



# **Chemical Safety Program**

## **Hazard Communication Program**

### **Chemical Inventory Database (CIDB) Program**

#### **Manual**

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## **Purpose**

The purpose of the manual is to inform employees how to use the Chemical Inventory Database (CIDB), its equipment and materials, and to explain user-associated responsibilities.

## **Scope**

The scope of the procedure pertains to the maintenance and operation of the Chemical Inventory Database Program per the Hazard Communication Program at Towson University (TU). The procedure covers the use of CIDB-related software including but not limited to databases (Vertere ChIM); hardware and equipment such as desktop printers used for tags and handheld scanners; and inventory items, which will be CIDB-tagged (per OSHA HazCom) and handled, transported, used, stored, and disposed per the Chemical Hygiene Program. The procedure applies to all chemicals considered hazardous per OSHA and to employees who use CIDB-tagged hazardous chemicals in laboratories and related storage areas, and in facilities maintenance.

## **Responsibilities**

### **A. Environmental Health & Safety (EHS)**

1. EHS will track inventory and submit reports to TU and governmental stakeholders as requested.
2. EHS will track CIDB equipment.
3. EHS will install and service equipment in appropriate office locations. That is, EHS will purchase, update, deliver, and install parts when software upgrades and/or parts (including consumables such as ribbon and label stock) as required.
4. EHS will provide CIDB training to employees and assign roles in CIDB based on performed duties and responsibilities.
5. EHS will respond to issues with CIDB by direct troubleshooting, contacting the Office of Technology Services (OTS), or CIDB-related vendors (e.g. Vertere, Zebra).
6. EHS may perform random audits of areas where items are expected to be used or stored.
7. EHS may add inventory and catalog records as required and request end users with appropriate rights do as such.
8. EHS will verify catalog records for accuracy and completeness.

### **B. The Office of Technology Services (OTS)**

1. OTS will maintain the server(s) which house the CIDB software for the developmental (DEV) and production databases.
2. OTS will update the application with assistance from the vendor Vertere upon request by EHS. This may be done by e-mail or via TechHelp ticket.
3. OTS has the responsibility of maintaining data backup in case of system failure.
4. OTS may provide assistance to EHS for issues that arise from these areas or equipment.

### **C. Area [CIDB] Coordinators**

1. CIDB Coordinators will inform EHS of new employees to be added to CIDB, employees who will also require CIDB training.
2. CIDB Coordinators will inform EHS of new locations to be added.
3. CIDB Coordinators will work with end users within their area or department to add/edit catalog records, print tags (if equipped), and resolve CIDB-related issues.
4. CIDB Coordinators will inform EHS of any CIDB issues that they cannot explain or resolve.

### **D. Other Departments/End User**

1. Other departments and end users will responsibly use CIDB to a) maintain inventory, b) print tags and attach to inventory items upon arrival, and c) access SDS as needed.
2. It is the responsibility of end users to request tags from their CIDB Coordinator or EHS for inventory.
3. It is the responsibility of end users to reconcile their inventory at least once annually.
4. It is the responsibility of end users to inform EHS of any CIDB issues promptly.
5. It is the responsibility of supervisors or CIDB Coordinators in other departments to inform EHS that members require training.

## **Introduction**

The campuswide Chemical Inventory Database (CIDB) Program was conceived as a comprehensive solution for safety compliance and budgetary requirements at TU, primarily for aspects of hazard communication. There are stakeholders who rely upon the information added to CIDB, such as TU employees in differing administrative and operational capacities, regulatory agencies, and first responders. EHS is tasked with advising and training employees to follow all federal, state, and local regulations, as well as TU Policy, which is assisted by CIDB. Also, through CIDB use, employees are encouraged to reduce spending by sharing and redistributing chemicals, tracking rented/leased gas cylinders, and disposing chemicals in a timely manner to reduce high hazards and hazardous waste disposal costs.

Per the OSHA Hazard Communication Standard, employers are required to provide to its employees the following information:

- chemical inventory, listing all items the employee is exposed to through their work;
- labels, affixed to chemical containers that identify the chemical and provide concise hazard information;
- access to safety data sheets, which provide further hazard and mitigation information for the chemical; and
- a written program, explaining how these documents correlate with one another and the subsequent training on how to use them to reduce exposure to employee illness and injury.

The CIDB Program ultimately covers two aspects of HazCom: chemical inventory and safety data sheets. Requirements for parts of 29 CFR 1910.1450, another OSHA standard commonly known as the Laboratory Standard, include hazard identification and employee training, each of

which are covered in aspects of the CIDB Program. In addition, Maryland Occupational Safety and Health Administration (MOSH) required employer submittal of [Material] Safety Data Sheets (SDS) every two years for chemicals on site, historically. This regulation was later changed to require submission of a list of hazardous chemical requiring SDS upon request.

Vertere ChIM (Enterprise, server version) was the chosen software for CIDB at the University, as the Chemistry Department had used the client-based version for several years prior, whose data was converted for use into the new version. The goal of the department was to track chemicals for inventory purchasing and financial auditing purposes, originally in conjunction with Material Management (Facilities Management); this purpose has been extended to other departments. As mentioned, CIDB is used by EHS for compliance as a primary objective; however, in cases of emergency, EHS - through CIDB - is able to provide chemical hazard and location information to first responders such as police, firefighters, and paramedics. It is useful to have the information available remotely prior to entry by said responders.

Prior to use of CIDB, business processes involving chemical management focused primarily on physical chemicals and documents. The business processes involve purchasing, receiving, handling and transport, use and storage, disposal, and recordkeeping, essentially the life cycle of the products. Per the federal Resource Conservation and Recovery Act, employers must track chemicals from cradle to grave; that is, from the time the chemicals arrive on campus until they are consumed, or they or their containers are removed as waste. CIDB has added the virtual component of chemical inventory record and safety data sheets, and it has facilitated the ability to track from cradle to grave for multiple departments on campus, based on the item status within the Program. For example, if an item is purchased or ordered, the corresponding virtual action is CIDB item addition with a status of "On Order". For a virtual inventory record, there is a corresponding physical item (chemical) and physical tag with matching CIDB information affixed to said item. Chemicals/containers are not tracked via CIDB after they are disposed virtually and physically removed from the original storage area, though EHS will track waste products until they are moved off campus.

Chemical items are added, edited, viewed, disposed, and/or restored in the database(s) by CIDB Coordinators and end users. The items are added from the associated item catalog. The original item catalog provided by Vertere contained over 230,000 items, which has since been supplemented by thousands of additional catalog records through the site administrator in EHS and CIDB Coordinators who have the authority to add catalog items. End users are tasked with keeping information up to date in their respective inventories while EHS periodically monitors accuracy through auditing. CIDB equipment is typically installed in an office setting, which is also where program training will be performed, though actual inventory will be stored and used in other workplace settings.

### **Applicable Regulations**

- 29 CFR 1910.1200 – Hazard Communication
- 29 CFR 1910.1450(f,h) – Occupational Exposure to Hazardous Chemicals in Laboratories: Employee Information and Training; Hazard Identification
- 40 CFR Parts 239-282 – Resource Conservation and Recovery Act: Solid Wastes
- COMAR 09.12.33.02 – Chemical Information List

## Procedure

### A. Getting Started

#### 1. Login

a) Navigate to the login page.

i. Use the Internet Explorer browser to type in the Chemical Inventory Database (CIDB) URL.

1) Development database URL:

<https://dev-vertere.towson.edu/viment/login.aspx>. This will be used for practice and testing.

2) Production database URL:

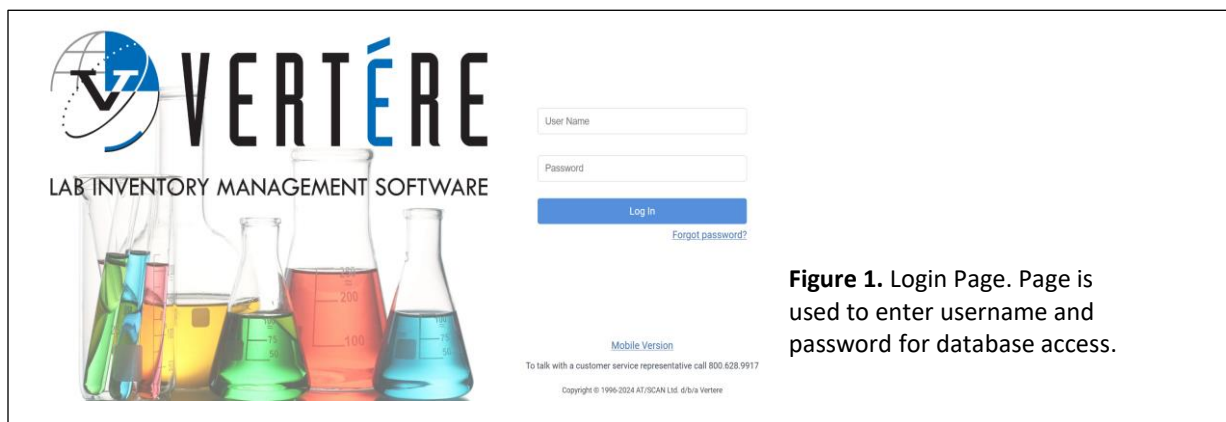
<https://vertere.towson.edu/vimenterprise/login.aspx>. This will be used ONLY for actual data.

ii. Use a shortcut or Favorite to access the CIDB website.

1) Create a shortcut on your desktop by right-clicking on the login page, clicking **Create shortcut**, and clicking **Yes** to the prompt that follows. The shortcut will be named "Vertere".

2) Save the URL to your favorite websites by going to the browser menu bar, clicking **Favorites**, clicking **Add to favorites**, and clicking the **Add** button. The name of the favorite will be "Vertere".

b) Expand the browser window to full screen.



**Figure 1.** Login Page. Page is used to enter username and password for database access.

c) Access the database.

i. Enter your User ID and password.

1) The User ID will be your TU username. Example: [jsmith@towson.edu](mailto:jsmith@towson.edu) for user John Smith will have the User ID "jsmith" in the CIDB.

2) The password will initially be "password". Upon first log in, there will be a prompt for creating a new password.

Click the **Submit** button.

1) If incorrect information is entered into user ID and password, click the **Reset** button.

2) *If password is forgotten:*


- A) Click the Forgot Password link below the Login prompt.
- B) Type User ID and click the Reset button. A Password Reset link will be sent to your e-mail address.

2. General Navigation

a) Navigation Tools

i. Arrow buttons 

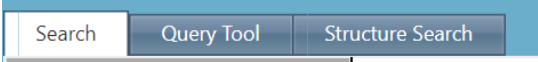
- 1) Use of **Back** or **Forward** buttons in your browser window to navigate through the database is not recommended.

ii. Control/Function buttons 

- 1) You may click a gray button to perform a function or to direct you to a different table or section for the menu you have selected.

Navigation Bar/Pathway Links 

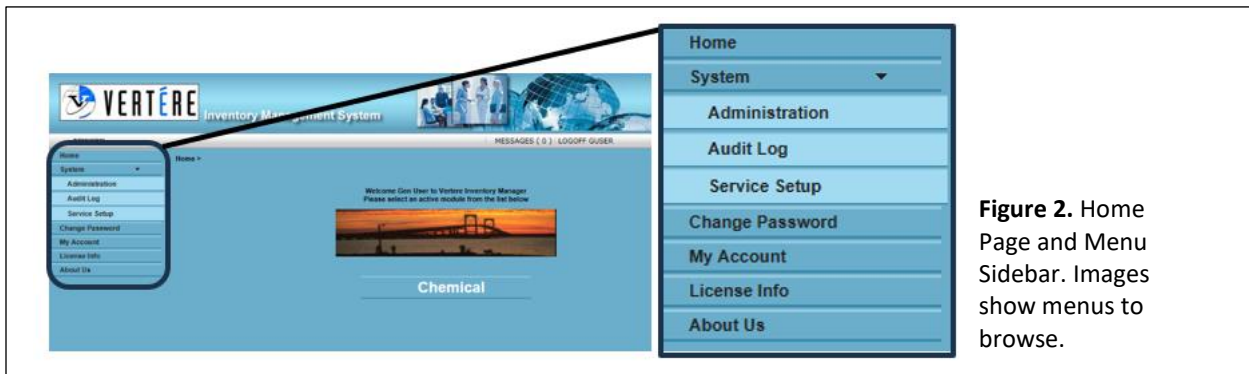
- 1) Under the page header, there is a pathway that details the navigation to the current page. This will appear black with one or more links, with the current page being in boldface.
- 2) You may click any link in the pathway to navigate back to that previous page.

Navigation Tabs (Tabs) 

- 1) You may click a blue tab to direct you to a different table or section for the menu you have selected. The current tab section will be highlighted.

Page links within a table

- 1) Use the **First** link to go to first page in series.
  - A) Use the **Prev** link to go to the previous page in the series.
  - B) Use the **Next** link to go to the next page in the series.
  - C) Use the **Last** link to go to the last page in the series.
  - D) For specific pages, type in page number in field next to **Go To Page** link then click the link (do not press Enter).



**Figure 2.** Home Page and Menu Sidebar. Images show menus to browse.

b) Home page and its menu side bar

i. Access the following home page menu sidebar options by clicking:

1) Change Password

- A) Type in Current Password.
- B) Create and type in New Password.
- C) Confirm Password by type new password again and clicking Save.


2) My Account

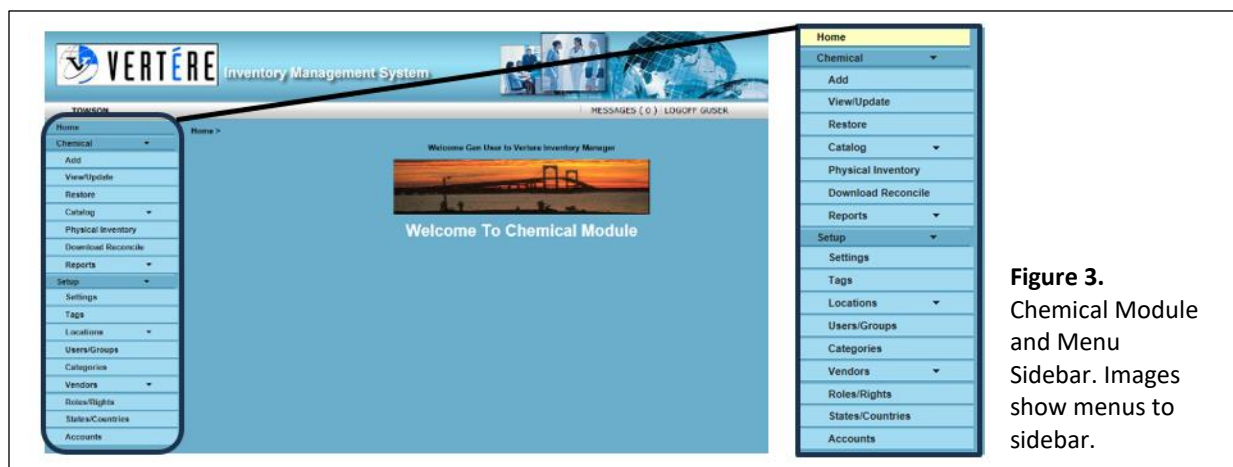
- A) Use this option to update name or e-mail information

3) About Us

- A) Use this option to get current information about vendor and database version.

ii. Modules

- 1) Enter the Chemical Module by clicking  button. Until further notice, only the Chemical Module will be available for use.



**Figure 3.** Chemical Module and Menu Sidebar. Images show menus to sidebar.

c) Chemical Module and its menu sidebar

i. Access the following home page menu sidebar options by clicking:

- 1) Chemical>Add
- 2) Chemical>View/Update
- 3) Chemical>Restore
- 4) Chemical>Catalog
- 5) Chemical>Physical Inventory
- 6) Chemical>Download/Reconcile
- 7) Chemical>Reports

These options will be discussed further in later sections.











d) Sorting

- i. Headers for item records in View/Update table are links that can be used to organize the records alphabetically or numerically, depending on the data.







e) Images




i. Record Images/Hyperlinks

- 1)  Barcode icon = This icon is used to print an inventory tag
- 2)  Check mark icon = This icon is used to select catalog record for adding inventory items or viewing archived record information
- 3)  Date icon = This icon is used to select date for item(s)
- 4)  Magnifying Glass icon = This icon is used to view a record
- 5)  Other Ingredients icon = This icon is used to add/edit non-CAS ingredients to Other Ingredients table
- 6)  Pencil icon = This icon represents a catalog or inventory record that can be edited; this icon is used to view/edit a record
- 7)  Current User icon = This icon is used to set the selected user to the user that is currently logged in. Since Group Security is in effect, this will only be useful for disposals.
- 8)  Chemical Structure icon = This icon is used to look up the chemical structure of an icon, if available
- 9)  Chemwatch hyperlink = This hyperlink is used to access Chemwatch SDS for item. SDS will display as PDF.
- 10)  SDS icons = These icons represent if SDS are attached to record and available in the Documents tab (left) or not (right). If no SDS in Documents tab, SDS may be available elsewhere.



ii. Group Images

- 1)  Administrator icon = This icon represents a Site Administrator
- 2)  All Users icon = This icon is used to organize Users
- 3)  Group icon = This icon represents a Group; this icon is used to organize User
- 4)  User icon = This icon represents a User; this icon is used to select User of items viewed

iii. *Location Images*

- 1)  *All Locations icon = This icon is used to add locations*
- 2)  *Location icon = This icon represents a location; this icon is used to select location of items viewed*
- 3)  *Location Lookup icon = This icon represents the Location Tree; this icon is used to look up locations*

iv. *Report icons*

- 1)  *Excel icon = This icon is used to select Excel version of report or export Excel file*
- 2)  *PDF icon = This icon is used to select PDF version of report*

f) *Errors*

- i. *If you try to access an area where you do not have permission, you will see the message "Access Denied". If you feel this message is displayed in error, please contact the site administrator.*

3. Logoff

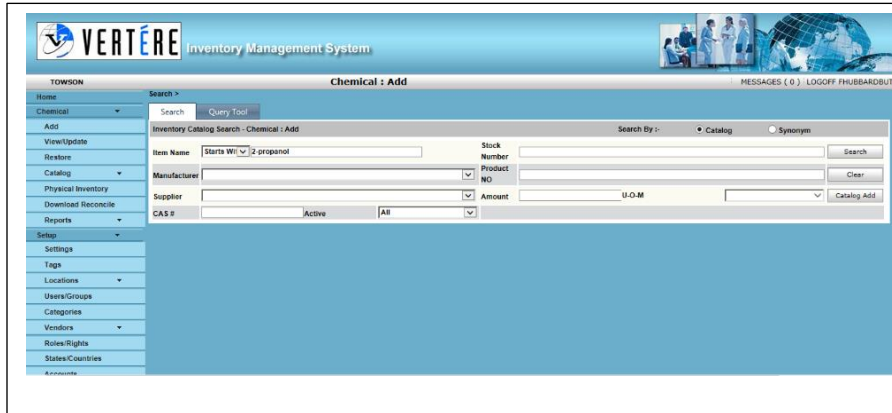
- a) Click the LOGOFF link in the upper right section of the home page.

**B. Adding Inventory Items**

1. Navigate to Add Menu to Add

- a) Go to the Chemical menu on the left sidebar and click Add.
- b) Select one of the following methods:
  - i. *Enter an item by typing in **Product NO** and clicking **Search**.*
  - ii. *Enter an item by using the condition "Contains", typing in the item name, and clicking **Search**.*
    - 1) *The "Contains" condition will search the catalog by a word or fragment entered into the **Item Name** field and results will contain the word or fragment.*
  - iii. *Enter an item by using the condition "End With", typing in the item name, and clicking **Search**.*
    - 1) *The "Ends With" condition will search the catalog by a word or fragment entered into the **Item Name** field and results will end with the word or fragment.*
  - iv. *Enter an item by using the condition "Is", typing in the item name, and clicking **Search**.*

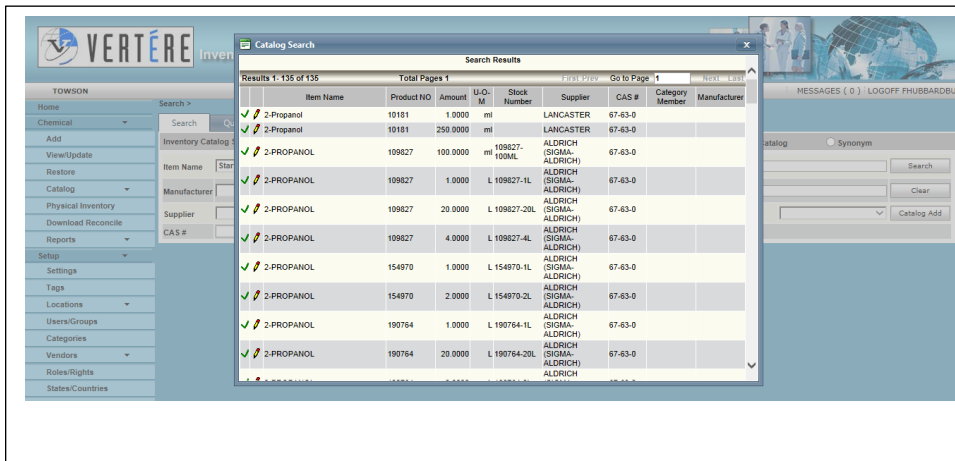
- 1) The "Is" condition will search the catalog by a word or set of words into the **Item Name** field and results will be an exact match of words entered.
- v. Enter an item by using the condition "Starts With", typing in the item name, and clicking **Search**.
  - 1) The "Starts With" condition will search the catalog by a word or fragment entered into the **Item Name** field and results will start with the word or fragment.
- vi. Enter an item by using **CAS #** and clicking **Search**.



**Figure 4.** Add Menu Search Table. Users can enter key words to find items to add to inventory.





## 2. Catalog Search

- a) A table of available catalog item records to add to your inventory will appear. This table will list **Item Name**, **Product NO**, **Amount**, **U-O-M** [Unit of Measure], **Supplier**, and **CAS #** (listed if pure compound). If no records are available according to the criteria you entered, you may need to specify other criteria or add a catalog item (Steps C1-C2).



**Figure 5.** Catalog Search. The user can choose an item here. The pop-up launches from the Add Menu Search Table.

- i. Click **Barcode #** button, which will auto-generate barcode number (item tag).

- ii. Click **Location** field to navigate through Location tree and select the future location for the item or the On Order location for the appropriate building. Select the  for the location of interest.
    - 1) Locations may auto-fill default Owner/Group combination upon selection. If a different Owner is desired, proceed to Step B4c. Otherwise, skip to Step B4d.
  - iii. Click **Owner** field to navigate through Group tree and select future Owner/Group combination for item.
    - 1) Select the appropriate group  and click the appropriate  for the owner.
  - iv. Select status "On Order" in **Status** field.
  - v. Type PO Number using departmental format in **PO Number** field.
  - vi. Select order date by clicking in the **Order Date** field or clicking the  date icon, or if today's date is correct (auto-generated value), skip to Step B4g.
  - vii. If desired, include specific notes about this item by clicking the **Notes** tab, typing data, then click the **Item Add** tab to return to original table.
  - viii. Click the **Save** button at bottom of table to save item record. After saving the item record, several buttons will unlock.
- d) To add multiple items with the same criteria:
- i. Click the **Add Many** button.
  - ii. Type the amount of items to be added and click the **OK** button. These item records will automatically be saved upon clicking **OK**, and you will be returned to the previous table. The amount you type will be in addition to the original item record.
- e) To add multiple items with different criteria:
- i. Click **Copy Last Data** button.
  - ii. Click **Clear** button to remove last entered information.
  - iii. Enter an item using Steps B1b-B2. Note that the **Location, Owner, Group, and PO Number** fields will remain populated.
  - iv. In order to continue:
    - 1) Click **Barcode #** button.
    - 2) Select status of "On Order" in **Status** field.
    - 3) Select order date, if different from today's date.
    - 4) If applicable, add notes using **Notes** tab.
    - 5) Click **Save** button.

### 3. Recommendations

- a) Use of the **Delete** and **Print Tag** buttons in this menu is not recommended.

- b) If you do not find a record in the catalog, you may add a Catalog Item, if you have catalog editing rights by following Steps C1-C2 below. If not, please contact the CIDB Coordinator in your area or department, or the site administrator (EHS).

### C. Adding Catalog Items

#### 1. Navigate to Appropriate Menu to Add Items



- a) Go to the menu sidebar on the left.
- i. In *Chemical>Add*, click **Catalog Add** button, OR
  - ii. Click the **Catalog>Create New** menu, OR
  - iii. Click the *Catalog>Edit* menu to Clone items.
    - 1) Search for item by following Step C2b.
    - 2) Click the Clone button. This will create a duplicate of the current item to be edited. Note: The same files in the Documents tab (e.g. SDS) and components in the Ingredients table will be added for the duplicate catalog record unless further edited.

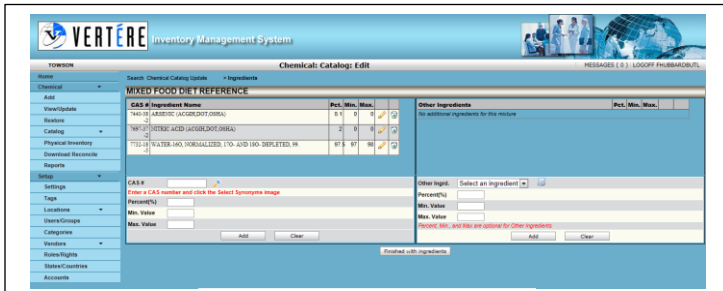
- b) Click **Record Data** tab to enter data. Use all capital letters for entering text.

- i. A minimum of the following information should be entered/edited:
  - 1) For new catalog records:
    - A) Item Name
    - B) Quantity (1)
    - C) Unit of Purchase (Each)
    - D) Amount
    - E) U-O-M [Unit of Measure]
    - F) Product NO, if available
    - G) Supplier
    - H) Add any permanent catalog notes in **Notes** field
    - I) CAS #, if available, and is a single component product; if not a single component product, click **Save** button and go to Step C2.
  - 2) For cloned catalog records:
    - A) Amount
    - B) U-O-M, if necessary.
  - 3) Click **Save** button.

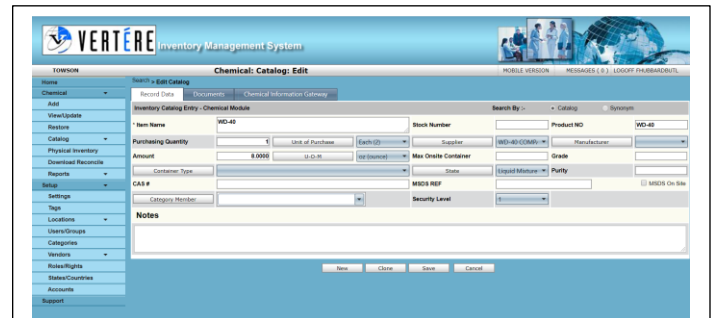
#### 2. Navigate to Catalog Menu to Edit Item Ingredients

- a) Click the **Catalog>Edit** menu.
- b) Select one of the following methods:
- i. Enter an item by typing in **Product NO** and clicking **Search**.
  - ii. Enter an item by using the condition "Contains", typing in the item name, and clicking **Search**.

- 1) The “Contains” condition will search the catalog by a word or fragment entered into the **Item Name** field and results will contain the word or fragment.
- iii. Enter an item by using the condition “End With”, typing in the item name, and clicking **Search**.
  - 1) The “Ends With” condition will search the catalog by a word or fragment entered into the **Item Name** field and results will end with the word or fragment.
- iv. Enter an item by using the condition “Is”, typing in the item name, and clicking **Search**.
  - 1) The “Is” condition will search the catalog by a word or set of words into the **Item Name** field and results will be an exact match of words entered.
- v. Enter an item by using the condition “Starts With”, typing in the item name, and clicking **Search**.
  - 1) The “Starts With” condition will search the catalog by a word or fragment entered into the **Item Name** field and results will start with the word or fragment.
- vi. Enter an item by using **CAS #** and clicking **Search**.
- c) Click the **Chemical Info Gateway** tab. If this tab is not active, in **Record Data** either a CAS # or a combination of a Product NO and Supplier must be added/available for access.
- d) Click the **Mixture** tickbox.
- e) Click the **Save** button.
- f) Click the **Add Ingredients** button or **View/Edit Ingredients** button.
  - i. For every ingredient that has a CAS #:
    - 1) Type CAS #.
    - 2) Click  to search, and select ingredient (you may add a Synonym if no Ingredient is available).
    - 3) Enter a target percentage or a range (min. and max. values), then click **Add** button.
  - ii. For every ingredient that does not have a CAS #:
    - 1) In the Other Ingredients table, search for the ingredient. If the ingredient is not found, select  and enter ingredient name. Click **Create** button.
    - 2) Select the ingredient.
    - 3) Enter a target percentage or a range (min. and max. values), then click the **Add** button.
    - 4) Once all ingredients have been added, click **Finished with Ingredients** button, then click the **Save** button.



**Figure 6.** Ingredients Table. CAS # and non-CAS # ingredients are entered into this table for the Chemical Information List.



**Figure 7.** Catalog Record Table. The table displays necessary fields and functions used to edit for catalog editors.


### 3. Add a New Supplier

a) In **Chemical>Catalog>Create New, Chemical>Catalog>Edit, or Vendors>Create New** menus:

- i. Click **Record Data** tab.
- ii. Click **Supplier** button.
- iii. Enter name of supplier in Name field within Vendor Detail tab. Use all capital letters for entering text.
- iv. Click **Save** button and close table window. New supplier entry will be found alphabetically on the Vendor list.

### 4. Add SDS File

a) In **Chemical>Catalog>Edit**

- i. Search for item by following Step B1b.
- ii. Click  next to the item. (Users with catalog edit rights.) Upon clicking the pencil icon, the user will note several tabs.
- iii. Click **Documents** tab.
- iv. Click **Add new document** button under Current Documents header.
- v. Enter document name into **Document title** field.
- vi. Enter brief description into **Description** field.

- vii. Select (M)SDS from **Document Type** dropdown menu.
- viii. Select or enter in current date for adding in the **Document Date** field.
- ix. Click **Select** button to search for (M)SDS file, which fills the **Document Path** field.
- x. Click **Upload & Save** button. The file is now ready to be viewed.

#### D. Viewing/Editing Inventory Items

##### 1. Navigate to View/Update Menu to View/Edit Inventory

- a) Go to the Chemical menu on the left sidebar and click View/Update. You may search for or edit an item by clicking the Search or Query Tool tabs, or the Scan Tag field:

##### i. Search

1) Search is the default tab, which will include some basic search fields such as **Barcode #, Location, Owner, Group**, etc. With the exception of Barcode #, these fields yield a broad search.

2) To create a search:

- A) Select a search field.
- B) Enter data or click into the field and select the appropriate icon.
- C) Click the Search button.

##### ii. Query Tool

1) Query Tool is a tab that can be used for more specific searches and has a broader choice of fields that can be used to view/edit items. This type of search may use one line of criteria for a query or a string (multiple lines of queries).

2) To create a search:

- A) Select a field.
- B) Select a condition.
- C) Enter value or select the appropriate icon.
- D) Click the Add button after each entry.
- E) Click the Search button.

3) To update a search:

- A) Edit a field, a condition, or a value of interest to change data or delete a line of criteria by clicking Select next to the line of interest and clicking the *Delete* button.
- B) Click the Update button.
- C) Click the Search button.

4) To clear a search:

- A) Click the Clear button.

##### iii. Scan Tag

1) Scan Tag is a feature that can be used for editing functions dealing with multiple items or conducting searches of multiple (but otherwise



*non-related) items. This feature may be used in conjunction with a tethered scanner or by entering data.*

2) *To create an individual tag search:*

- A) Select the Individually radio button.
- B) Scan or enter a Barcode # (Item Tag) into the Barcode # field.
- C) Click the Search Barcode # button or press Enter key, after each entry.
- D) Each entry will display and be added to the table/list upon pressing the button/key.

3) *To create a multiple tag search:*


- A) Select the Tag Range radio button.
- B) Scan or enter the first tag into Barcode # Start field.
- C) Scan or enter the last tag into Barcode # End field.
- D) Click the Search Barcode # Range button or press Enter key.
- E) The range will be added to the table/list upon pressing the button/key.

4) *To clear a search:*


- A) Click the Clear button.

iv. *Structure Search*

- 1) *This feature, although available for use, is not intended for normal users, as appropriate chemical structures for pure chemicals will be preloaded, if known.*


b) To view one item record, click the  next to the item. (Users with no edit rights.)

c) To view/edit one item record:

- i. Click  next to the item. (Users with edit rights.) Upon clicking the pencil icon, the user will note several tabs.
- ii. View/edit the field(s) of interest, then click the **Save** button.


d) To view/edit multiple item records at once:

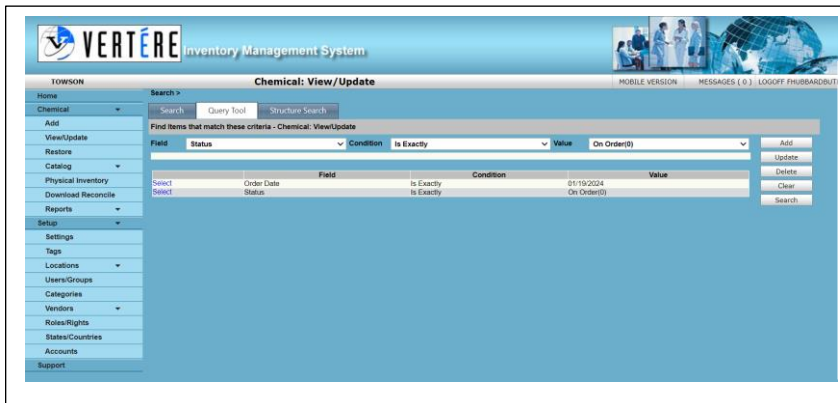
- i. Click the **Select All** tickbox and **MultiEdit** button.
- ii. Select the field.
- iii. Click the **Add** button.
- iv. After checking to make sure this is correct, click the **Process** button. The field will be updated for the item(s).

e) User may export data as a list in Excel by clicking the Export  icon and using the Save As function. **Note:** This will have some similar functionality to Report operations.

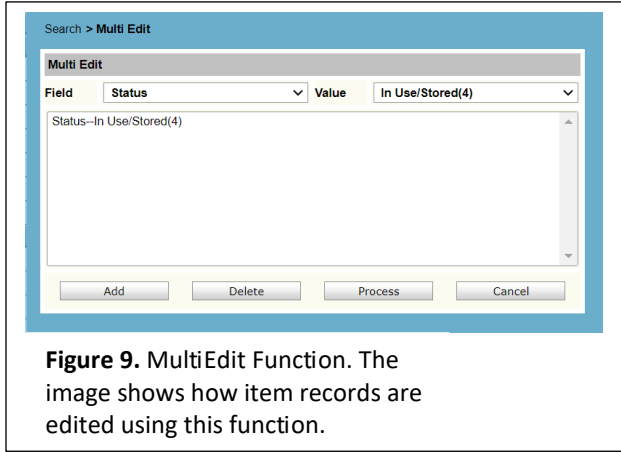
2. Navigate to View/Update Menu to Transfer Inventory

- a) Follow Step D1a to search for the item(s) of interest.
- b) To select the items you wish to transfer:
  - i. Click the tickbox next to each item or
  - ii. Click the **Select All** tickbox.
- c) Click the **Transfer** button.

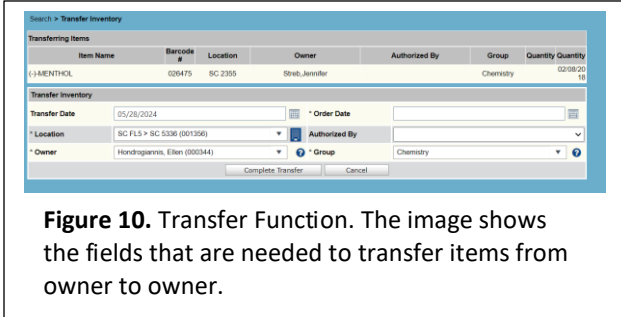
- d) Select location, owner, and/or group. Selecting a location may auto-fill default owner and group.
  - e) Click the **Complete Transfer** button.
3. Navigate to View/Update Menu to Dispose Inventory
- a) Follow Step D1a to search for the item(s) of interest.
  - b) To select the items you wish to dispose:
    - i. Click the *checkbox* next to each item or
    - ii. Click the **Select All** *checkbox*.
  - c) Click the **Dispose** button.
    - i. Select **Disposal Date**, by clicking  or the date field. It will be auto-generated as today's date.
    - ii. Select **Owner**.
    - iii. Select the **Disposal Method**.
    - iv. Click the **OK** button.



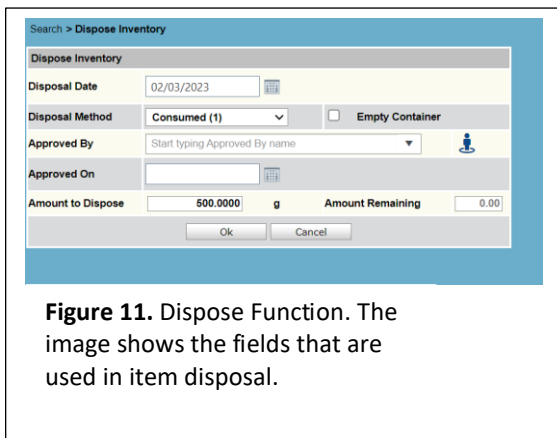
**Figure 8.** View/Update Example Using Query Tool. The example shows how a user may build criteria using different fields, conditions, and values. The buttons at the side assist in editing the specific query.



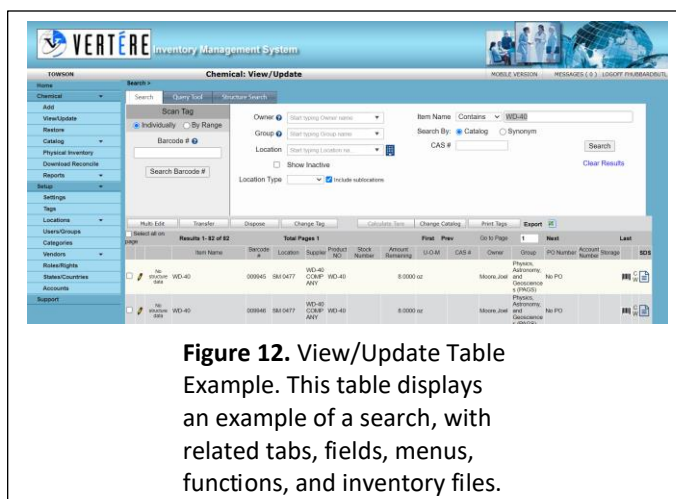
**Figure 9.** MultiEdit Function. The image shows how item records are edited using this function.



**Figure 10.** Transfer Function. The image shows the fields that are needed to transfer items from owner to owner.



**Figure 11.** Dispose Function. The image shows the fields that are used in item disposal.




**Figure 12.** View/Update Table Example. This table displays an example of a search, with related tabs, fields, menus, functions, and inventory files.



## E. Viewing/Printing Safety Data Sheets (SDS)

### 1. Navigate to View/Update Menu to View/Print SDS

- a) Follow Step D(1)(a) to search for the item(s) of interest.
- b) For items that contain one component (pure):

- i. Click the **CW** link  next to an item on its right within the table. A pop-up of a PDF will display the SDS, which may be viewed, saved, or printed. Only one SDS can be accessed at a time.
- ii. For the next item:
  - 1) Close the PDF.
  - 2) De-select the previous item.
  - 3) Repeat the previous steps (i & ii).



- c) For items that contain a mixture:

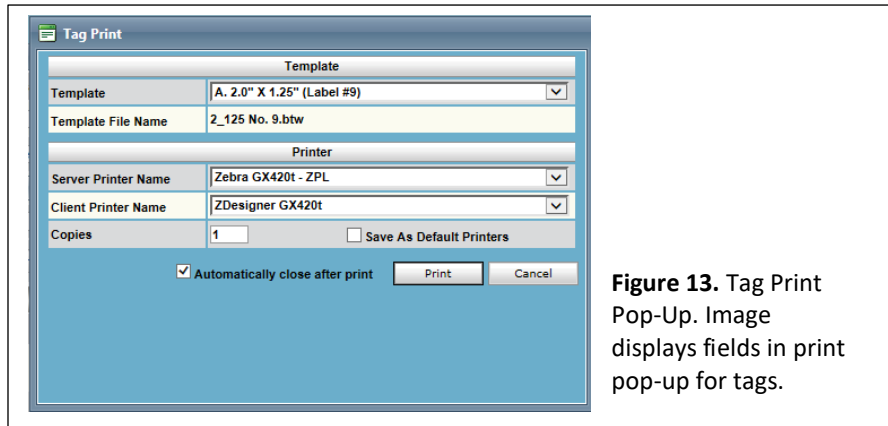
- i. Click  next to the item in table, OR
- ii. Click  next to the item to go into the record.
- iii. Click the **Chemical Info Gateway** tab OR follow steps under Step C(2)(c)(iv).
  - 1) Click the **MSDS Data** button.
  - 2) Click the View MSDS button. A pop-up of a PDF will display the SDS, which may be viewed, saved, or printed.
- iv. Click **Documents** tab
  - 1) Select SDS document by clicking magnifying glass icon.
- v. Use navigation bar to get back to previous table or click **Save** button.

## F. Printing Tags

### 1. Print Single Tags

- a) Follow Step D1.
- b) Select an item.

- i. Click  next to the item, or
  - ii. Click the pencil icon  and click the **Print Tag** button in upper-right corner of the General Information table.
- c) Select Template
- i. A (Label #9) is the default label [2"x1.25"], which includes Barcode Symbol, Barcode # (Item Tag), Item Name, Group Tag, Owner, and Location (Room #).
  - ii. B (Label #8b) is a similar label [2"x1.25"], which also includes Expiration Date.
  - iii. C (Label #13) is a smaller label [1.5"x0.5"], which has the same information as A, but may not contain complete Item Name due to size.
- d) Select the appropriate client printer ("ZDesigner GX420t" is default)
- e) Select copies of tags ("1" is default and should remain the value).
- f) Then click the **Print** button.
- g) To go back to table of searched items, click the **Save** button.



**Figure 13.** Tag Print Pop-Up. Image displays fields in print pop-up for tags.

## 2. Print Multiple Tags (Option 1)

- a) Follow Step D1.
- b) Select all items of interest within table, by clicking the tickbox next to each item, or
- c) Click the **Select All** tickbox to select every item being viewed.
- d) Click the **Print Tags** button.
- e) Follow Steps F1c-F1g.

## 3. Print Multiple Tags (Option 2)

- a) Go to **Setup>Tags** menu.
- b) Click the **Batch Printing** tab.
- c) For Tag Type, select Inventory.
- d) In Starting Sequence field, type numerical value that is first in barcode series.
- e) In Number of Tags to Print field, enter amount of total tags. Tags in barcode series must be consecutive. (Example: Tag #1023 [#001023] is first in a barcode series of five Tags. To print the series, this number is entered and the number 5 is entered

into the next field, yielding Tags for #1023, #1024, #1025, #1026, and #1027. The User would not be able to omit a number, e.g. #1026, using this function.)

f) Follow Steps F1c-F1g.

## **G. Restoring Inventory Items**

### **1. Navigate to Restore Menu to Restore Items**

a) Go to the Chemical menu on the left sidebar and click Restore. You may search for or edit an item by clicking the Search or Query Tool tabs:

#### *i. Search*

1) *Search is the default tab, which includes will include some basic search fields such as Barcode #, Disposal Method, Disposed Before, Disposed On/After, etc.*

2) *To create a search:*

- A) Select a search field.
- B) Enter data or click into the field and select the appropriate icon.
- C) Click the *Search* button.

#### *ii. Query Tool*

1) *Query Tool is a tab that can be used for more specific searches and has a broader choice of fields that can be used to view/restore items. This type of search may use one line of criteria for a query or a string (multiple lines of queries).*

2) *To create a search:*

- A) Select a field.
- B) Select a condition.
- C) Enter value or select the appropriate icon.
- D) Click the Add button after each entry.
- E) Click the Search button.

3) *To update a search:*

- A) Edit a field, a condition, or a value of interest to change data or delete a line of criteria by clicking Select next to the line of interest and clicking the Delete button.
- B) Click the Update button.
- C) Click the Search button.

4) *To clear a search:*

- A) Click the Clear button.

#### *iii. Scan Tag*

1) *Scan Tag is a feature that can be used for editing functions dealing with multiple items or conducting searches of multiple (but otherwise non-related) items. This feature may be used in conjunction with a tethered scanner or by entering data.*

2) *To create an individual tag search:*

- A) Select the Individually radio button.
- B) Scan or enter a Barcode # (Item Tag) into the Barcode # field.
- C) Click the Search Barcode # button or press Enter key, after each entry.
- D) Each entry will display and be added to the table/list upon pressing the button/key.



3) *To create a multiple tag search:*

- A) Select the Tag Range radio button.
  - B) Scan or enter the first tag into Barcode # Start field.
  - C) Scan or enter the last tag into Barcode # End field.
  - D) Click the Search Barcode # Range button or press Enter key.
  - E) The range will be added to the table/list upon pressing the button/key.
- 4) *To clear a search:*
- A) Click the Clear button.
- b) Select the items you wish to restore by clicking the tickbox next to each item.
- c) Click the **Restore** button. The item will return to its original location and owner.

#### **H. Using the Download/Reconcile and Physical Inventory Menus**

1. Refer to Steps B1-B2 in the procedure for Appendix C: CIDB Mobile Scanner Use.

#### **I. Viewing/Running Reports**

1. Navigate to Reports Menu to View/Run Reports
  - a) Go to the Chemical menu on the left sidebar and click Reports>Custom.
  - b) Peruse the list of reports by Report Name or Report Description.
  - c) Select the report file.
  - d) Click the  or  next to the appropriate report under the Run Reports header.  
(Users may only run reports for the group(s) for which they are associated.)

#### **Resources**

For issues with the CIDB Program, please contact EHS by completing the [Chemical Inventory Database \(CIDB\) Assistance Request Form](#).

# Appendix A:

## CIDB Compressed Gases Management for Science Complex

### Scope

The scope of the procedure pertains to the tracking and maintenance of compressed gases in relation to chemical inventory. The procedure refers to the ordering, receipt, transport, storage, and removal of compressed gases in the Science Complex building. Compressed gases mentioned are limited to individual, portable items that are gas cylinders (including lecture bottles) and dewar tanks.

### Responsibilities

#### **A. Environmental Health & Safety (EHS)**

1. EHS will periodically inspect compressed gas storage within Science Complex, including Gas Dock.
2. EHS will provide desktop printer training as it relates to CIDB and Compressed Gas Cylinder Program training.

#### **B. Other Departments/CIDB Coordinator**

1. CIDB Coordinators will responsibly use desktop printer unit(s) as it relates to CIDB.
2. It is the responsibility of CIDB Coordinators to print tags.
3. It is the responsibility of CIDB Coordinators to inform EHS that members require training.

#### **C. Other Departments/End User**

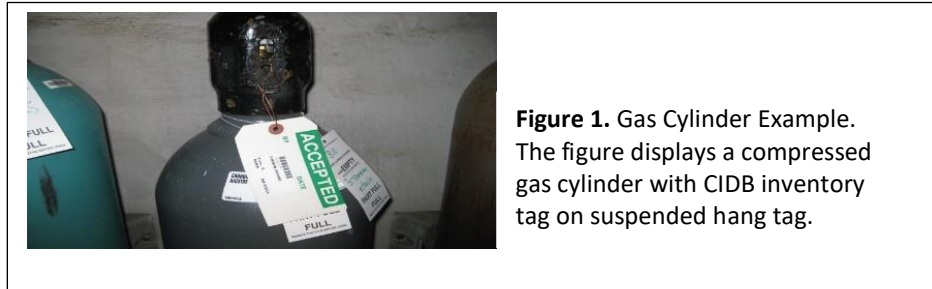
1. It is the responsibility of end users to order or request compliant items and tags.
2. It is the responsibility of end users to receive, transport, store, and remove items safely with the appropriate equipment and PPE.
3. It is the responsibility of end users to affix tags to items upon receipt and to dispose tags upon removal.
4. It is the responsibility of end users and their departments to notify EHS that employees (new or current) require Compressed Gas Cylinder Program training.

### Procedure

#### **A. Manage Gas Cylinders/Dewar Tanks**

1. Order Compressed Gas Item
  - a) Request a specific item to be ordered from a Supplier through the CIDB Coordinator for gas cylinders/dewar tanks. The Purchaser will need to know the Item Name, Amount and Unit of Measure, Product Number (if applicable), Supplier, Owner and Location, and PO Number. This information will be entered into the CIDB.

2. Receive, Store, & Transport Compressed Gas Item
  - a) When the item arrives, it may be delivered to the Gas Dock for storage or directly transported to its use location.
  - b) Tags should be printed by the CIDB Coordinator upon request. The receiver or the end user will request tag(s) from CIDB Coordinator, notifying the coordinator by phone or e-mail that item has arrived.
  - c) The receiver or end user will tag the item by attaching the tag directly to the vessel or to a hang tag, tying a hang wire to the hang tag, threading the hang wire through the cylinder cap, and securing it (as shown in Figure 1), or in the case of a dewar tank, tying the hang wire to the halo ring (the handling ring on the tank).
  - d) To transport a full, gas cylinder/dewar tank, go to the Gas Dock with the appropriate cylinder/dewar transport cart and PPE. Secure the item to the cart. If the vessel is fitted with caster wheels, handle with caution.
  - e) Use elevators to transport the item between floors. Avoid floor obstructions and striking the item.
  - f) Store gas cylinder items in location by securing in rack, bracket, or support with appropriate restraints. Store dewar tanks in an area that does not block entryways or passageways.
  - g) Confirm delivery to location with the coordinator for item(s), and that tag(s) match intended storage location. Pass along any relevant documentation for records.



3. Remove Compressed Gas Item
  - a) When a gas container is empty or no longer desired, transport it to the Gas Dock following Steps 2d and 2e above.
  - b) Assure that the hang tag matches the fill status of the container (e.g. Empty, Partially Full).
  - c) Remove the label from the item and either dispose in CIDB or deliver it to the CIDB Coordinator for disposal.
  - d) The CIDB Coordinator will report the empty/partially full container to the Supplier prior to the next pick-up date.



**B. Current Departmental Coordinators/CIDB Coordinators**

1. Biology
  - a) Jennifer L. Scott
  - b) Pam Healey
  
2. Chemistry
  - a) Jennifer Streb
  - b) Francis Knapp
  - c) George Kram
  
3. Physics, Astronomy, Geological Sciences (PAGS)
  - a) Trevor Lowing
  - b) Mark Edmonston
  - c) Samuel Hulett

## Appendix B: CIDB Printer Use

### Scope

The scope of the procedure pertains to the maintenance and operation of desktop printer units (Zebra, Model GX420t only) for use with chemical inventory. The attached computer will use ZDesigner Printer Driver in order to operate the specified printer. Printer units are limited to use with Vertere ChIM, otherwise known as the Chemical Inventory Database (CIDB). Units may only be used to print barcoded inventory tags (item tags).

### Responsibilities

#### **A. Environmental Health & Safety (EHS)**

1. EHS will track and maintain desktop printer units.
2. EHS will install desktop printing units in the appropriate office location. It is recommended to store units only in secure, clean, temperature-controlled locations.
3. If software updates or parts (including ribbon and label stock) are required, EHS will purchase, deliver, and install the parts.
4. EHS will provide desktop printer training as it relates to CIDB.

#### **B. Other Departments/End User**

1. Other departments and end users will responsibly use desktop printer unit(s) as it relates to CIDB.
2. It is the responsibility of end users to inform EHS that unit(s) are inoperative or require repair.
3. It is the responsibility of supervisors or operations managers in other departments to inform EHS that members require training.

### Procedure

#### **A. Print Tags**

1. Refer to Steps F1-F3 in the Chemical Inventory Database (CIDB) Program Manual.

#### **B. Set Printer Darkness and Speed**

1. Load Ribbon and Label Stock
  - a) Place the appropriate ribbon (e.g. 5100 Series ribbon) and label stock (e.g. PolyPro 4000T) into the printer and adjust appropriately, pulling the first label to the mouth of the printer.
  - b) Attach the adhesive strip from the ribbon end to the empty spool and rotate the ribbon slowly until the black strip is under the print head. The label may need to be advanced using the Feed button to adjust the alignment of the label. Feed button may vary in color from that shown below in Figure 1.



**Figure 1.** Feed Button. The button is helpful to advance label stock and activate other printer functions.

## 2. Adjust Printer Settings

- a) Assure printer is on and that the USB cord is connected to the desktop computer.
- b) The printer can be set from computer (recommended).
  - i. *On the desktop computer, click the **Start** button. Click **Control Panel** and then double-click **Devices and Printers**.*
  - ii. *Right-click on the icon for the printer of interest (e.g. ZDesigner GX420t), and select **Printer Properties**.*
  - iii. *Click the **General** tab and press the “**Preferences...**” button.*
  - iv. *Set the speed to 2 [/s].*
  - v. *Set the darkness to 28.*
  - vi. *Check each value to verify that they are correct, then click Apply, and click OK.*
  - vii. *Once back in the **General** tab, click **Print Test Pages** button to create a test print. A Windows symbol should be printed on the label.*
- c) Alternatively, the printer can be manually set.
  - i. *Manually set the printer by firmly holding the Feed button until the LED flashes green six (6) times and release. This will begin a slow procession of labels of increasing darkness in increments of four with 30 being the highest setting (0,4,8...24,28,30). The LED will flash red in between prints.*
  - ii. *When the label with the desired darkness is printed, press the Feed button, again.*
  - iii. *Do a test print from the CIDB to verify that accurate printing.*

## C. **Set Printer Label Size**

### 1. Load Label Stock

- a) Change the label stock to a roll of the preferred label size. Approved choices for label stock includes PolyPro 4000T or stock with comparable print/adhesive quality and sizes of 2” X 1.25” (Regular) and 1.5” X 0.5” (Small).
- b) Add the roll to the printer and adjust appropriately, pulling the first label to the mouth of the printer.

### 2. Adjust Printer Settings

- a) Make sure the printer is on.
- b) Manually reset the printer by firmly holding the Feed button until the LED flashes green two (2) times and release. The labels will advance and stop. The labels may be re-adjusted within the printer after the printer stops.
- c) Upon printing tags from CIDB, the settings will restrict the label print to the size of the new adjustments.

# Appendix C: CIDB Mobile Scanner Use

## Scope

The scope of the procedure pertains to the maintenance and operation of handheld mobile scanner units (Motorola, Models MC3090 and MC3190 only) for use with chemical inventory. Handheld scanner units are limited to use with Vertere ChIM, otherwise known as the Chemical Inventory Database (CIDB). Units interact with the program via Windows Mobile Device Center.

## Responsibilities

### **A. Environmental Health & Safety (EHS)**

1. EHS will track and maintain handheld mobile scanner units. If software updates or parts (including batteries) are required, EHS will manage the upgrade/replacement.
2. EHS will provide mobile scanner use training as it relates to CIDB.

### **B. Other Departments/End User**

1. Other departments and end users will responsibly use scanner(s) as it relates to CIDB.
2. It is the responsibility of end users to inform EHS that unit(s) are inoperative or require repair.
3. It is the responsibility of supervisors in other departments to inform EHS that members require training.

## Procedure

### **A. Setup and Basics**

1. Install/Remove Battery
  - a) Make sure the device is off.
  - b) Unfasten the handstrap for easy access to the battery door.
  - c) Rotate the latches (metallic levers) 90 degrees to the open position on each side of the door.
  - d) Remove the battery door by pulling back gently on the latches with slight pressure on the ridge of the door.
  - e) Pull on the Battery Release Tab to lift the battery out top first.
  - f) Insert the new battery into the slot bottom first.
  - g) Replace the battery door and rotate the latches 90 degrees to the closed position.
  - h) Re-insert the handstrap through the battery door and fasten.
2. Charge Unit/Spare Battery
  - a) Plug in the cradle.
  - b) Place the bottom of the scanner into the cradle slot.
    - i. *The amber indicator will show a fast, flashing, amber color when there is an error in charging.*

- ii. *The amber indicator will show a steady, flashing, amber color when charging properly.*
    - iii. *The amber indicator will show a solid, amber color when charging is complete.*
  - c) A standard battery will charge in less than five hours, while an extended life battery will charge in less than eight hours.
  - d) A spare battery may be placed on the back of the cradle, and the indicator at the base of the cradle will indicate the advancement in charging as described for the scanner.
  
- 3. Setting Time/Date
  - a) From the Start menu, go to Settings and select Control Panel.
  - b) Double-click the Date/Time icon to display the calendar and the clock.
  - c) Select the appropriate values and click Apply, so that future data will be accurate.
  
- 4. Scanning with Unit
  - a) A scan may be done by holding the scan window over a tag and pressing either of the yellow Scan buttons on the sides of the mobile scanner or the yellow Scan button on the keypad.
  - b) A scan may be done on Item Tags and Location Tags, as well as Group Tags and User Tags, if applicable.
  - c) If scanning a tag is not feasible, the barcode number for the tag may be keyed.
  
- 5. Resetting Unit
  - a) If a problem occurs with the mobile scanner, such as a frozen screen or it stops responding to input, it may require a reset. There are three options for reset:
    - i. *A warm reboot, which closes all programs with all unsaved data being lost. To perform a warm reboot:*
      - 1) *Press the **7**, **9**, and **Power** buttons simultaneously, not touching any other buttons.*
    - ii. *A cold reboot, which resets the mobile scanner to default factory settings, removing any added applications or saved work.*
      - 1) *Press the **1**, **9**, and **Power** buttons simultaneously, not touching any other buttons.*
      - 2) *After initialization, calibrate the touch screen as instructed.*
    - iii. *Battery removal and reinsertion, which would function as a cold reboot. This may be performed with the same battery or a new battery, if required.*
      - After initialization, calibrate the touch screen as instructed.*

## B. Performing a Physical Inventory

### 1. Scan and Save

- a) Within the database on your desktop computer, go to the Physical Inventory menu.
- b) Create a physical inventory process by clicking Create New and selecting different criteria to build your process similar to a Query.
- c) Once this is complete, type a process description or name and click OK. The Process ID (a numerical value) will display in the table. You will need the number for use on the unit.
- d) Press the red "ON" button to turn on the unit.
- e) Double-click the shortcut to VIM ChIM Mobile on the desktop of the unit.
- f) Enter in your User Tag, and press **Enter**. To do a physical inventory, press **6** (for PHY INV).
- g) Enter the Process ID (from the physical inventory table in the database) into the scanner and press Enter.
- h) Enter in or scan the Location Tag.
- i) Scan Item Tags until complete.
- j) If the user accidentally scans items more than once, it will not matter as there will not be any additional items with the same Item Tag added.
- k) Press the blue **FUNC** button and **7** on the keypad or use the stylus to click Main in the menu bar to go back to the main menu.
- l) Press **0** (UTIL) for the utility menu and press **1** (SAVE DATA) to save the data. This will save the data as an ASCII file.
- m) Save as often as necessary, but there will be a file created every time the data is saved.

### 2. Upload and Processing

- a) Place the device into the cradle. Make sure the cradle is plugged in and that the USB cable is attached to your desktop computer.
- b) On the desktop computer, double-click on the Windows Mobile Device Center shortcut, if its window does not automatically pop up on your screen.
- c) Click "Connect without setting up your Device", then click File Management, and within this, click "Browse the contents of your device".
- d) Double-click the Application icon.
- e) Double-click the Vertere ChIM folder.
- f) Select the ASCII file with the most current data that is applicable to the location inventoried and drag that to a designated folder on your desktop. The ASCII file name has the following format:  
Device Name, User Tag,YYYY\_MM\_DD\_HH\_MM.asc
- g) Within the database, go to Download/Reconcile menu within CIDB. Click Browse to find the ASCII file, and click Upload and Import.
- h) After inspecting that all data is correct, select all items by clicking Select All, then click Process. If the number of items scanned exceeds the amount of records

typically shown per page, then there will be multiple pages where this process will have to be done as Select All applies only to the items on the current page.

- i) Within the database, go to the Physical Inventory menu.
- j) Select the Process ID used for doing the physical inventory from the Active Inventory Process table.
- k) Note that all data is correct and click Complete Selected Inventory Process once all assessments have been made about accuracy and which items are missing.
- l) Check View/Update to verify that item data has been submitted and updated.
- m) Do not delete the ASCII file from the folder until data in the database has been updated or work may be lost.

### C. Performing a Disposal

#### 1. Scan and Save

- a) Press the red "ON" button to turn on the unit.
- b) Double-click the shortcut to VIM CHIM Mobile on the desktop of the unit.
- c) Enter in your User Tag, and press **Enter**. To dispose of chemicals, press **7** (for DISPOSE).
- d) Press **1** for Empty Container (for empty containers). Press **2** for Container and Chemical (for containers that still contain chemicals).
- e) Press **1** for Other Method. Press **2** for Default Method.
- f) Scan Item Tags until complete.
- g) If the user accidentally scans items more than once, it will not matter as there will not be any additional items with the same Item Tag added.
- h) Press the blue **FUNC** button and **7** on the keypad or use the stylus to click Main in the menu bar to go back to the main menu.
- i) Press **0** (UTIL) for the utility menu and click **1** (SAVE DATA) to save the data. This will save the data as an ASCII file.
- j) Save as often as necessary, but there will be a file created every time the data is saved.

#### 2. Upload and Processing

- a) Place the device into the cradle. Make sure the cradle is plugged in and that the USB cable is attached to your desktop computer.
- b) On the desktop computer, double-click on the Windows Mobile Device Center shortcut, if its window does not automatically pop up on your screen.
- c) Click "Connect without setting up your Device", then click File Management, and within this, click "Browse the contents of your device".
- d) Double-click the Application icon.
- e) Double-click the Vertere CHIM folder.
- f) Select the ASCII file with the most current data that is applicable to the location inventoried and drag that to a designated folder on your desktop. The ASCII file name has the following format:  
Device Name, User Tag,YYYY\_MM\_DD\_HH\_MM.asc

- g) Within the database, go to the Download/Reconcile menu.
- h) Click Browse to find the ASCII file and click Upload and Import.
- i) After inspecting that all data is correct, select all items by clicking Select All, then click Process.
- j) Check View/Update to verify that the items disposed have been removed from active inventory. Do not delete the ASCII file from the folder until data in the database has been updated or work may be lost.



## Appendix D: CIDB Glossary of Terms

**Account Number** – code used to track grant or departmental purchase information

**Action** - deed to be performed by a User

Add – to submit new data or a record, or program-specific entities to the CIDB

Clone – to copy a Catalog Item, with the intent to keep similar product information but change amount and units.

Collect – to physically retrieve requested/ordered Item

Deliver – to physically transport Item from internal source (e.g. Receiver, Stock Manager)

Detach – to physically and permanently remove a Tag or Label

Dispense - to reduce quantity of hazardous product from Item

Dispose – to virtually eliminate from an active Inventory by discarding or depleting an Item, and to detach its label. The Item is automatically placed into the CIDB record repository.

Edit/Update – to correct or revise an Item

Hold – to physically and temporarily place an Item into a Location for future distribution

MultiEdit – to correct or revise multiple Items at once, by changing the Value for a selected Field

Order – to express intent to acquire an Item from Vendor

Print – to produce a document or Label for distribution from a printer

Receive – to physically accept package(s) to campus and prepare Item(s) for delivery

Relocate – to change Location with same ownership (term used for Transfer on Scanner)

Request – to express intent to acquire an Item from internal source, (e.g. Stock Manager)

Remove – to physically and permanently eliminate an Item or a Container from the University by transport to an approved Hazardous Waste site.

Restore – to virtually re-add an Item that was disposed in error.

Store – to physically and permanently place an Item into its end Location (with respect to ownership) and to add to a Room, Vehicle, or a sub-location such as Receptacle/Reserve Area within the CIDB

Transfer - to change ownership of an Item

Vend – to sell and distribute an Item

Verify – to proofread and agree to the accuracy and validity of a record (e.g. new record added to Catalog).

View – to see Item records or SDS

**Article** – a manufactured item other than a fluid or particle: [§1910.1200(c)]

**(i) *which is formed* to a specific shape or design during manufacture; [§1910.1200(c)]**

**(ii) *which has end use function(s)* dependent in whole or in part upon its shape or design during manufacture; [§1910.1200(c)]**

**(iii) *which under normal conditions* of use does not release more than very small quantities, e.g. minute or trace amounts of a hazardous chemical (as determined under paragraph (d) of this section), and does not pose a physical hazard or health risk to employees.**

[§1910.1200(c)]<sup>1</sup>

**Catalog** – a list of all available Items that a User may purchase and add to their Inventory in the CIDB.

**Chemical Identity** – a name that will uniquely identify a chemical. This can be a name that is in accordance with the nomenclature system of the International Union of Pure Applied Chemistry (IUPAC) or the Chemical Abstracts Service (CAS), or a technical name.<sup>2</sup>

**CIDB** - Chemical Inventory Database. (*Program Vendor: Vertere*)

**Container** – a physical vessel used to store a hazardous product of specific unit measurement.

**Criteria** - the technical definition for the physical, health, and environmental hazards.<sup>2</sup>

**Field** – an identifier for Values within a table. These attributes are used for defining searches/queries or entering data.

**GHS** – “the Globally Harmonized System of Classification and Labelling of Chemicals”.<sup>2</sup>

**Group** – a program-specific entity in which Users and Items are assigned, i.e. an organizational unit within the CIDB. Examples of <sup>1</sup>Groups include Division, Subdivision, Department, etc.

**Division** – a Group representing main branches of organization per *Departmental Code Listing-Tree*

**Subdivision** – a Group representing Colleges (academic) and immediate subgroups of Divisions (e.g. Admin & Finance, Student Affairs, etc.), per *Departmental Code Listing-Tree*

**Department** – a Group representing a discipline within a College (academic) and/or organizational unit within a non-academic Group. Departments are immediate subgroups of Subdivisions, per *Departmental Code Listing-Tree*

**Hazard category** – the division of criteria within each hazard class, e.g., oral acute toxicity includes five hazard categories and flammable liquids include four hazard categories. These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.<sup>2</sup>

**Hazard class** – the nature of the physical, health, or environmental hazard, e.g., flammable solid carcinogen, oral acute toxicity.<sup>2</sup>

**Hazardous product** – a received product with a unique identifier by names or numbers, which has the potential to be physical, health, or environmental hazard as defined by the OSHA Hazard Communication Standard. A hazardous product can be a pure chemical, mixture, or substance. An article may become a hazardous product if physically altered by a process or operation.

**Inventory** – a physical collection of Items owned by an individual User. An Inventory is also a virtual list of Items owned by an individual User

**Item** – a container-level record containing a hazardous product. An Item is also a physical, hazardous product that is or will be tagged and tracked through the CIDB. Each item has an individual owner, status and location.

**Non-Stock Item** – a container intended for use by an individual User, generally for research or projects

**Stock Item** – a container intended for universal or frequent usage

**Label** – an appropriate group of written, printed or graphic information elements concerning a hazardous product, selected as relevant to the target sector(s), that is affixed to, printed on, or attached to the immediate container of a hazardous product, or to the outside packaging of a hazardous product.<sup>2</sup>

**Life Cycle** – the interval between when the Item is ordered/requested by the User to when the Item is no longer in an active Inventory, i.e. consumed, depleted, or disposed as waste, and untagged. The Life Cycle is also known as “womb to tomb”. During the Life Cycle, the Status of an Item changes from On Order to Disposed.

**Location** – a physical area for Inventory Items to be used/stored (temporarily or permanently). Also, a Location may represent a virtual area to store Inventory Items temporarily within the CIDB in order to track Item progress from womb to tomb, or to archive obsolete virtual areas.

**University** – a business entity. A University is a physical and program-specific Location that is made up of Buildings.

**Building** – a unique structure or designation per *R25 Building Spreadsheet*. A Building is a physical and program-specific Location which contains several sub-locations such as Floors and Rooms.

**Building Archive** - a program-specific Location for storing obsolete or inactive Locations.

**Building "On Order"** – a program-specific Location for adding Items that have been purchased with no final destination for storage currently known

**Floor** – a physical and program-specific Location for Rooms within a Building as designated per *R25 Building Spreadsheet*.

**Room** – a physical and program-specific Location for Items to be stored/used as designated per *R25 Building Spreadsheet*.

**Receptacle/Reserve Area** – a physical and program-specific Location for Items to be stored/used, which is a storage unit or subsection of a Room (e.g. Cabinet, Fridge, Hood, etc.)

**Mixture** – a mixture or a solution composed of two or more substances in which they do not react.<sup>2</sup>

**Pictogram** – a graphical composition that may include a symbol plus other graphic elements, such as a border, background pattern or color that is intended to convey specific information.<sup>2</sup>

**PO Number** – a User-defined Value that represents an Internal Purchase Order used to order an Item, which will be used to identify Item(s) once received. A PO Number may be alphanumeric in nature.

**Requisition ID** - a physical, User-defined Value that represents the origin and/or the chronological order in which a request is made

**Report** – a physical or virtual document containing User-selected Items, which extracts data from specified Fields

**Responsibilities** – duties assigned to a Role within the CIDB; Responsibilities are assigned by Administrator

**Right** – a program-specific function which assigns capability to a Role within the CIDB

**Role** – a program-specific position which carries assigned Rights within the CIDB; a Role is assigned to a User

**[Site] Administrator** - Role that is responsible for installation, configuration, maintenance, and oversight of CIDB

**Area [CIDB] Coordinator** – Role that is responsible for one or more of the following duties: data entry, ordering, accepting deliveries directly or from Receiver, Item ownership and transfers, and/or disposal. Unlike others, the Role is not found within the CIDB, but it is assigned to at least one User within a department.

**Area Leader/Stock Manager** - Role that is responsible for purchase, storage, transport, and disposal of a Stock Item; Area Leader is responsible for several buildings while Stock Manager is responsible for one

**Basic User** - Role that has access to the CIDB with only search rights within their Group

**Budget Officer** - Role that is responsible for purchase audits and budget reconciliation

**Catalog Editor** – Role that is responsible for updating Catalog and Vendors

**Chair/Department Head** - Role that is responsible for oversight of a Group (specifically Departments)

**Dean/Subdivision Head** - Role that is responsible for oversight of a Group (specifically Colleges [academic], or non-academic Subdivisions)

**Lab Manager/Shop Steward** - Role that is responsible for the purchase, distribution/storage, and disposal of an Item. A Lab Manager is responsible for academic science laboratories. A Shop Steward is responsible for non-science shops and studios.

**PI/Owner** - Role that is responsible for the purchase, use, storage, transport, and/or disposal of an Item (science, research; non-science). PI/Owners are ultimately responsible for maintaining accurate accounting of all Items in their Inventory.

Purchaser - Role that is responsible for the purchase, distribution/storage, and disposal of an Item; Role has ability to tag items

Receiver - Role that is responsible for initial receiving and delivery of Items; Role has ability to tag items.

**Signal Word** - a word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The GHS uses 'Danger' and 'Warning' as signal words.<sup>2</sup>

**Status** - current condition of an Item, as it relates to its availability

On Order - condition of an Item representing its initial purchase from Vendor or request from an internal source (by Lab Manager, Owner, PI, Purchaser)

Received - condition of an Item representing its confirmed arrival (by Receiver) to a Building from Vendor, and maintained/used by an individual User

Received (Damaged in Transit) - condition of an Item representing its confirmed arrival (by Receiver) to a Building from Vendor, with later discovery of damage rendering the Item unusable.

Collected – condition of an Item representing its confirmed pick-up (by PI/Owner)

Delivered - condition of an Item representing its confirmed delivery (by Receiver) to an Area Coordinator or Location selected by its Owner

Stock - condition of an Item representing its confirmed arrival (by Receiver) to a Building from Vendor, and maintained by Area Leader/Stock Manager for use by multiple Users

In Use/Stored - condition of an Item representing its confirmed arrival (by Owner) to a Location selected by its Owner or Area Coordinator

Available for Sharing – condition of an Item representing its availability to be given to other Owner(s)

**Substance** – chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.<sup>2</sup>

**Tag** – a barcode number that is a unique identifier within the CIDB. Examples for Tags include Item, Group, Location, etc. Tag may also refer to the label containing the barcode number.

Group Tag – Barcode number assigned to Group

Item Tag – Barcode number assigned to Item

Location Tag – Barcode number assigned to Location

User Tag – Barcode number assigned to User

**Technical name** – a name that is generally used in commerce, regulations and codes to identify a substance or mixture, other than the IUPAC or CAS name, and that is recognized by the scientific community. Examples of technical names include those used for complex mixtures (e.g., petroleum fractions or natural products), pesticides (e.g., ISO or ANSI

systems), dyestuffs (Color Index system), and minerals.<sup>2</sup>

**User** – a real-world person who will: a) own/manage Items b) handle Items c) use/manipulate data within the CIDB, and/or d) have oversight of Groups.

**Value** – a specific data or object choice.

**Vendor** - an external source used to obtain an Item.

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<sup>1</sup> Term is defined per OSHA Hazard Communication Standard

<sup>2</sup> Term is defined per Global Harmonization System standards.