

CHEMICAL EXCHANGE

The Chemical Exchange Program

The AU Chemical Exchange program was established in response to the **Environmental Protection Agency (EPA)** requirement for hazardous waste minimization and pollution prevention as described in the **Resource Conservation and Recovery Act (RCRA)**, the **Hazardous and Solid Waste Amendments of 1984**, the **Pollution Prevention Act of 1990**, and the **National Waste Minimization Program** established by EPA in 1994.



The [National Waste Minimization Program](#) focuses attention on reducing hazardous wastes production by lowering the toxicity and persistence of wastes that are generated.

We reduce the production of hazardous waste by promoting the use of non-toxic or less-toxic substances, purchasing only the amounts needed for the study, by We can also reduce the amount of hazardous wastes entering the waste stream by looking for ways to recycle, reuse, and redistribute usable unwanted materials, rather than putting them into the waste stream, and implementing conservation techniques, such as micro-scale processes.



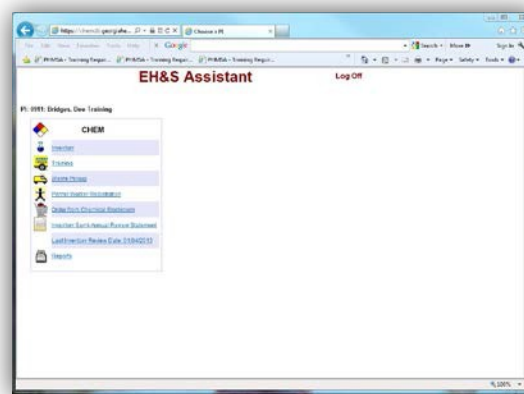
Pollution prevention and waste minimization requires cradle-to-grave analysis, tracking and redistribution processes, and these activities are all managed under the Chemical Exchange program through the Chemical Inventory Database.

The Chemical Exchange Program is managed by **Chemical Safety Office (CSO)**, under the leadership of the **Associate Vice President of Environmental Health & Safety Division (EH&S)** at AU.

Kenneth Erundu, the Chemical Safety Officer, Right-to-Know Coordinator, and Manager of the Chemical Safety Office, supervises CSO staff members who collect unwanted usable chemicals from various laboratories, store them in a central location for redistribution to other campus laboratories.

When Offering a Chemical for Exchange, consider the following:

1. Is the chemical expired,
2. Is the integrity of the container is still good
3. Is the integrity of the container still good
4. Is the original label still on the container and legible
5. Is the chemical time sensitive, highly reactive, or a highly toxic
6. The chemical is not a time sensitive, high hazard chemical, for example:
 - Methyl Methacrylate - Polymerization by internally formed Peroxides dispose within 12 month,
 - Diethyl Ether –Peroxide hazard dispose within 12 months,
 - Chloroform – forms phosgene gas in the head space above the liquid after opening dispose



- within 2 years
- Formic Acid – decomposed into CO₂ Carbon Dioxide causing the container to fail catastrophically, container may rupture explosively in storage, time limit 2 years.

Examples of chemicals are considered Not suitable for exchange:

1. Peroxides, Organic Peroxides, and Peroxide Forming Compounds –such as Isopropyl Ether, Diethyl Ether, Tetrahydrofuran, Acrylonitrile, Acrylic Acid, Vinyl Acetate, etc. All peroxidizable compounds should be ordered in the smallest quantity possible, must be periodically tested in storage, and should be wasted when no longer in use.
2. High Hazard chemicals such as Pyrophoric/Spontaneously Combustible, Self-heating, Self-Reactive, Potentially Explosive chemicals should be ordered in the smallest possible quantity and waste when no longer in use
3. Chloroform – forms phosgene gas in the head space above the liquid after opening dispose within 2 years, if the chloroform is older than 2 years it should be wasted
4. Formic Acid – decomposes into CO₂ Carbon Dioxide causing the container to fail catastrophically, container may rupture explosively in storage, time limit 2 years – it is two years or older it should be wasted
5. Methyl Methacrylate - Polymerization by internally formed Peroxides dispose within 12 months

Requesting an Exchange Chemical Pickup:

All Exchange Chemicals are processed through the Chemical Inventory Database for Pickup.

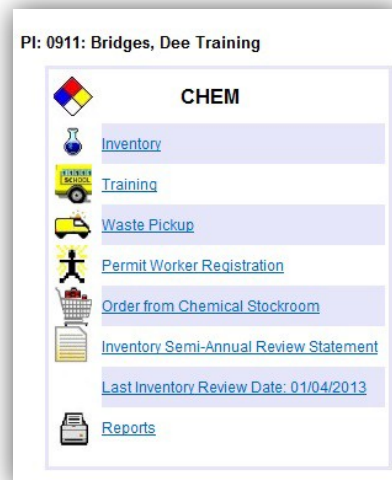
Your Chemical Inventory must be current in order to receive chemicals from the exchange program. Your inventory will be verified before chemicals ordered are delivered.

Only chemicals that are still usable should be offered for exchange. This includes usable, unwanted chemicals in the original Vendor's container and stock solutions/mixtures that are clearly labeled as to the contents and certified as usable by the original owner of the solution.

To place a pickup request for an exchange chemical,

- log into the Chemical Inventory Database.
- from the Main Menu, Click on Waste Pickup.
- Complete the Request for Pickup window just as you would if you were requesting a pickup of chemical waste.

If you have a waste that needs to be picked up and an exchange chemical to offer, you should enter two separate requests for pickup – one request for the chemical waste, and another request for the exchange chemicals.



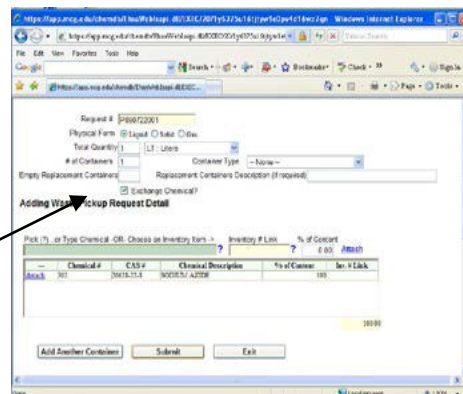
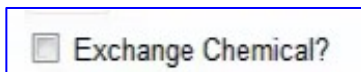
Completing the Exchange Chemical Container Details

When you save your request for pickup in the “Add Request” window, the “Request Detail” window will appear. Complete everything in the Request Detail window, just as you would for a waste container, with one exception.

You will mark the request detail as an Exchange Chemical.

To mark the entry:

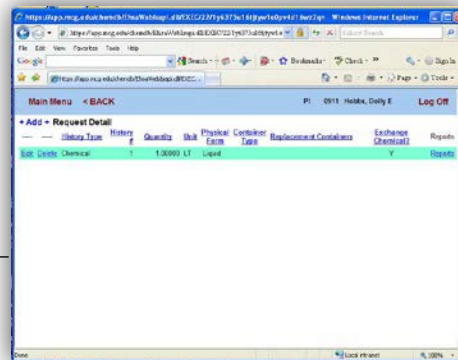
- Click on the check box to the right of the words “Chemical Exchange?” to identify your entry as an exchange chemical.



Again, enter a separate request for your waste when you have both waste and exchange chemicals to pick up.

You may enter more than one exchange chemical on a request for pickup. There should be a detail for each container you wish to offer to the Exchange program.

- After you have clicked on **Submit** for the first container details, you will see “**Add Another Container**” appear – click on this to enter another detail.
- When you have finished entering the last container information, **Click on Submit, and Exit**



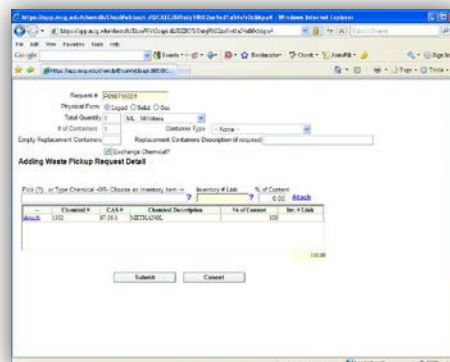
Preview/Print an Exchange Label

After you submit the request detail for your exchange chemical and click on Exit, the **Add Request Window** will appear. To produce an Exchange label, you will have to go back to the **Add Request Detail Window**.

To go back to the Add Request Detail window, Click on “**View**” to the left of the Request # .

In the Request Detail window you may:

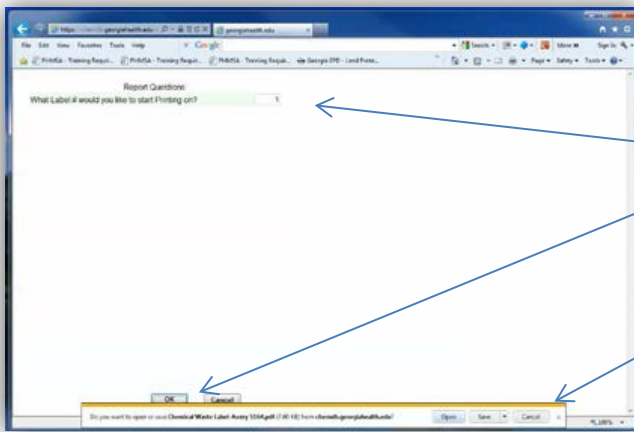
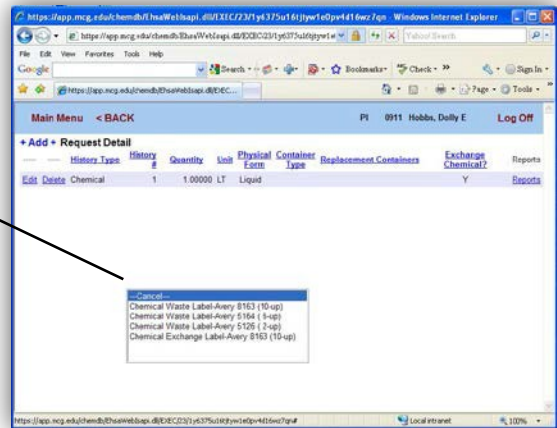
- Add** another detail by clicking on **+Add+ Request Detail**.
- Edit** a Detail you entered by clicking on **Edit** to the left of the item you wish to change.
- Delete** any Detail you entered by clicking on **Delete**.
- Print an Exchange Chemical Container Label**.



Click on **Report** in the far right column to produce a container label for your exchange chemicals. Notice that **Report** follows each container detail that has been entered. It does not matter which Report you click on. The system will print a label for every container detail listed. When you click on Report, a label selection menu will appear.

**There is only one label choice for an Exchange Chemical container:
Click on this item to select.**

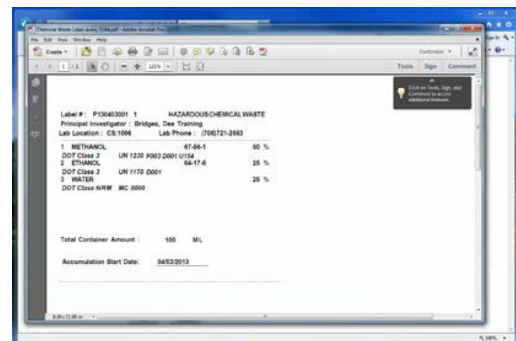
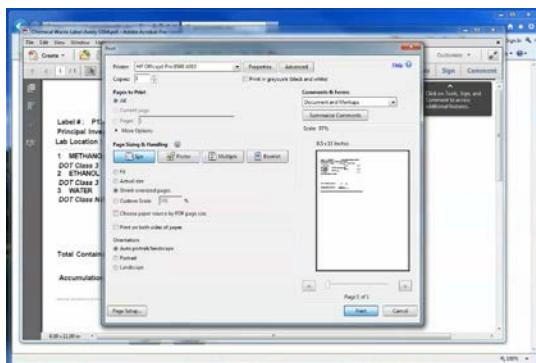
- Avery 8163 – 10 up - 2" x 4", ten per page
- Avery 5164 – 6 up – 3.3" x 4", six per page
- Avery 5124 – 2 up – 5" x 8", two per page
- **Chemical Exchange Avery 8163 – same size as the 10 up label, only to be used for exchange chemicals**



A window will appear asking you: **“What Label # would you like to start Printing on?”**
Type in 1 and click on OK.

A statement at the bottom of the screen will appear when the report is ready. Click on Open – the report will open in Adobe. Use the commands at the top of the screen to print the labels.

Select **File>Print**. Print the labels on a sheet of plain paper, cut out each label, and tape them to the appropriate container



Each container must have its own label attached. When taping the Exchange label to a container – do not cover or damage the original container label. Exchange Chemicals are picked up on Wednesday. CSO staff members will transfer the exchange chemical from the pickup request to the Exchange Inventory.

Ordering Chemical from the Exchange Program

As an enhancement to the Chemical Exchange Program, a list of the chemicals available for exchange is maintained in the **Chemical Inventory Database** under 'Order from Chemical Stockroom'. Under this Main Menu item, all chemical users are able to view the Chemical Exchange Inventory, and may order specific items from the chemicals listed.

View/Order from the Exchange Chemicals Inventory

To view the exchange chemical inventory:

- go to the **Main Menu** listings
- Click on “**Order from Chemical Stockroom.**”

You will see a list of all of the chemicals

available for order.

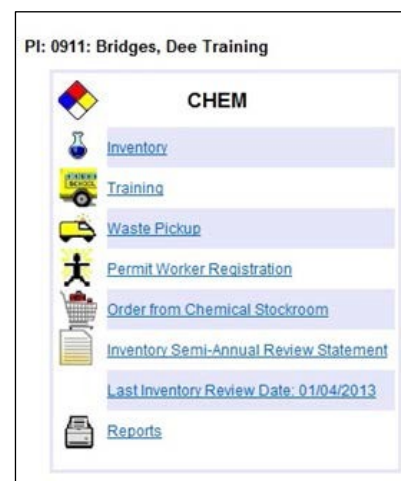
To order/request a chemical from the Exchange Inventory:

- Click on the field where you see “0” and type in the number of containers you would like delivered to your lab.
- Click on “**Place Order.**”

A CSO staff member will deliver the chemical to your lab, and transfer the item into your inventory.

Your Chemical Inventory must be current in order to receive chemicals from the exchange program. Your inventory will be verified before chemicals ordered are delivered.

All of the Chemicals offered through the Chemical Exchange Program are free.



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Chemical Description	Stock	# of Items	Amount	Unit	# in Stock	Status
BLUE DEXTRAN	9549-32-5	1	1 G	1	0	Stock
BROMOPHENOL BLUE SULFONE FORM	115-78-9	1	5 G	2	0	Stock
CODMASSE BRILLIANT BLUE R250	8104-58-2	1	25 G	2	0	Stock
CODMASSE BRILLIANT BLUE R250	8104-58-2	1	100 G	1	0	Stock
CODMASSE BRILLIANT BLUE R250	8104-58-2	2	10 G	2	0	Stock
DIETHYLNITROSAMINE	62-75-9	2	1 G	1	0	Stock
LAUROYLLEUCOSINE SODIUM, N-	137-16-6	1	1 KG	1	0	Stock
LEAD NITRATE	7435-92-1	1	1 KG	1	0	Stock
METHANOL	67-56-1	3	4 LT	1	0	Stock
NITRIC ACID	7801-37-2	1	2.5 LT	1	0	Stock