



WICC II Work Instruction

DIRECTIVE NO. WICCI-SOW-08.HW5.007492 **APPROVED BY Signature:** Original Signed by
EFFECTIVE DATE: 1-31-2019 **NAME:** Marianne Simko
EXPIRATION DATE: 1-31-2019 **TITLE:** Division Manager Medical and Environmental Division

Responsible Office: LJT/WICCI/Environmental Office

Title: Hazardous Waste: Management of Building B-29 (note review N223/U81 HW and other WI to combine)

PREFACE

P.1 PURPOSE

Work instruction (WI) is intended to aid the safe operation of the Less-Than-90-Day Hazardous Waste (HW) Storage Facility (Building B-29) at NASA Goddard Space Flight Center's Wallops Flight Facility (WFF). The WICC HW Manager may decide to restructure any number of the recommendations to coordinate with existing operations. Any method of incorporating these procedures into WICC HW operations is acceptable as long as they are included.

P.2 SCOPE

This WI applies to environmental management services performed by the WICC Environmental Office at WFF. This WI does not supersede existing directives from NASA, GSFC, or WICC; nor any federal, state, or local law or regulation. In fact, many such standards and regulations are referred to in this WI when the information contained herein is too detailed to be presented in this format.

P.3 REFERENCES

P.4 CANCELLATION

P.5 TOOLS, EQUIPMENT, AND MATERIALS

- Personal protective equipment (PPE; Level D recommended).
- Emergency communication device.
- Bung wrench.
- Drum cart.
- pH paper.
- Labels: HW, NON-REG, Flammable, Corrosive.
- Permanent marker.



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P.6 SAFETY PRECAUTIONS AND WARNINGS

- Wear appropriate PPE.
- Follow Hazardous Waste Management Job Hazard Analysis.
- Technicians performing these tasks should be HAZWOPER certified in accordance with 29CFR1910.120.
- Practice the “buddy system” (do not work alone).
- Carry radio or cellphone capable of receiving WFF ECHO alerts for weather alerts and emergency communication.

P.7 TRAINING

- HAZCOM
- HAZWOPER

P.8 RECORDS

Record Title	Record Custodian	Retention
GSFC 23-65 (12/03) INSPECTION RECORD <90- DAY STAGING FACILITY	NASA WFF Medical and Environmental Management Division (MEMD)	*NRRS 8/23A8 Cutoff annually. Destroy with concurrence of Center or NASA Counsel’s Office 75 years after cutoff or when no longer needed, whichever is later.

* NRRS – NASA Records Retention Schedule ([NPR 1441.1](#))



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P.9 INSTRUCTIONS

In this document, a requirement is identified by “shall,” a good practice by “should,” permission by “may” or “can,” expectation by “will,” and descriptive material by “is.”

This instruction is divided into the following five sections; each section describes procedures for performing the activities or functions needed to operate the HW storage facility:

1. Facility Opening
2. Material Handling and Storage
3. Facility Closing
4. Emergency Response
5. Additional Topics
 - Host/WICC Interface
 - Signs
 - Visitors
 - Breaks

Each section can be used independently. However, to avoid redundancy, some sections refer to other sections within this document. It should be noted that this WI is intended to be an operational guide for the HW storage facility. As existing HW programs at GSFC and WFF are updated or new programs are implemented, some procedures and recommendations may be discarded or revised.

1. Facility Opening

Opening and entering a HW facility without taking appropriate safety precautions can expose personnel to high levels of risk. This section identifies and describes storage facility opening and establishes standard procedures for the WICC HW Manager and workers to follow. Employees conducting HW management with the HW Facility are to be trained and have a current HAZWOPER Certification in accordance with 29 CFR 1910.120

Five key actions are necessary to safely open the standard design storage facility on a daily basis: (1) pre-operational perimeter inspection and entrance into the HW facility, (2) personnel briefing/task assignment; (3) activity planning; (4) facility activation; and (5) internal inspection.



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1.1 *Pre-operational Perimeter Inspection and Entrance into the HW Facility*

Performance of a pre-operational perimeter inspection can provide workers with useful information for determining whether or not the HW facility is safe to enter. Pre-operational perimeter inspections are limited to the HW facility exterior, including the loading dock. Inspectors will be HW facility employees familiar with the various facility systems and components. The primary focus of the inspection is to verify building security and support system activation. Special tools or equipment, other than facility keys and minimum PPE, should not be necessary.

The inspector will observe and listen to various system components to verify that they are in working condition. Any item found to need repair or replacement will be noted and reported to the WFF HW Manager, who will initiate corrective action. The HW facility will be entered only after the perimeter inspection has been completed and the inspector has concluded that the facility appears safe to enter.

Ventilation systems in B-29 operate continuously (24-hours/day). Prior to entering the facility, listen for the ventilation fans. If the fans are not running call the HELP desk. To gain access to the facility, open the two large rollup doors for 10 minutes before engaging in continuous work in the building. In the event of power outage, ventilation systems should operate for a minimum of 10 minutes before entry is attempted to allow for at least one complete air exchange.

When the ventilation fans are running, inspectors should enter the HW facility only through doors designated as personnel entrances. Personnel should first look through the glass in the door to check for any visual signs of release. If any release is noted, STOP, EXIT, and CALL 911.

1.2 *Personnel Briefing/Task Assignment*

Accounting for personnel entering the HW storage facility or for those involved in HW activities is a fundamental responsibility of WICC HW Manager. Knowledge of the whereabouts of personnel is critical during emergencies. When personnel are involved in HW pick-up or working in building B-29, the WICC HW Manager is normally informed by verbal acknowledgement. This may be vis-a-vis, by telephone, or portable communication device. Accounting for visitors (e.g., HW merchandise screeners, contract disposal personnel, guests) will be addressed in Section 5, Additional Topics.



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The WICC HW Manager is the centralized source of information regarding scheduled events. As such, the WICC HW Manager should conduct a daily briefing to disseminate information and discuss the day's schedule of activities and specific job assignments.

The briefing should include the following:

- The name of the generator, and the quantity and types of HW expected to be picked up.
- The HW scheduled to be removed, the name of the contractor, and the expected time of arrival.
- Special problems associated with particular HW.
- Identification of the generators that are to have pre-pickup inspections, who will conduct the inspections, and the types of HW to be inspected.
- The status (condition) of the storage facility, and procedural changes (if any) to compensate for problems.

The following additional topics can be covered during this time:

- Administrative information, training topics, and training drills to be performed.
- Questions concerning the facility, equipment, or HW.
- HW profiles to be completed (as described in Section 3, Preparation).
- Other problems.

1.3 Activity Planning

Activity planning includes gathering necessary paperwork (e.g., Hazardous Waste Disposal Inventory (HWDI) - GSFC 23-54 (05/2018), HW profiles, Safety Data Sheets (SDS)), gathering keys necessary for facility opening, and assuring that any necessary personal protective equipment (PPE) is available.

Workers scheduled to perform pre-pickup inspections at generating sites or pickup operations at the HW facility must collect the paperwork necessary to accomplish the tasks. Copies of completed HWDIs may be sent to WICC and HW profiles completed before pre-pickup inspections are performed. Completed HWDIs and HW profiles for materials to be pre-inspected are located in Building F-160, Room C135 Environmental Office.

The opening of or movement of hazardous waste containers must always be performed via the buddy system.



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Selection of appropriate clothing and equipment is affected by several factors, including:

- Degree of potential exposure to the HW to be handled.
- Chemical and physical properties of the HW to be handled.
- Toxicity of the HW.
- Type of container.
- Activities occurring simultaneously in the work area.

It is important to recognize that using inappropriate personal protective clothing and equipment can result in serious problems in the event of an exposure. In certain cases, chemical exposure may be increased. Workers choosing PPE for handling specific chemicals should refer to the HW profiles on file at Building F-160, or consult WICC management for assistance.

1.3.1 Eye Protection

Eye protection (e.g., goggles, safety glasses, face shields) is recommended for personnel performing HW operations. All eye and face protection should conform to the specifications in Title 29 Code of Federal Regulations (CFR), Section 1910.133. Personnel requiring corrective lenses to perform daily operations should be aware that using contact lenses may cause complications in the event of a HW release. Chemical contaminants may be absorbed by contact lens material or may become trapped under the lenses and cause eye discomfort or damage. If corrective lenses are worn with full-face respirators, optical inserts should be used.

1.3.2 Skin and Body Protection

Workers participating in HW operations should wear body protection (e.g., footwear, gloves, aprons, coveralls). Footwear should provide crush protection (for drums rolling over feet) and chemical protection. Gloves should protect against laceration, abrasion, and chemical absorption, and should have an adequate gripping surface to increase dexterity. Proper clothing should supplement the protection provided by coveralls or aprons. HW workers should wear shirts with long sleeves and pants with long legs while participating in HW related operations and in accordance with the prescribed dress code.



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1.3.3 Respiratory Protection

Respirators may be necessary when workers are exposed to open containers of hazardous waste, or when the material handled is defined as immediately dangerous to health (IDLH) or is an Occupational Safety and Health Administration (OSHA) regulated carcinogen (e.g., asbestos) for which no exposure is acceptable. Prior to opening a container, review the Safety Data Sheet Prior to determine if a respirator is needed. Employees must have a current respirator physical, respirator training and fit testing. Employees must perform a fit check prior to each use.

1.4 *Facility Activation*

All electrical power to the HW facility can be controlled through circuits and switches inside the electrical room. In addition, the electrical room contains a backup power source for emergency lighting and heat detection/alarm systems. Activation of the various systems is critical for the performance of daily operations such as storage, receiving, and transport.

No operation requiring HW facility use should be attempted or continued when power to the electrical room is disrupted (power failure), or when the facility is operating on the emergency backup power system. Procedures to be followed by HW workers during power loss are outlined in Section 4, Emergency Response.

Electrical room inspection and activation should be performed by electrical facility employees who have been oriented to the various electrical room panels, components, and switches. The individual performing the electrical room inspection/facility activation will need facility keys to open the electrical room doors and reset any alarms and controls contained within the room. The following are guidelines for electrical room inspection/facility activation:

- Unlock and open electrical room doors.
- Activate switches for the electrical room's fluorescent lighting and ventilation.
- Assure that the electrical panel disconnect switch is in the connected position.
- Activate all interior lighting and ventilation fans at the electrical panel control box.
- Observe zone indicators; assure power is being supplied to them.
- Note any tripped breakers and determine cause before resetting.



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- Assure that the fire alarm disconnect switch is in the connected position.
- Inspect electrical room roof for evidence of leaks.
- Inspect electrical room ventilation ducts for obstructions.
- Inspect emergency power battery for:
 - Evidence of corrosion;
 - Proper electrolyte level (if wet cell);
 - Properly functioning recharge status indicator light; and
 - Functioning test switch/indicator.

Any item found not functioning, or showing signs of imminent failure, should be brought to the attention of the WFF HW Manager, who should arrange for support activity personnel to fix, replace, or, in the case of tampering, investigate each item. Storage of HW and/or building/cleaning supplies (e.g., paint, cleansers) inside the electrical room are strictly prohibited.

1.5 Internal Inspection

Only qualified WICC personnel familiar with overall HW facility operation and trained in HW handling should inspect the facility's interior. Subsequent operations (e.g., storage, transport, receiving) require a minimum of two people. The chemical storage areas should be inspected each time the HW facility is placed into operation. Inspectors should report any item in need of repair to the WFF HW Manager so that repairs can be initiated or storage room operations suspended.

2 Handling and Storage

Material handling and storage consists of safely transporting a hazardous commodity, placing it into storage, and subsequently removing it for reutilization or disposal. General storage procedures are integral elements of WICC's daily operations and should be followed at all times. When dealing with HW, additional precautions should be observed to prevent a reaction between incompatible HW that could result in the following:

- Extreme heat or pressure, fire or explosion, or violent reaction;
- Flammable fumes or gases in sufficient quantities to pose a risk of fire or explosion;
- Uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health;
- Damage to the structural integrity of the container and the facility housing the



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material or waste; or

- A threat to human health or the environment through other means.

2.1 *Coordination of Information*

The guidelines identify procedures and precautions to assure separation of incompatible hazardous property when placing HW into storage. These guidelines take into account the inherent dangers associated with each storage code and provide safe operational procedures for hazardous property storage. To assure safe operation of an HW storage facility, facility workers must have available, or be able to identify:

- The hazard classification of the material (e.g., corrosive-acid, toxic, etc.)
- The storage area housing the hazardous property.
- The mode of transport (e.g., the hydraulic lift, hand-truck, drum truck).
- Safe procedures for storing the material specific to the hazard classification.

Information regarding a hazardous item's classification and storage area assignment is listed on the HW profile and should be readily available to facility workers. If this information is not available, refer to Section 3, Preparation, to determine the procedures for assigning a storage classification and storage location. If additional information is required, contact WICC management for assistance. The guidelines in this section indicate the proper material handling procedures and equipment for hazardous property.

2.2 *Material Handling Procedures and Equipment*

Material handling can be accomplished both mechanically (e.g., hydraulic lifts, hand-trucks, drum-cart s) and manually (e.g., a worker physically lifting an item). Most material handling involves a combination of these methods.

This section discusses basic material handling techniques necessary for safe and efficient HW movement. There are some specific handling guidelines that may be used in the various storage areas. The next step is determining the storage area.

Large-volume containers are known as bulk. Bulk may be defined as HW in containers that are 5-gallons or more. Small-volume containers are defined as containers that can be hand carried (e.g., small cans, jars, boxes, and bags) and are stored in containers less than 5-gallons.



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Appropriate procedures will be used for all material transport/handling operations discussed in this document (e.g., removing HW from the transport vehicle, staging HW, storing HW, retrieving HW from storage locations).

2.3 *Procedures for Unloading HW from Transport Vehicle*

As an example of materials handling, this section presents the specific case of removing a 55-gallon drum from the transport truck and storing it. Under normal operating conditions, the drum is maneuvered onto the lift gate. The lift gate is lowered to the ground. The drum is removed from the lift gate with a drum cart and is placed accordingly. The following general practices are to be observed when HW is brought to Building B-29:

- The transport vehicle will be properly secured.
- The transport vehicle will position HW for unloading by manual or mechanical means.
- All operators will observe standard safety precautions for unloading.

2.4 *Basic Material Handling Principles*

The following general practices are to be observed when moving HW:

- Drum Carts
 - Drum Carts are used primarily in the load/unload areas, staging areas, and for transporting 55-gallon drums to and from storage.
- Hand Trucks
 - Articles will not be stacked more than two tiers high when transported by hand trucks.
- Hand Carrying
 - HW will be hand carried only if no other method of transport is available or feasible.
 - If items are to be hand carried a long distance (over 10 feet), a bucket is recommended.
 - HW will be carried with two hands unless a handle is available on the



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container.

- Cart - The cart is not official Material Handling Equipment (MHE). However its usefulness is for transporting large quantities of bottles into the storage bays.
 - Make sure all bottles are resting on their base and directly on the surface of the cart. Items such as bottles should never be placed on top of other items such as boxes
 - Do not overload the cart.
 - Be attentive to the floor conditions when moving the cart into the storage room area in order to prevent tumbling the cart or knocking off any bottles.

In addition to the above precautions, the following general procedures are to be observed:

- Incompatible HW classifications will be transported separately (see HW profile for compatibility criteria).
- Floor obstructions (e.g., masonry dividers, any permanent elevated floor fixture which could cause tripping) must be conspicuously identified in accordance with Title 29 CFR, Section 1910.144. Building B-29 has no structural tripping hazards.
- The Material Handling Equipment (MHE) will be examined for gross contamination and, if necessary, decontaminated (according to procedures set forth in Section 4, Facility Closing) before transporting a different HW classification.

2.5 *Storage Procedures*

Safety procedures for storing HW specific to an item's hazard classification are presented in Table 1. This table enables facility workers to identify safety procedures that will mitigate the risks specific to the hazardous property being stored.



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Table 1 Safety Procedures for Storing Hazardous Waste

	Flammable Liquid	Combustible Liquid	Acid	Base	Oxidizer	Reducer	Water Reactive	Flammable Solid	Toxic	Gas Cylinder	Low Hazard	Irritant
Maintain cool environment	X									X		
Keep away from ignition source (e.g., spark, flame)	X	X	X	X		X	X	X	X	X		
Store with minimum general ventilation rate	X	X	X	X								
Ventilate storage area for 10 minutes prior to entry	X	X	X	X					X			X
Store in climate control area (32 to 70° F)			X	X					X		X	
Avoid contact with water or moisture			X	X	X		X	X	X			
Separate acids from bases by 6 feet			X	X								
Store in water-tight containers			X	X		X		X				
Do not store in area with sprinkler system								X				
Maintain routine inspection of storage containers	X	X			X	X	X	X			X	
Provide additional lighting for all storage activities	X	X	X	X	X		X		X			X

TO VERIFY THIS IS THE CORRECT VERSION, CHECK THE WICCII WIIMS SYSTEM AT
<https://wiims.wff.nasa.gov/WIIMSportal/portal-II.jsp> PRIOR TO USE.



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The following example shows how Table 1 should be used.

Example: Three 55-gallon drums of Methyl Ethyl Ketone (MEK) are staged in the load/unload area. Information from the HW profile indicates that MEK should be stored in the flammable bay (see Figure I). Locate Flammable Liquid on the top line of Table 1 and follow down the vertical column to each “X”. Review the corresponding safety procedures listed on the left side of Table 1. The following safety procedures are given for MEK:

- Maintain cool environment.
- Keep away from sources of ignition (e.g., sparks, flames, heat).
- Store in an area with a minimum ventilation rate of **1** cubic foot of air per minute per square foot of floor area.
- Provide additional lighting for all storage activities associated with large or small storage closets.
- Routinely inspect for container integrity.

In general, for all materials stored in Bldg. B-29, the following principles apply:

- Evacuate facility immediately in the event of a HW spill, and notify the WFF Fire Department/Emergency Response Team or 911.
- Position HW containers with the HW label in clear view.
- Position containers so as not to block MHE and personnel aisles or exits, ventilation louvers, light sources, alarms, monitors, or fire suppression nozzles.
- Wear proper PPE (as advised in Section I, Facility Opening).



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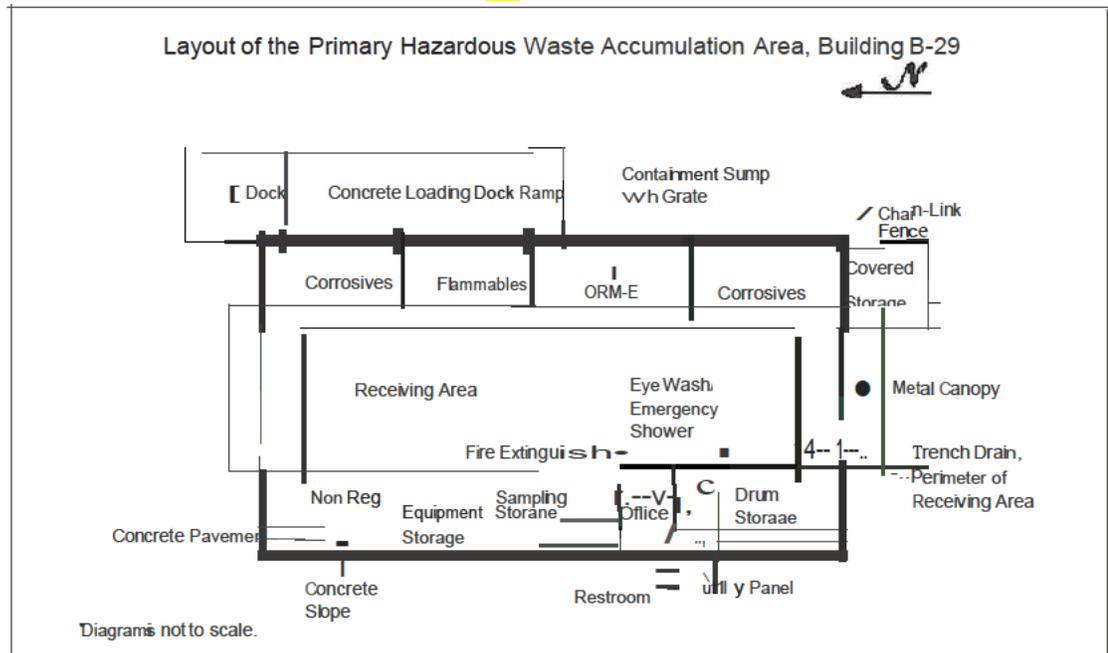
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Figure 1:
Layout of the Central Accumulation Area Building B-29
29



2.6 Storage of Paint Waste

Paint waste generators and HW personnel need to be aware of the potential for reactions between polyurethane and latex/water based paint compounds. The resulting compounds react with water to produce carbon dioxide. This gas production can develop sufficient pressure to bulge and rupture a 55-gallon drum. WICC personnel need to attend to the proper identification of paint wastes at the pre-pickup inspection. The weekly HW storage inspection should also determine the integrity of the paint waste containers.

2.7 Storage of Batteries

All batteries must have terminals taped prior to being stored or shipped to prevent accidental discharge.



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3.0 Facility Closing

To properly close the HW storage facility, the following steps must be taken: conclude operations; close all containers, prepare storage areas, staging areas, and loading dock for closure; exit from operations area; decontaminate personnel; and attend to administrative tasks.

3.1 Securing Operations

Concluding operations (e.g., unloading, storing) is the first step in facility closing. The WICC HW Manager will determine when to initiate closing operations. Consideration should be given to the following:

- Closing activities should be performed only during daylight hours, unless outside lighting is provided to adequately illuminate the loading dock and other outdoor areas.
- Pick-up, unloading, material handling, and storage activities should be concluded early to allow sufficient time to perform closing activities properly.
- Before operations are concluded, all HW should be inside storage areas on storage aids, with the service aisle, staging area, and loading dock clear of HW.
- Severe weather, such as thunderstorms or hurricanes, may affect closing activities. (See Section 4, Emergency Response.)

3.2 Facility Preparation

Preparing the facility for closing consists of two tasks: (1) inspecting the storage areas and (2) accounting for MHE and other tools used during the day. Pre-closing inspections of the storage areas focus on HW accountability and storage room security.

Personnel performing pre-closing inspections will physically enter each storage bay and visually inspect for the following:

- Containers are stored in compliance with regulations (i.e., properly segregated, stacking height limitations observed).
- Drums and other containers are closed and not leaking.
- Cabinets/storage aids are closed.



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Upon completion of storage bay inspections, any problem discovered should be immediately corrected or reported to the HW Manager.

Inspectors examining access aisles or the staging area will assure the following:

- HW containers are not left outside the storage areas.
- The emergency exits are closed and secure.
- The main office door is shut and secure.

3.3 Decontamination

All HW facility workers and guests should decontaminate themselves before leaving. Facility workers should remove and clean all protective gear (e.g., goggles, boots) before storing it properly. If coveralls or gloves are contaminated, they should be deposited in drums containing used rags and disposed of as HW. At Building B-29, no shower facilities are provided. It is strongly recommended that personnel wash before leaving Building B-29; washing the arms (from the elbow down), hands, and face is recommended when showers are not taken.

3.4 Administrative Tasks

Facility keys should be returned to the appropriate location. The HW Manager should assure that all the paperwork for operations completed that day is collected and filed, and that the hazardous waste inventory spreadsheet is updated. The inventory should reflect daily changes in quantity or type of materials. At Building F-160, the master inventory listing all material stored inside the HW facility is kept electronically on the Environmental Drive. This inventory can be made available to the fire department in the event of an emergency.

4. Emergency Response

During operation of the HW facility, emergency situations and conditions may develop that procedural or engineering measures cannot predict, prevent, or control. These situations and conditions may threaten the facility, the surrounding environment, stored HW, and individual workers. The appropriate response to each situation or condition depends on the type of mishap and how it is perceived. For example, a fire or explosion within the facility is immediately life threatening and demands prompt action to prevent or minimize injury to personnel and lessen damage to the facility, HW, MHE, and the environment. Conversely, low hazard HW (e.g., waste oil) leaking from a drum stored



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inside a module requires prompt action, but the situation is not immediately dangerous to life and health and should be handled accordingly.

This section provides standard emergency response procedures for facility workers, and focuses on the emergency response actions HW workers can take to prevent or minimize injury to themselves and other workers. The procedures presented in this section will complement and supplement the Integrated Contingency Plan at WFF. This section in no way supersedes any existing standard operating procedures.

At Building B-29, the facility layout, the communications network, the readiness of the facility, and the type of emergency situation are key factors that may influence personnel response to emergency situations. These factors should be familiar to all individuals who routinely come in contact with HW. New employees will be trained on these elements upon hire.

If an emergency requiring evacuation occurs, personnel will select the shortest and safest route to the exit most remote from the emergency. A general evacuation plan based on the facility layout is posted. The plan must indicate evacuation routes, points of assembly, and means of accounting for personnel after they have exited from the facility. According to Title 29 CFR, Section 1910.38, this plan must be available to employees at all times, and personnel must be trained in and thoroughly familiar with described evacuation procedures.

4.1 *Responsibilities*

The HW Manager and WICC employees should follow the procedures outlined below.

4.1.1. HW Manager

The HW Manager should:

- Evacuate personnel from the facility, as necessary.
- Account for all employees and visitors.
- Designate an assembly point, a safe distance from the emergency site.
- Perform on-scene assessment of the extent of the emergency.
- Assure that the alarm system has been activated, and notify emergency personnel and the FOM, as required.



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4.1.2. WICC Employees

WICC employees should:

- Familiarize themselves with emergency response procedures.
- Activate the alarm system from the nearest accessible pull box.
- Evacuate the HW storage facility, as directed, in a calm and orderly manner.
- Meet at a pre-designated assembly point for a head count.
- Use emergency first-aid procedures, as required.

4.2 *Emergency Evacuation*

All personnel will evacuate the required area following prescribed emergency evacuation routes in a calm and orderly fashion and will report immediately to the pre-designated assembly area. All WICC personnel must become familiar with these procedures. WICC employees should remember the following general guidelines:

- Physical hazards, curbs, are identified by yellow paint (in accordance with Title 29 CFR, Section 1910.144).
- If an alarm is sounded and the precise location of the spill or fire is unknown, exit through the nearest available door.

4.3 *Contaminated Personnel*

The HW profiles and/or SDS list the constituents for each HW handled at Building B-29. Before handling any materials, employees should become familiar with each type of HW they handle.

Building B-29 has emergency eyewash/shower stations in the chemical storage area main room. The emergency eyewash/shower unit facilitates rapid decontamination of personnel exposed to certain types of HW. Contaminated workers able to walk to the eyewash/shower without assistance should do so immediately. Contaminated workers unable to go to the eyewash/shower station unaided should notify coworkers and should be assisted in emergency decontamination procedures. Supervisory personnel should call for medical assistance immediately.



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Employees experiencing any symptoms of overexposure to HW should notify their immediate supervisor. These symptoms include:

4.3.1 Eyes - Persistent burning, itching, or watering

- Response:
 - Proceed directly to the nearest eyewash station. If contamination impairs vision, obtain assistance from nearest available personnel.
 - Place face in eyewash station and press valve. If only one eye is contaminated, position head with the clean eye up to prevent contamination by runoff. Irrigate eye(s) continuously for 15 minutes or until medical help arrives. Do not rub.

4.3.2 Respiratory Tract - Burning in nose or throat, tightness in chest, difficulty breathing, light-headedness, or fainting

- Response:
 - Get to fresh air immediately. Notify medical personnel.
 - Evacuate HW personnel.

4.3.3 Skin - Burning, redness/staining, itching, or tingling

- Response:
 - If contamination is widespread, proceed to the nearest emergency shower station. Remove contaminated clothing while standing directly under the shower nozzle. Flush the contaminated area continuously for 15 minutes or until medical help arrives.
 - If symptoms are located on an extremity (e.g., hand or arm), remove contaminated clothing and hold the affected extremity under running water for 15 minutes or until medical help arrives.

4.4 Severe Weather

WICC personnel must follow prescribed procedures during severe weather conditions.



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4.4.1 Thunderstorms

- Cease all loading/unloading activities upon notification by Wallops Lightning Notification System of impending severe thunderstorms.
- Move all staged HW into the facility.
- Engage electrical personnel to check backup electrical and ventilation systems for emergency readiness.
- Properly secure and protect all materials in outdoor storage.
- Check electrical and ventilation systems for proper operation upon reactivation of normal work procedures (refer to Section 1, Facility Opening).

4.4.2 Blizzards

- If a severe snowfall occurs, do not begin operations until the immediate area has been cleared of snow accumulation, especially the load/unload area and access roads to the HW storage facility.
- Check electrical and telephone services for snow buildup to reduce the potential of system failure.

4.4.3 Hurricanes

- Move all staged HW into the facility.
- Cease operations as a hurricane nears the HW storage area.
- Protect loosely stored equipment with specially designed battens.
- Check electrical and ventilation systems for proper operation upon reactivation of normal work procedures (refer to Section II, Facility Opening).

4.4.4 Tornadoes

- Move all staged HW into the facility.
- Specify a location, as near to Building B-29 as possible, to be used as a shelter if a tornado occurs.
- If time permits and no other suitable shelter exists, retreat to the bathroom.
- Notify appropriate authorities of downed electrical lines.
- Request that appropriate individuals remove wreckage and debris from the immediate area.



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- Notify the WFF Fire Department as deemed necessary by the On-Scene Coordinator (OSC).

4.4.5 High Winds

- Move all staged HW into the facility.
- Secure all loose equipment.
- Discontinue loading/unloading operations.

4.5 Accident

Immediately initiate response procedures if an accident involves a spill (e.g., container rupture).

4.5.1 Personnel

- As soon as possible, move personnel with minor injuries away from imminent danger.
- In cases where injuries are potentially life threatening, but no immediate environmental danger (e.g., fire, spill) exists, do not move injured personnel until medical help or the WFF Fire Department arrives.
- If imminent environmental danger does exist, attempt to reduce the hazard.
- If no other alternative exists, move severely injured persons away from immediate danger. Extreme caution must be used under these conditions. Do not complicate injuries.

4.5.2 Equipment

Leave damaged equipment in place, if possible, until a thorough accident investigation and analysis can be performed.



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5. Additional Topics

5.1 Support Personnel

Fire alarms are tested by on-site fire alarm technicians. Fire extinguishers are inspected monthly by the WFF Fire Department. The WFF Fire Safety Engineer routinely conducts building safety inspections.

The WFF Fire Department provides emergency medical response and can provide response in less than 4 minutes.

Evaluation of some hazards on WFF requires complex equipment and laboratory techniques that WICC is not capable of performing. Offsite subcontractors are utilized when these hazards cannot be identified by WICC personnel and equipment.

5.2 Signs

Various signs required or recommended for use in an HW storage facility will inform employees and visitors of immediate or potential hazardous conditions, safety precautions, emergency procedures, and emergency equipment used for emergencies and for routine operations. Signs posted outside the facility should be legible from a distance of at least 25 feet, and signs inside the facility should be legible from the opposite side of the room. Signs must be in English. Guidelines on sign design are provided in Title 29 CFR, Section 1910.145. The WICC HW Manager for HW Management should verify that the following signs are present, unobstructed, and replaced if missing.

- Signs stating "Danger, Unauthorized Personnel Keep Out" or "Danger, Hazardous Waste, Authorized Personnel Only" must be posted on all external facility walls and should be posted along the access route to the facility.
- Signs should be posted inside storage compartments, at entrances to storage compartments, and on exterior walls indicating the hazard class of materials stored within the module or closet (e.g., "Danger - Flammable Liquids," "Caution - Acids," "Caution - Oxidizers," "Danger - Flammable Corrosives").
- Stacking height limitations should be indicated in all storage areas. This can be accomplished by posting signs or by painting a line around the storage compartment wall. HW at Building B-29 should not be stacked.
- "No Smoking" signs must be posted outside the facility (in view of the load/unload pad), inside the staging area, and at entrances to and inside storage



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areas containing ignitable or reactive materials (including: ignitable, corrosive and toxic). "No Smoking" signs at Building B-29 should be posted throughout the interior and exterior of the building.

- "No Eating or Drinking" signs should be posted inside and outside the facility except in areas designated for eating and drinking.
- The following signs should be posted to identify the location of equipment and to maintain access to this equipment:
 - "Emergency Eyewash/Shower - Do Not Block" (Instructions and a diagram depicting how the eyewash and shower are activated should also be posted.)
 - "Fire Alarm - Do Not Block."
 - "Fire Extinguisher - Do Not Block."
 - "Telephone - Do Not Block" (Relevant emergency numbers (e.g., Hospital, WFF Fire Department, WFF HW Manager) should be posted on or near the telephone.)
- All emergency exits should be provided with an illuminated exit sign (inside) and an "Emergency Exit - Do Not Block Doorway" sign (outside). All emergency exits should be provided with a sign stating "Step Up" (inside).

The following charts should be placed at the entrance to the facility:

- A HW facility layout depicting the storage areas and rooms and the class of HW stored inside.
- A HW facility layout, depicting emergency exits, routes of escape, and fire alarms.
- A set of instructions detailing procedures to follow in the event of a HW spill.
- Signs should be available for posting if a HW spill occurs inside a storage compartment (e.g., "Danger - HW Spill, Keep Out") or if a HW spill occurs inside the staging area or on the loading dock (e.g., "Danger - HW Spill, Keep Away").
- Disconnect switches, circuit breakers, and activation switches in the electrical room should be labeled to indicate on/off positions and to identify equipment activated (e.g., "Fire Alarm Disconnect," "Exhaust Fan "Lights ").
- Defective equipment (e.g., MHE, PPE) that is not removed from the facility should be conspicuously labeled "Inoperative."
- A sign stating "Authorized Personnel Only" should be posted, and a sign stating "Office" should be posted on the facility's office door.



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5.3 Visitors

During the course of HW facility operation, non-WICC personnel may require access to the facility to perform essential functions such as inspections, maintenance, or Contract HW removal. Provisions should be made to assure visitor safety inside and near the HW facility. This section provides visitor safety procedures.

- Prospective visitors should notify the storage facility in advance so that arrangements can be made without disrupting ongoing operations.
- Visitors who have handicaps that impede exit or who cannot independently operate emergency doors (e.g., those in wheelchairs, on crutches, in body casts) will only be allowed in the facility while under constant escort.
- Visitors with uncorrected hearing deficiencies or significant handicaps interfering with the ability to recognize emergency alarms will only be allowed in the facility while under constant escort.
- All visitors regardless of the reason for their visit should sign in on the sign in sheet provided in the B-29 office. Attached to the sign in sheet, an information sheet lists the facility hazards and emergency information.
- Escorts should be provided to all visitors for the duration of their visits. The escorts should be familiar with facility procedures and facility engineering and safety features.
- All visitors should be briefed on emergency exit locations and emergency alarms before they enter the facility.
- Guests should be made aware that decontamination procedures must be followed if they come into contact with any HW or containers.

Visitors not directly involved in HW operations should be provided with PPE, including goggles (chemical) or safety glasses. Contract HW removal crews should be provided PPE by their employer.

5.4 Breaks

Building B-29 has an office isolated from the HW storage areas. Employee eating and drinking will be prohibited in all but the office areas. There will be no smoking within Building B-29. Employees will strictly adhere to the following safety precautions:

- Remove all special PPE (e.g., respirators, coveralls, boots, and gloves) before entering toilet facilities or break areas. Store PPE in the equipment room.



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- Thoroughly wash all body parts that have come in direct contact with HW before entering break areas.
- Wash hands whether or not protective gloves were worn while handling HW.
- Smoke fifty feet outside the Building B-29 perimeter.
- If employees are required to leave the HW storage facility, they will follow proper decontamination procedures (see Section 3, Facility Closing, Section 3.3, Decontamination).



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CHANGE HISTORY LOG

Revision	Effective Date	Description of Changes
A		Initial Release
B**		

***subsequent revisions will be alphabetical beginning with B. If this is the baseline version, leave this and the remaining revision blocks blank*