



**WAYNE STATE
UNIVERSITY**

INTEGRATED CONTINGENCY PLAN

Hazardous Waste Operations and Emergency Response
Spill Prevention, Control and Countermeasure
Pollution Incident Prevention
Resource Conservation and Recovery

April 2024

PREPARED BY:

The Office of Environmental Health and Safety
Wayne State University
5425 Woodward Ave, Suite 300
Detroit, MI 48202

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Purpose

This Integrated Contingency Plan (Plan) was developed by the Office of Environmental Health and Safety (OEHS) at Wayne State University (WSU) to provide a single guidance document for campus-related hazardous material response operations. This plan applies specifically to the response operations for campus-related events managed by OEHS. The purpose of this Plan is to:

1. Act as a guide during actual situations involving hazardous materials, thus providing timely and effective responses to campus-related emergencies.
2. Prevent and minimize the release of oil and other polluting materials, including hazardous wastes, during routine handling or during emergency situations.
3. Minimize hazards to human health and the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous materials to the air, soil, groundwater, or surface water.
4. Familiarize local emergency response personnel (i.e., police, fire, external contractor support, and rescue departments, hospital and governmental personnel, and emergency medical services) with the types of hazardous material handled on campus and related internal response procedures.

This combined Plan has been developed to comply with all of the requirements of the regulations listed below.

- Michigan Occupational Safety and Health Administration (MIOSHA) Part 432 - Hazardous Waste Operations and Emergency Response (HAZWOPER).
- Code of Federal Regulations Part 112 (40 CFR 112), which requires the development of a Spill Prevention Control and Countermeasure (SPCC) Plan to minimize accidental release of oils by facilities that store more than 1,320 gallons.
- Code of Federal Regulations Part 264 (40 CFR 264) which specifies preparedness and prevention measures required of facilities which store or generate hazardous wastes as defined under the Resource Conservation and Recovery Act (RCRA) of 1970. These regulations require development of a RCRA Contingency Plan.
- Part 5 promulgated pursuant to Part 31 of Michigan Act 451, Public Acts of 1994 as amended. These rules require facilities that store or use salt, oil, any chemical included in Rule 9, and any compound or product that contains 1% or more, by weight, of these materials to file a Pollution Incident Prevention Plan (PIPP) with the Michigan Department of Environment, Great Lakes, and Energy (EGLE).

All employees who are involved in the use, movement, or storage of polluting materials are required to be familiar with this Plan.

The provisions of this Plan will be carried out immediately whenever there is a fire, explosion, or potential or actual release of hazardous materials that could threaten human health or the environment. This Plan is also intended to describe the actions university personnel must take to minimize hazards to human health or the environment in the event of fires, explosions, or any unplanned sudden or non-sudden release of hazardous substances/wastes.

Campus Information

Wayne State University (WSU) is a public research university established in 1868, making it the third-largest university in Michigan. Located in the heart of Detroit, WSU boasts a vibrant campus spanning 203 acres and encompasses over 100 buildings dedicated to education and research. With a student body of nearly 24,000 across its 13 schools and colleges, WSU offers approximately 350 academic programs, fostering a diverse and dynamic learning environment.

Name:	Wayne State University	
Facility Contact (OEHS):	Jason Gizicki – Director, OEHS	Phone: (313) 993-7679
Facility Address (OEHS):	5425 Woodward Ave, Suite 300 Detroit, MI 48202	
Phone Number (OEHS):	(313) 577-1200	
Fax Number (OEHS):	(313) 993-4079	

General Campus Contacts

OEHS Incident Commander:	Jason Gizicki Director, OEHS	Office: (313) 993-7679 Cell: (248) 429-7028
Response Operations Manager / SPCC Coordinator:	Nawana Lawson Associate Director of Hazardous Materials Program	Office: (313) 577-5917 Cell: (313) 529-6265
Alternate OEHS Contact:	Richard Harrison Associate Director, Environmental Compliance	Office: (313) 993-7678 Cell: (313) 510-5916
Alternate OEHS Contact:	Richard Pearson Associate Director, Research Safety	Office: (313) 993-7597 Cell: (216) 798-2912
Facilities Planning & Management (Leadership):	James Brock Senior Director, Operations and Maintenance	Cell: (248) 421-9378
Facilities Planning & Management (Region A):	Eric Karteczka Regional Director Operations & Maintenance	Office: (313) 577-9289 Cell: (313) 304-3944
Facilities Planning & Management (Region B):	Ken Mason Regional Director Operations & Maintenance	Office: (313) 577-7657 Cell: (313) 900-4170
Wayne State University Police Department:	(313) 577-2222	

OEHS Response Team

These individuals have received the necessary training and granted the appropriate authority to perform the necessary response actions outlined in this Plan.

OEHS Incident Commander:	Jason Gizicki, CIH, CSP, MS, M.Eng
Response Operations Manager / SPCC Coordinator:	Nawana Lawson
Hazardous Materials Specialist:	Ed Speese
Compliance Manager:	Richard Harrison
Hazardous Materials Technicians:	Lamont Branch Vincent Jones
Chemical Safety:	Sandamali Ekanayaka, CHO, CHMM
Occupational Safety:	Elena Fracassa Linda Ritter
Research Safety / Bio Safety:	Richard Pearson, Ph.D.
Health Physics / Radiation Safety:	Maha Srinivasan, RSO Wendy Barrows

Campus Phone Instructions

- To call within the University, dial the last five digits of the telephone number desired.
 - For example, dial 7-1234 for (57)7-1234 or dial 3-1234 for (99)3-1234.
- To dial in the Detroit local calling area, dial 9, then the 7-digit telephone number.
- To dial in area code 313, but beyond the local calling area, dial 9, then 1, and the 7-digit telephone number.
- When using a cellular phone to dial 911, your call will be routed to the Michigan State Police, then directed to the closest Police Department.
- To call from an emergency blue light phone, dial the last five digits of the telephone number desired.
 - For example, dial 7-1234 for (57)7-1234 or dial 3-1234 for (99)3-1234.

Text Messaging Alerts

Wayne State uses a broadcast messaging service to communicate safety alerts to the campus community. Members of the WSU community are automatically signed up to receive text and email notifications during an emergency. External community members without an AccessID such as parents or our community partners can opt into Wayne State Alerts by texting WAYNESTATEALERT to 77295.

These alerts may communicate information about significant weather events, campus closures, emergency situations and more. There is no fee, although text message charges or per-message fees from your provider may apply. Terms and conditions for Wayne State Alerts can be found at <https://tech.wayne.edu/kb/communication-collaboration/mass-messaging-tools/258494>.

Members of the Wayne State community, please visit Academica to update or confirm your contact information.

Blue Light Emergency Phones

Approximately 297 emergency telephones can be found throughout Wayne State's campus. More than 175 of these phones are available at outdoor locations, and there are 121 indoor emergency phones throughout campus (including inside every campus elevator). These easy-to-operate phones provide a direct line to the WSUPD's dispatch center and can be used to make free calls to on-campus telephones.

To operate these phones in an emergency, simply push the red "emergency" button on the front of the phone panel. There is no need to dial a phone number, as the phone will immediately connect to the dispatch center.

Lines of Authority

In case of an event requiring the implementation of this Plan, the OEHS Incident Commander is the highest responsible party within the scope of this Plan.

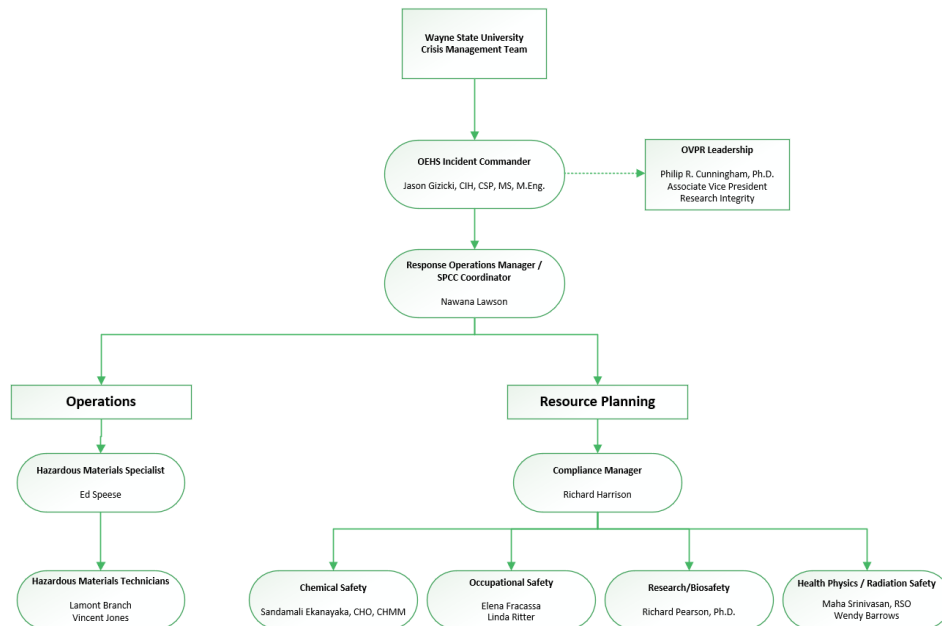
The Response Operations Manager / SPCC Coordinator, Alternate OEHS Contacts, OEHS Response Team, and all listed response individuals report to the OEHS Incident Commander within the scope of this Plan.

In the absence of the OEHS Incident Commander or unless delegated by the OEHS Incident Commander, the Response Operations Manager / SPCC Coordinator will assume the role of Acting OEHS Incident Commander and all other response individuals will report accordingly.

The OEHS Incident Commander will also act as the liaison with outside emergency, resource, and support personnel.

As delegated, the OEHS Incident Commander is responsible for spill prevention and countermeasures and for implementing all facets of the Plan. The following responsibilities will be delegated to members of the OEHS Response Team as required.

1. Instruction of all persons involved in unloading, accumulating, distributing, shipping, handling, and storing controlled materials and wastes, regarding the Discovery and Notification Procedure, and the Spill Containment and Cleanup Procedure.
2. Training of new employees within six (6) months of employment. Training shall be reviewed by all employees at least annually.
3. Retention of training documentation for three (3) years after termination of employment for each person, including date of training, name, job title, and job description(s).
4. Notification, countermeasures, and reporting, as specified in the above procedures, when a spill or potential release situation develops.
5. Compliance with requirements of this Plan for surveillance, inventorying, inspection, disposal, and correction of deficiencies.



Core Plan Elements

Discovery

In the event of a hazardous material release or spill, call WSU Police Department at 577-2222 from a safe location. If you have a doubt whether a spill can be safely and effectively cleaned up by staff, call the Office of Environmental Health and Safety at 577-1200.

If it is determined it is safe to stay in the area, look for container markings or labels that will assist in determining either the specific chemical or the hazards. Proper identification of the substance is essential to implement an adequate response.

Initial Response

WSU employees are not to engage in any emergency response operation unless they have received adequate training and have been approved by OEHS to participate in response operations.

During a hazardous release event and if determined safe to do so, all reasonable efforts should be employed to secure immediate operations in such a way that additional hazardous materials or wastes are not released, and do not aggravate the current hazardous condition. Attempt to contain the spread of the released material with the use of absorbent socks, pads, or vermiculite to prevent it from spreading.

If you have received proper training from OEHS, attempt to contain the spread of the released material, if it is safe to do so, with the use of absorbent socks, pads, or vermiculite.

Important Release Details

If performing the initial notification, be prepared to provide the following information (if known).

- Building and exact location (i.e., room number, area description, etc.) of the release event.
- Date and time of the release.
- Type of material released.
- Estimate of total quantity of material released (i.e., volume, surface area covered, depth, etc.).
- Source of the release.
- Cause of release.
- Media affected or threatened by the event (i.e., water, land, air).
- Any damages or injuries caused by the event.
- Current actions are being taken to stop or mitigate the event.
- The names of individuals/organizations/departments who have also been contacted.
- Any other information that may help emergency personnel respond appropriately.

Notification Procedures

All internal and external communication requirements will be managed through the OEHS Incident Commander per the communication procedures outlined by the Wayne State University Crisis Management Team (CMT). Notifications and updates will be based on the results of the preliminary hazard assessment as determined by the OEHS Incident Commander or delegated individual.

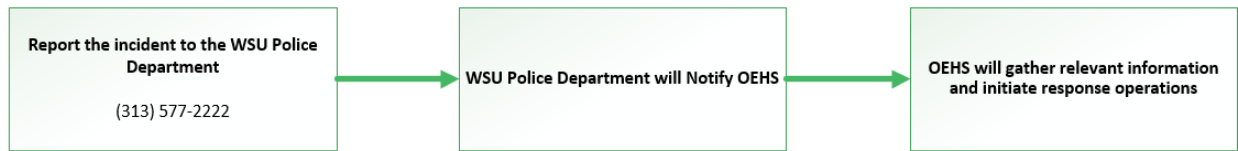
Campus Emergency Contact Information

WSU - Police Department	(313) 577-2222	
WSU - Office of Environmental Health & Safety	(313) 577-1200	
Crisis Management Team Notification <i>OEHS Incident Commander Only</i>	Private CMT GroupMe app/text	
OEHS Incident Commander:	Jason Gizicki Director, OEHS	Office: (313) 993-7679 Cell: (248) 429-7028
Response Operations Manager / SPCC Coordinator:	Nawana Lawson Associate Director of Hazardous Materials Program	Office: (313) 577-5917 Cell: (313) 529-6265
Alternate OEHS Contact:	Richard Harrison Associate Director, Environmental Compliance	Cell: (313) 510-5916
Alternate OEHS Contact:	Richard Pearson Associate Director, Research Safety	Office: (313) 993-7597 Cell: (216) 798-2912

Other Emergency Contact Information

Marine Pollution Control WSU Spill Response Contractor	(313) 849-2333	<i>OEHS Approval Required for Activation</i>
Henry Ford Hospital Emergency Department	(313) 916-2600	
Detroit Receiving Hospital Emergency Department	(313) 745-3000	
Nuclear Regulatory Commission (NRC)	(800) 522-3025	
U.S. NRC Region III - Headquarters Operations Center	(301) 816-5100	
National Response Center	(800) 424-8802	
Pollution Emergency Alerting System (PEAS) <i>Michigan Only</i>	(800) 292-4706	

Response Procedures



OEHS Response Team

The OEHS Incident Commander, or delegated individual, is responsible for determining which hazardous release situations require outside response personnel, external regulatory notification, and/or escalation of response operations.

The Response Team will secure the area by establishing a safe perimeter (with the assistance of the WSU Police Department) and restricting access to authorized personnel only. They will then attempt to identify the spilled material using Safety Data Sheets (SDS), information provided by the WSU Police Department, air sampling/monitoring data, or by contacting the department responsible for the area. The Response Team will also initiate appropriate containment measures to prevent the further spread of the material, utilizing spill kits, sandbags, or other available resources.

Release Characterization

The OEHS Response Team will evaluate pertinent release-specific data (i.e., exposure limits, physical/chemical properties, location, access, system operations, etc.) in conjunction with the following Risk Assessment Model to characterize hazardous release events. Based on this assessment and additional information received during the response, both the downgrading and response escalation action will be determined/communicated as needed.

	Severity Potential			
	People	Environmental	Property/Economic	Public
Severe (5)	One or more potential fatalities.	Spill or release extending off-site requiring public notification with significant environmental impact.	Major impact, loss of facility or major portion resulting in downtime greater than one year and major impact to operations.	Potential fatalities to public or major off-site damage. Impact to public perception of the university.
Critical (4)	Potential permanent disabling injuries or irreversible health effects, hospitalization of 3 or more people per event.	Spill or release extending offsite requiring mitigation/clean-up.	Loss of use of equipment for up to a year resulting in sourcing orders from other facilities and repair costs up to \$1 million.	Potential injuries to public offsite. Potential lawsuits or fines assessed.
Moderate (3)	Long-term disability (>60 days), lingering health effects.	Spill or release extending off-site requiring regulatory notification; no lasting impact.	Loss of use of equipment for multiple months resulting in sourcing orders from other facilities.	Local news coverage provides a negative image of the University.
Minor (2)	Lost time case, short-term disability, reversible health effects.	Onsite spill or release requiring response team clean-up; no offsite impact.	Loss of use of equipment for multiple days requiring late shipments.	Noticeable dust or smoke plumes traveling offsite resulting in public complaints.
Negligible (1)	First aid case, 100% reversible health effects.	Onsite incidental spill or minor release within permit conditions.	Minimal impact, considered normal shutdown for maintenance repairs.	Potential noticeable noise offsite or nuisance effects such as odor.

		Probability	
		Frequency of Exposure	Frequency of Occurrence
Frequent (5)	Task is performed several times an hour, and/or duration may approach at least 4 hours in a day.	Injury or has occurred repeatedly, within the company or at this site.	
Probable (4)	Will probably occur or task is performed several times a day, duration may approach 1-4 hours a day.	Has happened at this location recently.	
Occasional (3)	Is performed several times a day, or in typical durations under one hour.	Has happened in the company recently.	
Remote (2)	Not likely to occur, or task is performed less than one or two times a day, or duration may be under a few hours a month.	Injury occurred in the industry.	
Improbable (1)	May occur only under exceptional circumstances, or so remote as to be near zero in probability of exposure	Have not heard of this occurrence.	
Fatal or Serious Injury (FSI)	Fatal and Serious Injury (FSI) potential as the frequency of occurrence is not a valid predictor of likelihood or Probability		

Risk Matrix					
	Improbable (1)	Remote (2)	Occasional (3)	Probable (4)	Frequent (5)
Severe (5)	Medium - 5	High - 10	High - 15	Critical - 20	Critical - 25
Critical (4)	Low - 4	Medium - 8	High - 12	Critical - 16	Critical - 20
Moderate (3)	Low - 3	Medium - 6	Medium - 9	High - 12	High - 15
Minor (2)	Low - 2	Low - 4	Medium - 6	Medium - 8	High - 10
Negligible (1)	Low - 1	Low - 2	Low - 3	Low - 4	Medium - 5

Response Escalation

Depending on the Risk Rating of the release, the OEHS Response Team will request additional resources and identify subsequent response actions. If required, the Response Team will activate/escalate additional members of the OEHS Response Team, the 3rd party WSU Spill Response Contractor, and/or additional external resources.

Risk Rating		Response Activation Level
Low	1 - 4	Internal Response - OEHS Directed/Supported
Medium	> 5 - < 9	OEHS Response Team Activation
High	> 10 - 15	OEHS Response Team Escalation WSU Spill Response Contractor Activation Crisis Management Team Activation
Critical	> 15	OEHS Response Team Escalation WSU Spill Response Contractor Escalation Crisis Management Team Escalation External Support Resource Activation

Response Equipment

All visible spills are immediately stopped and cleaned up using spill clean-up materials and spill kits. An inventory of spill clean-up materials available on campus is provided below. Spill kits are used only by the OEHS Repose Team and trained personnel who are approved by OEHS. Any employee who has basic spill response training may respond to small leaks or spills that do not pose significant risks to health or safety.

The contents of the spill kits (OEHS Managed Only) are periodically inspected by the OEHS Response Team to ensure that they are fully stocked and ready for use in the event of a spill. If, during an inspection, items are noted as missing from the spill kit, the missing contents are ordered and replaced within the kit as soon as reasonably possible. This storage location is kept locked at all times, only authorized OEHS personnel can enter.

OEHS Spill Response Storage Location: Office of Environmental Health and Safety
5425 Woodward Avenue, Room 411
Detroit, MI 48202
577-1200

Personal Protection Equipment

	<u>Total</u>	
Air Purifying Respirators (Full Face)	8	Assigned to the OEHS Response Team
Respirator Cartridge - Organic Vapor / P100	16	
Respirator Cartridge – Combo (CL/HC/SD/CD/HF/OV/HS/AM/FM/MA/P100)	16	
Tyvek Coveralls	10	Various Sizes
DuPont™ Tychem® 2000 Coveralls	10	Various Sizes
DuPont™ Tychem® 2000 Boot Covers	20	Pairs
Disposable Nitrile Gloves	4	Boxes, Various Sizes
Disposable Latex Gloves	4	Boxes, Various Sizes
Silver Shields Gloves	4	Pairs
Leather Work Gloves	4	Pairs
Face Shields	2	
Safety Glasses	10	
Safety Goggles	10	
Chemical Aprons	2	
Hard Hats	4	

Spill Response Equipment

	<u>Total</u>
Mercury Spill Kits	2
Wet/Dry Vacuum	1
Box of Diking Material	1

Oil Dry Absorbent	4	50 Pound Bags
Absorbent Padding	4	Rolls
Chemical Spill Pillows	2	Boxes
Chemical Classifiers Test Strips	3	
pH Paper	2	Boxes
Caustic Spill Kits	4	
Acid Spill Kits	4	

Natural Gas/Propane (LPG) Leak

Danger! Extremely Flammable Gas -- May cause flash fire or explosion!
Keep away from heat, sparks, flames, or other sources of ignition.

Natural gas and propane are used throughout the campus for heat and hot water, and/or as the primary fuel for other operations. In its native state, natural gas lacks odor, color, and taste. Mercaptan, a harmless chemical is added to natural gas for safety and contains sulfur that is usually described as a rotten egg odor.

Mercaptan is a very effective warning agent considering the omitted odor and extremely low odor threshold. In the event of a confirmed uncontrolled gas leak, fire, or mercaptan-like odors, contact the WSU Police Department and request assistance to evacuate all personnel from the building. Be clear to specify that it is a natural gas leak and give the exact location.

Shut off any open flames and open operable windows, but do not turn any electrical switches on or off until the atmosphere has been proven to be below explosive levels (LEL to be less than 10%). Master natural gas shut-offs are located near the primary doorway of instructional and research laboratories. As a standard operating procedure, the gas valve is shut off by the last person exiting the laboratory when in use.

Welding/Compressed Gas Leak

Danger! Extremely flammable gas -- May form explosive mixtures with air!
May react explosively even in the absence of air at elevated pressure and/or temperature.
Asphyxiant. Contains gas under pressure; may explode if heated.

Welding and other compressed gases are present in research labs and work areas throughout campus. Welding fuel gases typically include acetylene and MAP welding gas that represent a potential explosive hazard if they should leak. The volume of gas available would not support a long-term high-volume leak, but in the event of a fire or other emergency, the hazard needs to be recognized.

Oxygen is used in combination with fuel gases and although it is not combustible itself, it can promote extreme acceleration of combustion in other materials in the event of a leak.

Nonflammable welding and other compressed gases, such as argon, nitrogen, carbon dioxide, and helium are also present, and are capable of displacing oxygen and pose an asphyxiation hazard especially in confined areas where ventilation is limited. Further, rapid depressurization of the containers in the event of a rupture can result in explosive release of pressure and cause injury.

Oil/Chemical Spill

**Emergency Overview -- Avoid contact with skin, eyes and clothing. Do not Swallow.
Avoid breathing vapors or mists. Use good personal hygiene Practices.**

Minor or incidental spills can typically be cleaned up by the OEHS Response Team and/or properly trained personnel. Examples of minor spills that could occur include oil, corrosive or flammable liquids, lab chemicals, mercury, or battery acid. Including hazardous materials smaller than the RQ or oil, provided that the spill meets the following criteria:

- The spilled material is easily stopped or controlled at the time of the spill;
- The spill is localized;
- The spilled material is not likely to reach surface water or groundwater;
- There is little danger to human health; and
- There is little danger of fire or explosion.

Major spills that cannot be safely controlled or cleaned up by the OEHS Response Team, will require external support to perform the clean-up. This includes any major spill that can pose a danger to people and/or the environment. Characteristics include the following:

- The spill is large enough to spread beyond the immediate spill area;
- The spilled material enters land, surface water, or groundwater (regardless of spill size);
- The spill requires special training or equipment to cleanup;
- The spilled material is dangerous to human health; and/or
- There is a danger of fire or explosion.

No person shall take action beyond their level of training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Put on appropriate personal protective equipment. Floors may be slippery; use care to avoid falling.

1. Stop the spill if it is safe to do so, remotely if possible. If the source cannot be safely stopped, escalate the response effort.
2. Isolate the spill area and remove unnecessary personnel.
3. Confine the spill to prevent it from spreading beyond the immediate area, using booms, socks, pads, loose absorbent, sand, or other materials, as appropriate.
4. Determine the most appropriate cleanup approach, absorbing, solidifying, cleanup of free liquid into suitable containers, etc. If absorbents or solidification are used, use sufficient quantities to prevent free liquids in the waste.
5. Clean up all free liquids and remove residues.
6. Place all cleanup materials in suitable containers. Coordinate disposal methods with the Response Operations Manager / SPCC Coordinator.

Corrosive Liquids (Acids or Bases)

Emergency Overview -- Causes severe skin burns and eye damage.

Causes skin Irritation. Causes serious eye irritation. May be corrosive to metals.

1. Obtain an acid/base spill kit from nearest spill equipment location.
2. All spills of concentrated corrosive materials (i.e.: "hazardous," pH <2.0 or >12.5) should be neutralized using an appropriate compound.
3. Remaining liquids will be absorbed using a non-flammable absorbent.
4. Absorbed and neutralized waste will be collected as directed by the Response Operations Manager / SPCC Coordinator and managed under the appropriate waste rule.
 - a. Cleanup debris from "hazardous" materials must be treated as "hazardous waste" even if the original hazardous characteristic has been neutralized or altered.
5. Spills of dilute corrosive materials (i.e.: "non-hazardous," pH between 2.0 and 12.5) may be addressed using two methods:
 - a. A "wet-vac" vacuum cleaner capable of handling dilute corrosives can be used to collect liquid. Collected liquid will be transferred to a properly labeled waste receptacle and managed under the appropriate waste rule.
 - b. Non-flammable absorbent may be used to collect the liquid. If this method is used, absorbed material will be collected and managed under the appropriate waste rule.

Broken or Leaking Battery

**Emergency Overview -- May form explosive air/gas mixture during charging.
Contact with internal components may cause irritation or severe burns.**

Broken or leaking batteries may still be electrically active. Use caution to prevent electric shock. Use appropriate PPE and/or cover battery terminals with non-conductive material to prevent shock. Use goggles with face shields and protective clothing and prevent splashing which could cause chemical burns.

1. Obtain a battery spill kit from the nearest spill equipment location.
2. Broken or leaking batteries shall be cleaned up based on the specific battery type involved.
3. Spilled battery electrolyte shall be neutralized using the appropriate absorbent media, and then placed in a sealable container. Leaking batteries shall be placed in a sealable container with adequate amounts of the appropriate absorbent to contain any additional free liquids that could continue to leak.
4. Broken batteries can be handled as Universal Waste if the casing is intact and no hazardous electrolyte is leaking. Leaking batteries will need to be addressed as Hazardous Waste if the leaking electrolyte exhibits a characteristic of corrosivity ($\text{pH} < 2$ or > 12.5). Coordinate disposal methods with the Response Operations Manager / SPCC Coordinator.

Flammable Liquids

Emergency Overview -- Extremely flammable liquid and vapor! May accumulate electrostatic charge and ignite or explode.

1. In the event of a flammable liquid spill, and as a precaution, evacuate non-essential personnel from the area even if no “emergency” exists.
2. In the event of a spill, the initial action is to evaluate the area to determine if an emergency situation exists. If concentrated vapors are present and there is the potential for ignition sources, the ignition sources must be eliminated immediately by de-energizing the equipment (remotely if possible). Ignition sources include open flames, spark-producing operations, ovens, pilot lights, etc.
3. Most flammable liquids evaporate quickly, and the vapors mix with air and migrate to other areas. Some vapors, such as those from isopropanol will concentrate and migrate near the floor, while others such as acetone will mix with air and migrate at all heights. High concentrations of vapors can result in an explosive situation.
4. Spills of flammable liquids will be addressed using one of two methods outlined below. First, obtain clean-up material from the nearest spill equipment location.
 - a. Non-flammable absorbent material may be used to absorb the free liquid and in sufficient quantities to suppress vapors.
 - b. Paper towels may be used in sufficient quantity to absorb all free liquids.
5. After all the liquid has been absorbed, the towels or absorbent material will immediately be collected in an appropriate container. A heavy garbage bag can also be considered as an option (removing as much air as reasonably possible).
 - a. Absorbed material will be collected and managed under the appropriate waste rule.
 - b. Cleanup debris from “hazardous” materials should be treated as “Hazardous Waste” even if the original hazardous characteristic has been neutralized or altered. Coordinate disposal methods with the Response Operations Manager / SPCC Coordinator.

Metallic Mercury

Emergency Overview -- Very toxic by inhalation, in contact with skin, and if swallowed.

NEVER use a vacuum cleaner, mop, or broom to clean up a mercury spill. The heat from the motor will increase the amount of mercury vapor in the air. Mops and brooms will spread the mercury, making proper cleanup more difficult. The vacuum cleaner, mop, or broom will become contaminated with mercury.

NEVER use a washer or dryer to clean clothing that became contaminated with liquid mercury. The washer and dryer can become contaminated with mercury. If these items are contaminated with mercury, they are very difficult to clean and may have to be disposed of as hazardous waste.

1. Stop the spill if it is ongoing, and only if safe to do so. Prevent tracking mercury to other areas by instructing that no one walks through the spill area upon exiting.
 - a. If possible, ventilate the area by opening windows and doors to the outside.
 - b. Close all doors between the room where the mercury spill occurred and the rest of the building.
 - c. Shutdown HVAC system, if present, to prevent mercury vapor from migrating to other areas.
 - d. Prior to cleanup, remove metal items like jewelry and watches since metal can bind with mercury.
2. Obtain a mercury spill kit from nearest spill equipment location.
3. Put on PPE: Shoe covers, disposable lab coat or apron, DOUBLE-GLOVE with nitrile or vinyl
4. gloves. If you suspect your clothing or shoes may have been contaminated during the spill, you will need to change out of your old clothes and shoes and put them in the trash bag at the end of the cleanup.
5. Identify items in the spill area that can be cleaned and those that cannot. Non-porous surfaces can be cleaned following this guidance. Porous surfaces, clothing, or fabric-covered items are difficult to clean because mercury beads or visible powder (from CFLs) may be trapped in these materials. Items that cannot be cleaned should be placed in plastic trash bags or wrapped in a double layer of plastic and carefully sealed with tape. Consult with EHS about how to decontaminate or dispose of these items. They should be handled as hazardous waste unless they are proven to be safe for continued use.
6. Wear two layers of gloves and use tweezers to carefully pick up the larger pieces of broken glass and what remains of the broken device and place them on a paper towel. Gently fold the paper towel around these pieces so you can pick the bundle up and place it in a zipper-type plastic bag.
7. Use index cards or stiff cardboard to push smaller pieces of glass and mercury beads or powder together into a pile. Shine a flashlight at an angle to locate beads of mercury. The beads will reflect light from the flashlight. Check for mercury in cracks or in hard-to-reach areas where beads may be hidden or trapped. Check a wide area beyond the spill.
8. Use an eyedropper to collect mercury beads and place them in a container or plastic bag. Hold the eyedropper at an angle to draw the mercury into the tip. Keep the eyedropper at an angle to stop the mercury from rolling back out until you can put the mercury into the plastic bag.
9. Make a tape ball (sticky side out) and carefully use it to pick up any remaining glass or beads. Check again with the flashlight to be sure that no beads of mercury remain.

10. At this point, mercury beads may still be trapped in cracks or crevices on irregular surfaces. Use a paper towel slightly dampened with water followed by wiping with another damp paper towel to clean up the powder and mercury. Place the used paper towels in a zipper-type plastic bag.
11. Put all the items that were used to pick up the mercury, including index cards or cardboard, eyedropper, contaminated tape, paper towels, and zipper-type bags into the trash bag. Carefully remove first layer of gloves by grabbing them at the heel of the hand (not the wrist) and pulling them inside out as they come off. Place the used gloves in the trash bag.
12. With gloved hands, carefully seal the trash bag that contains the mercury contaminated waste and put it in a hazardous waste container until it can be disposed of safely, and label properly.
13. Clothes or shoes that did not come in direct contact with liquid mercury may have absorbed mercury vapor. These items should be removed and put into the trash bag that was left outside the contaminated area at the beginning of the cleanup. Close the trash bag and take it outdoors. Carefully remove the shoes and or clothing from the trash bag and air them out thoroughly outdoors for 24 to 48 hours. After the outdoor airing, items that are washable can then be laundered.
14. Dispose of contaminated items properly.

Sustained Actions

It is expected that most incidents will be handled internally by the OEHS Response Team without implementing an extensive response management system. Any incident requiring prolonged mitigation and recovery will involve outside contractors and/or consultants to assist in design and implementation of an effective remediation system. Such an incident would involve the Crisis Management Team, whose role is to provide support through management of crisis level issues, manage risks, exposures and stakeholder interest in response to an event or disaster.

Termination And Follow-Up Actions

Termination of response will be managed based on the severity of the incident. Either the OEHS Response Team or the Crisis Management Team will have been activated and will work within the unified command structure of the Incident Command System (ICS) to make the decision to terminate the response. The following items should be considered when terminating a response:

- The risk of potential exposure has been eliminated.
- The source of the spill or release has been remedied to the point where no further release will occur.
- Spilled or released material has been cleaned to an appropriate standard, and at a minimum, no further impact will occur.
- All appropriate agencies have been notified, as required.
- Repairs have been made or scheduled to repair damaged or faulty equipment.
- Recovered spill material is collected, containerized, labeled, properly characterized, and scheduled for disposal in accordance with all applicable requirements.
- Re-usable equipment has been fully decontaminated.
- Spill materials have been re-ordered, as necessary, to replace equipment used in the spill.

Evacuations

Each WSU owned/leased facility must have an emergency evacuation plan/procedure(s) specific to that location. It is the responsibility of the highest-ranking individual user of each facility to develop and post such plan/procedure(s). The University Fire Safety Marshal can assist facilities/departments in the development and implementation of evacuation plans/procedure(s).

In the advance of an emergency, prepare an evacuation plan specific to your building and have it available at all times. The Enterprise Risk Management & Insurance Programs' Fire Marshal can assist you in preparing one if your building currently does not have one. The Enterprise Risk Management & Insurance Programs can be reached at 577-3110.

In the event of a fire or other building emergency, the alarm system in your building may consist of strobe lights, audible horns, ringing bells, a slow whooping sound, emergency voice communication or any combination of these.

Highest-Ranking Individual User Responsibilities

- Clearly identify the responsibilities of facility occupants to assist in evacuation procedures.
- Shut down any experiments, procedures, etc. that should not be left unattended. Extinguish any open flames and shut off flammable or noxious gas supply valves.
- When exiting the facility due to an emergency condition, proceed to a pre-determined location and begin verifying that everyone in the facility has been accounted for.

When a fire alarm is sounded at any WSU owned/leased facility, everyone should immediately leave the building in an orderly manner by means of the nearest exit. Under no circumstances are any personnel (excluding the WSU Police Department, Environmental Health and Safety, Detroit Fire Department) to remain in the building.

- Close the office, classroom, and lab door as you leave.
- Leave the building via the nearest available exit. Always know a secondary means of egress to use in the event your first choice is unattainable.
- Use the stairwells to evacuate (do not use elevators). Once in the stairwell, check to see that the door closed, proceed down to the level of exit discharge.
- If the facility is of a high rise occupancy (75' or 7 stories above grade) evacuation procedures are as follows: evacuate fire floor above and the floor below.
- Do not re-enter any facility until advised by the WSU Police Department.

Evacuation Procedures for Mobility Impaired/Disabled Persons

In the event of an emergency condition at a university facility, the following procedures with respect to mobility impaired/disabled persons should be followed:

Highest-Ranking Individual User Responsibilities

- Identify responsibilities of occupants to assist in evacuation procedures.
- Identify all mobility impaired/disabled persons within facility (faculty, staff, student assistants).
- A list of mobility impaired/disabled persons should be kept with each Building Coordinator. The list should be updated at least annually and contain the name, phone number, and floor/area assigned location of these persons.

- It is the responsibility of the Building Coordinator to provide the responding WSU Police Department and Detroit Fire Department personnel with the list and location of mobility impaired/disabled persons.

Building Occupant Responsibilities

- During the evacuation of any WSU facility, all mobility impaired/disabled persons that are above the level of exit discharge, shall be placed in an "area of refuge" i.e., a fire rated construction room or enclosed emergency exit stairwell.
- Pre-determined facility occupants who are assigned responsibility for evacuation of a particular floor, shall assist mobility impaired/disabled persons into the area of refuge after all persons on that floor have evacuated.
- Unless department/facilities have special evacuation equipment i.e. emergency evacuation wheelchair, the responsibility for removal of mobility impaired/disabled persons rests with the WSU Police Department or the Detroit Fire Department.

Tornado/Severe Weather

WSU Police Department is equipped to receive a National Weather Service message and will alert all WSU essential employees in the event that severe weather conditions should make it necessary for employees to move to designated shelter areas.

University employees during normal business hours will be made aware of Tornado warnings via Wayne State Alerts, text message alerts and alerts through the Blue Light Emergency Phone Speakers.

A Tornado Watch means tornadoes could potentially develop and a Tornado Warning means a tornado has actually been sighted.

Macomb County and the City of Detroit will sound a 3-minute continuous siren for a Tornado Warning. If a Tornado Warning is issued:

- Proceed to a basement, lower floor level, or interior hallway or corridor (center core).
- Seek shelter under sturdy or heavy furniture, tables, or desk.
- If in an automobile, drive at right angles away from tornado path.
- Avoid elevators, top floors of buildings, areas with glass windows or doors, auditoriums, gymnasiums, cafeterias, automobiles, and unsecured objects.
- Assist persons with disabilities to the safest area on the same floor.
- Keep a flashlight, radio and cellular telephone with you.

Explosions

Chemicals, leaking gas, incendiary devices, or terrorist acts could all be the cause of life-endangering explosions. If you hear, see, or feel an explosion within your building call WSU Police Department at 577-2222.

If you hear or are a victim of an explosion:

- Remain calm.
- Call WSU Police Department at 577-2222 and describe what occurred and what you observed.
- Seek shelter under sturdy or heavy furniture, tables, or desk.
- Be prepared for the possibility of further explosions.

- If possible and it is safe to do so, or if ordered by WSU Police Department and/or Detroit Fire Department, evacuate area. See "EVACUATION" section of this Guide for more information.
- Open door carefully and watch for falling objects. Stay away from windows, mirrors, overhead fixtures, filing cabinets, bookcases, electrical equipment and large, heavy unstable objects.
- Do not use elevators.
- Do not use matches or lighters.
- Do not move seriously injured persons unless they are in immediate life-threatening danger.

Program Review

The content and procedures outlined in the document will be reviewed by OEHS leadership on an annual basis. Additional reviews will be performed as a result of changing operations, incident investigations, and best practice recommendations.

Version Control

Version ID	Date	Notes	Approved By
April 2024	4/22/2024	Initial Version	J.Gizicki