MWI 8550.1
REVISION H-4
EFFECTIVE DATE: October 03, 2014
EXPIRATION DATE: October 03, 2029

MARSHALL WORK INSTRUCTION

AS01

WASTE MANAGEMENT
With Change 4 (1/24/23)

DOCUMENT HISTORY LOG

Status (Baseline/ Revision/ Change/ Revalidation/ Canceled)	Document Revision/ Change	Effective Date	Description
Baseline		4/8/02	
Revision	A	12/3/02	Removed references to MWI 8540.1, "Pollution Prevention," in paragraphs 3.3 and 6.5.1.
Revision	B	10/22/2004	This revision is in response to an action from NASA Headquarters requiring specific verbiage and updating document references.
Revision	C	8/11/2006	This revision updates organization changes and provides specific information regarding solder waste and aerosol can disposal (paragraphs 6.1.4 and 7).
Revision	D	8/25/2008	Revised 2. Applicability statement to specify that this directive is not applicable to the Michoud Assembly Facility. Revised training information in Section 10 since all environmental compliance training has been condensed to a single module, SHE 317 Environmental Compliance Training. [On 1/30/09, at the request of the OPRD, an administrative change was made to 9.1, 9.2, 9.3 and 9.3.1 to reflect update to Records Plan.]
Revision	E	9/4/2009	This revision incorporates the requirements to manage fluorescent bulbs as universal waste and disposal of universal waste. [On 3-5-10, at the request of the OPRD and concurrence from AS01 DCB Members, an administrative change was made at 6.1.2 1 to exclude the requirement to submit MSFC Form 4072 and MSDSs for seven waste streams.]
Revision	F	8/3/2011	Added definition of battery. Revised 6.1.4 to include that the collection of dry cell alkaline batteries (non-rechargeable) is a Best Management Practice. Added 6.7.3.1 and 6.7.3.2 to provide instructions on how batteries should be accumulated for disposal. Revised Section 9 Records to be consistent with AS10 format. Updated 10.2 SHE 317 Environmental Compliance Training requirements.
Revision	G	1/16/2013	Removed instructions specific to EEOH. Added recycling information. Revised to meet current MWI Template and applicability statement.
Revision	H	10/3/2014	Total Rewrite. Revised MSFC Form 4072 requirements; failure to submit MSFC Form 4072 prior to generating waste will result in a SHEtrak Finding. Added new requirement in section 5.3.7 that requires users to notify EEOH when new waste stream SAA reaches 75% of capacity. Added new requirement in section 5.4.1.1 and 5.4.1.2 for SAA in locations with restricted access. Added new requirement in section 5.4.3.2; full container turn in requires signature of the user. Revised the link for the Redstone Material Certification Form.
Change	1	7/2/2015	On 7/2/15, at the request of the OPRD, administrative changes were made to update the links at 5.8, 5.9.3, and Appendix D.
Change	2	4/12/2017	On 4/12/17, at the request of the OPRD, removed the term "controlled waste" since this term is not a regulatory term and is no longer used. Locations were 5.1.1, 5.3.6 and Appendix A Definitions. Also removed quotation marks from directive titles throughout the document.
Revalidation	H	8/7/2019	Deleted several references from Section 4. Applicable Documents and Forms that were not cited within the text. Made minor changes to wording to improve clarity. Indented and italicized Notes per NPR 1400.1.
Change	3	6/3/2021	On 6/3/21, at the request of the OPRD, administrative changes were made to update URL links.

Change	4	1/24/2023	On 1/24/23, at the request of the OPRD, administrative changes were made to replace all references to SHEtrak with SafeSuite and update the title of MWI 8715.12 at 4.3.
Revalidation	H-4	8/5/2024	On 8/5/24, at the request of the OPRD, directive is being revalidated with no changes. Expiration Date extended five years from 10/3/24 to 10/3/2029.

1. PURPOSE

This MWI instructs users on the method of compliance for waste operations (specifically new or existing hazardous waste streams), chemical product and unknown chemical disposal activities, empty container management, medical waste management, and debris disposal at MSFC in accordance with MPR 8500.1.

2. APPLICABILITY

2.1 This MWI applies to Center personnel, programs, projects, and activities, including contractors and resident agencies to the extent specified in their respective contracts or agreements. ("Contractors," for purposes of this paragraph, include contractors, grantees, Cooperative Agreement recipients, Space Act Agreement partners, or other agreement parties.)

2.2 This MWI does not apply to the Michoud Assembly Facility.

2.3 This MWI applies the following: all mandatory actions (i.e., requirements) are denoted by statements containing the term "shall." The terms: "may" or "can" denote discretionary privilege or permission; "should" denotes a good practice and is recommended, but not required; "will" denotes expected outcome; and "are/is" denotes descriptive material.

2.4 This MWI applies the following: all document citations are assumed to be the latest version unless otherwise noted.

3. AUTHORITY

MPR 8500.1, MSFC Environmental Engineering and Occupational Health Program

4. APPLICABLE DOCUMENTS AND FORMS

4.1 The Resource Conservation and Recovery Act , 42 U.S.C sec. 6901, et seq. (1976)

4.2 MWI 8550.5, Hazardous Material Management

4.3 MWI 8715.12, Safety, Health, and Environmental (SHE) Inspection Program

4.4 MWI 8715.10, Explosives, Propellant, and Pyrotechnics Program

4.5 MSFC Form 4072, Process Waste Questionnaire

4.6 Material Certification Form 2435

5. INSTRUCTIONS

5.1 General.

Under the Resource Conservation and Recovery Act (RCRA), the handling, storage, and ultimate disposition of wastes are closely regulated. RCRA requires a "cradle to grave" management system for the disposition of hazardous wastes.

5.1.1 User organizations shall dispose of materials that are not a hazardous, universal, or special waste in the regular trash. (See definitions in Appendix A.)

5.1.2 Collection of alkaline, dry cell batteries (non-rechargeable) for disposal is a Best Management Practice. Disposal in the regular trash is an acceptable alternative.

5.2 MSFC Site-Wide Waste Streams.

5.2.1 Waste streams that are common across all of MSFC are identified by Environmental Engineering and Occupational Health (EEOH) as "Site-wide Waste Streams." These wastes are identified and characterized by EEOH.

5.2.2 The following wastes are classified as site-wide waste streams:

a. Wipes/rags contaminated with solvents or metals.

NOTE: No free liquids are allowed to be placed in a wipe/rag container.

b. Lead and/or silver containing solder.

c. Used oil.

d. Oil filters.

e. Batteries containing lead, lithium, nickel and cadmium or other rechargeable batteries.

f. Aerosol cans.

5.2.3 When making an initial request for a container for one of these wastes, notify the EEOH support contractor at 256-544-9578 no less than 72 hours before the container is needed and provide the following information:

5.2.3.1 Point of contact information to be listed on the container including name, badge number, telephone number, organization code and, if applicable, name of contractor.

5.2.3.2 Number and size (e.g., 5 gallon, 55 gallon) of containers needed.

NOTE: If you cannot estimate the needed container size provide the EEOH support contractor with the volume of waste you will produce per day, week or month and they can assist you in selecting the best waste container size. Also, provide estimated length of time to fill containers.

5.2.3.3 Building and room location where the container will be located.

5.2.3.4 Process that is generating the waste.

5.2.4 The EEOH support contractor reviews the information submitted and determines if the waste meets the requested profile and, if appropriate, issues the containers.

5.2.5 If review of the information indicates the material does not meet a site-wide profile, the organization completes MSFC Form 4072 Waste Stream Characterization and submits it in accordance with section 5.3 of this document.

5.3 Waste Stream Identification.

5.3.1 The MSFC user organization shall complete an MSFC Form 4072, Waste Steam Characterization and submit it to the EEOH support contractor prior to beginning the process or activity that generates the waste.

NOTE: Indicators that a lab or process potentially generates a hazardous waste are the presence of acids, bases, flammable or chlorinated solvents, solutions containing metals, solids that absorb solvents or metals, or solid metallic material other than standard steel and aluminum alloys, and machinery that contains reservoirs. The review of the material or equipment under the Proactive Procurement process also notes if hazardous waste may be generated.

5.3.2 The EEOH support contractor shall not issue any waste container until MSFC Form 4072 is received and, if necessary, reviewed with the generator point of contact. Generating a hazardous waste without first completing and submitting MSFC Form 4072 to the EEOH support contractor will result in a SafeSuite finding in accordance with MWI 8715.12.

NOTE: For emergency response situations, a container may be issued prior to completing MSFC Form 4072.

5.3.3 The EEOH support contractor shall review the information on MSFC Form 4072 with the requestor to ensure accuracy and determines if the waste is non-hazardous, hazardous or requires special handling procedures.

5.3.4 The user organization shall sign the MSFC Form 4072 indicating they have accurately characterized the materials present in the waste stream.

5.3.5 The EEOH support contractor shall sign it indicating they have reviewed it with the generator.

5.3.6 If it is determined that the waste stream is a hazardous or universal waste, the EEOH support contractor shall issue the required container(s) and deliver it to the satellite accumulation area (SAA) for the process.

5.3.7 If the process generating the waste or the waste stream/composition changes, a new MSFC Form 4072 shall be submitted to the EEOH support contractor noting the items changed.

5.3.8 For new waste streams, the user organization shall contact the EEOH support contractor at 256-544-9578 when the first container reaches 75 percent of its capacity. The EEOH support contractor will then take a sample to validate the waste stream.

5.4 Satellite Accumulation Areas.

NOTE: The user is responsible for the compliance of the SAA. The EEOH support contractor can be contacted at 256-544-9578 for assistance.

5.4.1 All personnel utilizing satellite accumulation sites for hazardous wastes and all personnel involved in the purchase, use, or storage of hazardous chemicals shall complete SHE 317 Environmental Compliance training annually. Personnel whose sole involvement with waste management is collection of spent alkaline, dry cell (non-rechargeable) batteries are not required to complete this training.

5.4.2 The MSFC user organization shall locate SAAs at or near the hazardous waste generation points in their area.

5.4.2.1 If the satellite accumulation is within a secured location, the user organization shall provide key-card access to the EEOH support contractor's hazardous waste technicians.

5.4.2.2 If key-card access cannot be granted, the user organization shall identify an area to which the EEOH support contractor may have unrestricted access.

5.4.2.3 Location of SAA shall:

a. Be close enough to the process generating the waste that moving the waste from the point of generation to the accumulation area does not pose an increased risk of spillage.

b. Be located in an area that does not pose an increased risk of spillage or mismanagement (a high-traffic area, for example).

c. Be in a location that it is under the routine control and cognizance of the operator of the process.

5.4.3 MSFC user organizations shall:

5.4.3.1 Accumulate waste only in the containers assigned for the specific waste, including those wastes listed as "site-wide waste streams."

5.4.3.2 Ensure wastes are compatible with other co-located hazardous materials/waste.

5.4.3.3 Ensure that labels and/or markings supplied with the container that identify contents and hazards are not defaced or removed.

5.4.3.4 Ensure the container is in good condition and free from leaks and corrosion.

5.4.3.5 Close/seal the container when not in use.

NOTE: These containers are required by law to be closed unless actively adding or removing material from them.

5.4.3.6 Ensure that only the materials originally identified on the MSFC Form 4072 are placed in the container.

5.4.3.7 Ensure that no more than 55 gallons (or 1 quart of acutely hazardous waste) of an individual hazardous waste stream are accumulated at an SAA.

NOTE: More than 55 gallons of a hazardous waste can be accumulated at an SAA as long as they are not the same waste stream. Other conditions such as fire suppression requirements or secondary containment may still apply.

5.4.3.8 Handle and store containers in a manner that prevents rupture or leakage from the container.

5.4.4 When containers are full, the MSFC user organization shall immediately:

5.4.4.1 Mark the month, day and year on which the container was filled/closed on the "Date" label affixed to the container.

NOTE: A container holding liquid is considered "full" if 90% of the container is filled.

5.4.4.2 Contact the EEOH support contractor at 256-544-9578 and provide the container number, user name, building, and room number of the container. A replacement container may also be requested at this time.

5.4.5 The MSFC user organizations shall notify the EEOH support contractor immediately if a waste container is no longer needed or if the container point of contact is no longer valid.

5.5 Instructions for Disposal of Chemical Product.

NOTE: This document does not apply to materials that are explosives or shock hazards. Refer to MWI 8715.10 for the disposal of chemical substances which are explosives or shock hazards.

5.5.1 MSFC user organizations shall turn in opened or unopened chemical products:

5.5.1.1 As soon as it is determined that the material is no longer required by the user organization.

5.5.1.2 In original packaging or user created container that is labeled in accordance with MWI 8550.5.

5.5.1.3 If the original container is leaking.

5.5.2 If the chemical is not bar-coded, the MSFC user organization shall obtain a Safety Data Sheet and provide it the EEOH support contractor prior to or when the container is picked up.

5.5.3 Only with prior approval from the EEOH support contractor can a user organization utilize an existing waste stream and container in their area for disposal.

5.6 Unknown and/or Unidentified Chemicals.

5.6.1 Unknown and/or unidentified chemicals incur additional disposal costs and may be extremely dangerous. Per 40 CFR 262, once an unknown material is identified as a waste, it shall be removed from MSFC within 90 days from the date it was determined to be a waste.

5.6.2 MSFC user organizations shall immediately notify the EEOH support contractor at 256-544-9578 when unlabeled and/or unknown chemicals are found.

5.6.3 When requesting disposal of unknown/unidentified materials, the MSFC user organization shall provide:

5.6.3.1 The location of the unknown chemicals.

5.6.3.2 The type and condition of containers holding these materials.

5.6.3.3 The number of containers and the quantity of material.

5.6.3.4 If the container is leaking.

5.6.3.5 The organization responsible for the material.

NOTE: Ensure that locations where unknown/unidentified materials are stored are not

near work areas *or in corridors with high personnel traffic.*

5.6.4 The unknown and/or unidentified chemical containers shall remain under control of the MSFC user organization until the unknown chemical is identified and removed from MSFC.

5.6.4.1 EEOH supplies Best Management Practices to the user organization to minimize risk while the material is at the user's location.

5.6.4.2 User organizations shall ensure that areas used for unknown chemical storage are under engineering controls such as, but not limited to, local exhaust ventilation, explosion-resistant wiring and electrical, and limited access. Examples of areas which could be used are chemical storage rooms, lab hoods and paint booths.

5.6.5 User organizations that have unknown and/or unidentified chemicals are investigated by EEOH and a determination made as to whether the user organization is responsible for part or all of the analysis and disposal costs for the material.

5.7 Instructions for Management of Empty Containers.

The regulations at 40 CFR Part 261.7 define when hazardous waste residue in an empty container is exempt from regulation. These regulations define the requirements for rendering a container or inner liner "empty." To distinguish between the usual meaning of the word "empty" and the strict regulatory definition, the phrase "RCRA empty" is often used. Any hazardous material remaining in either a RCRA empty container or inner liner is not subject to regulation under RCRA Subtitle C. Environmental Protection Agency (EPA) promulgated these regulations to provide instructions to owners and operators on how to empty their containers so that containers are no longer subject to regulation, even if some residues remain in the container.

5.7.1 MSFC user organizations shall turn in empty containers to the EEOH support contractor as soon as they are empty or, if they are collected in a satellite accumulation container in the work area such as happens with aerosol cans, as soon as the satellite accumulation container is full.

5.7.2 When notifying the EEOH support contractor, user organizations shall provide the requestor's name, office symbol, NASA/contractor, telephone number, total number of empties, container size(s), storage location, and the chemical last contained.

5.7.3 Empty containers 5 gallons or less (with the exception of aerosol cans) may be disposed of in regular trash.

5.7.4 Empty aerosol cans, compressed gas cylinders, or any chemical container that is greater than 5 gallons shall be turned in by calling the EEOH support contractor at 256-544-9578.

5.7.4.1 Prior to calling the EEOH support contractor for disposal, the MSFC user organization shall ensure that a container which held compressed gases approaches atmospheric pressure.

5.7.5 When aerosol cans are empty:

5.7.5.1 Do not puncture aerosol cans.

5.7.5.2 Do not dispose of in regular trash.

5.7.5.3 Collect empty aerosol cans in a hazardous waste satellite accumulation container designated for aerosol cans or call the EEOH support contractor at 256-544-9578 for pickup.

5.7.5.4 Aerosol cans brought from home for personal use shall be returned home for disposal when empty.

5.7.6 The MSFC user organization shall ensure all material and residue is removed from the container or inner liner by means such as, but not limited to, pumping, pouring, or aspirating.

5.7.6.1 Do not rinse containers unless specifically requested to do so by EEOH.

5.7.7 For empty containers, MSFC organizations shall:

5.7.7.1 Ensure that bungs, tops, lids or other covers are in place while in storage and that they are in place and secure prior to turn-in.

5.7.7.2 If possible, place containers on pallets if:

a. More than four 5-gallon containers are to be removed.

b. More than eight 1-gallon containers are to be removed.

c. More than two 55-gallon drums are to be removed.

> *NOTE: 5-gallon and 1-gallon containers are not to be stacked more than two high. For all containers, any existing markings, placards, or labels on empty containers must be retained for compliance with the Department of Transportation regulation [49 CFR Part 173.29(b)].*

5.8 Instructions for Recycling.

Before disposing of a material consult MSFC's recycling program requirements at https://nasa.sharepoint.com/sites/msfceeoh/SitePages/EEOH-Recycling.aspx . The program includes how to recycle, what can and cannot be recycled, and how to obtain additional recycling containers.

5.8.1 Employees shall not bring material from offsite to recycle/dispose within the MSFC solid waste program.

5.9 Instructions for the Management of Debris.

5.9.1 Construction and maintenance contractors may utilize Redstone Arsenal's Solid Waste Management Area (SWMA) for disposal of **only** the following material as long as it is not characterized as hazardous wastes:

5.9.1.1 Asbestos

NOTE: Although asbestos is considered a Special Waste, it may be disposed of at the Redstone Arsenal SWMA.

5.9.1.2 Asphalt (un-milled)

5.9.1.3 Construction rubble

5.9.1.4 Insulation

5.9.1.5 Masonry waste

5.9.1.6 Rock

5.9.1.7 Roofing

5.9.1.8 Sand

5.9.1.9 Non-recyclable scrap metal

5.9.1.10 Sheetrock/plaster

5.9.1.11 Yard waste

5.9.1.12 Wood ash

5.9.1.13 Wood waste

5.9.2 If the debris consists of large, bulky items, the construction and/or maintenance contractor shall do the following prior to taking the debris to the SWMA:

5.9.2.1 Separate trees and tree debris, stumps, and yard waste from other inert materials.

5.9.2.2 Separate all construction debris from dirt and rock.

5.9.2.3 Prior to disposal, empty containers that are in poor condition and are 5 gallons or larger shall be flattened.

5.9.3 For each load to be taken to the Redstone SWMA, the contractor or NASA point of contact completes a Redstone Material Certification Form https://nasa.sharepoint.com/sites/msfceeoh/Shared%20Documents/Forms/AllItems.aspx?id=%2Fsites%2Fmsfceeoh%2FShared%20Documents%2FHazardous%20Waste%20and%20Disposal%2FRedstone%20Landfill%20Certification%20Form%2Epdf&parent=%2Fsites%2Fmsfceeoh%2FShared%20Documents%2FHazardous%20Waste%20and%20Disposal.

5.9.4 To ensure compliance, a representative of the SWMA randomly inspects loads and may refuse a load if it is found to be noncompliant.

5.9.4.1 If a load or portion of a load is refused by SWMA, the organization, group or contractor taking the material to the SWMA shall contact EEOH for direction regarding where and how to dispose of the material. At no time is the material to be taken off site unless specifically directed to do so by EEOH.

5.10 Instructions for Handling Medical and Biological Waste.

5.10.1 The MSFC user organization shall identify all expected medical or biological waste-producing processes prior to beginning the process and submit the Safety Data Sheet (SDS), experiment/process description, types of biological or medical agents used and MSFC Form 4072 to the EEOH support contractor.

5.10.2 The EEOH support contractor will evaluate the need for collecting the waste stream. If collection is needed, the EEOH support contractor will provide an SAA container(s).

5.10.3 The MSFC user organizations shall:

5.10.3.1 Prior to disposing of any equipment, glassware or containers that contained medical or biological material, autoclave the material using an appropriate indicator of autoclave effectiveness.

NOTE: The use of viability indicators or temperature/pressure sensitive autoclave indicators is required to ensure sterilization.

5.10.3.2 Treat plastic containers with a 10 percent solution of bleach to render them non-hazardous and dispose of as regular trash.

5.10.3.3 Autoclave liquid culture media to render the media nonhazardous and wash down the sink with copious amounts of water.

NOTE: This type of disposal requires efficacy checks of the sterilization system. Organizations generally accomplish this through the use of a Bacillus stereothermophilus spore test kit.

a. Record date, time, exposure temperature (minimum/maximum), exposure pressure (minimum/maximum), and cycle time of monthly sterilization system check with all records added to organization record retention schedule.

b. If a unit fails sterilization check biological material must be collect for disposal as bio-hazardous waste. Contact the EEOH support contractor for disposal.

5.10.3.4 Treat blood and blood products that are to be poured into the sink (sanitary sewer) with a 10 percent solution of bleach with a retention time of approximately 30 minutes to render them non-hazardous and wash down the sink with copious amounts of water.

5.10.4 Containers used as SAAs for medical/biological waste shall:

5.10.4.1 Utilize red lettering with a contrasting background color and be conspicuously labeled "BIOHAZARDOUS."

5.10.4.2 Be impermeable to moisture and have strength that prevents ripping, tearing, or bursting under normal conditions of use.

5.10.4.3 Be single-use containers.

5.10.5 The MSFC user organization shall accumulate medical waste so that waste is:

5.10.5.1 Collected in segregated, designated medical waste containers and kept separated from all other solid waste streams.

5.10.5.2 Placed directly into leak-proof, rigid, puncture-resistant containers for sharps and sealed to prevent loss of contents.

5.10.5.3 Handled in a manner to protect the integrity of the packaging.

5.10.5.4 At or near the point of generation and secure to prevent entry of unauthorized persons.

5.10.5.5 Compatible with the container and other co-located hazardous materials/wastes.

5.10.5.6 Properly labeled to identify contents and hazards.

5.10.5.7 Kept in good condition.

5.10.5.8 Closed/sealed when not in use.

5.10.5.9 Reported to the EEOH support contractor if any change in the medical waste-producing process occurs by submitting MSFC Form 4072 to the EEOH support contractor.

5.10.6 The EEOH support contractor collects the waste from the SAAs when notified by the user organizations.

5.10.6.1 For any operation/process that generates large volumes of medical/biological waste, the EEOH support contractor may establish a routine pickup schedule that does not require the user to initiate a pick-up request.

5.10.6.2 Upon pick-up of the collection container, a new container shall be issued unless the EEOH support contractor is notified otherwise.

5.11 Instructions for Disposal of Universal Waste.

5.11.1 MSFC manages the following materials as universal wastes:

5.11.1.1 Fluorescent, high intensity discharge (HID), neon, mercury vapor, high pressure sodium, and metal halide lamps.

NOTE: Bulbs of any type (except standard incandescent) from any type of equipment (e.g., process equipment, desk lights) are included in this category.

5.11.1.2 Batteries that contain nickel, lithium, cadmium, mercury and/or lead.

NOTE: For large batteries, such as those from mobile equipment, or large quantities of batteries that must be removed at the same time, such as those from Universal Power Supplies, notify the Environmental Support Contractor at 256-544-9578 for the specific pick-up.

5.11.1.3 Mercury-containing equipment, such as, but not limited to, switches, thermostats and similar devices containing elemental mercury or mercury salts.

5.11.1.4 Any pesticides used at MSFC.

5.11.2 MSFC user organization shall identify universal waste processes for their areas and contact the EEOH support contractor at 256-544-9578 to request containers.

5.11.3 When requesting containers, the user organization shall provide the following information:

5.11.3.1 Point of contact to be listed on the universal waste container including name, badge number, telephone number, organization code and, if applicable, name of contractor.

5.11.3.2 Number of containers needed.

5.11.3.3 Estimated length of time to fill containers.

5.11.3.4 Building and room location where the container will be located.

5.11.3.5 Process that is generating the waste.

5.11.4 The EEOH support contractor will issue the appropriate, pre-labeled container to the designated area for collection of universal waste and mark the "Accumulation Start Date" on the container when delivered.

NOTE: These containers are required by law to be closed unless actively adding or removing material from them.

5.11.5 MSFC user organizations shall accumulate only those items listed on the label for the universal waste container in that container.

5.11.6 When containers are filled, the user organization notifies the EEOH support contractor at 256-544-9578 for pickup.

5.11.7 All user organizations shall ensure that universal wastes generated and/or contained in their areas are:

5.11.7.1 Accumulated in only designated collection containers issued by the EEOH support contractor.

5.11.7.2 Immediately cleaned up and placed in designated waste container should a spill occur.

5.11.7.3 Stored only in areas designated as accumulation areas by the EEOH support contractor.

NOTE: The user is responsible for the compliance of the universal waste accumulation container. The EEOH support contractor can be contacted at 256-544-9578 for assistance.

6. CANCELLATION

MWI 8550.1G, Waste Management, dated January 16, 2013.

Original signed by

Patrick E. Scheuermann
Director

APPENDIX A
DEFINITIONS

Acutely Hazardous Waste. A waste that is considered to present a substantial hazard whether managed properly or not. EPA includes in this category waste shown to be fatal to humans in low doses, those shown in animal studies to have specific toxicities, and explosives. All P-listed wastes and other hazardous wastes with the designated Hazard Code H. Hazard Code H is the RCRA designation for acutely-hazardous waste. P-listed wastes are identified in 40 CFR Part 261.

Battery. One or more electro-chemical cells through which stored energy can be discharged electrically to provide power when needed. Examples include both rechargeable and non-rechargeable types such as lead-acid, nickel-cadmium, nickel metal hydride, lithium ion, silver-zinc, and lithium. Alkaline dry cell batteries are excluded from the definition in this instruction.

Chemical Product. Chemicals in original containers that are no longer needed.

Debris. Per 40 CFR Part 268.1 "Solid material exceeding a 60 millimeter particle size which is intended for disposal and which is a manufactured object, plant or animal matter, or natural geologic material. However, the following materials are not debris: (a) any material for which a specific treatment standard is provided in 40 CFR, Subpart D, Part 268 (namely lead acid batteries, cadmium batteries, and radioactive lead solids); (b) process residuals such as smelter slag and residue from the treatment of waste, wastewater, sludge, or air emission residue; and (c) intact containers of hazardous waste not ruptured but retaining at least 75 percent of their original volume. A mixture of debris that has not been treated to the standards provided by 40 CFR Part 268.45 and other material is subject to regulation as debris if the mixture comprises primarily debris (by volume) based upon visual inspection."

Hazardous Waste. A waste or combination of wastes that can pose a substantial or potential hazard to human health or the environment when not properly managed, possesses at least one of four characteristics (ignitable, corrosive, reactive, or toxic), or appears on special U.S. EPA lists and includes toxic waste, spilled chemicals, and unused chemicals.

Inner Liner. A continuous layer of material placed inside a tank or container that protects the construction materials of the container from contact with the contained waste or reagents used to treat the waste.

SDS. Information supplied by chemical manufacturers/importers that provides pertinent safety and health information concerning a hazardous chemical.

Medical Waste. Animal waste, blood and body fluids, microbiological waste, pathological waste, renal dialysis waste, and sharps as defined under State regulatory requirements ADEM 13-1.03.

P-List. Approximately 250 classes of chemical substances as categorized in 40 CFR 261.33 as commercial chemical products, manufacturing chemical intermediates or off-specification commercial chemical products referred to in paragraphs (a) through (d) of same section and identified as acute hazardous wastes and are subject to the small quantity exclusions defined in 40 CFR Part 261.33.

RCRA Empty. A container is considered "RCRA empty" when the hazardous waste remaining in the container (or inner liner) is not subject to regulation under RCRA Subtitle C.

Recycling. The Diversion of materials from the solid waste stream to a beneficial reuse of the materials.

SAA. An area in an individual laboratory, shop, or other facility designated by the generator for the accumulation of waste not to exceed 55 gallons of hazardous waste or 1 quart of extremely or acutely-hazardous waste. The area is at or near the initial point of waste generation.

Special Waste. A waste that does not fall into the categories of hazardous or non-hazardous waste. Special wastes are those wastes that require specific processing, handling, or disposal techniques as determined necessary by ADEM which are different from the techniques normally utilized for handling or disposal. Typical special waste generated at MSFC is cured sprayed-on foam insulation, medical waste, asbestos, media blasting waste, and oil-contaminated soil.

Unidentified Chemical. A chemical/chemical formulation offered for disposal for which partial or incomplete information is available regarding the material's identity such as a container holding the chemical material has incomplete or illegible information, and no SDS is associated with the container contents.

Unknown Chemical. A chemical/chemical formulation offered for disposal for which no information is available regarding the identity of the material or intended use for the chemical, and the container holding the material (frequently not original product container) has no identifying marking or labeling.

Universal Waste. Waste which would normally be regulated as hazardous waste (see definition above), but which has been classified as "universal waste" with alternative management standards as defined in 40 CFR Part 273. Examples include batteries, pesticides, mercury-containing equipment, and fluorescent and HID lamps.

APPENDIX B
ACRONYMS

ADEM. Alabama Department of Environmental Management.

CFR. Code of Federal Regulations.

EEOH. Environmental Engineering and Occupational Health Office.

EPA. Environmental Protection Agency.

HID. High-intensity Discharge.

RCRA. Resource Conservation and Recovery Act.

SAA. Satellite Accumulation Area.

SDS. Safety Data Sheet.

SHE. Safety, Health, and Environmental.

SWMA. Solid Waste Management Area.

APPENDIX C
(Reserved for Verification Matrix)

None.

APPENDIX D
RECORDS

The following records will be maintained according to the "List of Environmental Records" located at:
https://nasa.sharepoint.com/sites/msfceeoh/SitePages/Records-Management.aspx .

D.1 MSFC Form 4072 Process Waste Questionnaire

D.2 Material Certification Form 2435

D.3 Personnel training records for civil service employees

D.4 Personnel training records for contractor employees

APPENDIX E
REFERENCES

AS10-OI-052, Environmental Management