UNLV Risk Management and Safety
presents:

The Chemical Inventory Management &
Electronic Reporting Application
Manual
Chemical Inventory Manual

Table of Contents

❖ The CHIMERA On-line Management System .................. 3
❖ Inventory Equipment ........................................... 10
❖ The Physical Inventory Process ............................... 11
❖ Adding Inventory .............................................. 13

powered by:

[CHIMERA logo]
The CHIMERA Online Management System is an interface that enables its users access to crucial inventory information. This system provides easy access to reports, inventory management tools, first responder signs, and safety data sheets among other functions.

**Reports**

The online reporting functionality in CHIMERA is one of the most important features provided in the software. Various reports have been created to meet the needs of federal, state, and local regulators, as well as the needs of CHIMERA users.

These reports include:

* The products that are in the inventory
* Hazards associated with each product
* NFPA ratings
* P-Code
* IFC minimum quantities

To find out more about each report simply hover over the report with the mouse to find a summary of what the report provides. Users are also able to make a customized report which is detailed on page 9-10.
**Inventory Management**

The online Inventory Management interface is where users will be able to add, edit, transfer, and remove inventory.

**Add Inventory**

The add inventory function enables users to input the annual inventory and add new chemicals that are missed by receiving. Users that wish to take advantage of this function need to request barcodes that they can apply on their own. For more information about adding inventory see page 13.

**Remove Inventory**

The remove inventory function enables users to scan (if a barcode scanner is available) or hand type individual barcodes for chemicals that are no longer in the inventory. This function helps in maintaining as close to a real-time inventory as possible. Chemical containers that have been removed by the RMS Hazardous Material Safety Technician are also scanned at the hazpad, to verify that they have been removed from the inventory.

**Edit Inventory**

The edit inventory function allows the user to change the listed quantities on each container, as well assign a cost and a cabinet location to each individual product. This is optional information and can be entered if the user wishes.

**Transfer Inventory**

The transfer function is another tool that enables users to maintain an up-to-date inventory. This function allows them to transfer chemicals either to or from their inventory. The user will input the barcode information for all chemicals that need to be transferred and then select the new storage destination.

**Inventory Update**

The inventory update function allows users to update previously entered barcodes. This function will update the building, room, date, and storage location (optional) of previously entered inventory. The inventory update function can be used in place of the batch uploader.
**Batch Uploader**

The Barcode Batch Uploading function is used to handle data that comes from the barcode scanners. At the conclusion of uploading, a PDF report is generated letting the administrator know if there are any discrepancies with the barcodes that have been scanned.

**Remove Non-Scanned Inventory**

The remove non-scanned inventory function is another tool that can be used to maintain an up-to-date inventory. This function removes all of the non-scanned barcodes in a building before a chosen date, i.e. the date that building’s inventory started. Any barcodes that were inventoried before that date will be removed from the live inventory.

**Full-Room Transfer**

The full-room transfer function allows users to transfer an entire room’s inventory into another room. Input the source building and room and the destination building and room and click transfer.

**NFPA Signs**

An NFPA sign is used to assist first responders by providing them with quick access to the chemical hazards located within the area of interest, as well as other useful hazard information, including radioactive and biohazards.

The chemical hazard information is obtained from each room's inventory, while the biohazard and radioactive hazards are managed by their respective RMS groups. The remaining information can be updated by either the CHIMERA administrators or a faculty/staff member who has been granted access to the area. This information includes department data, lab director information, and the lab name. After the annual data cleaning has been completed, door signs are printed and distributed by building once a year. The user can also print out his/her own door signs any time they wish.

**Searches**

CHIMERA users can locate chemicals by product name, part number, CAS number, and by manufacturer through the searches provided. Users are also able to search for specific barcodes which will provide the location information, possible SDS’s, and the cost per unit.
A search that users may find useful is the Chemshare search. The Chemshare search is an optional function that users must opt in for. Participants in Chemshare are able to search any Chemshare user’s inventory for a product and CHIMERA will provide contact information for those who have it in their inventory.

In order to participate in Chemshare, users have to opt in while creating their account. If the user already has an account and would like to participate in Chemshare, they should contact their CHIMERA administrator.

**Safety Data Sheets (SDS)**

A safety data sheet (SDS) is a form containing data about the properties of a particular substance. In accordance with Hazcom 1910.1200, an SDS must be available for every chemical located on campus. These forms also provide crucial information that is used for reports that are required to be submitted to federal, state, and local regulators.

Through CHIMERA, we are able to provide users on campus access to all of the SDSs in the system.

When searching for a specific SDS, a user has much of the same functionality that she/he would have using a normal search tool. If the user was looking for a Fisher brand acetone, they would simply need to type "acetone AND fisher" and a list of results will appear (as seen below).

A user simply needs to select the name of the product that they are interested in viewing the SDS for, and the file will open.

Users might also want the ability to search and view associated synonyms, part numbers, CAS numbers, and in some cases UPC barcode numbers. If multiple products appear after a search, the user can select the information graphic and view the additional information that has been entered for each product. This ability is very helpful on products that may have an SDS that was used as a substitution.
**Safety Inspection Software (SIS)**

The Safety Inspection Software (SIS) is where users can go to keep track of safety inspections, various safety equipment, and fume hoods.

**Safety Inspections**

The safety inspection tab is where users can go to submit, edit, and/or view safety inspection reports.

Users with Inspection approval (see manage users) have access to the administrative functions of the SIS Inspection system. These users can create new inspection types, edit the structure of existing inspection types, edit inspectors and contacts, edit locations and department information, and view various reports by date, category, or issue. These users are able to view any inspection report that has been submitted, not just the reports the user has submitted.

Users with Inspection Basic approval (see manage users) have the ability to submit a new inspection report for any of the previously set up safety inspection forms. Users are also able to edit, view, and follow-up on any inspection that the user has submitted.

**Safety Equipment**

The safety equipment tab is where users can manage various types of safety equipment like fire extinguishers, AED’s, showers, eyewashes, etc.

Users with SIS Admin approval (see manage users) have access to the administrative functions of the SIS Safety Equipment system. These users are able to approve service requests, manage inspection concerns, and manage safety equipment.

Users with SIS approval (see manage users) are able to view various reports including: inspection reports, inventory reports, service reports, and inspections pending reports.

**Fume Hoods**

The fume hood inspection tab is where users can go to manage various fume hoods. Fume hoods can be viewed based on type, location, and status.

Users with FHI approval (see manage users) are able to add new fume hoods and edit existing fume hoods. Users are also able to view when inspections of a fume hood is needed.

**Additional Administrative, Regulator, and User Functions**

In addition to the main list of functions, a number of additional utilities have been designed to further assist CHIMERA users.

**Administrative Functions**

**User Access Report**

The user access report allows administrators to see which users have logged in, what time and date they logged in, the user access level, and the approved room list for the user.

**Removed Inventory Report**

The removed inventory report allows administrators to view which chemicals have been removed, up to the last 2,500 products. The report provides
information on the person who removed the product, the date, barcode, building, room, and the product information of the removed product.

**Manage Users**
To add a new user, the user has to request a login and fill out the necessary info. After a new user applies for access through the web, the administrator will need to use the manage users function to grant access. The system is set up to save an applicant's information in the system for the administrator to look at before granting access. After either adding or approving an applicant, the administrator is still required to edit the user's approved room list and add rooms in which they are granted access.

Administrators are able to grant users access to the Safety Inspection Software here as well (see the corresponding section to learn of the different types of access available).

Besides the ability to update room assignments, the manage users function also enables the administrator to update contact information as well as reset passwords.

**Manage Departments**
The manage departments function allows the administrator to add, remove, and edit the departments on campus.

**Manage Buildings**
The update building function allows an administrator to manage the buildings that are in CHIMERA with the ability to add, remove, and edit individual building information.

**Manage Rooms**
The manage rooms function provides the administrator the ability to add, remove, or edit rooms. Administrators can choose which building, floor, control area, and department the room occupies.

**Cost Allocation**
The cost allocation function provides a report of the cost per location of each building. The report also provides the chemical count of each building as well as the percent of total inventory of the building.

**Edit Control Areas**
This function enables administrators to add NFPA control area assignments to each room that has an inventory. This information is then used for the Control Area Report.

**Edit IARC List**
The edit IARC list function allows administrators to view the list of chemicals that are currently deemed to be carcinogenic by the IARC. The list provides the group (Group 1, Group 2A, or Group 2B) of the chemical as well as the CAS number. The minimum percent the chemical has to be to be determined carcinogenic has been defaulted at 0.1%, however administrators can edit this amount if they choose.

**Building Floor Plan Upload**
The Building Floor Plan Upload function enables an administrator to upload building maps in PDF format.
Regulator Functions

**Building Floor Plans**
The building floor plans function houses maps for every building available and provides quick access to regulators and administrators.

**Manage Biohazard Rooms & Manage RPD/RAM Rooms**
As mentioned in the NFPA sign section, members of the groups who oversee the radioactive and bio-hazardous materials have the functionality to update the rooms that have biohazards, radioactive material, and/or radiation producing equipment for the NFPA signs.

**Edit Prop 65 List**
The edit prop 65 list allows administrators to view, add, edit, and remove the chemicals on the California Proposition 65 List. The list provides the chemical, the CAS number, the minimum percent, and the reason why the chemical has been placed on the Prop 65 List.

**Hazard Codes**
Provides a list and definition of each of the NFPA Chemical Hazards and rankings.

**Chemical Room Totals**
The chemical room totals function allows administrators to choose a building and see a report of the total products associated with each room in that building.

User Functions

**Contact Support**
This function provides a means for CHIMERA users to contact CHIMERA support and report various issues that they have encountered.

**Hazard Class Systems**
The hazard class systems function provides a pdf of the different hazard classifications tools and symbols. This function provides a brief explanation of GHS, NFPA, and HMIS and the differences between them.

**Chemical Storage**
The chemical storage function provides the user with a description of the different types of hazard codes, the type of chemical that falls into the hazard codes, and how each chemical should be stored.

**NFPA Hazard Codes & NFPA Hazard Classifications**
The NFPA hazard codes and hazard classifications provides a brief overview of the different chemical hazard codes and classifications and their ranks.

**Manage Custom Reports**
Customized reports allow you to build reports of the inventory based on a particular hazard, location, container type, inventory date, manufacturer, etc. in any combination the user chooses.

In order to add a customized report, click on the Manage Custom Reports found under the User Functions on the right hand side. Here users have the option of viewing, removing, or editing any custom report already made or users can add a new report.
After clicking on add report, users will be prompted to give the report a title (Administrators have the option of sharing new reports). After entering the title, click Add. This will prompt the Column List to appear. The columns are used to input the different categories that users want for the report. At the bottom of the screen are three buttons: Add Column, Remove Column, and Edit Column. Click on the Add Column button.

Users will now be able to choose which category they want to be reported as well as where in the report they want that category to be. Users can add multiple columns to the report.

After all of the columns have been entered for the report, click on view report. Users will then have to choose which report they want to view and the location that they want to report.

INVENTORY EQUIPMENT

Personal Protective Equipment

As a safety oriented program it is CRUCIAL to wear appropriate PPE while doing chemical inventory. Not only will it protect those who are completing the inventory, it also sets an example for faculty, staff, and students throughout campus. PPE includes: Lab coats, gloves, and eye protection.

Laptops

Laptops are the core of the inventory program, as they are used to complete the physical inventory.

Barcodes

The barcodes that are used for all laboratory chemicals are made with a chemical resistant polyvinyl compound. These barcodes are formatted to provide a unique number for each lab chemical inventoried. This method is used to help facilitate accurate chemical tracking.

Barcode Scanning Equipment

At UNLV, two different, pre-programmed, barcode scanners are used while doing inventory. However, CHIMERA will accept any barcode scanner that submits and enter barcodes.
The Symbol Phaser P360, is a batch scanner, which is used to scan Laboratory chemicals that have a UNLV-CHEM ID barcode on them.

The Symbol LS4278, is a Bluetooth scanner which reports back to its assigned field laptop. This scanner is used for scanning UPCs from "Static" chemicals. The LS4208 corded USB scanner can also work in this capacity.

THE PHYSICAL INVENTORY PROCESS

The Inventory Routine

Preparation
The daily inventory preparation is crucial to completing the assigned tasks in a timely manner. A team member should make sure that all PPE, inventory equipment, building maps, and appropriate keys are collected and ready to go prior to the scheduled departure time.

Chemical Handling & Reading
The team member who is reading should handle each chemical with care and always use TWO hands while using appropriate PPE. When reading the chemical information make sure to take as much time as necessary to read all the information correctly. Incorrect or incomplete information results in "Go-back" visits.
Barcode Process for Laboratory Chemical

In order to maintain continuity, the UNLV-CHEMID barcode is always applied on the left-hand side of the product label.

In the instance that a container is too small, the barcode should be cut down to fit onto an acceptable location taking care not to cover up any hazardous information.

Sealed Containers

While going through inventory, one might find a new laboratory chemical that is in a sealed metal can or plastic bag. In this instance, the teams’ job is still to assign the product a barcode during the inventory process. However, the team member must attach the barcode with a second note that notifies the end user to apply the barcode when he or she removes the product from the sealed container. Note the example below:

The Difference Between Barcode and Static Chemicals

CHIMERA has two separate chemical categorizations which are used during inventory: barcode and static.

Barcode Chemicals

A barcode chemical is any laboratory chemical that is not in a single use container. In theory, products that should be around for more than a single year period should be bar-coded.

Static Chemicals

A static chemical is considered anything that a barcode chemical is not. This includes one-time use products, gas cylinders, non-laboratory chemicals, and all other chemicals that the team is uncertain how to classify. It has been best stated, "When in doubt, static it out."

Infrequent Issues

Rooms without Keys

Occasionally, teams may find rooms that are not keyed with the master set provided to them. When this occurs, the team can contact the CIO or CIS, and they will call the lock shop to have someone come out and open the area.

Chemical Spills or Broken Containers

In the rare occasion that there is a chemical spill or broken chemical container, the inventory team should call the Hazardous Material Safety Technician for assistance. This is to assure proper clean up and disposal are conducted.
**Adding Inventory**

As mentioned before, the Add Inventory function is where users go to enter the inventory information. After clicking the Add Inventory button users will see the screen below.

At the top users will see two buttons: Instructions and Auto Fill Tool. Clicking on the Instructions button will provide the user with a detailed explanation of each section in the Add Inventory field.

The Auto Fill Tool is the best and easiest way to enter inventory. This tool allows users to search for products that are already in the system, instead of entering that information manually.

Below the buttons is the Location and Barcode section. This is where the user will input the building, room, location (optional), and whether the product will be a Barcode or Static.

It is **VERY** important to make sure to select whether the product is a barcode or a static chemical prior to submitting. Users can review the difference between static and barcode chemicals on the previous page.

The Chemical Information section is where users will enter the product information that is needed in order to assign the appropriate SDS.

At the bottom of the page users can see all of the products that have been inventoried for that day.

**Inventory Input Procedures**

The best way to start inventorying chemicals is by using the Auto Fill Tool. To use this tool, first click on the 'Use Auto Fill Tool' button. Then, once the team is ready to start, the reader will either scan a UPC, read a part number, or read a product name for the operator to enter into the system.

![Add Inventory Interface](image-url)
**Products Already in the System**

If there are any products that match the search terms, they will appear in the list box below. If the correct product name and manufacturer pops up, click on it. That product's name and manufacturer will be entered in the Chemical Information section below and a part number will no longer be required. Once a product has been selected, a list of size and unit suggestions will appear (if available) in the list box to the right. Look for the correct size and unit, click on it, and that information will be entered in the Chemical Information section. If the correct size or unit is not there, users can enter the size and unit in the Chemical Information section. After the information has been filled out, click the Add Inventory button.

**Products Not in the System**

If the product you are entering does not show up in the Auto Fill Tool, users are still able to add the product by filling out the Chemical Information section. Required fields include the full Product Name, Manufacturer, Size, Unit, Container Type, Part Number, Quantity, and CAS Number (if available). Optional fields include Cost, Lot Number, Expiration Date, and Comments.

When entering the Product Name make sure to include the **FULL** product name which includes prefixes, suffixes, concentrations, color (for paints), scents, and any information that makes the product unique.

Part Numbers are incredibly important in finding an SDS for a product. Many manufacturers separate SDS’s by their part numbers, making it imperative to have the correct part number. Part numbers can include product codes, reorder numbers, UPC codes, item number, and any number specific to the product.

Remember, it is **VERY** important to make sure to select whether the product is a barcode or a static chemical prior to submitting.

It is also very important to update the room number on both the software **AND** the batch scanner when moving from one room to the next. If this is not done the inventory will be **WRONG!**