ICP.

Cyanide Plating Solutions:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.

- **Physical Parameters**

    - pH.
    - Reactivity.
        - All cyanide-containing solutions have severe toxic capabilities.
        - Contact with acids of any type releases highly toxic hydrogen cyanide gas.
        - Contact with acidic chlorine solutions releases highly toxic cyanogen chloride gas.
    - Toxicity: cyanide and heavy metals.

- **Chemical Parameters**
    - Analysis of liquid phase.
        - Total Ag, Cd, Cu, Ni, Pb and Zn; by AA or ICP.
        - Water content by evaporation.
        - Total cyanide by distillation and colorimetry or titrametric.
    - Analysis of sludge phase.
        - Total Ag, Cd, Cu, Ni, Pb and Zn; by AA or ICP.
        - Total cyanide by distillation and colorimetry or titrametric.
        - Identify by IR, XRF, XRD or wet chemistry.

Plating Solutions (Metals):

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.
- **Physical Parameters**
    - pH.
    - Specific Gravity.
    - Reactivity: Tank specific (e.g., cyanide) or reaction/acid solutions.
    - Toxicity: cyanide, fluoride and other heavy metals.
- **Chemical Parameters**
    - Analysis of liquid phase.
        - Total Ag, Cd, Cr, Cu, Ni, Pb and Zn; by AA or ICP.
        - Water Content.
        - Acid or Alkali.
        - Special tests as requested.

Chromate Solutions:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.
- **Physical Parameters**
    - pH.
    - Specific Gravity.
    - Reactivity.
        - Many chromate solutions are strongly acidic.
        - Same incompatibilities and reactions as with acid solutions.
    - Toxicity: hexavalent chromium, other heavy metals or fluoride.
- **Chemical Parameters**

- Analysis of liquid phase.
  - Total Cr, Cd, Cu, Ni, Zn and Pb; by AA or ICP.
  - Water content.
  - Percent acid titration.
  - Optional analysis Cr(VI) by colorimetry, iodimetry or ion chromatography.

Electroless Copper Plating:

- **Visual Parameters**
  - Color of solution.
  - Phases: number, type and volume.
- **Physical Parameters**
  - pH.
  - Specific Gravity.
  - Toxicity: formaldehyde, presence copper.
- **Chemical Parameters**
  - Analysis of liquid phase.
    - Water content.
    - Formaldehyde by chromatropic acid/ sulfuric acid colorimetric method.

Adhesives, Sealants and Prepegs:

- **Visual Parameters**
  - Color of material.
  - Phases: number, type and volume.
  - Viscosity.
  - Layers.
- **Physical Parameters**
  - Flash point.
  - Toxicity: Aromatic amines, expoxides, formaldehyde, phenols, isocynates, solvents.
- **Chemical Parameters**
  - Analysis of volatiles.
    - Percent volatiles by distillation.
    - Identify volatiles by GC, GC/MS or IR.
  - Analysis of nonvolatiles.
    - Identify by IR: epoxy, polysulfide, acrylic, etc.

Waste Paint: New, Used, or Paint Contaminated Rags:

- **Visual Parameters**
  - Color of material.
  - Phases: number, type and volume.
- **Physical Parameters**
  - Flash point.
  - Toxicity: Aromatic solvents, non-aromatic solvents or heavy metals.
- **Chemical Parameters**

- Analysis of volatiles.
  - Percent of volatiles by distillation.
  - Identify volatiles by GC, GC/MS or IR.
- Analysis of nonvolatile.
  - Percent extractable organics.
  - Identify extractable by GC, GC/MS or IR.
- Analysis of no extractable material.
  - Identify material by IR.
  - Total Cd, Pb, Cr, Ba, Cu, Zn, Hg, etc.
- Analysis of contaminated rags.
  - Volatiles by Headspace/GC or GC/MS.
  - Total Cd, Pb, Cr, Ba, Cu, etc. by AA or ICP.

Paint Remover (Methylene Chloride Type):

- **Visual Parameters**
  - Color of material.
  - Phases: number, type and volume.
- **Physical Parameters**
  - pH.
  - Flash point.
  - Toxicity: solvents, heavy metals, amines, ketones or phenols.
- **Chemical Parameters**
  - Analysis of volatiles
    - Identify volatiles by GC, GC/MS or IR.
  - Analysis of nonvolatile.
    - Percent extractable organics.
    - Identify extractable by GC, GC/MS or IR.
  - Analysis of no extractable material.
    - Identify material by IR.
    - Total Pb, Cd, Cr, Cu, etc. by AA or ICP.

Paint Stripper (Solvent Tank and Hot Strippers):

- **Visual Parameters**
  - Color of material.
  - Phases: number, type and volume.
- **Physical Parameters**
  - pH.
  - Flash point.
  - Toxicity: solvents, amines, ethers, heavy metals.
- **Chemical Parameters**
  - Analysis of volatiles.
    - Percent volatiles distillation.
    - Identify volatiles by GC, GC/MS or IR.
  - Analysis of nonvolatile.
    - Identify nonvolatile by IR.

        - Total Pb, Cd, Cr, Cu, etc. by AA or ICP

Degreaser Solvents:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.
- **Physical Parameters**
    - Toxicity: solvents (aromatic, halogenated, etc.), heavy metals in sludge.
- **Chemical Parameters**
    - Analysis of liquid phase.
        - Percent volatiles.
        - Identify volatiles by GC, GC/MS or IR.
    - Analysis of sludge.
        - Percent extractable organics.
        - Identify extractable by GC, GC/MS or IR.
        - Identify non-extractable by IR.

Degreasing Detergents:

- **Visual Parameters**
    - Color of solution.
    - Phases: number, type and volume.
    - Analysis of sludge.
        - Percent extractable organics.
        - Identify extractable by GC, GC/MS or IR.
        - Identify non-extractable by IR.
        - Total Ag, Cr, Cd, Cu, Ni, Zn, Pb, etc. by AA or ICP.

Oils Not Commingled (Hydraulic, Aircraft):

- **Visual Parameters**
    - Color of materials.
    - Phases: number, type and volume.
- **Physical Parameters**
    - Flash point.
    - Toxicity: heavy metals, esters, solvents.
- **Chemical Parameters**
    - Analysis of oil phase.
        - Identify by GC, GC/MS or IR.
        - Percent volatiles by Headspace GC.
        - Identify volatiles by GC, GC/MS.
        - Metals Pb, Cr and Cd by AA, ICP or AE.
    - Analysis of rags contaminated with oil.
        - Percent extractable organics.
        - Identify extractable by GC, GC/MS or IR.

Waste Fuels:

- **Visual Parameters**
    - Color of material.
    - Phases: number, type and volume.
- **Physical Parameters**
    - Flash point.
    - Specific Gravity
    - Toxicity: solvents, lead, hydrocarbon fuels.
- **Chemical Parameters**
    - Identify type of fuel by GC, GC/MS and IR.
    - Percent volatiles by distillation.
    - Identify volatiles by GC, GC/MS and IR.
    - Identify heavy hydrocarbons by GC, GC/MS and IR.

Industrial Waste Treatment Sludge:

- **Visual Parameters**
    - Color of materials.
    - Phases: number, type and volume.
- **Physical Parameters**
    - pH.
    - Toxicity: heavy metals, cyanide, fluoride, sulfide, pesticides, herbicides, phenols.
- **Chemical Parameters**
    - Analysis of water.
        - Ag, As, Ba, Be, Cd, Co, Cr, Cu, Hg, Mo, Ni, Pb, Sb, Se, Tl, V and Zn by AA or ICP.
        - Total cyanide by distillation and colorimetry or titrametric.
        - Total fluoride by distillation and specific ion electrode.
    - Analysis of volatiles.
        - Identify volatiles by GC, GC/MS.
    - Analysis of nonvolatile.
        - Percent extractable organics.
        - Identify extractable by GC, GC/MS or IR.
    - Analysis of non-extractable material.
        - Identify material by IR.
        - Total Pb, Cd, Cr, Cu, etc. by AA or ICP.

Appendix B – Emergency Contacts Tinker AFB

ORGANIZATION	ON-DUTY EXTENSION
a. Tinker Air Force Base	**(405) 732-7321**
(1) Fire Department	911
(2) Tinker Emergency Services	911
(3) Command Post	734-7313
(4) 76 AMXG Maintenance Operations Center (MOC)	736-2500
(5) Civil Engineer Service Desk	734-3117
(6) Environmental Compliance Section (72 ABW/CEIEC)	734-5199
(7) Occupational Safety Office	739-3263
(8) Security Forces **(EMERGENCY)**	734-3737
(9) Emergency Management	734-3515
(10) Bio-environmental Engineering	734-7844
(11) Liquid Fuels Maintenance	734-2753
(12) Staff Judge Advocate/(Environmental)	739-5811
(13) Public Affairs Office	739-2026
(14) HWMF (Barrel Yard)	734-3285
(15) DLA-DS	739-2204
b. Other Federal and State Agencies:	
National Response Center	(800) 424-8802
Regional Response Center	(214) 767-2720
(If NRC is unavailable)	
Oklahoma Department of Environmental Quality	(405) 271-1400

c. Contingency Contacts

If, in the judgment of the Incident Commander (IC) additional off-base resources are required, the Installation Emergency Response Plan (IEMP) 10-2 will be implemented, and the following agencies and organizations can be contacted if deemed necessary:

Oklahoma City Police Department	297-1000
Oklahoma City Fire Department	297-3439
Midwest City Police Department	739-1300
Midwest City Fire Department	739-1340
Del City Police Department	677-2443
Del City Fire Department	671-2891
Veterans Affairs Medical Center	270-0501
Fort Sill EOD Unit	DSN 639-2313
	Commercial (580)442-2313
OK County Sheriff (Bomb Unit)	236-1717

If adequate spill response information is not available for a spill product, which can be identified by chemical, trade name, or manufacturer, the following organizations can be contacted by telephone to assist in providing specific information concerning the spill product:

Chemtrec	(800) 424-9300
Chem-Tel, Inc	(800) 255-3924
Military Shipments (Explosives/Ammunition)	(703) 697-0218
Military Shipments (Non-Explosive/Ammunition)	(800) 851-8061
ETIS	(904) 283-6167

Appendix C: Example Forms and Signage

The purpose of this section is to provide users of this HWPM with the locations of prescribed AF and Tinker forms and to provide examples of non-AF standard signage or documents. All Air Force or Tinker Forms may be found through the AF e-Publishing website (http://www.e-publishing.af.mil/).

TANK INVENTORY LOG FOR ACCUMULATION SITES

MONTH/YEAR: TANK#: BLDG/ORG:
CURRENT ASD:

DAY	DESCRIPTION OF WASTE	GENERATION		ADDITION		REMOVAL			CURRENT TANK QUANTITY	DAYS LEFT BEFORE DRAINAGE
		PROCESS	RCC	**QTY	TOTAL	DRAIN (D) LEAK (L)	QTY	REMOVED TO***		
1.										
2.										
3.										
4.										
5.										
6.										
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										
16.										
17.										

ACCUMULATION START DATE (ASD) **ALL QUANTITIES IN GALLONS ***DRMO OR OFF-SITE FACILITY (OSF)

TINKERAFB FORM 132,19950810 (PerFORM PRO) Page 1 of 2

Figure 1: Tinker AFB Form 132, *Tank Inventory Log for Accumulation Sites*

ACCUMULATION SITE INSPECTION CHECKLIST (TANKS)

MONTH	YEAR	ROUTING SYMBOL	LOCATION	WASTE/TYPE

PART I - DAILY INSPECTIONS
(Leaks, Corrosion, Containment Damage, Monitoring Devices, Labels, Security)

DAY	TIME	PROBLEMS AND ACTION TAKEN	INSPECTOR
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
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TINKER AFB IMT 485, 20101227 PREVIOUS EDITIONS ARE OBSOLETE

Figure 2: Tinker AFB Form 485, *Accumulation Site Inspection Checklist (Tanks)*

ACCUMULATION SITE INSPECTION CHECKLIST (CONTAINERS)

MONTH	YEAR	ROUTING SYMBOL	LOCATION

PART I - WEEKLY INSPECTIONS

(INSTRUCTIONS: Inspect containers weekly with emphasis on evidence of leaks and corrosion. Complete all three columns and use Part III if necessary to describe problems or action taken.)

DATE / TIME	PROBLEM DESCRIPTION AND ACTION TAKEN	INSPECTOR

PART II - END-OF-MONTH INSPECTIONS

(INSTRUCTIONS: Inspect following items during last week of month. Indicate response to questions with check mark in appropriate column. Explain all "No" responses and actions taken in Part III.)

MARKINGS	YES	NO	NOT APPLICABLE
1. ARE ALL CONTAINERS CLEARLY MARKED WITH THE WORDS "HAZARDOUS WASTE" OR WITH CONTENTS DESCRIPTION IF DETERMINATION OF HAZARDOUS WASTE HAS NOT BEEN MADE?	☐	☐	☐
2. ARE ALL HAZARDOUS WASTE CONTAINERS MARKED WITH AN "ACCUMULATION START DATE?"	☐	☐	☐
3. ARE ALL "ACCUMULATION START DATES" LESS THAT 90 DAYS OLD?	☐	☐	☐
LABELS			
1. FOR CONTAINERS WITH CONTENTS THAT HAVE NOT BEEN DETERMINED TO BE HAZARDOUS WASTE, HAS THE OC-ALC FORM O-141 LABEL BEEN INSTALLED AND PROPERLY COMPLETED?	☐	☐	☐
2. ARE RECEIVING, SAMPLING, AND BUNG LABELS PROPERLY PLACED AND MARKED?	☐	☐	☐
3. FOR CONTAINERS WITH CONTENTS THAT ARE HAZARDOUS BY DOT RULES, HAVE PROPER DOT HAZARD CLASS AND WARNING LABELS BEEN PLACED ON THEIR OUTER SURFACE?	☐	☐	☐
CONTAINER MANAGEMENT			
1. ARE ALL DRUMS PLACED VERTICALLY ON PALLETS?	☐	☐	☐
2. DO ALL PALLETS CONTAIN FOUR OR LESS DRUMS?	☐	☐	☐
3. ARE PALLETS STACKED NOT MORE THAN TWO HIGH (ONE HIGH FOR FLAMMABLE LIQUIDS)?	☐	☐	☐
4. ARE ALL CONTAINERS TIGHTLY SEALED?	☐	☐	☐
LOCATION			
1. ARE IGNITABLE OR REACTIVE WASTES STORED AT LEAST 50 FEET FROM THE PROPERTY LINE?	☐	☐	☐
2. ARE WASTES SURROUNDED BY DIKES OR BERMS THAT ARE IN GOOD CONDITION?	☐	☐	☐
3. ARE INCOMPATIBLE WASTES SEPARATED BY DIKES, BERMS, OR WALLS?	☐	☐	☐

TINKER AFB IMT 486, 20101227 PREVIOUS EDITIONS ARE OBSOLETE

Figure 3: Tinker AFB Form 486, *Accumulation Site Inspection Checklist (Containers)*

INITIAL ACCUMULATION POINT MANAGEMENT AID

MONTH	YEAR	ROUTING SYMBOL	LOCATION *(Bldg/Post)*

WASTE DESCRIPTION *(Same as Container Label)*

PART I - WEEKLY INSPECTIONS

(INSTRUCTIONS: Inspect weekly noting evidence of leaks, corrosion, open containers, improper container markings and labels, and damage to secondary containment. Complete all three columns using Part III if necessary)

DATE AND TIME / CONTAINER SERIAL NUMBER	PROBLEM DESCRIPTION AND ACTION TAKEN	INSPECTOR

PART II - CONTAINER INVENTORY

(INSTRUCTIONS: Record indicated information when container is filled, removed, and replaced.)

FILLED DATE*	CONTAINER SERIAL NUMBER	QUANTITY (GALLONS)	REMOVAL DATE	REPLACEMENT SERIAL NUMBER	DATE PUT IN SERVICE	RECORDER NAME

*ENSURE FILLED DATE IS MARKED ON CONTAINER

PART III - COMMENTS

PART IV - MONTHLY ENDORSEMENT

TO THE BEST OF MY KNOWLEDGE THE ABOVE INFORMATION IS COMPLETE AND ACCURATE.

SUPERVISOR: _____ DATE: _____

TINKER AFB IMT 487, 20101227 PREVIOUS EDITIONS ARE OBSOLETE

Figure 4: Tinker AFB Form 487, *Initial Accumulation Point Management Aid*

Universal Waste Lamp

Tracking Log

ORGANIZATION:	WLAS MANAGER:	SITE LOCATION (BLDG/POST):

INSTRUCTIONS: Post new Accumulation Start Date on Tracking Log and Container Label when first UW Lamp is placed into UW Waste Lamp Container. Containers must be kept closed unless adding waste to the container (boxes taped, tubes with lids on them). Containers at Waste Lamp Accumulations Site (WLAS) must be relocated to Waste Lamp Consolidation Site (B808 @ 734-3285) out within 6 months of accumulation start date written on Tracking Log and Container Label. Post the Clean-Out Date on day that the container is taken to WLCS.

ACCUMULATION START DATE (ASD)	CLEAN-OUT DATE	SIGNATURE

Figure 5: Example UW Tracking Log

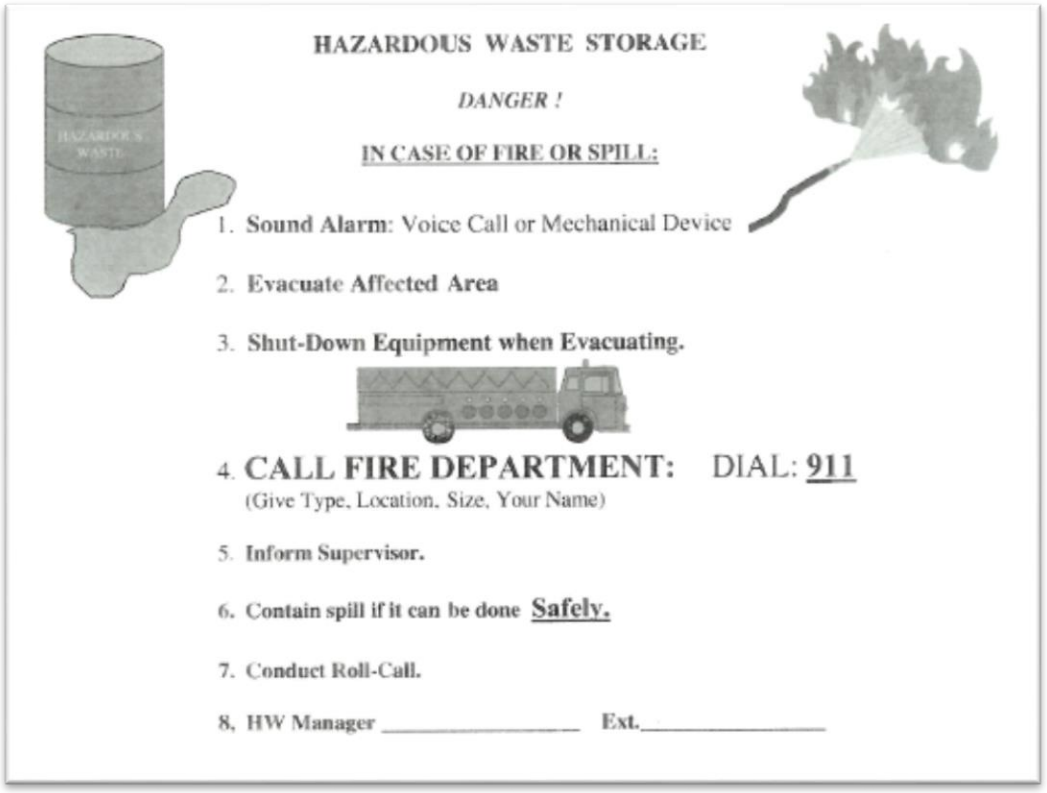

Figure 6: Example Emergency Response Plan

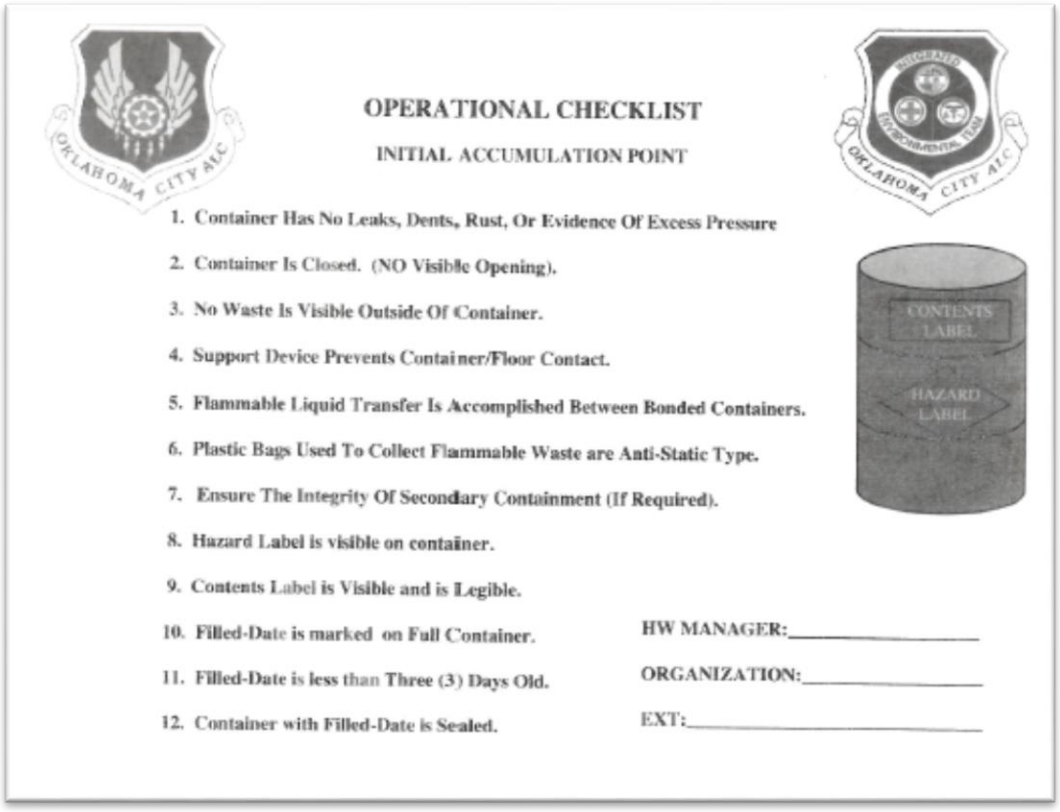

Figure 7: Example Operational Checklist

OPERATIONAL CHECK LIST

ACCUMULATION SITE

1. No Leaks, Spills, or Evidence of Excess Pressure are Visible Around Containers or Tanks.
2. Containers and Tanks are Sealed Except when Sampling or Transferring Waste.
3. Hazardous Waste Containers and Tanks are Labeled "HAZARDOUS WASTE."
4. Containers are all Marked with "Received Date", Tanks with "Accumulation Start Date" (ASD).
5. Received Dates and ASDs are less than Ninety (90) Days old.
6. Incompatible Wastes are Separated.
7. Ensure the Integrity of Secondary Containment (if Required). HW MANAGER:_____
8. Aisle Space is Sufficient to Allow Passage of Emergency Equipment.
9. Site Specific Contingency Plan is Prominently Posted. ORGANIZATION:_____
10. Internal Communication or Alarm System is Operational.
11. Emergency Assistance Summoning Device is Operational. EXTENSION :_____
12. Fire Extinguishers are Operational.
13. "NO SMOKING WITHIN 50 FEET" Signs are Posted near Flammable Wastes.
14. Emergency Eye-Wash and Shower are Operational.
15. Spill Control Equipment is Readily Available.

Figure 8: Example HWAS Checklist