PLAN

ENVIRONMENTAL WASTE MANAGEMENT PLAN (EWMP)

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Texas Military Department (TMD)
2200 W. 35th St
Austin, TX 78703

OPR: ENVIRONMENTAL BRANCH

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Summary. This EWMP is designed to achieve compliance with applicable waste regulations for management of Non-Hazardous Solid Waste, Special Waste (SW), Universal Waste (UW) and Hazardous Waste (HW). Hazardous Materials (HM) management is included in this plan in order to reduce the amount of waste materials generated through the lack of proper inventory control, over procurement and overstock of HM.

Applicability. This PLAN applies to all components of TMD, mainly the Texas Army National Guard (TXARNG) and our tenants, as well as contractors.

Management Control Process. NA

Proponent and Exception Authority. The proponent for this PLAN is the Environmental Branch of Construction & Facilities Management Office (CFMO). Environmental Branch has the authority to approve exceptions to this PLAN consistent with controlling laws and regulations.

Supplementation. Supplementation of this PLAN or establishment of command and local forms on the EWMP is prohibited without prior approval from the Adjutant General (TAG), through the Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Suggested Improvements. Users are invited to send comments and suggested improvements concerning this PLAN directly to Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Distribution. A

Table of Contents

Chapter 1. Introduction. This TXARNG EWMP supersedes the requirements in the Hazardous Waste Management Plan, dated 1 March 2012. The EWMP describes responsibilities and policies and procedures for storing and managing Resource Conservation and Recovery Act (RCRA) wastes while emphasizing prevention of pollution and waste minimization.

1.1. Purpose and Scope. This EWMP is designed to achieve compliance with applicable waste regulations for management of HW, UW, SW, and other non-hazardous solid waste. This plan includes the Hazardous Materials Management Standard Operating Procedures (SOP) (**Appendix C**).

This EWMP applies to:

- Activities under the command of the TMD
- Any activity using TXARNG training sites that generates and/or disposes of waste
- All contractors working for the TMD
- Training conducted outside of or on active duty installations within Texas, unless the procedures for the host activity dictates otherwise

1.2. Texas Military Department Environmental Statement Directive (Directive #4700.01). The Adjutant General has issued an environmental statement directive that commits all TMD organizations to continual improvement in environmental performance, prevention of pollution, compliance with environmental laws, and the sustainment and stewardship of our environment. These commitments will help develop and maintain operating processes and practices that will optimize training lands and TMD's ability to meet mission readiness requirements for current and future national defense needs. To carry out TAG's environmental statement directive, TMD has implemented an Environmental Management System (EMS) based on the international standards specified by the International Organization for Standardization (ISO) 14001 standard and in accordance with Army Regulation (AR) 200-1. This management system exists to help organizations minimize how their operations and processes negatively affect the environment. (**Appendix A: Texas Military Department Environmental Statement Directive**).

1.2A. Environmental Management System. An EMS is a results-oriented approach to improving an organization's environmental performance by actively reducing costs, limiting risks, prioritizing environmental issues and identifying potential problem areas. An EMS is a systematic approach for organizations to bring environmental considerations into decision-making and day-to-day operations, and it establishes a framework for tracking, evaluating, and communicating environmental performance. Improved environmental performance lowers potential risk for non-compliance.

1.2B. Significant Environmental Aspects. The elements of daily activities that have the *potential* to impact the environment are the environmental *aspects* of an organization's operations. This includes all of an organization's activities and business practices that can interact with the environment. A *significant aspect* is an aspect that has the potential to significantly impact the environment. For example, a spill from a parts washer is an environmental aspect because it has the potential to affect water quality or contaminate the soil.

1.2C. EMS Objectives with Targets and Action Plans. Managing HW is an important aspect of TXARNG operations that could potentially cause a significant impact to the environment. The assigned objective for this aspect is minimizing the disposal of "excess" and outdated HM as HW. The goal is for the RES to assist the maintenance community with training "responsible personnel" in effective HM shelf life and stock management practices during Site Assistance Visits (SAVs).

1.2D. Environmental Compliance Tool Kit (CTK) and Record Keeping. Texas Army National Guard maintenance shops, training sites and readiness centers should maintain a Compliance Tool Kit (CTK), containing environmental records and documents that belong specifically to that facility. The CTK provides for standardized organization and storage of relevant environmental records and documents. Contact the Environmental branch to obtain a CTK if there is not one assigned.

Federal, state and local regulations require certain environmental documents and records to be maintained and/or accessible at the facility. Maintaining the records in the CTK will provide for easy retrieval of facility environmental records to support internal and external compliance assessments, regulatory inspections and other activities where review of records may be required. Chapter 5, *Training, Inspections, and Recordkeeping*, provides additional guidance related to maintaining environmental documents and records.

1.2E. Lone Star Portal (LSP) and EMS Awareness Training. The Environmental Branch homepage on LSP contains electronic copies of pertinent facility documents and records, informative presentations, regulatory and compliance documents, EMS records, training dates, and various training tools. All members of TXARNG and TMD are required to complete EMS Awareness training. The EMS Awareness video entitled, "*A Mission Multiplier*," is easily accessible on the LSP Environmental Homepage, under the EMS section. If one **DOES NOT** have access to LSP, contact the Environmental Training team lead at (512) 782-6228 to arrange an alternative method to receive training.

1.2F. Environmental Website. The Environmental Branch homepage on LSP provides an intranet portal to environmental information, to include:

- Staff contact information
- Current regulatory documents and records
- Electronic forms
- Training resources
- Additional information from Natural Resources, Cultural Resources, and Compliance

1.3. Federal Regulations. The Federal Facilities Compliance Act of 1992 requires TXARNG to comply with all federal, state, and local HW management regulations. Therefore, TXARNG must manage its HW in accordance with (IAW) RCRA, as amended by the Hazardous and Solid Waste Amendments (HSWA). These acts enforce "cradle-to-grave" responsibility that begins with the initial generation of HW and does not end until final disposal. Federal waste management regulations are codified in Title 40 of the Code of Federal Regulations (40 CFR). This plan provides procedures for complying with the following parts of 40 CFR:

- Part 260 through Part 272 (Management of HW)
- Part 273 (Management of Universal Waste [UW])
- Part 270 (Management of Used Oil)

While this plan indirectly supports compliance with 49 CFR 170-177 (U.S. Department of Transportation [USDOT]), 29 CFR 1910 (Occupational Safety and Health Administration [OSHA]), and Executive Order (EO) 13693, “Planning for Federal Sustainability in the Next Decade,” it is not intended to be the primary compliance document for these programs.

1.4. State Regulations. Texas Army National Guard must also comply with Texas state laws and regulations for the management of HW. While Texas has adopted the federal RCRA regulations, there are a few Texas requirements, such as the Texas Administrative Code (TAC) that are more stringent than the federal rules. Texas waste management related regulations that potentially apply to TXARNG facilities include:

- 30 TAC 324 (Used Oil)
- 30 TAC 327 (Spill Prevention and Control)
- 30 TAC 328 (Waste Minimization and Recycling)
- 30 TAC 328.21-328.30 (Used Oil Filter Management and Recycling)
- 30 TAC 335 (Industrial Solid Waste, Municipal Hazardous Waste, and Universal Waste)

1.5. Military Regulations. This EWMP requires compliance with *AR 200-1 Environmental Protection and Enhancement* (13 Dec 2007). AR 710-2 *Supply Policy Below the National Level* (28 Mar 2008) and Department of the Army Pamphlet 710-7 *Hazardous Material Management Program* (23 Mar 2017) outline provisions for a HM Management Program. For specific information concerning HM, see Appendix C. Together, these documents contain information to assist TMD with minimizing waste generation (hazardous material inventory control, green procurement and shelf-life management).

1.6. Local Regulations, Ordinances, and Codes. Texas Army National Guard must also comply with applicable local, city, or county environmental regulations for activities such as wastewater and sewage discharges, flood control, storm water discharges and spill incident management. Contact the Deputy Environmental Program Manager (DEPM) at (512) 782-5753 for questions regarding water quality regulations.

1.7. Responsibilities.

1.7A. Construction and Facilities Management Officer (CFMO).

- Participates as a member of the Environmental Quality Control Committee (EQCC)
- Assesses facilities and infrastructure for compliance with this plan
- Prepares and executes contracts, plans, and timelines for improving facilities that **DO NOT** meet the requirements of the plan

1.7B. Environmental Program Manager (EPM).

- Participates as a primary member of the EQCC
- Monitors the implementation of this plan
- Serves as advisor to TAG, the Chief of Joint Staff, and the TXARNG on this plan
- Ensures plan is reviewed annually and modifies HW handling procedures as necessary
- Acts as Program Manager for the hazardous chemical and waste management budget and executes funds
- Budgets and plans for all on-site environmental training

1.7C. Deputy Environmental Program Manager (DEPM).

- Participates as an alternate member of the EQCC
- Monitors the implementation of this plan
- Serves as advisor to the EPM
- Fulfills the duties of the EPM in their absence
- Ensures plan is periodically reviewed

- Acts as Coordinator for National Environmental Protection Act (NEPA), Pollution Prevention (P2) and Spill Prevention Control and Countermeasures Plans (SPCCP)

1.7D. Environmental Training Section.

- Consists of Environmental Training Team Lead, Environmental Trainers and other Subject Matter Experts (SMEs)
- Develops, assess and evaluates training
- Coordinate environmental training events
- Conduct environmental awareness training and other environmental multimedia training
- Tracks training for the Environmental Branch
- Tracks and coordinates annual Toxic Release Inventory (TRI) and Toxic Inventory Emissions Report (TIER) II

1.7E. RCRA Waste Manager (RCRA WM).

- Serves as an advisor to the EPM
- Interprets laws and regulations related to HW management
- Maintains waste analysis and sampling program for characterization of waste
- Reports to the National Guard Bureau (NGB) as required and submits State and Federal reports
- Acts as liaison to arrange for waste disposal
- Coordinates reportable spill notifications with regulatory entities

1.7F. Environmental Performance Assessment System (EPAS) and RCRA Coordinator.

- Serves as the EPAS Manager for the agency
- Overall coordination of Internal Site Support (ISS) and Site Assessment Visits (SAV)
- Liaison between TMD and NGB during External EPAS
- Manager of Web Compliance Assessment & Sustainment Systems (WEBCASS) and Installation Corrective Action Plan (ICAP) for the agency
- Track and assist HW turn-ins and waste classification via Web Application System for Turn-in Execution (W.A.S.T.E.) database

1.7G. Regional Environmental Specialist (RES). RESs are strategically located throughout the state to provide compliance assistance in management and disposal of waste. An RES can assist with proper labeling, shipping, sampling, handling, and disposal of waste. Trained in waste management, prevention of pollution, and regulatory compliance, The RES is an immediate point of contact for assistance and is responsible for conducting internal environmental assessments under the EPAS. To assist in performance for EPAS assessments, RESs conduct SAVs at pre-selected facilities where hazardous materials and wastes are managed. During a SAV, the RES completes a compliance assessment. The RES then provides assistance to personnel to correct deficiencies, provide waste management assistance, and conduct spill prevention training as needed. In support of achieving regulatory compliance, the RES has the following duties:

- Provide environmental support to Maintenance Shops, Readiness Centers, Training Sites, State Shops, tenants, etc.
- Provide guidance on environmental laws and regulations
- Provide waste/material handling and on-the-job training, as requested
- Support ongoing waste management, characterization, and disposal including waste sampling programs
- As needed, act as the on-site liaison when conducting waste sampling and analysis, packaging, and pickup

1.7H. Facility Environmental Officer or Representative.

- Implements the procedures established by this plan
- Screens HM procurement and requisitions
- Provides briefings as necessary to unit/activity personnel regarding this plan
- Ensures compliance with applicable local environmental regulations
- Notifies the RCRA WM or RES of any changes in operations, such as process changes, new waste streams, or changes in chemicals stored
- Promotes recycling, waste minimization, and prevention of pollution in managing HM and HW
- Communicates any related issues to the Environmental SMEs

Chapter 2. Hazardous Waste Management.

2.1. Hazardous Waste Program Overview. This chapter sets forth basic procedures for managing TXARNG's HW and complying with applicable regulatory standards for on-site accumulation of HW, cradle-to-grave tracking, manifest tracking, labeling, training, reporting, and recordkeeping requirements. Proper handling and management of HW also minimizes the creation of more wastes resulting from cross contamination, spills, and improper storage. Sound waste management practices support TXARNG's P2 goal to eliminate and/or continuously reduce the amount of waste generated annually.

2.1A. Waste Management Made Easy. All TXARNG facilities generate waste, whether it is residue from the use of products or products themselves that are no longer useful. The Environmental Branch has developed resources to assist personnel. These resources, found in the appendices, provide easy to follow, helpful instructions for managing specific waste streams.

2.1B. Waste Fact Sheets (WFS), Standard Operating Procedures (SOPs), and Forms. Waste Fact Sheets for processing and management of various wastes are located in Appendix F (**Waste Characterizations/Waste Fact Sheets/Waste Submission Sheet**). Waste Fact Sheets have been designed to simplify the waste management, specific handling and disposal procedures for common wastes generated by TXARNG processes. Other SOPs and forms are also available in the appendices. If the waste does not have a WFS, contact the RES or the RCRA WM and one can be developed.

2.2. Solid Waste. The term solid waste is a generic term that is used to describe all waste. Unless specifically excluded by regulation, solid waste refers to all discarded materials, including solids, semi-solids, sludge, liquids, and gases. A **discarded material** is any material that is abandoned or recycled or is considered waste-like, due to expired shelf-life or lack of usability. Solid wastes are either hazardous or non-hazardous wastes.

Texas Army National Guard activities generate a wide variety of hazardous and non-hazardous waste streams. Generally, TXARNG's waste streams fall into one of the categories outlined below in Table 2-1, Types of Solid Waste. Management of HW will be covered in this chapter. UW, Used Oil, and SW will be discussed in Chapter 3.

Table 2-1: Types of Solid Waste.

Type of Waste	Definition
Non-Hazardous Waste	These solid waste streams are not regulated as hazardous under RCRA, nor do they pose an immediate threat.
Non-Hazardous Industrial Waste (Class 1, 2, and 3 Waste)	Any industrial waste that is not listed as hazardous and does not have hazardous characteristics. Class 1 considered potentially threatening to human health and the environment if not properly managed because of the constituents and properties. Class 2 includes activated sludge from biological waste treatment. Class 3 materials such as demolition debris.
Solid Waste	These wastes are certain non-hazardous solid wastes that require special handling because of quantity, physical or chemical characteristics, or biological properties.
Non-RCRA Regulated Waste	Wastes regulated by laws other than RCRA, such as the Toxic Substances Control Act (TSCA) (i.e. asbestos, polychlorinated-biphenyls [PCBs]).
Recyclable Waste	A waste that can be recycled, reclaimed, or reused. (See WFSs for additional information.)
Universal Waste	Includes batteries, thermostats, mercury-containing devices, lamps, and paints and paint-related materials. Although defined as hazardous under RCRA, are subject to reduced HW management regulations.
Hazardous Waste	Defined as hazardous under RCRA, these waste streams must be managed IAW all applicable Federal and State management regulations.

2.3. Hazardous Waste Management Requirements. Federal and State HW regulations establish a cradle-to-grave responsibility system governing management of HW from point of generation to its ultimate disposal. Facilities that generate HW are subject to waste accumulation, manifesting, and recordkeeping requirements. A brief summary of waste management requirements is included in this chapter. Detailed information can be found in the SOP (**Appendix E**) and the WFS (**Appendix F**).

2.3A. Hazardous Waste. A HW is any solid waste with physical and chemical properties that make it dangerous or capable of having a harmful effect on human health or the environment. By regulation, there are two ways a waste can be considered hazardous: material exhibits hazardous characteristics (i.e. ignitable, corrosive, reactive, or toxic) above specified limits or the material is "listed" among over 400 chemicals identified in 40 CFR, Section 261.3.

2.3B. Hazardous Waste Determination and Waste Analysis. Before determining which regulatory requirements the facility must comply with, one must calculate how much HW is generated at the facility or unit each month (and be able to demonstrate how this conclusion was reached). To accomplish this, Federal and State law requires designation (or classification) of all wastes that are generated. For assistance in making a waste determination, see the Waste Characterization, Waste Fact Sheets, and Waste Submission Sheet Appendix (**Appendix F**). In Texas, the waste must additionally be classified as "hazardous, non-hazardous, industrial class 1, 2, or 3, special waste, or excluded."

Waste determination can be accomplished several ways, either through laboratory analysis or by applying knowledge of the hazardous characteristics of the materials or the process that generated it. Waste determination using knowledge of materials or processes can be accomplished through the use of a Safety Data Sheet (SDS). However, in some cases, SDSs **DO NOT** include chemicals that make up less than 1% of the total constituents of the material. Therefore, an SDS can only be used to classify a waste as hazardous.

If the waste is not characterized through knowledge of its process (i.e. use of SDS), it must be sampled and analyzed. Examples of TXARNG waste streams that must be analyzed are oil/water separator (OWS) sludge, parts washer fluid and filters, and contaminated soils. All waste determination records must be maintained for at least three years from the date the waste was last sent off site.

The Texas Commission on Environmental Quality (TCEQ) has created an assistance tool online called the Hazardous Waste Determination Matrix to help walk generators through the determination process. The matrix can be accessed online at **https://www.tceq.texas.gov/assistance/waste/waste-matrix/matrixsolidwaste.html**.

Contact the RES or the RCRA WM for assistance in conducting a HW determination or creating a waste profile for any “unknowns” at the facility. If a laboratory analysis is required, the RES or RCRA WM will arrange for a contractor to sample the waste or provide instructions on how to sample the waste. The laboratory will send results directly to the RCRA WM. The RES or RCRA WM will interpret lab analytical results and provide guidance on disposing of the waste properly. A copy of the laboratory results will be posted on the LSP Environmental Homepage. Refer to Appendix E. Check the list of WFSs in Appendix F and see if the waste has a profile already prepared. The appropriate WFS will indicate if analysis is needed and contain instructions on labeling and managing the waste while waiting for sample results.

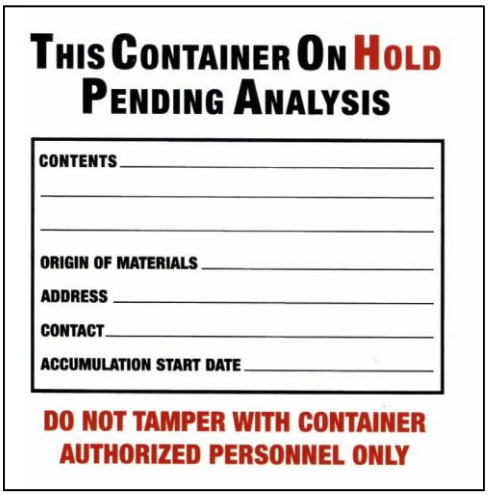
The majority of TXARNG facilities qualify as Conditionally Exempt Small Quantity Generators (CESQG). In order to qualify for this exemption, Texas requires facilities to conduct HW determinations on all waste streams. Each facility/unit will conduct a HW inventory of all waste streams generated in order to **demonstrate** and document generator status in order to qualify for the exemption.

Texas Army National Guard utilizes a Pending Analysis label for wastes that are waiting for sample results to determine disposal options. If knowledge of the process that generated the waste or information on the product SDS is not sufficient to determine if the waste material is hazardous or non-hazardous, conduct a laboratory analysis of the waste.

While the material is being analyzed, containerize the waste and obtain a Pending Analysis label from the RCRA WM or RES. Place the label clearly visible on the container and the date the sample was taken. Uncharacterized wastes have the potential to be hazardous and should be managed as hazardous from the point of generation until the analytical results indicate they are non-hazardous.

If lab results characterize the waste as hazardous, **immediately** attach a Hazardous Waste Label, carrying forward the accumulation start date from the Pending Analysis label (not the date waste was sampled or the date sample results were known).

Figure 2-1: Pending Analysis Label or Equivalent.



2.4. Categories of Hazardous Waste Generator. A HW generator is any person, by site, who first creates or produces HW. There are three categories of generators:

- CESQG
- Small Quantity Generator (SQG)
- Large Quantity Generator (LQG)

The volume of waste a generator produces in a calendar month determines which category of generator status is applied to that facility. Facilities that produce less waste must comply with fewer regulations than facilities that produce more waste. For a summary of Generator Criteria, see Table 2-2.

2.4 A. Conditionally Exempt Small Quantity Generator. Subject to limited regulations, a CESQG cannot produce more than 100 kilograms (kg) (220 lbs or roughly 1/2 of a 55-gallon drum) of HW or more than one (1) kg (2.2 pounds [lbs]) of acutely HW per calendar month. CESQGs may not store more than 1,000 kg (2,200 lbs or roughly ten [10] 55-gallon drums) of HW at any time, or they lose their regulatory exemption. There are no storage time limits for CESQG waste; however, if the 1,000 kg limit is exceeded, the facility becomes subject to increased regulation.

2.4B. Small Quantity Generator. SQGs produce between 100 kg (220 lbs) and 1,000 kg (2,200 lbs) of HW per calendar month. The total amount of waste stored on-site cannot exceed 6000 kg (13,200 lbs) at any time, or the generator will be subject to LQG rules. HW cannot be stored at a SQG facility longer than 180 days (or 270 days if the waste must be transported over 200 miles for treatment, storage, and disposal at a permitted facility).

2.4C. Large Quantity Generator. Large Quantity Generators produce 1,000 kg (2,200 lbs) or more of HW per calendar month and are subject to the most stringent requirements of the three (3) categories. LQGs, also called 90-day generators, cannot store HW on-site for more than 90 days without obtaining a permit.

2.4D. Temporary Change in Generator Status. Generator status is determined by the amount of waste that is generated or stored at a facility on a monthly basis. Periodically, TXARNG facilities change their generator status from one (1) month to the next, usually from a CESQG to SQG status and back. Called "episodic generation," this can occur when a unit disposes of large amounts of excess and outdated HM, causing their monthly limits as a CESQG to be exceeded. **The unit and the Environmental Branch are required to comply with increased regulatory requirements for the waste generated in that particular month.** In order to stay in full regulatory compliance at all times, it is a best management practice (BMP) for the TXARNG to train all HW workers to SQG regulatory standards. LQG facilities receive additional training as needed by their parent unit. If the facility is approaching its generator status limits and may need to temporarily change generator status, contact the RES or the RCRA WM immediately, before current generator status limits are exceeded.

2.4E. Hazardous Waste Generator Verification Form. To assist waste generators with tracking their monthly waste levels, the Hazardous Waste Generator Verification Form (**Appendix G**) was created. Contact the RES for assistance with form completion and submittal. Maintain completed copies in the CTK.

Table 2-2: Hazardous Waste Generator Storage Limits.

Generator Status	Time Limit	Maximum Amount of Hazardous Waste Generated Per Month	Maximum Amount of Hazardous Waste Accumulated On-Site	TMD Facilities
CESQG	No regulatory limit (BMP 365 days)	100 kg (220 lbs) 1 kg (2.2 lbs) Acute HW 100 kg (220 lbs) Spill Residue	1,000 kg (2,200 lbs) 1 kg (2.2 lbs) Acute HW 100 kg (220 lbs) Spill Residue	All facilities not listed below are CESQGs
SQG	180 days*	1,000 kg (2,200 lbs) 1 kg (2.2 lbs) Acute HW 100 kg (220 lbs) Spill Residue	6,000 kg (13,200 lbs) 1 kg (2.2 lbs) acute HW 100 kg (220 lbs) Spill Residue	Camp Mabry, Camp Bullis, Ellington Field
LQG	90 days **	>1,000 kg (2,200 lbs)	No Limit	Maneuver Area Training Equipment Site (MATES) (North Ft Hood), Dyess Air Force Base (AFB), Ft Bliss ***

**SQG can accumulate waste for up to 270 days if it must be transported more than 200 miles for treatment, storage or disposal.*

***Regulators may grant case-by-case extensions upon request.*

****TMD is only a LQG because we are **tenants** of LQG facilities.*

2.5. Hazardous Waste Accumulation. There are two types of HW accumulation or storage areas: centralized waste container storage areas (CSAs) and satellite accumulation points (SAPs). The CSA is the primary location on-site where HW drums and containers accumulate, until the waste is shipped off-site. Remember that waste may only accumulate for the amount of time allowed by the current generator status.

SAPs are individual storage areas located at or near the point of generation of the waste and are maintained by the operator generating the waste. Typically, HW is initially accumulated at SAPs before being moved to a CSA. Once a HW storage area has been established, **DO NOT** move or relocate the storage of waste to another location at the facility. Relocating hazardous storage may impact the SPCCP and Tier II. Contact the RES to discuss relocation of the HW storage area.

2.5 A. Setting up a CSA. Locate the CSA in a well-ventilated site indoors or a site outdoors that is under cover and fenced or otherwise secured to prevent unauthorized access.

STEP 1: Provide secondary containment to contain any releases to the environment.

STEP 2: For SQGs and LQGs, ensure a means of internal communication is provided at the facility, such as a telephone, two-way radio, or internal communications equipment.

STEP 3: Ensure fire extinguishers and/or a fire suppression system are located nearby that are compatible with the types of potential fire hazards.

STEP 4: Post warning signs in visible locations at the site. The signs must be readable from 50 feet away. To receive guidance on signage, contact the RCRA WM or the RES. Refer to the example in Figure 2-2.

STEP 5: Place enough spill response equipment to contain a spill nearby.

STEP 6: Segregate incompatible wastes with berms, curbs, walls, or spill pallets. See Chapter 4 for information on determining if HM or wastes are compatible.

Figure 2-2: Hazardous Waste Accumulation Area.

2.5B. Maintaining a CSA. Container Storage Areas at TXARNG facilities that are LQGs must be inspected weekly using the *HW Container Storage Areas - Inspection form* located in Appendix I (**Storage/Containers Inspection Resources**). Small Quantity Generator and CESQG locations must be inspected monthly using the monthly inspection form. If an alternate inspection checklist is required by the host installation containing the same information and meeting regulatory requirements is currently used, continue using that checklist.

STEP 1: Position container(s) so the label is clearly visible and there is enough room between rows (usually three [3] feet) to inspect containers and to permit movement of personnel, fire protection equipment, spill control equipment, and decontamination equipment. Containers should be closed, except when waste is added.

STEP 2: Ensure that labels are completed and include the date when accumulation begins. See the waste stream specific guidance in Appendix F for more on marking specific waste streams.

STEP 3: Ensure that wastes are compatible with adjacent containers and not accumulated in secondary containment structures (if used) with incompatible wastes. Maintain and operate the area to minimize the possibility of fire, explosion, or any unplanned releases.

STEP 4: Conduct storage area inspections as required. Completed inspection records should be maintained in the CTK for three (3) years.

STEP 5: Ensure proper operation of all required facility communications or alarms systems, fire protection equipment, spill control equipment, and decontamination equipment.

STEP 6: Verify that the facility Installation Spill Contingency Plan (ISCP) is up to date and a Spill Prevention Coordinator (SPC) has been appointed. The SPC must be on the premises or on call with the responsibility for coordinating spill and emergency response during hours of operation.

STEP 7: Ensure HW workers are properly trained and that training is documented. All employees should be familiar with proper waste handling and emergency procedures relevant to their responsibilities during normal facility operations. Any personnel who have not received HW generator training should be under constant supervision by trained personnel during performance of duties involving HW.

STEP 8: Take measures to safeguard against or mitigate container leaks. If a container holding HW is not in good condition, or if it begins to leak, transfer the HW from this container to a compatible container that is in good condition.

STEP 9: When a container approaches its accumulation time limit or the total waste on site approaches the maximum amount allowed, initiate the turn-in process IAW Chapter 4.

2.5C. Satellite Accumulation Points. A generator may accumulate as much as 55 gallons of HW or one (1) quart of acute HW in containers ***at or near*** the point of generation. **DO NOT** use an SAP to accumulate waste from multiple operating areas, even areas within the same shop. **DO NOT** mix multiple wastes in the same container. As a BMP, it is a recommendation of the TXARNG Environmental Branch to turn in waste in SAPs at least annually.

The purpose of an SAP is to allow generators some relief from having to take their waste to the CSA, which may be located away from the work area or out of the building, each time waste is generated. Because regulators may closely inspect SAPs, special care should be taken in setting up and maintaining them. The following steps should be taken to operate a SAP:

STEP 1: SAPs must be under the direct control of the operator or worker that generates or produces the waste.

STEP 2: The total amount of HW allowed to be stored in an SAP cannot exceed 55 gallons (or one [1] quart of acute HW).

STEP 3: Select an appropriate container (type and size). Use containers that are in good condition and compatible with the waste being stored. **DO NOT** use a 55-gallon drum if a 30-gallon drum is all that is needed. Use the WFS guidance in Appendix F to help determine proper container type(s).

STEP 4: Keep lids and locking rings on all containers at all times, except when adding or removing waste. **DO NOT** fill drums to the top. Allow sufficient headspace (approximately four [4] inches in a 55-gallon drum).

STEP 5: Refer to Appendix F for waste stream specific marking instructions. Add DOT hazard labels (flammable liquid, corrosive, etc.) as appropriate.

STEP 6: Position container so the waste stream name is clearly visible and there is enough room around the container to conduct inspections. Ensure that enough spill response material is located nearby to contain a spill.

STEP 7: Once the container at the SAP reaches capacity, mark it with the date and move it into the CSA within three (3) days (including weekends and holidays). This date will mark the beginning of the accumulation period.

Note: *At or near the point of generation means the SAP should be as close to the generating process as possible. If there is some reason the SAP cannot be located near the process (i.e., space or safety), coordinate with the RCRA WM for approval to locate it elsewhere.*

Caution: *Always ground metal containers containing flammable liquids during the transfer of materials.*

2.6. Accumulating Other Types of Wastes.

Texas Army National Guard activities will use CSAs for the following types of wastes:

- UW (i.e. paint and paint related waste, fluorescent light bulbs and lithium batteries)
- Recyclable/reusable materials (i.e., used oil, lead-acid batteries, and off-specification fuel)
- Non-RCRA hazardous wastes

At a minimum, accumulation or storage areas for these wastes should be at a location that provides compatible storage, is protected from the elements, and is provided with a means of secondary containment to prevent potential release to the environment. As a BMP, the Hazardous Materials/Hazardous Waste Storage Area Inspection Log (**Appendix I**) may be used for the inspection of these areas as well. See Chapter 3 for further guidance on accumulating and managing these types of wastes.

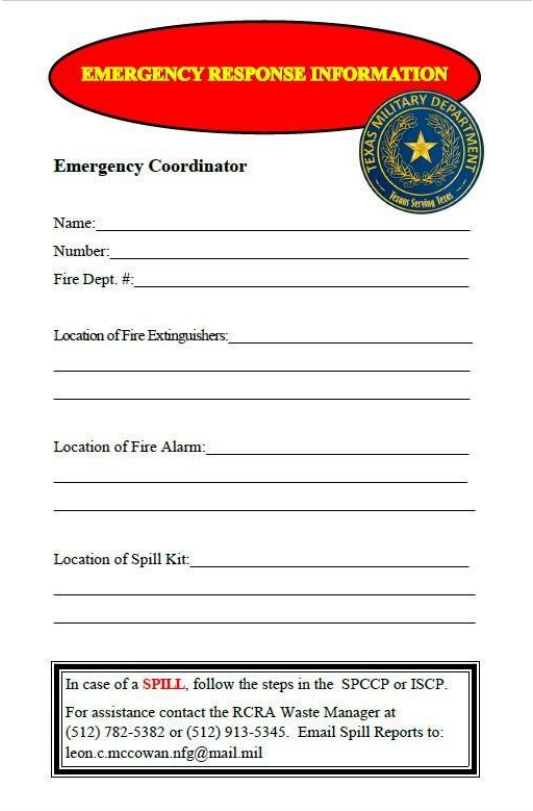
Caution: *When storing liquid wastes such as used antifreeze and used petroleum, oils, and lubricants (POL) in shop areas, all floor drains must be plugged.*

2.7. Hazardous Waste Accumulation Area Emergency Preparedness and Prevention. Federal regulations require that TXARNG facilities that are LQGs or SQGs be maintained and operated to reduce the possibility of fire, explosion, or any unplanned release of HW which could threaten human health or the environment. To achieve these standards, provide access to communications or an alarm system, maintain sufficient aisle space between containers, and establish arrangements with local authorities to respond to emergency situations.

Federal regulations also require LQGs and SQGs to post the following information next to the facility telephone(s):

- The name and telephone number of the SPC
- The location of fire extinguishers and spill control material and, if present, the location of fire alarms
- The telephone number of the fire department

Figure 2-3: Emergency Response Telephone Procedures.


EMERGENCY RESPONSE INFORMATION

TEXAS MILITARY DEPARTMENT

Emergency Coordinator

Name:_____

Number:_____

Fire Dept. #:_____

Location of Fire Extinguishers:_____

_____

_____

Location of Fire Alarm:_____

_____

_____

Location of Spill Kit:_____

_____

_____

In case of a SPILL, follow the steps in the SPCCP or ISCP.

For assistance contact the RCRA Waste Manager at (512) 782-5382 or (512) 913-5345. Email Spill Reports to: leon.c.mccowan.nfg@mail.mil

Additionally, TXARNG requires all generators, including CESQGs, to post the information listed above in their orderly/supply rooms. Forms are available from the RES or on LSP.

Spill procedures are contained in an SPCCP or ISCP. See Chapter 6 for more information.

- Report all spills IAW the TXARNG Spill Report Form found in Appendix K
- A spill kit and fire extinguisher should be located within close proximity of each HW storage area in case a spill occurs
- Typical spill kits may contain absorbent pads, socks, pillows, protective gloves, goggles, and instructions on the use of these items
- If a spill should occur, use the contents of the spill kit to stop and contain the spill. If one cannot safely contain the spill, call 911
- Replace or replenish materials used from the spill kit. Contact the RCRA WM for assistance in obtaining spill kits and spill prevention supplies

2.8. Container Management. Containers must be kept in good condition. If a container begins to leak, the waste must be transferred to another container immediately. CSAs must be inspected monthly (CESQG and SQG) or weekly (LQG) depending on generator status, and all leaks or container deterioration must be addressed. Keep containers closed at all times, except when adding or removing waste. **DO NOT** allow waste to sit in an open container and evaporate. Storage containers must be made of compatible materials appropriate to the waste. If a container is being reused, remove any old accumulation labels and dates. WFSs in Appendix F will provide specific instructions on selecting, labeling, and adding waste to containers.

2.8A. Selecting and Preparing a Container. Only certain types of performance oriented packaging (POP) containers are authorized for accumulating waste. The type of container selected depends on the type of waste.

- Open-head drums (1A2) are commonly used for non-liquid wastes such as rags and filters
- Closed-head drums (drums with bung holes) (1A1) are used for liquids
- Boxes are the best containers for certain items like batteries, aerosol cans, and fluorescent light bulbs
- As a BMP, select the smallest appropriate container for the waste

2.8B. Labeling the Container.

STEP 1: For each container of waste in the CSA, obtain waste labels (see Figure 2-3) from the RCRA WM or RES.

STEP 2: Use an indelible marker to write the required information on the label. For containers at an SAP, **DO NOT** place an accumulation start date on the container until the container is full and moved to the CSA.

STEP 3: Attach the label securely to the side of the container.

STEP 4: If a label is not available, mark the container with the type of waste (Hazardous, Special, Universal, etc.). For containers in the CSA, mark the label on the container with an ACCUMULATION START DATE. This is the date the full container was moved in the CSA awaiting disposal. The timeline for disposal starts now.

STEP 5: Attach DOT hazard labels, if required.

Figure 2-4: Waste Labels.

2.8C. Adding Waste to the Container. These procedures are general instructions that apply to all waste containers. Some wastes may require special handling or Personal Protective Equipment (PPE) be worn. Always refer to the appropriate SDS to verify that one is using the proper PPE for the specific chemical waste being handled. Adding wastes to containers can occur at SAPs or at the primary CSA.

STEP 1: Ensure the container is appropriate for the waste being accumulated and that it is marked and labeled properly.

STEP 2: Utilize the proper PPE during waste handling.

STEP 3: Carefully open the container and add the waste. Use a funnel to pour liquids into drums. **DO NOT** mix different waste streams in the same container. **DO NOT** mix hazardous and non-hazardous waste. **Whenever adding flammable waste to a drum, ensure the drum is properly bonded and grounded.**

STEP 4: When adding waste to an empty container, use an indelible marker to write the ACCUMULATION START DATE on the label. For an SAP, **DO NOT** mark the container with an ACCUMULATION START DATE until the container is full and is moved to the CSA.

STEP 5: Securely replace the lid or bungs on the container.

STEP 6: When the level of the waste is near the top of the container, STOP adding waste. **DO NOT** overfill the container. Heat causes liquids to expand and can cause the drum and/or lid to bulge and become unstable. Maintain headspace in the container as noted below. **DO NOT** place liquids in open-head drums.

Table 2-3: Container Size and Headspace.

Size of Container	Headspace Amount
55 gallon	4 inches
30 gallon	3 inches
15 gallon	2 inches
Less than 15 gallons	1 inch

2.9. Managing Empty Drums. Empty drums that held hazardous substances are regulated as HW or Class 1 waste. The containers are considered "RCRA empty" when all wastes or materials are removed from a drum using common practices such as pouring, pumping, etc., and no more than three percent of residue (approximately one inch) remains in the bottom. If the drum cannot be emptied, it must be managed as a HW. **NOT all landfills are able to dispose of these types of waste.** See Appendix F, WFS 36 (**Empty Container Management**), for specific information on procedures for managing empty drums.

Empty drums that are not designated as hazardous may be used on site for waste accumulation or turned in to the United States Property & Fiscal Office (USPFO) as a surplus drum (no rinsing is required).

Drums that held oil should be triple rinsed with water over a fully functional OWS and turned in as scrap metal. If the facility does not have a functioning wash rack/OWS, contact the RCRA WM for guidance.

Empty drums should be stored on their sides on a pallet or drum rack so they **DO NOT** accumulate rainwater within the bung ring, causing them to rust. Mark the drum “Empty” in a clearly contrasting color. Remove or cover all other labels or markings. Remove all residues from the outside of the drums. Contact RCRA WM for the disposal of excess empty containers.

Chapter 3. Universal Waste, Used Oil, and Special Waste. This chapter deals with wastes that are common to TXARNG sites, but are regulated, managed, and disposed of differently than the HW discussed in the previous chapter. UWs, Used Oil and other special wastes require specific handling and disposal procedures. **DO NOT** throw these wastes into the trash or municipal solid waste dumpsters for disposal. Accumulate these wastes in a CSA in accordance with the procedures described in Chapter 2.

3.1. Universal Waste. The UW rule allows alternative waste management and disposal procedures for specific, common hazardous wastes. Managing UW reduces reporting and the impact on generator status.

There are numerous benefits to classifying waste under the UW Rule:

- When managed as UW, material is not subject to regulations 40 CFR parts 262 through 272, management standards applicable to HW generators, transporters, and disposal facilities.
- HW manifests are not required when transporting UW, but a bill of lading is required.
- UW does not have to be transported by a registered HW transporter.
- UW does not count toward total accumulation for HW generator status.

Note: DO NOT accumulate UW on site for more than one year. DO NOT *attempt to dispose, dilute, or treat UW onsite. Report all spills according to the Spill Report Form in Appendix K.*

Table 3-1: Common Universal Waste Streams.*

Waste Stream	Description
Batteries, Miscellaneous	**Includes** batteries such as lead-acid, lithium, magnesium, mercury, and nickel-cadmium (Ni-Cad) used for communication devices, and rechargeable alkaline batteries **Does not include** non-rechargeable alkaline batteries, such as common flashlight batteries, contact the RCRA WM for guidance when disposing of these batteries
Mercury-Containing Equipment (MCE)/Devices	**Includes** thermostats, barometers, manometers, certain gauges, and electrical switches
Hazardous Lamps	**Includes** fluorescent lights, high intensity discharge, neon, mercury vapor, high-pressure sodium and metal halide lamps **May include** incandescent lights. Contact the RCRA WM for guidance when disposing of incandescent lights
Paint and Paint Related Waste	**Includes** non-latex paint and primer (Chemical Agent Resistant Coating [CARC], enamel, polyurethane coatings, etc.), paint booth barrier paper, paint booth waste and filters, hazardous water-based CARC paint and reclamation sludge **Does not include** latex paint and primer or non-hazardous water-based CARC paint waste
	**See Appendix F WFSs for more details on UW management*

3.1A. Universal Waste Labels.

STEP 1: For each container of UW, obtain a UW label from the RES or the Environmental Training Section. Figure 3-1 shows an example of UW label.

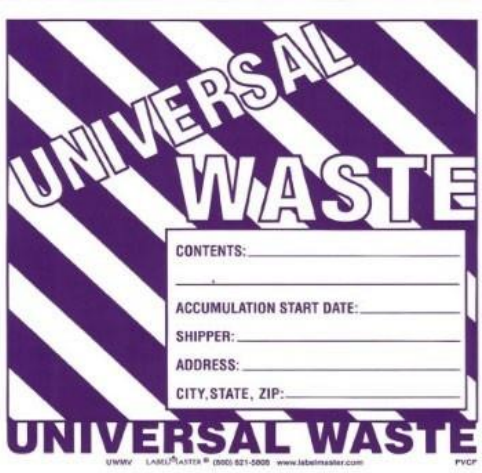
STEP 2: Use an indelible marker to write the required information on the label. See Appendix F WFS for the information required on the label.

STEP 3: Attach the label securely to the side of the container.

STEP 4: If a label is not available, mark the container with the information required on the labels in Figure 3-1 including the words “Universal Waste.”

STEP 5: Mark the accumulation start date, meaning the date on which the first piece or drop of waste touched the container. **This date is used to start the clock. The maximum accumulation time is one year before it needs to be shipped off for disposal**

Figure 3-1: Universal Waste Label.



3.1B. Universal Waste Management – Batteries. Common UW batteries generated at TXARNG facilities include rechargeable alkaline, lithium, magnesium, mercury, lead acid and Ni-Cad. See Appendix F WFS 33 (**Spent Batteries**) for waste battery storage.

Table 3-2: Battery Labeling Requirements.

Batteries - Labeling Requirements
Label the batteries or container storing multiple batteries, with **both** of the following:
1. Accumulation date waste batteries storage begins, AND 2. ONE of the following phrases: • "UNIVERSAL WASTE – BATTERY(IES)" or • "WASTE BATTERY(IES)" or • "USED BATERY(IES)"

3.1C. Universal Waste Management – Mercury Devices/Thermostats.

Mercury Containing Equipment includes thermostats, barometers, manometers, temperature and pressure gauges, mercury switches, and medical devices that contain various amounts of elemental mercury. Mercury is a toxic substance that is restricted from disposal in municipal landfills. Turn in any unused items for disposal that could contain mercury.

Table 3-3: MCE and Mercury Thermostats.

MCE and Mercury Thermostats Labeling Requirements	
Label the MCE or container storing the MCE, with **both** of the following:	Label the thermostats or container storing thermostats with **both** of the following:
1. Accumulation date MCE storage began AND 2. "UNIVERSAL WASTE – MERCURY CONTAINING EQUIPMENT"	1. Accumulation date thermostat storage began AND 2. "UNIVERSAL WASTE – MERCURY THERMOSTAT(S)"

3.1D. Universal Waste Management – Waste Lamps. Universal Waste lamps include, but are not limited to, fluorescent lights, high intensity discharge (HID), neon, mercury vapor, high-pressure sodium, and metal halide lamps. These contain toxic metals, such as mercury.

- Manage all discarded fluorescent bulbs as UW
- **DO NOT** dispose of UW lamps in a municipal dumpster
- **DO NOT** crush or intentionally break mercury-containing light bulbs
- Some facilities may use pre-labeled boxes to mail lamps (various types) for recycling. Be sure to fill in the ACCUMULATION START DATE when the first lamp is added to the box. If there are questions about using or obtaining these boxes, contact the RCRA WM
- See Appendix F, WFS 35 (**Spent Light Bulbs**) (intact or broken) for more guidance

Table 3-4: Hazardous Lamps Labeling Requirements.

Hazardous Lamps Labeling Requirements
Label the lamps or container storing multiple lamps, with **both** of the following:
1. Accumulation date hazardous lamps storage began AND 2. ONE of the following phrases: • "UNIVERSAL WASTE – LAMP(S)" or • "WASTE LAMP(S)" or • "USED LAMP(S)"

3.1E. Universal Waste Management – Paint and Paint Related Waste. According to Texas regulation 30 TAC Section 335.262(b), paint and paint related materials can be classified as UW. Paint and paint related materials include:

- Used or unused paint
- Spent solvents used in painting (i.e. combinations of thinners and paint, lacquer, or varnish)
- PPE, contaminated rags, gloves, and debris resulting from painting operations
- Coating waste paint, overspray, overrun paints, paint filters, paint booth stripping materials, and paint sludge from water-wash curtains on a case-by-case basis

- Cleanup residues from spills of paint (this excludes cleanup residues from a spill of paint waste being managed as UW)
- Cleanup residues from painting and paint removal activities
- On a case-by-case basis, other paint related wastes generated because of the removal of paint

Table 3-5: Paint and Paint Related Waste Labeling Requirements.

Paint and Paint Related Waste Labeling Requirements
Label the paint or the containers storing the paint and paint related waste, with **both** of the following:
1. Accumulation date storage began of the paint related waste AND 2. “PAINT AND PAINT RELATED WASTES”

3.2. Used Oil Management. Used oil is any lubricant, hydraulic fluid, heat transfer fluid or similar oil that was refined from crude oil or any synthetic oil, and is contaminated by physical or chemical impurities from its use. Used oils (including diesel, hydraulic fluid, brake fluid, and transmission fluid) are collected for recycling and can all be stored in the same container. (See Appendix F WFS 25 Used Oil) for more information.)

3.2 A. Used Oils (Regular or Synthetic).

- Automotive crankcase oil, including car, truck, marine, and aircraft engine oils not used for engine fuel
- Diesel engine crankcase oil, including car, truck, heavy equipment, aircraft, and railroad engine oils not used for fuel
- Used hydraulic oil, alternative fuel engine oils, transmission fluids, brake fluids, and power steering fluid

3.2B. Used Oil Management Practices.

- All containers, tanks, and fill pipes associated with the collection of Used Oil must be clearly marked or labeled with the words "USED OIL." **DO NOT** label containers with any other description in place of the words "USED OIL"
- Used Oil must be stored in non-leaking tanks or containers that are in good condition
- **DO NOT** allow tanks and containers to deteriorate. Correct any leaks or defects immediately

- Keep Used Oil containers closed except when adding waste to the container
- **DO NOT** dispose of Used Oil in a municipal dumpster, place it on land, or use it for road oil or as a dust suppressant
- **DO NOT** add HW or other HM to Used Oil that would render it unfit for recycling
- **DO NOT** collect Used Oil in a container that previously held HW; it may contaminate the Used Oil
- Collect motor gas (MOGAS) and diesel separately from Used Oil
- Maintain records for the recycling or disposal of Used Oil in the CTK

Figure 3-2: Used Oil Label.

3.2 C. Used Oil Filter Accumulation.

- Used Oil filters must be “hot-drained” prior to being recycled to remove free-flowing oil
- **DO NOT** separate filters to be recycled into their component parts
- Used Oil filters must not be stored, processed, or disposed in any manner that results in a discharge of oil into the soil or groundwater
- Containers must be in good condition, not leaking, and clearly marked with the words “Used Oil Filters”
- Sufficient spill equipment must be on-site to respond to a spill
- Contact the RCRA WM for assistance with filter disposal
- Retain a copy of the bill of lading or manifest from the disposal in the CTK
- Never dispose of Used Oil Filters in the municipal dumpster or regular trash
- If filter crushing is authorized, they can be crushed in order to save space

3.3. Special Waste Management. The TCEQ defines SW as wastes that require special handling, specially trained personnel, and/or special disposal methods. If improperly handled, stored, processed or disposed, special waste may pose a present or potential danger to human health or the environment. **DO NOT** mix SW with HW. Examples of SW commonly generated at TXARNG facilities include:

- Contaminated fuels
- Used antifreeze
- OWS and grit trap waste
- Biodegradable solvent

Refer to Appendix F and the sections below for more information on managing specific types of special wastes.

Figure 3-3: Special Waste Label.

3.3 A. Contaminated Fuels. Contaminated fuels are those that **DO NOT** meet military specifications. Texas Military Department has purchased diesel recycling filtration systems capable of filtering contaminants from diesel. If a facility has large amounts of contaminated diesel fuel, they should contact MATES or either Combined Support Maintenance Shop (CSMS) facility about scheduling use of the filtration units. Fuels contaminated with hazardous or other SW must be treated as SW (off-spec fuel) and must not be filtered through this system. **DO NOT** allow contaminated fuels to vent to the atmosphere. See Appendix F WFSs 31 (**Off-Specification Fuel – MOGAS**) and 32 (**Off-Spec Fuel – Diesel, JP-8, and F24**) for guidance.

3.3B. Used Antifreeze. Antifreeze recyclers are located at MATES and at both CSMSs. There are also sites that utilize vendors who supply new antifreeze and remove old antifreeze for recycling. Although there are several different types of antifreeze

available, only the green or orange colored antifreeze is currently recyclable by TXARNG. Collect used antifreeze in its own container and label it “Used Antifreeze.” Never discharge or discard contaminated antifreeze into the sewer, on the ground, or other unauthorized locations. Extended use can cause antifreeze to become contaminated with hazardous substances like cadmium, chromium and lead. If a facility has large amounts of antifreeze, schedule a turn-in at MATES or CSMS. Contact the RES or the RCRA WM for scheduling assistance. See Appendix F WFSs 29 (**Recycled Antifreeze – Coolant**) and 30 (**Antifreeze Filters**) for guidance.

3.3C. Wash Racks, Grit Traps, Oil/Water Separators and Grease Traps. Grit traps are required for permanent vehicle wash racks. Wash rack must be covered or have a functioning diverter valve that diverts water from the wash rack to the Sanitary Sewer when in use and to the Storm Sewer when not in use. Never put solvents, gasoline or oil products into the grit traps (wash rack). Ensure that chlorinated solvents and any other surfactants (soaps) are not used in any cleaning operation that flows into the grit traps (wash racks). Pressure washing and heated water are acceptable.

Some wash racks and drains are connected to OWSs. Never use detergents because they emulsify the oils that can impair the function of OWS, allowing oils and greases to escape to the environmental. See Section 3.3D for more information about floor drains.

Refer to the following steps to ensure wash racks, grit traps and OWSs are maintained.

STEP 1: The facility supervisor is responsible for maintaining a properly working wash rack or submitting a Work Order requesting repairs or servicing, in a timely manner.

STEP 2: Inspect wash racks and OWSs monthly and immediately after heavy rain. Inspection should include inlet of wash rack, fill line, diverter valve and piping.

STEP 3: Set-up a dry wash point before using the OWS and remove big sticks, trash and dirt from vehicles.

STEP 4: Do not smoke cigarettes or introduce any sparks or open flames when utilizing wash racks, grit traps and OWSs.

Texas Commission on Environmental Quality regulates the pumping, transportation, and disposal of grit trap waste. Normally classified as a SW, sediment accumulated at car washes, wash racks, and other vehicle washing facilities can be hazardous if hazardous substances or petroleum products have contaminated it. This includes pre-treating engine parts prior to cleaning. Contact the RES or RCRA WM for any questions about whether or not a solvent is chlorinated.

The wastes from wash racks, grit traps and OWSs should be analyzed periodically in a laboratory to check for HW content. Appendix E contains a SOP that outlines the procedures for requesting lab samples. Once the waste is characterized, the RCRA WM

will request a quote for services from a private contractor to clean out wash racks, grit traps and OWSs as needed or as required by some City Ordinances.

Grease traps are installed in many Readiness Center kitchens and cooking areas to filter and remove fats, oils and greases (FOG) from water before it enters the municipal waste system. A Facility Maintenance Work Order should be requested on LSP for the clean out and maintenance of the grease trap. Some Local City Codes, City Ordinances or vendors require laboratory analysis before a grease trap can be cleaned or pumped out. Contact the RES or the RCRA WM if an analysis is requested. Whether a laboratory analysis is required or not, Facility Maintenance will assist with servicing grease traps.

3.3D. Floor Drains and Shop Sinks. **DO NOT** pour chemicals or petroleum products down shop sinks or allow unauthorized discharges to enter floor drains. The water discharge from floor drains and shop sinks into sanitary discharge systems may be regulated by the pretreatment provisions of the Clean Water Act (CWA) or by Texas Pollutant Discharge Elimination System (TPDES) permits. This is dependent on the discharge point of the drain or sink. Hazardous chemicals discharged to a publicly owned treatment works (POTW) through the sanitary sewer, may violate Federal, state, or local regulations.

3.3 E. Solvent Use. Solvents required by Technical Manuals (TM) for military equipment will be tested and characterized before disposal. Check with the RCRA WM or the RES with questions on whether the waste stream is recyclable or not.

3.4. Other Considerations.

3.4 A. Non-Hazardous and Non-RCRA Regulated Waste. Some waste streams generated by TXARNG are non-RCRA regulated wastes. These wastes are not specifically regulated as hazardous under RCRA; however, they are regulated and must be managed and disposed of properly. Asbestos (**WFS 28**) and PCBs (**WFS 19**) are regulated under TSCA, and radioactive waste is regulated by the Nuclear Regulatory Commission. Other wastes that are not hazardous or otherwise regulated (such as some liquids) may need to be accumulated and disposed of properly, instead of being disposed of in municipal waste.

Refer to the following steps and the materials in Appendix F WFSs for information on accumulating and disposing these types of wastes.

STEP 1: For each container, obtain a non-hazardous or non-RCRA regulated waste accumulation label from the RCRA WM or RES. If unsure whether a waste falls into one of these categories, contact the RCRA WM. Use the label shown in Figure 3-4 for accumulation non-hazardous wastes, Figure 3-5 for the accumulation of non-RCRA waste, and Figure 3-6 for accumulating asbestos containing materials.

STEP 2: Use an indelible marker to write the required information on the label.

STEP 3: Attach the label securely to the side of the container.

STEP 4: If a label is not available, mark the container with the information required on the label including the words “Non-Hazardous Waste.”

Note: *The non-hazardous waste label is not required by regulation but is a BMP to declare the waste type.*

Figure 3-4: Non-Hazardous Waste Label.

Figure 3-5: Non-RCRA Regulated Waste Label.

Figure 3-6: Asbestos Caution Label.

3.4B. Non-Hazardous Industrial Waste. Non-hazardous waste generated by these activities must be classified and managed as Class 1, 2, or 3 non-hazardous industrial waste. Contact the RCRA WM or RES with any questions about non-hazardous industrial waste.

Chapter 4. Turn-In: Waste (Hazardous, Special, Universal, etc.).

4.1. Waste Submission Sheet. Texas Army National Guard cannot dispose of any hazardous, special or universal wastes on site.

STEP 1: Provide the RES or the RCRA WM with a completed Waste Submission Sheet. The form is contained in Appendix F.

STEP 2: The RCRA WM will review the Waste Submission Sheet to ensure that all requested waste items have been scheduled for pick-up.

4.2. Waste Turn-In Procedures. Hazardous Waste items that cannot be reused, recycled or disposed of in regular (municipal) trash, and must be disposed by the RCRA WM, must follow strict waste guidance.

DO NOT contact vendors or contractors to discuss waste removal or schedule removal, unless directed to do so by the RCRA WM. Disposal Funding must be scheduled and processed through the RCRA WM. Use the following procedures to schedule waste removal from the facility:

- Use the Waste Characterization Sheet (Appendix F) to determine the wastes specific hazard
- Using the Waste Submission Sheet; make a list with all the required information for each waste item to be disposed
- Send the Waste Submission Sheet to the RES or directly to the RCRA Waste Manager to request removal
- The RCRA WM will send the Waste Submission Sheet to the vendor and request a quote for the service and schedule the pick-up
- Refer to the WFS for packing and marking instructions to prepare the waste for pickup

The process above can take between 30 and 45 days to complete, due to funding procedures and contractor/vendor scheduling availability. Sites that are tenants may have a variation on the time lines, depending on the host installation.

Note: If services are completed without prior funding approval by the RCRA WM, they will be liable for the cost.

4.3. Generator Activities during Waste Pick-Up.

STEP 1: The generator will ensure that the driver has and is in possession of a valid HM certification or endorsement.

STEP 2: Review the manifest and Land Disposal Restrictions (LDR) with the contractor and correct any mistakes. Only personnel who have attended the two week Ammo-62 Technical Transportation of Hazardous Materials or the Hazardous Waste Manifest/DOT Certification course are authorized to sign manifests.

STEP 3: Sign the manifest and LDR. If the generator cannot sign the manifest, contact the RCRA WM.

STEP 4: Transport vehicles must be properly placarded. Contractors should provide required placards.

STEP 5: Retain a copy of all paperwork in the CTK for a minimum of three (3) years. Paperwork to retain includes waste manifest, LDR Form, SDS and laboratory analysis.

STEP 6: The original manifest must be received by the generator within 45 days for LQGs or 60 days for all other generators from the date the waste was transported to the Treatment, Storage, and Disposal Facility (TSDF). Contact the RCRA WM if the manifest is not received. An exception report will need to be filed with TCEQ when the allotted days have been exceeded.

STEP 7: Provide the RCRA WM with a copy of the disposal paperwork to keep on file.

Chapter 5. Training, Inspections, and Recordkeeping. This chapter provides information, instructions, and tools to assist with required training, regulatory inspections, internal audits, and recordkeeping.

5.1. Training Requirements.

5.1A. Hazardous Waste Management Training. Personnel handling or responsible for managing HW must complete training requirements before they can work in waste management positions unsupervised. Training is designed to familiarize personnel with their duties and responsibilities in order to achieve and maintain compliance with the HW management standards applicable at their facility. Refresher training is required annually.

Table 5-1: Training Requirements for HW Generators and UW Handlers.

	Conditionally Exempt Small Quantity HW Generator	Small Quantity HW Generator	Small Quantity UW Handler	Large Quantity UW Handler
Who must be trained	Employees who handle HW at facilities generating <100 kg (220 lbs) of HW per month	Employees at facilities generating >100 kg (220 lbs) to 1,000 kg (2,200 lbs) per month	Employees at facilities with <5,000 kg of accumulated UW at any time	Employees at facilities with >5,000 kg of UW at any time
Regulatory Citation	TXARNG requires all HW handlers to attend annual training per 40 CFR 262.34 (d)(5)(iii)	40 CFR 262.34 (d)(5)(iii)	40 CFR 273.16	40 CFR 273.36
When training must occur	Time limit not defined for initial training, annual refresher is required	Time limit not defined for initial training, annual refresher is required	Time limit not defined for initial training	Time limit not defined for initial training, annual refresher is required
Recordkeeping	Document training provided	Document training provided	Document training provided	Document training provided

5.1B. TMD Annual Hazardous Waste Management Training. Training for TMD personnel who handle hazardous waste occurs annually at various locations around the state. Completion of this training satisfies the initial and annual refresher for the following federal training requirements; Hazardous Waste Handling (40 CFR 262.34), Spill Response Training (40 CFR 112.7(f)).

Contact the Environmental Training team lead at (512) 782-6228 for registration information.

Note: *To receive the HM endorsement on a Military Driver's License (DA Form 348), completion of online Logistics Training Course (LTC)-012, HM Training for Non-Certifying Official (see Table 5-2) is required.*

Table 5-2: Environmental Training.

Training Requirement	Regulation Citations	Training Source
EMS Awareness Training All members of TMD are required to complete EMS Awareness Training. One-Time Training	AR200-1	Video available on LSP
EWMP –Training Series	Task specific video modules developed to assist in awareness of the Agency's EWMP requirements and/or provide personnel with remedial topic specific training	This is not a substitute for attending Hazardous Waste Generator Training
(LTC-012) Hazardous Materials (HM) Training for Non-Certifying Official "Entry level" HM course designed to meet the General Awareness, Familiarization, Safety, DOT Security, and Department of Defense (DoD) Security Training requirements (Required annually if course used to satisfy requirements of OSHA mandated Hazard Communication (HAZCOM) training)	49 CFR 172.204, 29 CFR 1910.120, 40 CFR 265.16, and DoD Regulation 4500.9R, Part II, Chapter 204, Para D.1.a United States Army Forces Command (FORSCOM)/ARNG Regulation 55-1, Appendix K-4 and K-5, and The Army Driver and Operator Standardization Program (AR 600-55) Chapter 4-9	Online - National Guard Professional Education Center (PEC): Installations, Logistics, & Environmental Training Center Online Campus Guard University (GuardU) for student registration **https://guardu.ng.mil/**
Hazardous Waste Management Training Required for all personnel generating or handling hazardous waste. Course	Hazardous Waste Handling Training - 40 CFR 262.34 Universal Waste Training - 40 CFR 273.16	Course conducted by SMEs and occurs annually at various locations around the state

combines annual training requirements Completion of this training satisfies annual requirements	Hazardous Materials Awareness Handling (49 CFR 172) Refresher (*Completion will not update military driver's license annotation, see PEC course LTC-012*) OSHA Hazardous Communication (29 CFR 1910.1200) 40 CFR 112.7(f) Employees are to be trained on the contents of the SPCC Plan and spill response activities annually	
Spill Prevention Training Series	40 CFR 112.7(f) Employees are to be trained on the contents of the SPCCP and spill response activities annually	DVD contains two training modules Module 1: For personnel responsible for compliance with provisions of spill plan and/or conducting required inspections Module 2: Inspections and Checklist
Environmental Officer (EO)	AR 200-1	TXARNG UNITS: Will identify and appoint an EO and an alternate Training will be provided

NOTE: *For more information on available training or to request a class, please go to:* **https://portal.tx.ng.mil/arg/arg010/SitePages/env_training_req.aspx**

5.1C. Hazard Communication. Occupational Safety and Health Administration (OSHA) 29 CFR 1910.1200(h) requires employers to provide information and training to employees who work in areas where hazardous chemicals are present. Training must be provided at the time of initial assignment and whenever a new physical or health hazard is introduced into an employee's work area.

Training can be found at: **http://www.free-training.com/osha/hazcom/hazmenu.htm**

5.2. Regulatory Inspections and Audits. All TXARNG activities are subject to internal and external inspections by the DoD, TCEQ, and federal regulatory agencies. Local governments may also inspect for compliance with permits, local codes, or other regulations. If an external inspection takes place, immediately notify and forward copies of all related correspondence to the EPAS Manager at (512) 782-5001 ext. 7494113 or RCRA WM at (512) 782-5382.

Regional Environmental Specialists support the entire state of Texas. They conduct SAVs for all units in their respective areas, ensuring compliance with environmental laws and regulations. They also conduct on-site and on-the-job training during the SAVs, as needed. The RESs assist with External EPAS conducted by NGB Contractors, in an advisory capacity. For questions, comments, or concerns about EPAS, contact the EPAS Manager at (512) 782-5001 ext. 7494113 or the RES. Texas Army National Guard facility specific checklists for EPAS have been developed and are available for download on LSP.

5.3. Document Control and Retention. Texas Army National Guard is required to establish and maintain a standard practice for the identification, maintenance and disposition of environmental records in compliance with ISO 14001 standards and all applicable federal, state, and local regulatory requirements.

Texas Army National Guard Maintenance Facilities, Training Sites, and Readiness Centers are provided with a CTK to be used for the standardized organization and storage of environmental records, documents, and reference materials, as required by EMS document control standards. Refer to the CTK reference content card for retention times (**Appendix J**).

- The environmental CTK provides the facility with all site specific regulatory required materials, documents, and guidance needed to ensure the facility's records are easily accessible and retrievable as required by the TMD EMS.
- The CTK provides a centralized location for storing all environmental documents and records needed on-site for compliance with regulatory and EMS documents and recordkeeping requirements. RCRA requires generators to keep various types of documents and records related to their HW activities available on-site for review by regulators.

- The facility's site specific CTK contains environmental plans, records, forms, labels, and similar materials, while allowing for expansion as needed to accommodate future environmental document and recordkeeping needs.
- Each CTK is equipped with a laminated "Content Reference Card" designed specifically for the facility. The Content Reference Card is a list of all regulatory documents and records required at the facility. It also includes a list of the reference materials and laminated samples of forms and templates that are included in the facility's CTK. The Card contains a brief description of each document or item and identifies the required retention times for maintaining documents and records at the facility.

Chapter 6. Spill Response Procedures.

6.1. Spill Prevention Control and Countermeasures Plan. Spill Prevention Control and Countermeasure Plans are required by 40 CFR 112 and AR 200-1 for facilities with the capacity to store greater than 1,320 gallons of POL (petroleum, oil, lubricants) above ground. Antifreeze and other chemicals are not included in the plan. However, spill response using the same principles as the SPCCP is recommended. Only containers of 55-gallon or larger are included in this threshold. The SPCCP establishes procedures, methods, and equipment used to prevent the discharge of oil and hazardous substances to the environment. Refer to the facility SPCCP or the ISCP, as applicable, to determine the specific prevention and response procedures that exist for potential spill sites. For information related to SPCC Plans, contact the Environmental Branch at (512) 782-5753 or the Clean Water Coordinator at (512) 782-6098.

6.2. Installation Spill Contingency Plan. The purpose of the generic ISCP is to establish procedures and identify resources for the control and cleanup of hazardous substance incidents at TXARNG facilities and units that are not required to have a facility SPCCP (See Figure 6-1).

6.3. Spill Response Procedures.

6.3A. Major Spill.

A major spill response is an **EMERGENCY** where available personnel and equipment in the immediate area CANNOT absorb or otherwise control the spill at the time of release.

STEP 1: Stop the flow only if absolutely safe to do so. Only qualified and trained personnel should participate in spill response operations.

STEP 2: DO NOT attempt to mitigate the spill.

STEP 3: Evacuate all personnel to a safe distance uphill/upwind of the spill.

STEP 4: Secure the area and immediately notify the local fire department or emergency response personnel by dialing 911.

STEP 5: Be prepared to provide the emergency responders with the following information:

- Name
- Location and time of the spill
- Type of substance and approximate amount spilled
- Container size and estimated rate the substance is leaking

- Number of injured/exposed/contaminated personnel and the nature of any injuries

STEP 6: Notify the staff duty officer and/or unit commander.

STEP 7: Notify the Environmental Branch (See Environmental Branch Contact Information on LSP).

STEP 8: Complete a Spill Report Form (**Appendix K**) and submit the report to the RCRA WM **as directed in the spill plan**.

6.3 B. Incidental Spill.

STEP 1: Only qualified and trained personnel should participate in spill response and cleanup operations.

STEP 2: If necessary, evacuate all personnel to a safe distance uphill/upwind of the spill and secure the area.

STEP 3: Wearing the proper PPE and without placing oneself at risk of injury, attempt to stop the source of the leak by closing valves or shutting off pumps.

STEP 4: Using absorbents contained in the spill kit, stop the spread of the spill by diking or enclosing with absorbent material.

STEP 5: Absorb or accumulate the spill using absorbents.

STEP 6: Place all residue and spill related waste into a DOT-approved container. Small spills may be collected in the poly bags stored in the spill kit.

STEP 7: Contact the RCRA WM.

STEP 8: Notify the Supervisor and/or Unit Commander.

STEP 9: Complete the Spill Report Form (**Appendix K**) and submit the report to the RCRA WM **as directed in the spill plan**.

6.4. Highway/Training Site Spill Incident Procedures.

Refer to Spill Prevention Guide for MFTs (**Appendix N**). When spills of POL, fuel, or other HM occur along highways or during TXARNG unit-training activities, the personnel involved shall:

STEP 1: ASSESS

- Only qualified and trained personnel should participate in spill response and cleanup operations
- Identify the spilled material (if known)

- If the spilled material is unknown, **DO NOT** approach until all hazards are identified; move upwind to minimize risk of exposure
- Notify the Unit Officer-in-Charge
- If the spill is flammable, eliminate all smoking material or other ignition sources
- If the spill is an immediate threat to surface waters or wetlands, call local emergency responders (911, Sheriff, or State Highway Patrol)
- Restrict access to the spill site until emergency responders arrive

STEP 2: STOP FLOW

- Use all the appropriate PPE
- Stop the spill at the source and surround the spill perimeter with absorbent materials
- Block the flow of spilled materials to keep it from entering storm sewers or surface waters
- Keep spilled material confined on paved surfaces, if possible

STEP 3: CLEANUP AND DISPOSAL

- Gather contaminated absorbent materials and contain them (in a drum or bag) for disposal
- Isolate contaminated soil in suitable containers (drums) or covered piles
- Transport contaminated materials (soil, used absorbent) to servicing maintenance shop

STEP 4: REPORT

- Complete a Spill Report Form (**Appendix K**) and submit the report to the RCRA WM **as directed in the spill plan**
- Notify the TXARNG Public Affairs Office if the spill occurred along a highway or on private property

6.4 A. Annual Training

- Immediately notify Range Control of all spills
- On-post personnel will perform cleanup and collect contaminated materials
- Complete a Spill Report Form (**Appendix K**) and submit the report to the RCRA WM **as directed in the spill plan**

6.4B. Field Fueling Points

- Establish a minimum of 500 feet from the nearest body of water or wetland
- Always have spill kits on-hand and surround the tanker with a temporary berm when available

6.5. Spill Response Equipment. Spill response equipment and supplies shall be maintained in the vicinity of all hazardous material storage for immediate use. Examples of spill response equipment and supplies that should be available to personnel at the facility are listed in Table 6-1. Contact the RCRA WM to obtain spillresponse equipment and spill kits.

Table 6-1: Spill Response Equipment and Supplies.

PPE	Spill Response Equipment	Spill Response Supplies
• Gloves • Boots • Goggles	• Overpack drums • 5-gallon containers • Plastic bags • Non-sparking rakes • Non-sparking shovels • Push brooms • Caution tape • Sand bags	• Absorbent pads • Absorbent booms/socks • Granular absorbent (i.e. oil-dry) • Absorbent pillows • Drain covers

Keep enough spill equipment and supplies on hand at all times to respond to a 55-gallon spill or smaller spills that could occur as a result of daily operations. Ensure that compatible materials are on hand to respond to spills of POL, acids, bases, or unknown materials. As an example, it is recommended to have on hand the following items listed below to respond to a POL, acid, base, or unknown spill:

Table 6-2: Recommended Spill Supplies.

• 48-inch socks • Mat pads • Absorbent Wipes	• 10-foot socks • Pillows • Disposal bags with ties	• 12-inch drain blocker • Container of dry sweep

Promptly clean and restore to ready condition any equipment used, and replace any disposal materials such as pads, wipes and absorbent. The EO or Facility Environmental Representative will ensure an equipment maintenance program is established and strictly followed. Table 6-3 lists the National Stock Number (NSN) for common spill response equipment.

Table 6-3: Spill Response Equipment and Supplies Ordering Information.

NSN	Product Name	Description	Absorbent Capacity (Total)
ABSORBENT MATERIALS			
4230-01-436-8877	Versatile Container Kit	Pre-assembled kit that contains socks, pillows, mats, disposal bags and ties, instruction manual, labels, and polyethylene kit	34 gallons
4235-01-420-3099	Large Overpack Kit	Pre-assembled kit that contains socks, drain blocker mat, pads, pillows, floor sweep, wipers, disposal bags, emergency response guidebook, instruction manual, labels, polyethylene overpack drum with threaded lid	64 gallons
4235-01-424-3130	Spill Kit	1 polyethylene mobile response kit, 10 socks 3"x4', 8 pillows 9"x9", 4 pillows 18"x18", 30 Pads 17"x19", 5 disposal bags w/ties, 1 pair of splash-resistant goggles, 1 pair of nitrile gloves, 5 HM labels, and 1 box of degreaser wipes	24 gallons
7930-01-448-8638	Pads	100 double-weight pads	25 gallons
9330-01-308-5151	Pads	100 pads	
7930-01-455-9536	Mat Rolls	37 lb. heavy weight roll	47 gallons
7930-01-387-8923	Socks	55 socks, 24 in. L, 3 in. diameter	20 gallons
7930-01-436-8315	Socks	8 socks, 10 ft. L.	15 gallons
7930-01-301-2646	Socks	40 socks, 42 in. L, 3 in. diameter	20 gallons
9930-01-379-8367	Absorbent	1-50 quart (25 lbs) bag absorbent	
9930-01-436-8317	Lite-dry Absorbent	1 bag (22 lbs) granular absorbent	8 gallons
8135-01-324-2664	Zononlite Industrial Vermiculite	Granular absorbent	
9930-01-379-8354	Absorbent	Granular absorbent, 12-pound bag	
7930-01-436-8316	Pillows	10 large absorbent pillows	10 gallons
7210-LP-X19-2917	Pillow		
7930-01-145-5797	Oil-dry – 25 lbs bag		
CONTAINERS			
8110-00-030-7780	55-gallon open head drum (steel)		
8110-00-753-4643	19-gallon open head drum (steel)		
8110-00-292-9783	55-gallon closed head drum (steel)		
8110-00-282-2520	5-gallon closed head drum (steel)		
8110-00-150-0677	55-gallon closed head drum (polyethylene)		

8110-01-101-4055	85-gallon overpack/salvage drum
7240-00-819-7735	10-gallon plastic pail with lid (plastic)
PLASTIC BAGS	
8105-01-183-9769	30-gallon heavy duty, clear
8105-01-183-9770	30-gallon extra heavy duty, dark brown/green, 125/box
8105-01-183-9764	32-gallon heavy duty, 75 lb capacity
HAND TOOLS	
LPL, DA Form 1348-65	Safety shovel (Request from USPFO: Local Purchase List (LPL)

6.6. Spill Response Forms and Instructions.

Hazardous substances include any hazardous material or hazardous waste with the potential to harm people or the environment. This includes petroleum products, such as motor oil, diesel fuel, and transformer oil. The ISCP will be implemented whenever there is a hazardous substance release or the potential for a hazardous substance release. The purpose is to establish reporting procedures and guidelines for the TXARNG in the event of a hazardous substance spill. The Spill Report Form (**Appendix K**) is attached to the ISCP.

Chapter 7. Pollution Prevention.

7.1. Continual Improvement. The TXARNG is committed to continual improvement through the implementation of the EMS to reduce mission and environmental impacts. Texas Military Department Environmental Statement Directive (4700.01, dated 30 Oct 17), is the driving force behind TXARNG's efforts to integrate an environmental management system into everyday operations. An EMS is a business process system designed to integrate environmental considerations into all aspects of planning and operations at all levels of the organization and is the tool to implement Sustainability. Emphasis on environmental management not only improves regulatory compliance, but also supports the mission through environmental impact reduction. Key components of the EMS are legal compliance with laws and regulations, preventing pollution by minimizing environmental risks and a commitment to continually improve operations and performance. When based on sound planning and decision-making, a fully implemented EMS shifts the environmental focus from reactive to proactive.

7.2. Pollution Prevention Plans. Pollution Prevention Plans are a key part of the overall environmental health of the TXARNG environmental program and are designed to be an evolving, living document, much like the EMS. EMS and Pollution Prevention Plans form a strong partnership, as the EMS framework significantly enhances the benefits of pollution prevention by incorporating P2 concepts into day-to-day operations. P2 programs support reusing and recycling materials and reducing hazardous waste generation. Pollution Prevention Plans identify processes that use resources and/or generate waste, recommend modifications to that process in order to eliminate or reduce resource use, and minimize the amount of wastes generated. Routinely review P2 plans to ensure their continued effectiveness. Facility input into these plans is very important, as participation from the ultimate end-user has initiated many of the successful P2 initiatives implemented thus far.

7.3. Pollution Prevention Initiatives. The TXARNG has initiated numerous award-winning programs or changes in processes that have eliminated or reduced the use of natural resources and the generation of wastes. These programs cannot successfully accomplish their goals without valuable input from our users in the field. In order to improve these processes, the CFMO Environmental Branch is continuously seeking input from end users who know the day-to-day details of the procedures and processes that generate waste. The following is a list of previous TXARNG P2 programs:

- Aqueous parts washers for degreasing operations
- Used Oil/fuel filter crushers to reduce volume and collect used POL
- Antifreeze recycling units
- Diesel recycling units
- Water re-circulating wash racks
- Water based CARC paint system

- Water based, walnut shell and bead blast paint removal systems
- Fuel containment systems
- Used Oil recycling program
- Waste containment buildings

The above list is only a sampling of the programs in place. Not all programs listed are utilized at all TXARNG facilities; some programs apply only to large facilities. The challenge is to identify programs or changes to processes that may be less obvious, but can refine and build on existing methods.

The TMD has several programs that constitute recovery, reuse, and recycling. Even though recycling has been a focus for a number of years, NGB has approved the Texas Qualified Recycling Program (QRP). A QRP is a major component of the Integrated Solid Waste Management (ISWM) program and is beneficial not only in diverting solid waste (non-hazardous) from the landfill but also in reducing costs associated with solid waste disposal. To establish local recycling or for other guidance on recycling, contact the QRP Manager/Solid Waste Coordinator at (512) 782-6838.

APPENDIX A

Texas Military Department

DIRECTIVE

NUMBER 4700.01
30 October 2017
NGTX-F

SUBJECT: Texas Military Department (TMD) Environmental Statement

References: See Enclosure

1. PURPOSE.

a. Directs all TMD organizations to implement, maintain, and communicate to all military and civilian employees and supporting contractors, this environmental statement.

b. Promote an ethic within TMD that takes the department beyond environmental compliance to sustainability.

2. APPLICABILITY AND SCOPE. This directive applies to all TMD personnel.

3. DEFINITIONS. NA

4. DIRECTIVE.

a. TMD is committed to sustainability and stewardship of our environment and natural resources. TMD commits to fully comply with applicable federal, state and local laws, regulations and other requirements for protection of the environment, prevention of pollution and continual improvement of our environmental analysis results. To meet these commitments, TMD, with involvement of all levels of supervision and command, will:

1. Implement an environmental management system meeting the requirements of Executive Order 13693 and National Guard Bureau Memorandum, ARNG Environmental Management System (EMS) Installation Guidance, 06 FEB 2017.

2. Assess strategic decisions for balance between environmental considerations and mission requirements to ensure future sustainment of resources and readiness.

3. Integrate environmental considerations at the earliest stages of the decision-making process into operations, training, maintenance, construction activities, and plans and programs to meet mission requirements.

4. Establish measurable environmental goals and objectives for prevention of pollution, conservation of energy, water and other resources, promotion of recycling, and minimization of waste generation.

5. Develop, fund and implement action plans and management programs to achieve environmental goals and objectives, including providing for the training, equipment and supplies necessary for their accomplishment.

6. Ensure that relevant environmental training is included as a part of scheduled team and individual training every year.

7. Establish and fully support committees and teams comprised of personnel who are involved in the day-to-day decision making process, working to meet the requirements of the environmental management system and accomplish these objectives.

b. This directive is designed to assist TMD with stewardship of the environment, meet sustainability goals and improve results. Our commitments will help develop and maintain operating processes and practices that will optimize training lands and TMD's ability to meet mission readiness requirements for current and future national defense needs.

5. RESPONSIBILITIES. All members of TMD will ensure this directive is implemented throughout all operations and activities of the organization.

6. INFORMATION REQUIREMENTS. Environmental Management System program information can be found on the Sustainability Lone Star Portal page: https://portal.tx.ng.mil/arg/arg010/SitePages/sus_home.aspx

7. RELEASABILITY. Unlimited.

8. EFFECTIVE DATE. This directive will expire two years from the effective date of publication unless sooner rescinded or superseded.

9. POINT OF CONTACT. Point of contact is the Environmental Management System, Management Representative at 512-782-6929.

JOHN F. NICHOLS
Major General, TXANG
Adjutant General

Encl
References

DISTRIBUTION:
A
POLICY OFFICER
CW2, AG, SA
SIG-Policy

Official

Enclosure

References.

(a) Army Regulation 200-1, Environmental Protection and Enhancement, 12 Dec 2007

(b) Executive Order (EO) 13693, “Planning for Federal Sustainability in the Next Decade.”

(c) National Guard Bureau Memorandum, ARNG Environmental Management System (EMS) Installation Guidance, 06 FEB 2017

APPENDIX B

APPENDIX B

Definitions

The following definitions are specific to this PLAN. In some cases, these definitions may vary from those found in the regulations because they are a summary or composite of definitions from different regulations.

Accumulation – The process of collecting waste onsite in containers or tanks, prior to shipping the waste to a TSDF. Waste is accumulated at SAPs and CSAs.

Accumulation Start Date – This is the date when HW in a container or tank first becomes subject to accumulation time limits. Either the accumulation start date can refer to the first day that a full container of waste is placed into a 90-Day or 180-Day CSA or it can refer to the date that a container already in the 90-Day or 180-Day Storage Area becomes full. It is also the date that a container is allowed to exceed the 55-gallon quantity limit at an SAP.

Activity – For the purposes of this PLAN, the term Activity includes any installation or facility in the TXARNG (e.g., an FMS, CSMS, AASF or training site).

Acute Hazardous Waste – The commercial hazardous chemical products, manufacturing hazardous chemical intermediates, and off specification commercial hazardous chemical products or manufacturing hazardous chemical intermediates listed in 40 CFR 261.33(e).

Characteristic Hazardous Waste – Described in 40 CFR 261.20, characteristic HW is solid wastes that meet or exceed the thresholds established for any of four physical characteristics, as identified in 40 CFR Subpart C: ignitability, corrosivity, reactivity and toxicity.

Conditionally Exempt Small Quantity Generator (CESQG) – Activities that generate no more than 220 lbs/month (100 kg) of HW or accumulate no more than 2,200 lbs (1,000 kg) of HW on-site at any time. CESQGs also generate no more than 2.2 pounds/month (1 kg) of Acute HW and generate no more than 220 lbs/month (100 kg) of any residue or contaminated soil, waste, or other debris resulting from the cleanup of a release of any acute HW.

Container Storage Area – The primary location on-site where HW drums and containers accumulate, without a permit, until the waste is shipped off-site. The waste may only accumulate for the amount of time allowed by your current generator status.

Disposal – Generally refers to land disposal at permitted facilities, but may also include wastewater effluent discharged to surface waters. Disposal is the least favorable waste management alternative because of the harmful effects these wastes can have on the environment. Always consider hazard and liability concerns associated with transporting

and disposing of wastes when evaluating pollution prevention and waste management options.

Environmental Officer (EO) – A commissioned officer or a non-commissioned officer (NCO) designated to implement the environmental program. An EO can be appointed at several levels, including Directorate, Activity and Unit.

Environmental Performance Assessment System (EPAS) – An EPAS is an internal or external assessment for selected facilities of the TXARNG. Externals are contracted assessments by National Guard Bureau to assist with environmental compliance and EMS conformance. This formal assessment is conducted approximately every 3-4 years. Internals for the TXARNG are identified as SAVs or ISSs (See expanded definitions, below).

Hazardous Chemical – Any element, chemical compound or mixture of elements and compounds, that is a physical hazard or a health hazard. Chemicals with physical hazards include combustible liquids, compressed gases, explosives, flammables, organic peroxides, oxidizers, pyrophoric chemicals (which can ignite spontaneously in air), unstable chemicals and water-reactive chemicals. Chemicals with health hazards are those for which there is significant evidence that the chemical has an acute or chronic effect on the health of exposed people. See 29 CFR 1910.1200, Appendix X A and Appendix X B for further definitions and criteria for identifying hazardous chemicals.

Hazardous Material (HM) – The U.S. Department of Transportation (USDOT) defines HM as anything that, due to its chemical, physical, or biological nature, causes safety, public health or environmental concerns during transportation. Under this definition, HM includes hazardous waste and other materials exhibiting explosive, flammable, corrosive and oxidizing properties. For storage, handling and disposal purposes, HM is a hazardous substance that is still unopened and unused.

Hazardous Materials/Waste Employee – A person who loads, unloads, or handles HM/HW, prepares HM/HW for shipment, is responsible for HM/HW transportation safety and/or operates a vehicle used to transport HM/HW.

Hazardous Substance – In general, any material that poses a substantial hazard to human health or the environment. For the purposes of this Plan, a hazardous substance is any of the following:
• Any HW having the characteristics identified under the RCRA;
• Any material regulated as a hazardous material per USDOT;
• Any material that requires an MSDS per OSHA (see “Hazardous Chemical”); and
• Any substance designated according to Comprehensive Environmental Response, Compensation, and Liability Act, Clean Water Act, Clean Air Act, or TSCA.

Hazardous Waste (HW) – A solid waste is a hazardous waste if it is specifically listed as such in 40 CFR 261, Subpart D. If your waste is not on the list in 40 CFR Part 261, it

may still be a hazardous waste if it exhibits at least one of four physical characteristics: ignitability, corrosivity, reactivity and toxicity, as measured by standard test methods.

Internal Site Support (**ISS) –** An Internal Site Support visit is an informal compliance visit to assist in closing previously identified compliance issues and provide assistance on a variety of environmental topics.

Large Quantity Generator (LQG) – An activity that generates 2,200 pounds or more of HW in a calendar month, or accumulates more than 13,200 pounds of HW at any one time. A LQG may accumulate HW for no more than 90 days after the accumulation start date.

Manifest – A shipping document that must accompany HW to the Treatment, Storage and Disposal Facility (TSDF). The Uniform Hazardous Waste Manifest is a form prepared by all generators who transport, or offer for transport, hazardous waste for off-site treatment, recycling, storage or disposal. The manifest is required by both Department of Transportation and EPA regulations. Currently, the manifest is a paper document containing multiple copies of a single form. Once the waste reaches its destination, the receiving facility returns a signed copy of the manifest to the generator, confirming that the waste has been received by the designated facility.

Ninety (90)-Day Accumulation Area – centralized container storage area for management of LQG hazardous waste temporarily stored prior to shipment off site. Waste cannot be stored at the facility for longer than 90-days past the accumulation start date listed on the container. Small Quantity Generators (SQGs) have an equivalent term of “180-Day Accumulation Area” to describe their central management location.

One Hundred and Eighty (180)-Day Accumulation Area – Centralized container storage area for management of SQG hazardous waste temporarily stored prior to shipment off site. Waste cannot be stored at the facility for longer than 180-days past the accumulation start date listed on the container (or 270 days or less if the generator’s waste is transported over a distance of 200 miles to a Treatment, Storage or Disposal Facility.)

Personal Protective Equipment (PPE) – Personal protective equipment, or PPE, is designed to protect employees from serious workplace injuries or illnesses resulting from contact with chemical, radiological, physical, electrical, mechanical, or other workplace hazards. Besides face shields, safety glasses, hard hats and safety shoes, PPE includes a variety of devices and garments such as goggles, coveralls, gloves, vests, earplugs, and respirators.

Pollution Prevention (P2) – Pollution Prevention is the use of practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials and resources. Such practices include source reduction, reuse and recycling.

Resource Conservation and Recovery Act (RCRA) – RCRA is a set of revisions to the 1965 Solid Waste Management Act. Passed by Congress in 1976 (and amended several times since then), RCRA contains the provisions for management of HW under Federal law. RCRA has three primary goals: 1) protection of human health and the environment, 2) reduction of waste and conservation of energy and natural resources, and 3) reduction or elimination of the generation of HW as expeditiously as possible.

Recycling – Recycling is the reuse or regeneration of materials and wastes into usable products and by-products. Recycling includes practices such as material exchange, recovery of materials, and composting of organic waste matter.

Release – Under EPCRA, release includes emitting, discharging, dumping or disposing any hazardous chemical or substance into the environment. A release does not include chemical shipments off-site to other facilities for disposal, recycling, energy recovery or treatment.

Safety Data Sheet (SDS) – A collection of information required by the OSHA Hazard Communication Standard. An SDS includes the identity of hazardous chemicals, health and physical hazards, exposure limits, and safety precautions.

Satellite Accumulation Point (SAP) – A Satellite Accumulation Point (SAP) is a location where you can accumulate hazardous waste or universal waste indefinitely at or near the point of generation. The waste cannot exceed a total of 55-gallons or 1 quart of acute HW and must be under the control of the operator of the process generating the waste.

Site Assessment Visit (SAV) – A Site Assessment Visit is a formal and more in depth compliance visit than an ISS to identify any new environmental compliance issues and assist in closing previously identified compliance.

Small Quantity Generator (SQG) – An activity that generates more than 220 pounds but less than 2,200 pounds of HW per month, and does not accumulate more than 13,200 pounds of HW at any one time. A SQG may accumulate HW for no more than 180 days from the Accumulation Start Date, with one exception. SQGs located more than 200 miles from a HW TSDF may accumulate HW for no more than 270 days from the Accumulation Start Date.

Solid Waste – All discarded materials including solids, semisolids, sludge, liquid and compressed gases are solid wastes unless excluded by regulation (see definitions of hazardous waste and universal waste). A discarded material is any material that is abandoned, recycled or considered inherently waste-like.

Special Waste – Wastes that require special handling, specially trained personnel, and/or special disposal methods. Examples of SW commonly generated at TXARNG facilities include:

- Contaminated fuels

- Used antifreeze
- OWS and grit trap waste
- Biodegradable solvent

Spill – According to the Texas Water Code, a "Spill" means an act or omission through which waste or other substances are deposited where, unless controlled or removed, they will drain, seep, run, or otherwise enter water in the state. An "accidental discharge" is an act or omission through which waste or other substances inadvertently discharge into water in the state.

Transfer – The physical movement of waste from one activity or point to another, such as from a SAP to a 90-Day Accumulation Area or shipping waste off-site to a TSDF.

Treatment – Any method, technique or process, including neutralization, designed to change the physical, chemical or biological character of any HW. Examples of treatment are incineration, biological treatment, thermal oxidation or compaction. Many treatment technologies reduce the volume of waste or create a less concentrated or toxic waste. Treatment often results in the transfer of hazardous materials from one medium to another (e.g., from solid to gas during incineration).

Treatment, Storage and Disposal Facility (TSDF) – A TSDF is a facility that meets the requirements of 40 CFR 270.14 through 270.28 under RCRA and has obtained the permit required under the Federal regulations. A TSDF can store HW for up to one year before shipping the waste off site to another TSDF, can treat HW through a number of approved processes such as incineration and/or can dispose of HW in a legally approved manner. TSDFs handle a specific set of HW and cannot accept or dispose of any HW not included in its permit.

Universal Waste – Certain categories of hazardous wastes (including batteries, pesticides, mercury-containing equipment and thermostats, electric lamps and paint and paint-related wastes), that qualify for reduced regulations.

Used Oil – Any oil that has been refined from crude oil or any synthetic oil that has been used and because of such use is contaminated by physical or chemical impurities. This includes, but is not limited to, fuel oils, motor oils, gear oils, cutting oils, transmission fluids and hydraulic fluids.

Waste Stream – A waste stream is the collective wastes that may be accumulated, consolidated or bulked into the same container for disposal or recycling.

W.A.S.T.E – Web Application System for Turn-in Execution (W.A.S.T.E.) software and database that generates and automatically manages the documents associated with turn-in of HM and HW.

WEBCASS – Web Compliance Assessment & Sustainment Systems (WEBCASS) software and database that is used for generating environmental findings from various assessments and tracking those findings them to resolution.

APPENDIX B

List of Acronyms and Abbreviations

AKO	Army Knowledge Online
AR	Army Regulation
BMP	Best Management Practice
CAA	Clean Air Act
CAC	Common Access Card
CARC	Chemical Agent Resistance Coating
CESQG	Conditionally Exempt Small Quantity Generator
CFMO	Construction and Facilities Management Officer
CFR	Code of Federal Regulations
CSA	Container Storage Area
CSMS	Combined Support Maintenance Shop
CTK	Compliance Tool Kit
CWA	Clean Water Act
DEPM	Deputy Environmental Program Manager
DoD	Department of Defense
DOT	Department of Transportation
EMS	Environmental Management System
EO	Environmental Officer
EO	Executive Order
EPAS	Environmental Performance Assessment System
EPM	Environmental Program Manager
EQCC	Environmental Quality Control Committee
EWMP	Environmental Waste Management Plan
FOG	Fats, Oils, and Greases
HAZCOM	Hazard Communication
HID	High Intensity Discharge
HM	Hazardous Material(s)
HSWA	Hazardous and Solid Waste Amendments
HW	Hazardous Waste(s)
IAW	In accordance with
ICAP	Installation Corrective Action Plan
ISCP	Installation Spill Contingency Plan
ISO	International Organization for Standardization
ISS	Internal Site Support
ISWM	Integrated Solid Waste Management
Kg(s)	Kilogram(s)
Lb(s)	Pound(s)
LDR	Land Disposal Restrictions
LQG	Large Quantity Generator
LSP	Lone Star Portal
LTC	Logistics Training Course
MATES	Maneuver Area Training Equipment Site

MCE	Mercury Containing Equipment
MOGAS	Motor Gas
NEPA	National Environmental Policy Act
NGB	National Guard Bureau
Ni-Cad	Nickel-cadmium
NSN	National Stock Number
OSHA	Occupational Safety and Health Act
OWS	Oil Water Separator
P2	Pollution Prevention
PCB	Polychlorinated-biphenyls
PEC	Professional Education Center
POL	Petroleum, Oils, and Lubricants
POP	Performance Oriented Packaging
POTW	Publicly Owned Treatment Works
PPE	Personal Protective Equipment
QRP	Qualified Recycling Program
RCRA	Resource Conservation and Recovery Act
RCRA WM	RCRA Waste Manager
RES	Regional Environmental Specialist
SAP	Satellite Accumulation Point
SAV	Site Assistance Visit
SDS	Safety Data Sheet
SME	Subject Matter Expert(s)
SOP	Standard Operating Procedure
SPC	Spill Prevention Coordinator
SPCCP	Spill Prevention, Control, and Countermeasure Plan
SQG	Small Quantity Generator
SW	Special Waste
TAC	Texas Administrative Code
TAG	The Adjutant General
TCEQ	Texas Commission on Environmental Quality
TIER	Toxic Inventory Emissions Report
TM	Technical Manuals
TMD	Texas Military Department
TPDES	Texas Pollutant Discharge Elimination System
TRI	Toxic Release Inventory
TSCA	Toxic Substances Control Act
TSDF	Treatment, Storage, and Disposal Facility
TXARNG	Texas Army National Guard
USDOT	United States Department of Transportation
UW	Universal Waste
W.A.S.T.E.	Web Application System for Turn-in Execution
WEBCASS	Web Compliance Assessment & Sustainment Systems
WFS	Waste Fact Sheet

APPENDIX C

Standard Operating Procedure (SOP)

Hazardous Materials Management

Number 4145.01
(Date stamped by SIG)

Texas Military Department (TMD)
2200 W. 35th St
Austin, TX 78703

OPR: G4 Surface Maintenance

Official:
KATHERINE M. BROWN
CW4, AG, USA
J5 - Issuance

Summary. This SOP describes policies, procedures and methods for the safe handling and storage of hazardous materials (HM). The intent of this SOP is to preserve and protect the quality of the environment, Soldiers and employees of the Texas Military Department (TMD) as well as meeting statutory requirements to comply with applicable regulatory guidance.

Applicability. This SOP applies to all components of TMD.

Management Control Process. This SOP contains management controls for the management of hazardous materials.

Proponent and Exception Authority. Proponent for this SOP is the G4 Surface Maintenance. Exception Authority is CFMO - Environmental Branch (NGTX-FE).

Supplementation. Supplementation of this SOP or establishment of command and local forms on the Hazardous Materials Management SOP is prohibited without prior approval from the Adjutant General (TAG), through the G4 Surface Maintenance, ATTN: NGTX-DOL-SMM, P.O. Box 5218, Austin, TX 78763-5218.

Suggested Improvements. Users are invited to send comments and suggested improvements concerning this SOP to the Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Distribution. A

TABLE OF CONTENTS

INTRODUCTION

1-1. Purpose. This SOP describes policies, procedures and methods for the safe handling and storage of hazardous materials (HM). The intent of this SOP is to preserve and protect the quality of the environment, Soldiers and employees of TMD, as well as meeting requirements to comply with applicable statutory requirements and regulatory guidance.

1-2. Authority. Statutory authority for this SOP and additional supplemental guidance documents is derived from United States Code (USC) Titles 42, Code of Federal Regulations (CFR) Titles 29, 40 and 49 and related State of Texas laws and regulations that support the policies of the Department of the Army contained in AR 200-1, AR 710-2, DA PAM 710-7, TM 38-410 and of TMD Environmental Statement, 4700.01.

1-3. Scope. All personnel are responsible for the proper use, handling, storage and disposal of hazardous materials (HM). The fundamental purpose of HM management is to minimize, control, and track HM at the user level throughout its life cycle.

1-4. Training. Anyone who handles HM must attend formal training prior to handling. Contact the environmental branch or the Regional Environmental Specialist (RES) for guidance on specific training requirements. See RES contact info pg. 51.

1-5. Applicability. This SOP applies to all organizations and personnel within TMD who purchase, use, handle and/or store hazardous materials as part of their functional mission and/or day to day operations.

1-6. Overview. Distribution and proper management of HM prior to their use is the responsibility of the Defense Logistics Agency (DLA) and Army National Guard Logistics Division as described in AR 710-2, *Inventory Management Supply Policy below the Wholesale Level*. However, Hazardous Materials (HAZMAT) are used daily during maintenance and equipment repairs, weapons cleaning operations, in the field, and at home station etc. Where proper management of those materials is an important part of Hazardous Waste (HW) minimization efforts, source reduction of HAZMAT at the user or operator level is the best way to decrease HW generation.

Diligence in managing HAZMAT by proper use of shelf life management and inventory control procedures not only reduces disposal costs, but it also reduces the potential hazards associated with excess, and expired unusable HAZMAT. Good housekeeping techniques will minimize material losses and prevent unnecessary HW generation due to spills.

2-1. Hazardous Material Characteristics. HAZMAT is any substance that has a human health hazard associated with it or one that poses an unreasonable risk to health, safety, environment or property. Special safety procedures and protocols are required when handling, using, storing and shipping HAZMAT to protect against accidental human exposure. HAZMAT includes:

a. Materials designated as hazardous are located in the HM Table (49 CFR 172.101) and further divided into specific hazard classes in the Department of Transportation (DOT) regulations for packaging and shipping of HAZMAT (located in 49 CFR 173, Subchapter C).

b. Any item or chemical listed as a health or physical hazard by OSHA in 29 CFR 1910.1200. Reference Table 2-1

Table 2-1 Typical Hazardous Materials Characteristics

1.	The item is a health or physical hazard. Health hazards include carcinogens, corrosive materials, irritants, sensitizers, toxic materials and materials that damage the skin, eyes or internal organs. Physical hazards include combustible liquids, compressed gases, explosives, flammable materials, organic peroxides, oxidizers, pyrophoric, unstable (reactive) materials and water-reactive materials.
2.	The item and/or its disposal are regulated by the host nation because of its hazardous nature.
3.	The item contains asbestos, mercury, or polychlorinated biphenyls (PCBs).
4.	The item has a flashpoint below 93^{o}C (200^{o}F) closed cup, or is subject to spontaneous heating or is subject to polymerization with release of large amounts of energy when handled, stored, and shipped without adequate control.
5.	The item is a flammable solid, is an oxidizer or is a strong oxidizing or reducing agent with a standard reduction potential greater than 1.0 volt or less than -1.0 volt.
6.	In the course of normal operations, accidents, leaks, or spills, the item may produce dusts, gases, fumes, vapors, mists or smokes with one or more of the above characteristics.
7.	The item has special characteristics, which in the opinion of the manufacturer or DoD, could cause harm to personnel if improperly used or stored.

2-2 Hazardous Materials Management. HAZMAT programs are an integral part of the TMD Environmental Statement which includes; promoting Pollution Prevention measures and waste minimization efforts by the following:

c. Procurement of hazardous materials protocols

d. Safety Data Sheet (SDS) management

e. Storage requirements and incompatibility determination of HAZMAT

f. Inventory control procedures

g. Shelf life management

2-3 Procurement. It is the goal of TMD to substitute less hazardous or non-hazardous materials for HAZMAT, where practical, IAW green purchasing mandates and the TAG's environmental statement. Procurement of most HAZMAT is through the United States Property and Fiscal Office (USPFO), Government Procurement Cards, or other means of open purchase. As a rule, HAZMAT stocks should be limited to ensure that shelf life is adequately tracked and inspection, test, and expiration dates are not exceeded. State purchases should also follow these guidelines.

2-4 Safety Data Sheet (SDS). The Hazard Communication Standard (HCS) (29 CFR 1910.1200(g)), revised in 2012, requires that Safety Data Sheets (SDS) be available and accessible to workers for all hazardous chemicals known to be present in their workplace to enable users to communicate information on these hazards. The information contained in the SDS is largely the same as MSDS, however, the SDSs are now required to be presented in a consistent user-friendly, 16-section format. An SDS is a document that contains information on the potential health effects of exposure to chemicals, or other potentially dangerous substances, and on safe working procedures when handling chemical products. It contains hazard evaluations on the use, storage, handling and emergency procedures related to that material. SDS's contain much more information about the material than the label and is prepared by the supplier. The intent is to inform the user of the hazards of the product, how to use the product safely, what to expect if the recommendations are not followed, what to do if accidents occur, how to recognize symptoms of overexposure, and what to do if such incidents occur. SDS standards can be found on OSHA's Hazard Communication Safety page, located at: https://www.osha.gov/Publications/OSHA3514.pdf.

2-5. Using Safety Data Sheets (SDS). All personnel who handle HM must be trained on how to interpret information provided on the SDS before using hazardous materials in order to become familiar with their associated hazards, specific handling procedures, and any recommended spill response or personal protective measures. Take time to review each SDS to become familiar with the hazards presented by the chemical you intend to use.

2-6. Safety Data Sheet (SDS) Content Information. SDS's contain the following information:

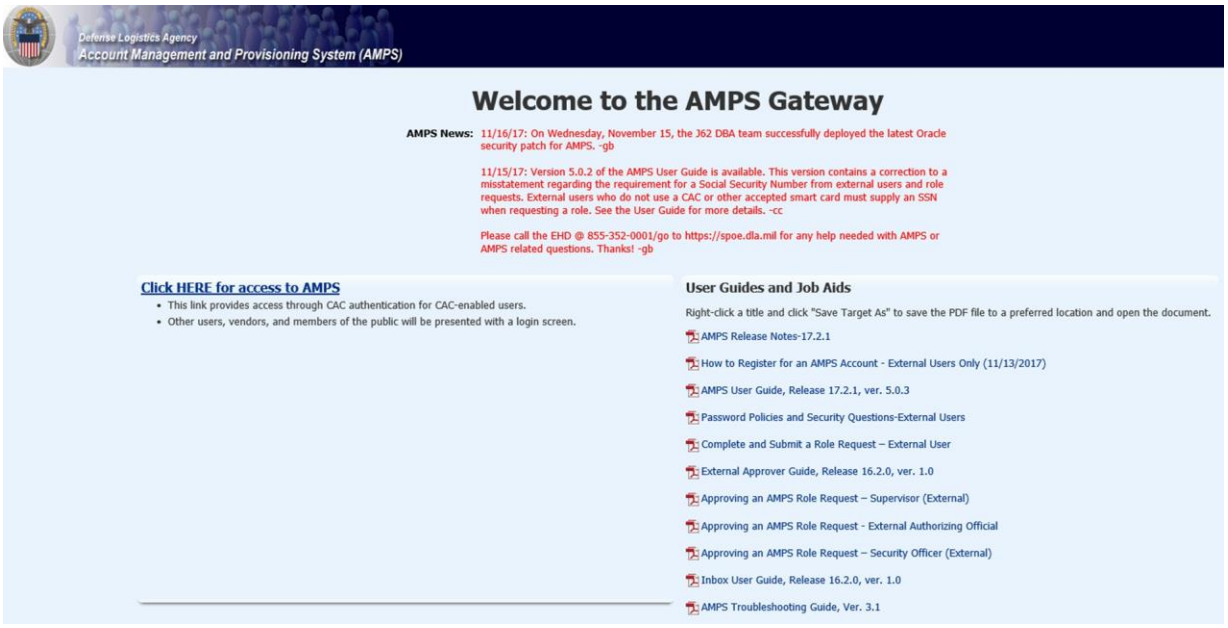
a. **Section 1, Identification:** Identifies the chemical(s) as well as the recommended uses.
b. **Section 2, Hazard(s) Identification:** Identifies the hazards of the chemical and the appropriate warning information associated with those hazards.
c. **Section 3, Composition/Information in ingredients:** identifies the ingredient(s) contained in the product including impurities and stabilizing additives.
d. **Section 4, First Aid Measures:** Describes the initial care that should be given by untrained responders to an individual who has been exposed to the chemical.
e. **Section 5, Fire Fighting Measures:** Provides recommendations for fighting a fire caused by the chemical.
f. **Section 6, Accidental Release Measures:** Provides recommendations on the appropriate response to spills, leaks, or releases, including containment and cleanup practices to prevent or minimize exposure to people, properties, or the environment.
g. **Section 7, Handling and storage:** Provides guidance on the safe handling practices and conditions for safe storage of chemicals.
h. **Section 8, Exposure controls/Personal Protection:** Indicates the exposure limits, engineering controls, and personal protective measures that can be used to minimize worker exposure.
i. **Section 9, Physical and Chemical Properties:** Identifies physical and chemical properties associated with the substance or mixture.
j. **Section 10, Stability and Reactivity:** describes the reactivity hazards of the chemical and the chemical stability information.
k. **Section 11, Toxicological Information:** This section identifies toxicological and health effects information or indicates that such data are not available.
l. **Section 12, Ecological Information:** Provides information to evaluate the environmental impact of the chemical(s) if it were released to the environment.
m. **Section 13, Disposal Considerations:** Provides guidance on proper disposal practices, recycling or reclamation of the chemical(s) or its container, and safe handling practices.
n. **Section 14, Transport information:** Provides guidance on classification information for shipping and transporting of hazardous chemical(s) by road, air, rail, or sea.
o. **Section 15, Regulatory information:** Identifies the safety, health, and environmental regulations specific for the product that is not indicated anywhere else on the SDS.
p. **Section 16, Other Information:** This section indicates when the SDS was prepared or when the last known revision was made. The SDS may also state where the changes have been made to the previous version. You may wish to contact the supplier for an explanation of the changes. Other useful information also may be included here.

2-7. Storage/Archiving Safety Data Sheets (SDS). SDS's must be available on site for every HAZMAT in use. TMD facilities, units, and maintenance shops must create an active master SDS binder for all products available to personnel in the workplace. Place the binder in a location that is accessible to all personnel. To ensure that all SDS's are present, cross reference them against your hazardous materials inventory (HMI) and create an index to place in the front of the folder or binder. An SDS folder is located in the environmental Compliance Tool Kit (CTK) for products no longer in use. Occupational Safety and Health regulations require the retention of SDS records for 30 years after product is last used.

SDS's should be provided by the manufacturer when the product arrives at your location. However, it is the user's responsibility to ensure they are on file. Listed below are methods of locating and obtaining SDSs.

2-8. Hazardous Material Information Resource System. The Hazardous Materials Information Resource System (HMIRS) is a Department of Defense (DoD) automated system developed and maintained by the Defense Logistics Agency (DLA). HMIRS is the DoD authoritative source for Safety Data Sheets and archived Material Safety Data Sheets for the United States Government military services and civil agencies, per DODI 6050.05. It also contains Government unique value-added data. Value-added data includes HAZCOM warning labels, transportation information, and Hazardous Chemical codes (HCC) etc. The system is designed to assist Federal Government personnel who handle, store, transport, use, or dispose of hazardous materials. To access HMIRS, complete the online requirements for external DLA users through the (AMPS) web page Fig 2-1 at https://amps.dla.mil. Once access has been granted enter HMIRS Next Gen URL: https://h2.hmms.hill.af.mil/my.policy for technical questions email HMIRS@dla.mil

Figure 2-1 AMPS Gateway



Ensure that each SDS obtained is specific to the product's following information:

a. National Stock Number (NSN) and CAGE (manufacturer's code)

b. Chemical Abstracts Service (CAS registry number), or manufacturer name

c. Defense Logistics Agency (DLA) numbers

d. Item serial number

This information is printed on the SDS and on the HAZMAT container. It is important to acquire manufacturer specific information because Military specifications are performance based, which means that products from different manufacturers may perform the same, but have different ingredients. To ensure that you are dealing with the appropriate ingredients, verify the NSN, CAGE, CAS #s, and the name of the manufacturer.

Internet resource to locate SDS. The National SDS Repository at http://www.msdssearch.com>>, Click on the DB tab and enter the NSN. Another option is the DLA customer service line toll-free at (877) 352-2255.

The manufacturer will occasionally list a phone number that can be used to obtain the SDS. If the manufacturer has no phone number listed, follow the steps below:

Step 1. Obtain the following information from the container:

a. Manufacturer's name

b. Manufacturer's city and state

c. Product name

d. Part number or stock number

Step 2. Use an internet search engine to locate the manufacturer's phone number and/or website. Some manufacturer's websites may include downloadable SDSs.

Step 3. Call the company and give them the product name, stock or part number and any other information they request.

Step 4. Request the manufacturer to fax, email, or mail a copy of the SDS to your location.

Step 5. Local stores can be a good source of SDS's also. If they carry the product they are required to keep an SDS.

Step 6. For assistance locating SDS's contact the RCRA Waste Manager at; 512-782-5382, or 512-913-5345.

3-1 FUEL HANDLING AND STORAGE

This section describes policies and procedures for the safe handling associated with fuel storage, fueling, re-fueling operations, and spill reporting procedures.

3.2 Fueling Operations Fuel will only be stored and dispensed from approved containers specifically designed for the type of fuel being used. Due to static electricity concerns, remove small portable containers from the vehicle or trailer while refilling them. Personnel involved in fueling operations will ensure that adequate spill containment is on hand to prevent fuel from coming in contact with the ground or water. Personnel dispensing fuel at commercial sites (gas stations etc.) will adhere to local guidance while performing fueling operations. Personnel performing fueling operations on military/government equipment will ensure the following before dispensing fuel:

a. To perform fueling operations personnel will receive proper training and/or licensing for the equipment in use.
b. Safety Data Sheets (SDS) are available and consulted for the type of fuel being dispensed.
c. Appropriate personal protective equipment (PPE) is available and serviceable.
d. Spill prevention devices such as drip pans, secondary containment and spill kits must be on hand and in serviceable condition.
e. Only dispense fuel in areas authorized by the site Spill Prevention Control and Countermeasures Plan (SPCCP) or local laws, whichever is more stringent or applicable.
f. Ensure equipment is properly grounded and adequate fire extinguishing equipment is on hand and serviceable.

g. Local Fire Department and emergency personnel telephone numbers are available.
h. Fuel is only dispensed in authorized vehicles and containers.
i. Do not dispense fuel when lightning or static electricity conditions exist.

3.3 Fuel Storage Periodic equipment inspections are required in order to ensure safety of personnel and to prevent the release of fuel/POL into the environment. Assigned fuel handlers will ensure the following:

a. Inspect Fuel dispensing equipment (Mobile Fuel Tankers) in accordance with (IAW) Equipment -10 Technical Manual.
b. Maintain records that reflect the condition of the tanks and piping
c. Ensure fuel is properly stored on secondary containment
d. Cell phones, two-way radios and similar electrical equipment must remain at least 50 feet from stored fuel IAW National Fire Prevention Agency code, and keep all sparks, open flames or ignition sources away from fuel storage areas

3.4 Spill Prevention Control and Counter Measure Plan (SPCCP) SPCCP's are required by 40 CFR 112 and AR 200-1 for facilities storing greater than 1,320 gallons of petroleum products, which includes 55 gallon containers and higher. The SPCCP establishes procedures, methods and equipment used to prevent the discharge of petroleum fuel/oil, and hazardous substances into the environment.

Installation Spill Contingency Plan (ISCP) The Installation Spill Contingency Plan (ISCP) establishes spill procedures for spill incidences that occur at TMD facilities that are not required to have an SPCCP.

Spill cleanup and Reporting Refer to the appropriate facility SPCCP/ISCP appendix D, Spill Response and Clean up Procedures, and Spill Reporting Forms for specific Spill response procedures for the site.

3-5 Turn-in / Disposal Procedures Contact the RCRA Waste Manager for disposal of fuel/POL Spill cleanup residue. Closely manage bulk storage of fuel to prevent waste due to ageing of fuel, manage off-spec fuel and fuel filters according to the procedures listed in the Environmental Waste Management Plan, Appendix F, waste fact sheets, WFS-31 Off-Spec Fuel-Mogas and WFS-32 Off-Spec Fuel-JP8/F24.

RCRA Waste Manager
Mr. Leon McCowan,
512-782-5382, DSN 954-5382
leon.c.mccowan.nfg@mail.mil

4-1. Chemical Properties of Hazardous Materials.
Hazardous materials are described in terms of their physical, chemical, and biological properties. These properties can assist in predicting the likely behavior of a material in various circumstances, allowing the user to reduce and eliminate potentially hazardous situations. When certain physical conditions exist (such as heat or water) or when materials are not compatible, storing or mixing them together can cause violent reactions to occur.

Hazardous materials should be stored and transported in accordance with the Segregation Table for Hazardous Materials, found in 49 CFR Subpart C, 177.848 (e) (5) & (g)), DOT Chart. Generally, segregate chemicals by the following classes during storage: Reference tables and figures below.

Table 4-1

CHEMICAL CLASSES	
Flammable/Combustible	Reactive
Oxidizers	Corrosive
Compressed Gases	Toxicity

4-2. Flammables and Combustibles

Flammable and combustible materials are incompatible with oxidizers, certain corrosives, high temperature and pressure, and any source of ignition. The difference between “flammable” and “combustible” materials is their flashpoints. A flammable material has a flashpoint below 140^{o}F, and a combustible material has a flashpoint between 140^{o}F-200^{o}F. In other words, air temperature alone may be enough to make a flammable material begin to burn, but a combustible material is unlikely to begin to burn without an outside heat source.

Table 4-2

COMMON FLAMMABLES/COMBUSTIBLES	
Acetone, MEK	Adhesives
Aerosols	Gasoline
Isobutyl / Isopropyl Alcohol	Alcohol
Paint Thinner, Solvents, Toluene	MRE Heater

4-3 Oxidizers

An oxidizer produces oxygen during chemical reactions, making fires burn more vigorously. Oxidizers are usually liquids or gases, and may be corrosive. Keep everything away from oxidizers. Chemicals incompatible with oxidizers include flammable and combustible materials, certain corrosives, oils, and greases.

Table 4-3

COMMON OXIDIZERS	
Calcium Hypochlorite	Nitric Acid Sulfuric Acid
Chlorine	Oxygen
Fluorine	Peroxides

4-4 Reactive chemicals

Reactive materials react violently without the presence of another chemical. Usually, some other condition, such as moisture, heat, oxygen, or high pressure, initiates the reaction. Segregate organic reactive materials from inorganic metals.

Table 4-4

COMMON REACTIVES	
Diethyl ether	Organic Peroxides
MRE Heaters	Lithium Batteries
Styrene	

4-5 Corrosives

A corrosive may be in the form of a solid, liquid, or gas. Corrosives may react violently with water and organic matter to release heat sufficient to ignite combustible material. Corrosives can also cause the destruction of skin at the point of contact. Corrosives are either acids or bases. The pH scale distinguishes between them. Acids and bases should not be stored near each other as their accidental combination could generate a huge amount of heat and energy, possibly resulting in an explosion.

Acids have the following characteristics:

a. pH between 0 and 7

b. As pH increases, the acid becomes weaker or less corrosive (a pH of 7 is neutral)

Bases have the following characteristics:

a. pH between 7 and 14

b. As pH increases, the base becomes stronger and more corrosive

Figure 4-1 pH Scale

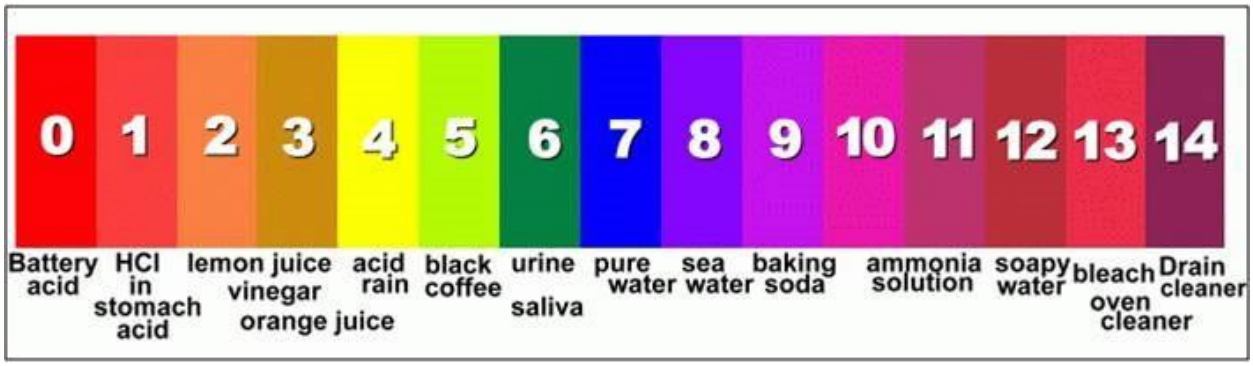


Table 4-5

COMMON CORROSIVES	
ACIDS	**BASES**
Acetic Acid (Vinegar) Sulfuric Acid (Lead Batteries) Nitric Acid (Citric) Phosphoric Acid (Cola Drinks)	Drain Cleaner Ammonia Baking Soda Bleach Liquid Soap

4-6 Compressed Gases/Cylinder Management

Store cylinders grouped by hazard class IAW Fig 5-1, and adequately separated (i.e., 40 feet between oxygen and flammable gases). Post NO SMOKING signs. Storage area must be well ventilated and temperature should not exceed 125^{o}F. Dry chemical or CO_2 fire extinguishers may be available. Secure cylinders to prevent falling, and make sure Acetylene cylinders are stored with the valve end up. When they are not in use, keep caps secured.

5-1 Incompatible Materials Storage

This section provides guidance in the proper handling and safe storage of Hazardous Materials in order to avoid dangerous conditions associated with incompatibles.

Improper handling, storage, and disposal of incompatible chemicals can result in an undesired chemical reaction which could result in damage to the environment, property, or injury to personnel. Accidental mixing of incompatible materials may result in the following; heat or pressure, fire or explosion, violent reaction, toxic dusts, mists, vapors, or gases, and flammable vapors or gases.

Always identify, segregate and store hazardous chemicals including wastes properly in order to avoid accidental mixing of incompatible materials. See table 5-1 for examples of incompatible materials, and Figure 5-1 for an example of Storage Compatibility Groups.

Hazardous materials must be stored based on their compatibility using the DoD Hazardous Chemical Compatibility System. Refer to Para 5-3 thru 5-5 for storage compatibility and segregation requirements.

Best Management Practices (BMPs) for Storing Incompatible Materials:

a. Maintain a binder with SDSs for all chemicals in the workplace. Consult the SDS and chemical label for information on special storage requirements. Review SDSs carefully and ensure labels on the container include warnings about incompatibilities

b. Ensure that all containers are properly labeled, inspected regularly for leaks, breakage or out of date shelf life

c. Flammable materials should be stored in an approved, dedicated, flammable materials storage cabinet or a room, if the volume exceeds ten (10) gallons

d. DO NOT store highly toxic materials, acids, bases, compressed gasses or pyrolytic chemicals in flammable liquids storage cabinets

e. DO NOT store chemicals in a refrigerator

f. Separate incompatible materials in storage by a minimum of 4 feet

g. DO NOT store incompatible materials within the same flammable locker or cabinet

h. DO NOT store flammable or reactive materials within 50 feet of the property line (IAW National Fire Protection Act (NFPA) standards)

i. DO NOT store tools or personal items in any HAZMAT storage locations

j. DO NOT store hazardous materials in trailers, vehicles, personal wall lockers, near floor drains, or in high traffic areas

k. Keep all containers closed when in storage. Keep all chemical storage to a minimum,
l. And never store more material than is actually needed at the facility
m. Practice good housekeeping in areas where hazardous products are stored

n. Keep chemical storage areas free of sources of extreme heat, cold, open flame or areas with potential for flooding

o. Chemicals should be stored no higher than eye level and never on the top shelf of a storage unit

> **Assistance:** for assistance with identifying incompatible materials, contact your Regional Environmental Specialist (RES). See page 51.

Table 5-1 **Examples of Incompatible Materials and Explosive Consequences**

CHLORINE incompatible with:	**Potential consequences:**
Organic Acids Combustible Liquids Lithium Sodium	Fire Explosion Violent Reaction Generation of flammable hydrogen or toxic gas
METAL HYDRIDES incompatible with:	**Potential consequences:**
Lime Sludge Solvent Sulfuric Acid Alkaline Corrosive Liquids	Heat generation Violent reaction Generation of flammable hydrogen gases
BATTERY ACID incompatible with:	**Potential consequences:**
Acetylene Sludge Alkaline Caustic Liquids Aluminum Halogenated Hydrocarbons	Fire Explosion Violent reaction Generation of flammable or toxic gases
SPENT CYANIDE incompatible with:	**Potential Consequences:**

Chemical Cleaners Battery Acid Acid Sludge Water	Generation of a toxic hydrogen cyanide Generation of a hydrogen sulfide gas
HYPOCHLORITES incompatible with:	**Potential Consequences:**
Paint (Enamel, Oil-Based) Concentrated Mineral Acids Alcohols Magnesium	Fire Explosion Violent reaction
PAINT (Enamel, Oil-Based) is incompatible with:	**Potential Consequences:**
Sulfuric Acid Nickel-Cadmium Batteries Lithium Chlorine	Fire Explosion Violent reaction Heat generation
LITHIUM (batteries) incompatible with:	**Potential Consequences:**
Water Alcohols Nitrated Hydrocarbons Solvents	Heat generation Violent reaction Generation of flammable hydrogen gas
MAGNESIUM (batteries) incompatible with:	**Potential Consequences:**
Electrolyte, Acid Water Alcohols Chlorites	Fire Explosion Violent reaction Generation of flammable hydrogen gas

5-2 TXARNG Storage Compatibility Matrix

TXARNG has historically utilized the Storage Compatibility Chart, Figure 5-1, other methods can be used.

Figure 5-1 TXARNG Storage Compatibility Matrix

Storage Compatibility Groupings		
Explosives (Ammunition, etc)	Multi-Hazards Low Hazards Non-Hazards Magnetic Materials Bases	Corrosive Bases
Flammables Solid, Liquid, and/or Gas Combustibles Paints & Paint Related Materials, Ignitable, etc.	Non-Flammable Gas (Toxic/Non-Toxic) Flammable Gas (Toxic/Non-Toxic)	Corrosive Acids
Etiologic Agents Used Needles, Used Bandages, Contaminated Medical Equipment and Supplies	Oxidizers Calcium Hypochlorite, STB, etc. Non-Hazards	Toxics Gas Mask Filters Batteries Magnesium and Mercury Fluorescent Bulbs
Reactive(s) Water Reactive, etc. Batteries Lithium	Pesticides Herbicides	Pyrophoric Acute Toxic Chronic Toxic

(Outside Storage)

Oxygen Tanks

(Outside Storage)

Acetylene Tanks

NOTE: Facilities are not required to set up a storage area for every grouping shown. Set up only the areas necessary to store your facility's HAZMAT safely.

5-3 DoD Hazardous Chemical Compatibility System

The DoD Hazardous Chemical Compatibility System is the preferred method of determining where hazmat is stored, and which incompatible hazardous materials need to be stored separately. This system is based on the Storage Segregation Matrix, Table 5-3 which consists of four essential elements:

a. Hazard Characteristic Code (HCC)
b. HCC Group Name
c. Primary Segregation required by Hazard Storage Area Code (HSAC)
d. Secondary Segregation required (if any) within the primary storage area

Each hazardous material is assigned one of 63 HCCs (Table 5-3) that are then grouped into one of the 10 Hazardous Storage Area Codes (HSAC) shown in Table 5-2.

The HSAC determines the primary segregation requirements for each type of material. A graphical representation of this is shown below in Figure 5-2.

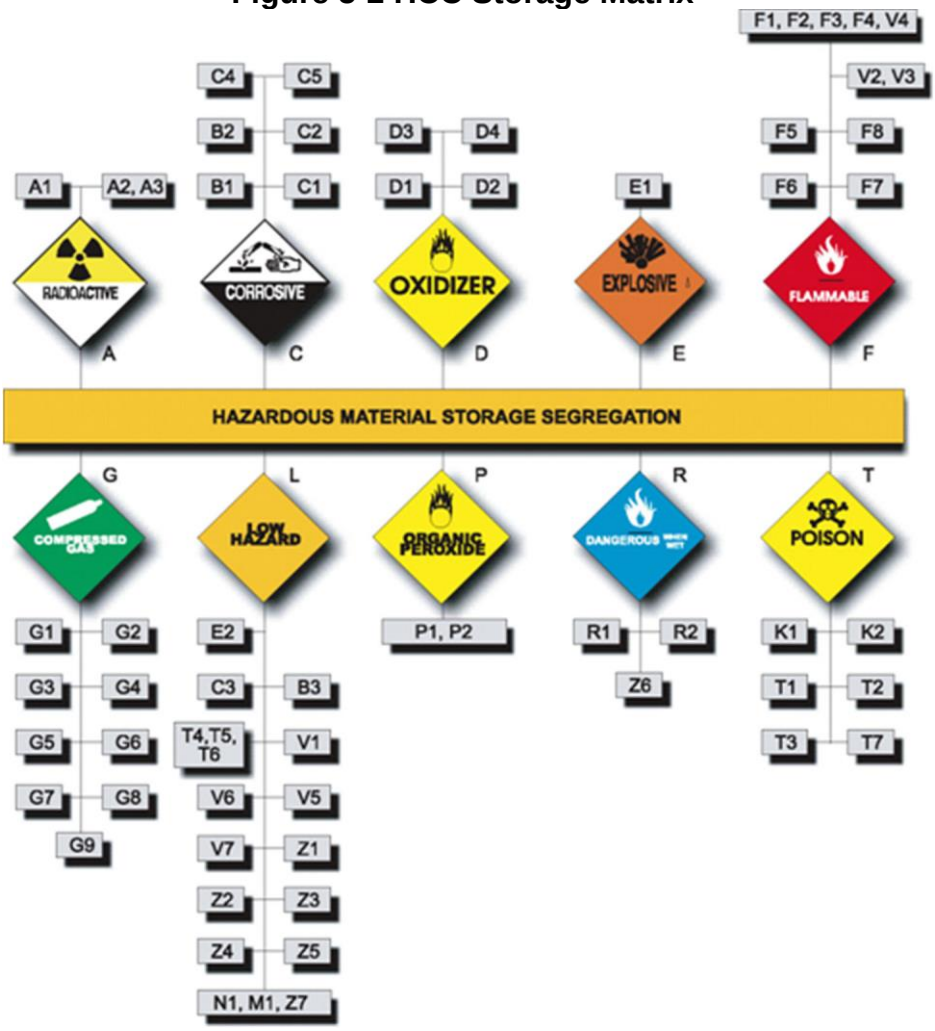
The Hazardous Chemical Compatibility System is designed to work with SDSs generated from the HMIRS; however, it can also be used for non-HMIRS generated SDSs.

For more information on the Hazardous Chemical Compatibility System, refer to TM 38-410, Dated 13 Jan 1999 *Storage and Handling of Hazardous Materials.*

Table 5-2 Hazard Storage Area Codes (HSAC)

A = Radioactive	G = Gas, Compressed
C = Corrosive	L = Low Hazard (General Purpose)
D = Oxidizer	P = Peroxide, Organic
E = Explosive	R = Reactive
F = Flammable	T = Poison

Figure 5-2 HCC Storage Matrix



5-4 Storage Compatibility Segregation Requirements

There are two methods for determining Hazardous Chemical Codes (HCC) for the purpose of incompatible materials segregation. *Method 1* below uses a pre-determined HCC generated by HMIRS. Method 2, para 5-5 uses the manual method of identifying hazardous materials using information found on the SDS, then assigning an HCC using Table 5-3. Follow the directions below to determine hazmat segregation and incompatibility for storage.

> **CAUTION:** Personnel must be trained in order to perform hazmat segregation tasks. Care must be taken to ensure that each SDS/HCC for material used, matches the NSN, contract#, or CAS# etc. as closely as possible. If an HCC cannot be determined using HMIRS, continue to Method 2, Para 5-5. **If you cannot determine the HCC using these methods, contact your Regional**

<u>Environmental Specialist (RES) immediately for assistance.</u> See contacts on page 51.

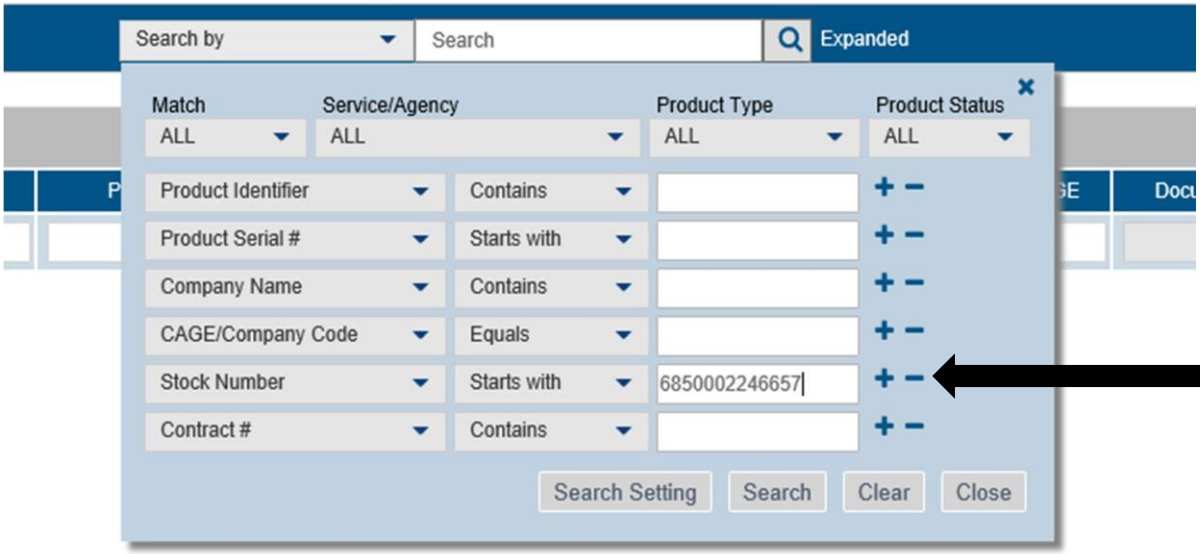
<u>Method 1:</u> Hazardous chemical codes (HCC) are used to identify and store separately chemicals that are not compatible with each other. Using this method, HCCs have been predetermined by the Defense Logistics Agencies (DLA) Hazardous Materials Information Resource System (HMIRS) and placed on the Safety Data Sheet. Access to the HMIRS web page is required through AMPS at https://amps.dla.mil. See Para 2-8 for access request procedures.

Once access has been granted, log on to HMIRS at: https://h2.hmms.hill.af.mil/my.policy and enter search criteria for the desired item. I.E, National Stock Number (NSN), CAS#, or serial# etc. Required information can be found using the Safety Data Sheet (SDS) from your binder. Complete all task steps to determine primary and secondary storage requirements using Table 5-3.

Step 1. To find an HCC on the HMIRS web site; **log into HMIRS**; https://h2.hmms.hill.af.mil/my.policy

Step 2. Enter search criteria using SDS into the quick search box and select execute search. Figure 5-3

Figure 5-3 HMIRS Quick Search



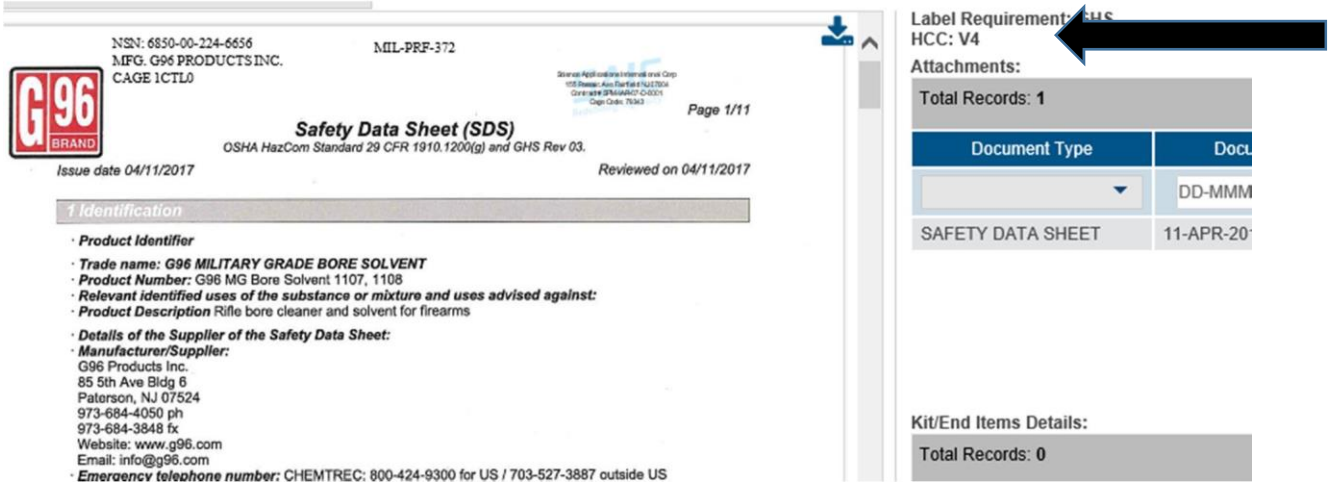
Step 3. Locate the correct SDS for the product ensuring product/company name, NSN, and/or product CAS#, or serial # are correct and select it by double clicking the link. Figure 5-4

Figure 5-4 SDS Selection

6850002246657	G96 MILITARY GRADE BORE SOLVENT	FBDLT	PRODUCT	ACTIVE	G96 PRODUCTS INC.
6850002246657	EAGLE SHIELD WEAPON CLEANER MIL-PRF-...	DTDKQ	PRODUCT	ACTIVE	NEXEO SOLUTIONS, LLC
6850002246657	WEAPON CLEANER	DTHGW	PRODUCT	ACTIVE	HYBRID PLASTICS, INC
6850002246657	ARPOLUBE 372 MIL-PRF-372 AM.2; MIL-PRF-3...	DNSYT	PRODUCT	PRELIMINARY	NEXEO SOLUTIONS, LLC
6850002246657	ARPOLUBE 372	DJTKJ	PRODUCT	ACTIVE	NEXEO SOLUTIONS, LLC FORMERLY CHEMI...
6850002246657	ARPOLUBE 372	CVLRH	PRODUCT	ACTIVE	NEXEO SOLUTIONS, LLC FORMERLY CHEMI...
6850002246657	GUNZILLA, BC-10	DFKPZ	PRODUCT	PRELIMINARY	HY-TEST PACKAGING CORP
6850002246657	ARPOLUBE 372	DCGKJ	PRODUCT	ACTIVE	ARPOL PETROLEUM CO
6850002246657	MIL-PRF-372D, RIFLE BORE CLEANER	CMXYM	PRODUCT	ACTIVE	INTERNATIONAL LUBRICANTS CO INC
6850002246657	MIL-C-372C AM. I (RIFLE BORE CLEANER)	CPVWL	PRODUCT	ACTIVE	OCTAGON PROCESS INC
6850002246657	MIL-C-372C AM 2 RIFLE BORE CLEANER	BDKKW	PRODUCT	ACTIVE	OCTAGON PROCESS INC.
6850002246657	MIL-C-8188C	CCHRN	PRODUCT	ACTIVE	VELSICOL CHEMICAL CORPORATION
6850002246657	GUNCARE	BWCWC	PRODUCT	ACTIVE	CRC CHEMICALS U S A
6850002246657	RIFLE BORE CLEANER	BDKKV	PRODUCT	ACTIVE	KONALRAD PRODUCTS,INC.

The HCC is located in the upper right hand corner of the screen, along with the SDS selected. See Figure 5-5

Figure 5-5 HCC Location – SDS



Step 4. Use the Storage Segregation Matrix in Table 5-3 to determine incompatibility using the HCC.

Step 5. Determine the primary storage site using the HCC, Table 5-3, and Figure 5-2.

Step 6. Determine if secondary segregation is required. See Definitions of notes on page 28-30, and follow notes instructions associated with the HCC.

For Example: HCC F6 is a corrosive acid that is flammable. It will be assigned a code of F and placed in a Flammable Storage Area. HCC F7 is a corrosive alkali that is flammable. It will also be assigned a code of F and placed in a Flammable Storage Area. However, these two HCCs are incompatible with each other and must be separated horizontally by at least one 4-foot-wide aisle.

> **Note:** Vertical separation may also be required, to ensure that incompatible products do not leak and contact one another.

Step 7. Check the matrix notes to see if the HCC has any special storage needs that may require secondary segregation within the primary storage area or segregation from all other products.

Two HCCs -- H1 and X1 -- are not included in this segregation matrix because they are system derived HCCs and are not used for physical storage. All other HCCs are defined in Table 5-3.

Table 5-3 Storage Segregation Matrix

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
A1	Radioactive, Licensed	*										Note A
A2	Radioactive, License Exempt	*										Note A
A3	Radioactive, License Exempt, Authorized	*										Note A
B1	Alkali, Corrosive Inorganic		*									Note B
B2	Alkali, Corrosive Organic		*									Note C
B3	Alkali, Low Risk							*				Note F

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
C1	Acid, Corrosive Organic		*									Note D
C2	Acid, Corrosive & Oxidizer, Inorganic		*									Note E
C3	Acid, Low Risk							*				Note F
C4	Acid, Corrosive & Oxidizer, Organic		*									Note D
C5	Acid, Corrosive & Oxidizer, Organic		*									Note E
D1	Oxidizer			*								None
D2	Oxidizer & Poison			*								Note G
D3	Oxidizer & Corrosive Acidic			*								Note G
D4	Oxidizer & Corrosive Alkali			*								Note G
E1	Explosive, Military				*							
E2	Explosive, Low Risk							*				Note A
F1	Flammable Liquid DOT PG I, OSHA IA					*						Note J
F2	Flammable Liquid DOT PG II, OSHA IA					*						Note J
F3	Flammable Liquid DOT PG III, OSHA II					*						Note J

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
F4	Flammable Liquid DOT PG III, OSHA II					*						Note J
F5	Flammable Liquid & Poison					*						Note L
F6	Flammable Liquid & Corrosive, Alkali					*						Note L
F7	Flammable Liquid & Corrosive, Acidic					*						Note L
F8	Flammable Solid					*						Note K
G1	Gas, Poison (Nonflammable)						*					Note M
G2	Gas, Flammable						*					Note N
G3	Gas, Nonflammable						*					Note P
G4	Gas, Nonflammable, Oxidizer						*					Note R
G5	Gas, Nonflammable, Corrosive						*					Note S
G6	Gas, Poison, Corrosive (Nonflammable)						*					Note T
G7	Gas, Poison, Oxidizer (Nonflammable)						*					Note U
G8	Gas, Poison, Corrosive (Nonflammable)						*					Note V

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
G9	Gas, Poison, Flammable						*					Note W
K1	Infectious Substance										*	Note X
K2	Cytotoxic Drugs										*	Note Y
M1	Magnetized Material							*				None
N1	Not Regulated as Hazardous							*				None
P1	Peroxide, Organic, DOT Regulated								*			None
P2	Peroxide, Organic (Low Risk)								*			None
R1	Reactive Chemical, Flammable									*		Note Z
R2	Water Reactive Chemical									*		Note AA
T1	DOT Poison – Inhalation Hazard										*	None
T2	UN Poison, Packing Group I										*	None
T3	UN Poison, Packing Group II										*	None
T4	UN Poison, Packing Group III							*				Note BB
T5	Pesticide, Low Risk							*				None
T6	Health Hazard							*				None

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
T7	Carcinogen (OSHA, NTP, IARC)										*	Note CC
V1	Miscellaneous Hazardous Materials – Class 9							*				None
V2	Aerosol, Nonflammable					*						Note EE
V3	Aerosol, Flammable					*						Note EE
V4	DOT Combustible Liquid, OSHA IIIA					*						None
V5	Hi-Flash Point Liquids, OSHA IIIB							*				None
V6	Petroleum Products							*				None
V7	Environmental Hazard							*				None
Z1	Article Containing Asbestos							*				None
Z2	Article Containing Mercury							*				None
Z3	Article Containing Polychlorinated Biphenyls (PCB)							*				None
Z4	Article, Battery, Lead Acid, Non-spillable							*				None
Z5	Article, Battery, Nickel Cadmium, Non-spillable							*				None

HCC	Hazard Characteristics Group Name	Primary Segregation by Hazard Storage Area Code (HSAC)										Secondary Segregation
		A	C	D	E	F	G	L	P	R	T	
Z6	Article, Battery, Lithium									*		Note DD
Z7	Article, Battery, Dry Cell							*				None

DEFINITIONS OF NOTES

NOTE A	**Security Storage** - must be well ventilated with limited access.
NOTE B	**Inorganic Alkali Storage** - store away from acids by at least one 4 ft aisle width and store away from organic alkalis by at least one 4 ft aisle width
NOTE C	**Organic Alkali Storage** - store away from acids by at least one 4 ft aisle width and store away from inorganic alkalis by at least one 4 ft aisle width
NOTE D	**Inorganic Acid Storage** - store away from alkalis (caustics) by at least one 4 ft aisle width and away from organic acids by at least one 4 ft aisle width. Separate from other acids with subsidiary risk labels by at least one 4 ft aisle width
NOTE E	**Organic Acid Storage** - store away from alkalis (caustics) by at least one 4 ft aisle width and away from inorganic acids by at least one 4 ft aisle width. Separate from other acids with subsidiary risk labels by at least one 4 ft aisle width
NOTE F	Further separate into Acid and Alkali Storage within the low hazard storage area to keep potentially incompatible products from mixing.
NOTE G	Separate from other oxidizers and oxidizers with secondary hazards by at least one 4 ft aisle width
NOTE H	Magazine Storage

NOTE J	Segregate into flammable liquid storage separate from flammable solids by at least one 4 ft aisle width
NOTE K	Segregate into flammable solid storage separate from flammable liquids by at least one 4 ft aisle width
NOTE L	Separate from other flammables and flammables with secondary hazards by at least one 4 ft aisle width
NOTE M	Further segregate into Poison Gas storage within compressed gas area
NOTE N	Further segregate into Flammable Gas storage within compressed gas area
NOTE P	Further segregate into Nonflammable Gas storage within compressed gas area
NOTE R	Further segregate into Oxidizer Gas within the Nonflammable Gas storage that is within the compressed gas area
NOTE S	Further segregate into Corrosive Gas within the Nonflammable Gas storage that is within the compressed gas area
NOTE T	Further segregate into Corrosive Gas within the Poison Gas storage that is within the compressed gas area
NOTE U	Further segregate into Oxidizer Gas within the Poison Gas storage that is within the compressed gas area
NOTE V	Further segregate into Flammable Gas within the Poison Gas storage that is within the compressed gas area.
NOTE W	Further segregate into Corrosive and Oxidizer Gas within the Poison Gas storage that is within the compressed gas area.
NOTE X	Further segregate into Biomedical storage within the Poison Storage area.
NOTE Y	Further segregate into Medical Security storage within the Poison Storage area.
NOTE Z	Further segregate into Spontaneously Combustible storage within the Reactive Storage area.

NOTE AA	Should not store in areas protected with water sprinkler system. Fire protection should be non-water based.
NOTE BB	Store away from food
NOTE CC	Further segregation within Poison Storage area may be necessary if secondary hazards exist (i.e. flammable, corrosive, etc.)
NOTE DD	Separate from other products within the Reactive Storage area.
NOTE EE	Store aerosols from flammables by placing in separate room or barrier such as floor to ceiling wire mesh, chain link fence, etc. to protect personnel from aerosols that can become self-propelled projectiles.

5-5 Method 2 – Determine hazardous material storage segregation without an HMIRS generated SDS.

NOTE: Before attempting to determine hazardous materials segregation requirements review paragraph 5-1 thru 5-3 Hazardous Materials Compatibility.

Hazardous materials with an SDS not generated from HMIRS, or SDSs provided by the manufacturer will not have an HCC. In order to determine storage and segregation requirements you will need to be able to identify the hazardous material by reading the DOT warning labels on the container, and/or using the manufacturers SDS. You may also use the Waste Fact sheets located in the Environmental Waste Management Plan (EWMP) to further assist you with this process.

Follow the steps below,

Step 1. Locate the DOT Transportation label(s), GHS pictograms, signal word, and the material name on the container or SDS.

Step 2. Match the DOT label with Table 5-4.

Step 3. Locate the Suggested Temporary HCC.

Step 4. Use the Storage Matrix in Table 5-3 to determine incompatibility using the HCC.

Step 5. Determine the Primary storage site Table 5-3, and Figure 5-2.

Step 6. Determine if secondary segregation, see Table 5-3 Notes pages 28-30.

Step 7. Place hazardous materials in suitable storage containers, cabinets, or areas IAW Table 5-3.

If you find a precautionary Label on the back of your container:

Step 1. Go to Table 5-5.

Step 2. Match the label with the Signal Word and Statement of Hazard in the first two columns.

Step 3. Follow the recommended storage requirements.

If you cannot determine the HCC using these methods, contact your Regional Environmental Specialist (RES), or the Environmental Branch immediately for assistance.

Table 5-4 DOT Labels for HCC

DOT Label	DOT Label Name	Suggested Temporary HCC	Recommended Storage Area	
			Primary	Secondary
	Explosive 1.1	E1	Explosive	Magazine

DOT Label	DOT Label Name	Suggested Temporary HCC	Recommended Storage Area	
			Primary	Secondary
	**Explosive 1.2**	**E1**	**Explosive**	**Magazine**
	**Explosive 1.3**	**E1**	**Explosive**	**Magazine**
	**Explosive 1.4**	**E2**	**Explosive**	**Secondary**
	**Explosive 1.5**	**E2**	**Explosive**	**Secondary**
	**Explosive 1.6**	**E2**	**Explosive**	**Secondary**
	**Poison Gas**	**G1**	**Compressed Gas**	**Poison Gas Cylinder**

DOT Label	DOT Label Name	Suggested Temporary HCC	Recommended Storage Area	
			Primary	Secondary
	Flammable Gas (Cylinder)	G2	Compressed Gas	Flammable Gas Cylinder
	Flammable Gas (Aerosol Non-refillable Tank or Canister)	V3	Flammable	Aerosol Container
	Nonflammable Gas	G3	Compressed Gas	Nonflammable Gas Cylinder
	Flammable Liquid	F1-F4	Flammable	Flammable Liquid
	Flammable Solid	F8	Flammable	Flammable Solid
	Spontaneously Combustible	R1	Reactive	Spontaneously Combustible

DOT Label	DOT Label Name	Suggested Temporary HCC	Recommended Storage Area	
			Primary	Secondary
	Dangerous When Wet	R2	Reactive	Dangerous When Wet, No Water Sprinklers
	Oxidizer	D1	Oxidizer	None Required
	Organic Peroxide	P1	Organic Peroxide	None Required
	Poison	T2	Poison	None Required
	Harmful Keep Away From Food	T4	Low Hazard	Away From Food
	Infectious Substance	K1	Poison	Biomedical

DOT Label	DOT Label Name	Suggested Temporary HCC	Recommended Storage Area	
			Primary	Secondary
	Radioactive I	A1	Radioactive	Security
	Radioactive II	A1	Radioactive	Security
	Radioactive III	A1	Radioactive	Security
	Corrosive	C1, C2, C4, C5 (Acid)	Corrosive	Acid*
	Corrosive	B1, B2 (Alkali)	Corrosive	Alkali*
	Class 9	V1	Low Hazard	None Required
Not Available	Magnetized Material	M1	General Purpose	None Required

Figure 5-6 GHS Labels for HCC

Table 5-5 OSHA Precautionary labels for HCC

Signal Word	Examples of Statement of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
DANGER!	MAY BE FATAL IF SWALLOWED	T2	Poison	None Required
WARNING!	HARMFUL IF SWALLOWED	T3	Poison	None Required
WARNING!	HARMFUL IF SWALLOWED	T4	Low hazard*	Away from Food
DANGER!	MAY BE FATAL IF ABSORBED THROUGH SKIN	T2	Poison	None Required
WARNING!	HARMFUL IF ABSORBED THROUGH SKIN	T6	Low Hazard*	None Required
DANGER!	CAUSES (SEVERE)** BURNS	C1, C2, C4, C5	Corrosive	Acid
DANGER!	CAUSES (SEVERE)** BURNS	B1, B2	Corrosive	Alkali
DANGER!	EXTREMELY FLAMMABLE	F1	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F2, F3	Flammable	Flammable Liquid
WARNING!	FLAMMABLE	F8	Flammable	Flammable Solid
CAUTION!	COMBUSTIBLE	F4	Flammable	Flammable Liquid

Signal Word	Examples of Statement of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
CAUTION!	COMBUSTIBLE	V1	Flammable	None Required
DANGER!	EXTREMELY FLAMMABLE- CATCHES FIRE IF EXPOSED TO AIR	R1	Reactive	Spontaneously Combustible
DANGER!	STRONG OXIDIZER- CONTACT WITH OTHER MATERIALS MAY CAUSE FIRE	D1	Oxidizer	None Required
DANGER!	MAY BE FATAL IF INHALED	T1	Poison	None Required
WARNING!	HARMFUL IF INHALED	T2	Poison	None Required
WARNING!	MAY CAUSE ALLERGIC RESPIRATORY REACTION	T6	Low Hazard*	None Required
CAUTION!	(VAPOR GAS)** REDUCES OXYGEN AVAILABLE FOR BREATHING	T6	Low Hazard*	None Required
WARNING!	CAUSES EYE IRRITATION	T6, C3, C4	Low Hazard*	None Required
WARNING!	CAUSES IRRITATION	T6, C3, C4	Low Hazard*	None Required
WARNING!	MAY CAUSE ALLERGIC SKIN REACTION	T6, C3, C4	Low Hazard*	None Required

Please note that "None Required" means no additional storage requirements.

*Material bearing precautionary label text will not be assigned a Low Hazard (General Purpose) location without notification and approval by the Environmental Branch.

Signal Word	Examples of Statement of Hazard	Suggested Temporary HCC	Recommended Primary Storage Area	Recommended Secondary Storage Area
**Enter proper term as appropriate.				

6-1 Hazardous Material Storage Management (Inspections and Inventories)

Reduce the hazards of chemicals by minimizing the quantity of HAZMAT on hand. Proper storage and handling can reduce or eliminate associated risks to personnel and property and minimize waste generated from excessive or deteriorating HAZMAT containers. **Conduct inspections of material and chemical inventories as required to detect degradation, deterioration, corrosion damage or expiring shelf life.** Large Quantity Generators are required to conduct weekly inspections of HAZMAT/HW storage areas, all other Generators at TXARNG facilities/units are required to conduct monthly inspections.

A copy of the Monthly Hazardous Materials / Waste Storage Areas Inspection Form is available in the EWMP. Additional blank forms are available in the virtual CTK on the Environmental Homepage on the Lone Star Portal (LSP). A laminated quick reference guide titled “Setup/Inspection of HAZMAT Storage Areas Reference Card” is located in the units CTK. This reference card provides a quick "how-to" guide to set-up HAZMAT storage areas. A copy is also included in the EWMP.

6-2 HAZMAT Storage Management

Proper storage of HAZMAT controls health or physical hazards posed by chemical compounds by minimizing the potential for exposure to personnel and the environment. Protecting flammables from ignition sources and segregating incompatible compounds prevents their accidental mixing (via spills, residues, fires or human error). Consider the following when establishing HAZMAT storage areas:

a. Make sure all HAZMAT and chemical containers, whether stored in toolboxes, under tables, or in supply cabinets, are properly identified, labeled, packaged, and stored, per OSHA requirements

b. Store products and materials in cabinets in an orderly fashion, with no open containers

c. Designate a storage place for each product and return it to that location after each use

d. Return all containers of flammable liquids (flashpoint <140°F) to the flammable cabinet immediately after use

e. Keep storage areas free from materials that create hazards, such as clutter that could lead to tripping, fire, or attract pests

f. DO NOT leave hazardous products out on tables and bench tops where they are unprotected from ignition sources and can be more easily knocked over

g. DO NOT block exits and common traffic routes

h. DO NOT locate storage areas in locations exposed to extreme heat or sunlight

i. DO NOT store materials near any heat or ignition sources

j. Ensure that storage cabinets are fire resistant and labeled FLAMMABLE - KEEP FIRE AWAY

k. DO NOT store more than 60 gallons of Class I or Class II liquids or more than 120 gallon of Class III liquids in one flammable cabinet. See examples in Table 6-1.

l. Keep aerosol containers in well-ventilated areas

m. Use adequate security measures to prevent unauthorized personnel from gaining access to HAZMAT

n. Locate containers holding ignitable or reactive wastes at least 15 meters (50 feet) from the facility's property line

o. "No Smoking" signs must be conspicuously posted in all spraying areas, paint storage rooms and explosive, fuel and battery areas per 29 CFR 1910.107 (g)(7)

Table 6-1 Flammable Liquids Chart

Class	Liquid	Approximate Flash Point (°C)	Approximate Normal Boiling Point (°C)
IA	Diethyl Ether	-45	35
IA	n-Pentane	-40	36
IA	Propylene Oxide	-20 (Open Cup)	35
IB	Acetone	-18	56
IB	n-Hexane	-7	69
IB	Ethyl Acetate	-4	77
IB	n-Heptane	-4	98
IB	Acetonitrile	5	82
IB	Methenol	11	65
IB	2-Propanol	12	82
IB	Ethanol	13	79
IB	n-Octane	13	125
IB	1-Propanol	21	97
IC	n-Nonane	31	151
IC	1-Butanol	34	118
IC	2-Butanol	37	98
II	Acetic Acid	39	118
II	Propionic Acid	52	141
IIIA	Butyric Acid	72 (Closed Cup)	164
IIIA	Phenol	79 (Closed Cup)	182
IIIB	Ethylene Glycol	111	198
IIIB	Benzyl Alcohol	93	204

6-3 Troop Deployment

Uninterrupted compliance with the law is still required prior to, during, and after deployment. When a unit is preparing to deploy, contact the assigned RES to assist with unit HAZMAT and waste responsibilities. The EWMP contains Army Environmental Command checklists for “Chemical Management for Troop Deployment” that can be used before departure and redeployment to ensure consistent unit compliance.

7-1 Shelf Life Management

An effective waste-minimization program includes active life-cycle management of hazardous materials before they expire and turn into a hazardous waste. One of the best methods of doing that is to establish a good shelf life extension program. Shelf life is the total period of time that an item may remain in the storage system and remain suitable for issue. It begins with the date of manufacture, cure, assemble, pack, or inspect/test/restorative action. A shelf life item is an item of supply having deteriorative or unstable characteristics to the degree that a storage-time period must be assigned to ensure that it will perform satisfactorily while in service.

7-2 Shelf life Types

To determine if an item is a shelf life or non-shelf life item, look at the container label. If the container label does not have a test, inspection, or expiration date, it is not a shelf life item. If the item is not a shelf life item, use it indefinitely or until it becomes unserviceable. If the item is a shelf life item, properly manage it as a Type I or Type II material, as explained below.

If an item purchased through the military supply system has no shelf life markings, use FEDLOG Army Master Data File to determine if that item is a shelf life or non-shelf life item.

Note: If you do not have access to FEDLOG, contact your supply Sergeant or maintenance facility where FEDLOG is available.

Step 1. Open the FEDLOG program

Step 2. Enter the NSN.

Step 3. Highlight the information in the SLC column and click the right mouse button. A table will appear that indicates if the item is Type I or Type II.

Keep in mind the following key points about the shelf life program:

a. HAZMAT purchased locally with no expiration date are not shelf life items and can be used indefinitely or until the item becomes unserviceable

b. Half of the HAZMAT purchased through the military supply system are non-shelf life items and can be used indefinitely or until the items become unserviceable

c. For items that existed before marking of shelf life items was required, TMD personnel must determine if the items are shelf life items.

7-3 Type I Materials

Type I materials have an alphabetical shelf life code and are marked with an expiration date. See Table 7-1. Type I materials are not extendable. DoD policy requires that Type I HAZMAT be used or disposed of within 30 days of the expiration date. One exception is Type I medical items may be extended if they have been accepted as candidates for the DoD Shelf life Extension Program. Contact RES for turn-in or disposal instructions. In addition to the expiration date, Type I materials are required to be marked with either the date manufactured, date cured, date assembled, or date packed (apply one as appropriate).

Table 7-1 Type I Materials – Shelf Life Codes

Shelf Life Code	Shelf Life (Months)	Shelf Life Code	Shelf Life (Months)
A	1	N	27
B	2	P	30
C	3	Q	36
D	4	R	48
E	5	S	60
F	6	T	84
G	9	U	96
H	12	V	108
I	72	W	120
J	15	X	CPC >60
K	18	Y	144
L	21	Z	240
M	24		

7-4 Type II Materials

Type II materials (roughly 90% of shelf life material) have a numeric shelf life code. See Table 7-2. These materials are marked with an inspection/test date, as well as the date manufactured, cured, assembled, or packed, as appropriate. Type II materials are extendable. Every effort shall be made to extend the life of the material until it is used. Authorized personnel can extend Type II items by visual inspection or laboratory analysis. Type II materials with a test date must only be extended using laboratory analysis. Engine lubricating oil is an example a Type II item.

Table 7-2 Type II Materials – Shelf Life Codes

Shelf Life Code	Shelf Life (Months)	Shelf Life Code	Shelf Life (Months)
0	Non-Deteriorative	5	18
1	3	6	24
2	6	7	36
3	9	8	48
4	12	9	60

7-5 Extending Shelf life

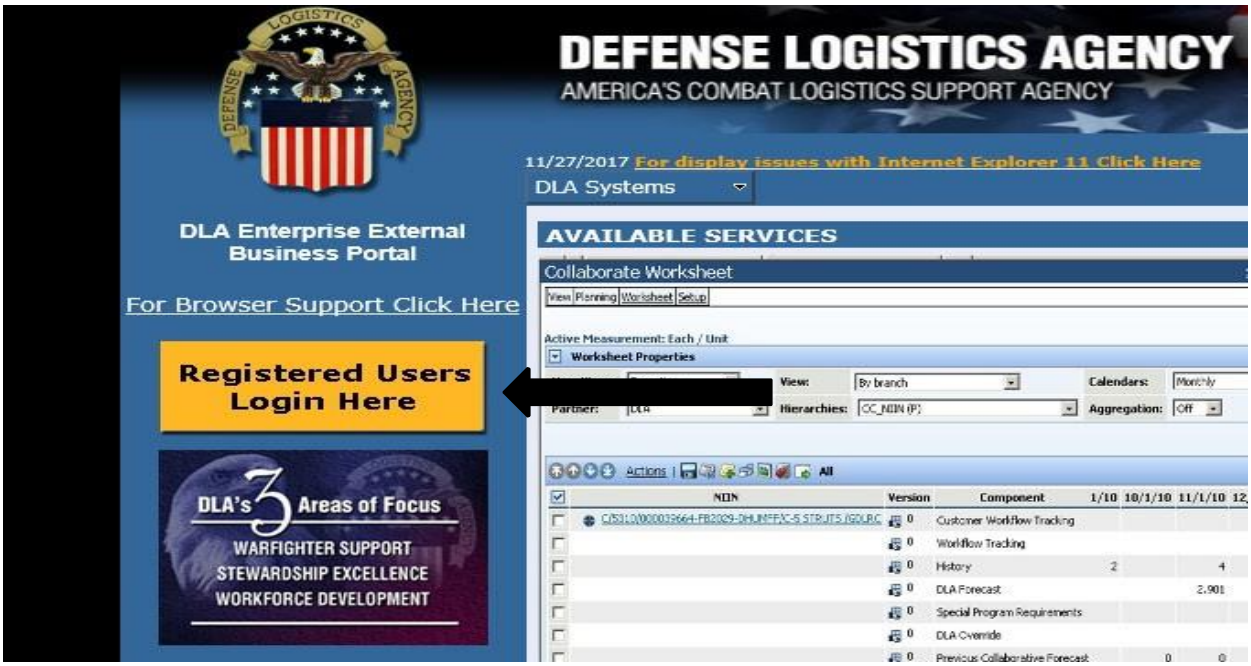
Most Type II items can be extended through visual inspections. Anyone can conduct visual inspections for items not requiring certified test results. The extension time information used to establish the next test/inspection date can be obtained from FEDLOG or the Material Quality Control Storage Standard (MQCSS). Other items require laboratory testing to extend shelf life. The Quality Status List (QSL) provides test results from DoD certified laboratories.

To use the MQCSS/QSL, access the online Shelf Life Extension Service. To gain access follow the instructions below.

Request access; Access to the shelf life extension service (SLES) and the MQCSS/QSL must be requested through the DLA Account Management and Provisioning System (AMPS) at; https://amps.dla.mil. For assistance with amps contact the help desk at 1-855-352-0001.

Once assess has been granted, the shelf life extension service will be accessed through the DLA Enterprise External Business Portal at; https://business.dla.mil. See Figure 7-1

Figure 7-1



To extend Type II shelf life items, follow the steps below:

STEP 1 Visually inspect the containers, checking for:

a. Leakage, broken glass
b. Rodent/insect infestation
c. Hardening/liquefying
d. Bulging containers
e. Rust, caking, and powdering
f. Liquid evaporation/condensation
g. Proper/legible label

STEP 2 If storage containers are in poor condition, process them for disposal IAW waste fact sheets. Contact your RES for assistance.

STEP 3 Obtain extension information from FEDLOG or MQCSS/QSL online.

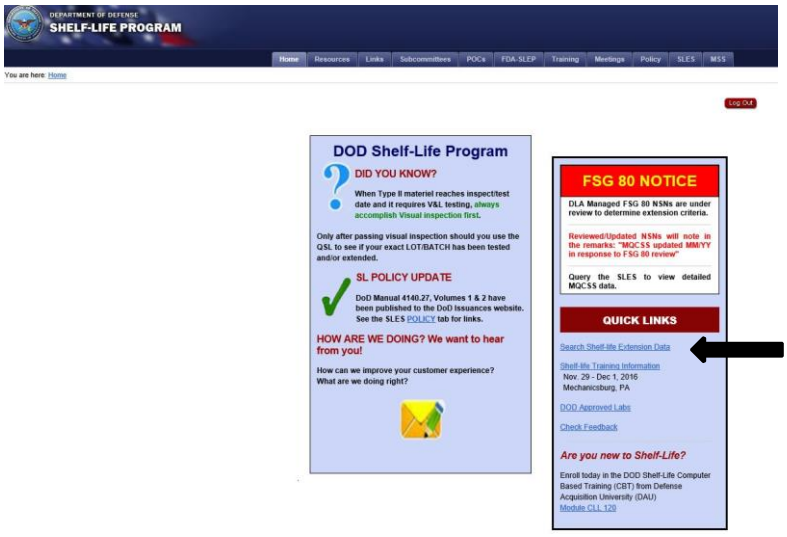
a. For **Non-mission Essential Items** — use FEDLOG to obtain the shelf life extension information. Once in FEDLOG, enter the NSN. When the screen comes up for the item, find the Shelf life Code indicated by "SLC." Click on the "contents" icon and drag it to the code, or highlight the information in the

SLC column and click the right mouse button. A table will appear that indicates if the item is a Type I or Type II as well as the material's shelf life period. There is often a code associated with the item status (a letter is indicative of a Type I item, a number is indicative of a Type II item). **Mission Essential Items** (Not Requiring Laboratory Certification) — use the MQCSS. The MQCSS is a database that implements uniform storage standards for Type II (extendible) NSNs. While the MQCSS was designed for wholesale managing activities, the TXARNG can use it to obtain the following shelf life information for mission essential items. The website for .MIL users includes shelf life policy documents and the combined Quality Status List (QSL) and MQCSS internet-based programs.

b. **Mission Essential Items** (Requiring Laboratory Certification) — the shelf life website also contains information concerning laboratory-testing certification required to extend the shelf life on some items. This information is found in the QSL. The QSL contains the results of tests by DoD/GSA) commercial physical science laboratories on Type II shelf life material. The test determines whether the material is unstable or has experienced any deterioration, rendering it unusable. The results of these tests can be used to extend the shelf life of material on hand. In order for the test results on one unit of material to be applied to other units in storage, the material must share the same unique identifiers of NSN, Contract, and Lot/Batch identification. The QSL will provide the last test date and the date the next test is due.

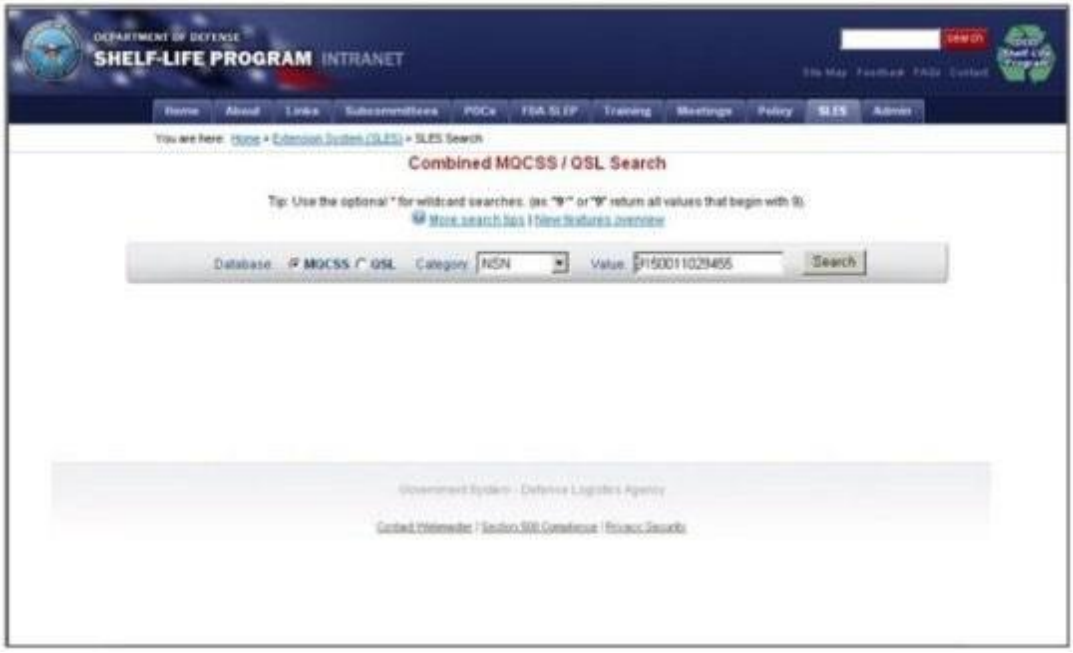
c. To use the MQCSS/QSL, access the website at: https://business.dla.mil log in, then select "search shelf life extension data". Figure 7-2

Figure 7-2 Search shelf life extension data



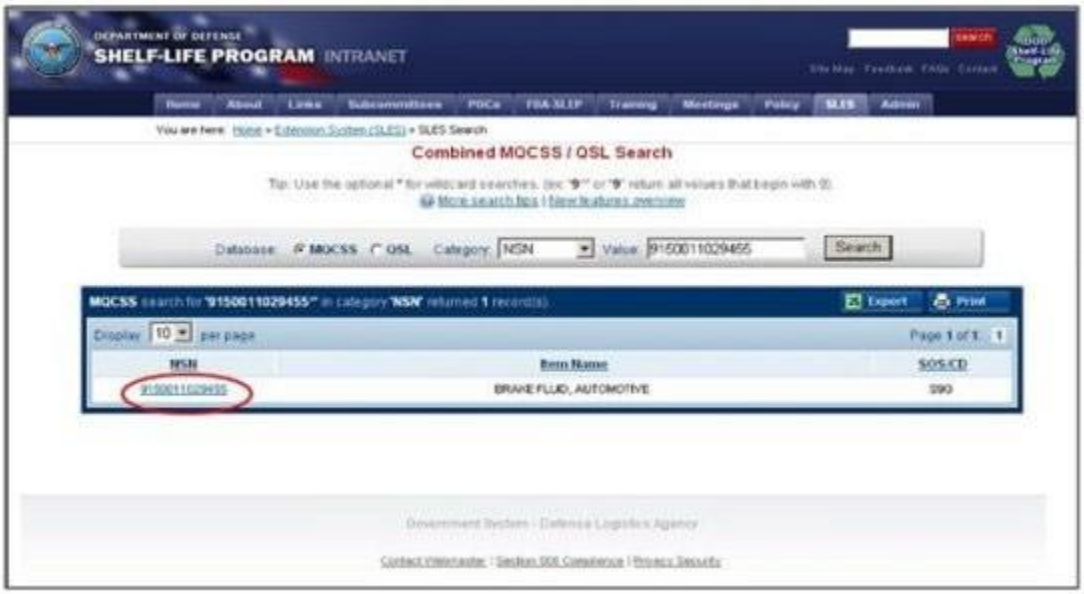
Next Select **MQCSS** or **QSL** and select **NSN** in the **Category** dropdown box; enter the NSN for the product that needs to be extended and click the **Search** button. Figure 7-3.

Figure 7-3



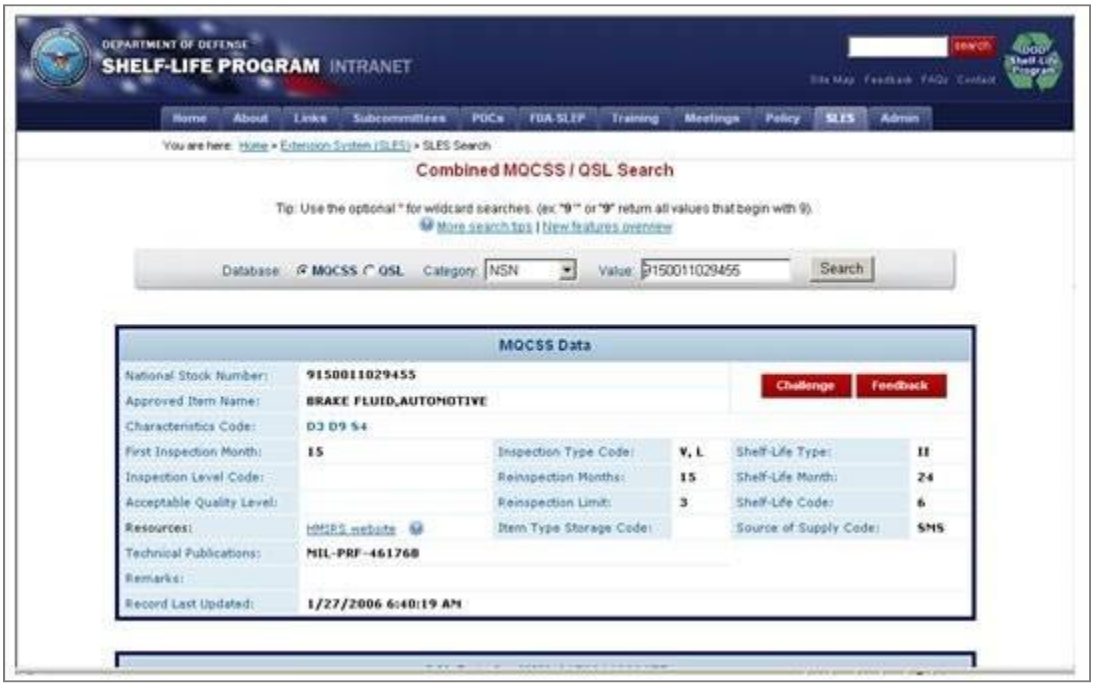
The search results will show both the NSN and the item name. Fig 7-4. Double check that the item shown is the one that needs to be extended, and click on the NSN to see the item details.

Figure 7-4 MQCSS/QSL search



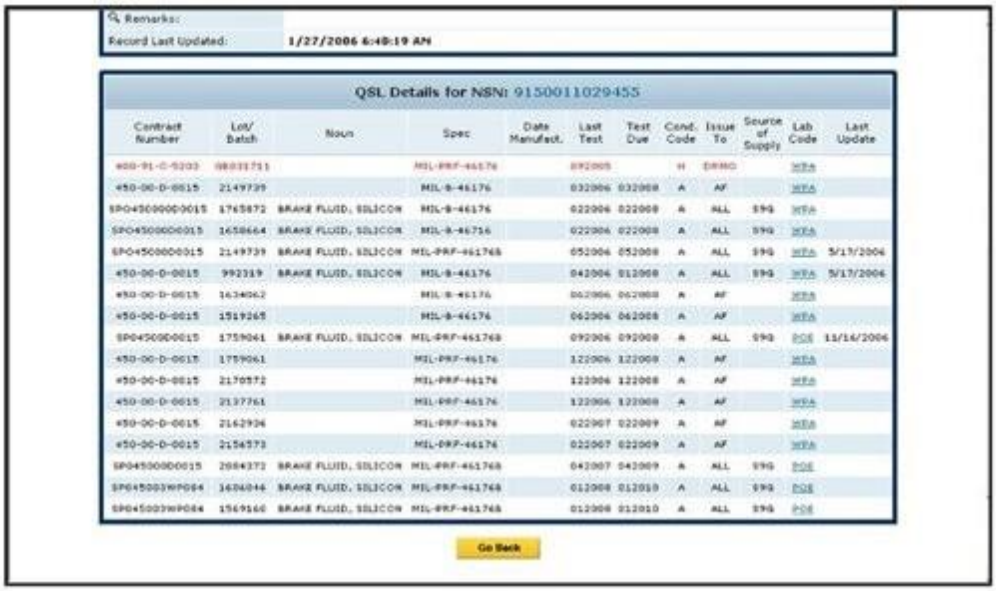
For items that do not require laboratory testing, refer to the MQCSS details. Figure 7-5

Figure 7-5



For items that require laboratory testing, scroll down to the QSL details. Fig 7-6

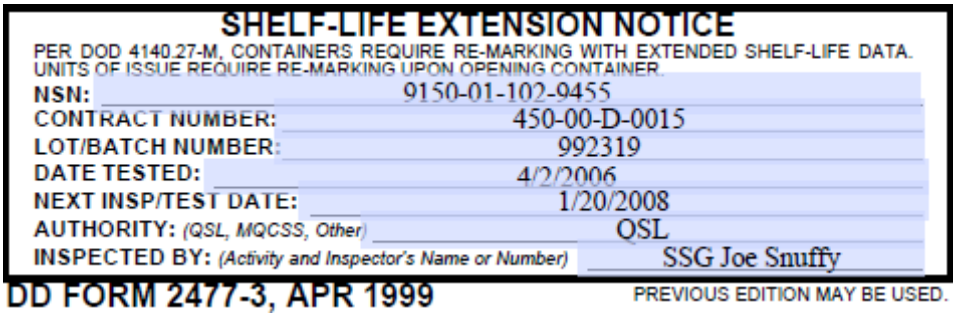
Figure 7-6



If the item can be extended, fill out a DD Form 2477-3, sticker Figure 7-7 with all required information and attach it to the container, or write shelf life information directly on the container with a permanent marker.

a. National Stock Number (NSN)
b. Contract Number
c. Lot/Batch Number
d. Date Tested
e. Next inspection/test date
f. Authority (FEDLOG, QSL, MQCSS, or laboratory name)
g. Inspected by: Signature or initials of person who inspected and extended the item

Figure 7-7 Shelf Life Extension Notice



SHELF-LIFE EXTENSION NOTICE

PER DOD 4140.27-M, CONTAINERS REQUIRE RE-MARKING WITH EXTENDED SHELF-LIFE DATA. UNITS OF ISSUE REQUIRE RE-MARKING UPON OPENING CONTAINER.

NSN:	9150-01-102-9455
CONTRACT NUMBER:	450-00-D-0015
LOT/BATCH NUMBER:	992319
DATE TESTED:	4/2/2006
NEXT INSP/TEST DATE:	1/20/2008
AUTHORITY: *(QSL, MQCSS, Other)*	QSL
INSPECTED BY: *(Activity and Inspector's Name or Number)*	SSG Joe Snuffy

DD FORM 2477-3, APR 1999 PREVIOUS EDITION MAY BE USED.

References

a. Army Regulation 200-1, Environmental Protection and Enhancement
b. AR 710-2, Supply Policy Below the National Level
c. DA Pam 710-7, Hazardous Materials Management Program
d. 29 CFR: Labor (Safety), 40 CFR: Protection of the Environment, 49 CFR: Transportation
e. TMD Environmental Statement Directive # 4700.01
f. TM 38-410: Storage and Handling of Hazardous Materials
g. ATP 4-43, Petroleum Supply Operations
h. TM 4-43.31, Petroleum Laboratory Operations
i. MIL STD 3004, Quality Surveillance for Fuels, lubricants, and related products

Regional Environmental Specialists: Contact Info

a. Region A (Northeast) office 512-782-5001 x7604234
b. Region B (Northwest) office 512-782-5001 x7604174
c. Region C (Southwest) office 512-782-5717
d. Region D (Southeast) office 512-782-5001 x7024815
e. Region E (Central) office 512-782-5001 x7494113

Acronyms

a. AMPS account management and provisioning system
b. CTK compliance tool kit
c. DLA defense logistics agency, Fort Belvoir, VA
d. DoDI department of defense instruction
e. EWMP environmental waste management plan
f. HAZMAT hazardous materials
g. HCC hazard characteristic code
h. HMIRS hazardous material information resource system
i. HSAC hazardous storage area code
j. HW hazardous waste
k. NSN national stock number
l. MQCSS material quality control storage standards
m. QSL quality status listing
n. RES regional environmental specialist
o. SDS safety data sheet
p. SLEP shelf life extension program
q. SLES shelf life extension system

APPENDIX D

HWM Pre-Deployment Checklist

POC:

Name:_____
Address:_____
Phone Number:_____

Checklist Item	Date Completed	Anticipated Completion Date
Has the facility HW manager been notified by the generator of chemical cleanout for hazardous waste pickup? Comment:		
Has the building facility manager been notified of troop deployment and chemical cleanout? Comment:		
Has each generator developed a chemical inventory list for waste and reusable chemicals? Comment:		
Has each generator segregated chemicals into waste/re-useable? Comment:		
Has the generator scheduled a HW pickup within 24 hours of deeming chemicals hazardous waste at the point of generation? Comment:		
Has the generator applied proper waste labels to each container? Comment:		
Has the EO made arrangements to redistribute any and all reusable chemicals to the installation's hazardous material management center? Comment:		
Has the generator followed all procedures for closing the satellite accumulation point (SAP)? Comment:		
Has the facility HWM conducted a courtesy inspection to assist the EO in their preparations for deployment? Comment:		
Have personnel completed a closure report and filed it with the facility environmental office? Comment:		
Have personnel conducted a comprehensive final inspection to ensure that all hazardous waste issues have been addressed prior to deployment? Comment:		
Has the EO made arrangements with the HWM for interim monitoring and management of any potential on-going HW issues? Comment:		

Has the HWM arranged for any remaining hazardous waste to be removed, disposed of, and/or otherwise properly treated? Comment:		
Has the HWM arranged to assume the responsibility for any required, on-going inspections of the facility while the unit is deployed? Comment:		
Has the HWM or EO contacted the HW disposal contractor to apprise them of the changing circumstances and modified the contract or schedule to account for different pick-ups, temporarily cancelled stops, etc.?		
Has the HWM arranged for a complete set of facility keys to be available to installation personnel? Comment:		
Has the HWM ensured that unit personnel have assembled and organized all relevant records pertaining to environmental performance, permits, training, etc. and made installation personnel aware of their location? [Records cannot deploy with the unit and must remain at the permanent garrison location.] Comment:		

HWM Post-Deployment Checklist

POC: **Name:**_____

Address:_____

Phone Number:_____

Checklist Item	Date Completed	Anticipated Completion Date
Have personnel contacted the building facilities manager of operations to inform them of their impending redeployment? Comment:		
Have personnel ensured that the building/structure is capable of and setup for chemical usage? Comment:		
Have personnel ensured that flooring is impervious to chemical spills? Comment:		
Have personnel installed or put in place the appropriate containments for chemical storage? Comment:		
Have personnel posted the appropriate signs for chemical storage? Comment:		
Have personnel ensured that all appropriate safety mechanisms are in place (i.e. eye wash, fire extinguisher, first aid kits)? Comment:		
Have personnel ensured that spill kits are in place and that they are familiar with procedures on how to restock them? Comment:		
Has the generator followed all procedures for setting up the SAP? Comment:		
Have personnel correctly posted all appropriate signs for chemical operations? Comment:		
Have personnel posted MSDS/SDS in the appropriate area? Comment:		
Have personnel obtained unit leader information for the restocking of equipment? Comment:		
Has the EO been updated by the HWM concerning any HW issues that may have arisen during the unit's deployment? Comment:		

Checklist Item	Date Completed	Anticipated Completion Date
Has the EO been updated concerning new regulations, requirements, or procedures that have been implemented since deployment? Comment:		
Has the HW disposal contractor been contacted to arrange for resumption of scheduled pickup routine, weekly servicing of parts cleaners, etc.?		

APPENDIX E

Standard Operating Procedure (SOP)

REQUESTING LABORATORY ANALYSIS

Number xxxx.xx
(Date stamped by SIG)

Texas Military Department (TMD)
2200 W. 35th St
Austin, TX 78703

OPR: ENVIRONMENTAL BRANCH

Official:
KATHERINE M. BROWN
CW4, AG, USA
SIG - Policy

Summary. Establishes guidelines for requesting laboratory analyticals in order for waste streams of the Texas Army National Guard (TXARNG) to be properly characterized.

Applicability. This SOP applies to all components of TMD, mainly the TXARNG and our tenants, as well as contractors.

Management Control Process. NA

Proponent and Exception Authority. The proponent for this guidance is the Environmental Branch of the Construction Facilities & Management Office (CFMO).

Supplementation. Supplementation of this SOP or establishment of command and local forms on the basis of this SOP is prohibited without prior approval from the Adjutant General (TAG), through the Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Suggested Improvements. Users are invited to send comments and suggested improvements concerning this SOP directly to Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Distribution. All

Table of Contents

1. Scope. Obtain laboratory services for conducting waste profiling on unknown chemicals that may result from daily operations, spills or releases to the environment, or unforeseen waste generation.

2. Operational Procedures.

a. In the event that a chemical or container is located that cannot be identified or a new process takes place that generates a new waste stream for the facility or if personnel are just not sure what the chemical constituents are, contact the RCRA Waste Manager to arrange for a laboratory analysis to be conducted.

b. Provide as complete a physical description of the chemical or material as possible, to include the process that might have produced it. Descriptions can assist with determining the criteria for testing. Some examples of good descriptions are as follows:

- Dry sweep contaminated with Gasoline
- Sludge-like material from the Oil Water Separator
- Absorbent contaminated by an unknown solvent, with an Ammonia-like odor
- Unknown brown colored liquid, with odor similar to paint thinner
- Diesel and water mix
- Solids or Liquids from the Oil-Water Separator/Grit Traps
- Parts Washer Liquid
- Paint Booth Residue
- Weapons Patches

c. In the event that unsafe conditions prevent you from obtaining an accurate description of the chemical or material in question, do not attempt to do so. In that case, use the descriptions “unknown liquid” or “unknown solid.”

d. Some waste streams (such as water-based CARC paint waste, non-POL rags, antifreeze filters, and off-spec MOGAS) may be hazardous and cannot be disposed of without a laboratory analysis. Refer to Waste Fact Sheet for the individual waste stream for guidance. Waste Fact Sheets (WFS) are in Appendix F of the Environmental Waste Management Plan (EWMP). If no WFS is available, contact your Regional Environmental Specialist (RES) or the RCRA Waste Manager.

e. Once samples are taken by the selected vendor:

- Affix a Pending Analysis Label to the container
- Fill in the contents (if known), date waste entered the container, and the date sampled

- Place the container in a Container Storage Area (CSA)
- If analytical results reveal that the waste stream is hazardous, **immediately** complete and attach a Hazardous Waste (HW) Label to the container. Note that the date on the HW Label is the same as the date the waste entered the container (found on the Pending Analysis Label), not the date of the lab sampling or the date the lab results were received.

3. Turn-in/Disposal Procedures. After receipt of the laboratory analytical reports, the site will need to conduct a waste characterization. Refer to Appendix F for Waste Characterization Guidance. Your RES can assist you with characterizing your waste and completing a Waste Submission sheet so that your waste can be disposed of properly.

4. Technical Assistance. For assistance with management of hazardous materials (including turn-in), hazardous waste management (including disposal), obtaining laboratory analytical services or other Environmental Compliance issues, contact your RES or the RCRA Waste Manager. Contact information is in the Environmental Waste Management Plan (EWMP) and on the Lone Star Portal (eLSP).

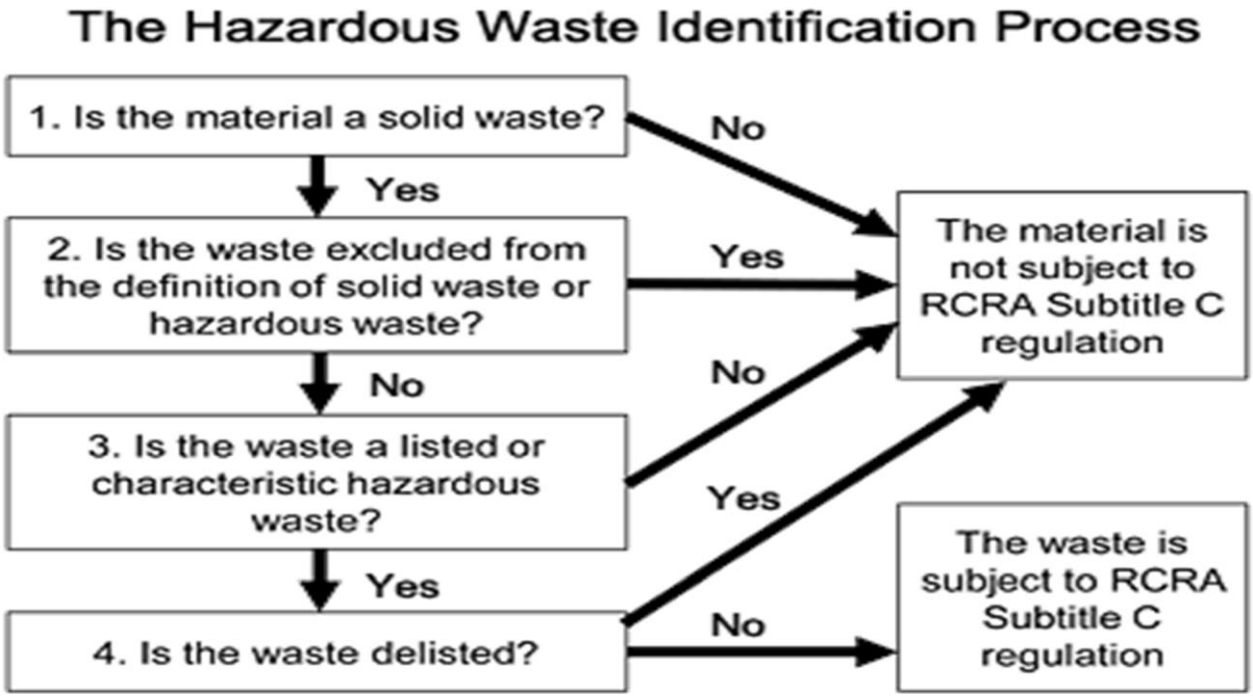
For questions, suggestions or concerns with material presented in this document, please contact the RCRA Waste Manager at 512-782-5382 or leon.c.mccowan.nfg@mail.mil.

APPENDIX F

Waste Characterization

All waste generated at a facility must be characterized to determine if the waste generated is a hazardous or non-hazardous waste. If the materials used, or the process generating the waste changes, or there are other impacts from maintenance or construction operations change the waste (e.g. cross contamination from solvent use, paint or aerosol overspray), you must also evaluate the solid waste characteristics. If in doubt, you should ***check with your Regional Environmental Specialist (RES)*** to properly characterize the facilities waste and to see if laboratory sampling is required.

Solid waste means any garbage or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other waste material, resulting from industrial, commercial, mining, and agricultural operations, and from community activities. Basically anything you discard from your facility could be a solid waste and potentially hazardous. You must determine if the waste is hazardous by utilizing the following steps.



Waste Characterization identification Steps:

First, conduct a waste survey to identify all your waste streams. Hazardous waste may be generated in the shop, storage and office areas. Although this list is **not** complete, if the facility has any of the following items, Hazardous Waste (HW) is being generated:

- Spent fluorescent lamps or bulbs and other lighting fixtures and thermostats (toxic for mercury),
- Disposable rags containing free liquids with a flashpoint of less than 140 degrees Fahrenheit or used with a listed solvent (ignitability, spontaneous combustion, used with “F” listed solvents),
- Spent activated carbon media, included in some air filters and other equipment (contains “F” listed solvents),
- Used solvents with low flashpoint (toxic, ignitability),
- Used solvents with high flashpoints (toxic and reactive contaminants),
- Drain or sump sludge, including loading/unloading area trenches (toxic and ignitability due to gasoline from vehicles),
- Painting materials and waste including paint thinners, enamel reducers, epoxies, primers, enamels, solvent-based paints, and paint booth filters (contains “F” solvents, metals, ignitability),
- Aerosol cans that are not empty (contains “U” or “P” chemicals, ignitability). Solvent-based adhesives (ignitability),
- Batteries - lead acid and dry cell (toxic for lead, nickel and mercury, corrosive),
- Used water-based, non-synthetic or synthetic lubricating fluids containing high concentrations of heavy metals (toxic metals of concern include lead, chromium, cadmium, and barium),
- Listed wastes mixed with another non-hazardous waste,
- Office computer equipment (may contain lead in the cathode ray tubes, batteries),
- Discarded, unused chemical products from inventory reduction activities (any of the commercial chemical products on the “P” and “U” lists in the state or federal regulations),
- Medical waste and first aid kits containing mercury thermometers or antiseptics containing mercury (toxic),
- Military items containing water-reactive (MRE Heaters), flame producing items, chemical compounds and equipment.

Second, determine the **Type** of Waste you have.

A. **Non-hazardous solid waste** include items that are being recycled like metal, plastic and paper, used oil, used antifreeze, municipal wastes, petro-chemically soiled rags, reusable shop towels or other textiles that do not contain free liquid and are sent to a commercial cleaning service, laundered and reused, scrap metal when recycled.

B. **Special Waste** is a waste that requires special handling, trained people, and/or special disposal methods. A waste may be a special waste because of its quantity, concentration, or physical, chemical, or biological characteristics. Absorbent material used in spill cleanup, contaminated soil, and Class I industrial waste like fuel filters and some abrasive-blast material are classified as a Special Waste.

C. **Universal waste**, which includes electric lamps (e.g. fluorescent and other mercury or lead containing light bulbs), batteries, mercury containing equipment (MCE), consumer electronics, pesticides or Paint and Paint Related Material.

D. **Hazardous Waste** (HW) includes material that is **listed** and/or **characteristic** as hazardous waste. Listed wastes include “F,” “K,” “P,” and “U” in the hazardous waste number Resource Conservation and Recovery Act (RCRA) and rules CFR 40 261.31 thru CFR 40 261.35. If **listed** hazardous waste is combined with other non-hazardous wastes, the combined waste is regulated as listed hazardous waste. **Characteristic** HW is waste that has been determined to be ignitable, corrosive, reactive, or toxic in accordance with federal RCRA CFR 40 261.21 thru CFR 40 261.24

E. **Hazardous Waste** or material regulated under the federal Toxic Substances Control Act (TSCA) such as PCB waste, from transformers and light ballasts, asbestos containing material (ACM), lead-based paint abatement materials and refrigerants.

Third, keep any records obtained during your waste determinations including test analysis results, safety data sheet [SDS], or other documentation such as product information from a supplier or manufacturer, to demonstrate your findings. These records should be maintained in the Facility CTK and available for review in the event of a regulatory inspection.

Methods of Characterizing Waste

There are two accepted methods to characterize solid waste; **generator or process knowledge** and **analytical sampling** which are described below.

Generator or process knowledge includes detailed information about the waste obtained from existing published or documented waste analysis data or studies conducted on wastes generated by processes similar to that which generated the waste in question. It's a common method of identifying a solid waste stream by incorporating SDS, chemical abstract sheets, manufacturer technical specification sheets or other identification documents known to accurately identify the solid waste. You can also use the Waste Fact Sheets in the EWMP to characterize the waste. For example; if you know the waste is a solvent, paint, battery etc.. and have the documentation to validate it, you can characterize the waste. Remember that the documentation needed to characterize your waste must be retained for future reference or regulatory inspection and kept in the facility CTK.

Waste Characterization using Generator Knowledge

1. Has the waste been **maintained** under the Generator's Control? Y / N

2. Are all **hazards** associated with the waste identified? Y / N

3. Is there sufficient **documentation** to support the waste characterization? Y / N

4. Has determination been made if the waste is **listed** or **characteristic**? Y / N

5. Has the waste stream **type** been identified? Y / N

6. Has the waste been properly **labeled** or marked IAW its type? Y / N

If you answered yes to questions above you should be able to characterize your waste using generator knowledge, if not request assistance from the RES.

Waste Characterization Using Laboratory Sampling

When unknown hazardous material or regulatory (Storm Water, Grit Traps etc.) sampling is to be conducted, strict sampling procedures must be used. Samples should be collected and analyzed by qualified individuals using the appropriate equipment and procedures. Samples taken during the survey will be submitted to a qualified laboratory for analysis.

Sampling request must be coordinated through the State RCRA WM or RES to properly obtain funding for the procedure. Samples of the waste stream are taken and sent to the laboratory for analysis based on the type hazards associated with the material which will be determined by RCRA WM or RES. When the laboratory results are received the RCRA WM or RES will characterize the waste based on the analytical evidence. A copy of the analytical results will be stored and maintained in the facility CTK for review in the event of a regulatory inspection. Laboratory sampling is expensive

While the material is being analyzed, containerize the waste, and obtain a **Pending Analysis** label from the RCRA WM or RES. Place the label clearly visible on the container and include **all** the following information:

- Type of waste and process it was collected from
- Date the material was put into the container
- Date Sample was taken

ABSORBENTS

Includes berms, booms, socks, pillows, mats, pads, floor sweep, or anything used to absorb liquids.

General Information

Absorbents are available in a wide variety of formats including, but not limited to; berms, booms, socks, pillows, mats, pads, floor sweep, or anything used to absorb liquids. They can be found in facility spill kits and are generally used to clean-up POL related spills. If absorbents are required to clean-up a spill a **Spill Report** must be generated IAW the ISCP or Spill Prevention Control and Countermeasures Plan. Spill supplies used for a reported spill are **eligible for replacement** by TMD Environmental.

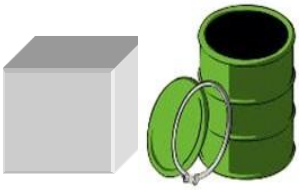
- **Used or Spent absorbents CANNOT be turned in for restocking.**
- Absorbents may be contaminated with any number of chemicals used in the shop. The most likely contaminants are POLs that may be flammable and/or toxic. Other contaminants include solvents or acetone.
- **TO DISPOSE:** Absorbents are classified as either a hazardous or special waste depending on whether the product absorbed is hazardous or non-hazardous.
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the material added to absorbent is hazardous (RCRA) or non-hazardous (Non-RCRA).
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- DO NOT mix absorbents soaked with different hazardous products,
- DO NOT mix non-hazardous absorbents with hazardous absorbents,
- DO NOT co-mingle absorbent types. Use and containerize a single absorbent for spill clean-up. If you use a product like "*Spillsorb*" to clean-up a spill, don't mix with other brands like "*Stardust*" or "*Spill Kleen*" unless it is absolutely necessary.

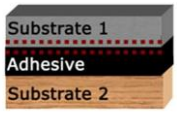
OSHA GHS Label

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Spent Absorbent and (Add Hazard Characteristic)
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Store using precautions for material absorbed.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.
DO NOT use containers that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• If absorbent is saturated with liquid allow for sufficient head space IAW the EWMP.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description:
Mark the outside container with Proper shipping name (PSN) and ERG number. Contact the RCRA WM or RES to determine the (PSN).</td><td>Use DOT Label IAW the appropriate Hazard Class
 
</td></tr>
</table>

<table>
<tr><td colspan="3">If waste is Characterized as <u>Special</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Special Waste Spent Absorbent
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a suitable <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.
• If absorbent is saturated with liquid allow for sufficient head space IAW the EWMP.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

ADHESIVES AND SEALANTS

General types of Adhesives (not including aerosols)



General Information

Adhesives (glue) and sealants are used for fastening and assembly for a wide range of equipment and devices made with wood, plastic and metal substrates. Many maintenance and construction activities rely on bonding methods including thermal joining, mechanical fastening, and adhesive bonding to ensure complete and competent repairs. Adhesives are made of specialized chemicals and may be toxic, flammable, reactive or a combination of all three and must be handled, or disposed of, properly.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates? (Most adhesives and Sealants are Type I Shelf Life items; ensure use by shelf-life date.)

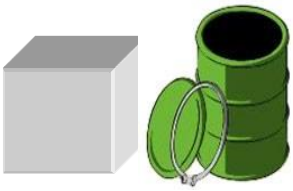
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, is a waste and must be characterized.
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the Adhesive or Sealant is hazardous (RCRA) or non-hazardous (Non-RCRA).
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

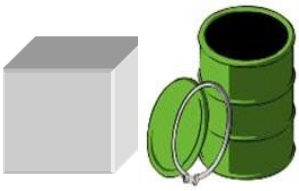
Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel.
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,

OSHA GHS Labels

<table>
<tr><th colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</th></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Adhesives, (add Waste Code)
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Most Adhesives are flammable. Store them in a well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.

DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Ensure the container is properly bonded and grounded.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the outside container with “UN1133 Adhesives / 3 / I” and attach a hazard class 3 label. ERG 128</td><td> 
</td></tr>
</table>

<table>
<tr><th colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</th></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Waste Adhesives
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a suitable <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

AEROSOL CANS

Pressurized Lubricants, Adhesives, Cleaners, Solvents and Paints

General Information

Aerosol cans can deliver a wide range of chemicals, utilizing propellants to expel the contents from the container. Aerosol cans must be disposed of according to their species type, which will affect the way it's managed.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates? (Most Aerosols are Type I Shelf Life items; ensure use by shelf-life date.)
5. Is the HM nozzle serviceable and is there sufficient propellant?

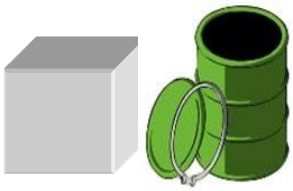
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop,
- **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, is a waste and must be characterized,
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the waste aerosol is hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

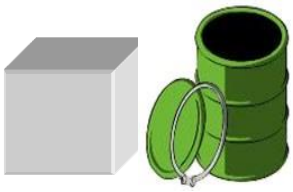
Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

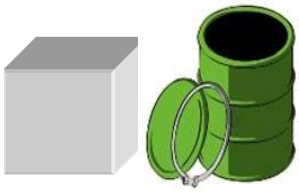
OSHA GHS Labels

If waste is Characterized as a **Hazardous** waste complete the following:

Label Waste RCRA Solvent and Adhesive Labeling Requirement	Contents: **Hazardous Waste- Aerosols (Add Hazard Characteristic i.e. D001 for Flammable or Corrosive D002)** Accumulation Start Date: **Apply label and date when the container is full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Store using segregation precautions for material listed in SDS	
Step 1: Check CSA	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: Select Container	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. .DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: Add Waste	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: Accumulate	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	Basic Description for Shipping: Mark the container with " UN1950 / Waste Aerosols, Flammable, n.o.s. (Type) / 2.1/" and attach a hazard class 2.1 label. ERG 126 OR Mark the container with " UN1950 / Waste Aerosols, Corrosive, n.o.s. (Type) / 2.2, 8 attach a hazard class 2.2 label. ERG 126	

<table>
<tr><td colspan="3">If the waste is paint related it's <u>Universal Waste</u> complete the following:</td></tr>
<tr><td>Universal Waste
Paint
Labeling Requirement</td><td><u>Contents:</u>
Paint and Paint Related Material
<u>Accumulation Start Date:</u>
<u>Apply label and date when the first Aerosol Paint Can enters the container</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA). Store using segregation precautions for material listed in the SDS.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>Basic Description for Shipping:
Mark the container with " UN1950 / Universal Waste Aerosols, Flammable, n.o.s. (Paint or Paint Related) / 2.1" and attach a hazard class 2.1 label.
ERG 126</td><td> 
</td></tr>
</table>

If waste is Characterized as **<u>Non-Hazardous</u>** waste complete the following:

Mark the container	In a contrasting color, mark or stencil the container with its contents.	
Non-RCRA Labeling Requirement	<u>Contents:</u> **Non-Hazardous Waste Aerosols** <u>DOT PSN for Shipping:</u> Aerosols, non-flammable	
Storage Requirement Step	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Store using segregation precautions for material listed in the SDS	
Step 1: **Check CSA**	**Check the Container Storage Area (CSA) to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a suitable **<u>fiberboard box</u>** or a **<u>1-gallon or greater removable head metal or plastic container</u>** in serviceable condition. DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	Basic Description for Shipping: Mark the container with "**UN1950 /Aerosols, non-flammable / 2.2** attach a class 2.2 label. ERG 126	

CLEANER, LUBRICANT, PRESERVATIVE (CLP)

General Information

CLP is widely used throughout the TMD for both personal and crew-served weapons cleaning and for its lubricating and preservative properties. Unlike conventional oils and lubricants; CLP contains chemicals which render it hazardous (Toxic) for disposal.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

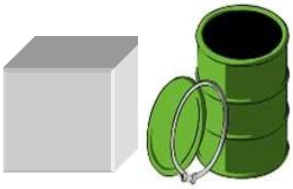
1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates? (Most lubricants are Type II Shelf Life items; ensure you rotate the stock.)

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, it's a hazardous waste,
- CLP is a <u>hazardous (RCRA)</u> waste,
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.
- **For Breakfree CLP manufactured before 1994**: Contact the RCRA WM or RES for guidance,
- **Manage CLP-contaminated rags according to the guidance in Waste Fact Sheet Rags (WFS-22).**

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Toxic Liquid, D006
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA). Store and segregate CLP IAW the SDS.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Allow for sufficient head space for liquids IAW the EWMP.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the containers with “UN2810 / Toxic Liquid, Organic, N.O.S. / 6.1 /III” and attach a hazard class 6.1 label. ERG 153</td><td> 
</td></tr>
</table>

DIESEL STARTING FLUID CYLINDERS

General Information

Diesel Starting Fluid Cylinders used in moderation on engines which do not employ glow plug technology and older OTR diesels is a standard procedure for starting diesel engines in moderately cold conditions - from around 35 degrees down to around 10 degrees F. These cylinders contain Ethyl Ether, a highly flammable gas and inherently subject to leaking / venting when taken out of service.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

- Is the HM in a serviceable container and marked or labeled?
- Is the HM container free of leaks?
- Is the HM still usable for its intended purpose?
- Is the HM within shelf-life dates?
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is a hazardous (RCRA) waste.
- ***Caution: Diesel Starting Fluid Cylinders contain extremely flammable gas!*** An inherent risk with all gas cylinders is leaking valves. Ethyl Ether (Ether) has an unmistakable sweet ethereal odor, use extreme caution if an odor is present. When handling Diesel Starting Fluid Cylinders take precautions to keep away from heat, sparks, and open flames,
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
- Avoid breathing vapors.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Waste Compressed Gas Flammable (Ethyl Ether) D001
<u>Accumulation Start Date:</u>
Apply label and date when the container is placed in storage device or building.</td><td> 
</td></tr>
<tr><td>Storage Requirement Step 1:</td><td>Ether cylinders are extremely flammable. Store waste cylinders awaiting turn-in in a well-ventilated storage device or an approved fire rated Flammable Storage Building.
DO NOT store cylinders in paper, cardboard or fiberboard containers or metal or plastic drums.</td><td>  </td></tr>
<tr><td>Step 2:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Secure cylinders with a chain to keep from tipping.</td></tr>
<tr><td>Step 3:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the outside container with UN1954 /WASTE Compressed Gas, Flammable (Ethyl Ether) / 2.1 and attach a hazard class 2.1 label.</td><td> 
</td></tr>
</table>

DECONTAMINATING AGENT, DS2

General Information

Decontaminating Agent, DS2 (Diethylene Triamine) is no longer used in military applications and is a hazardous (RCRA) waste. DS2 may be discovered in old military storage areas or obsolete vehicle applications.

- **DISCARD:** The material is not usable or cannot be restocked, this is a hazardous (RCRA) waste and must be turned in immediately,
- To request lab analysis or dispose of waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DS2 is **highly corrosive** to metals and **reacts violently** with oxidizing agents, such as Super Tropical Bleach,
- DS2 is combustible, with a flash point of 168°F (76°C). **If ignited, it burns violently and creates a lethal vapor hazard**,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Avoid breathing vapors,
- Avoid Contact with water or oxidizers.

OSHA

GHS Labels

DS2 is a **<u>Hazardous</u>** waste complete the following:

Label Waste

RCRA

Labeling Requirement

<u>Contents:</u>

Hazardous Waste- Corrosive, Liquid N.O.S. D002

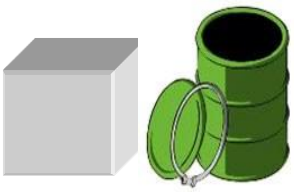
<u>Accumulation Start Date:</u>

Apply label and date when the container is <u>full</u>

Storage Requirement Steps

Store waste awaiting turn-in in a **Container Storage Area (CSA).**

Store DS2 containers a well ventilated area.

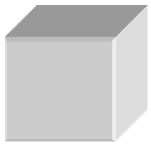
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents or bulges.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container, • Allow for sufficient head space IAW the EWMP.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with "**UN1760 /Corrosive, Liquid N.O.S. (Diethylene Triamine) / 8 / II**" and attach a hazard class 8 label. ERG 154	

FIRE EXTINGUISHERS

CO_2, Dry Chemical Fire Extinguishers and Loaded Stream

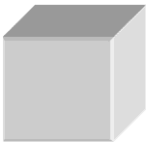
General Information 	Fire extinguishers vary in contents depending on their rating and application. Various types such as: Multi-Purpose, ABC Dry Chemical Fire Extinguishing Agents, Pressurized and Non-pressurized, Gas and liquids, for example are available for specific applications. **Determine if materials are usable/serviceable for restocking / re-distribution**. Determine if a usable hazardous material (HM) can be re-used by considering the following: 1. Is the Fire Extinguisher serviceable? 2. Is the Fire Extinguisher container free of leaks? 3. Is the Fire Extinguisher still usable for its intended purpose? 4. Is the Fire Extinguisher within shelf-life dates? • **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop. • **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, **non-military** fire extinguishers are turned into the Recycle Facility. Contact the Recycle Manager 512-782-6838 for guidance • Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES. **Precautions:** • DO NOT handle waste unless you have been trained or are supervised by trained personnel. • DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
OSHA GHS Labels	

<table>
<tr><td colspan="3">CO_2, Dry Chemical Fire Extinguishers and Loaded Stream Fire Extinguishers are not hazardous waste but are regulated by DOT</td></tr>
<tr><td colspan="3">The Fire Extinguishers listed above may have their contents under high pressure, which could have serious consequences during transportation. Fire Extinguishers must meet DOT guidelines to be transported on public highways.</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store Fire Extinguishers awaiting turn-in in a Container Storage Area (CSA).</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 3.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> for small cylinders

For larger cylinders, use a DOT approved <u>wooden box</u> in good condition and secure cylinders with DOT approved inner packing.
.</td><td> 
  </td></tr>
<tr><td>Step 3:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
• Accumulate waste in accordance with its type and take to the Recycle Facility for disposal. Contact the Recycle Manager 512-782-6838 for guidance.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the outside container with “UN1044 /Fire Extinguishers / 2.2 / ” and attach a hazard class 2.2 label. ERG 126</td><td> 
</td></tr>
</table>

Military Specific Fire Extinguishers

Fire Extinguishers, which are part of military vehicles and equipment and have a national stock number (NSN) must be turned in to the USP&FO, due to accountability issues. The Fire Extinguishers listed above may have their contents under high pressure, which could have serious consequences during transportation. Fire Extinguishers must meet DOT guidelines to be transported on public highways.

Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 3.	
Step 2: **Select Container**	Use a DOT approved **<u>fiberboard box</u>** for small cylinders For larger cylinders, use a DOT approved wooden box in good condition and secure cylinders with DOT approved inner packing. .	 
Step 3: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and turn in fire extinguishers to the USP&FO Warehouse.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with **"UN1044 /Fire Extinguishers / 2.2 / "** and attach a hazard class 2.2 label. ERG 126	

FUEL FILTERS (SPENT)

MOGAS, JP-8 and F-24

<table>
<tr><td> 
General Information</td><td>Fuel filters are generated by service operations throughout the TMD Federal and State maintenance activities / facilities. By their nature they collect contaminates from fuels that are strained through them for use by the engine. All Fuel Filters should be drained for a minimum of 72 hours to allow all free liquids to be removed.

• TO DISCARD: Spent Fuel Filters are not reusable or cannot be restocked, and are characterized as a Special Waste.
• To request lab analysis or dispose of waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.
Precautions:
• DO NOT use an air hose to blow remaining fuel from filter,
• DO NOT handle waste unless you have been trained or are supervised by trained personnel,
• DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.</td></tr>
<tr><td>OSHA
GHS Labels</td><td>  </td></tr>
<tr><td colspan="3">The waste is Characterized as <u>Special</u> waste complete the following:</td></tr>
<tr><td>Label Waste
Texas Labeling Requirement</td><td><u>Contents:</u>
Special Waste- Spent Fuel Filters</td><td>  </td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with “Spent Fuel Filters” and current date on the container.</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Fuel filters are combustible, store in a well ventilated area.</td></tr>
</table>

Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a **<u>55-gallon or greater removable head metal or plastic Drum</u>** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Drain free flowing liquid from filters for 24 hours or crush them with a filter crusher, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container, • Ground the barrel using an appropriate grounding strap or cable.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Not regulated by DOT	Not Required

GAS PATH CLEANER

Turbine Engine Cleaner

<table>
<tr><td>General Information</td><td>


Path Gas is a liquid, water miscible, solvent material for maintenance cleaning of jet and turbine engines. It improves engine performance by removing carbon and controls corrosion by the removal of salt buildup and sulfate residues. Empty Path Gas metal containers can be recycled in scrap metal.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

• RESTOCK: If the answer to all of the above is “Yes,” STOP — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
• Gas Path is characterized as a <u>non-hazardous (Non-RCRA)</u>.
• If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

• DO NOT handle waste unless you have been trained or are supervised by trained personnel,
• DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
• Avoid breathing fumes.
</td></tr>
<tr><td>OSHA
GHS Labels</td><td>

</td></tr>
<tr><td colspan="2">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td>In a contrasting color, mark or stencil the container with its contents.</td></tr>
</table>

Non-RCRA Labeling Requirement	Contents: **Non-Hazardous, Gas Path Cleaner**	
Step 1: **Check CSA**	**Check the Container Storage Area (CSA) to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a suitable **1-gallon or greater removable head metal or plastic container** in serviceable condition. DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Transportation Requirements	Not regulated by the Department of Transportation.	

HALON FIRE EXTINGUISHERS

Halon 1301 and 1211

General Information

Halon is a liquified compressed gas that stops the spread of fire by chemically disrupting combustion. It stops the fuel, the ignition and the oxygen from reacting together. There is **no** cost-effective means of safely and effectively disposing of halon that has already been produced, recycling and reusing is the best option for recovery.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **TO DISCARD:** If the answer to any of the questions is "**No**" contact the RCRA WM or your RES for guidance.
- The RCRA WM or RES will Process the container for turn-in through:

  Defense Depot Richmond Virginia (DDRV)

  SW0400 Cylinder Operations

  8000 Jefferson Davis Highway

  Richmond, VA 23297-5900

  (804) 279-5202

- **Precautions:**
- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Halon is an ozone depleting substance (ODS). **DO NOT release Halon to the environment.**

OSHA GHS Labels

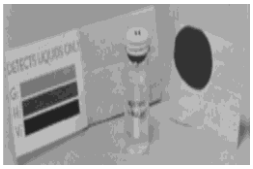
Halon Fire Extinguishers are Non hazardous waste but are regulated by **DOT** and the **Clean Air Act (CAA)**

Halon Fire Extinguishers have their contents under high pressure, which could have serious consequences during transportation. Fire Extinguishers must meet DOT guidelines to be transported on public highways.

Label Waste **RCRA** **Labeling Requirement**	Contents: **NON-RCRA Regulated Waste, Halon** **Apply label to waste container**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).**	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** for small cylinders For larger cylinders, use a DOT approved **wooden box** in good condition and secure cylinders with DOT approved inner packing. .	 
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with “**UN1044 /Bromotrifluoromethane / 2.2 /** ” and attach a hazard class 2.2 label. ERG 126	

IMPREGNATION SET-CHEMICAL

This applies **ONLY** to Chemical Impregnation Sets, NSN 4230-00-368-8145



General Information

The Chemical Impregnation Set, a trainer simulator, was developed to provide realistic training while avoiding unnecessary exposure to potentially carcinogenic reagents in the detector kit. The trainer contains 36 pre-engineered detector tickets and an instruction booklet. The pre-engineered detector tickets show color changes comparable to those seen when the detector kit is used in clean or contaminated environments.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

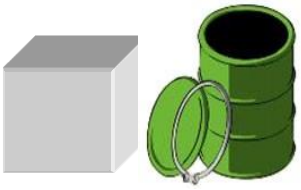
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, the Chemical Impregnation Set is **non-hazardous (Non-RCRA) waste.**
- To request lab analysis contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

If waste is Characterized as **Non-Hazardous** waste complete the following:

Mark the container	In a contrasting color, mark or stencil the container with its contents.	
Non-RCRA Labeling Requirement	Contents: **Non-Hazardous** Chemical Impregnation Set **Apply label to container**	
Step 1: **Check CSA**	**Check the Container Storage Area (CSA) to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a suitable **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** • Item must be demilitarized. Turn-in the entire kit and/or all remaining pieces of the kit to the **USP&FO Warehouse**, • Dispose of entire kit as a unit, **DO NOT SEPARATE**.	
Department of Transportation (DOT) **Requirements**	Not regulated by the Department of Transportation	

MRE HEATERS

Flameless Ration Heater used to heat Meals Ready to Eat (MRE)

General Information

The heating element found in the Meals Ready to Eat, are activated by adding water, which causes a chemical reaction with the magnesium compound producing heat. MRE heaters which have been **activated or used, no longer pose a hazard** because the potential for chemical reactions for heat or fire no longer exists. **Spent / activated MRE Heaters can be disposed of in municipal receptacle such as the facility dumpster when *cool*.** Spent or activated MRE Heaters can be disposed of in regular trash. Inactivated MRE Heaters are hazardous waste and must be disposed of properly

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

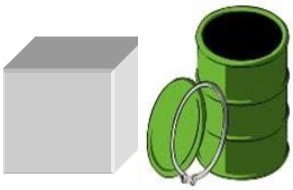
1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO
- **TO DISCARD:** If it's determined the material is not usable or cannot be restocked, **Unused / inactivated MRE Heaters** are a **hazardous waste**.
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- MRE Heaters contain water reactive magnesium—keep dry,
- Saturation with water produces heat and trace amounts of highly flammable hydrogen gas.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- MRE Heaters, D003
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Store unused MRE Heaters them in a dry and well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the outside container with “UN2813 /Waste Water-Reactive Solid, N.O.S. (Magnesium) / 4.3 / III” and attach a hazard class 4.3 label. ERG 138</td><td> 
</td></tr>
</table>

DETECTION KITS, M-229

General Information

The M-229 is used to replace the consumable materials for sustaining the operation of the M43 detector unit for the M8 automatic chemical agent alarm. Refer to TM 43-0001-26-1 for further guidance.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO
- **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is a **hazardous waste**.
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Kits should be turned in "as is." DO NOT separate the kits into individual components for turn in.

OSHA GHS Labels

If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:

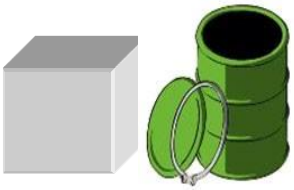
Label Waste RCRA Labeling Requirement

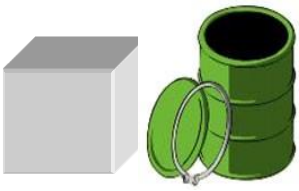
<u>Contents:</u>

Hazardous Waste- Detection Kit, D003

<u>Accumulation Start Date:</u>

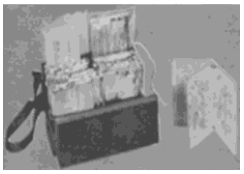
Apply label and date when the container is <u>full</u>

Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Silver Nitrate is an **oxidizer.** DO NOT store with other flammables.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with **"UN1493 /Silver Nitrate / 5.1 / II"** and attach a hazard class 5.1 label. ERG 140 ***Note: If the shipment contains over 1 lb of Silver Nitrate, mark the container as "RQ, Silver Nitrate."***	

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Name of Waste
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a suitable <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.
• If absorbent is saturated with liquid allow for sufficient head space IAW the EWMP.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

DETECTOR KITS, M-256 & M-256A1

NSN 6665-01-133-4964, 6665-01-133-8399



General Information

The M-256 & M-256A1 trainer are used to detect and identify blood, blister and nerve agents present and to monitor decontamination effectiveness. These Items must be demilitarized. Turn-in the entire kit and/or all remaining pieces of the kit to the USP&FO Warehouse. Turn-in entire kit as a unit and separate kits by NSN.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

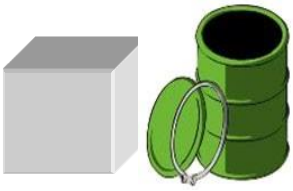
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO.
- **DISCARD:** If the material is not usable or cannot be restocked, it's a **hazardous waste**.
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE).
- Always wash skin with soap and water after handling waste.

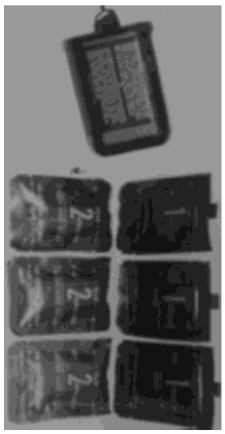
OSHA GHS Labels

If waste is Characterized as a **Hazardous** waste complete the following:

Label Waste **RCRA** **Labeling Requirement**	Contents: **Hazardous Waste- Waste Flammable Liquid, D001** Accumulation Start Date: **Apply label and date when the container is full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** DO NOT store kits near oxidizers (bleach), corrosives, or heat sources and store in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container. • If absorbent is saturated with liquid allow for sufficient head space IAW the EWMP.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with **"UN1992 / Waste Flammable Liquid, Toxic, N.O.S. (Methanol, Mercuric Cyanide) / 3 / II"** and attach hazard class 3, 6.1 labels (position as shown). ERG 131	

DECONTAMINATION KITS

M-280, M-258 & M-258A1



General Information

The M-280, M-258 & M-258A1 trainer are used to decontaminate personal equipment after the deployment of blood, blister and nerve agents present and ensure decontamination effectiveness. These Items must be demilitarized, turn-in the **entire** kit and/or all remaining pieces of the kit to the USP&FO Warehouse.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO
- **DISCARD:** If the material is not usable or cannot be restocked, it's a **hazardous waste**.

If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

If waste is Characterized as a **Hazardous** waste complete the following:

Label Waste RCRA Labeling Requirement

Contents:

Hazardous Waste- DECON KIT, D001

Accumulation Start Date:

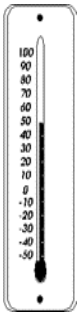
Apply label and date when the container is full

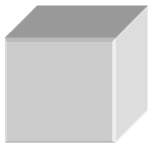
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA):** • Decontamination Kits contain flammable material, store them in a well ventilated area. DO NOT store kits near oxidizers (bleach), corrosives, or heat sources.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** in serviceable condition. . DO NOT use containers in poor condition.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with "**Flammable Liquid, Corrosive, N.O.S. (UN2924 / Ethanol, Sodium Benzenesulfonchloramine) / 3 / II**" and attach a hazard class 3 label. ERG 132	

MERCURY THERMOSTATS AND MERCURY CONTAINING EQUIPMENT (MCE)

MCE includes thermostats, barometers, manometers, temperature and pressure gauges, mercury switches, and various medical devices.

<table>
<tr>
<td>General Information
 

  </td>
<td>Older thermostats used in TMD facilities High Voltage Air Conditioning (HVAC) and specific military equipment, have mercury components which enable temperature adjustments or readings. The mercury components are hazardous (Universal Waste) and must be carefully handled to prevent breakage or spills.
• Mercury Thermostats and MCE CANNOT be turned in for restocking.
• TO DISCARD: The material is not usable or cannot be restocked, it’s a waste and must be managed as Universal Waste (UW).
• The material is a Universal (hazardous) waste to request lab analysis or dispose of waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.
• For spills, contact the RCRA Waste Manager (WM) at (512) 782-5382 or request assistance from your RES.
Precautions:
• DO NOT handle waste unless you have been trained or are supervised by trained personnel.
• DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
• If a thermostat breaks or any large release of mercury occurs DO NOT attempt to clean it up on your own, Contact RCRA WM or RES for clean-up guidance.</td>
</tr>
<tr>
<td>OSHA GHS Labels</td>
<td>  </td>
</tr>
<tr>
<td colspan="2">This is <u>Universal</u> waste complete the following:</td>
</tr>
<tr>
<td>Label Waste RCRA Labeling Requirement</td>
<td><u>Contents:</u>
Universal Waste- Mark with “Mercury Thermostats” or “Mercury Containing Equipment”
<u>Accumulation Start Date:</u>
Apply label and mark accumulation date when the first item enters the container.</td>
<td> 
</td>
</tr>
</table>

Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Thermostats and Mercury Containing Equipment are sensitive items and must be handled with great care. Store them carefully in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** in serviceable condition. . DO NOT use containers in poor condition.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Universal Waste (UW) may only be stored for one (1) year unless an extension is authorized by the RCRA WM or RES. Once the first UW item is place in the storage container, it must be disposed of before the end of 365 day limit. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with "**UN3082 / Environmentally Hazardous Substance (Mercury) / 9 / III**" ERG 171	

LATEX PAINT AND PRIMER

Includes Latex or other Non-Flammable, Water-Based, or Non-Metal Bearing Coatings

Latex-based paint is a general term used for water-based emulsion paints. It is a stable emulsion of polymers and pigment in water and is non-toxic and has less of an odor than other paints. Water is used solely as a solvent to clean-up latex paint and primers. Paint brushes, rollers and other devices used exclusively to apply latex paint will be considered non-hazardous as well and may be disposed of in municipal waste.

General Information

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

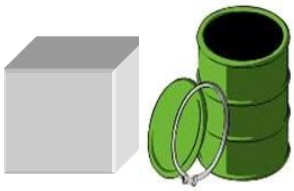
- Is the HM in a serviceable container and marked or labeled?
- Is the HM container free of leaks?
- Is the HM still usable for its intended purpose?
- Is the HM within shelf-life dates? (Most paints are Shelf Life items; ensure use by Shelf-life date.)
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.

- **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is Non-hazardous waste.
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.
- This Waste Fact Sheet (WFS) is **ONLY for Latex** or other non-flammable, water-based, or non-metal bearing coatings. For all other paint and paint related waste, refer to **WFS-18 Paint and Paint Related Waste**.
- Dispose of empty dry latex cans in municipal waste.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel.
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

<table>
<tr><td colspan="3">Latex waste is Characterized as a <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Waste- Latex Paint
<u>Accumulation Start Date:</u>
Not applicable</td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Store latex paint wastes in a cool and well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.
• While latex products are not flammable, they can ferment and pressurize the container if exposed to high temperatures, allow for sufficient head space IAW the EWMP.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Not applicable</td><td>Not Required</td></tr>
</table>

Paint and Paint Related Waste (P&PRW)

General Information

In Texas; P&PRW is used or unused paint, spent solvents used in painting for example, combinations of thinner and paint, lacquer, or varnish, Personal Protective Equipment (PPE), contaminated rags, gloves, and debris resulting from painting operations. Coating waste paint, overspray, overrun paints, paint filters, paint booth stripping materials, paint sludge's from water-wash curtains, cleanup residues from spills of paint excluding cleanup residues from a spill are managed as P&PRW. Cleanup residues from painting and paint-removal activities; and other paint-related wastes generated as a result of the removal of paint such as blast media or high pressure blast residue are managed as P&PRW, a Universal Waste.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates? (Most paints are Type I Shelf Life items; ensure use by shelf-life date.)

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **TO DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is a **Universal Waste**.
- If you do not know if the material is a Universal Waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

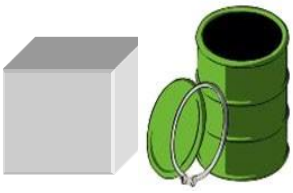
Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel.
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

For Paint Stripper use-->

This waste is Characterized as **Universal Waste** complete the following:

Label Waste **RCRA** **Labeling Requirement**	Contents: **Universal Waste- Paint and Paint Related Material** Accumulation Start Date: Paint and Paint Related Material must be labeled as Universal Waste and marked with the accumulation date when the first waste is added. Can only be accumulated for no longer than one year before disposal	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Store Universal Waste in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Universal Waste (UW) may only be stored for one (1) year unless an extension is authorized by the RCRA WM or RES. Once the first UW item is place in the storage container, it must be disposed of before the end of 365 day limit. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. See Paint Waste Chart	See Paint Waste Chart

PAINT RELATED SHIPPING TABLE

Texas law requires “Paint and Paint Related Waste” be added to the DOT Shipping Description when shipping Paint and Paint Related **Universal Waste**.*

Product Name	Hazard	Department of Transportation Proper Shipping Name (PSN)
Paint (Aerosol)		**UN1950 Aerosols, Flammable (Paint and Paint Related Waste)* / 2.1 / / II** Hazard Class 2.1 Label **ERG 126**
Paint and Primer (Non-Latex)		**UN1263 / Paint (Paint and Paint Related Waste)* / 3 / II** Hazard Class 3 Label **ERG 128**
Paint Booth Filters (Used)		**UN3178 / Flammable, Solid, Inorganic N.O.S., Filters (Paint and Paint Related Waste)* / 4.1 / II** Hazard Class 4.1 Label **ERG 133**
Paint Stripper		**UN3066 / Paint Related Material (Paint and Paint Related Waste)* / 8 / II** Hazard Class 8 Label **ERG 153**
Paint Remover		**UN1263 / Paint Related Material (Paint and Paint Related Waste)* / 3 / II** Hazard Class 3 Label **ERG 128**
Paint Thinner		**UN1263 / Paint Related Material (Paint and Paint Related Waste)* / 3 / II** Hazard Class 3 Label **ERG 128**

PCB CONTAMINATED WASTE

All Types of Polychlorinated Biphenyls (PCBs) Contaminated Soil and Equipment

General Information

Polychlorinated biphenyls (PCBs) are a group of manmade chemicals. They are oily liquids or solids, clear to yellow in color, with no smell or taste. PCBs are very stable mixtures that are resistant to extreme temperature and pressure. PCBs were used widely in electrical equipment like capacitors and transformers. They also were used in hydraulic fluids, heat transfer fluids, lubricants, and plasticizers. • PCB contaminated soil and equipment may or may not be regulated as TSCA waste depending on the **overall concentration** of PCBs. Contact the RCRA WM or RES for assistance.

- **DISCARD:** PCB contaminated waste cannot be restocked or reused, the material is not usable, it's a potential TSCA (Toxic Substance Control Act) waste and must be characterized.
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the waste is hazardous (RCRA) or non-hazardous (Non-RCRA).
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel.
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

If waste is Characterized as a **TSCA** waste complete the following:

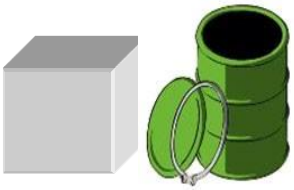
Label Waste TSCA Labeling Requirement

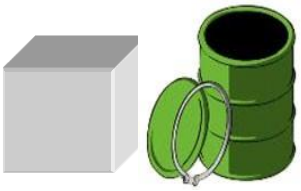
Contents:

NON-RCRA Regulated- PCB's,

Accumulation Start Date:

Apply label and stencil the date on the container

Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Store PCB contaminated waste where it cannot leak into the environment.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** for solids and DOT approved **1-gallon or greater removable head metal or plastic container** in serviceable condition for liquids. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. TSCA waste can only be stored / accumulated for 1 year. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with: For liquid PCBS use: **UN2315 / Polychlorinated biphenyls, liquid /9/II ERG 171** For Solid PCBS use: **UN3432 / Polychlorinated biphenyls, Solid /9/II ERG 171**	

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Name of Waste i.e. light ballast, transformers, capacitor’s ect.
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a suitable <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

WASTE PESTICIDES

Including containers, residue, waste or unused products

General Information

Refer to the Texas Army National Guard statewide Integrated Pest Management Plan (IPMP) before using or applying pesticides. Questions should be directed to the State Pest Management Coordinator at (512) 782-6037. Pesticide applicators must be certified and licensed in Texas. Refer to the Integrated Pest Management Plan and Natural Resource specialists to request assistance and get guidance on allowable self-help items such as wasp spray.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates? (Most adhesives are Type I Shelf Life items; ensure use by shelf-life date.)

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, it's a Universal Waste,

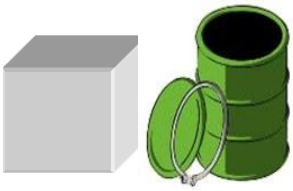
If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Waste Pesticides are extremely toxic, handle with care.

OSHA GHS Labels

If waste is Characterized as a **<u>Universal</u>** waste complete the following:

Label Waste **RCRA** **Labeling Requirement**	Contents: **Universal Waste- Waste Pesticides** Accumulation Start Date: Waste Pesticides must be labeled as Universal Waste and marked with the accumulation date when the first waste is added. Waste Pesticides can be accumulated for no longer than one year before disposal. See EWMP for guidance	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Most Pesticides are Flammable store them in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container,	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Universal Waste (UW) may only be stored for one (1) year unless an extension is authorized by the RCRA WM or RES. Once the first UW item is place in the storage container, it must be disposed of before the end of 365 day limit. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact the RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. See Waste Pesticides Shipping Table below	 Hazard Class Labels

WASTE PESTICIDES SHIPPING TABLE

Product Name	Hazard	Department of Transportation Proper Shipping Name (PSN)
Waste Pesticides liquid		**UN3021 Waste Pesticides, liquid, flammable, toxic, flash point less than 23 degrees C, (Technical Name) / 3 / / I** Hazard Class 3 and 6.1 Label **ERG 131**
Waste Pesticides liquid		**UN2903 Waste Pesticides, liquid, toxic flammable N.O.S., flash point not less than 23 degrees C, (Technical Name) / 6.1, 3 / I** Hazard Class 3 and 6.1 Label **ERG 131**
Waste Pesticides liquid		**UN2902 Waste Pesticides, liquid, toxic N.O.S. (Technical Name) / 6.1 / I** Hazard Class 6.1 Label **ERG 151**
Waste Pesticides Solid		**UN2588 Waste Pesticides, solid, toxic N.O.S. (Technical Name) / 6.1 / II** Hazard Class 1 Label **ERG 151**

POL CONTAMINATED RAGS

POL rags contaminated with motor, gear, cutting, and penetrating oils; hydraulic and brake fluids; or grease and other lubricants associated with maintenance operations.

General Information

Rags, which means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material, are used part of the cleaning process. These rags are then either cleaned and reused (reusable rags) or sent for disposal (disposable rags). Currently three types of rags are in use; Red Laundered, Blue POL Extracted and Laundered, White disposable.

The "**Red Rag**" program is comprised of a vendor who provides a closed-loop service which launders rags used in cleaning, and maintenance operations and returns cleaned serviceable rags. (rags may or may not be red)

The "**Blue Rag**" program is comprised of a vendor or on-site operation who uses a centrifuge to extract POL from pre-saturated wipes, rags, and other materials used in painting, cleaning, maintenance operations and returns cleaned serviceable rags. (rags may or may not be blue)

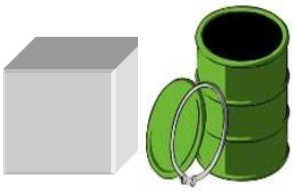
- **Red and Blue Rags** are both returned for reuse.

The "**White Rag**" program utilizes bundle rags obtained thru the supply chain and are disposed by a Waste Contractor and are managed as described below.

- **TO DISCARD:** Spent **White Rags** are not usable or cannot be restocked, and is a waste.
- Rags containing or contaminated with used oil are regulated under the used oil rules. They are or are **not a hazardous waste**,
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- DO NOT add POL contaminated rags with oxidizers (i.e., Calcium Hypochlorite) or rags contaminated with corrosive chemicals (pH on SDS less than 2 and greater than 10.5),
- DO NOT add rags contaminated with paint strippers or removers.

<table>
<tr><td>OSHA
GHS Label</td><td colspan="2">  </td></tr>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste follow the guidance in WFS- 22, for Excluded Solvent Contaminated Rags</td></tr>
<tr><td colspan="3">If waste is Characterized as a <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Waste- Spent Rags
<u>Accumulation Start Date:</u>
Mark container with date and weight when full</td><td>  </td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
POL contaminated rags are combustible store in a well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>fiberboard box</u> or a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
.DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Some facilities may establish a SAP to accumulate the rags. Otherwise, facilities should establish a CSA. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Not Required</td><td>Not Required</td></tr>
</table>

EXCLUDED SOLVENT CONTAMINATED RAGS

General Information

Rags, which means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material, are used part of the cleaning process. These rags are then either cleaned and reused (reusable rags) or sent for disposal (disposable rags).

Excluded -solvent contaminated rags or wipes; contain one or more of the F001 through F005 solvents listed in 40 Code of Federal Regulations, the corresponding P or U-listed solvents, or exhibits only the hazardous waste characteristic of ignitability. For example “F” listed solvents like; acetone, toluene, and methyl ethyl ketone are used on rags and wipes in paint shops for their solvent properties. “F” and “P / U Listed” solvents are also commonly used for maintenance activities. There are too many to list in this waste fact sheet, contact your Regional Environmental Specialist to see if the solvents your using are “Excluded”

Excluded solvent-contaminated rags or wipes **are hazardous** and require a higher standard of management than POL contaminated rags or wipes:

- ✓ Must not contain free liquids when stored,
- ✓ Must be marked “Excluded solvent-contaminated wipes,”

The “**Red Rag**” program is comprised of a vendor who provides a closed-loop service which launders used in painting, cleaning, and maintenance operations and returns cleaned serviceable rags. The name and address of the laundry must be documented and vendor must meet regulations under sections 301 (effluent discharge restrictions) and 402 (permitting requirements) or section 307 (indirect discharge to a POTW) of the Clean Water Act. **Return Rags to the vendor *if* using Red Rag Program.**

The “**White Rag**” program utilizes bundle rags obtained thru the supply chain and are disposed by an approved Waste Contractor and are managed as described below.

- **DISCARD:** The material is not usable or cannot be restocked, is a waste and must be characterized,
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the rags are hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request lab analysis or dispose of waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

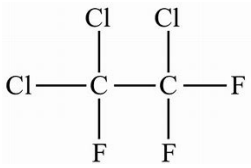
Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA **GHS Labels**		
If waste is Characterized as **<u>Non-Hazardous</u>** waste refer to **WFS-21**		
If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:		
Label Waste **RCRA** **Labeling Requirement**	<u>Contents:</u> **Hazardous Waste- Excluded solvent-contaminated wipes** <u>Accumulation Start Date:</u> **Apply label and date when the container is <u>full</u>**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Excluded Solvents are Flammable store them in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **<u>1-gallon or greater removable head metal or plastic container</u>** in serviceable condition. .DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. **UN 1325, Flammable Solids, organic N.O.S. , 4.1, II, ERG 133**	

REFRIGERANT (FREON)

All Types



General Information

A refrigerant is a substance or mixture, usually a fluid, used in High Voltage Air Condition (HVAC) refrigeration applications. Refrigerants undergo phase transitions from a liquid to a gas and back again. Many working fluids have been used for such purposes. Fluorocarbons, and chlorofluorocarbons, are commonplace, but they are being phased out because of their ozone depletion effects. Empty (at atmospheric pressure) refrigerant cylinders may be recycled in scrap metal.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?
4. Is the HM within shelf-life dates?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, it's a waste, refrigerants are regulated by the **Clean Air Act,** Section 608 in 40 CFR Part 82, This is a **TSCA** waste,
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Liquid refrigerant contact can cause severe irritation and frostbite,
- Vapors are heavier than air and can displace oxygen causing difficulty breathing or suffocation.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Non-RCRA TSCA</u> waste complete the following:</td></tr>
<tr><td>Label Waste
TSCA
Labeling Requirement</td><td><u>Contents:</u>
Non-RCRA Regulated Waste- Waste Refrigerant
<u>Accumulation Start Date:</u>
Apply label and mark the container with the date.</td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Most refrigerants are asphyxiates store them in a well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use DOT approved refrigerant cylinders that are in good condition. New / unused refrigerant cylinders have one dispensing valves and are <u>not</u> designed for reuse. Cylinders for recovering refrigerant have two valves. Do not attempt to recover refrigerant into a single valve cylinder.
.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Refrigerant recovery should only be conducted by trained, qualified and licensed technicians.
• Wear the proper Personal Protective Equipment listed on the SDS.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal. TCSA waste may be accumulated for up to 1 year</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
“UN1078 /Refrigerant Gas, N.O.S. (Trade Name) / 2.2” and attach a hazard class 2.2 label. ERG 126</td><td>Hazard Class Label
 
</td></tr>
</table>

Refrigerant Recovery Equipment must be registered with the EPA. Registration forms are usually supplied with new equipment. You can also download the registration form at:

http://www.phaseoutfacts.org/App_Content/PhaseOutFacts/files/ContractorsTechnicians/recoveryform.pdf

SPENT SOLVENT FILTERS

Dry Cleaning Solvent, PD 680 I or II, Petroleum Distillates, Breakthrough, Harvest Gold, Citrus Based, Brake Kleen, & CLP

General Information

A solvent is a substance that dissolves a solute, resulting in a solution. A solvent is usually a liquid but can also be a solid, a gas, or a supercritical fluid. The quantity of solute that can dissolve in a specific volume of solvent varies with temperature. Common uses for organic solvents are in dry cleaning, as paint thinners, paint removers and glue and detergents. Filters are used to trap debris suspended in the solvent, when the filters are discarded they may be a hazardous waste

- **TO DISCARD:** Spent solvent filters are not reusable and cannot be restocked, it's a waste and must be characterized.
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the spent filters are hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Uncharacterized Wastes have the potential to be hazardous and should be managed as hazardous from the point of generation, until the analytical results indicate they are non-hazardous,
- Vapor from spent filters may be harmful.

OSHA GHS Labels

If waste is Characterized as a **Hazardous** waste complete the following:

Label Waste **RCRA** **Labeling Requirement**	Contents: **Hazardous Waste- Spent Solvent Filters,(***D001 Flammable or D002 Corrosive, depending on characterization***)** Accumulation Start Date: **Apply label and date when the container is full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Most solvents are flammable store them in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container, • Ground the barrel using an appropriate grounding strap or cable.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. (Example Only) "**UN3175, Solids containing flammable liquid N.O.S., PG II**" Hazard Class 4.1 label EGR 133 ***Note:*** *There are many types of solvents, you must characterize the solvent to correctly manage it. This may affect the correct Basic Description, contact the RCRA WM or RES for proper identification.*	Hazard Class Labels  (Example Only)

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Spent Filters
<u>Accumulation</u>
Mark the drum with the weight and date it’s placed in the CSA</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td><u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Ground the barrel using an appropriate grounding strap or cable.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

USED OIL

Petroleum-Based or Synthetic Lubricants

General Information

Used oil is **any** oil that has been refined from crude oil or any synthetic oil that has been used and as a result of such use is contaminated by physical or chemical impurities. Simply put, used oil is exactly what its name implies—any petroleum-based or synthetic oil that has been used. During normal use, impurities such as dirt, metal scrapings, water, or chemicals can get mixed in with the oil, so that in time the oil no longer performs well.

- **TO DISCARD:** Used Oil cannot be restocked, it's must be turned in as a recyclable material.
- If the Used Oil has been contaminated, request lab analysis by contacting the RCRA WM at (512) 782-5382 or request assistance from your RES.
- TXARNG collects used oil from all FMS, AASF, MATES, CSMS, and any other applicable unit that generates used oil. Units transporting used oil for collection at a servicing maintenance shop must:
  - ✓ Transport used oil in appropriate government vehicles only,
  - ✓ **NEVER** transport more than 55 gallons of used oil per vehicle.

Precautions:

- **DO NOT** handle Used Oil unless you have been trained or are supervised by trained personnel,
- **DO NOT** eat, drink, or smoke while handling Used Oil. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** contaminate used oil with hazardous waste or any other substance that may render the oil unrecyclable,
- **DO NOT** pour used oil onto the ground, into water or into the trash dumpster or use used oil for dust suppression,

- **DO NOT** accumulate near oxidizers, corrosives, or heat sources,
- Accumulate used oil in areas with secondary containment that is large enough to contain a catastrophic release of 110% of the largest container plus at least 12 inches of freeboard,
- Respond to releases of used oil immediately by stopping the release, containing the release, cleaning up and managing the used oil release,
- Report any spills to the RCRA WM, per the procedures specified in the **Spill Prevention Control and Countermeasures Plan** (SPCCP) or EWMP's Spill Reporting procedures and **complete and submit Spill Report**,
- Keep used oil containers covered and out of the weather.

OSHA **GHS Labels**		
For **USED OIL** complete the following:		
Label **USED OIL** **Labeling Requirement**	Contents: **USED OIL** Accumulation Start Date: **Mark date on container when Used Oil is first added**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Oil is combustible store it in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved Tote or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. For stationary Used Oil collection Totes and double walled tanks may be used. Ensure **SPCCP** considerations are met. DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the Used Oil and close the container, • Ground the barrel using an appropriate grounding strap or cable, • A closed top funnel may be used to close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Not Required	**Not Required**

OIL FILTERS (SPENT)

Petroleum-Based or Synthetic Lubricants

General Information

Oil Filters are used to trap debris suspended in the oil, when the filters are discarded they are a special waste. Spent oil filters may be used for BTU recovery, check with your vendor to see if they want them crushed or whole.

- **DISCARD:** Spent Oil Filters are not reusable or **cannot be restocked**, and are characterized as a **Special Waste**.
- If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT use an air hose to blow remaining oil from filter,
- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.

OSHA GHS Labels

Oil filters are Characterized as **<u>Special</u>** waste complete the following:

Label Waste

Texas Labeling Requirement

<u>Contents:</u>

Special Waste- Spent Oil Filters

Mark the container

In a contrasting color, mark or stencil the container with “Spent Oil Filters” and current date on the container.

Storage Requirement Steps

Store waste awaiting turn-in in a **Container Storage Area (CSA).**

Oil filters are combustible, store in a well ventilated area.

Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a **<u>55-gallon or greater removable head metal or plastic Drum</u>** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Drain free flowing liquid from filters for 24 hours or crush them with a filter crusher per collection requirements, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container, • Ground the barrel using an appropriate grounding strap or cable.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Not regulated by DOT	Not Required

GAS MASK CANISTERS/FILTERS

M-17, M-24, and M-25 Series Protective Mask Filters and C2A1/M40 Canisters

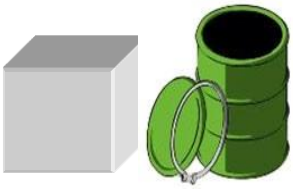
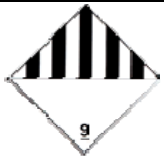
General Information

The gas mask uses a filter to protect the user from inhaling airborne pollutants and toxic gases. To filter out harmful chemicals, most gas mask filters are made with activated charcoal, or oxidized charcoal. When charcoal is activated with oxygen, it becomes ripped with tons of "sticky" holes in each molecular structure to trap contaminates. Trace amounts of Chromium and Silver metals are used in the construction of most military filters, which renders them a hazardous waste. Local demilitarization of canisters / filters is NOT authorized.

- **DISCARD:** Spent gas mask canisters / filters are not reusable or cannot be restocked, they are waste and must be disposed of as a Hazardous Waste.
- If possible use generator knowledge to characterize the waste; check product details and SDS to determine if the filter is hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Protective Mask Filters (M-17, M-24, and M-25) contain trace amounts of **chromium**,
- C-2A1 Canisters contain trace amounts of **silver** and are therefore hazardous waste,

OSHA **GHS Labels**		
If waste is Characterized as a **Hazardous** waste complete the following:		
Label Waste **RCRA** **Labeling Requirement**	Contents: **Hazardous Waste- Waste Filters (Waste Code)** Accumulation Start Date: **Apply label and date when the container is full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).**	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Pack in a **plastic bag** and use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container, • DO NOT accumulate more than fifty (50) filters/canisters at one time • Separate Mask Filters by NSN.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. **NA3077 /Hazardous Waste Solid, n.o.s. (Chromium or Silver) / 9 / III"** and attach a hazard class 9 label. ERG 171	Hazard Label 

ASBESTOS

Brake Shoes, Brake Lining Kits, Clutch Plates, Fire Suits, and Blankets

General Information

Asbestos containing material (ACM) by definition is any waste containing 1 percent or more asbestos. Friable asbestos waste contains more than 1 percent asbestos and can be crumbled or pulverized to powder under hand pressure. This Waste Fact Sheet does not apply to with asbestos abatement, construction debris, or any other type of asbestos-containing material (ACM).

This Waste Fact Sheet is written specifically for TMD maintenance and fire-fighting activities. Contact the RCRA WM or RES for additional assistance with construction or deconstruction ACM.

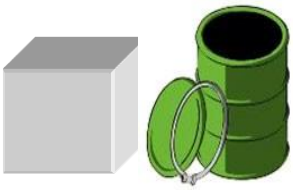
- **TO DISCARD:** The material is not reusable or cannot be restocked, it's a TSCA waste must be disposed of IAW federal regulations,
- If you do not know if the material is ACM containing request lab analysis or dispose of waste, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- **DO NOT** handle waste unless you have been trained or are supervised by trained personnel,
- **DO NOT** eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** handle asbestos in a manner that could create dust.
- Asbestos is an active carcinogen,
- Wet and double bag and the asbestos in plastic bags - then place the bag in the labeled container,
- Use a wet-bath collection method when removing suspected ACM containing parts such as a Brake Buggy or other similar device to arrest potential dust creation.

OSHA GHS Labels

Asbestos is Characterized as a **TSCA** waste complete the following:

Label Waste Non-RCRA (TSCA) Labeling Requirement	Contents: **Non RCRA Waste- Asbestos Containing Material** Accumulation Start Date: **Mark with date and weight when the container is full** Caution Label: **Asbestos, Hazardous, Do Not Disturb Without Proper Training and Equipment.** Additional Requirement Label each ACM shipping container with the Generator / Operator's name, work site address, and telephone number.	 
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).**	
Step 1: Check CSA	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: Select Container	Wet and Double bag the asbestos **or ACM** and place in DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: Add Waste	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: Accumulate	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal. TSCA waste **can only be stored for 1 year**.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark with "**RQ, NA2212 / Asbestos / 9 / III"** and attach a hazard class 9 label. ERG 171	Hazard Label 

RECYCLED ANTIFREEZE / COOLANT

General Information

An antifreeze is an additive which lowers the freezing point of a water-based liquid and increases its boiling point. An antifreeze mixture is used to achieve freezing-point depression for cold environments and also achieves boiling-point elevation to allow higher coolant temperature.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

- Is the HM in a serviceable container and marked or labeled?
- Is the HM container free of leaks?
- Is the HM still usable for its intended purpose?
- Is the HM within shelf-life dates? (Most antifreeze is a Shelf Life item; ensure use by shelf-life date.)
- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not spent and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop.
- **RECYCLE:** If any answers are **"No"** and the material must be turned in to a maintenance shop or authorized vendor for **recycling**,
- Vendors are available to provide closed-loop antifreeze services that include pick-up and delivery of antifreeze **at the facilities expense**.
- Keep all receipts and records of used antifreeze shipments. Receipts and records must include the following information:
  - ✓ Name and address of the generator and the recycling facility for off-site shipments,
  - ✓ The amount of used antifreeze shipped or recycled on-site,
  - ✓ Date of shipment or recycling.
- If the antifreeze is being turned-in to a vendor, shipping documents should be emailed or faxed (after each turn-in) to the Recycling Coordinator using the information provided in the EWMP.

Precautions:

- **DO NOT** handle waste unless you have been trained or are supervised by trained personnel,
- **DO NOT** eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** drain onto ground, into storm sewers or septic tanks.

<table>
<tr><td>OSHA
GHS Labels</td><td colspan="2">  </td></tr>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Used Antifreeze
<u>Accumulation:</u>
Mark the date on the container</td><td>  </td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
Ensure container is stored in adequate secondary containment. Collect like colored antifreeze in separate containers, do not mix.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a <u>D.O.T. approved 55-gallon non-removable head plastic or lined metal container</u> in good condition.
For stationary antifreeze collection Totes and double walled tanks may be used. Ensure SPCCP considerations are met.</td><td> 
   </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Used antifreeze will be transported by TMD personnel to the closest activity that recycles antifreeze, or turned-in to a vendor. Contact the Recycling Coordinator at (512) 782-6838, DSN 954-6838 for appropriate vendor information.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required.</td></tr>
</table>

ANTIFREEZE FILTERS

Filters generated from the recycling of antifreeze

General Information

Certain TMD facilities have the equipment and training to recycle antifreeze and recondition it to a technical specification. Part of the reconditioning involves filtering the antifreeze to remove debris introduced during the use / collection process. These filters have the potential to be hazardous waste.

- **DISCARD:** The filters are not usable or cannot be restocked, is a waste and must be characterized,
- Used antifreeze filters require laboratory testing to determine if they are hazardous or non-hazardous waste, as they may contain heavy metals such as lead, cadmium, and chromium in high enough levels to make it a regulated hazardous waste.
- While the material is being analyzed, containerize waste; obtain a **Pending Analysis** label from the RCRA WM or RES and complete with the following:
  - ✓ **"Used Antifreeze Filters."**
  - ✓ Date the material placed in container.
  - ✓ Date Sample was taken,

- To request laboratory sampling, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** allow filters to come in contact with ground, into storm sewers or septic tanks.

OSHA GHS Labels

If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:

Label Waste RCRA Labeling Requirement

<u>Contents:</u> **(add the characterization code)**

Hazardous Waste- Waste Antifreeze Filters,

<u>Accumulation Start Date:</u>

Apply label and date when the container is <u>full</u>

Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).**	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **1-gallon or greater removable head lined metal or plastic container** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the container with "**Hazardous Waste Solid, n.o.s. (Lead, Cadmium) / 9 / UN3077 / III"** and attach a hazard class 9 label. ERG 177.	Hazard Class Labels 

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Spent Antifreeze Filters
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

OFF-SPECIFCATION FUEL—MOGAS

General Information

Fuel that cannot be used for its intended purpose in equipment is called off-specification fuel and is not a hazardous waste. TMD may manage off-specification (Off-Spec) MOGAS as a hazardous material and ship it offsite, destined for a refinery to be recycled as a fuel. Procedures detailed below are for **MOGAS only**. (Refer to WFS-32 for Off-Specification Fuel-JP8)

- If the off spec fuel is being turned-in to a refinery for recycle, shipping documents should be emailed or faxed (after each turn-in) to the Recycling Coordinator at (512) 782-6838, DSN 954-6838.
- Off-spec MOGAS **may not be** transported by TMD personnel, but may be picked up by a qualified vendor. Contact the Recycling Coordinator at (512) 782-6838, DSN 954-6838 for appropriate vendor information.
- **TO DISCARD:** If the material is not usable or cannot be restocked, it's a Hazardous Waste and must be characterized.
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- **DO NOT** handle waste unless you have been trained or are supervised by trained personnel,
- **DO NOT** eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** contaminate off-spec MOGAS oil with hazardous waste or any other substance that may render it unrecyclable,
- Ensure that all metal containers used for the accumulation of ignitable waste are properly grounded,
- MOGAS is **Flammable**—DO NOT store with oxidizers, corrosives, or heat sources,
- Report any spills to the RCRA WM, per the procedures specified in the facilities SPCCP or EWMP's Spill Reporting procedures and **complete and submit a Spill Report**.

OSHA GHS Labels

If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:

Label Waste **RCRA** **Labeling Requirement**	Contents: **Hazardous Waste- Waste Gasoline, D001** Accumulation Start Date: **Apply label and date when the container is full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** MOGAS is Flammable store it in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **1-gallon or greater metal closed top drum** in serviceable condition. . DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS. • Open the container slowly, keeping your head and face clear of the opening. • Add the waste and close the container. • Ground the barrel using an appropriate grounding strap or cable. • A closed top funnel may be used to close the container.	
Step 4: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the container with the following: **"Waste UN1203/Gasoline/3/ II "** and attach a hazard class 3 label. ERG 128	Hazard Labels 

OFF-SPEC FUEL-DIESEL, JP-8, AND F24

Kerosene based fuels

General Information

Fuel that cannot be used for its intended purpose in equipment is called off-specification fuel and is not a hazardous waste. Check with your supporting **MATES or CSMS** to see if the fuel can be reconditioned and reused. If not:

- ✓ TMD may manage off-specification (Off-Spec) Diesel, JP-8 and F24 as a hazardous material and ship it offsite, destined for a refinery to be recycled as a fuel. Procedures detailed below are for **Diesel, JP-8 and F24 only**. (Refer to WFS-31 for Off-Specification MOGAS),
- ✓ Off-spec **Diesel, JP-8 and F24 may not be** transported by TMD personnel, but may be picked up by a qualified vendor. Contact the Recycling Coordinator at (512) 782-6838, DSN 954-6838 for appropriate vendor information and coordination,
- ✓ If the off spec fuel is being turned-in to a refinery for recycle, shipping documents should be emailed or faxed (after each turn-in) to the Recycling Coordinator at (512) 782-6838, DSN 954-6838.
- ✓ Off-spec diesel fuel will be labeled Special Waste.

- **TO DISCARD:** If the material is not usable or cannot be restocked it is Special Waste and must be characterized.

Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- **DO NOT** handle waste unless you have been trained or are supervised by trained personnel,
- **DO NOT** eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- **DO NOT** contaminate off-spec Diesel, JP-8 and F24 with hazardous waste or any other substance that may render it unrecyclable,
- Ensure that all metal containers used for the accumulation of ignitable waste are properly grounded,
- Diesel, JP-4, JP-8 and F24 is combustible and contain benzene—DO NOT store with oxidizers, corrosives, or heat sources,
- Report any spills to the RCRA WM, per the procedures specified in the facilities ISCP, SPCCP or EWMP's Spill Reporting procedures, **complete and submit a Spill Report**.

<table>
<tr><td>OSHA
GHS Labels</td><td colspan="2">  </td></tr>
<tr><td colspan="3">If waste is characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Off-Spec Fuel (D018)
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Most Diesel, JP-8 and F24 is combustible store it in a well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>55-gallon or greater removable head metal or plastic container</u> in serviceable condition. For stationary Used Oil collection Totes and double walled tanks may be used. Ensure SPCCP considerations are met.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Ground the barrel using an appropriate grounding strap or cable,
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the container with the following: “UN1863 /Fuel, Aviation, Turbine Engine / 3 / II” and attach a hazard class 3 label. ERG 128</td><td>Hazard Label
 
</td></tr>
</table>

SPENT BATTERIES

Spent: Alkaline, Lead Acid, Lithium, Magnesium, Mercury, Ni-Cad (dry), Ni-Cad (wet), Rechargeable Alkaline Batteries

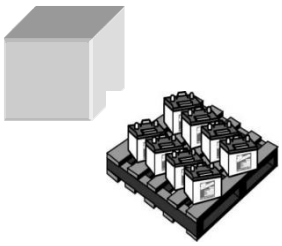
General Information

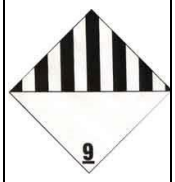
- **STOP HERE:** if you have **Lead-acid** batteries under contract to be recycled by the current battery supplier (Excide). Accumulate them in secondary containment. No marking is required if the batteries go to a recycler. **See "Stacking Procedures for Lead-Acid Batteries."**
- **RECYCLE:** Check to see if your facility has established battery recycle boxes or take them to the recycle center if feasible. Facility personnel may contact the RCRA WM to request Battery Recycle Boxes.
- Spent batteries **CANNOT** be turned in for restocking.
- **TO DISCARD:** The material is not usable or cannot be restocked, Spent Batteries are **Universal Waste.**
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the batteries are hazardous.
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

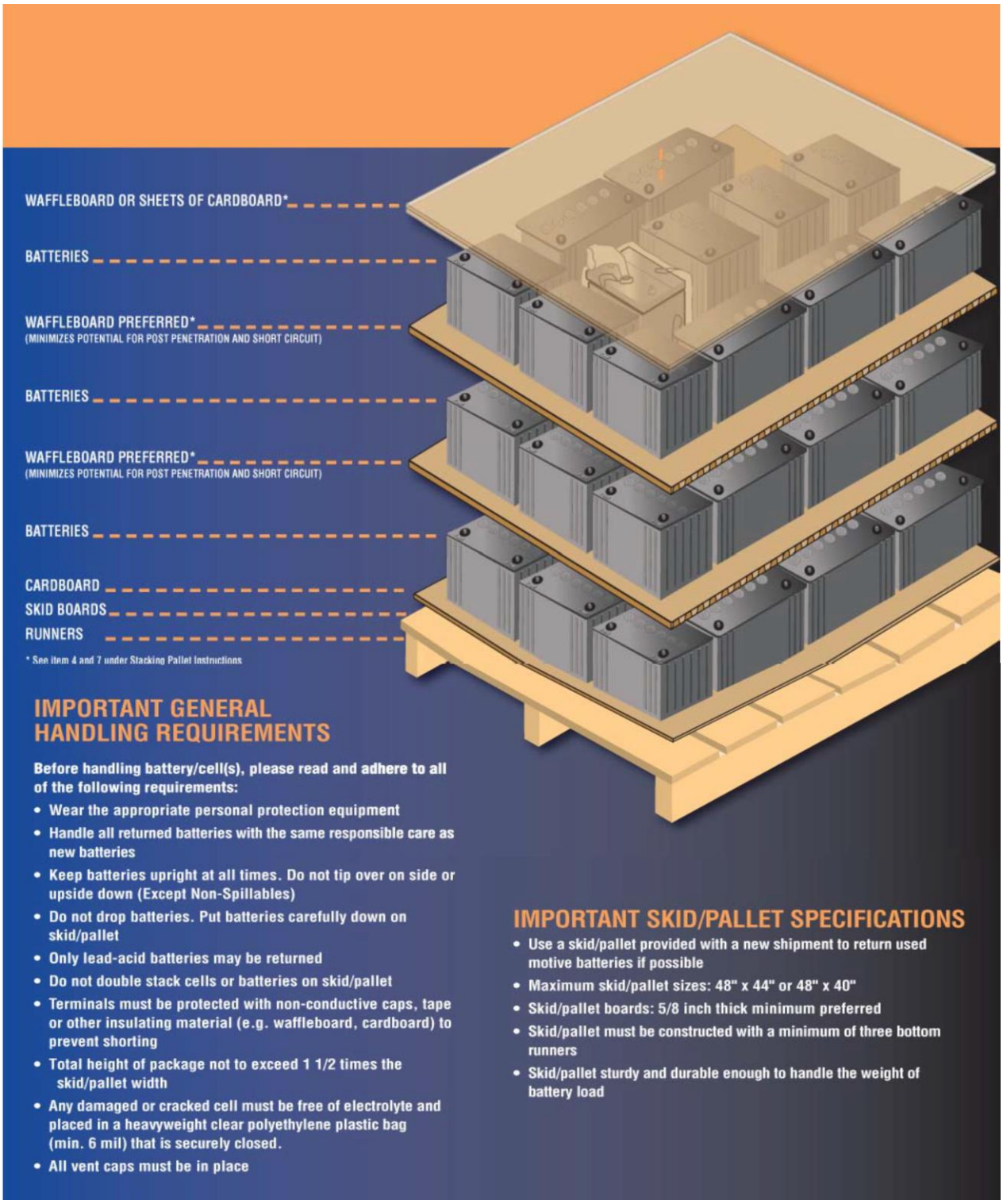
- **DO NOT** handle waste unless you have been trained or are supervised by trained personnel.
- **DO NOT** eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
- **DO NOT** accumulate batteries near flammables or other corrosive or reactive chemicals.
- **DO NOT** expose batteries to water or wet / damp conditions.
- Batteries must be segregated by type and packaged for transportation in a way that prevents short circuiting and damage to the battery or its terminals.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Universal</u> waste complete the following:</td></tr>
<tr><td>Label Waste
Labeling Requirement</td><td><u>Contents:</u>
Universal Waste- Waste Batteries
<u>Accumulation Start Date:</u>
Apply label and date when first battery is placed in the container</td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
• Keep batteries dry. Accumulate batteries containing liquid within secondary containment.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>• Use a DOT approved <u>fiberboard box</u> and separate by type. For contract (Excide) batteries reuse the original packaging, if in a serviceable condition. Do not stack more than three high. See “Stacking Procedures for Lead-Acid Batteries.” Shrink-Wrap before shipment</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Separate batteries by placing each one in a separate plastic bag or by taping over the terminals of the battery to prevent short-circuiting.
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Universal Waste (UW) may only be stored for one (1) year unless an extension is authorized by the RCRA WM or RES. Once the first UW item is place in the storage container, it must be disposed of before the end of 365 day limit. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
See Battery Shipping Table below</td><td>See table below</td></tr>
</table>

	BATTERY SHIPPING TABLE			
BATTERY TYPE	**ACCUMULATION MARKINGS**	**TRANSPORTATION MARKINGS**	**GHS Label**	**HAZARD CLASS LABEL**
Alkaline	Universal Waste – Batteries – Alkaline	Non-Regulated	None	Non-Regulated
Lead Acid (1, 2, 3)	Universal Waste – Batteries – Lead Acid	Batteries, Wet, Filled With Acid / 8 / UN2794 / II ERG 154		
Lithium (2)	Universal Waste – Batteries – Lithium	Lithium Batteries (Universal Waste)/ 9 / UN3090 / II ERG 138		
Magnesium	Universal Waste – Batteries – Magnesium	Batteries Dry, Non-Regulated		Non Regulated
Mercury	Universal Waste – Batteries – Mercury	Mercury (Contained in Manufactured Articles-Universal Waste)/ 8 / UN2809 / III ERG 172		
Ni-Cad (dry)	Universal Waste – Batteries – Ni-Cd Dry	Batteries, dry, containing potassium hydroxide solid (Universal Waste) / 8 / UN3028 / III ERG 154		
Ni-Cad (wet) (1)	Universal Waste – Batteries – Ni-Cd Wet	Batteries, wet, filled with alkali (Universal Waste) / 8 / UN2795/ III ERG 154		

Stacking Procedures for Spent Lead-Acid batteries



SPENT SOLVENTS

Dry Cleaning Solvent, PD 680 I or II, Petroleum Distillates, Breakthrough, Harvest Gold, Citrus Based, Brake Kleen, & CLP

General Information

A solvent is a substance that dissolves a solute, resulting in a solution. A solvent is usually a liquid but can also be a solid, a gas, or a supercritical fluid. The quantity of solute that can dissolve in a specific volume of solvent varies with temperature. Common uses for organic solvents are in dry cleaning, as paint thinners, paint removers, glue removers, cleaning agents and detergents.

TO DISCARD: Spent solvents are not reusable and cannot be restocked, it's a waste and must be characterized.

- While the material is being analyzed, containerize the waste, and obtain a **Pending Analysis** label from the RCRA WM or CTK. Place the label clearly visible on the container and include **all** the following information:
  - ✓ **Spent Solvent (Type),**
  - ✓ Date the material was put into the container,
  - ✓ Date Sample was taken,

- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the solvent is hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Uncharacterized Wastes have the potential to be hazardous and should be managed as hazardous from the point of generation, until the analytical results indicate they are non-hazardous,
- Vapor from spent solvents may be harmful.

OSHA GHS Labels

<table>
<tr><th colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</th></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Spent Solvent (F001 thru F005, depending on characterization)
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Most solvents are flammable store them in a well ventilated area.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>1-gallon or greater non-removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Leave ample headspace when adding solvent, see EWMP for guidance,
• Ground the barrel using an appropriate grounding strap or cable,
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
(Example Only)
“UN1993, flammable liquid toxic N.O.S., PG I”
Hazard Class 3 label EGR 128
Note: There are many types of solvents, you must characterize the solvent to correctly manage it. This may affect the correct Basic Description, contact the RCRA WM or RES for proper identification.</td><td>Hazard Class Labels
(Example Only)
 
</td></tr>
</table>

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Spent Solvent
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>1-gallon or greater removable head metal or plastic container</u> in serviceable condition.
DO NOT use containers in poor condition or that have dents, bulges, or excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.
• Leave ample headspace when adding solvent, see EWMP for guidance.
• Ground the barrel using an appropriate grounding strap or cable.
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

SPENT LIGHT BULBS

Fluorescent Lamps, High Intensity Discharge, Neon, Mercury Vapor, High Pressure Sodium, and Metal Halide Lamps

<table>
<tr>
<td>


General Information


</td>
<td>
40 CFR part 273.9 defines a lamp as the bulb or tube portion of an electric lighting device. A lamp is specifically designed to produce radiant energy most often in the ultraviolet, visible, and infra-red regions of the electromagnetic spectrum. Examples of common universal waste electric lamps include, but are not limited to, fluorescent, high intensity discharge (HID), neon, mercury vapor, high pressure sodium (HPS), and metal halide lamps (MHL).

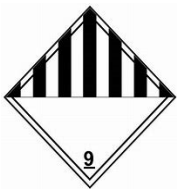
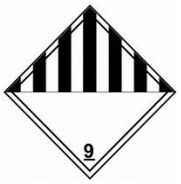
Small quantities of mercury, antimony, cadmium, barium, and lead are used to manufacture fluorescent bulbs and high intensity discharge (HID) lamps, such as high pressure sodium and mercury vapor lamps.

• TO DISCARD: Spent Light Bulbs are not reusable or cannot be restocked, they are Universal Waste.
• Use the EWMP Waste Characterization Sheet to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:
• DO NOT handle waste unless you have been trained or are supervised by trained personnel,
• DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
• DO NOT intentionally crush or break fluorescent bulbs. This releases Mercury vapor and is subject to regulatory requirements.
</td>
</tr>
<tr>
<td>Broken Bulbs Cleanup Process:</td>
<td>
• DO NOT VACUUM or SWEEP
• Using appropriate PPE, carefully scoop up glass fragments and powder using stiff paper or cardboard and place debris in a sealable plastic bag,
• Use sticky tape, such as duct tape, to pick up any remaining small glass fragments and powder. Place the used tape in the plastic bag,
• Wipe the area clean with damp paper towels or disposable wet wipes. Place the towels / wipes in the plastic bag,
• Promptly place all bulb debris and cleanup materials in the plastic bag and seal with an additional bag (double Bag),
• Wash your hands with soap and water after handling the plastic bags containing the debris and cleanup materials, and contact the RCRA WM (512) 782-5382 or RES for disposal instructions.
</td>
</tr>
</table>

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Universal</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Universal Waste- Waste Lamps
<u>Accumulation Start Date:</u>
Apply label and date when first bulb is placed in the container</td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Spent Lightbulbs are fragile, handle with caution.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Select an approved container. Use <u>original packaging</u> or a <u>fiberboard</u> container.
Fluorescent bulbs can be stored in either the original bulb container, the replacement bulbs’ container or in cardboard cartons from the recycling vendor.
Contact the RCRA WM to order bulb boxes designed specifically for collection and recycle.
Ensure the box is serviceable and all printing on the box is legible. Attach a Universal Waste label and mark the accumulation start date.</td><td> 
</td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
A Universal Waste (UW) may only be stored for one (1) year unless an extension is authorized by the RCRA WM or RES. Once the first UW item is place in the storage container, it must be disposed of before the end of 365 day limit. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
See Light Bulb Shipping Table below</td><td>Hazard Labels
See Table below</td></tr>
</table>

LIGHT BULB SHIPPING TABLE

LIGHT BULB TYPE	ACCUMULATION MARKINGS	TRANSPORTATION MARKINGS	HAZARD CLASS LABEL	GHS LABEL
Fluorescent Broken (1)	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN3077 Environmentally Hazardous Substances, Solid n.o.s. (Mercury), 9/III**		
Fluorescent Unbroken (1)	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN3077 Environmentally Hazardous Substances, Solid n.o.s. (Mercury), 9/III**		
Incandescent and Halogen	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN3077 Environmentally Hazardous Substances, Solid n.o.s. (Halogen), 9/III**		
Mercury Vapor (1)	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN3077 Environmentally Hazardous Substances, Solid n.o.s. (Mercury), 9/III**		
Metal Halide (1)	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN3077 Environmentally Hazardous Substances, Solid n.o.s. (Halide), 9/III**		
Sodium (2)	Universal Waste—Lamps, Waste Lamps, or Used Lamps	**UN2813/ Water Reactive, Solid N.O.S.(Sodium) / 4.3/ III**		

(1) Vapors contain mercury, do not inhale.
(2) This waste is reactive. Do not accumulate near water, corrosives, or flammables.

EMPTY CONTAINER MANAGEMENT

Metal, Plastic, Wood and cardboard; barrels, bottles boxes, cans, cartons, crates, drums etc.

General Information

A container is any portable device in which a material is stored, transported, processed, or disposed of, or otherwise handled. This definition is intentionally broad to encompass all types of portable devices that may be used to handle waste. Examples of containers include; a cardboard box, a 5-gallon bucket, a 55-gallon drum, a tanker truck, or any number of other portable devices. TMD produces a high volume of empty containers on a daily basis, which must be properly identified and processed for **reuse, recycle or discarded because of its *waste* properties.**

- **REUSED: Determine if materials are usable/serviceable for restocking / re-distribution**. Determine if a container can be re-used by considering the following:

1. Is the empty container serviceable, free of dents and corrosion?
2. Is the empty container free of shipping and product labels?
3. Is the empty container still usable for its intended purpose?
4. If the answer is **Yes** to all the above questions; reuse, turn in or store as necessary.

- **RECYCLED:** Value to the TMD can be achieved by properly collecting and managing bulk recyclable items. Every effort should be made to recycle empty containers. Be careful to prevent original contents from contaminating the empty containers, and follow the guidance in the Solid Waste Management Plan (SWMP) for guidance on preparing empty containers for recycle. Recycled containers should be turned in as a material to the Camp Mabry Recycle Center or local Recycle activity such as; the supporting FMS, CSMS, MATES or USP&FO.

  Empty **POL** Containers may be triple rinsed at facilities with functioning Oil Water Separators (OWS), but it's not required. Triple rinsed or well-drained POL barrels, cans and drums should be recycled or reused.

- **DISCARDED:** Empty Containers that have held **hazardous chemicals** may be considered a waste and must be **characterized**. These are containers with RCRA Listed wastes such as F, P, U, K wastes' and are not authorized to be triple rinsed and are hazardous waste,
- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the residue is hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

	• DO NOT handle waste unless you have been trained or are supervised by trained personnel, • DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.	
OSHA **GHS Labels**	Not applicable. **NOTE:** For Hazardous waste / material containers follow precautions described on the empty container.	
If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:		
Label Waste **RCRA** **Labeling Requirement**	<u>Contents:</u> **Hazardous Waste-** *Name of Hazardous Waste and Waste Code* <u>Accumulation Start Date:</u> **Apply label and date when the container is <u>full</u>**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** Store empty containers them in a well ventilated area.	
Step 1: **Empty Waste Containers**	Ensure that containers that held hazardous materials / waste or their inner liners are RCRA **empty** and IAW 40 CFR 261.7: • Using practices commonly employed to remove all materials from the container e.g. pouring, pumping, and aspirating, • Ensuring that no more than 2.5 centimeters (one inch) of residue remain on the bottom of **55** gallon containers, • Ensuring that no more than 3% residue by weight of the total capacity of containers or liners with capacity to hold **110** gallons.	
Step 2: **Move to CSA**	• Wear the proper Personal Protective Equipment listed on the SDS, • Keep your head and face clear of the container openings, • Add the empty waste containers to the CSA.	
Step 3: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. *See 49 CFR 172.101*	(As appropriate) Hazard Class Labels

<table>
<tr><td colspan="3">If waste is eligible for Recycling complete the following:</td></tr>
<tr><td>Process the container</td><td colspan="2">Process recyclable materials IAW the SWMP.</td></tr>
<tr><td>Labeling Requirement</td><td><u>Contents:</u>
Recyclable, cardboard, metal, paper etc.</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td colspan="2"> 
</td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the SWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
</table>

AQUEOUS PARTS WASHER FLUID

Also known as, Jet Wash Fluid, Hot Parts Washer Residue,

General Information

An, aqueous (water) based parts washer is safe and effective method of cleaning parts for both the user and the environment. It is also a viable alternative to cleaning parts with harmful solvents. These hot- water based systems eliminate the need to keep and store harmful solvents in your shop. They are designed to meet the parts washing needs of industrial applications, for general maintenance, automotive and fleet maintenance users and for military equipment, aircraft and weapons cleaning. Although they are a much preferred method to pure solvent based cleaning system; spent aqueous parts washers ***may contain additives like anti-rust compounds, chemicals previously on the parts, and heavy metals*** from wear in their spent fluids.

TO DISCARD: Aqueous parts washing fluid is not reusable and cannot be restocked, it's a waste and must be characterized.

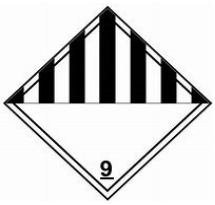
- While the material is being analyzed, containerize the waste, and obtain a **Pending Analysis** label from the RCRA WM, RES or CTK. Place the label clearly visible on the container and include **all** the following information:
  - ✓ **Aqueous Parts Washer Fluid**
  - ✓ Date the material was put into the container,
  - ✓ Date Sample was taken,

- If possible use generator knowledge to characterize the waste; check container label and SDS to determine if the fluid is hazardous (RCRA) or non-hazardous (Non-RCRA),
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous request lab analysis, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- Uncharacterized Wastes have the potential to be hazardous and should be managed as hazardous from the point of generation, until the analytical results indicate they are non-hazardous.

OSHA GHS Labels

<table>
<tr><td colspan="3">If waste is Characterized as a <u>Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Hazardous Waste- Spent Parts Washer Fluid (D001 thru D043, depending on characterization)
<u>Accumulation Start Date:</u>
Apply label and date when the container is <u>full</u></td><td> 
</td></tr>
<tr><td>Storage Requirement Steps</td><td colspan="2">Store waste awaiting turn-in in a Container Storage Area (CSA).
Most fluids are subject to fermentation store them in a cool well ventilated area, and observe head-space guidance in the EWMP.</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the CSA to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>55-gallon closed head metal or plastic container</u> in serviceable condition.
DO NOT use containers that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Open the container slowly, keeping your head and face clear of the opening,
• Add the waste and close the container,
• Leave ample headspace when adding fluid, see EWMP for guidance,
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
(Example Only)
“UN3082, Environmentally Hazardous Substance, liquid N.O.S. PG III” Hazard Class 9 label EGR 171
Note: There are many types of hazards, you must characterize the fluid to correctly manage it. This may affect the correct Basic Description, contact the RCRA WM or RES for proper identification.</td><td>Hazard Class Labels (Example Only)
 
</td></tr>
</table>

<table>
<tr><td colspan="3">If waste is Characterized as <u>Non-Hazardous</u> waste complete the following:</td></tr>
<tr><td>Mark the container</td><td colspan="2">In a contrasting color, mark or stencil the container with its contents.</td></tr>
<tr><td>Non-RCRA Labeling Requirement</td><td><u>Contents:</u>
Non-Hazardous Spent Parts Washer Fluid
<u>DOT PSN for Shipping:</u>
Non-Hazardous</td><td> 
</td></tr>
<tr><td>Step 1:
Check CSA</td><td colspan="2">Check the Container Storage Area (CSA) to see if a container for the waste has already been established.
If a container has been established, skip to Step 4.</td></tr>
<tr><td>Step 2:
Select Container</td><td>Use a DOT approved <u>55-gallon closed head metal or plastic container</u> in serviceable condition.
DO NOT use containers that have dents, bulges, or have excessive corrosion.</td><td>  </td></tr>
<tr><td>Step 3:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS.
• Open the container slowly, keeping your head and face clear of the opening.
• Add the waste and close the container.
• Leave ample headspace when adding solvent, see EWMP for guidance.
• A closed top funnel may be used to close the container.</td></tr>
<tr><td>Step 4:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Transportation Requirements</td><td colspan="2">Not regulated by the Department of Transportation, no additional identification is required</td></tr>
<tr><td colspan="3"><u>Used Oil Process</u></td></tr>
<tr><td>Used Oil Collection</td><td colspan="2">Part of the process from parts washing with hot water produces “Used Oil” which is skimmed from the top of the fluid by a skimmer plate and collected in an external container. Refer to WFS 25 for disposal</td></tr>
</table>

WASTE FLAMMABLE GAS CYLINDERS

Butane, Propane, MAPP, Acetylene and Flammable gas mixtures

General Information

Compressed gases are typically stored under pressure in metal cylinders. The cylinders are designed and constructed to withstand high pressures. Handling waste compressed gas cylinders poses unique hazards and challenges associated with the chemical composition of each gas, the energy of compression, and the capability of a gas to move and flow freely when not contained. As with most hazardous wastes, the best way to manage gas cylinders, canisters and cartridges is to only store exactly what is needed. **All** compressed gas cylinders should be managed IAW OSHA guidance and Army Regulation 700-68 for storage. There are two types of cylinders; ***one-use*** disposable and refillable commercial cylinders that are designed for repeated use. ***Do not attempt to refill one-use disposable cylinders.*** Refillable commercial cylinders should be returned to the vendor.

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop. ***Refillable commercial*** cylinders should be returned to the vendor.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is a hazardous (RCRA) waste.
- **DISPOSE:** ***one-use disposable*** Waste Flammable Gas Cylinders, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.
- ***Caution: Waste Flammable Gas Cylinders contain extremely flammable gas!*** An inherent risk with all gas cylinders is leaking valves. Use extreme caution if an odor is present. When handling Waste Compressed Gas Cylinders take precautions to keep away from heat, sparks, and open flames,

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
- Avoid breathing vapors.

OSHA **GHS Labels**		
If waste is Characterized as a **<u>Hazardous</u>** waste complete the following:		
Label Waste **RCRA** **Labeling Requirement**	<u>Contents:</u> **Hazardous Waste- Waste Compressed Gas Flammable (Type of Gas) D001** <u>Accumulation Start Date:</u> **Apply label and date when the container is placed in storage device or building.**	
Storage Requirement Step 1:	Waste Flammable Gas Cylinders are extremely flammable. Store waste cylinders awaiting turn-in in a well-ventilated storage device or an approved fire rated Flammable Storage Building. **DO NOT store cylinders in paper, cardboard or fiberboard containers or metal or plastic drums.**	
Step 2: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Secure cylinders with a chain to keep from tipping, • Ensure cylinders are stored IAW NFPA guidance, contact the State Safety Office for further guidance.	
Step 3: **Accumulate**	**Accumulate Waste in the CSA.** Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Mark the outside container with **UN1954 /WASTE Compressed Gas, Flammable (Type of Gas) / 2.1** and attach a hazard class 2.1 label. ***Note:*** *There are many types of flammable gases, you must correctly identify it. This may affect the correct Basic Description, contact the RCRA WM or RES for proper identification.*	

WASTE NON-FLAMMABLE GAS CYLINDERS

Oxygen, Argon, Nitrogen, Helium, Carbon Monoxide, Carbon Dioxide, C25 and Air Mixtures

General Information

Compressed gases are typically stored under pressure in metal cylinders. The cylinders are designed and constructed to withstand high pressures. Handling waste compressed gas cylinders poses unique hazards and challenges associated with the chemical composition of each gas, the energy of compression, and the capability of a gas to move and flow freely when not contained. As with most hazardous wastes, the best way to manage gas cylinders, canisters and cartridges is to only store exactly what is needed. **All** compressed gas cylinders should be managed IAW OSHA guidance and Army Regulation 700-68 for storage. There are two types of cylinders; ***one-use*** disposable and refillable commercial cylinders that are designed for repeated use. ***Do not attempt to refill one-use disposable cylinders.***

Determine if materials are usable/serviceable for restocking / re-distribution. Determine if a usable hazardous material (HM) can be re-used by considering the following:

1. Is the HM in a serviceable container and marked or labeled?
2. Is the HM container free of leaks?
3. Is the HM still usable for its intended purpose?

- **RESTOCK:** If the answer to all of the above is "**Yes,**" **STOP** — the HM is not a waste and should be turned in as a material to USP&FO, MATES, CSMS or a supporting maintenance shop. ***Refillable commercial*** cylinders should be returned to the vendor.
- **DISCARD:** If any answers are **"No"** and the material is not usable or cannot be restocked, this is a Department of Transportation regulated waste.
- **DISPOSE: O*ne-use disposable*** Waste Non-Flammable Gas Cylinders, contact the RCRA WM at (512) 782-5382 or request assistance from your RES.
- ***Caution: Waste Non-Flammable Gas Cylinders contain extremely high pressures!*** An inherent risk with all gas cylinders is leaking valves. Some Non Flammable gases are asphyxiates. Use extreme caution when handling Waste Compressed Gas Cylinders take precautions to keep away from enclosed areas.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste.
- Avoid breathing vapors.

<table>
<tr><td>OSHA
GHS Labels</td><td colspan="2">  </td></tr>
<tr><td colspan="3">If waste is Characterized as a <u>Non Hazardous</u> waste complete the following:</td></tr>
<tr><td>Label Waste
RCRA
Labeling Requirement</td><td><u>Contents:</u>
Non Hazardous Waste- Waste Compressed Gas (Type of Gas)
<u>Accumulation:</u>
Apply label to the container when placed in storage device or building.</td><td> 
</td></tr>
<tr><td>Storage Requirement Step 1:</td><td>Waste Non Flammable Gas Cylinders may contain extremely high pressure .Store waste cylinders awaiting turn-in in a storage device or an approved fire rated Flammable Storage Building.
DO NOT store cylinders in paper, cardboard or fiberboard containers or metal or plastic drums. Do not store near grease oil or other POL containing items</td><td>  </td></tr>
<tr><td>Step 2:
Add Waste</td><td colspan="2">• Wear the proper Personal Protective Equipment listed on the SDS,
• Secure cylinders with a chain to keep from tipping,
• Ensure cylinders are stored IAW NFPA guidance, contact the State Safety Office for further guidance.</td></tr>
<tr><td>Step 3:
Accumulate</td><td colspan="2">Accumulate Waste in the CSA.
Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.</td></tr>
<tr><td>Department of Transportation (DOT) Requirements</td><td>DOT Basic Description.
Mark the outside container with UN1956 /WASTE Compressed Gas, n.o.s. (Type of Gas) / 2.2 and attach a hazard class 2.2 label. ERG 126
Note: There are many types of non-flammable gases, you must correctly identify it. This may affect the correct Basic Description, contact the RCRA WM or RES for proper identification.</td><td> 
</td></tr>
</table>

Waste Non Flammable ***One-Use*** Gas cylinders that are “at or near atmospheric pressure” may be placed in scrap metal for Recycling.

Process recyclable materials IAW the SWMP.

Contents:

Metal

Check the Container Storage Area (CSA) to see if a container for the waste has already been established.

If a container has been established, skip to Step 4.

- Wear the proper Personal Protective Equipment,
- Open the container slowly, keeping your head and face clear of the opening,
- Add the waste and close the container.

Accumulate Waste in the CSA.

Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the SWMP. Contact Solid WM for disposal.

Not regulated by the Department of Transportation, no additional identification is required

WEAPONS CLEANING PATCHES AND RAGS

Personal and Crew-served weapons cleaning Patches and Rags contaminated with CLP, LSA, lead and residue associated with maintenance operations.

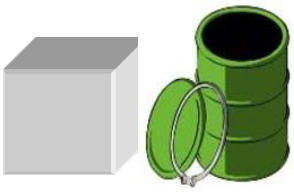
General Information

Weapon cleaning patches and rags means a woven or non-woven shop towel, rag, pad, or swab made of wood pulp, fabric, cotton, polyester blends, or other material, are used part of the weapon maintenance and cleaning process. This material is used to remove residue buildup from use or activity. POL products such as CLP, LSA and other solvents are used to facilitate cleaning and maintenance. **RCRA** toxic compounds such as Barium, Cadmium, Chromium, Lead and Silver and other hazardous material residue may contaminate the patch or rag, which would render it a hazardous waste.

- **TO DISPOSE:** Weapons cleaning patches and rags are classified as either a hazardous or special waste depending on whether the residue is hazardous or non-hazardous.
- If possible use generator knowledge to characterize the waste; check container labels and SDS to determine if the material added to absorbent is hazardous (RCRA) or non-hazardous (Non-RCRA).
- Use the EWMP ***Waste Characterization Sheet*** to make a waste determination. If you do not know if the material is hazardous or non-hazardous, request a lab analysis from the RCRA WM at (512) 782-5382 or request assistance from your RES.

Precautions:

- DO NOT handle waste unless you have been trained or are supervised by trained personnel,
- DO NOT eat, drink, or smoke while handling waste. Use appropriate personal protective equipment (PPE). Always wash skin with soap and water after handling waste,
- DO NOT add weapons cleaning patches or rags with oxidizers (i.e., Calcium Hypochlorite) or rags contaminated with corrosive chemicals (pH on SDS less than 2 and greater than 10.5),
- DO NOT add weapons cleaning patches or rags contaminated with paint strippers or removers.

OSHA **GHS Label**		
If waste is Characterized as a **Hazardous** waste follow the guidance in WFS- 22, for Excluded Solvent Contaminated Rags		
If waste is Characterized as a **Non-Hazardous** waste complete the following:		
Label Waste **Labeling Requirement**	Contents: **Non-Hazardous Waste- Spent Rags** Accumulation Start Date: **Mark container with date and weight when full**	
Storage Requirement Steps	Store waste awaiting turn-in in a **Container Storage Area (CSA).** POL contaminated rags are combustible store in a well ventilated area.	
Step 1: **Check CSA**	**Check the CSA to see if a container for the waste has already been established.** If a container has been established, skip to Step 4.	
Step 2: **Select Container**	Use a DOT approved **fiberboard box** or a **1-gallon or greater removable head metal or plastic container** in serviceable condition. .DO NOT use containers in poor condition or that have dents, bulges, or have excessive corrosion.	
Step 3: **Add Waste**	• Wear the proper Personal Protective Equipment listed on the SDS, • Open the container slowly, keeping your head and face clear of the opening, • Add the waste and close the container.	
Step 4: **Accumulate**	Some facilities may establish a SAP to accumulate the rags. Otherwise, facilities should establish a **CSA**. Accumulate waste in accordance with its type and facility generator status. See Waste Accumulation in the EWMP. Contact RCRA WM for disposal.	
Department of Transportation (DOT) Requirements	DOT Basic Description. Not Required	Not Required

Waste Submission Sheet

Date	Nomenclature	NSN	QTY	Container Type	Total Weight	Location	HAZ Waste	UNIV Waste	Special Waste	Non-RCRA Waste	ACCM Time

APPENDIX G

HAZARDOUS WASTE GENERATOR VERIFICATION FORM

Environmental Officer (EO) or Representative: **Unit / Location:**

Phone: **Email:**

State and Federal law require documentation to prove the hazardous waste generator status for each Texas Army National Guard (TXARNG) facility/location where waste is generated. In order for the TXARNG Environmental Office to assist with calculating each facility's regulatory status, each maintenance shop, armory, readiness center, training site, etc., must record the amount/weight of hazardous waste generated each month. In order to determine the correct generator status, the hazardous waste count should be combined monthly for the entire facility in multi-unit facilities (fence-line to fence-line). ***Contact your TXARNG Regional Environmental Specialist (RES), if you're not sure what type of waste you have.***

Reportable hazardous wastes include (but not limited to): Aerosol cleaning solvents, such as brake and electrical cleaners; pesticides; unused MRE heaters for disposal; spent or unserviceable gas mask filters; spent M1 NBC Filters; waste gasoline; items contaminated with lead or other heavy metals; items containing low level radioactive materials such as, light intensifier tubes, certain weapon and NBC equipment.	**Exempted Wastes that do not need to be reported:** **Universal Waste items**: Paint and Paint Related Material, Batteries, Fluorescent Bulbs and Mercury Containing Equipment (MCE) such as thermostats. **Special Wastes:** Used Oil, Antifreeze, Municipal Trash (dumpster / solid waste collection).

GENERATOR VERIFICATION - FY

Month	Date of Month	Hazardous Waste* (Lbs.)	Signature of EO	Date Signed
OCT				
NOV				
DEC				
Submission to RES: Yes No			Submitted by:	Date:
JAN				
FEB				
MAR				
Submission to RES: Yes No			Submitted by:	Date:
APR				
MAY				
JUN				
Submission to RES: Yes No			Submitted by:	Date:
JUL				
AUG				
SEP				
Submission to RES: Yes No			Submitted by:	Date:

*Documentation for the generation of Reportable Hazardous Waste (in pounds) is required.

The RESs will periodically request this document to be submitted. The response to this request is required within two weeks of receipt, unless arrangements are made for an extension. If you haven't generated any reportable hazardous waste within the reporting time period, an email stating this will suffice. This document should be kept up-to-date and filed in your Compliance Tool Kit (CTK).

If you are not sure who your RES is, please contact the RCRA Waste Manager.

Leon C. McCowan, Ph.D.
RCRA Waste Manager
Austin, TX
512-782-5382
leon.c.mccowan.nfg@mail.mil

Regional Environmental Specialists

Region A
Kelley A. Hartsell
Dallas, TX
512-782-5001 EXT 7604234
kelley.a.hartsell.nfg@mail.mil

Region B
Elizabeth "Liz" Chaffee
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512-782-5001 EXT 7604174
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Region C
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Region D
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Region E
CW3 (Ret) Don Melton
Gatesville, TX
512-782-5001 EXT 7494113
donald.j.melton3.nfg@mail.mil

APPENDIX H

LOCATION

Hazardous Materials Inventory Form

DATE

Nomenclature	NSN	QTY	Container Type	WT (lbs)	Expiration Date

Material/Waste Transfer Receipt

Originator's Address:	Originator Date:	Receiver's Address:	Receiver Date:

Stock #/Product #:	Item Description:	Quantity:	Container Type:	Unit of Issue:	Weight:	Manufacturer:
1.						
2.						
3.						
4.						
5.						
6.						
7.						

Orginator's Signature Date:

Receiver's Signature Date:

Additional Information/Comments:

This document serves as a transfer of responsibility for the items above. This receipt could affect your generator status.
If additional information is needed contact the Environmental Branch (NGTX-FE).

Spill Prevention Control and Countermeasure Plan
ANNUAL SPILL KIT INVENTORY INSPECTION FORM

GENERAL INFORMATION	
Facility Name	
Area of Responsibility (check one)	☐ AASF ☐ CSMS ☐ FMS ☐ RC ☐ AFRC ☐ UTES ☐ Other:
Location(s) of Spill Kit(s)	

Spill Control Equipment	Quantity	Actions Needed	Follow-Up Date
Absorbent material (sheets, booms, etc.)	M		
Absorbent, granular (oil-dry, fiber-pearl)	M		
Empty 55-gallon drum	M		
Recovery/overpack drum	M		
Non-sparking shovel	1		
Plastic bags	M		
Rain suits/boots			
Rubber gloves	M		
Safety goggles/face shield	M		
Sand bag	M		
Scrub brushes, brooms or mops	M		
Spill response equipment kit			
Other equipment:			

M = Multiple
# = Minimum amount required

Spill Prevention Coordinator: _____

Signature: _____ Date: _____

APPENDIX I

HAZWASTE-HAZMAT STORAGE AREAS
MONTHLY INSPECTION FORM

Complete this inspection record **MONTHLY** for each area where hazardous waste and/or hazardous material storage containers are located (such as container storage areas, satellite accumulation points, flammable cabinets, POL storage lockers, battery rooms, etc.). Visually inspect the containers in the storage areas and place a check in the appropriate box and identify each area inspected. Maintain completed forms in facility's environmental Compliance Tool Kit (CTK) records system, if available. The completed forms must be maintained for at least three years from date conducted. Follow up on any actions needed as soon as possible.

Building/Area: **Inspector:** **Date:**

INSPECTION ITEM	RESULT			COMMENTS & FOLLOW UP ACTIONS
	NO	YES	N/A	
CONTAINERS				
Containers are open (i.e., bung/cap is not in top hole, lid is open)				
Containers are overturned (when not in use)				
Containers are located outside or water has accumulated in spill containment				
Containers or supports are rusted, pitted, bulging, buckled, or deteriorated				
Water is visible on top of or at the base of containers				
Area around containers is recently stained				
Exterior surfaces show signs of leakage or are bubbled, cracked, or damaged				
Incompatible wastes and/or materials are stored together				
LABELING				
Containers of Hazardous Materials missing appropriate DOT warning labels or markings				
Waste storage containers missing labels (Hazardous Waste, Universal Waste, Special Waste, Used Oil, etc.)				
The date each container was filled at a Satellite Accumulation Point is missing				
Accumulation container in a storage area is missing the accumulation start date				
FLAMMABLES CABINETS				
Interior shelves/walls or exterior surfaces show signs of leakage				
Cabinet is rusted, pitted, or deteriorated				
Security measures (lock, doors) are non-functional				

No: Compliant **Yes: Non-Compliant** **N/A: Not Applicable**

MONTHLY

HAZARDOUS MATERIALS/WASTE STORAGE AREA WEEKLY INSPECTION

FACILITY:_____ STORAGE AREA:_____

INSPECTOR	SIGNATURE	DATE	AREA CONDITION	CONTAINER CONDITION			CORRECT LABELING	CORRECT SEGREGATION	SECONDARY CONTAINMENT	**REMARKS** (note corrective measures taken as appropriate)
			CONDITION	DENTED	RUSTED	LEAKING				

Texas Army National Guard

Setup / Inspection of HAZMAT Storage Areas Reference Card

Procedures for the setup and inspection of hazardous materials storage areas are described in the TXARNG Hazardous Waste Management Plan (HWMP). This reference card does not substitute for knowledge and understanding of the HWMP. It provides a quick reference for hazardous material storage area setup and inspection. Refer to HWMP Chapter 2: Hazardous Material Management. Contact the RCRA Waste Manager at 512-782-5382 or Regional Environmental Specialists for assistance with Hazardous Materials handling, storage, purchasing and disposal of waste materials.

SETUP OF HAZARDOUS MATERIALS STORAGE AREAS

Storage Buildings

Storage buildings must be labeled properly, kept clean, orderly and in good working order. Do not remove the door, penetrate the walls, modify ventilation, or otherwise alter the building. When setting up a storage building, the procedures are:

1. Inspect and approve the desired location.
2. Provide secondary containment if needed.
3. Ensure that fire extinguishers and spill response equipment is nearby, approved and properly inspected.
4. Post any warning signs that are required. Unauthorized signs, labels, stickers, or markings are prohibited.
5. Inventory the contents of the storage building and document the following on a monthly basis or as frequent as hazardous materials are used and supplied:
   a. Chemical Name
   b. National Stock Number (NSN)
   c. Manufacturer's Name
   d. Quantity
   e. Volume of Product
6. Using the inventory information, obtain a Material Safety Data Sheet (MSDS) for the various items. If a problem finding the MSDS arises, contact GSA MSDS Request Line at 866-588-7659 or 816-926-5097. Ensure that all hazardous materials are compatible.
7. Determine how much space is needed for each hazardous material. Make sure that containers over 30 gallons of capacity are not stacked upon each other.
8. Monitor various MSDSs for special storage requirements.

Flammable Cabinets/ Storage Lockers

All lockers must meet the specifications assigned by the National Fire Protection Association (NFPA), and be kept clean and orderly. Maintain structural integrity and hardware by not removing doors, penetrate the walls, modify ventilation, or alter the locker in any unauthorized way. When not transferring materials, keep the cabinet doors closed. When setting up a storage cabinet the procedures are:

1. Select a location for the cabinet/locker using the following criteria:
   a. Locate the locker indoors in an area where the hazardous material will be used and make sure that the area is well ventilated.
   b. Maintain easy access to the locker.
   c. Do not block the doors.
   d. Do not place lockers near break rooms, latrines, offices or other non-shop areas.
   e. Do not locate near floor drains, drainage channels, or areas with high vehicle or human traffic.
2. Ensure that fire extinguishers and spill response equipment is nearby, approved and properly inspected.
3. Post any warning signs that are required. Unauthorized signs, labels stickers, or markings are prohibited.
4. Inventory the storage locker and document the following:
   a. Chemical Name
   b. National Stock Number (NSN)
   c. Manufacturer's Name
   d. Quantity
   e. Volume of Product
5. Using the inventory information, obtain a Material Safety Data Sheet (MSDS) for the various items. If a problem finding the MSDS arises, contact GSA MSDS Request Line at 866-588-7659 or 816-926-5097.
6. Ensure that all hazardous materials are compatible.
7. Determine how much space is needed for each hazardous material. Make sure that the containers are orderly and are not open.
8. Monitor various MSDSs for special storage requirements.

Storage Racks

When setting up a storage rack, the procedures are:

1. Inspect and approve the desired location.
2. Provide primary and secondary containment. Place drip pans under any dispensing faucets or valves.
3. Ensure that fire extinguishers and spill response equipment is nearby, approved and properly inspected.
4. Post any warning signs that are required. Unauthorized signs, labels, stickers, or markings are prohibited.
5. Inventory the storage locker and document the following:
   a. Chemical Name
   b. National Stock Number (NSN)
   c. Manufacturer's Name
   d. Quantity
   e. Volume of Product
6. Using the inventory information, obtain a Material Safety Data Sheet (MSDS) for the various items. If a problem finding the MSDS arises, contact GSA MSDS Request Line at 866-588-7659 or 816-926-5097. Ensure that all hazardous materials are compatible.
7. Determine how much space is needed for each hazardous material. Make sure that the containers are orderly and are not open.
8. Monitor various MSDSs for special storage requirements.

INSPECTION OF HAZARDOUS MATERIALS STORAGE AREAS

General Procedures

When acquiring new items or maintaining current stock, TXARNG personnel must properly store Hazardous Materials. The goal is to complete the mission while minimizing hazards to personnel, property and the environment. Hazardous Materials can be stored in storage buildings, lockers or racks. Once storage areas are designated or created, ensure that a continuous inspection and monitoring process is established. Some of the things that the TXARNG personnel should be aware of are the following:

a. Maintain a current inventory of all hazardous chemicals and materials currently in use or storage.
b. Do not store tools or personal items in any hazardous materials storage location.
c. DO NOT store incompatible materials within the same flammable locker or cabinet. Separate incompatible materials in storage areas by a minimum of 4 feet
d. Do not store Flammable or Reactive Materials within 50 feet of the property line.
e. Do not store hazardous materials in trailers, vehicles, personal wall lockers, near floor drains, or in high traffic areas.
f. Avoid using wood for additional or replacement shelving.

Inspection Form

Hazardous Materials Storage Areas are required to be inspected monthly in accordance with TXARNG policy and the HWMP. Frequent inspections can uncover potential problems and unsafe conditions for correction in advance of serious issues or spills. Personnel should utilize the approved form for monthly inspections as shown below. Blank forms are attached to the HWMP and located on the Environmental Branch TKO website.

HAZWASTE-HAZMAT STORAGE AREAS
MONTHLY INSPECTION FORM

Complete this inspection record **MONTHLY** for each area where hazardous waste and/or hazardous material storage containers are located (such as container storage areas, satellite accumulation points, flammable cabinets, POL storage lockers, battery rooms, etc.). Visually inspect the containers in the storage areas and place a check in the appropriate box and identify each area inspected. When the inspection is complete maintain forms in facility's Compliance Tool Kit (CTK) record management system. The completed forms must be maintained for at least three years from date conducted. Follow up on any actions needed as soon as possible.

Building/Area: **Inspector:** **Date:**

INSPECTION ITEM	RESULT			COMMENTS & FOLLOW UP ACTIONS
	NO	YES	N/A	
CONTAINERS				
Containers are open (i.e., bung/cap is not in top hole, lid is open)				
Containers are overturned (when not in use)				
Containers are located outside or water has accumulated in spill containment				
Containers or supports are rusted, pitted, bulging, buckled, or deteriorated				
Water is visible on top of or at the base of containers				
Area around containers is recently stained				
Exterior surfaces show signs of leakage or are bubbled, cracked, or damaged				
Incompatible wastes and/or materials are stored together				
LABELING				
Containers of Hazardous Materials missing appropriate DOT warning labels or markings				
Waste storage containers missing labels (Hazardous Waste, Universal Waste, Special Waste, Used Oil, etc.)				
The date each container was filled at a Satellite Accumulation Point is missing				
Accumulation container in a storage area is missing the accumulation start date				
FLAMMABLES CABINETS				
Interior shelves/walls or exterior surfaces show signs of leakage				
Cabinet is rusted, pitted, or deteriorated				
Security measures (lock, doors) are non-functional				

No: Compliant **Yes: Non-Compliant** **N/A: Not Applicable**

MONTHLY

APPENDIX J

Texas Army National Guard
Environmental Compliance Tool Kit
Contents List and Record Retention

Master Content Card

The Environmental Compliance Tool Kit (CTK) stores environmental documents, plans and records to assist the Texas Army National Guard personnel maintain federal and state regulatory compliance with document and recordkeeping requirements, as required by the Adjutant General's Environmental Statement (TMDD 4700.01)

The CTK includes the following types of information:

- **Documents** – Instructional information and guidance, such as plans, permits, SOPs, and reference materials required to comply with regulatory and/or internal requirements.
- **Records** – Documents that show results, such as completed waste manifests, completed inspection forms, completed inventory forms, training records, laboratory or inspection results, and other similar documents.
- Verify your environmental documents and plans are up-to-date on Lone Star Portal at: https://portal.tx.ng.mil/gis/InstallationPages/jumpProfiles.aspx

Drawers 1 & 2:

- EMS Wallet (orange) Cards, Training DVDs, Emergency Response Guides, Mobile Fuel Tanker Spill Guides
- Labels for Hazardous Waste, Universal Waste, Non-Hazardous Waste, Special Waste, Pending Analysis and Used Oil
- Signs for NFPA Diamonds and Numbers, No Smoking, Spill Response Kits, Flam Cabinet Hazardous Materials Storage Guide, Emergency Phone Signs, Gas Cylinders, Asbestos Warning, and Spill Response Procedures

Drawer 3 (Bottom): Includes paper versions of relevant environmental documents, records, and tools organized by subject matter using a tabbed hanging file system. The following tables outlines the contents of Drawer 3, and the retention time requirement. The official home of records and blank inspection forms are located on the Lone Star Portal:
https://portal.tx.ng.mil/gis/InstallationPages/jumpProfiles.aspx

Folder	Document Description/Purpose:	Retention Requirement
Environmental Waste Management Plan	3-Ring Binder containing the Texas Army National Guard Management Plan for Hazardous, Universal and Special Waste, includes SOPs, Waste Fact Sheets, inspection forms, etc.	Maintain current version until updated/replaced.
Spill Prevention Control and Countermeasures Plan (SPCCP) or "Spill Plan"	3-Ring Binder containing **Installation Specific** Spill Prevention And Response guides, as well as required inspection checklists.	Maintain current version until updated/replaced.
Installation Spill Contingency Plan (ISCP)	Generic Spill Plan Guide for installations that are not required to have a Spill Plan, suggest posting in ready accessible area where spills could occur.	Maintain current version until updated/replaced.
Storm Water Pollution Prevention Plan (SWPPP)	3-Ring Binder containing **Installation Specific** Storm Water Pollution Prevention Plan and Permit guidance, as well as required inspection checklists.	Maintain current version until updated/replaced.
Environmental Appointment Letters	Appointment of unit environmental officer (EO).	Maintain current version until updated/replaced.
Environmental Office POC	Primary Point of Contacts for the TXARNG Environmental Office and breakdown of the Environmental Specialists regions.	Maintain current version until updated/replaced.
Environmental Training Records	Maintain copies of all personnel training certificates for RCRA Hazardous Waste Training (annual), Spill Prevention Training (annual), HAZMAT Certifications, EMS Video Certificates, etc.	Maintain current 3 years
Monthly Inspection Forms – HAZMAT & Waste Storage Areas	Repository for Completed Inspection Checklists Blank inspection forms are included in the Environmental Waste Management Plan appendices.	Maintain current 3 years
Submission and Transfer Forms – Hazardous Materials & Waste	Repository for Completed Material & Waste Submission Forms and Waste Transfer Receipts forms. *Transfer Receipt Required when Armory provides turn-in items to their servicing Maintenance Shop.* Blank inspection forms are included in the Environmental Waste Management Plan appendices.	Maintain current 3 years
Hazardous Waste Profiles, Lab Analysis and Waste Manifests	Hazardous Waste Profiles and/or lab analysis received prior to disposal and/or attached the Waste Manifests upon disposal.	Maintain current 3 years
Disposal Receipts – Recycling /Universal Waste / Used Oil	Repository for Vendor Receipts for shipping or pickup of Universal Waste Lamps, Batteries, Used Oil, Antifreeze, etc.	Maintain current 3 years
Non-Recycled Antifreeze Log/Receipts	Repository for receipts, manifests or turn-in of antifreeze that is not sent off-site for recycling	Maintain current 3 years
EPCRA Tier II	Archive of current and previous years Tier II report information.	Maintain current year

Spill Reporting Forms	Repository for Completed Spill Report Forms. Blank inspection forms are included in the Environmental Waste Management Plan appendices or Spill Plan appendices (if applicable).	Maintain current 3 years
Spill Plan Inspection Forms	Repository for Completed Inspection Checklists Blank inspection forms and annual plan review forms are included in the Spill Prevention Control and Countermeasures Plan appendices.	Maintain current 3 years
Storage Tank Registration / Test Results	Texas Commission on Environmental Quality (TCEQ) Tank Registration form and/or Tank and/or Piping Integrity Tightness Test Results	Maintain current version until updated/replaced
Natural Resources Summary & Standard Operating Procedures (SOPs)	Policy for Environmental Review of TXMF Activities and SPOs for: Pest Management Services; Activities near Water Resources; Tree Management; Fire Ant Treatment and Equipment Transfer; Mineral Activities; Landscaping Design; and Brush Pile Management Protocols.	Maintain current version until updated/replaced
Pest Management Plan (SOPs)	Pest Management Plan located in Installation Environmental Documents: https://portal.tx.ng.mil/gis/InstallationPages/jumpProfiles.aspx Copy of Self-Help Pesticide Management Guidance.	Maintain current version until updated/replaced
Cultural Resources Summary & Standard Operating Procedures (SOPs)	Policy for Environmental Review of TXMF Activities and SOPs for: Maintenance, Repair and Rehabilitation of Historic Buildings; Disposal and Demolition of Excess Property; Inadvertent Discovery of Historic Materials; Emergency and Homeland Security Activities; Off-Limits and Restricted Areas; Mission Training of Military and Tenant Personnel; and Unauthorized Disturbance and/or Treasure Hunting.	Maintain current version until updated/replaced
Approval Letters / City Ordinances	Washrack Approval Letters, Oil Water Separator Approval Letters, and/or any applicable City Discharge Ordinances	Maintain current version until updated/replaced
Asbestos Management Plans/Surveys	Asbestos Plans, Reports and/or Industrial Hygiene Survey Reports conducted at TXARNG installations and/or buildings	Maintain current version until updated/replaced. All asbestos records must be archived for life.
Noise Complaint Form	TXARNG Noise Plan is located on Environmental LoneStar Portal (LSP) website. Complete Complaint Form and Forward to Environmental Office and Public Affairs Office	Maintain current 3 years
Deployment Environmental Checklists	Complete all items on checklist prior to deployment and use post deployment checklist upon return	Maintain current version until updated/replaced
MSDS / SDS Archive Folder	Archive Repository for all product MSDS / SDS no longer utilized on-site.	Maintain for 30 yrs

APPENDIX K

TEXAS ARMY NATIONAL GUARD
HAZARDOUS SUBSTANCES SPILL REPORT FORM

PART 1. FACILITY (DIVISION) ORIGINATING REPORT

Name				Unit:			
Address		City		State		Zip	
Phone		Fax		County			

PART 2. INCIDENT DESCRIPTION

Location Incident Occurred:			
Date Started:	Time Started:	Date Ended:	Time Ended:
Cloud Cover		Precipitation	
Temperature (°F)		Wind Direction/Speed	
Type Material Spilled/Released			

Injury to Personnel or Damage to Property: NO ☐ YES ☐ (If Yes, Describe in Line Below)

Spill/Release into or onto Ground, Water or Air: Check all Box(es) that Apply:	Ground ☐	Water ☐	Air ☐
Amount of Material Released (in each category)			
Amount of Material Recovered (from each category)			
Product / Material Spill Source Container			
Total Capacity of Spill Source Container(s):			
Equipment Repairs or Replacement Needs:			

Identify Receiving Stream, Waterway or Sewer (if impacted):

Describe Release Incident:

Corrective Action(s) Taken:

PART 3. NOTIFICATIONS

Local Emergency: 911	Name/Agency/Company of Person(s) Contacted	Date	Time
RCRA Waste Manager: (512) 782-5382 (Office) (512) 913-5345 (Cell)			
ALT (512) 782-5753			
ALT (512) 782-6098			
Other Agencies			

Additional Comments:

PART 4. REVIEW AND APPROVAL

Spill Report Preparer (Print name)	Signature	Date

Send Spill Report to: leon.c.mccowan.nfg@mail.mil (preferred)

Or

RCRA Waste Manager, (NGTX-FE), 2200 W. 35th St, Austin, TX 78703

August 2018

INSTALLATION SPILL CONTINGENCY PLAN (ISCP)
_____, Texas

INITIAL SPILL RESPONSE ACTIONS

Step 1. Initiate evacuation, if necessary.
Step 2. Stop spill flow when possible without undue risk of personal injury.
Step 3. Contain the spill using whatever means is readily available.
Step 4. Make spill scene OFF LIMITS to unauthorized personnel.
Step 5. Restrict all sources of ignition when flammable substances are involved.
Step 6. Report to the Spill Prevention Coordinator (SPC) upon his/her arrival to the scene. If necessary, also contact the local fire department by dialing 911.
Step 7. Fill out Spill Incident Report Form (last page of this Appendix)

Collect the following information as soon as possible:

- Name of individual reporting spill
- Location of spill
- Number of injured personnel and number of injuries, if applicable
- Substance and source of spill
- Estimated amount spilled
- Estimated rate at which material is currently spilling
- Estimated time of spill occurrence
- Extent of spill travel
- Necessity of Fire Department to respond to protect life, property, and environment
- Any additional pertinent information such as other potential hazards

---

PHONE NUMBERS

The following organizations may need to be reached in the event of a spill.

On-site

1. *Spill Prevention Coordinator*……..

Off-site

2. *Local Fire, Medical, Police and Emergency*..... *911*
3. *Fire Department (Non-emergency)*.....
4. *Medical Center*.....
5. *TXARNG Hazardous Waste Manager (Office)*.....*(512) 782-5382*
   (after hours).....*(512) 913-5345*
   (alternative).....*(512) 782-5253*
   (alternative).....*(512) 782-6098*

THE SPILL INCIDENT REPORT FORM FOR RECORDING INFORMATION IS INCLUDED AS THE LAST PAGE OF THIS SECTION.

1.0 Initial Response Team

The Initial Response Team (IRT) is comprised of personnel (listed in Table 2) that perform functions as directed by the SPC in times of emergency.

Table 2 - Initial Response Team

Name	Title	Telephone (work)
	Spill Prevention Coordinator	
	Alternate SPC	

2.0 Spill Response

The SPC is responsible for evaluation of the spill and to classify the spill as either **incidental or major**. More detailed information can be found in Section 3.3 of the report.

INCIDENTAL SPILL

- Routine job exposure for the involved personnel, and
- No immediate threat to life, human health, or the environment.

MAJOR SPILL

- The material released is immediately or potentially threatening to life, human health, or the environment (including critical water use areas),
- Involved personnel have not been trained in initial response actions for hazardous material releases, or
- Involved personnel do not handle the hazardous material(s) as part of their routine job functions, (and they do not have Hazardous Communications training as required in 29 CFR 1910.1200).

2.1 Incidental Spill Response Procedures

Incidental releases are spills small enough to be handled using personnel and equipment routinely located in the immediate area of the release. The normal course of action following an **incidental spill** is for appropriately trained personnel to contain and cleanup the spill using available spill response equipment. **You or others may be injured if you try to cleanup a spill beyond your capability**.

- Review facility records (i.e., material safety data sheets) and manifests as necessary to identify product(s) released, health hazards, and clean-up/recovery procedures.
- Dispose of contaminated materials properly. If spill is to water (any amount) or to ground (> 1 gallon), notify ERMB.

2.2 Major Spill Response Procedures

Major releases are spills that CANNOT be absorbed or otherwise controlled at the time of release by personnel in the immediate release area. These include spills that pose a significant safety or health hazard, such as fire or explosion, or that may reach a water source. The normal course of action in the event of a **major spill** (or Emergency Spill) is to evacuate, secure the area and immediately notify the Fire Department by dialing 911. Detailed steps are on the first page of this document.

Texas Army National Guard
Facility Spill Incident Report Form

Part 1. Facility (Division) Originating Report							
Name							
Address		**City**		**State**	Texas	**Zip**	
Phone		**Fax**		**County**			

Part 2. Incident Description			
Location Where Incident Occurred			
Date Started:	**Time Started:**	**Date Ended:**	**Time Ended:**
Cloud Cover		**Precipitation Conditions**	
Temperature (°F)		**Wind Direction/Speed**	
Type Material Spilled/Released			
Damages or Injuries (Check Box)?	**YES** ϒ (if yes, describe below)	**NO** ϒ	

Spill/Release into or onto (Check applicable box(es)):	**Ground** ϒ	**Water** ϒ	**Air** ϒ
Amount Spilled/Released in each category checked			
Amount Recovered from each category checked.			
Product/Material Source Container(s)			
Total Capacity of Spill Source Container(s)			
Equipment Repairs/Replacement Needs			

If Water Impacted, Identify Receiving Streams or Waters:

Description of What Caused the Release:

Corrective Action(s) Taken:

Part 3. Notifications			
Agency & Telephone #	**Contact Name**	**Date**	**Time**
Local Emergency 911			am/pm
TXARNG (512) 782-5382			am/pm
***or* (512) 913-5345**			am/pm
ALT (512) 782-5753			am/pm
ALT (512) 782-6098			am/pm
Other Agencies			am/pm
			am/pm
			am/pm

Comments:

Part 4. Review and Approval		
Preparer of Spill Report (Print Name)	**Signature**	**Date**

Send Spill Report to: leon.c.mcowan.nfg@mail.mil (preferred)
Or
Mail to: RCRA Waste Manager, (NGTX-FE), 2200 W. 35th St, Austin, TX 78703

APPENDIX L

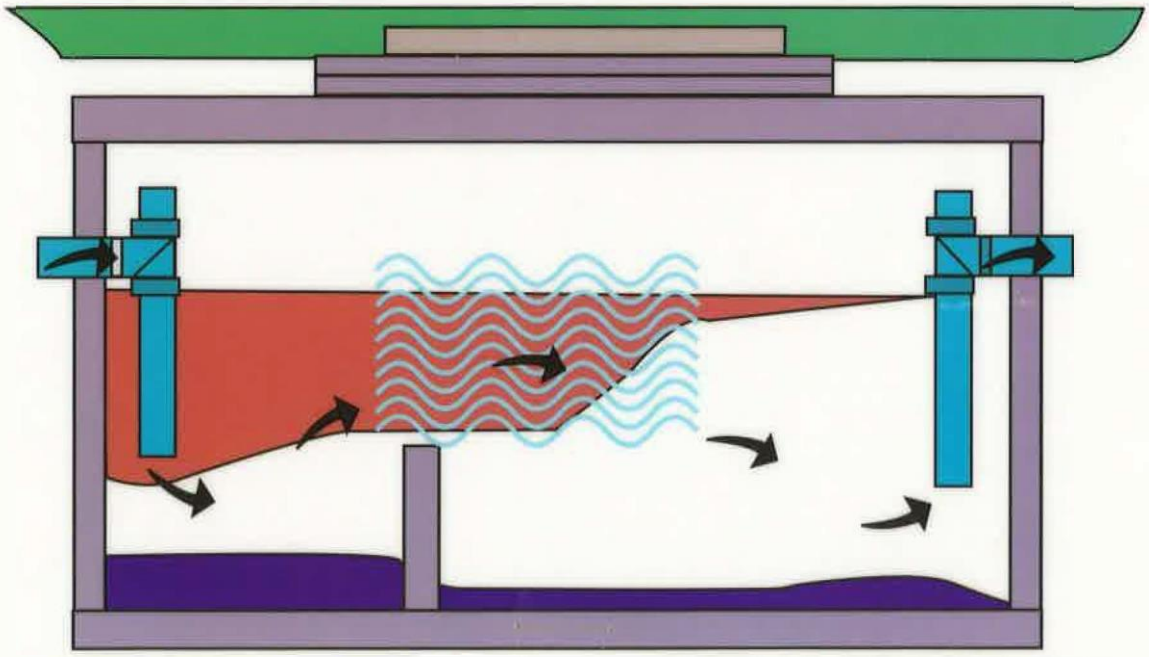
OIL WATER SEPARATOR MAINTENANCE & INSPECTION

DO's

- Use the Oil Water Separator (OWS) for its intended purpose - trap oil and grease
- Inspect OWS for oil and grease accumulation as required in your facility spill plan
- Keep screens and drain areas free of solids and floating debris
- Clean OWS when sediment & solids accumulate to 25% of OWS capacity
- Refill the OWS with water after clean out
- Monitor water levels during operation & minimize water usage
- Check physical characteristics of water flowing through the unit for discoloration, POL odor, and/or visible oil sheen
- Prevent storm water from flowing into the OWS
- If spills of unauthorized materials enter the OWS, follow your facility spill plan

DONT's

- Don't overload the OWS
- Don't use detergents and cleaners
- Don't pour used oil, oil from drip pans, battery acid, solvents, antifreeze, hydraulic fluid, hazardous substances, or other unauthorized material directly into the OWS



For More Information on Maintenance or Inspection of your OWS, Complete a Facility Maintenance Request or Contact your RES

for Guidance and Assistance.

APPENDIX M

Standard Operating Procedure (SOP)

GOOD HOUSEKEEPING

Number xxxx.xx
(Date stamped by J5)

Texas Military Department (TMD)
2200 W. 35th St
Austin, TX 78703

OPR: ENVIRONMENTAL BRANCH

Official:
KATHERINE M. BROWN
CW4, AG, USA
J5 - Policy

Summary. Good Housekeeping procedures and operating practices ensure the periodic inspection, maintenance and cleanliness of Texas Army National Guard (TXARNG) facilities and minimizes the potential risks of accidents and spills.

Applicability. This SOP applies to all components of TMD, mainly the TXARNG and our tenants, as well as contractors.

Management Control Process. Not applicable.

Proponent and Exception Authority. The proponent for this guidance is the Environmental Branch of the Construction Facilities & Management Office (CFMO).

Supplementation. Supplementation of this SOP or establishment of command and local forms on the Good Housekeeping SOP is prohibited without prior approval from the Adjutant General (TAG), through the Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Suggested Improvements. Users are invited to send comments and suggested improvements concerning this SOP directly to Environmental Branch, ATTN: NGTX-FE, P.O. Box 5218, Austin, TX 78763-5218.

Distribution. All

Table of Contents

1. Scope. The objective of good housekeeping is to minimize material losses and prevent unnecessary waste generation through implementing practices that reduce, reuse, or recycle waste.

2. General Procedures.

a. Use good housekeeping measures to reduce spills leaks and spills. Maintain work area in a clean and well-organized manner.

b. Do not use stairwells, hallways and indoor ranges for storage and entrances and exits are to be free of obstructions.

c. Aisles should be clear at all times to avoid tripping or other accidents. Do not store materials in a manner that they can become tripping hazards.

d. Avoid leaks and spills of hazardous products, since materials used to clean up spills or leaks may also become hazardous. Keep floors free of oil, grease, or any other types of liquid or chemicals.

e. Clean up spilled chemicals or liquids immediately. Follow facility spill response and notification procedures, as required.

f. Place all scrap pieces in the correct containers.

g. Identify all emergency equipment such as fire extinguishers and eyewash stations with highly visible signs and ensure they are functional. Do not obstruct access to emergency equipment.

h. The grounds surrounding the facility must be free of stains and spills. All excess products, materials and waste must be stored in proper storage areas.

3. Preventative Maintenance.

a. Routinely inspect all potential sources of leaks and spills.

b. Maintain equipment in good working order. Report any equipment that is leaking immediately.

c. Inspect supply chemical storage areas looking for leaks and for deterioration caused by corrosion or other factors.

d. Inspect fuel storage areas daily, including exposed piping.

e. Inspect vehicle storage areas daily for leaking vehicles. Use vehicle drip pans as needed.

f. Inspect waste storage areas at least weekly, looking for leaks and for deterioration caused by corrosion or other factors.

g. Instruct employees in proper materials handling to reduce wastes and spills.

h. Educate personnel on the benefits of pollution prevention and establish pollution prevention goals.

4. Disposal of Waste or Unusable Chemicals.

a. Determine if the chemical or material is overstock, off-spec, or expired and whether it can be recycled or reused. Contact your Regional Environmental Specialist (RES) or the RCRA Hazardous Waste Manager (RCRA WM) for assistance with turn-in of excess materials or waste.

b. Label each container with the words “Hazardous Waste” and the date the first drop of waste was generated. See Appendix F (**Waste Characterizations/Waste Fact Sheets/Waste Submission Sheet**) of the Environmental Waste Management Plan (EWMP) for assistance with waste characterization.

c. Keep tight fitting lids and bungs on containers. Keep containers closed during storage, except when adding or removing waste. Do not open, handle or store (e.g., stack) containers in a way that might rupture them, cause them to leak, or otherwise fail.

d. Maintain adequate aisle space and keep clear from obstructions. Store containers in a manner that allows for full visual inspection for signs of corrosion and/or leaks.

e. Prevent mixing of hazardous wastes with non-hazardous wastes. Store materials in compatible groups and isolate liquid wastes from solid wastes to prevent cross-contamination in case of spills.

f. Avoid mixing several different hazardous wastes. Doing so may make recycling very difficult, if not impossible, or increase the costs of disposal.

g. Segregate incompatible wastes and store separately. Refer to Hazardous Materials Management SOP for assistance with determination of incompatibles and proper storage procedures. Contact your RES for additional guidance.

h. Containers with ignitable, corrosive, or reactive wastes must be stored in a safe manner and must be located at least 50 feet from facility’s property line.

i. Make sure original containers of hazardous products are completely empty before disposal. Refer to the appropriate WFS for Empty Container Management.

j. Clean up all spills promptly and properly dispose of any absorbent or spill kit materials used to for that purpose. Contact the RCRA WM, immediately, for assistance with spills and your RES for proper disposal techniques.

k. Keep materials or waste materials out of storm drains and surface waters. Refer to facility Spill Prevention Control and Countermeasure Plan (SPCCP) or Installation Spill Contingency Plan (ISCP). Complete a Spill Report Form (**Appendix K**) and contact the RCRA WM, immediately, to report spills.

l. Maintain secondary containment and catch basins and inspect routinely to keep clear of liquids or debris.

m. Dispose of wastes properly starting with a waste characterization process.

5. Technical Assistance. For assistance with management of hazardous materials (including turn-in), hazardous waste management (including disposal), obtaining laboratory analytical services or other Environmental Compliance issues, contact your RES or the RCRA Waste Manager. Contact information is in the EWMP and on the Lone Star Portal (LSP).

For questions, suggestions or concerns with material presented in this document, please contact the RCRA Waste Manager at 512-782-5382 or leon.c.mccowan.nfg@mail.mil.

APPENDIX N

SPILL INCIDENT CONTACTS

Contact the Environmental Branch:

RCRA Hazardous Waste Manager (Office) 512-782-5382
Report spills and obtain Spill Kit Materials & Equipment (Cell) 512-913-5345

Environmental Engineer (Office) 512-782-5276
(Alternate) (Cell) 512-971-0112

Compliance Manager (Alternate) (Office) 512-782-5753
(Cell) 512-971-0115

If Traffic Accident or Medical Emergency: 911
If Emergency / Major Spill Occurs: 911

If spilled material poses an imminent threat to public health, safety or the environment or ANY amount enters state waters and **you are unable to contact any of the above listed Environmental Branch staff**, only then, contact the State of Texas Spill-Reporting Hotline and State Emergency Response Center at **1-800-832-8224.**

INITIAL SPILL RESPONSE ACTIONS

Step 1 Initiate evacuation, if necessary

Step 2 Stop flow of spill, if possible, without undue risk of personal injury

Step 3 Contain the spill using spill kit absorbents or whatever means is readily available

Step 4 Secure the spill scene OFF LIMITS to unauthorized personnel

Step 5 If material is flammable, restrict all ignition sources

Step 6 Contact Unit Spill Prevention Coordinator

Step 7 Complete Spill Incident Report and send to:

Environmental Branch
P.O. Box 5218 (JFTX-EV)
Austin, TX 78763-5218
512-782-6875 FAX

SPILL INCIDENT REPORTING

1.Facility /Name:	
2. Address:	
3. City /County:	
4. Spill Location:	
5. Spill Date:	
6. Spill Time:	
7. Material Spilled:	
8. Container Size:	
9. Amount Spilled:	
10. Description of Release:	

☐ Leaking drum/container ☐ Overfill, vehicle unattended

☐ Leaking MFT, TPU or pod ☐ Drive off, hose in vehicle

☐ Overfill, during fuel drop ☐ Equipment failure

☐ Human error (provide details) ☐ Other (provide details)

Damages or Injuries? ☐ YES* ☐ NO

Soil Impacted? ☐ YES* ☐ NO

Water Impacted? ☐ YES* ☐ NO

Spilled material enter storm drain, pipes or ditches? ☐ YES* ☐ NO

*Describe:_____

_____

Corrective Action Taken: _____

_____

_____

Person Making Report: _____

Contact Phone Number: _____

Date of Report: _____

TEXAS MILITARY FORCES

Spill Prevention Guidance for Mobile Fuel Tankers

Texas Military Forces (TXMF) use Mobile Fuel Tankers (MFTs) for a variety of transportation related purposes. The most common uses, with the potential to adversely impact the environment by spills of hazardous materials or petroleum, oils and lubricants (POL), occur during fuel transport, refueling operations, fuel transfer and parking.

The purpose of this document is to provide guidance for preventing and responding to discharges that may occur from TXMF owned MFTs. Maintain a copy within each MFT and/or vehicle log book. Carry spill response supplies in all TXMF MFTs at all times.

Unit Commanders are directly responsible for oil spill prevention and control for MFTs. The Texas Military Forces is committed to providing necessary resources to prevent spills and quickly control and remove harmful quantities of oil or hazardous substances discharged from MFTs. This guidance is designed to meet requirements of the Clean Water Act and the Department of Transportation (DOT) Response Plan for MFTs (49 CFR 130.31). These guidelines do not replace or supersede any vehicle's Technical Manual requirements.

STANDARD OPERATING PROCEDURES

PRIOR TO TRANSPORTING FUEL

1. Ensure license to operate assigned MFT is current.
2. Ensure DOT-required hazardous material (HAZMAT) tanker and safety training is current (verify with DD Form 1902).
3. Make sure fuel is compatible with MFT.
4. Inspect refuel equipment in accordance with (IAW) DOT and vehicle PMCS Checklist.
5. Prepare DD Form 626 (Vehicle Inspection Form), DD Form 836 (Dangerous Goods Shipping Paper) and all other required transport documentation.
6. MFT must have a complete spill kit; preferably with a full-sized foldout berm & small foldout berm.
7. Prepare placards for the fuel tanker.

Common Name	Proper Shipping Name	UN ID Number	NA ID Number
Gasoline	Gasoline	UN 1203	- -
Diesel	Diesel Fuel	- -	NA 1993
JP-8	Fuel, Aviation, Turbine Engines	UN 1863	- -

*Placard per the Emergency Response Guidebook and/or 49 CFR 172.101, 502, 503 & 504 – Display placards on each side & each end of the fuel tank or truck. UN and NA ID Numbers must match that of the fuel supplier. All MFTs must be marked "**FLAMMABLE**" in 6 inch high block letters and "**NO SMOKING WITHIN 50 FEET**" in 3 inch high block letters directly under "FLAMMABLE."*

LOCATING YOUR REFUELING SITE

1. Establish tactical refueling area IAW FM 10-67-1.
2. Consider safety & the environment when selecting site.
3. Locate site **AWAY** from environmentally sensitive areas (i.e., wetlands and/or animal habitats).
4. Park MFT on a flat, impervious surface such as concrete or asphalt pavement
5. Clear area of debris (shrubs, rocks, tree limbs or equipment).
6. Choose accessible area, large enough to handle expected volume of traffic including a waiting area for vehicles to be refueled.
7. Maintain **300 FEET OR MORE** from the following:
   - Ditches, drainage channels, streams, lakes or other water bodies
   - Drinking water or other water supply wells
   - Living, dining and high traffic areas
   - Ammunition storage areas
   - Open fire or heater

SETTING UP THE REFUELING SITE

1. Post perimeter with "**NO SMOKING WITHIN 50 FEET**" & "**FLAMMABLE**" signs that can be seen from 50 feet. Post signs per FM 10-67-1 and FORSCOM aviation requirements.
2. Have fire extinguishers ready & ensure area is well-ventilated.
3. Establish grounding station and set up fold-out berm.

PARKING MFTS

1. Park away from all overhead lines.
2. Do not park within 5 feet or more of the traveled portion of a public street or highway.
3. Block the wheels with chocks.
4. Display placards of the appropriate type.
5. Connect the required grounding & bonding wires.

REFUEL & FUEL TRANSFER PROCEDURES

1. Operate MFTs IAW their applicable Technical Manuals.
2. Personnel must have training on fuel hazards, emergency procedures & how to use personal protective equipment (PPE).
3. Never perform refueling or fuel transfer operations when electrical storms threaten.
4. Check all drains, outlets, valves, lines, fittings, issue/receiving points & around the tank area for leaks before, during & after all fueling operations.
5. Turn off vehicle & ensure no one remains in it during refueling or other fuel transfer operations. (Exception during aviation HOT REFUELING operations.)
6. Place small portable foldout berm or drip pan under vehicle to capture spills.
7. Carefully open hatches, vents & valves, due to pressure build up.
8. Fuel attendant must stay within reach of the emergency shut-off & keep a clear view of the hoses, connections & vehicle being refueled.
9. Leave 10% freeboard in every flammable or combustible liquid tank or compartment to allow for content expansion.

SPILL PREVENTION PRACTICES

1. Control spills with a proactive spill prevention program.
2. Keep area free of objects that may cause accidents.
3. Place drip pans & drainage tubs under hose connections, faucets & similar equipment.
4. Replace worn or broken parts, leaking hoses & gaskets immediately.
5. Watch for and prevent:
   - High-pressure line breaks
   - Loose or broken fittings or valves
   - Supply or vent line ruptures
   - Vehicle accidents
   - Overfilling

SPILL RESPONSE PROCEDURES

MAJOR/EMERGENCY SPILL RESPONSE

1. A **MAJOR** spill response is an emergency situation where the spill **CANNOT** be absorbed or otherwise controlled at the time of release by personnel & equipment in the immediate area.
2. Stop the flow only if absolutely SAFE to do so. Do not otherwise attempt to mitigate the spill.
3. Evacuate all personnel to a safe distance uphill/upwind of the spill.
4. Secure the area & immediately notify the local fire department or emergency response personnel by dialing 911.
5. Be prepared to provide the following information:
   - Your name
   - Location & time of the spill
   - Type of substance & approximate amount spilled
   - Container size & estimated rate substance is leaking
   - Number of any injured/exposed/contaminated personnel & nature of any injuries
6. Notify Staff Duty Officer and/or Unit Commander.
7. Notify the Environmental Branch (contact numbers listed on reverse side of document).
8. Complete the Spill Incident Report form (see reverse side).
9. Submit the report to the Environmental Branch within 24 hours (Contact information on reverse side).

INCIDENTAL SPILL RESPONSE

1. Only qualified & trained personnel should participate in spill response & cleanup operations.
2. If necessary, evacuate all personnel to a safe distance uphill/upwind of the spill & secure the area.
3. Wearing the proper personal protective equipment (PPE) and without placing yourself at risk of injury, attempt to stop the source of the leak by closing valves or shutting off pumps.
4. Using the spill kit maintained on the MFT, stop the spread of the spill by diking or enclosing with absorbent material.
5. Absorb or accumulate the spill using dry sweep absorbent, spill socks, pads or soil.
6. Place all residue and spill related waste into a DOT approved container. Small spills may be collected in poly bags stored in the spill kit.
7. Contact the Environmental Branch upon return to the Unit for disposal options.
8. Notify Staff Duty Officer and/or Unit Commander.
9. Notify the Environmental Office (contact numbers listed on reverse side of document).
10. Complete the Spill Incident Report form (see reverse side).
11. Submit the report to the Environmental Branch within 24 hours (Contact information on reverse side).

APPENDIX O

ENVIRONMENTAL BRANCH (NGTX-FE)
STAFF LISTING

NAME/TITLE	OFFICE	CELL	EMAIL
LTC Martinez, Richard L. Environmental Program Manager (EPM)	(512) 782-6707	(512) 423-3126	richard.l.martinez.mil@mail.mil
Boucher, David Deputy Environmental Program Manager	(512) 782-5753	(512) 971-0115	david.n.boucher.nfg@mail.mil
COMPLIANCE SECTION			
Pathmanathan, Yamunalinie Environmental Specialist - Clean Water Coordinator	(512) 782-6098	N/A	yamunalinie.pathmanathan.se@tmd.texas.gov
McCowan, Leon C. RCRA Waste Manager	(512) 782-5382	(512) 913-5345	leon.c.mccowan.nfg@mail.mil
Melton, Donald "Don" EPAS/RCRA Coordinator - Region E (RES)	(512) 782-5001 x7494113	(512) 771-0638	donald.j.melton3.nfg@mail.mil
Chaffee, Elizabeth "Liz" Regional Environmental Specialist (RES) - Region B	(512) 782-5001 x7604174	(737) 230-6848	elizabeth.m.chaffee.mil@mail.mil
English, Michael "Mike" Regional Environmental Specialist (RES) - Region D	(512) 782-5001 x7024815	(512) 520-7886	michael.a.english12.nfg@mail.mil
Hartsell, Kelley Regional Environmental Specialist (RES) - Region A	(512) 782-5001 x7604234	(817) 312-4861	kelley.a.hartsell.nfg@mail.mil
Tryce, Donald "Don" Regional Environmental Specialist (RES) - Region C	(512) 782-5717	(512) 657-8854	donald.r.tryce.nfg@mail.mil
TRAINING/RECORDS SECTION			
Griffith, Patricia "Patsy" Environmental Training Team Lead	(512) 782-6228	(512) 944-2367	patricia.r.griffith9.nfg@mail.mil
Jennings, Christopher Environmental Training Specialist	(512) 782-5722	(512) 954-0027	christopher.jennings3.nfg@mail.mil
Walker, Edgar Archiving Assistant	(512) 782-1267	N/A	edgar.b.walker.nfg@mail.mil
NATURAL RESOURCES SECTION			
Brown, Linda Natural Resources Program Manager	(512) 782-5818	(512) 466-4921	linda.a.brown110.nfg@mail.mil
Strebe, Wayne Fire Program Coordinator, Plant Ecologist	(512) 782-6227	(512) 241-9972	wayne.g.strebe2.nfg@mail.mil
Gilfillan, Aaron "Ross" Natural Resources Specialist, Field Biologist	(512) 782-6037	(512) 740-1604	aaron.r.gilfillan.mil@mail.mil

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STAFF LISTING

Kolbe, Nicholas "Nick" Natural Resources Specialist, Wildlife Biologist	(512) 782-5315	(512) 221-7269	nicholas.r.kolbe.nfg@cfmo.mil.texas.gov
Strebe, Wayne (interm) Pesticide Coordinator, Field Biologist	(512) 782-6227	(512) 241-9972	wayne.g.strebe2.nfg@mail.mil
CULTURAL RESOURCES SECTION			
Mt. Joy, Kristen Cultural Resources Program Manager	(512) 782-6194	(512) 971-0114	kristen.e.mtjoy.nfg@mail.mil
Vacant Architectural Historian			
ADDITIONAL ASSISTANCE			
Howard, Robin EMS/ACUB/JLUS **Sustainability Branch, Branch Deputy**	(512) 782-6929	(512) 426-8305	robin.a.howard12.nfg@mail.mil
Sontheimer, Willis EMS/ACUB/JLUS **Sustainability Branch**, Program Specialist	(512) 782-6683	(512) 739-8535	willis.p.sontheimer.nfg@mail.mil
Morley, Eric Qualified Recycling Program/Solid Waste **Facilities Management Branch**	(512) 782-6838	(512) 960-0963	eric.r.morley.nfg@mail.mil
Kandis, John, M. Website & Content Administrator **Business & Information Systems**	(512) 782-6741	N/A	john.m.kandis.mil@mail.mil
Krueger, Catherine "Cathy" Environmental Budget Analyst **Resource Management Branch**	(512) 782-5439	N/A	catherine.e.krueger2.nfg@mail.mil