

**GUIDELINES FOR  
HOUSEHOLD HAZADOUS WASTE COLLECTIONS  
With Bulking on Site**

**TABLE OF CONTENTS**

1.0 INTRODUCTION

2.0 TRAINING

2.1 General Requirement

- 2.1.1 Supervisors and Other Decision makers
- 2.1.2 Pour-Off Employees/Emergency Responders
- 2.1.3 Other Employees Handling Wastes

2.2 Site Safety Meeting

3.0 SITE REQUIREMENTS

3.1 Site Placement

3.2 Site Preparation

3.3 Site Setup

- 3.3.1 Off-Loading
- 3.3.2 Segregation/Packing
- 3.3.3 Pour-Off/Squishing
- 3.3.4 Command Center/Main Emergency  
Response Station
- 3.3.5 Employee Break Area

4.0 EQUIPMENT REQUIREMENTS

4.1 Site Setup

4.2 Pour-Off

4.3 Command Center/Main Emergency Response Station

4.4 Spill Stations

4.5 Employee Break Area

## 5.0 PERSONAL PROTECTIVE EQUIPMENT

5.1 Site Setup/Breakdown

5.2 Off-Loading/Segregation/Packing

5.3 Pour-Off

## 6.0 CONTINGENCY PLAN

6.1 Emergency Information

6.2 Emergency Action

6.2.1 Spill or Chemical Release

6.2.2 Flammable Conditions

6.2.3 Fire

6.2.4 Reaction

6.2.5 Employee Injury or Exposure

6.2.6 Evacuation

## 7.0 SITE-SPECIFIC INFORMATION

## 8.0 OPERATING GUIDELINES

8.1 Off-Loading

8.2 Segregating

8.3 Pour-Off

8.4 Packing/Shipment

## 9.0 MISCELLANEOUS

## 10.0 APPENDICES

10.1 Site-Specific Information

10.2 Site Safety Meeting Checklist and Acknowledgment

**MXI ENVIRONMENTAL SERVICES  
GUIDELINES FOR  
HOUSEHOLD HAZARDOUS WASTE COLLECTIONS**

**1.0 INTRODUCTION**

Household Hazardous Waste (HHW) Collections pose potential health and safety hazards to community residents and workers at these events, as well as risks to the environment. Community residents may unknowingly bring substances that are extremely volatile, flammable, toxic or unstable. To minimize the potential for a mishap, MXI Environmental Services, of Piscataway, NJ has established this Health and Safety Guideline for HHW operations. Although this guideline presents general requirements for HHW operations, additional requirements may be imposed based on client bid specifics.

This guideline attempts to address the issues involved with the handling of HHW in order to minimize potential human exposure to or injury from handling HHW, as well as to reduce the potential for any environmental contamination.

**2.0 TRAINING**

**2.1 General Requirement**

All MXI Employees participating in HHW collections must have successfully completed the appropriate training as outlined in this section. The training will enable the employee to safely perform her/his function, as well as satisfy the operational objectives of the HHW collection.

**2.1.1 Supervisors and Other Decision Makers**

Employees involved the supervision of operations, waste-related decision-making, lab packing waste, and paperwork must be 40-hour OSHA trained.

**2.1.2 Pour-Off Employees/Emergency Responders**

Employees involved with pouring operations to consolidate wastes or responding to any emergency situations must at a minimum be a 40-hour OSHA trained. Their OSHA training, medical surveillance coverage, and respirator fit testing all must be current.

### 2.1.3 Other Employees Handling Wastes

Employees involved in any other waste handling operations (i.e., off-loading cars, sorting) must have completed the MXI HHW Training Program or its equivalent.

The program will have a component devoted to an orientation of the operational aspects of HHW collections. Employees who are 40-hour trained should also receive this operations orientation. Training must be up-to-date and the employee must have a valid certificate.

Part time or temporary employees must have the same level of training indicated above that is associated with the function they will be performing. Those employees not handling waste, but are involved with other support roles must be involved with the site safety meeting and understand the site contingency plan.

## 2.2 Site Safety Meeting

After site setup, the MXI site Supervisor must conduct a site safety meeting. The purpose of this meeting is to assure each crew member is aware of the following:

- Requirements of HHW Guidelines
- Each person's role in the HHW collection
- Location of safety equipment
- Contingency plans
- Waste packing guidelines & unacceptable materials
- Chemical/Physical hazards associated with the wastes and collection activities
- Personal protection equipment requirements
- Safety precautions/work practices

The site supervisor will utilize the Site Safety Meeting checklist and acknowledgment in Appendix 3 to document the meeting. All individuals who will enter work areas must participate in the meeting and sign-off on the Acknowledgment. Other people at the site associated with the HHWC (local officials, volunteers, EPA personnel, etc.) also should be included in the safety meeting.

## 3.0 SITE REQUIREMENTS

### 3.1 Site Placement

Site Placement requires careful consideration in order to ensure the safety of the operations, as well as the prevention of environmental contamination. Adequate room for collection activities, equipment, waste containers, and

vehicle access/exit must be maintained. The following must be considered when determining the appropriate location of the waste collection area:

- Minimum required operations area – 1200 sq. ft (i.e., 30' x 40');
- Location: Open areas are preferable because of increased air movement (aids in dispersion of vapors);
- Adequate space to allow access for emergency equipment (fire trucks, ambulance, etc.)
- Smooth traffic flow for entrance/egress of participants;
- Adjacent property lines (i.e., homes, businesses) must be a minimum of 50 feet from the collection area;
- The nearest public way must be a minimum of 25 feet from the collection area;
- Car off-loading area at least 35 feet from the pour-off or squisher operations;
- No ignition sources within 50 feet if flammable /combustibles are being poured/squished;
- Proximity to a ground source for grounding if flammables/combustibles are being poured and/or paints squished;
- No other events scheduled for that location;
- No smoking or underground storage tanks within 25 feet;
- Proximity to potable water and a telephone;
- Proximity of fire hydrants;
- Location where waste compactor truck (if applicable) can safely dump load in the event of an emergency (e.g. fire);
- Storage area for waste flammable/combustible drums and packed flammable/combustible materials at least 35 ft. away from potential fire sources, including waste compactor truck and/or rolloff containing empty containers from pour off or squisher operations.

### 3.2 Site Preparation

To further reduce the likelihood of environmental contamination and limit the migration of spilled material, the following site preparation must be performed:

- Seal all storm drains.
- Lay poly in locations where waste will be handled. Include vehicle lanes if required by client. Cover foot traffic areas with plywood. (Plywood may be re-used. Store outside in case of vapor generation. Plywood grossly contaminated or having a strong odor should be discarded properly);
- Work tables will be set up by placing poly-covered plywood on top of 55 gallon drums;
- Designate emergency and spill equipment stations. (See Sections 4.3 and 4.4);

- Designate decontamination area;
- Restrict access to the collection and waste handling areas with caution tape;
- Indoor collection sites should be set up with general room ventilation;
- Indoor collection sites with pour-off and/or paint squishing areas will require local ventilation;
- Identify location where waste compactor truck (if used) can be dumped in the event of a fire within the truck and dumping becomes necessary e.g. ordered by Fire Dept. Location should be selected to minimize likely runoff of water during firefighting activities, or alternately a location where containment material could easily be deployed by on-site personnel.

### 3.3 Site Setup

Five locations will be established to accept, consolidate and pack household hazardous waste: Off-loading; Segregation/packing; Pour-off/squishing; Command center; and Employee break area.

This is the location where household waste is removed from stationary vehicles and placed on segregating tables. Several lanes may be used. Poly should not be placed such that vehicle tires will ride over it, unless requested by the client. The traffic flow must be regulated to avoid overcrowding in the off-loading area. A clear lane must always be left open to allow emergency access in the event of an emergency. Designate the vehicle travel lanes with traffic cones. Residents should be encouraged to stay in their vehicles for their own safety.

Certain materials are not acceptable for disposal at a HHW collection (refer to Appendix 1 for a list of the specific materials not acceptable at the collection event in question). Waste should be inspected for unacceptable materials while still in the resident's vehicle and the resident informed of any waste which can not be accepted. Reactive materials (peroxidizables, multi-nitrated compounds, etc.) also should be identified at this point and handled per Appendix 5.

Tables should be used for placement of waste containers removed from vehicles. Plastic or metal trays may be used to carry containers from vehicles to segregation tables to prevent spilling and contain any leaks. The tray capacity should be sufficient to hold the volume of the largest container being carried. The segregation tables should be covered with poly to protect surfaces. Caution tape should be set up to restrict access to the waste handling areas by residents or other non-CHES personnel.

In the event of a leaking or spilled container in a vehicle, notify the Site Supervisor. The spilled material should be identified by labels, markings, or through customer questioning before handling. MXI is not responsible for spill cleanup in vehicles due to leaking containers and, therefore will not perform any vehicle decontamination, unless a MXI employee has caused the spill.

Absorbents (i.e. 3M pads, speedi-dry) and other cleaning supplies should be kept readily available in the unloading area for quick response to spills outside of vehicles.

### 3.3.2 Segregating/Packing

This is the location where HHW is identified and then more specifically categorized for lab packing or pour-off/squishing.

Tables separating off-loading and segregating should be covered with poly and accommodate the following categories:

1. Paints and Paint-related products
2. Solvents/Oils
3. Aerosols
4. Pesticides
5. Corrosives
6. Others

A MXI-trained employee(s) will be located behind the receiving (off-loading) tables to supervise the segregation and placement of materials into packing containers according to the packing specifications (see Appendix 4).

Lab pack drums/flex bins will be arranged in the same manner as the receiving tables to minimize movement. Plywood will be used to cover the personnel traffic areas to increase traction and prevent rips in poly.

Unidentified containers should be fingerprint tested by a Chemist utilizing an unknowns kit in a designated area away from personnel. “Unidentified” is defined as an unlabelled container the resident has some knowledge of the identity of the contents. **If the resident has no knowledge of the container contents, then the container will be considered an unknown and will not be accepted.**

### 3.3.3 Pour-Off/Squishing

This is the location where wastes capable of being consolidated on site are collected and consolidated via a pour-off operation. Also, paints may be consolidated via a hydraulic squisher device. A MXI-trained employee will supervise these operations and screen all containers to ensure only acceptable materials are poured/squished. Containers to be poured or squished will be transferred to poly-covered tables adjacent to the operation. Containers will then be opened and poured into a receptacle fitted over a collection drum or placed into the squisher. **With the exception of motor oil, any pourable materials not in their original containers will be set aside for pH/oxidizer testing and separate consolidation utilizing compatibility (“bucket”) testing.**

The setup should include the following:

- Compatibility testing will be performed for pourable materials not in their original containers (Exception: motor oil). Test buckets will be located in a drip pan.
- Absorbent will be readily available in the area.
- Proper bonding and grounding procedures (Refer to the MXI Grounding and Bonding Guidelines) will be employed for pouring all flammable and combustible materials.
- A local exhaust blower will be set up to control/reduce employee exposure to vapors from flammable/combustible materials, if the operation is conducted indoors. The blower also will be properly grounded.
- Restrict access to the pour area with caution tape.
- A "Roll-off" or "trash compactor truck" may be located adjacent to the pour-off area for placement of discarded original containers. Refer to the MXI Confined Space Entry Guidelines for their possible applicability.
- All filled flammable/combustible containers must be moved to a storage location at least 35 ft. away from pour-off/consolidation, and compactor truck or rolloff containing empty pour-off/consolidation containers. This is to minimize fire hazard in the event truck/rolloff or pour-off equipment catches fire.

#### 3.3.4. Command Center/Main Emergency Response Station

A table will be set up as common center (CC) for the entire HHW collection. The location of the CC will be determined by the Site Supervisor based on the layout of the other operations. The CC will be the location of first aid equipment and the main emergency response station (see Section 4.3 for specific equipment), as well as all the paperwork processing and other information associated with the HHW collection.

#### 3.3.6 Employee Break Area

An area will be established by the Site Supervisor as an employee break area, where personnel can go to eat, drink, smoke, and rest. The area will be located 50 feet from any waste handling operations. The area should be established in a shaded location when the ambient temperature is above 80°F. Personnel must remove any PPE in the decontamination area before entering the break area and wash before they eat, drink, smoke, etc. Personnel must notify the Site Supervisor upon going to and returning from the break area.

### 4.0 Equipment Requirements

The following is a list of minimum equipment that will be required to set up and conduct HHW site activities. The amount of equipment will vary depending on the anticipated waste volume

#### 4.2 Pour-Off/Squisher Area

- Flexible grounding and bonding cables, including dip rods for bonding bottles/containers being poured;
- Iron or steel rod to install as ground source, if existing source not available
- Wire brush, scraper or sand paper;
- Continuity tester;
- Explosion-proof exhaust blower, if operations are conducted inside. Duct to direct exhaust outside, downwind. Generator or compressor to power blower, if no power on site;
- Ground-fault interrupter circuit (GFCI) if generator or other electrical equipment is used;
- 2 x 20lb ABC-rated fire extinguisher;
- 17H steel 55 gallon drums;
- Drip pans;
- Pour screens or funnels;
- Metal 5 gal. pails for compatibility (“bucket”) testing;
- Absorbent materials (speedi-dry 3M pads);
- Non-sparking (brass) bung wrenches, shovel, and hand tools;
- Opener for paint cans;
- Broom and dust pan;
- “No Smoking” signs;
- Caution tape.

#### 4.3 Command Center/Main Emergency Response Station

- Safety Information Package: HHW Guidelines, emergency phone numbers, hospital directions and reference sources (Chemical Dictionary, DOT ER Guidebook & NIOSH Pocket Guide, MXI Env. H&S Field Manual, 5-page Emergency Response Plan blank);
- First aid kit;
- Eye wash solution;
- Air horn for emergency alarm signal;
- Immediate access to telephone communications;
- Wind sock (or comparable device) visible to all ops areas;
- Combustible gas meter and organics meter;
- 3 x SCBAs;
- 3 x poly-Tyvek, 3 x Saranex, 3 x Barricade suits;
- 3 pairs each Silver Shield, nitrile, PVA, PVC and neoprene gloves. Also, one box latex or nitrile inner gloves;
- 3 pairs chicken boots or rubber overboots;
- Duct tape;
- 1 x 20 lb ABC-rated;
- 1 x 30 lb D-rated fire extinguishers, or dry sand /lime/salt;
- Absorbent materials (speedi-dry, 3M pads, etc.);
- Acid/base neutralizing materials;

- Drum repair kit consisting of plugs and patches;
- Broom and non-sparking shovel or dust pan.

#### 4.4 Spill Stations

There should be a maximum of two additional spill stations located at each end of the collection line.

- Absorbent materials. (speedi-dry, 3M pads, etc.)

#### 4.5 Employee Break Area

- Hand cleaning supplies, if not available on site;
- Towels, if not available on site;
- Cooler with water or other non-caffeinated beverage;
- Oral thermometer for heat stress monitoring (temp.  $\geq 80^{\circ}\text{F}$ ).

### 5.0 Personal Protective Equipment

#### 5.1 Site Set-up/Breakdown

Personnel setting up and breaking down the HHW collection site will be dressed in Level D personal protection, which will include:

- a) Work uniform;
- b) Steel-toe shoes;
- c) Safety glasses with sideshields;
- d) Work gloves (if no chemical contamination) or PVC.

#### 5.2 Off-Loading/Segregation/Packing

Personnel off-loading vehicles, segregating, and packing materials will be in modified Level "D" personal protection to include:

- a) Tyvek disposable white coveralls or CPFI apron w/sleeves;
- b) Steel-toe shoes;
- c) PVC gloves;
- d) Safety glasses w/sideshields or chemical splash goggles;
- e) Reflective vest for off-loaders.

An increased level of respiratory protection and PPE may be warranted in specific situations. Leaking containers, spills or other instances where potential exposure may occur may require upgrading with the guidance of the Site Supervisor.

#### 5.3 Pour-Off / Squisher

Because of the handling of open containers, pour off personnel shall don Level C personal protection. Minimum PPE for pour-off operations includes:

- a) Full-face air purifying respirator with GMC-H or GME-H cartridges (Not required for personnel solely opening containers outside pour-off/squisher area or for personnel loading closed containers into squisher). Faceshield w/safety glasses when respirator not used;
- b) Poly-Tyvek suit or CPFI apron with sleeves;
- c) Latex or nitrile rubber gloves – inner;
- d) Silver shield gloves – outer;
- e) Chicken boots or rubber overboots;
- f) Steel-toe shoes;
- g) Hard hat for Prodeva squisher loading.

In addition, all the gloves will be securely taped to further reduce the possibility of skin contact. Outer boots also will be taped in cases where full suit is used.

## 6.0 Contingency Plan

To prepare for potential releases, spills or emergencies, a contingency plan must be developed. Prior to the HHW collection, the Site Supervisor or other MXI representative should visit the site to gather site-specific information, which will be included in Appendix 2. A traffic flow plan must be established that will allow emergency equipment (Fire Department, ambulance, etc.) access to the site in the event of an emergency. The proposed layout of the site in relation to neighboring structures and properties must also be identified. Location of fire hydrants, or lack thereof must be identified. Fire Department should be prepared in the event the site has no readily available hydrants. Fire contingency plans must be reviewed with local Fire personnel, including potential for trash compactor fire. Locations for the trash compactor truck, and for possible dumping of the truck in the case of a fire (dumping only as directed by the Fire Department) should be made available. This information will be used to develop a site map. A copy of the contingency plan should be distributed to the local emergency organizations, EPA representatives and all other involved parties.

Remember to keep access lanes to the site clear at all times. In the event of an emergency, emergency equipment may need to have direct access to the site. Traffic lanes should be prearranged so there is an open path at all times.

The Site Supervisor will serve as the Emergency Coordinator in the event of an emergency situation.

### 6.1 Emergency Information

Emergency information will be located at the Command Center table. The information will be placed on the table with the job folder. Information to be present should include a copy of the HHW Collection Guidelines containing the site specific information

(contingency plan, emergency phone numbers, hospital directions, etc.) and safety references (Chemical Dictionary, DOT ER Guidebook, NIOSH Pocket Guide, and MXI 5-page Emergency Response Plan). The following services shall be included on the emergency phone list; Fire Department, ambulance, hospital, poison information center, police department, state police, local MXI service center, and local H&S rep.

## 6.2 Emergency Actions

### 6.2.1 Spill or Chemical Release

In the event of a spill or release, the Site Supervisor will evaluate the situation and evacuate the site if necessary. A continuous blast of an air horn will signal the evacuation of the site. The Site Supervisor, with the assistance of the local H&S Representative, next will decide how to respond to contain and clean up the spill/release. Ensure that wind direction is noted in determining evacuation assembly areas: locate upwind.

### 6.2.2 Flammable Conditions

In the event that flammable vapors exceed 10% of the Lower Explosive Limit (LEL), the following actions should be taken:

- Cease all pour operations and evacuate the pour area.
- Eliminate all ignition sources. No Smoking.
- Stop the flow of cars into the area and have all cars in the unloading area exit immediately.
- If vapors do not dissipate in a short period of time (five minutes), notify the local official on site and the Fire Department. Contact the local MXI H&S Rep for assistance on how to proceed.

Low lying and other areas that may hold trapped flammable vapors should be monitored with an LEL meter to ensure vapors have dissipated. After the site has been monitored, the Site Supervisor may give the "all clear".

### 6.2.3 Fire

In the event of a fire, an appropriate fire extinguisher may be used to fight a fire if it is in the incipient stage. The following additional actions should be taken:

- Cease all operations and evacuate the area of all unnecessary personnel. Ensure that wind direction is noted in determining evacuation assembly areas: locate upwind.
- Eliminate all ignition sources.
- Stop the flow of cars into the area and have all cars in the unloading area exit immediately.

- Notify the local official on site, the Fire Department and the local MXI H&S Rep.

#### 6.2.4 Reaction

In the event of a reaction during pouring, the following actions should be taken:

- Cease the pour operations and evacuate the pour area. Ensure that wind direction is noted in determining evacuation assembly areas: locate upwind.
- Notify the Site Supervisor and the local MXI H&S Rep immediately.
- The Site Supervisor will evaluate the situation, evacuate the site if necessary, and decide on any further action.

#### 6.2.5 Employee Injury or Exposure

If an employee becomes injured or ill (i.e., heat-related illness), provides first aid and seek medical attention, if necessary. Notify the Site Supervisor and the local MXI H&S Representative immediately. If there is an injury involving blood, be sure to follow the MXI Bloodborne Pathogens Exposure Control Plan.

### 7.0 Site Specific Information

Site specific information will be gathered prior to the start of the collection and reviewed by the Site Supervisor with the crew during the site safety meeting. Refer to the Site Specific Information Form in Appendix 2 for details on the HHW collection in question.

### 8.0 Operational Guidelines

At a minimum the following steps must be followed during collection operations. It is the Site Supervisor's responsibility to ensure that all employees understand and follow the appropriate guidelines.

#### 8.1 Off-Loading

- When a vehicle enters the off-loading area, the vehicle engine should be shut off and the resident should stay in the vehicle. A MXI employee will then unload the vehicle. Carrying trays may be used to transport the waste containers from the vehicles to the segregating tables.
- Waste should be inspected for unacceptable materials while it is still in the resident's vehicle. Unacceptable waste, per Appendix 1, shall not be accepted. High hazard materials (peroxidizables, multi-nitrated compounds, etc.) will be handled per Appendix 5. ENSURE THAT THE PROCEDURES DISCUSSED IN APPENDIX 5 ARE REVIEWED WITH CLIENT PRIOR TO THE COLLECTION. If a large volume of waste is in closed bags or boxes, they may

be brought to the segregation tables for unpacking. The resident should not be allowed to leave until the waste has been screened.

- In the event of a leaking or spilled container in a vehicle, the material should be identified by labels, markings, or through customer questioning before handling and then overpacked appropriately. The vehicle owner is responsible for decontaminating the vehicle. Only if a MXI employee is responsible for the spilled material should they perform any decontamination. Notify the Site Supervisor in either case. After a MXI decon has been completed the Site Supervisor should inspect the car.
- All containers should be checked for labels and the driver asked to confirm the contents. If there is no label and the driver can identify the container's contents, it must be written on the container.
- In the event an unidentified container is received, it should be fingerprint-tested by a MXI chemist utilizing a fingerprinting kit in a designated area away from personnel. Finger-printed containers must be lab packed for incineration, not poured off. "Unidentified" is defined as an unlabelled container the resident has some knowledge of the identity of the contents. If the resident has no knowledge of the container contents, then the container will be considered an unknown and not be accepted.
- The Site Supervisor should be available to make decisions on what materials are acceptable for collection. Also, refer to Appendix 1 for list of unacceptable materials.
- Immediately overpack any leaking containers.
- If a spill occurs, all operations should stop until the situation is under control and the spill is cleaned up. (See Section 6.2.1, Contingency Plan).
- Containers should not be opened in vehicles for any reason.
- When placing collected waste on segregation tables, check to make sure each piece is in the correct category. Any questions on the appropriate category should be directed to MXI Environmental & the Site Supervisor.

## 8.2 Segregating

- Personnel segregating and packing wastes should be trained under their direct supervisor.
- Ensure drums are labeled, segregated and staged properly. Drums should be arranged in the same manner as the receiving tables to reduce movement and handling.

- Ensure containers are packed according to the packing specifications given in Appendix 4.
- Immediately overpack leaking containers.
- If a spill occurs, all operations should stop until the situation is under control and the spill is cleaned up (See Section 6.2.1, Contingency Plan).

### 8.3 Pour-Off

- A MXI trained employee will supervise these operations and screen all containers to ensure only acceptable materials are poured or squished.
- Locate the pour-off/paint squishing area 35 ft. from the car unloading area, potential ignition sources, and the nearest public way; and 50 feet from adjacent property lines.
- Establish one collection drum for each waste stream being consolidated as indicated in the packing specifications in Appendix 4. Place the collection drums in drip pans.
- If the pour-off or paint squishing operations is conducted indoors, set up the blower to remove vapors. Direct the discharge duct to the outside at least 5 ft. above ground and downwind, away from personnel and ignition sources.
- Assure bonding and grounding wires are attached to a clean, non-corroded, non-painted metal surface on the collection drums and/or the squisher. Use wire brush or other device to remove rust or paint from drums to attach grounding wires. Also ground the blower, if utilized, and the bucket for compatibility testing.
- Establish a ground source. Examples of ground sources which may exist on site include fire hydrants, utility pole grounds, electrical system grounds, and cold water pipes. If no existing ground source is present, establish a ground by sinking a ground rod at least 8 ft. below surface or by submerging a ground rod at least 1 ft. under water in any natural body of water (i.e., stream, pond, etc.). Check grounding/bonding continuity with test device to ensure the resistance of the connections is low (<20 ohms) or shows as being acceptable on test device.
- Cover the outside of all collection drums with poly bags to limit exterior contamination.
- Prior to opening or consolidating any materials, don PPE.

- With the exception of motor oil, any pourable materials not in their original containers will be set aside for PH/oxidizer testing and separate consolidation utilizing compatibility (“bucket”) testing. Monitor for any possible reaction between materials (smoking, fuming, spattering, heat generation, etc.). If a material reacts, do not pour it. Lab pack the container for incineration and start a new bucket test.
- After solvent containers are opened, insert bonding wire/rod and bond to the collection drum, then begin pour off.
- If direct-reading instrumentation or personal air monitoring is specified by Health & Safety, monitor the area while pour off/squishing operations are conducted. Document your readings.
- As soon as a drum is full, it should be closed and labeled before another drum is started. Full drums should be moved to designated storage area, at least 35 ft. away from pour-off and from trash compactor or rolloff.
- Keep ample absorbents (speedy dry, 3M pads) in area and clean up all spills immediately.
- Chemists and pour off personnel should ensure that non-pour off containers (e.g. empty cans of containers brought in by homeowners) are not thrown into the compactor truck or rolloff if there is any possibility they may contain residual chemicals (e.g., oxidizers) which could react with flammables/combustible material, or cause other reaction. Any containers with any residual material will be lab packed.

#### 8.4 Packing/Shipment

Pre-transportation and transportation requirements will be adhered to for packing and shipping all waste containers generated at the HHW collection.

- All lab pack containers shall be packaged with appropriate absorbent material per standard lab pack procedures.
- Reference packing specifications in Appendix 4 for specific requirements of wastestream packaging for the contract.
- All drums generated from the pour off and paint squishing operations shall be checked to ensure container integrity and no exterior contamination.
- All containers shall be checked to ensure proper DOT labeling and other appropriate wastestream information is communicated properly.

- A drum count will be taken to ensure accuracy before shipment (Use of a standard count sheet to reflect piece size and quantity is recommended).
- The Site Supervisor (or the designated person responsible for the generation of appropriate manifest, shipping documents, and other associated documentation) will review all shipping documents with the driver(s) before departure to ensure the completion of all forms as required. This person will also ensure with driver(s) that appropriate vehicle placarding is in place.
- If requested, the Site Supervisor will phone destination plant to communicate the size of the inbound shipment.

## 9.0 Miscellaneous

Refer to the following MXI Health & Safety Programs/Guidelines for additional guidance and information.

- Paint Squisher Work Plan
- Heat/Cold Stress
- Drum Handling
- Decontamination
- Grounding and Bonding Guidelines
- Physical Hazard Control Checklists
- Asbestos Handling
- Respiratory Protection
- Personal Protective Equipment (PPE)
- Bloodborne Pathogen Exposure Control Plan for First Aid Responders
- Confined Space Entry Guidelines

## 10.0 Appendices

1. Site set-up flow and diagram
2. Site-Specific Information for HHW Collection
3. Site Safety Meeting Checklist and Acknowledgment for HHW Collections
4. Packing Specifications for HHW Collections
5. Peroxidizables/Other Reactive Materials
6. Collection-Specific Budget/Pricing Information
7. Collection-Specific Contract

APPENDIX 2 SITE-SPECIFIC INFORMATION FOR HHW COLLECTIONS

SITE NAME: \_\_\_\_\_  
 SITE LOCATION: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

COLLECTION DATE: \_\_\_\_\_  
 SITE SUPERVISOR: \_\_\_\_\_  
 \_\_\_\_\_

SETTING: \_\_\_\_\_ OUTDOOR \_\_\_\_\_ INDOOR

SURROUNDING AREA:  
 \_\_\_\_\_ URBAN \_\_\_\_\_ RURAL \_\_\_\_\_ RESIDENTIAL \_\_\_\_\_ INDUSTRIAL  
 \_\_\_\_\_ OTHER (Specify)

BODIES OF WATER NEIGHBORING SITE:  
 \_\_\_\_\_ STREAM \_\_\_\_\_ RIVER \_\_\_\_\_ POND \_\_\_\_\_ LAKE \_\_\_\_\_ BAY \_\_\_\_\_ OCEAN  
 \_\_\_\_\_ OTHER (Specify)

PROPERTIES/OPERATIONS ABUTTING THE SITE & CURRENT USE:  
 (NOTE: SPECIFY APPROXIMATE DISTANCE TO WORK AREAS)

North: \_\_\_\_\_  
 \_\_\_\_\_  
 South: \_\_\_\_\_  
 \_\_\_\_\_  
 East: \_\_\_\_\_  
 \_\_\_\_\_  
 West: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

CLIENT SITE OPERATIONS:

\_\_\_\_\_

LOCATION OF GROUND FOR SOLVENT POUR OR SQUISHER OPERATION:

\_\_\_\_\_

LOCATION OF EVACUATION ASSEMBLY AREA:

\_\_\_\_\_

LOCATION OF EMPLOYEE BREAK AREA:

\_\_\_\_\_

KEY PERSONNEL AND EMERGENCY NUMBERS:	
Fire Department.....	
Ambulance Service.....	
Police Department.....	
State Police.....	
Chemtrec.....	(800) 424-9300
Poison Information Center.....	

APPENDIX 3. SITE SAFETY MEETING CHECKLIST & ACKNOWLEDGMENT  
FOR HHW COLLECTION

The MXI Site Supervisor will discuss the below listed information with the work crew and other on-site personnel in a site safety meeting.

- 1. SITE LAYOUT/WORK ZONES: Identify Off-loading, Segregation, Pour/Squish, Command Center, Decon & Break Areas.
- 2. CHAIN OF COMMAND (Same Person Can Serve More Than One Function)  
Site Supervisor: \_\_\_\_\_  
Off-loading Supervisor: \_\_\_\_\_  
Lab Pack Supervisor: \_\_\_\_\_  
Segregation Supervisor: \_\_\_\_\_  
Pour-Off/Squisher Supervisor: \_\_\_\_\_
- 3. ROLE/ASSIGNMENT OF EACH WORKER
- 4. EQUIPMENT LOCATIONS: Supplies, First Aid, Fire Extinguishers, Spill Clean-up, Communications, ER SCBAs/PPE, Basic PPE.
- 5. PPE REQUIREMENTS  
Site Set up/Breakdown: Work clothes/safety shoes/safety glasses/gloves.  
Off Loading: Add disposable suit or apron/chemical gloves/traffic vest.  
Segregating/Packing: Add disposable suit or apron/chemical gloves.  
Pour Off Area: Add Poly-Tyvek suit or CPF1 apron/full-face respirator w/combo Cartridges, inner (latex)/outer (Silver Shield) gloves/Chix boots.
- 6. PHYSICAL/SITE HAZARDS  
Vehicular Traffic  
Slips/Trips/Falls  
Sunburn (if applicable)  
Heat Stress/Cold Stress (if applicable)  
Material Handling/Lifting  
Hand Tools  
Flammable Handling – fire/explosion--> ignition sources, bonding & grounding  
Electrical Equipment (if applicable, e.g. squisher) lighting)  
Hydraulic Equipment (if applicable, e.g. squisher)
- 7. CHEMICAL HAZARDS  
Flammables: gasoline, auto products, paints & paint-related materials, aerosols  
Oxidizers: bleach, pool chemicals, disinfectants  
Corrosives: cleaners, disinfectants, batteries, photo chemicals  
Irritants: cleaners, photo chemicals  
Reactives: home or school lab chemicals  
Toxic: pesticides, paints & paint-related products, cleaners, disinfectants, auto products, pool & photo chemicals, batteries
- 8. BIOLOGICAL HAZARDS (If Applicable)  
Insect Bites  
Snake Bites  
Poison Plants, e.g. Poison Ivy

- \_\_\_ 9. SAFE WORK PRACTICES BY AREA:
  - \_\_\_ Off-Loading
    - \_\_\_ Residents Remain in Cars/Extinguish Smoking
    - \_\_\_ Materials/Turn Off Motors
    - \_\_\_ Collection-Specific Unacceptable Wastes/Explanation of What To Do When Homeowner Presents Unacceptable Material
    - \_\_\_ Unlabelled Material Identification
    - \_\_\_ Do Not Open Containers
    - \_\_\_ Check Container Condition to Avoid Leakers/Spills
    - \_\_\_ If Leaker/Spill, Notify Site Supervisor IMMEDIATELY
- \_\_\_ 10. SEGREGATING/PACKING
  - \_\_\_ Flex Bin/Roll-off Packing Guidelines
  - \_\_\_ Generic Packing Guidelines
  - \_\_\_ Complete Necessary Packing List
  - \_\_\_ Drums: Verm, Gaskets, Markings
  - \_\_\_ Flex Bins: Lined, Verm, Secured to Pallet, Inner Containers Sealed/Upright, Markings
- \_\_\_ 11. POUR-OFF/SQUISHER
  - \_\_\_ Acceptable/Unacceptable Pour-off or Squisher Materials
  - \_\_\_ Oxidizer/pH/Bucket Test Mat' is Not in Original Containers (Exception: Motor Oil)
  - \_\_\_ Restrict Access w/Caution Tape
  - \_\_\_ Spill Containment
  - \_\_\_ Bonding/Grounding/Bare Metal Contact on Drums/Continuity Test
  - \_\_\_ Cover Outside Drums
  - \_\_\_ Exhaust Blower If Indoors
  - \_\_\_ Squisher Safety Devices
  - \_\_\_ Squisher Jams
  - \_\_\_ Prevention of disposal of non-pour off empties into pour-off trash
- \_\_\_ 12. CONTINGENCY PLANS, Including:
  - \_\_\_ Location of emergency info
  - \_\_\_ Emergency actions
  - \_\_\_ Evacuation/all clear signals
  - \_\_\_ Location of evacuation assembly area
  - \_\_\_ Receipt of high hazard, peroxidizable, reactive chemicals
  - \_\_\_ High haz., peroxid., reactives procedures reviewed with client
  - \_\_\_ Trash compactor or rolloff fire areas



## HHW HEALTH AND SAFETY AUDIT CHECKLIST

		Y	N	NA
<b>TRAINING:</b>				
	Supervisors, Decision-makers, (40-hr./CP Chemist)			
	Pour-Off, Emer Resp (40 hr.)			
	Other Handlers (HHWC Training)			
	Site Safety Meeting held/documented?			
<b>SITE REQUIREMENTS:</b>				
	Area large enough? (1200 sq. ft. or larger)			
	Open area for air movement?			
	Space for emergency vehicle/equipment access?			
	Entrance/exit of cars smooth?			
	50 ft. adjacent property distance?			
	25 ft. from nearest public way?			
	Proximity to potable water and telephone?			
	Proximity of grounding source?			
	Poly ground cover/Plywood-covered foot traffic areas?			
	Storm Drains sealed?			
	Decon. Areas designated/set up?			
	Good Location?			
	Collection and waste handling areas barricaded?			
	Local ventilation? (Indoors pours/paint squish, only)			
	Command center set up w/equip. & paperwork?			
	Employee break area set up properly?			
	Trained supervisor stationed for supv./screening?			
	Compatibility testing for unlabeled containers?			
	Contingency plan set up?			
<b>FIRE/FLAMMABLE AND COMBUSTIBLE MATERIALS CONTROL:</b>				
	Adequate grounding source(s) used?			
	No ignition sources w/in 25 ft.?			
	No smoking or USTs w/in 25 ft.?			
	Pour-Off/Squisher grounded?			
	All bonds continuity checked?			
	Non-sparking tools used?			
	Fire extinguishers available?			
<b>HEAT STRESS:</b>				
	Water/non caffeinated beverages used?			
	Heat monitoring conducted?			

<b>PRE: CORRECT PPE USED:</b>				
	Set Up/Breakdown (Level D: shoes/glasses/gloves)			
	Off Loading (Modified D, plus traffic vest)			
	Segregating/Packing (Modified D)			
	Pour off/Squisher (Level C)			
<b>AIR MONITORING:</b>				
	LEL and organics meters available for ER?			
	Personal air sample collected (when specified)			
	Worksheet completed?			
<b>OPERATIONS:</b>				
	Off Loading			
	Trained supervisor overseeing area?			
	Unacceptable waste not accepted?			
	Leaking containers properly handled?			
	Unidentified waste fingerprinted?			
	Segregation			
	Trained supervisor overseeing area?			
	Containers labeled, segregated, staged?			
	Leaking containers overpacked?			
	Pour-off/Squishing			
	Trained supervisor overseeing area?			
	Proper bonding/grounding established?			
	Compatibility testing for unlabeled containers?			
	Packing/Shipment			
	Containers properly packed/closed/labeled?			
	Containers properly loaded on trucks?			
	Proper paperwork completed?			
	Employee Break Area			
	Proper decon prior to entry?			
	Contingency plan implementation?			