

Standard Operating Procedure

Chemical Environmental Management System (CEMS)

School and department:	School of Molecular Sciences		
SOP preparation date:	8/1/2022	SOP approval date:	9/9/2022

Laboratory locations covered by this SOP – building and room number
All SMS laboratories ordering hazardous materials that must go through intake at Chemical Receiving in Physical Sciences G-wing

Type of SOP	<input checked="" type="checkbox"/> Process	<input type="checkbox"/> Hazardous chemical	<input type="checkbox"/> Hazardous class
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Purpose

To provide start-to-finish instructions for hazardous materials procurement and disposal of waste.

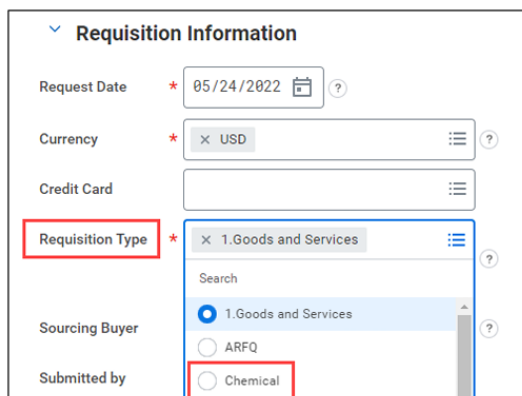
Procurement

Chemical Requisition Process

Chemical orders should be placed in Workday (<https://www.myworkday.com/asu/d/home.html>)

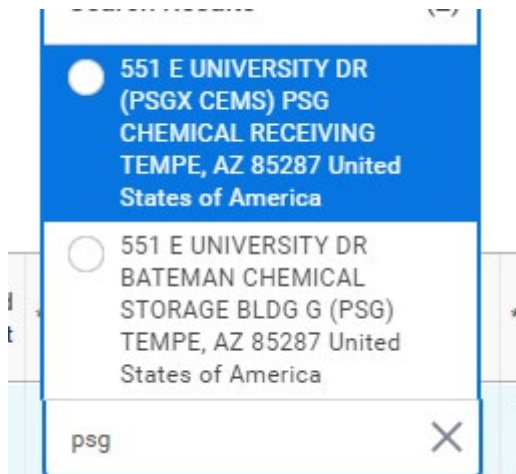
Chemical purchases must be on a separate PO from supplies, consumables, biologicals, etc.

- Select the requisition type to Chemical



The screenshot shows the 'Requisition Information' section of a Workday form. The 'Requisition Type' dropdown menu is open, showing '1.Goods and Services' as the selected option. Below it, 'ARFQ' and 'Chemical' are visible as other options. The 'Chemical' option is highlighted with a red box. Other fields include 'Request Date' (05/24/2022), 'Currency' (USD), and 'Submitted by'.

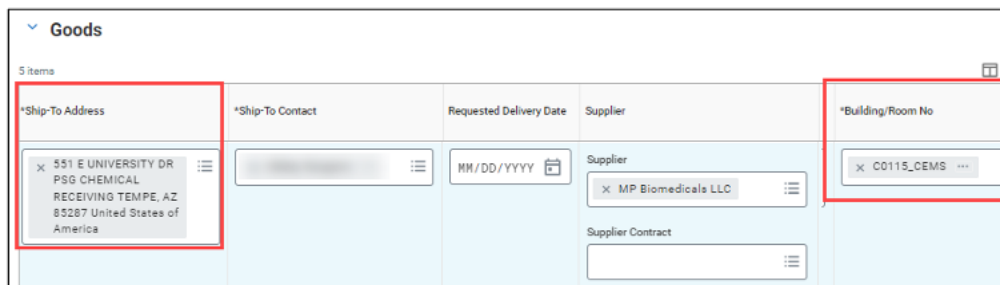
- All chemicals must have a Ship To address for Chemical Receiving
 - Type PSG and select the address: 551 E UNIVERSITY DR (PSGX CEMS) PSG CHEMICAL RECEIVING TEMPE, AZ 85287



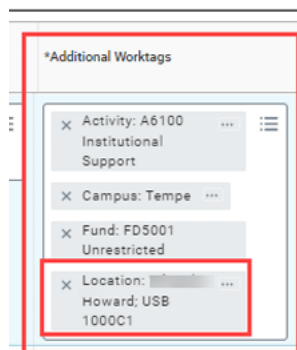
- For all RADIOACTIVE materials select the address: 971 S PALM WALK (ECD) ENGINEERING CENTER D-WING TEMPE, AZ 85287



- Select the Building/Room # for final delivery location:
 - For final delivery to BDA choose à C0115_CEMS
 - For final delivery to PSG choose à C0215_CEMS
 - For final delivery to ISTB4 choose à C0815_CEMS
 - For RADIOACTIVE material choose à your lab building/room number



- In the Additional Worktags section, select the Lab Location, PI Name, and Room Number:



- Complete your Workday Requisition and submit. Check for errors listed and refer to <https://www.asu.edu/purchasing/pdf/New-Chemical-Requisition-Process-Quick-Guide.pdf> if you encounter any problems.
- **If you are purchasing other materials (i.e. consumables, biologicals, etc.) use Goods and Services for the requisition type.**
 - Email CEMS (askEHS@asu.edu) or Laura (Laura.Gibble@asu.edu) if there are further questions about purchasing biologicals.

Chemical Receipt

Shipment Delivery to Chemical Receiving

- All **chemicals** will be centrally received by ASU Materials Management.
 - When ASU Materials Management receives the chemical item, it will:
 - Open the package and view the contents to confirm that the correct chemical was sent and that there is no damage.
 - Enter the chemical item and quantity in the new CEMS Chemical Management System based on the PI, Building/Room# entered on the line and adhere a barcode to the chemical container.
 - If the purchase order number is not visible on the shipping label, they will write the PO number on the box for you.
 - Will place a delivery label on every package to let people know that the chemical has been through CEMS receiving.

Delivery to Final Delivery Location

- ASU Materials Management will deliver the chemical packages to the respective final delivery location selected during the procurement process.
 - C0115_CEMS will be delivered to the BDA receiving area
 - C0215_CEMS will be delivered to the PSG receiving area
 - C0815_CEMS will be delivered to the ISTB4 labs
- ASU Materials Management scans their tracking barcode to confirm delivery to the final delivery location.

Chemical Pickup/Delivery to PI

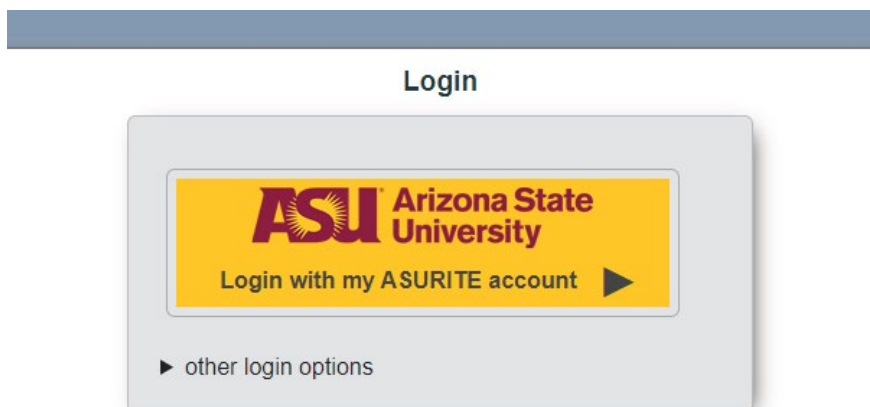
- For chemical pickup for the Biodesign A, B, and C buildings, follow the protocol for the BDA receiving area
- For chemical pickup for Goldwater, ISTB5, Physical Sciences A-H, follow the protocol for the PSG receiving area
 - Chemicals will be handed off to PSG receiving after CEMS Receiving
 - Packages will be checked in and a PSG receiving representative will email the PI with notification that their package(s) have arrived for pickup
 - PI will send lab personnel to pick up the package(s) from the PSG receiving area

Preceding information is subject to change.

Inventory and Laboratory Management through CEMS

CEMS Login

All lab personnel must log in to CEMS through Single-Sign-On with their ASURITE by clicking on the Gold ASU button at <https://cfo.asu.edu/cems>.



Add group members to your lab group

- Click on “Add” next to My Colleagues.
- Choose the User to add to your group.

The screenshot shows the 'Chemical Environmental Management System' dashboard. On the left is the 'My Profile' section for Michelle Near, with fields for Name, Email, Status, Work Ph, Alt Ph, Office, and Dept. Below the profile is an 'update profile' button and a 'My Colleagues' section with an 'add' button highlighted by a red arrow. In the center is an 'Alerts' box stating '(850) missing SDS for inventory last 90 days'. On the right is a 'Quick Links' section with options like 'Add Chemical Inventory', 'Search SDS', 'Particularly Hazardous Chemicals', 'Search Chemical Inventory', 'Update Chemical Inventory', 'Contact EH&S', and 'Documentation'. At the bottom, a 'Chemical Inventory' section is partially visible.

- Select the appropriate permissions for the user (i.e. postdoc, lab manager, may need editing access to chemical inventory; undergrad researchers may only need to view chemical inventory). And SAVE.

Colleague Permissions

Define the relationship between **Michelle Near** and **Dakota Templeton**.

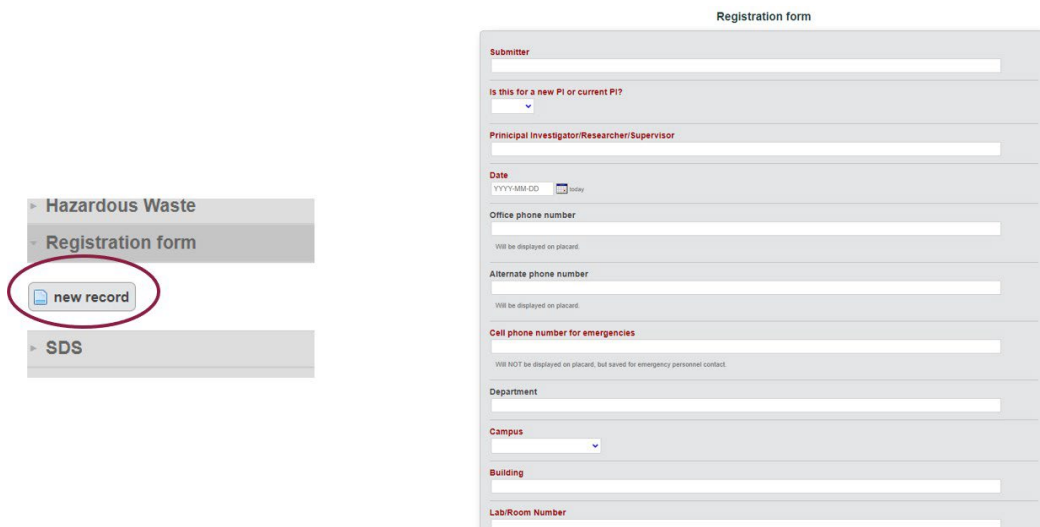
check all that apply

- Michelle Near is a supervisor of Dakota Templeton
- Dakota Templeton is a supervisor of Michelle Near
- Dakota Templeton can assist Michelle Near
(assist with making door signs, compliance reports, general tasks)
- Michelle Near can assist Dakota Templeton
(assist with making door signs, compliance reports, general tasks)
- Dakota Templeton can edit Michelle Near chemical inventory
- Dakota Templeton can view Michelle Near chemical inventory
- Michelle Near can edit Dakota Templeton chemical inventory
- Michelle Near can view Dakota Templeton chemical inventory

cancel delete save

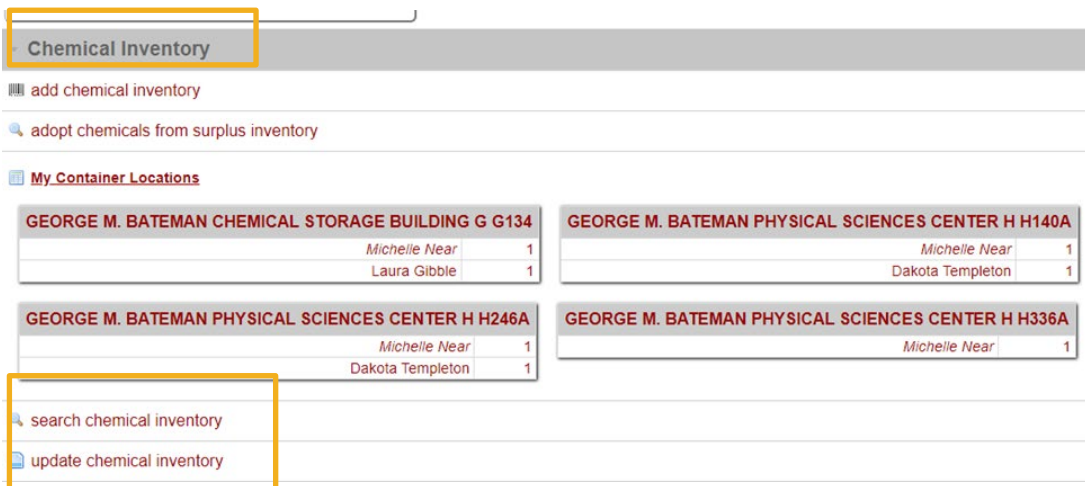
Register or update lab registration

- Lab registration is updated on an annual basis. During your annual lab safety consultation, the PI and EHS will check the lab registration is updated.
- To renew a lab registration or register a new lab space, select “New Record” from under the Registration form drop down
 - Fill in all of the required information on the registration form. Click Submit.



Chemical inventory searching and editing

- ASU Materials Management adds chemicals to your inventory via the “add chemical inventory” link in CEMS.



Location Name	PI Name	Quantity
GEORGE M. BATEMAN CHEMICAL STORAGE BUILDING G G134	Michelle Near	1
	Laura Gibble	1
GEORGE M. BATEMAN PHYSICAL SCIENCES CENTER H H140A	Michelle Near	1
	Dakota Templeton	1
GEORGE M. BATEMAN PHYSICAL SCIENCES CENTER H H246A	Michelle Near	1
	Dakota Templeton	1
GEORGE M. BATEMAN PHYSICAL SCIENCES CENTER H H336A	Michelle Near	1

- You can search the current chemical database at ASU by clicking the “search chemical inventory” link.
- You can update or edit details to your chemical inventory by clicking the “update chemical inventory” link. PIs can also check CEMS entries by Materials Management for accuracy by following these instructions.
 - Enter or scan the barcode number into the field on the page.
 - Scroll to the bottom of the next page and click on the barcode link for the chemical you are updating.

Review Inventory
(1) barcodes found

Barcode	Chemical Name	Owner	Location
10000332	Barium hydroxide, Octahydrate	Dakota Templeton	GEORGE M. BATEMAN CHEMICAL STORAGE BUILDING G G118 Inorganic C1

cancel confirm

- On the following page you can update various fields for the chemical:
 - Location, sublocation
 - Container quantity
 - Expiration date

UNHCEMS* | View Chemical Inventory

Chemical Information

Chemical Name: Barium hydroxide, Octahydrate

Manufacturer: Alfa Aesar

ProdNo: 14499

CAS: 12238-71-6 100%

Safety Data Sheet: 2022-06-07

Hazard Classifications

DANGER ☠️ ⚠️

- Causes serious eye damage
- Causes severe skin burns and eye damage
- Harmful if inhaled
- Harmful if swallowed
- H302 ACUTE TOXICITY - ORAL (4)
- H332 ACUTE TOXICITY - INHALATION (4)
- H314 SKIN CORROSION/IRRITATION (1A)
- H318 EYE DAMAGE/IRRITATION (1)

NFPA

Container Information

Barcode: 10000332

Owner: Dakota Templeton (dtemple)

Location: GEORGE M. BATEMAN CHEMICAL STORAGE BUILDING G G118 Inorganic C1

Container Quantity: 250 0
update quantity remaining

Container Type: PLASTIC BOTTLE
 open secondary hide

Label Photo: none
upload max size: 300k allowed types: jpg jpeg png

Date Acquired: 2022-06-02 Expiration Date: YYYYMM-DD

Last Evaluation Date: 2022-06-02

Container Notes

last updated by Michelle Near on 2022-06-02 14:43:19

History

mark not found

mark refill

mark empty

surplus

print label

save

- Remember to click SAVE
- **Note: at this time it is not required for PIs to submit updated chemical inventory lists annually.**

Hazardous Waste Pickup Requests

To have a waste container picked up

- Click “request waste removal” under the Hazardous Waste menu



- Fill the waste information in the fields on the following page:
 - Generator: Your ASURITE if it did not autofill
 - Other: enter PI Phone number
 - PI Name
 - Department
 - Location
 - Description (short description of waste, i.e. Titration Lab Waste)
 - Detailed Description (including percentages of waste totaling 100%)
 - Physical State
 - Primary Hazard
 - Container information
 - Tag Number(s)

Request Waste Removal Form

Generator
 Michelle Near (mknear3) no [v] ...
 other:

PI
 first last (username@email) no [v] ...
 other:

Department
no [v] ...
 other:

Pick-up Location
 building room number no [v] ...
 other:

Description

Detailed Description

Describe each waste component on its own line. Each line must end with a percentage. Example: Chemical Name 10.5%. The sum of all percentages entered must equal 100%.

Waste Type

Physical State

Primary Hazard

<input type="checkbox"/> biohazardous	<input type="checkbox"/> corrosive-acid	<input type="checkbox"/> corrosive-base
<input type="checkbox"/> ignitable	<input type="checkbox"/> other	<input type="checkbox"/> reactive
<input type="checkbox"/> sharps	<input type="checkbox"/> toxic	<input type="checkbox"/> used oil

Complete ALL **required** fields OR enter *other* field.

Total # Containers	Qty per container	Unit of measure	Container type	other
<input type="text"/>	<input type="text"/>	<input type="text"/> no [v] ...	<input type="text"/> no [v] ...	<input type="text"/>

Tags

Comments

- Removal of chemical from your inventory
 - If chemical bottles have been emptied:
 - Remove the barcode from that container and adhere to a paper for HazWaste to take when they pick up waste.

OR

- Update your chemical inventory for this barcode and select “mark empty.”

Additional Information

EHS provided training videos: <https://cfo.asu.edu/cems>

Tips for success: <https://www.asu.edu/ehs/documents/CEMS-Inventory-Management.pdf>

Chemical requisition process: <https://www.asu.edu/purchasing/pdf/New-Chemical-Requisition-Process-Quick-Guide.pdf>

I have read and understand the content of this SOP. Please fill out the information below and email a signed copy to SMSsafety@asu.edu .

Employee name	ASU affiliate no.	Signature	Date