PROPER WASTE DISPOSAL

Seitz Materials Research Laboratory

Maisie Kingren
MRL Safety Engineer
295 ESB
WASTE DISPOSAL

- Chemical waste
- Wafers/Samples
- Sharps
- Glass

- If you have questions or concerns about how to dispose of any of the above, please reach out to DRS for further instructions.
  - Email: cws@illinois.edu
  - Phone: 217-333-2755
    - You can find this contact info on the DRS website - http://www.drs.illinois.edu/
CHEMICAL WASTE REQUIREMENTS TRAINING

- DRS recommends training for all University personnel who generate, store, and request pickups of chemical waste on campus:
  - DRS Laboratory Safety Training (Required for MRL Orientation)
  - DRS Chemical Safety (Required for MRL Orientation)

- These online trainings provide an explanation of requirements for collecting, storing, and disposing of chemical waste.

- Topics include: proper disposal procedures, storage requirements, safe handling procedures, and emergency preparedness.
CHEMICAL WASTE

- Clearly label containers as waste and the contents inside
  - Example: “Waste – Acetone”
  - Chemicals must be spelt out – not abbreviated
  - Label containers before putting any waste inside

- Containers MUST be in good condition and compatible with the waste in the containers

- Keep waste containers closed at all times

- Use secondary containers to help control leaks or spills

- Do NOT pour chemicals down the drain

- Do NOT put chemical waste in the trash
WAFERS

- Wafers need to be disposed of in the designated containers

- Wafers should NOT be thrown in the trash or the sharps container
Dispose the following in this bucket:
Glass slides, wafers, or substrates coated or contaminated with:

- Aluminum
- Aluminum Oxide
- Arsenic
- Cadmium
- Cadmium Sulfide
- Chromium
- Cobalt
- Copper
- Germanium
- Gold
- Hafnium Oxide
- Iron
- Iron Oxide
- Lead
- Lithium
- Magnesium
- Magnesium Oxide
- Manganese
- Molybdenum

- Nickel
- Nickel Chromium (Alloy)
- Niobium
- Palladium
- Photoresists
- Platinum
- Polyimide
- Silicon
- Silicon Oxide
- Silver
- Tin
- Titanium
- Titanium Oxide
- Tungsten
- Tungsten Oxide
- Zinc
- Zinc oxide

For questions contact Maisie Kingren at 217-244-8637
mlswans2@Illinois.edu
Materials that qualify as “sharps” are defined at the state level and shall be disposed of as Potentially Infectious Medical Waste (PIMW). In Illinois, the Illinois Environmental Protection Agency (IEPA) has designated the following material (used or unused) as sharps:

- Any medical needles,
- Syringe barrels (with or without needle),
- Pasteur pipettes (glass),
- Scalpel and razor blades,
- Blood vials,
  - (NOT in MRL)
- Microscope slides and coverslips,
- Glassware contaminated with infectious agents
  - (Not in MRL)

*2 gallon is recommended*
IMPROPER USE OF SHARPS DISPOSAL CONTAINERS

NEVER dispose of these items in Sharp Disposal Containers:

- Plastic items (except for syringes),
- Beverage containers (no pop cans!),
- Non-biologically contaminated laboratory glassware,
- Solvent/chemical bottles,
- Light bulbs,
- Any paper materials,
- Pipette tips,
- Plastic pipettes,
- Aerosol cans or cans of any type,
- Scintillation vials,
- Any item with liquid (except for blood in vacutainer tubes).
## SHARPS DISPOSAL CONTAINER

### ALWAYS...
...dispose of these items in sharps disposal containers:
- Any medical needles
- Syringe barrels (with or without needle)
- Pasteur pipettes (glass)
- Scalpel and razor blades
- Blood vials
- Microscope slides and coverslips
- Glassware contaminated with infectious agents

### NEVER...
...dispose of these items in sharps disposal containers:
- Plastic items (except for syringes)
- Beverage containers (no pop cans!)
- Non-biologically contaminated laboratory glassware
- Solvent/Chemical bottles
- Light bulbs
- Any paper materials
- Silicon wafers
- Plastic pipettes and pipette tips
- Aerosol cans or can of any type
- Scintillation vials
- Any item with liquid (except for blood in vacutainers)

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**Still not sure?**

Call [333-2755](tel:333-2755) for help concerning the proper handling of any items contaminated with infectious agents.
Contaminated Glassware

- Laboratory glassware that is either broken or unbroken that is chemically contaminated must be placed in a labeled cardboard box and discarded through the DRS chemical waste disposal program.
  - [https://www.drs.illinois.edu/chemicalwastepickup](https://www.drs.illinois.edu/chemicalwastepickup)

Clean Glassware

- Broken glassware is not necessarily considered to be a sharp. Broken glass that is NOT biologically, chemically, or radiologically contaminated may be disposed of in the cardboard glass disposal boxes.
  - Glass disposal boxes can be purchased in the MRL and Chemistry store rooms.
PROHIBITED
Items for Laboratory Glass Disposal Boxes

- Thermometers
- Pasteur Pipettes
- Syringes
- Microscope Slides & Cover Slips
- Liquids

For questions contact the Division of Research Safety at (217) 333-2755 or bss@illinois.edu.
CIRCUIT BOARD DISPOSAL

- Do NOT dispose circuit boards in the trash.
- You MUST contact DRS for the proper UI# for small electronics and circuit boards.

- cws@illinois.edu
PDMS AND PMMA DISPOSAL

- PDMS/PMMA glass slides DO go in sharps container

- PDMS/PMMA coated wafers DO NOT go in sharps container
  - They go in the designated wafers container

- Contact DRS for help with your specific waste streams
PDMS and PMMA

Contaminated Slide Disposal

- PDMS, PMMA glass slides or glass slides with no coating **DO** go in sharps container

- PDMS, PMMA wafers or wafers with no coating **DO NOT** go in the sharps container
REMINDERS DURING ESCO CONSTRUCTION

Microfab
CONSTRUCTION SAFETY REMINDERS

- Do NOT cross the marked barriers
- Watch for ladders, extension cords, and maintenance carts
- Look for ESCO project updates in your email
- Read notices and information outside the rooms
- If you see any problems, please report them to the main office
- Go to the main office if you cannot find a staff member. The construction project will cause some staff members to be relocated temporarily.
Construction News

Project: UIUC EPC 3 College of Engineering ESCO Project

Date: September 18, 2017 – October 6, 2017

<table>
<thead>
<tr>
<th>Items completed to date</th>
</tr>
</thead>
<tbody>
<tr>
<td>0066 MRL</td>
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<tr>
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<tr>
<td>• ECM 5 Occupancy Sensors</td>
</tr>
<tr>
<td>• ECM 10 Pipe Insulation</td>
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<tr>
<td>• ECM 7.1 Steam Traps (Non Radiation Only)</td>
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<tr>
<td>• ECM 19 Process Water</td>
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<tr>
<td>• ECM 26 Everitt Cleanroom</td>
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</tbody>
</table>

Areas to be affected in near term

0066 Seitz Materials Research Lab (MRL)

Basement

No construction activities at this time.

First Floor

No construction activities at this time.

Second Floor

No construction activities at this time.

Third Floor

Southwest Quadrant:
Replacing existing vent, temperature controls, perimeter control valves and perimeter steam traps. Installing occupancy sensors in accordance with design drawings.

Roughing in process water mains and installing chilled beams in accordance with design drawings.

Interpass:
Demolishing existing and installing new ceiling grid, lighting, occupancy sensors, thermostats, air terminals and associated ductwork.
### Fourth Floor
- Reinstalling ceiling and programming room controls

### Penthouse
- Installing new heating equipment and associated piping
- Roofing over east side of fourth floor

### 0067 Loomis Laboratory

<table>
<thead>
<tr>
<th>Floor</th>
<th>Activities</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Basement</strong></td>
<td>No construction activities at this time.</td>
</tr>
<tr>
<td><strong>First Floor</strong></td>
<td>No construction activities at this time.</td>
</tr>
<tr>
<td><strong>Second Floor</strong></td>
<td>No construction activities at this time.</td>
</tr>
<tr>
<td><strong>Third Floor</strong></td>
<td>Demolishing existing and installing new ceiling grid, lighting, occupancy sensors, thermostats, air terminals and associated ductwork in the interpass.</td>
</tr>
</tbody>
</table>

### Fourth Floor
- Demolishing existing and installing new air terminals, ductwork, grilles and room controls along north perimeter and in east interior.

### Penthouse
- Installing new pipe and ductwork for AHU-3. A crane will be utilized to hoist materials to the penthouse on 9/27. Bike racks northwest of Loomis will be impacted.
- Demolishing existing fans and associated utilities.

### 0095 Superconductivity Center

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<tr>
<td><strong>First Floor</strong></td>
<td>Adjusting thermostat heights.</td>
</tr>
<tr>
<td><strong>Second Floor</strong></td>
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*Note: The document contains a table with floor-specific construction activities.*
MRL 4TH FLOOR
April 20, 2017 - August 25, 2017

Substantially Complete
Substantially Complete
Substantially Complete
Substantially Complete
MRL 2ND FLOOR

December 27, 2017 – April 3, 2018

- Jan 31st—Feb 20th
- Dec 27th—Jan 30th
- Feb 21st—Mar 6th
- Mar 7th—Apr 3rd

Substantially Complete
THANK YOU